BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MARCH 1, 1876.

QC
982
.B85
1976
(Mar.-Apr.)

7:35 A. M. WASHINGTON 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
2:44 P. M. ST. PETERSBURG mean time.

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U.S. Dept. of Commerce

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WEATHER BUREAU

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Gé...

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	66.6	19.2	50	Calm			0		2			0	0	Clear	Charnot.
Algiers			30.28	769.2	70.5	21.4	44	NNW			1		0			0	0	Clear	Peter.
La Calle																			Kuntz.
Tunis			30.20	767.0	72.7	22.6	35	W			1		0			0	0	Clear	Jacques.
Sfax			30.21	767.2	67.3	19.6	58	S			4		1			0	0	Clear	Chauvey.
Safda			30.34	770.5	72.0	22.2		W			1		0			0	0	Clear	Millot.
Tebessa			30.26	768.6	73.8	23.2		S			6		0			0	0	Clear	Colin.
Geriville			30.37	771.3	68.0	20.0	22	NW			3		2			0	0	Clear	Buard.
Laghouat			30.36	771.1	73.4	23.0	83	NW			1		1			0	0	Clear	Guyot.
Biskra			30.28	769.2	76.3	24.6	24	Calm			0		0			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.94	760.5	57.6	14.2	59	NE			2		4			0	0		Prof. Ivan Stosir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.92	759.9	36.3	2.4	89	W			1		10			0.047	1.2		I. R. Observatory.
Eperies			29.89	759.3	37.8	3.2	83	Calm			0		10			0.154	3.90		Julius Mikolik.
Gratz	28.74	729.9	29.94	760.5	51.8	11.0	68	SSE			2		2			0	0		Andreas Rospini.
Hermannstadt	28.39	721.2	29.84	757.7	44.6	7.0	84	NW			1		10			0.020	0.50		Prof. Reissenberger.
Kremsmünster	28.61	726.7	29.95	760.8	52.3	11.3	82	SSW			3		6			0.177	4.5		Prof. C. Wagner.
Lemberg			29.85	758.3	33.3	0.7	73	W			1		5			0.012	0.3		Dr. T. Stanecki.
Nyiregyhaza			29.91	759.7	39.6	4.2	80	NE			2		7			0.236	6.00		Habsuda Daniel.
Pola			30.00	762.0	55.9	13.3	78	ESE			2		7cs			0	0		I.R. Hydrographic Of'ce
Szegedin			29.89	759.3	55.0	12.8	68	W			2		8			0	0		Karl Stancel.
Trieste			30.00	762.0	53.1	11.7	70	Calm			0		4			0.098	2.5		Prof. V. Farolfi.
Vienna			29.91	759.6	54.1	12.3	77	W			2		9			0.039	1.0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.63	752.6	52.2	11.2	94	SSW			2		10			0.659	1.50	Raining	Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.23	742.4	46.3	7.9		SW	23	10.3			4			0.245	6.23	Blue sky	William Boswell.
Ardrossan			29.50	744.2	47	8.3		SW			4		7					*D. clouds	J. Mayes.
Armagh Observatory			29.35	745.5	47.3	8.5		SW	20	8.9			7					Squally	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			29.42	747.3	49.0	9.4		WSW	21	9.4			7					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			[illegible]	747.0	52.7	11.5		WSW			4–5		4					*D. clouds	J. Dreyer.
Bradford			[illegible]	746.2	49.3	9.6		W			2		4			0.16	4.1	*D. clouds	J. McLandsborough.
Bridgetown, Glasgow			[illegible]	[illegible]	80.2	26.8		NE			4		6					Gloomy	Sergt. G. H. Hunt.
Cambridge Observatory			[illegible]	[illegible]	48.0	8.9		SW			1		10					Raining	H. Todd.
Cardington			29.52	[illegible]	48.6	9.2		WSW			1		10					Raining	John McLaren.
Carlisle			29.37	[illegible]	48.8	9.3		SW			6		7			0.07	1.8	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School H. C.			29.51	749.5	52.2	11.2		SW			2							Gloomy	Capt. J. Fellowes, R. E.
Dartmoor	28.18	715.8	29.68	753.9	44.0	6.7		W			6		10					Threatening	R. E. Power.
Donaghadee			[illegible]	[illegible]	51	10.6		SW			5		3					*D. clouds	J. Mac Gowan.
Dover			[illegible]	[illegible]	47	8.3		SW			4		10					Raining	J. Costello.
Eccles, (near Manchester)			[illegible]	747.8	50.7	10.4		SW	7.0	3.1			8					Gloomy	Thomas Mackereth.
Falmouth Observatory			[illegible]	753.4	48.8	9.3		W	28	12.5			9					Overcast	The Staff.
Fort Napier, (Natal)			29.78	756.4	81.6	27.6		E			1		1			0	0	*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.86	758.4	82	27.8		N			0		9					*D. clouds	[tis.
Galway, Queen's College			29.60	751.8	52	11.1		SW			3		5					*D. clouds	R. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			30.33	770.4	66.4	19.1		NW			4		7					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.28	743.7	46.1	7.8		S			3		7					*D. clouds	Lewis Stuart.
Great Yarmouth			29.46	748.3	47	8.3		WSW			2		9					Raining	G. T. Watson.
Greenwich Royal Obs.			29.54	750.3	48.4	9.1		WSW			1		10					Raining	The Staff for G. B. Airy.
Guernsey			29.68	753.9	44	6.7		SW			5		10					Raining	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.45	748.0	48.6	9.2		WSW			1		9			Blank	Blank	Threatening	L. J. Crossley.
Helston			29.62	752.3	53	11.7		W			6		6			0.11	2.8	Overcast	M. P. Moyle.
Holyhead			29.45	748.0	49	9.4		SW			5		3					Blue sky	John Tilston.
Kew Observatory			29.55	750.6	48.5	9.2		SW	7	3.1			10					Raining	The Staff.
Kingstown			29.43	747.5	50	10.0		WSW			5		3					Blue sky	George Mitchell
Leicester Museum			29.51	749.5	48.6	9.2		SW			1		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.15	765.8	62.0	16.7		NW			2		6k						Fred Travis, Pvt A.H.C.
Nairn			29.15	740.4	48	8.9		SW			1		5					½ clouded	W. D. Penny.
Nassau, (Bahamas)			30.21	767.3	74.2	23.4		NE			4		6					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.48	748.8	49.5	9.7		SW			2		10k			0.73	18.5	Overcast	E. J. Lowe, F. R. S
Oscott, St. Mary's College			29.49	749.0	47.5	8.6		WSW			3		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.52	749.8	49	9.4		WSW			1		10					Misty	J. Lucas.
Plymouth			29.63	752.6	48.3	9.1		SW			4		10					Overcast	John Merrifield.
Roche's Point			29.51	749.5	47	8.3		W			5		8					Showery	W. Kennedy.
Saint Ann's Head			29.54	750.3	49	9.4		WSW			5		5					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.66	753.4	45.8	7.7		NW			6		10					Raining	A. P. Amy.
Sandwick Manse (Orkneys)			29.13	739.9	43.3	6.3		S	15	6.7			10					Misty	Rev. Dr. Clouston.
Scarborough			29.41	747.0	48.8	9.3		WSW			1		10					Foggy	F. Shaw.
Scutari Cemetery (Turkey)			29.91	759.7	52.4	11.3		S			1		1					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.44	747.8	51.9	11.1		W			2		10			0	0	Overcast	W. F. Cooper.
Stiloth Rectory			29.35	745.5	49.2	9.6	90	SW			5		2			0.030	0.76	*D. clouds	Rev Francis Redford
Stonyhurst Observatory			29.42	747.3	49.4	9.7		W			4		10					Gloomy	S. J. Perry.
Stornoway, Lewis C. (Hebr.)			29.07	738.4	45	7.2		SSW			5		5					*D clouds	John Smith.
Strathfield Turgiss			29.55	750.6	49.6	9.8		W			0–1		10					Raining	Rev Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.13	739.9	42	5.6		S			3		8					Overcast	John Trotter.
Truro, Royal Institution			29.63	752.6	53	11.7		NW			8		10					Gloomy	W. Newton.
Valencia Observatory			29.49	749.0	49.9	9.9		WSW	32	14.3			10					Threatening	The Staff.
Sub-Series.																			
Cape Good Hope Obs.			29.95	760.7	74.1	23.4	39	SSE	12	5.4			1						The Staff, for E. J. Stone.
Calf of Man, (Isle of Man)					48	8.9		W			4		3			0	0		
Leith, Restalrig Park			29.28	743.7	50.8	10.4		W			4		2k			0.04	1.0	Fine	Andrew Gibb.
Mauritius			29.80	756.9					6.3	2.8						0	0		
Monach Lt-house, Hebrides			29.06	738.1	46	7.8		SW			4	5	5	SW		0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.25	742.9	44	6.7		S			7		10			Blank	Blank		

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.77	756.1	33.6	0.9	94	SSE			2		10					Foggy	
Faröe			29.08	753.9	39.7	4.3	93	S			2		7						
Godthaab, (Greenland)			29.56	750.9	12.6	—10.8	79	NNW			4		8						
Stykkisholm, (Iceland)																			
Thorshavn, (Faröe)			29.13	740.0	42.8	6.0	78	SE			4		7						
Vestervig			29.66	753.4	30.6	— 0.8	96	ENE			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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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			29.73	755.1	50.0	10	86	WSW			2		8cn.		WSW	0.157	4.0	Very cloudy	Normal School.
Amiens			29.72	754.8	57.2	14.0	82	SW			3		10			0	0	Covered	Normal School.
Avignon			30.04	763.0	60.4	15.8	52	NNW			1		10		WSW	0	0	Covered	Normal School.
Bar-sur-Seine			29.86	758.4	53.6	12.0	87	S			2		10			0.020	0.5	Raining	C. Saillard.
Beaumette, (near Angers)			29.84	757.9	52.2	11.2	98	SW	55.9	25.0					SW	0.150	3.8		Beaumette Observatory
Beauvais			29.70	754.4	57.7	14.3	74	SW			4		8		SW	0.069	1.75	Very cloudy	Normal School.
Besançon			29.95	760.6	56.3	13.5	70	S			2		8		SW	0.051	1.3	Very cloudy	Normal School.
Bourg en Bresse			30.10	764.4	55.2	12.9	88	S			1		10		E			Raining	Normal School.
Bourges			29.88	758.9	55.4	13	88	SE			2		8		SE	0	0	Very cloudy	Normal School.
Brest			29.74	755.3	50.9	10.5	79	W			5		5n		W	0.285	7.25		Naval Observatory.
Caen																			Normal School
Chartres			29.87	758.8	47.7	8.7		SW			6		10			0.106	2.7	Covered	Normal School.
Chaumont																			Normal School.
Clermont			29.89	759.3	59.7	15.4	55	SW			4		8		W	0	0		Puy de Dome, Obs.
Commercy			29.92	759.9	52.0	11.1	86	W			6		10kn		W	0.110	2.8	Covered	Normal School.
Commune de Gréasque*			30.00	761.2	63.5	17.5	59	NW			2		8		NW	0	0		
Grenoble			30.00	761.9	53.1	11.7	78	ENE			2		10kn		S	0	0	Covered	Normal School.
Le Mans			29.78	756.3	51.3	10.7	97	SW			4		8		SW	0.138	3.5	Very cloudy	Normal School.
Loches			29.81	757.1	50.9	10.5	89				6		10			0.091	2.3	Raining	Normal School.
Lons-Le-Saulnier			29.94	760.5	57.7	14.3	70	SSW			Var.		8		SW	0	0	Sprinkling	Normal School.
Mâcon			29.95	760.6	54.0	12.2	86	S			1		10			0	0	Covered	Normal School.
Mirecourt																			Normal School.
Metz			29.91	759.7	51.4	10.8	93	SW			4		10		SW	0.146	3.7		M. Schuster.
Nismes			30.06	763.5	65.7	18.7	67	NW			2		2		NW	0	0	Slightly cl'dy	Normal School.
Orleans			29.77	756.1	55.0	12.8	90	S			3		8		SW	0.016	0.4	Very cloudy	Normal School.
Paris Observatory			29.73	755.1	54.3	12.4	86	SW			3		10			0.056	1.42	Covered	National Observatory.
Parthenay			29.86	758.5	52.5	11.4	95	SW			4		5		W	0.071	1.8	Cloudy	Normal School.
Privas			30.03	762.7	59.4	15.2		SW			2		10		SW	0	0	Covered	Normal School.
La Roche-sur-Yon			30.10	764.4	54.7	12.6	81	SW			4		5		NE	0.177	4.5	Cloudy	Normal School.
Rochefort, Observatory			29.98	761.6	55.6	12.8	81	WSW			7		10		NE	0.118	3.0	Covered	Naval Observatory.
Rouen			29.68	753.9	50.2	10.1	86	W			8		10		S	0	0	Covered	Normal School.
Saint Lo			29.68	753.8	50.2	10.1	98	W			2		10		SW	0.386	9.8		Normal School.
Tarbes			30.22	767.6	51.8	11	53	W			2		10		NE	0	0	Covered	Normal School.
Toulouse																			Normal School.
Villefranche			30.02	762.6	56.3	13.5	83	SE			2		5			0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.93	760.1	77.9	25.2	74	NE			2		5ks						L'Abbé Marchési.
Gorée																			
Marseilles			30.05	763.3	58.5	14.7	77	WNW			2		10			0	0	Covered	Marseilles Observatory.
Mont-Louis	24.00	632.5	30.26	768.6	48.6	9.2	68	SSW	16.8	7.50			8		SW	0	0		—. Faignère.
Montsouris, Paris			29.73	755.2	54.1	12.3	89	SW			4		10		SW	0.071	1.8	Raining	Montsouris Observ'tory.
Perpignan			30.01	763.0	58.1	14.5		E	1.9	0.83			10		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H. P.	21.28	540.4			27.5	— 2.4		S			4		10			0.20	5.	Snowy	M. Baylac.
Saint Maur, (near Paris)			29.74	755.5	54.3	12.4	87	SW			2		10			0.043	1.1	Raining	E. Renou.
Toulouse			30.11	764.9	60.4	15.8	61	NNW			3		9			0	0		Toulouse Observatory.
Tours			29.82	757.3	55.0	12.8	79	WSW			5		10		WSW	0.070	2.0		C. Marquet.
Versailles, (near Paris)			29.72	755.0	53.6	12.0	93	SW			6		10			0.096	2.52	Covered	Dr. A. Bérigny.
Zi-Ka Wei, (near Shanghai)																			H. Le Lec, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 432 m., or 1,930.3 ft.; Clermont, 384 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,360 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

* Near Marseilles.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Bamberg			29.86	758.4	52.7	11.5	91	SW			2		10			0.079	2.0		Prof. T. Hoh.
Berlin			29.88	759.9	50.0	10.0	65	SW			2		4			0.213	5.4		Prof. Arndt.
Breslau			29.93	760.1	43.5	6.4	93	NW			3		3			0.516	13.1		Dr. P. Neugebauer
Carlsruhe			29.84	757.9	57.9	14.4	69	SW			1		10			0.016	0.4		A. Senz.
Cassel			29.71	754.5	52.7	11.5	57	S			6		10			0.102	2.6		Dr. H. Möhl.
Cologne																			Dr. Garthe
Emden																			Prof. Prestel.
Frankfort on the Main			29.94	760.4	55.4	13.0	70	SSW			2		9			0.028	0.7		Physical Society.
Friedrichshafen			29.95	760.7	54.0	12.2	64	SE					9			0.252	6.4		M. Wilhelm.
Hamburg			29.77	756.1	48.0	8.9	93	SE			4		5ck	SE		0.079	2.0	Fine	Deutsche Seewarte.
Kiel			29.78	756.5	44.1	6.7	85	SSW			2		5			0.157	4.0		Prof. G. Karsten.
Königsberg			29.86	758.5	32.7	0.4	88	SW			2		9			Inap.	Inap.		Prof. E. Luther.
Köslin			29.70	754.4	34.8	1.0		W			2		10			0.043	1.1	Foggy	H. Müller.
Leipsic			29.88	759.0	53.8	12.1	66	W			2		8	W		0.547	13.9		Prof. Bruhns.
Memel			29.78	756.3	34.3	1.3	83	WSW			3		10			0.031	0.8		Reinbrecht & Skalweit.
Münster			29.71	754.6	52.9	11.6	80	SW			2		10			0.445	11.3	Raining	Prof. L. Reis.
Neufahrwasser			29.80	756.8	33.4	0.8	85	SSW			1		10			0.020	0.5		A. Lothes.
Posen			29.93	760.1	40.1	4.5	80	NE			2		10			0	0		Dr. Magenor.
Strassburg, (in Alsace)			29.87	758.8	57.9	14.4	74	S			2		10			0.165	4.2		Dr. Schur.
Stuttgart			29.89	759.2	57.0	13.9	70	SW					10			0.094	2.4		Prof. Schoder.
Thorn			29.85	758.2	32.5	0.3	95	SW			4		10			Inap.	Inap.		Dr. Hasenbalg
Treves, (Trier)			29.74	755.4	54.3	12.4	84	SW			8		10			0.185	4.7	Misty	Prof. Flesch.
Wustrow, Naval School			29.84	757.9	40.8	4.9	88	SSE			1		4			0.024	0.6		E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Udine			29.99	761.7	54.9	12.7	51	Calm	0	0			5			0	0		
Padua			29.99	761.7	54.7	12.6	69	NE	1.8	0.8			8	WSW		0	0		
Vicenza			29.98	761.5	55.2	12.9	62	SE	0.7	0.3			4			0	0		
Verona			29.96	761.0	54.5	12.5	91	E			1		10			0	0		
Bergamo	28.61	726.7	29.93	760.2	54.1	12.3	65	SE			1		4			0	0		
Domodossola	28.92	734.6	29.95	760.6	58.6	14.8	65	SSE			4		3			0	0		
Milan			29.97	761.2	63.1	17.3	65	SE			1		8			0	0		
Pavia			29.99	761.7	57.7	14.3	60	SE			1		9	NW		0	0		
Moncalieri			30.00	761.9	56.1	13.4	58	SSW	4.3	1.9			5	W		0	0		
Mondovi	28.06	712.6	29.97	761.3	56.3	13.5		SE			2		9			0	0		
Porto Maurizio			30.10	764.6	58.5	14.7		SSW			2		10	NW		0	0		
Genoa			30.04	763.0	54.7	12.6	85	SE	8.7	3.9			10	SE		0	0		
Piacenza			30.00	762.1	57.1	13.9	60	E	4.9	2.2			9			0	0		
Parma			30.01	762.2	58.1	14.5	74	E			2		2			0	0		
Bologna			30.08	764.0	56.7	13.7	24	W			1		4			0	0		
Florence			30.07	763.8	59.7	15.4	63	SW			2		10	SW		0	0		
Leghorn			30.10	764.5	57.7	14.3	72	W	3.8	1.7			8			0	0		
Siena	28.84	732.6	30.06	763.5	55.9	13.3	70	ESE	0	0			7	W		0	0		
Urbino	28.49	723.7	30.06	763.4	54.9	12.7	59	SSW ?			2		1			0	0		
Pesaro																			
Ancona			30.01	762.3	56.5	13.6	67	SE			4		1			0	0		
Grosseto			30.08	764.0	59.0	15.0	68	NW			2		5	S		0	0		
Rome			30.11	764.7	59.4	15.2	70	S	6.3	2.8			7	S		0	0		
Naples, O. U.			30.15	765.9	65.5	18.6	61	SSW			2		4	SW		0	0		
Lecce			30.10	764.4	60.4	15.8	46	SW	2.5	1.1			0			0	0		
Cosenza			30.13	765.2	60.8	16.0	69	SE	6.3	2.8			2			0	0		
Riposto, (Sicily)			30.00	762.1	60.8	16.0	69	N			4					0	0		
Palermo			30.09	764.3	59.4	15.2	57	NE	1.8	0.8			1			0	0		
Caltanissetta	28.16	715.2	30.11	764.9	59.7	15.4	14	W			1		0			0	0		
Sub-Series.																			
Naples, S. R.			30.15	765.9	57.6	14.2	75	SW	1.3	0.6			..k	W		0.205	5.2		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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters., or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Tokio																			

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 instrumental errors. Inches.	Barometer. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Flushing			29.60	751.9	50.7	10.4		SW			5								
Groningen			29.55	750.5	49.1	9.5		S			2								
Helder			29.53	750.1	49.6	9.8		SSE			4								
Utrecht			29.56	750.9	51.3	10.7	96	S			4		10					Dull	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Bergen			29.54	750.3	36.7	2.6	58	S	11.6	5.2			10			0.071	1.8		
Brönö			29.64	752.8	26.8	— 2.9	64	S	18	8			3			0	0		
Christiania			29.84	758.0	18.0	— 7.8	66	E	5.6	2.5			0			0.055	1.4		
Tromsö			29.73	755.1	22.3	— 5.4	61	SW	2	1			6			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	769.6	58.8	14.9	85	WNW	7.0	3.12			4			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.32	770.1	60 8	16.0	69	WNW	10.6	4.75			9	WNW		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.41	772.4	65.7	18.7	64	SW	4.4	1.97			9			0	0		Capt. D. A. da Cunha.
Lisbon			30.40	772.2	60.4	15.8	84	W	12.5	5.6			6			0.016	0.4		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.83	757.7	34.5	1.4	83	S	7	3			10						Astronomical Obs.
Wilna			29.85	758.2	36.5	2.5	94	Calm	0	0			10						Astronomical Obs.
Dorpat			29.98	761.6	25.0	— 3.9	88	ESE	9	4			10						Physical Cabinet.
St. Petersburg			30.07	763.6	14.7	— 9.6	86	E	11	5			10					Snowing	Central Physical Obs.
Kuopio			30.10	764.5	6.8	—14.0	91	ESE	13	6			0						Ch. Forsten.
Kieff			29.74	755.5	36.7	2.6	80	NW	4	2			8						Physical Cabinet
Nikolaiev			29.84	758.0	41.7	5.4	80	Calm	0	0			10						Kurdakof.
Kertch			29.85	758.3	47.5	8.6	83	Calm	0	0			10					Light rain	Lagorio.
Moscow			30.11	764.9	28.4	— 2.0	88	SE	18	8			10					Snowing	Meteorological Obs.
Lugan			29.91	759.7	30.9	— 0.6	81	ESE	29	13			5						Meteorological Obs.
Archangel			30.34	770.5	10.8	—11.8	89	Calm	0	0			0						Ogorodnikof.
Tiflis	28.03	727.2	30.06	763.5	47.5	8.6	59	SE	13	6			2						Physical Observatory.
Astrakhan			30.26	768.7	32.4	0.2	67	W	2	1			10						Sebastianof.
Kasan			30.29	769.4	30.6	— 0.8	74	NE	7	3			1						Physical Cabinet.
Orenburg			30.20	767.1	21.7	— 5.7	85	Calm	0	0			10						Tschernischef.
Ekaterinburg	29.11	739.3	30.19	766.7	12.2	—11.0	41	W	20	9			0						Meteorological Obs.
Nukuss			30.05	763.3	35.6	2.0	91	W	7	3			10						
Kasaly																			Bobrof.
Tashkend	28.49	723.7	30.24	768.0	43.9	6.6	67	Calm	0	0			10						Michelson.
Barnaul			30.00	762.0	19.0	— 7.2	75	S W	11	5			7						Meteorological Obs.
Yeniseisk			29.58	751.2	23.2	— 4.9	84	S	7	3			6					Snowing	Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.37	771.4	33.4	0.8	26	NNE	9	4			0						Physical Observatory.
Nertchinsk	27.86	707.7	30.17	766.2	— 8.0	—22.2	82	Calm	0	0			0						Meteorological Obs.
Vladivostock			30.16	766.1	17.6	— 8.0	85	Calm	0	0			1						
Nikolaievsk, on the Amoor					—10.5	—24.6	100	Calm	0	0			0						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 404. meters, or 1,341.8 feet; Ekaterinburg, 394.4? m., or 1,295.2? ft.; Tashkend, in 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.20	767.0	63.3	17.4	52	SW	14.9	6.67		5	2	NW		0	0	Cloudy	Royal Observatory.
San Fernando			30.39	771.9	60.3	15.7	79	WNW	10.1	4.5		0	10		E	0	0		The Naval Observatory

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.10	764.5	6.8	—14.0	91	E			2		1			0	0		
Umea			30.00	762.1	9.5	—12.5	96	E			2		10			0	0		
Hernosand			29.97	761.2	11.5	—11.4	97	NE			2		10			0	0		
Stockholm			29.81	757.2	22.8	— 5.1	93	E			2		10			0	0		
Wisby			29.83	757.6	35.2	1.8	93	S			2		10			0.012	0.3		
Sub-Series.																			
Upsala			29.87	758.6	18.9	— 7.3	99	NE	7.8	3.5			10			0.018	0.46	Snowing	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Geneva	28.54	725.0	29.96	761.0	57.2	14.0	72	NNW			1		10			0	0	Covered	The Observatory.
Zurich	28.32	719.3	29.96	760.9	54.3	12.4	75	SE			1		6			0.354	9.0	Lightly cov'd	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —0.4 mm.; Thermometer, +8.3 cent.; Relative Humidity, +7 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Constantinople			29.97	761.3	51.8	11.0	71	S	7	3.0			2		N	0	0		
Fao, (Persian Gulf)			30.16	766.0	66.7	19.3		NW			4		5						
Salonica			29.98	761.6	58.6	14.8		SE			1		0						
Valona			29.95	760.8	60.3	15.7		W			1		0						
Varna			29.84	758.0	57.2	14.0		NW			3		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.85	758.3	63.1	17.3	62	NW			2		9c			0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Bathurst, N. B.			30.23	767.8	—0.5	—18.1	84	Calm	0	0						0	0		Hon. J. Ferguson.
Brockville, Ontario			30.28	769.1	20	— 6.7		SW	8	3.6			10s		SW	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B.			30.25	768.3	10	—12.2	89	N	1	0.4		10ck	0			0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island			30.19	766.8	22	— 5.6	94	N	8	3.6			10s			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.18	766.6	22.0	— 5.6	72	S			1		10n			0.10	2.5	Unsettled	James Smith, M. A.
Dalhousie, N. B.			30.32	770.1	7.5	—13.6	77	NW			2	10cs				0	0		H. A. Johnson.
Esquimault, B. C.			29.72	754.9	44.3	6.8	91	E	5	2.2		9k				0	0	Cloudy	W. H. Bevis.
Fredericton, N. B.			30.28	769.1	5.2	—14.9	93	N	4	1.8			10s			0.020	0.51		Prof. Harrison.
*Fort Garry, Manitoba			30.71	780.0	—16	—26.7	100	Calm	0	0			10ks			0	0	Cloudy	James Stewart.
Goderich, Ontario			30.31	769.9	19.9	— 6.7	87	Calm			0		10n			0	0	Threatening	H. J. Strang, M. A.
Granton, Ontario			30.25	768.3	20.3	— 6.5		NW			1		10n			0	0	Cloudy	James Grant.
*Halifax, N. S.			30.15	765.8	23	— 5.0	88	NE	7	3.1			8n		NE	0	0	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.27	768.8	20	— 6.7	81	W	7	3.1		10cs	0			0	0	Cloudy	S. Woods, M. A.
Little Current, Ontario			30.32	770.1	11.6	—11.3		W	6.0	2.7			10s			0	0		G. B. Abrey, C. E.
*Montreal, Quebec			30.15	765.8	22	— 5.6	87	SW	17	6.6			10b		SW	0.27	6.9	Light snow	C. H. McLeod, C. E.
*Ottawa, Ontario			30.17	766.3	19	— 7.2	80	W	11	4.9		10k	0	W		0.10	2.5	Cloudy	J. B. Haney.
*Parry Sound, Ontario			30.31	769.9	7	—13.9	84	W	2	0.9		0	2ks		W	0.03	0.8	Clear	Rev. R. Mooley.
*Port Dover, Ontario			30.30	769.6	23	— 5.0	73	Calm	0	0		10k	0			0	0	Cloudy	H. Morgan.
Port Hastings, N. S.			30.15	765.8	24.9	— 3.9		N	5	2.2						0	0	Fine	Peter Grant.
*Port Stanley Ontario			30.30	769.6	23	— 5.0	89	N	5	2.2			10n		W	0	0	Light snow	M. Payne.
*Quebec, Quebec			30.17	766.3	15	— 9.4	91	NE	9	4.0			10n		NE	0	0	Light snow	Capt. Ash, R. N.
St. John, N. B.			30.24	768.1	14	—10.0	81	N	1	0.4			8s			0	0		G. Murdoch, C. E.
*Saugeen, Ontario			30.23	767.8	18	— 7.8	84	N	7	3.1			10s			0	0	Light snow	K. Stewart.
Stayner, Ontario			30.32	770.1	15	— 9.4	84	N	6	2.7			10n		NW	0	0	Cloudy	R. J. Cole.
Stratford, Ontario			30.30	769.6	20.5	— 6.4	85	NW	5	2.2			10s			0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			30.14	765.5	24	— 4.4	92	N	5	2.2			10n		N	0.06	1.5	Cloudy	T. C. Hill.
*Toronto, Ontario			30.30	769.6	20	— 6.7	88	W	5	2.2			10n			Inap.	Inap.	Light snow	Magnetic Observatory
Woodstock, Ontario																			J. Montgomery

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The latitude of Granton is 1,015 feet, or 309.1 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	27	— 2.8	88	Calm	0	0			10s			0.03	0.8	Cloudy	
Alpena, Mich.			30.29	769.4	9	—12.8	89	NW	6	2.7			10n			Inap.	Inap.	Light snow	
Atlantic City, N. J.			30.31	769.9	31	— 0.6	89	Calm	0	0			10s			Inap.	Inap.	Cloudy	
Augusta, Ga.			30.25	768.3	48	8.9	85	E	1	0.4			Fog			0	0	Foggy	
Baltimore, Md.			30.32	770.1	34	1.1	71	W	3	1.3			10s			0	0	Cloudy	
Barnegat, N. J.			30.29	769.4	30	— 1.1	78	NW	3	1.3			10s		W	Inap.	Inap.	Cloudy	
Benton, Montana	27.33	694.2	30.13	765.3	1	—17.2	100	Calm	0	0		2c	0			0	0	Fair	
Bismarck, Dakota	28.56	725.4	30.42	772.7	5	—15.0	63	N	6	2.7			10s		N	0.10	2.5	Cloudy	
Boston, Mass.			30.22	767.6	20	— 6.7	84	W	7	3.1		10s	Fog	W		Inap.	Inap.	Foggy	
Breckenridge, Minn.			30.14	773.2	— 1	—18.3	84	N	14	6.3			10s			0	0	Cloudy	
Buffalo, N. Y.			30.28	769.1	23.5	— 4.7	61	W	8	3.6		Haze	2s		SW	0.01	0.3	Fair	
Burlington, Vt.			30.19	766.8	26	— 3.3	100	S	2	0.9			10n			0.05	1.3	Light snow	
Cairo, Ill.			29.97	761.2	41	5.0	91	SE	10	4.5			10s		W	0.15	3.8	Cloudy	
Cape Hatteras, N. C.			30.24	768.1	43	6.1	75	N	8	3.6		0	Haze			0	0	Clear	
Cape Henry, Va.			30.33	770.4	39	3.9	46	Calm	0	0		5c	0	NW		0	0	Fair	
Cape May, N. J.			30.32	770.1	34	1.1	79	N	1	0.4			10s			0.03	0.8	Cloudy	
Charleston, S. C.			30.25	768.3	52	11.1	79	NE	8	3.6		5c	0	SW		0	0	Fair	
Cheyenne, Wyoming	24.06	611.1	30.00	762.0	21	— 6.1	72	NW	20	8.9		0	0			0.01	0.3	Clear	
Chicago, Ill.			30.11	764.8	30	— 1.1	89	E	12	5.4			10n			Inap.	Inap.	Light snow	
Cincinnati, Ohio			30.11	764.8	35	1.7	70	SE	7	3.1			10s			0	0	Cloudy	
Cleveland, Ohio			30.25	768.3	25.8	— 3.4	76	NW	3	1.3			10s			Inap.	Inap.	Cloudy	
Colorado Springs, Col.	24.01	609.8	29.93	761.5	37	2.8	71	N	16	7.2		0	0			Inap.	Inap.	Clear	
Corsicana, Tex.			30.05	763.3	64	17.8	94	SW	7	3.1		10k	0	S		0	0	Cloudy	
Davenport, Iowa			30.03	762.7	26	— 3.3	88	E	20	8.9			10n			0.05	1.3	Light snow	
Denison, Tex.			30.09	764.3	53	11.7	60	NW	4	1.8		1c	0			0.04	1.0	Clear	
Denver, Col.	24.86	631.4	30.08	764.0	34	1.1	62	SE	4	1.8		0	0			0	0	Clear	
Detroit, Mich.			30.22	767.6	24	— 4.4	93	NE	5	2.2			10n			0.01	0.3	Light snow	
Dodge City, Kan.	27.51	698.7	29.92	760.0	27	— 2.8	88	W	14	6.3		0	0			0.05	1.3	Clear	
Dubuque, Iowa			30.12	765.0	25	— 3.9	75	NE	12	5.4			10n		NE	Inap.	Inap.	Light snow	
Duluth, Minn.			30.43	772.9	11	—11.7	60	NE	6	2.7		0	5s			0	0	Fair	
Eastport, Me.			30.19	766.8	21	— 6.1	85	NE	10	4.5			10s		W	0	0	Cloudy	
Erie, Pa.			30.26	768.6	25	— 3.9	88	Calm	0	0			10s			0	0	Cloudy	
Escanaba, Mich.			30.35	770.9	6	—14.4	76	N	4	1.8			10s		N	Inap.	Inap.	Cloudy	
Fort Gibson, Indian Terr.			29.93	760.2	48	8.9	70	NW	12	5.4		0	0			0.08	2.0	Clear	
Ft. St. Michaels, Alaska			30.45	773.4	—19	—28.3	100	Calm	0	0		0	0			0	0	Clear	
Fort Sill, Indian T.	28.90	734.0	30.03	762.7	44	6.7	60	NW	4	1.8		2cs	0	NW		Inap.	Inap.	Clear	
Fort Sully, Dakota	28.55	725.2	30.39	771.9	11	—11.7	90	NW	9	4.0			10s		NW	0.45	11.4	Cloudy	
Galveston, Tex.			30.07	763.8	67	19.4	100	SE	4	1.8			Fog			0	0	Foggy	
Grand Haven, Mich.			30.23	767.8	24	— 4.4	93	E	5	2.2			10n			0.02	0.5	Light snow	
Indianapolis, Ind.			30.19	764.3	33	0.6	79	E	8	3.6			10s			0	0	Cloudy	
Indianola, Tex.			30.07	763.8	66	18.9	100	SE	6	2.7			10s		S	0	0	Cloudy	
Jacksonville, Fla.			30.19	766.8	50	10.0	86	Calm	0			5c	0	W		0	0	Fair	
Keokuk, Iowa			29.88	758.9	31	— 0.6	100	E	16	7.2			10n		E	0.10	2.5	Light snow	
Key West, Fla.			30.16	766.1	73.8	23.2	85	E	6	2.7		5k	2ks	E	E	0	0	Fair	
Kittyhawk, N. C.			30.34	770.6	38	3.3	72	Calm	0	0		2cs	0			0	0	Fair	
Knoxville, Tenn.			30.16	766.1	38	3.3	71	Calm	0	0		10cs	Fog	SW		0	0	Cloudy	
La Crosse, Wis.			30.21	767.3	20	— 6.7	100	NE	9	4.0			10n		NE	0.40	10.2	Light snow	
Leavenworth, Kan.			29.79	756.7	43	6.1	91	W	5	2.2			10s			0.18	4.6	Cloudy	
Lexington, Ky.	29.09	736.6	30.16	766.1	29	1.7	88	NE	5	2.2			10s			0	0	Threatening	
Long Branch, N. J.			30.28	769.1	31	— 0.6	79	NW	5	2.2			10s			0.02	0.5	Cloudy	
Louisville, Ky.			30.09	764.3	37	2.8	81	E	3	1.3			10n			0.02	0.5	Light rain	
Lynchburg, Va.			30.35	770.9	30	— 1.1	84	Calm	0	0		10k	Sm'e	W		0	0	Cloudy	
Malone, N. Y.			30.17	766.3	24	— 4.4	87	SW	11	4.9			10n		SW	0.10	2.5	Light snow	
Manhattan, Kan.	28.78	731.0	30.00	762.0	18	— 7.8	68	NW	15	6.7			10s		SE	0.08	2.0	Cloudy	
Marquette, Mich.			30.44	773.2	8	—13.3	78	NW	4	1.8			10s			0.02	0.5	Cloudy	
Memphis, Tenn.			29.98	761.5	52	11.1	66	S	4	1.8			10s			0	0	Cloudy	
Milwaukee, Wis.			30.23	767.8	25	— 3.9	88	E	15	6.7			10n			0.32	8.1	Heavy snow	
Mobile, Ala.			30.16	766.1	54	12.2	86	Calm	0	0			10s			0	0	Cloudy	
Montgomery, Ala.			30.18	766.6	52.5	11.4	63	SE	7	3.1		10cs	Haze	W		0	0	Cloudy	
Morgantown, W. Va.			30.24	768.1	30	— 1.1	78	NE	7	3.1			10s		NE	Inap.	Inap.	Cloudy	
Mt. Washington, N. H.	23.54	597.9	29.90	759.4	9	—12.8	100	W	48	21.5			10n		W	0.05	1.3	Heavy snow	
Nashville, Tenn.			30.05	763.3	42	5.6	83	E	4	1.8			10n		SE	0.07	1.8	Light rain	
New Haven, Conn.			30.27	768.8	27	— 2.8	77	NW	2	0.9			10s			0.04	1.0	Cloudy	
New London, Conn.			30.27	768.8	26	— 3.3	68	Calm	0	0		8k	0	W		0.01	0.3	Fair	
New Orleans, La.			30.12	765.0	63	17.2	89	Calm	0	0		5ck	2k	W	SW	0	0	Fair	
Newport, R. I.			30.23	767.8	27	— 2.8	76	Calm	0	0		2ck	Haze	NW		0.02	0.5	Fair	
New York, N. Y.			30.30	769.6	30	— 1.1	88	W	8	3.6			10s		W	0.27	6.9	Cloudy	
Norfolk, Va.			30.34	770.6	35.5	1.9	80	Calm	0	0		2c	Haze			Inap.	Inap.	Fair	
North Platte, Neb.	27.20	690.9	30.00	762.0	12	—11.1	80	N	12	5.4		0	2s		NW	0.12	3.0	Fair	
Omaha, Neb.	28.84	732.5	29.96	761.0	26	— 3.3	88	N	10	4.5			10s			0.46	11.7	Cloudy	
Oswego, N. Y.			30.26	768.6	26.4	— 3.1	77	NW	7	3.1			10n			Inap.	Inap.	Light snow	
Pembina, Dakota			30.61	777.5	—21	—29.4	100	NW	4	1.8		0	0			0	0	Clear	
Philadelphia, Penn.			30.33	770.4	31	— 0.6	89	NW	11	4.9			10ks		W	0.01	0.3	Cloudy	
Pike's Peak, Colorado	17.57	446.3	29.78	756.4	— 7	—21.7	100	NW	42	18.8		0	0			0.02	0.5	Clear	
Pittsburgh, Penn.			30.27	768.8	28	— 2.2	77	N	3	1.3			10s			Inap.	Inap.	Cloudy	
Port Huron, Mich.			30.28	769.1	21	— 6.1	85	NE	11	4.9			10s			Inap.	Inap.	Cloudy	
Portland, Me.			30.20	767.1	2	— 5.6	72	Calm	0	0			10s			0	0	Cloudy	
Portland, Oregon			29.88	758.9	42	5.6	91	Calm	0	0			10s			0.36	9.1	Cloudy	
Punta Rassa, Fla.			30.17	766.3	65	18.3	68	E	8	3.6		Haze	Sm'e			0	0	Hazy	
Rochester, N. Y.			30.27	768.8	23	— 5.0	73	W	8	3.6			10s			0	0	Cloudy	
Salt Lake City, Utah	25.78	654.8	30.11	764.8	31	— 0.6	68	Calm	0	0		0	0			0.10	2.5	Clear	
Sandy Hook, N. J.			30.23	767.8	30	— 1.1	89	NW	6	2.7			10n			0.04	1.0	Light snow	
San Diego, Cal.			30.16	766.1	47	8.3	85	Calm	0	0		0	0			0	0	Clear	
San Francisco, Cal.			30.09	764.3	51	10.6	72	W	12	5.4		0	5s		W	0	0	Fair	
Santa Fe, N. M.	23.33	592.6	29.87	758.7	23	— 5.0	73	N	14	6.3		0	0			0	0	Clear	
Savannah, Ga.			30.21	767.3	53	11.7	80	SE	4	1.8		10ck	0	SE		0	0	Cloudy	
Shreveport, La.			30.08	764.0	59	15.0	88	S	1	0.4		5ck	5ks	W	SW	0	0	Cloudy	
Smithville, N. C.			30.30	769.6	49	9.4	71	E	15	6.7		10c	0	W		0	0	Cloudy	
Springfield, Mass.			30.25	768.3	21	— 6.1	70	Calm	0	0			10s			0.01	0.3	Cloudy	
St. Louis, Mo.			29.87	758.7	39	3.9	71	S	12	5.4			10n			0.03	0.8	Light rain	
St. Marks, Fla.			30.18	766.6	50	10.0	86	E	3	1.3		5ck	8s	W		0	0	Cloudy	
St. Paul, Minn.			30.23	767.8	20	— 6.7	63	N	8	3.6			10s			0.02	0.5	Cloudy	
St. Paul's Island, Alaska			30.23	767.8	18	— 7.8	84	E	20	8.9		2c	0			0.21	5.3		
Thatcher's Island, Mass.			30.21	767.3	27	— 2.8	77	SW	9	4.0			10ks		NW	0.01	0.3	Cloudy	
Toledo, Ohio			30.20	767.1	26	— 3.3	76	NE	12	5.4			10s		NE	0.02	0.5	Cloudy	
Tucson, Arizona	27.68	703.1	30.27	768.8	38	3.3		S				0	0			0.02	0.5	Clear	
Tybee Island, Ga.			30.22	767.6	58	14.4	87	E	2	0.9		0	8ks			0	0	Cloudy	
Vicksburg, Miss.			30.13	765.3	62	16.7	78	SW	3	1.3		8k	Sm'e	SW		0	0	Cloudy	
Virginia City	21.28	616.7	29.76	755.9	14	—10.0	63	SE	1	0.4		1c	0	W		0.03	0.8	Clear	
Washington, D. C.			30.34	770.6	31.5	— 0.3	79	Calm	0	0			10s		W	0	0	Cloudy	

UNITED STATES SERIES.—CONTINUED

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.32	770.1	38	3.3	71	NE	5	2.2		8cs	Haze	NW		0	0	Fair	
Wood's Holl, Mass			30.22	767.6	32	0.0	79	SE	1	0.4		0	0			0.12	3.0	Clear	
Wytheville, Va	27.81	706.4	30.08	764.0	30	— 1.1	78	E	1	0.4			10s			0	0	Cloudy, frost	
Yankton, Dakota	28.82	732.0	30.21	767.3	16	— 8.9	82	N	14	6.3			10s			1.10	27.9	Cloudy	
Yuma, Arizona			30.21	767.3	48	8.9		N				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.06	763.5	80	26.7	78	NE	4	1.8		5ck	8ks	NE	NE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.04	763.0	77	25.0	76	E				2k	2k			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I.			30.29	769.4	76	24.4	63	E	10	4.5		4ck	8kn	E		0	0	Cloudy	W. S. Cameron.
Kingston, Jamaica, W. I.			30.22	767.6	73	22.8	81	Calm	0	0		2c	2s	SE	SE	0	0		James Gall.
Santiago de Cuba, W. I.			29.79	756.7	74	23.3	76		9.6	4.3		0	0			0.15	3.8	Clear	Robert Mason.
Havana, Cuba, W. I.			30.16	766.1	74	23.3	81	SE	2.4	1.1		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			30.08	764.0	59.5	15.3	71	NE	15.0	6.7		8k	2s	NE	NE	0.04	1.0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.24	691.9	30.05	763.3	65	18.3	83	NE	3.0	1.3		5c	0	NE		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A			29.98	761.5	80	26.7	78	E			3		6ks			0	0	Dry & fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.07	763.3	82.0	27.8										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640.6			62.0	16.7	79		0	0		6c	4s			0.59	15.0	Cloudy	Thomas Herran.
St. Johns, Newfoundland			30.08	764.0	22.5	— 5.3		NE					10n			0	0	Cloudy	John Delaney.
York Factory, B. A.			30.52	775.2	—24	—31.1		W	2	0.9		0	Fog			0	0		J. Fortescue.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			E. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Manhattan, 1,125.0 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.3 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 2, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	772.1	68.0	20.0	55	Calm			0		2			0	0	Clear	Charnot.
Algiers			30.37	771.4	66.2	19.0	67	NNW			2		1			0	0	Clear	Peter.
La Calle																			Kuntz.
Tunis			30.18	766.5	63.3	17.4	32	NW			7		0			0	0	Clear	Jacques.
Sfax			30.20	767.0	72.3	22.4	34	NW			4		2			0	0	Clear	Chauvey.
Saida			30.36	771.2	68.7	20.4		NW			1		1			0	0	Clear	Millot.
Tebessa			30.28	769.1	67.6	19.8		N			5		4			0	0	Fair	Colin.
Gerlville			30.39	771.9	59.8	15.5	31	NNE			3		2			0	0	Clear	Buard.
Laghouat			30.34	770.5	69.8	21.0	49	E			2		2			0	0	Clear	Guyot.
Biskra			30.29	769.3	77.9	25.5	26	N			5		4			0	0	Fair	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.94	760.4	46.0	7.8	87	Calm			0		10			0.264	6.7	Raining	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.84	757.9	43.9	6.6	96	NE			1		10			0.185	4.7		I. R. Observatory.
Eperies			29.85	758.3	39.0	3.9	95	Calm			0		10			0.063	1.60		Julius Mikolik.
Gratz	28.72	729.4	29.93	760.1	49.8	9.9	40	NW			5		10			0	0		Andreas Rospini.
Hermannstadt	28.40	721.3	29.82	757.4	50.0	10.0	67	ENE			1		5			0	0		Prof. Reissenberger.
Kremsmünster	28.67	728.2	30.04	763.0	41.2	5.8	77	WSW			3		10			0.197	5.0		Prof. C. Wagner.
Lemberg			29.80	756.8	38.5	3.6	70	S			1		2			0.248	6.3		Dr. T. Stanecki.
Nyiregyhaza			29.80	759.3	40.6	4.8	97	NE			1		10			0.110	2.80		Habsauda Daniel.
Pola			29.86	758.4	50.9	10.5	75	ENE			2		10s			0.231	5.87		I.R. Hydrographic Of'ce
Szegedin			29.84	758.0	50.9	10.5	90	E			2		10			0.071	1.80		Karl Stancel.
Trieste			29.87	758.8	55.4	13.0	65	ENE			1		10			0.098	2.5	Rain & fog	Prof. V. Farolfi.
Vienna			29.92	759.9	49.1	9.5	90	W			5		10			0.169	4.3		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.89	759.1	49.5	9.7	70	SW			4		10			0.232	5.90	Sprinkling	Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.39	746.5	47.5	8.6		SW	19	8.5			4			0	0	Blue sky	William Boswell.
Ardrossan			29.55	750.6	45	7.2		WSW			3		8					Raining	J. Mayes.
Armagh Observatory			29.64	752.8	46.2	7.9		SW	20	8.9			7					*D. clouds	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.70	754.4	47.8	8.8		WSW	25	11.2			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.70	754.4	48.1	8.9		SW			1		10					Overcast	J. Dreyer.
Bradford			29.62	752.3	44.6	7.0		W			4		0			0.61	0.3	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.00	762.0	84.0	28.9		NE			2		2					*D. clouds	Sergt. G. H Hunt.
Cambridge Observatory			29.79	756.7	50.0	10.0		SSW			2		7					*D. clouds	H. Todd.
Cardington			29.79	756.7	47.4	8.6		SW			1		7					Overcast	John McLaren.
Carlisle			29.60	751.8	47.4	8.6		SW			6		3			0	0	*D.clouds	[illegible] Bell, for J. Cartmell.
Chatham, School M. E.			29.81	757.2	48.2	9.0		SW			2							Blue sky	Ca[illegible] J. Fellowes, R. E.
Dartmoor	28.40	721.3	29.91	759.7	43.2	6.2		SW			2		10					Raining	R. E. Power.
Donaghadee			29.60	751.8	46	7.8		W			4		3					*D. clouds	J. Mac Gowan.
Dover			29.86	758.4	45	7.2		WSW			3		8					Drizzling	J. Costello.
Eccles, (near Manchester)			29.70	754.4	48.9	9.4		W	8.8	3.9			6					*D. clouds	Thomas Mackereth.
Falmouth Observatory			29.86	758.4	50.2	10.1		SW	13	5.8			10					Rain and fog	The Staff.
Fort Napier, (Natal)	27.56	700.0	29.79	756.7	73.6	23.1		E			1		10					Overcast	Pvt G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	84	28.9		N			1		9					*D. clouds	[illegible]
Galway, Queen's College			29.59	751.6	49	9.4		SW			1		9					Gloomy	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.34	770.6	66.8	19.3		E			3		0					Blue sky	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.52	749.8	43.6	6.4		W			5		10					Squally	Lewis Stuart.
Great Yarmouth			29.77	756.1	47	8.3		W			4		3					Blue sky	G. T. Watson.
Greenwich Royal Obs			29.82	757.4	49.2	9.6		WSW			3		9			Blank	Blank	Nearly covered	The Staff for G. B. Airy.
Guernsey			29.85	758.2	49.5	9.7		WNW			4		8					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs			29.68	753.9	47.7	8.7		W			3		7			Blank	Blank	*D. clouds	[illegible] J. Crossley.
Helston			29.82	757.4	53	11.7		SW			2		10			0.29	7.4	Overcast	M. P. Moyle.
Holyhead			29.71	754.6	47	8.3		SW			4		4 ?					Overcast?	John Tilston.
Kew Observatory			29.83	757.7	48.6	9.2		SW	17	7.6			8					*D. clouds	The Staff.
Kingstown			29.71	754.6	48	8.9		WSW			4		10					Overcast	George Mitchell
Leicester Museum			29.77	756.1	47.8	8.8		SW			1		8					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.99	761.7	62.8	17.1		NW			3		6k						Fred Travis, Pvt A.H.C.
Nairn			29.34	754.2	45	7.2		WSW			3		8					¾ clouded	W. D. Penny.
Nassau, (Bahamas)			30.15	765.8	71.2	21.8		NE			3		6					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.74	755.4	51.5	10.8		SW			3		7k,d		SW	0.150	3.81	*D. clouds	E. J. Lowe, F. R. S
Oscott, St. Mary's College			29.76	755.9	47.6	8.7		SW			3		10					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.78	756.4	51	10.6		SW			1		10					Overcast	J. Lucas.
Plymouth			29.85	758.2	49.5	9.7		SSW			2		10					Drizzling	John Merrifield.
Roche's Point			29.70	754.4	47	8.3		SW			4		10					Raining	W. Kennedy.
Saint Ann's Head			29.80	756.9	47	8.3		SSW			2		10					Overcast	John C. Walker.
Saint Helier, (Jersey)			29.84	757.9	50.8	10.4		WSW			6		10					Raining	A. P. Amy.
Sandwick Manse (Orkneys)			29.22	742.2	45.1	7.3		WSW	30	13.4			0					Blue sky	Rev. Dr. Clouston.
Scarborough			29.63	752.6	47.6	8.7		WSW			5		7					*D. clouds	F. Shaw.
Scutari Cemetery (Turkey)			29.89	759.2	52.8	11.6		NE			2		8					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.70	754.4	48.6	9.2		W			2		7			0.001	0.03	Overcast	W. F. Cooper.
Silloth Rectory			29.60	751.8	47.0	8.3	80	W			5		2			0.327	8.31	*D. clouds	Rev Francis Redford
Stonyhurst Observatory			29.67	753.6	46.9	8.3		SW			5		5					*D. clouds	S. J. Perry.
Stornoway, Lews C. (Hebr.)			29.25	742.9	44	6.7		WSW			6		8					*D. clouds	John Smith.
Stratfield Turgiss			29.84	757.9	45.9	7.7		W			1		9					*D. clouds	Rev Charles H. Griffith.
Streatley Vicarage																			Rev. John Slater.
Thurso			29.23	742.4	47	8.3		WSW			4		4					*D. clouds	John Trotter.
Truro, Royal Institution			29.83	757.7	51	10.6		SW			4		10					Raining	W Newcombe
Valencia Observatory			29.71	754.6	46.9	8.3		SSE	23	10.3			10					Drizzling	The Staff
Sub-Series.																			
Cape Good Hope Obs.			30.16	766.1	72.0	22.2	41	SE	26	11.6			1						The Staff, for E. J. Stone.
Calf of Man, (Isle of Man)					46	7.8		W			6		10			0.20	5.1		
Leith, Restalrig Park			29.53	750.0	44.0	6.7		W			5		7k			0.01	0.3	Cloudy	Andrew Gibb.
Mauritius			29.80	756.9					3.5	1.6						0	0		
Monach Lt-house, Hebrides			29.32	744.7	46	7.8		WSW			6		10			0.3	7.6		J. Youngclause.
North Unst, (Shetland Is.)			29.06	738.1	42	5.6		SW			7		10			Blank	Blank		

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.55	750.5	37.0	2.8	93	W			2		10					Foggy	
Fanöe			29.61	752.2	40.3	4.6	97	W			4		9						
Godthaab, (Greenland)			29.67	753.5	6.3	—14.3	70	NNE			6		2						
Stykkisholm, (Iceland)																			
Thorshavn, (Faroe)			29.99	736.6	43.0	6.1	86	NE			4		7						
Vestervig			29.56	750.8	31.3	— 0.4	96	Calm			0		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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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			29.92	760.0	50.0	10	89	SW			1		10			0.606	15.4	Covered	Normal School.
Amiens			29.96	760.9	48.6	9.2	76	SSW			3		0			0.197	5.0	Clear	Normal School.
Avignon			30.27	768.8	58.6	14.8	34	NNW			4		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.12	765.1	47.8	8.8	71	SW			3		10		SW	0.150	3.8	Sprinkling	C. Saillard.
Beaumette, (near Angers)			30.01	762.3	52.9	11.6	86	WSW	52.3	23.4			10		SW	0.272	6.9	Raining	Beaumette Observatory
Beauvais			29.98	761.5	46.8	8.2	78	S			3		10		S	0.167	4.25	Covered	Normal School.
Besançon			30.21	767.4	49.1	9.5	60	S			2		8		SW	0.346	8.8	Very cloudy	Normal School.
Bourg en Bresse			30.30	769.6	49.5	9.7	66	SW			1		5kn		E			Cloudy	Normal School.
Bourges			30.17	766.3	46.2	7.9	91	S			2		5		S	0.138	3.50	Cloudy	Normal School.
Brest			29.93	760.2	52.3	11.3	86	WSW			5		10		WSW	0.354	9.00	Raining	Naval Observatory.
Caen																			Normal School
Chartres			29.92	760.0	49.8	9.9		SE			6		10			0.146	3.7	Covered	Normal School.
Chaumont																			Normal School.
Clermont			30.22	767.6	49.3	9.6	54	SW			2		8		W	0	0		Puy de Dome, Obs.
Commercy			30.11	764.8	46.4	8	72	W			6		10k		W	0.12	3.	Covered	Normal School.
Commune de Gréasque*			30.19	766.8	53.8	12.1	41	NW			8		2		NW	0	0		
Grenoble			30.41	769.8	51.3	10.7	65	NE			2		2k		SW	0.39	10.	Slightly cl'dy	Normal School.
Le Mans			30.17	766.3	49.3	9.6	97	SW			3		10		SW	0.559	14.2	Covered	Normal School.
Loches			29.76	756.0	50.6	10	88				6		10			0.055	1.4	Covered	Normal School.
Lons-Le-Saulnier			30.24	768.2	50.2	10.1	82	SW			Var.		10			0.189	4.8	Covered	Normal School.
Mâcon			30.30	769.6	50.7	10.4	62	W			2		5		W	0.193	4.9	Cloudy	Normal School.
Mirecourt																			Normal School.
Metz			30.13	765.3	47.3	8.5	71	SW			4		10		SW	0.173	4.4		M. Schuster.
Nismes			30.24	768.1	58.1	14.5	45	N			6		10		N	0	0	Covered	Normal School.
Orleans			29.95	760.7	46.0	7.8	94	S			4		8		WSW	0.094	2.4	Very cloudy	Normal School.
Paris Observatory			30.00	762.0	43.7	6.5	93	SSW			3		10		SSW	0.254	6.44	Raining	National Observatory.
Parthenay			30.09	764.2	48.6	9.2	98	SW			4		10			0.04	1.	Covered	Normal School.
Privas			30.30	769.7	52.2	11.2		N			4		5		N	0	0	Pretty cloudy	Normal School.
La Roche-sur-Yon			30.09	764.3	52.9	11.6	87	SW			4		10			0.217	5.5	Covered	Normal School.
Rochefort, Observatory			30.23	767.7	53.2	11.8	86	WSW			6		10			0	0	Covered	Naval Observatory.
Rouen			29.91	759.8	46.0	7.8	86	SSE			6		10		SE	0.429	10.9	Covered	Normal School.
Saint Lo			29.87	758.6	51.1	10.6	97	W			4		10		SW	0.177	4.5		Normal School.
Tarbes			30.40	772.1	57.2	14	57	SW			1		10		E	0	0	Covered	Normal School.
Toulouse																			Normal School
Villefranche			30.28	769.2	56.3	13.5	83	SE			2		10			0	0	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.93	760.1	77.0	25	71	NE			2		2k						L'Abbé Marchésl.
Gorée																			
Marseilles			30.15	765.9	57.6	14.2	45	NW			8		0			0.039	1.0		Marseilles Observatory.
Mont-Louis	25.03	635.7	30.42	772.7	46.4	8.0	53	WNW	14.9	6.66			5		W	0.028	0.7		—. Falguière.
Montsouris, Paris			29.98	761.5	43.2	6.2	98	SSW			4		10		SSW	0.390	9.9	Raining	Montsouris Observ'tory.
Perpignan			30.32	770.0	60.1	15.6		N	28.1	12.50			3		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H. P.	21.38	543.0			23.0	— 5.0		NW			6		10			0.47	12.	Cloudy	M. Baylac.
Saint Maur, (near Paris)			30.00	762.1	44.7	6.7	90	S			2		10			0.217	5.5	Raining	[illegible] Renou.
Toulouse			30.39	772.0	54.7	12.6	61	WNW			4		7			0.035	0.9		Toulouse Observatory.
Tours			30.07	763.8	50.0	10.0	93	WSW			4		10		W	0.189	4.8		C. Marquet.
Versailles, (near Paris)			29.98	761.6	45.0	7.2	91	S			6		10			0.417	10.61	Covered	Dr. A. Bérigny.
Zi-Ka Wei, (near Shanghai)																			H. Le Lee, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,536.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.1 ft.; Ier mont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,7[illegible]2.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Near Marseilles.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Bamberg			29.85	758.2	45.5	7.5	80	W			5		2			0.157	4.0	Rain and graupel	Prof. T. Hoh.
Berlin			29.78	756.5	50.8	10.3	67	SW			3		5			0.154	3.9	Raining	Prof. Arndt.
Breslau			29.86	758.5	44.8	7.1	77	W			8		10			0.169	4.3		Dr. P. Neugebauer
Carlsruhe			30.05	763.3	45.7	7.6	79	SW			10		9			0.394	10.0	Raining	A. Senz.
Cassel			29.79	756.6	48.7	9.3	75	SW			4		8			0.094	2.4		Dr. H. Möhl.
Cologne																			Dr. Garthe
Emden																			Prof. Prestel.
Frankfort on the Main			30.04	763.1	50.0	10.0	59	SW			5		7			0.130	3.3	Raining	Physical Society
Friedrichshafen			30.16	766.0	44.6	7.0	70	W			2		7			0.398	10.1	Rainy	M. Wilhelm.
Hamburg			29.73	755.2	44.8	7.1	86	WSW			4		8s,k			0.280	7.1	Pretty good.	Deutsche Seewarte.
Kiel			29.70	754.4	44.4	6.9	86	W			2		10			0.311	7.9		Prof. G. Karsten
Königsberg			29.69	754.1	34.3	1.3	95	S			2		9			0.114	2.9		Prof. E. Luther.
Köslin			29.65	753.1	42.8	6.0		SW			4		10			0.232	5.9		H. Müller.
Leipsic			29.89	759.1	44.8	7.1	80	SW			6		9		W	0.063	1.6	Showery	Prof. Brahms.
Memel			29.60	751.7	35.8	2.1	75	SSE			5		10			0.043	1.1		Reinbrecht & Skalweit.
Münster			29.84	757.8	47.1	8.4	82	SW			2		10			0.236	6.0	Rain & hail	Prof. E. Heis.
Neufahrwasser			29.60	751.7	37.2	2.9	94	SSW			1		10			0.130	3.3		A. Lothes.
Posen			29.80	756.9	47.1	8.4	75	W			7		10			0.382	9.7		Dr. Magener.
Strassburg, (in Alsace)			30.12	765.1	47.7	8.7	68	WSW			4		5			0.366	9.3		Dr. Schur.
Stuttgart			30.06	763.5	48.7	9.3	55	W					5			0.055	1.4		Prof. Schoder.
Thorn			29.69	754.0	43.3	6.3	96	W			4		10			0.201	5.1		Dr. Hasenbalg
Treves, (Trier)			29.95	760.6	49.1	9.5	57	WSW			8		10			0.197	5.0		Prof. Flesch.
Wustrow, Naval School			29.63	752.5	40.6	4.8	90	WSW			4		7			0.075	1.9		E. F. Schütz.

NOTE.—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. The elevation of Friedrich[illegible] [illegible] meters [illegible] feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.87	758.8	52.2	11.2	73	W	1.3	0.6			10			0	0		
Padua			29.92	759.9	50.7	10.4	81	NW	7.4	3.3			10			0.198	2.5		
Vicenza			29.92	759.9	50.4	10.2	80	SW	2.5	1.1			9			0	0		
Verona			29.92	760.0	57.2	14.0	77	E			1		0			0	0		
Bergamo	28.58	725.8	29.89	759.3	53.6	12.2	72	E			2		2			0	0		
Domodossola	28.96	735.6	29.98	761.6	59.0	15.0	29	NNE			8		0			0	0		
Milan			29.96	761.0	63.7	17.6	25	N			1		0			Blank	Blank		
Pavia			29.91	759.7	62.1	16.7	14	N			6		0			0.177	4.5		
Moncalieri			29.96	761.0	58.3	14.6	18	WNW	18.6	8.3			5			0	0		
Mondovi	28.06	712.7	29.98	761.4	54.8	12.7	29	NW			4		1	NNW		0	0		
Porto Maurizio			29.98	761.6	57.2	14.0		SW			2		1	S		0	0		
Genoa			29.92	759.9	62.4	16.9	27	N	7.4	3.3			0			0.181	4.6		
Piacenza			29.95	760.7	56.5	13.6	53	SE	16.1	7.2			1			0	0		
Parma			29.97	761.1	53.6	12.0	90	SE			4		3			0.528	13.2		
Bologna			29.93	760.2	50.0	10.0	49	W			1		10			0.591	15.0		
Florence			29.92	759.9	54.0	12.2	57	NE			6		10	NE		0.059	1.5		
Leghorn			29.86	758.5	58.1	14.5	59	ENE	8.7	3.9			7			0	0		
Siena	28.69	728.6	29.91	759.7	50.7	10.4	67	N	8.1	3.6			9	NW		0.008	0.2		
Urbino	28.29	718.5	29.85	758.2	45.0	7.2	97	NNE			2		10			0.508	12.9		
Pesaro																			
Ancona			29.96	760.9	48.9	9.4	92	WNW			4		10			0.244	6.2		
Grosseto			29.85	758.2	55.9	13.3	76	N			4		8	NE		0.358	9.1		
Rome			29.79	756.6	56.8	13.8	62	N	11.2	5.0			4	NNW		0.047	1.2		
Naples, O. U.			29.81	757.1	54.1	12.3	80	W			2		10	WSW		0.272	6.9	Raining	
Lecce			29.87	758.8	57.6	14.2	74	E	16.1	7.2			10			0	0		
Cosenza			29.85	758.1	55.8	13.2	76	WNW	4.3	1.9			10			0.157	4.0	Raining	
Riposto, (Sicily)			29.99	761.8	61.5	16.3	67	N			6		1			0	0		
Palermo			29.88	759.0	59.6	15.0	48	WNW	18.1	8.1			3			0	0		
Caltanissetta	27.90	708.7	29.86	758.4	57.7	14.3	67	WSW			6		8	ENE		0	0		
Sub-Series.																			
Naples, S. R.			29.80	757.0	50.4	10.2	88	WSW	0.7	0.3			10k	SW		0.189	4.8	Raining	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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters., or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.91	759.6	45.7	7.6		W			5								
Groningen			29.72	754.8	45.0	7.2		W			4								
Helder			29.78	756.3	43.5	6.4		SW			4								
Utrecht			29.81	757.2	49.1	9.5	71	WSW			5		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.40	746.8	36.3	2.4	75	S	13.4	6.0			10			0.217	5.5		
Brönö			29.39	746.5	30.2	— 1.0	59	E	12	5			1			0	0		
Christiania			29.53	750.1	23.2	— 4.9	86	N	2.2	1.0			10			0.264	6.7	Light snow	
Tromsö			29.47	748.4	22.6	— 5.2	71	SW	13	6			0			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.16	766.1	59.7	15.4	93	SSW	5.7	2.56			6			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.43	773.0	67.1	19.5	32	E	1.9	0.83			2			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.39	772.0	64.8	18.2	66	SE	8.6	3.85			1			0	0		Capt D. A. da Cunha.
Lisbon			30.51	775.0	57.6	14.2	59	NNE	9.8	4.4			1			0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.74	755.4	36.3	2.4	96	SE	12	5			10					Raining	Astronomical Obs.
Wilna			29.83	757.7	37.6	3.1	87	S	4	2			10						Astronomical Obs.
Dorpat			29.88	758.9	37.0	2.8	86	SSE	4	2			10						Physical Cabinet.
St. Petersburg			29.94	760.4	34.2	1.2	91	SE	12	5			10						Central Physical Obs.
Kuopio			29.89	759.2	21.2	— 6.0	100	SE	9	4			10					Snowing	Ch. Forsten.
Kieff			29.92	760.0	32.9	0.5	87	E	4	2			10						Physical Cabinet.
Nikolaiev			29.89	759.1	36.3	2.4	85	NW	25	11			10						Kurdakof.
Kertch			29.74	755.4	42.4	5.8	85	WSW	9	4			10						Lagorio.
Moscow			30.25	768.3	33.1	0.6	83	S	13	6			7						Meteorological Obs.
Lugan			29.91	759.8	25.3	— 3.7	82	E	56	25			10			Blank	Blank		Meteorological Obs.
Archangel			30.04	762.9	11.1	—11.6	93	SSE	13	6			10						Ogorodnikof.
Tiflis	28.46	722.8	29.87	758.8	51.4	10.8	51	Calm	0	0			7						Physical Observatory.
Astrakhan			30.24	768.2	27.9	— 2.3	77	ENE	9	4			10						Sebastianof.
Kasan			30.44	773.2	10.0	—12.2	66	Calm	0	0			0						Physical Cabinet.
Orenburg			30.53	775.5	14.2	— 9.9	74	SE	4	2			0						Tschernischef.
Ekaterinburg	29.28	743.8	30.37	771.4	15.8	— 9.0	51	SW	9	4			0						Meteorological Obs.
Nukuss			30.14	765.5	29.8	— 1.2	88	NE	9	4			10						
Kasaly																			Bobrof.
Tashkend	28.58	725.9	30.34	770.6	40.0	4.8	81	Calm	0	0			8						Michelson.
Barnaul			29.9[illegible]	760.0	5.4	—14.8	73	WNW	13	6			10						Meteorological Obs.
Yeniseisk			29.65	753.2	3.4	—15.9	69	W	7	3			0						Marks.
Irkutsk																			Usolzeff.
Ourga																			Mossin.
Pekin, (China)			30.20	767.[illegible]	36.3	2.[illegible]	38	Calm	0	0			0						Physical Observatory.
Nertchinsk	27.82	706.7	30.11	764.7	— 4.9	—20.5	75	Calm	0	0			2						Meteorological Obs.
Vladivostock			30.19	766.9	13.3	—10.4	67	N	2	1			0						
Nikolaievsk, on the Amoor					— 8.7	—22.6	76	Calm	0	0			0						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 400. meters, or 1,311.8 feet; Ekaterinburg, 393.4? m., or 1,905.2? ft.; Tashkend, m. 494.2?, or 1,621.3? ft.; Irkutsk, 392. m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Ourga, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.42	772.7	63.3	17.4	22	SW	8.9	4.00		4	0	NW		0	0	Light clouds.	Royal Observatory.
San Fernando			30.42	772.6	72.0	22.2	51	ENE	6.5	2.9		0	2		SE	0	0		The Naval Observatory

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.86	758.4	14.7	— 9.6	100	SE			2		10			0	0	Snowing	
Umea			29.77	756.2	19.8	— 6.8	94	S			2		10			0	0	Snowing	
Hernosand			29.65	753.1	23.7	— 4.6	98	E			2		10			0.039	1.0	Snowing	
Stockholm			29.54	750.3	31.8	— 0.1	85	ESE			2		10			0.028	0.7	Snow-showers	
Wisby			29.56	750.8	32.4	0.2	85	S			4		10			0.031	0.8	Snowing	
Sub-Series.																			
Upsala			29.58	751.2	31.3	— 0.4	90	ESE	8.1	3.6			10		SE	0.213	5.41		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.82	731.9	30.30	769.5	48.6	9.2	63	S			3		9			0.276	7.0	Covered	The Observatory.
Zurich	28.50	724.0	30.17	766.2	46.6	8.1	67	W			4		8		SW	0.945	24.0	Cloudy	The Observatory.

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +6.4 mm.; Thermometer, +3.4 cent.; Relative Humidity, —2 per cent.

NOTE.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.94	760.5	49.3	9.6	78	NNE	7	3.0			10		W	0	0		
Fao, (Persian Gulf)			30.11	764.9	66.2	19.0		SE			4		5						
Salonica			29.85	758.3	63.0	17.2		S			1		0						
Valona			29.76	756.0	61.9	16.6		SW			1		10						
Varna			29.88	759.0	50.0	10.0		N			2		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.86	758.5	61.3	16.3	80	NW			2		9n		NW	0.17	4.3	Rainy	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			30.05	763.3	4.5	—15.3	90	Calm	0	0						0	0		Hon. J. Ferguson.
Brockville, Ontario			30.24	768.1	15	— 9.4		N	3	1.3			10s		N	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B.			30.07	763.8	8	—13.3	91	Calm	0	0		2k	8ks			0.01	0.3	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			30.03	762.7	13	—10.6	96	NE	5	2.2			10s			0.02	0.5	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.12	765.0	19.8	— 6.8	80	N			1		10s			0	0	Unsettled	James Smith, M. A.
Dalhousie, N. B.			30.10	764.5	12.0	—11.1	74	W			2	10cs				0	0		H. A. Johnson.
Esquimault, B. C.			29.70	754.4	41.1	5.1	91	Calm	0	0			10			0	0	Cloudy	W. H. Bevis.
Fredericton, N. B.			30.07	763.8	13.1	—10.5	93	NE	3	1.3			10s			0	0		Prof. Harrison.
*Fort Garry, Manitoba			30.38	771.6	— 1	—18.3	100	SW	6	2.7		5c	5s	W	W	0	0	Fair	James Stewart.
Goderich, Ontario			30.41	772.4	14.6	— 9.7	84	W			3					0	0	Fine, clear	H. J. Strang, M. A.
Granton, Ontario			30.35	770.9	9.6	—12.4		NW			1					0	0	Cloudy	James Grant.
*Halifax, N. S.			29.92	760.0	23	— 5.0	92	NE	8	3.6			8n			0.01	0.3	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.24	768.1	13	—10.6	74	N	6	2.7		2k	0			0	0	Clear	S. Woods, M. A.
Little Current, Ontario			30.48	774.2	7.6	—13.6		W	12.0	5.4			0			0	0		G. B. Abrey, C. E.
*Montreal, Quebec			30.12	765.0	19	— 7.2	92	NE	8	3.6			10n		NE	0.03	0.8	Light snow	C. H. McLeod, C. E.
*Ottawa, Ontario			30.20	767.1	11	—11.7	84	NW	7	3.1		2k	0	W		0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.39	771.9	7	—13.9	84	N	8	3.6		5k	0	W		0	0	Clear	Rev. R. Mooley.
*Port Dover, Ontario			30.31	769.9	11	—11.7	82	NW	7	3.1		0	0			0.15	3.8	Clear	H. Morgan.
Port Hastings, N. S.			29.98	761.5	20.2	— 6.6		Calm	0	0						0.40	10.2	Snowing	Peter Grant.
*Port Stanley, Ontario			30.33	770.4	9	—12.8	96	NW	5	2.2		0	0			0.19	4.8	Clear	M. Payne.
*Quebec, Quebec			30.11	764.8	18	— 7.8	84	Calm	0	0		0	0			0.10	2.5	Clear	Capt. Ash, R. N.
St. John, N. B.			30.03	762.7	16	— 8.9	83	N	7	3.1		7k				0	0		G. Murdoch, C. E.
*Saugeen, Ontario			30.39	771.9	9	—12.8	80	NE	2	0.9		0	0			0.02	0.5	Clear	K. Stewart.
Stayner, Ontario			30.39	771.9	8	—13.3	82	NW	9	4.0		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario			30.37	771.4	8.7	—12.9	87	N	8	3.6			0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			30.02	762.5	16	— 8.9	90	NE	4	1.8			10n		NW	0.09	2.3	Light snow	T. C. Hill.
*Toronto, Ontario			30.30	769.6	11	—11.7	77	N	10	4.5		0	0			0	0	Clear	Magnetic Observatory.
Woodstock, Ontario																			J. Montgomery.

NOTE.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The latitude of Granton is 1,015 feet, or 309.1 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	19	− 7.2	84	NW	9	4.0			10ks		NW	0.01	0.3	Cloudy	
Alpena, Mich.			30.45	773.4	13	−10.6	62	NW	5	2.2		0	0			Inap.	Inap.	Clear	
Atlantic City, N. J.			29.94	760.5	28	− 2.2	88	N	20	8.9			10n		N	0.11	2.8	Light snow	
Augusta, Ga.			29.95	760.7	49	9.4	89	NW	3	1.3		0	Sm'e			0.09	2.3	Clear	
Baltimore, Md.			30.06	763.5	31	− 0.6	79	N	4	1.8		5k	2s		N	0.16	4.1	Cloudy	
Barnegat, N. J.			29.94	760.5	28	− 2.2	89	N	27	12.1			10n		N	0.17	4.3	Light snow	
Benton, Montana	27.33	694.2	30.13	765.3	− 3	−19.4	100	NE	1	0.4		0	0			0	0	Clear	
Bismarck, Dakota	28.44	722.4	30.28	769.1	4	−15.6	48	SW	5	2.2		5c	Haze	SW	S	0	0	Fair	
Boston, Mass.			29.94	760.5	24	− 4.4	74	N	12	5.4		10cs	1ks	NW		Inap.	Inap.	Cloudy	
Breckenridge, Minn.			30.60	777.2	− 6	−21.1	100	Calm	0	0			Fog			0	0	Foggy	
Buffalo, N. Y.			30.24	768.1	20	− 6.7	70	N	12	5.4		Haze	8n		N	0.04	1.0	Light snow	
Burlington, Vt.			30.10	764.5	19	− 7.2	69	N	6	2.7			10s		N	0.01	0.3	Cloudy	
Cairo, Ill.			30.44	773.2	32	0.0	79	N	16	7.2			10s		N	0.02	0.5	Cloudy	
Cape Hatteras, N. C.			29.76	755.9	46	7.8	76	NE	28	12.5			10s		NE	0.06	1.5	Cloudy	
Cape Henry, Va.			29.89	759.2	42	5.6	100	N	24	10.7			10s		N	0.19	4.8	Cloudy	
Cape May, N. J.			29.96	761.0	29	− 1.7	100	N	12	5.4			10s			0.41	10.4	Cloudy	
Charleston, S. C.			29.90	759.4	59	15.0	81	SW	8	3.6		2c	2s	SW	SW	Inap.	Inap.	Fair	
Cheyenne, Wyoming	24.15	613.4	30.09	764.3	20	− 6.7	85	SW	2	0.9		1c	2s			0	0	Fair	
Chicago, Ill.			30.47	773.9	29	− 1.7	67	NE	9	4.0		5k	0	NE		0.10	2.5	Fair	
Cincinnati, Ohio			30.30	769.6	22	− 5.6	72	NE	13	5.8		5cs	Sm'e	N		0.11	2.8	Cloudy	
Cleveland, Ohio			30.34	770.6	16.3	− 8.7	73	N	4	1.8			10ks		NW	0.12	3.0	Cloudy	
Colorado Springs, Col.	24.24	615.7	30.11	764.8	16	− 8.9	32	N	3	1.3		8cs	0			0	6	Fair	
Corsicana, Tex.			30.48	774.2	40	4.4	48	N	12	5.4		2c	0	SW		0	0	Fair	
Davenport, Iowa			30.58	776.7	17	− 8.3	83	N	4	1.8		10k	0	E		0.30	7.6	Cloudy	
Denison, Tex.			30.53	775.4	31	− 0.6	78	N	7	3.1		0	0			0	0	Clear	
Denver, Col.	24.97	634.2	30.19	766.8	21	− 6.1	71	S	4	1.8		0	0			0	0	Clear	
Detroit, Mich.			30.39	771.9	15	− 9.4	82	NW	6	2.7		0	0			0.35	8.9	Clear	
Dodge City, Kan.	27.86	707.6	30.40	772.1	14	−10.0	81	W	3	1.3		5c	0			0	0	Fair	
Dubuque, Iowa			30.60	777.2	10	−12.2	58	N	1	0.4		0	0			0.08	2.0	Clear	
Duluth, Minn.			30.60	777.2	− 4	−20.0	64	Calm	0	0		0	0			0	0	Clear	
Eastport, Me.			29.96	761.0	19	− 7.2	84	N	13	5.8		8c	2s	W	N	0.01	0.3	Cloudy	
Erie, Pa.			30.25	768.3	18	− 7.8	92	NE	8	3.6		0	8ks		N	0.19	4.8	Fair	
Escanaba, Mich.			30.66	778.7	6	−14.4	70	NW	4	1.8		0	0			0	0	Clear	
Fort Gibson, Indian Terr.			30.55	776.0	32	0.0	68	N	8	3.6			10s			0	0	Cloudy	
Ft. St. Michaels, Alaska			30.35	770.9	− 7	−21.7		NE	14	6.3		2cs	0	SW		0	0	Fair	
Fort Sill, Indian T.	29.31	744.5	30.53	775.4	26	− 3.3	67	N	8	3.6		2cs	0	N		0	0	Clear	
Fort Sully, Dakota	28.62	726.9	30.52	775.2	− 0.5	−18.1	85	SE	6	2.7		0	0			0	0	Clear	
Galveston, Tex.			30.32	770.1	58	14.4	45	N	22	9.8		0	0			0.11	2.8	Clear	
Grand Haven, Mich.			30.51	774.9	15	− 9.4	82	N	4	1.8		0	Sm'e		N	0.10	2.5	Clear	
Indianapolis, Ind.			30.44	773.2	16	− 8.9	83	N	7	3.1		5k	2s	N	N	0.28	7.1	Fair	
Indianola, Tex.			30.30	771.1	60	15.6	39	N	28	12.5			10s		N	0	0	Cloudy	
Jacksonville, Fla.			30.08	764.0	65	18.3	89	SW.	6	2.7			10s		W	0.14	3.6	Threatening	
Keokuk, Iowa			30.57	776.5	15	− 9.4	82	N	5	2.2		0	0			0.05	1.3	Clear	
Key West, Fla.			30.14	765.5	74.6	23.3	76	W	3	1.3		2k	1ks	SW		0	0	Fair	
Kittyhawk, N. C.			29.84	757.9	43	6.1	91	N	36	16.1			10ks		N	0.63	16.0	Cloudy	
Knoxville, Tenn.			30.14	765.5	37	2.8	71	N	24	10.7			10ks		N	0.14	3.6	Cloudy	
La Crosse, Wis.			30.63	778.0	4	−15.6	74	S	5	2.2		Haze	Haze			0.20	5.1	Hazy	
Leavenworth, Kan.			30.60	777.2	29	− 1.7	78	NE	4	1.8			10s			0	0	Cloudy	
Lexington, Ky.	29.15	740.4	30.34	770.6	23	− 5.0	73	NW	20	8.9			10s			0.20	5.1	Cloudy	
Long Branch, N. J.			29.99	761.7	26	− 3.3	89	N	22	9.8			10s		N	0.53	13.5	Cloudy	
Louisville, Ky.			30.32	770.1	27	− 2.8	76	NW	23	10.3			10s		NW	0.10	2.5	Cloudy	
Lynchburg, Va.			30.00	762.0	37	2.8	71	N	6	2.7			10s		N	0.06	1.5	Cloudy	
Malone, N. Y.			30.10	764.5	22	− 5.6	72	W	4	1.8			10s		W	0	0	Cloudy	
Manhattan, Kan.	29.40	746.7	30.66	778.7	25	− 3.9	75	Calm	0	0			10s			0	0	Cloudy	
Marquette, Mich.			30.55	776.0	8	−13.3	78	W	8	3.6		0	0			0	0	Clear	
Memphis, Tenn.			30.39	771.9	40	4.4	64	N	16	7.2			10s			0	0	Cloudy	
Milwaukee, Wis.			30.56	776.2	18	− 7.8	76	N	10	4.5		10k	0	N		0.26	6.6	Cloudy	
Mobile, Ala.			30.20	767.1	60	13.3	39	N	7	3.1		2c	0	W		0	0	Fair	
Montgomery, Ala.			30.17	766.3	52.5	11.4	57	N	10	4.5		8c	Haze	W		0.10	2.5	Fair	
Morgantown, W. Va.			30.20	767.1	22	− 5.6	86	N	12	5.4			10n		N	0.39	9.9	Light snow	
Mt. Washington, N. H.	23.37	593.6	29.73	755.1	− 1	−18.3	100	NE	24	10.7			Fog			0.32	8.1	Foggy	
Nashville, Tenn.			30.27	768.8	38	3.3	71	NW	8	3.6			10s		NW	0.10	2.5	Cloudy	
New Haven, Conn.			29.77	761.2	25	− 3.9	75	N	12	5.4			10s			0.04	1.0	Cloudy	
New London, Conn.			29.96	761.0	28	− 2.2	82	N	10	4.5			10s			0.07	1.8	Cloudy	
New Orleans, La.			30.23	767.8	60	15.6	37	N	14	6.3		5c	0	W		Inap.	Inap.	Fair	
Newport, R. I.			29.92	760.0	27	− 2.8	76	N	12	5.4		8cs	0	N		0.08	2.0	Cloudy	
New York, N. Y.			30.00	762.0	27	− 2.8	88	NW	14	6.3			10n		W	0.35	8.9	Light snow	
Norfolk, Va.			29.91	759.7	40	4.4	91	N	17	7.6			10s		N	0.11	2.8	Threatening	
North Platte, Neb.	27.41	696.2	30.24	768.1	15	− 9.4	82	E	1	0.4		5c	0			0	0	Fair	
Omaha, Neb.	29.44	747.8	30.65	778.5	9	−12.8	89	NW	3	1.3		0	0			Inap.	Inap.	Clear	
Oswego, N. Y.			30.19	766.8	21.2	− 6.0	72	N	15	6.7			10s		N	0.02	0.5	Cloudy	
Pembina, Dakota			30.42	772.7	2	−16.7	71	SE	8	3.6		2c	2s	SW		0	0	Fair	
Philadelphia, Penn.			30.02	762.5	27	− 2.8	88	NE	16	7.2		8ck	2s	NW	N	0.06	1.5	Cloudy	
Pike's Peak, Colorado	17.76	451.1	29.97	761.2	7	−13.9	54	W	44	19.7		Haze	2s			0	0	Fair	
Pittsburgh, Penn.			30.20	767.1	21	− 6.1	71	NE	12	5.4			10s			0.09	2.3	Cloudy	
Port Huron, Mich.			30.38	771.6	17	− 8.3	83	N	12	5.4		0	1s			0.12	3.0	Clear	
Portland, Me.			29.98	761.5	24	− 4.4	74	N	12	5.4			10n			Inap.	Inap.	Light snow	
Portland, Oregon			29.80	756.9	44	6.7	92	S	1	0.4			10s			0.07	1.8	Cloudy	
Punta Rassa, Fla.			30.13	765.3	70.8	21.6	87	W	8	3.6		2cs	5ks	SW		0	0	Cloudy	
Rochester, N. Y.			30.19	766.8	23	− 5.0	86	N	12	5.4			10s		S	0	0	Cloudy	
Salt Lake City, Utah	25.68	652.3	30.01	762.2	38	3.3	71	SE	4	1.8		0	0			0	0	Clear	
Sandy Hook, N. J.			29.97	761.2	27.5	− 2.5	88	N	24	10.7			10n			0.27	6.9	Light snow	
San Diego, Cal.			30.18	766.6	48	8.9	85	NE	4	1.8		0	0			0	0	Clear	
San Francisco, Cal.			29.96	761.0	51	10.6	86	SE	14	6.3			10s			0.46	11.7	Cloudy	
Santa Fe, N. M.	23.45	595.6	29.99	761.7	40	4.4	56	SE	14	6.3		0	5s			0	0	Fair	
Savannah, Ga.			29.95	760.7	61	16.1	70	NW	8	3.6			10s			0.07	1.8	Cloudy	
Shreveport, La.			30.45	773.4	43.5	6.4	56	N	11	4.9		2c	0	W		0	0	Fair	
Smithville, N. C.			29.84	757.9	57	13.9	87	NW	8	3.6			10ks		NW	0.47	11.9	Cloudy	
Springfield, Mass.			29.99	761.7	25	− 3.9	61	N	12	5.4		5ck	2s	W		0.01	0.3	Cloudy	
St. Louis, Mo.			30.55	776.0	26	− 3.3	88	N	12	5.4			10s			0.35	8.9	Cloudy	
St. Marks, Fla.			30.04	763.0	67	19.4	74	NW	11	4.9			10s		NW	0	0	Cloudy	
St. Paul, Minn.			30.57	776.5	7	−13.9	75	Calm	0	0		2c	Sm'e			0	0	Clear	
St. Paul's Island, Alaska			29.89	759.2	34	1.1	79	SSW	8	3.6		2ck	0	SW		0.03	0.8		
Thatcher's Island, Mass.			29.93	760.2	27	− 2.8	65	NE	29	13.0			10ks		NE	0	0	Cloudy	
Toledo, Ohio			30.28	769.1	14	−10.0	63	N	10	4.5		0	0			0.40	10.2	Clear	
Tucson, Arizona	27.67	702.8	30.26	768.6	40	4.4		S				2c	0			0	0	Clear	
Tybee Island, Ga.			29.96	761.0	59	15.0	87	W	2	0.9			10ks		E	Inap.	Inap.	Cloudy	
Vicksburg, Miss.			30.39	771.9	45	7.2	53	N	13	5.8		2cs	0	W		0	0	Fair	
Virginia City	21.22	615.2	29.70	754.4	25	− 3.9	63	Calm	0	0		2c	0	N		0	0	Fair	
Washington, D. C.			30.04	763.0	29	− 1.7	89	N	8	3.6			10n			0.23	5.8	Light snow	

UNITED STATES SERIES.—CONTINUED

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			29.84	757.9	55	12.8	80	NW	14	6.3			10s		NW	0.07	1.8	Cloudy	
Wood's Holl, Mass			29.91	759.7	31	— 0.6	79	NW	7	3.1			10s		NW	0.19	4.8	Cloudy	
Wytheville, Va	27.55	699.8	29.77	756.1	32	0.0	79	N	12	5.4		10k	0	N		0.06	1.5	Cloudy	
Yankton, Dakota	29.23	742.4	30.78	781.8	—15	—26.1	71	Calm	0	0		0	0			0.05	1.3	Clear	
Yuma, Arizona			30.15	765.8	50	10.0		NE				2c	0	N		0	0	Fair	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.08	764.0	79	26.1	82	NE	5	2.2		2k	5ks	N	NE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.04	763.0	73	22.8	76	NE				10pc	0			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I.			30.28	769.1	75	23.9	67	E	1	0.4		4ck	8n	E		0	0	Cloudy	W. S. Cameron.
Kingston, Jamaica, W. I.			30.23	767.8	76	24.4	82	SE	3	1.3		8c	8s	SE	SE	0	0		James Gall.
Santiago de Cuba, W. I.			29.88	758.9	75	23.9	72	NE	2.4	1.1		0	0			0.25	6.3	Clear	Robert Mason.
Havana, Cuba, W. I.			30.16	766.1	71	21.7	81	SE	3.6	1.6		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			30.03	762.7	62.0	16.7	69	S	12.0	5.4			10k		S	0	0	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.22	691.4	30.04	763.0	62	16.7	88	N	0.5	0.2		0	0			0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.			29.99	761.7	83	28.3	71	E			3		5k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A.			30.07	763.8	80.6	27.0										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640.6			64.0	17.8	78		0	0		4ck	3s			0.10	2.5	Fair	Thomas Herran.
St. Johns, Newfoundland			30.18	766.6	18.0	— 7.8		Calm				2c	5s			0	0	Fair	John Delaney.
York Factory, B. A.			30.01	762.2	8	—13.3	89	S	3	1.3			10n			0	0		J. Fortescue.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Manhattan, 1,125.0 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.3 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 3, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the 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.
Nemours			30.26	768.5	64.8	18.2	65	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.27	768.9	69.8	21.0	34	N			1		1			0	0	Clear	Peter.
La Calle																			Kunts.
Tunis			30.17	766.4	63.7	17.6	50	NW			5		3			0	0	Fair	Jacques.
Sfax			30.21	767.2	69.4	20.8	35	N			5		1			0	0	Clear	Chauvey.
Saïda			30.26	768.5	78.1	25.6		W			1		2			0	0	Clear	Millot.
Tebessa			30.25	768.4	67.5	19.7		N			4		2			0	0	Clear	Colin.
Geriville			30.32	770.2	61.8	18.2	23	NW			1		2			0	0	Clear	Buard.
Laghouat			30.26	768.6	69.8	21.0	65	N			2		0			0	0	Clear	Guyot.
Biskra			30.25	768.4	75.7	24.3	19	NW			2		0			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the 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.
Agram			29.89	759.3	49.5	9.7	62	NE			2		9			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.88	759.0	44.6	7.0	52	W			2		8			0.012	0.3		I. R. Observatory.
Eperies			29.85	758.2	44.1	6.7	78	Calm			0		10		S	0.143	3.64		Julius Mikolik.
Gratz	28.68	728.5	29.89	759.3	47.5	8.6	59	S			2		10			0	0		Andreas Rospini.
Hermannstadt	28.39	721.1	29.84	757.8	42.8	6.0	73	NW			1		10			0.177	4.50	Raining	Prof. Reissenberger.
Kremsmünster	28.60	726.4	29.98	761.4	39.7	4.3	92	WNW			3		10			1.398	35.5		Prof. C. Wagner.
Lemberg			29.79	756.7	37.8	3.2	92	SW			1		10			0.189	4.8		Dr. T. Stanecki.
Nyiregyhaza			29.89	759.1	46.4	8.0	78	E			3		9			0.272	6.90		Habzsuda Daniel.
Pola			29.95	760.6	52.5	11.4	77	SSW			1		10cs			0	0		I.R. Hydrographic Of'ce
Szegedin			29.89	759.3	51.1	10.6	52	NW			2		10			0.067	1.70		Karl Stancel.
Trieste			29.94	760.4	51.6	10.9	83	Calm			0		2			0	0		Prof. V. Farolfi.
Vienna			29.91	759.8	44.6	7.0	77	W			1		10			0.028	0.7		I. R. Central Institute

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 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the 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.
Brussels			29.85	758.1	51.6	10.9	90	W			3		10			0.205	5.20	Light rain	Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.11	739.4	46.6	8.1		S	17	7.6			9			0.210	5.33	*D. clouds	William Boswell.
Ardrossan			29.15	740.4	51	10.6		SSW			5		8					Overcast	J. Mayes.
Armagh Observatory			29.17	740.9	54.1	12.3		SW	35	15.6			10					Raining	S. Call, for Dr. Robinson
Bidston, Liverpool Obs			29.43	747.5	56.0	13.3		SW	35	15.6			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.24	742.7	55.4	13.0		SW			5		10					Drizzling	J. Dreyer.
Bradford			29.40	746.7	54.8	12.7		SW			4		10			0.27	6.9	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	79.6	26.4		NE			4		10					Gloomy	Sergt. G. H Hunt.
Cambridge Observatory			29.67	753.6	55.0	12.8		SW			3		10					Overcast	H. Todd.
Cardington			29.66	753.4	56.0	13.3		SW			4		10					Overcast	John McLaren.
Carlisle			29.30	744.2	52.5	11.4		W			8		10			0.30	7.6	Raining	. Bell, for J. Cartmell.
Chatham, School M. E.			29.75	755.6	52.2	11.2		SW			2							Threatening	Ca t. J. Fellowes, R. E.
Dartmoor	28.32	719.3	29.82	757.4	47.6	8.7		SW			6		10					Raining	R. E. Power.
Donaghadee			29.16	740.7	52	11.1		SW			6		8					*D. clouds	J. Mac Gowan.
Dover			29.79	756.7	47	8.3		SW			5		10					Drizzling	J. Costello.
Eccles, (near Manchester)			29.44	747.8	55.2	12.9		WSW	9.0	4.0			10					Squally	Thomas Mackereth.
Falmouth Observatory			29.75	755.6	53.0	11.7		SW	43	19.2			10					Foggy	The Staff.
Fort Napier, (Natal)	27.65	702.3	29.89	759.2	65.9	18.8		SE			3		10					Overcast	Pvt G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.85	758.2	88	31.1		N			2		4					Blue sky	{tis.
Galway, Queen's College			29.14	740.1	52	11.1		SW			8		8					Gloomy	B.G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			30.30	769.6	66.9	19.4		E			1		1					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.11	739.4	52.9	11.6		S			6		10					Squally	Lewis Stuart.
Great Yarmouth			29.65	753.1	54	12.2		WSW			4		7					Gloomy	G. T. Watson.
Greenwich Royal Obs			29.74	755.4	54.8	12.7		SW			5		10			Blank	Blank	Overcast	The Staff for G. B. Airy.
Guernsey			29.90	759.4	52.5	11.4		SW			6		8					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs			29.44	747.8	54.1	12.3		SW			4		10					Threatening	E. J. Crossley.
Helston			29.72	754.9	55	12.8		SW			6		10			0.25	6.3	Overcast	M. P. Moyle.
Holyhead			29.36	745.7	52	11.1		SSW			6		5					Hazy	John Tilston.
Kew Observatory			29.74	755.4	54.3	12.4		SW	26	11.6			10					*D. clouds	The Staff.
Kingstown			29.30	744.2	57	13.9		WSW			6		5					*D. clouds	George Mitchell.
Leicester Museum			29.60	751.8	55.1	12.8		SW			3		8					Hazy	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.98	761.5	62.0	16.7		NW			3		4k						Fred Travis, Pvt A.H.C.
Nairn			28.94	735.1	56	13.3		SW			1		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.03	762.7	71.4	21.9		NW			7		4					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.55	750.6	55.5	13.1		SSW			5		10d		SSW	0.140	3.56	Overcast	E. J. Lowe, F. R. S
Oscott, St. Mary's College †																			Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.64	752.8	57	13.9		SW			4		9					Overcast	J. Lucas.
Plymouth			29.78	756.4	52	11.1		SW			5		10					Gloomy	John Merrifield.
Roche's Point			29.45	748.0	53	11.7		WSW			7		8			Blank	Blank	¾ clouded	W. Kennedy.
Saint Ann's Head			29.54	750.3	50	10.0		SW			7		8					Foggy	John C. Walker.
Saint Helier, (Jersey)			29.94	760.5	51.2	10.7		SW			6		10					Overcast	A. P. Amy.
Sandwick Manse (Orkneys)			29.93	760.2	43.7	6.5		S	30	13.4			10					Raining	Rev. Dr. Clouston.
Scarborough			29.43	747.5	54.0	12.2		SW			2		10					Overcast	F. Shaw.
Scutari Cemetery (Turkey)			29.78	756.4	50.0	10.0		NE			2		7			Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.46	748.3	58.2	14.6		SW			4		9			0.233	5.92	Threatening	W. F. Cooper.
Silloth Rectory			29.27	743.4	49.8	9.9	95	SW			6		10			0.120	3.05	Overcast	Rev Francis Redford
Stonyhurst Observatory			29.42	747.3	52.9	11.6		SW			5		10			Blank	Blank	Threatening	S. J. Perry.
Stornoway, Lews C. (Hebr.)			28.89	733.8	49	9.4		SSW			6		10					Raining	John Smith.
Strathfield Turgiss			29.75	755.6	54.3	12.4		SW			2–3		10					Raining	Rev Charles E. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.91	734.3	47	8.3		S			5		8					Gloomy	John Trotter.
Truro, Royal Institution			29.75	755.6	54	12.2		SW			6		10					Raining	W. Newcombe
Valencia Observatory			29.32	744.7	52.0	11.1		SW	65	29.1			10					Hazy	The Staff.
Sub-Series.																			
Cape Good Hope Obs.			30.13	765.3	73.4	23.0	43	SSE	27	12.1			0						The Staff, for E. J. Stone.
Calf of Man, (Isle of Man)					48	8.9		S			7		10			0.10	2.5		
Leith, Restalrig Park			29.18	741.1	55.5	13.1		W			4		10ks			0.24	6.1	Showery	Andrew Gibb.
Mauritius			29.68	753.9					20.1	9.0						2.48	63.0		
Monach Lt-house, Hebrides			28.82	732.0	47	8.3		SSW			6		10			0.4	10.2		J. Youngclause.
North Unst, (Shetland Is.)			29.15	740.4	40	4.4		S			7		10			Blank	Blank		

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds. † Observation not simultaneous.

DANISH SERIES.

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

Copenhagen			29.74	755.5	37.9	3.3	90	SSW			2		10						
Faröe			29.70	754.4	39.2	4.0	100	SW			4		10						
Godthaab, (Greenland)			29.65	753.1	8.8	-12.9	80	NE			2		8					Misty	
Stykkisholm, (Iceland)																			
Thorshavn, (Faröe)			28.97	735.8	40.6	4.8	87	ESE			4		10					Raining	
Vestervig			29.63	752.6	38.5	3.6	97	S			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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	773.4	51.8	11	86	WSW			2		10			0.110	2.8	Covered	Normal School.
Amiens			29.93	760.2	54.3	12.4	90	SW			3		10			0	0	Covered	Normal School.
Avignon			30.15	765.9	66.0	18.9	42	NW			2		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.10	764.6	55.2	12.9	81	WSW			3		10		WNW	0.508	12.9	Covered	C. Saillard.
Beaumette, (near Angers)			30.10	764.6	54.0	12.2	80	SW	22.8	10.2					SW	0	0		Beaumette Observatory
Beauvais			29.98	761.6	56.5	13.6	73	SW			3		10		W	0.187	4.75	Covered	Normal School.
Besançon			30.19	766.7	51.8	11	86	SSW			3		8		W	0.728	18.5	Very cloudy	Normal School.
Bourg en Bresse			30.29	769.3	50.9	10.5	86	SSW			1		5n		E			Cloudy	Normal School.
Bourges			30.21	767.3	52.3	11.3	93	SSW			2		10		SSW	0.47	12.	Covered	Normal School.
Brest			29.92	760.0	52.3	11.3	85	SW			5		10		SW	0.039	1.00	Misty	Naval Observatory.
Caen																			Normal School
Chartres			30.05	763.2	54.1	12.3		SW			6		10			0.386	9.8	Covered	Normal School.
Chaumont																			Normal School.
Clermont			30.17	766.4	56.1	13.4	66	W			3		5		W	0.063	1.6		Puy de Dome, Obs.
Commercy			30.07	763.6	50.5	10.3	89	W			6		10kn		W	0.256	6.5	Covered	Normal School.
Commune de Gréasque*			30.13	765.4	61.0	16.1	51	NW			6		5		NW	0	0		
Grenoble			30.25	768.4	47.8	8.8	91	ENE			2		5kn		S	0.71	18.	Cloudy	Normal School.
Le Mans			30.09	764.3	55.4	13	75	SW			3		8		SW	0.106	2.7	Very cloudy	Normal School.
Loches			29.92	760.0	51.8	11	69	S			2		10			0.31	8.	Covered	Normal School.
Lons-Le-Saulnier			30.22	767.6	50.9	10.5	90	SW			2		8		W	0.559	14.2	Very cloudy	Normal School.
Mâcon			30.19	766.7	54.9	12.7	98	Calm			0		10			0.264	6.7	Covered	Normal School.
Mirecourt																			Normal School.
Metz			30.08	764.1	51.3	10.7	90	SW			3		10		SW	0.504	12.8		M. Schuster.
Nismes			30.18	766.5	65.3	18.5	43	N			4		2		N	0	0	Slightly cl'dy	Normal School.
Orleans			30.10	764.4	51.4	10.8	87	SW			4		8		WSW	0.283	7.2	Very cloudy	Normal School.
Paris Observatory			30.04	763.0	55.9	13.3	71	WSW			2		10		W	0.243	6.18	Covered	National Observatory.
Parthenay			30.11	764.9	51.8	11	95	SW			4		5		W	0.217	5.5	Cloudy	Normal School.
Privas			30.18	766.6	58.6	14.8		N			4		5		N	0	0	Cloudy	Normal School.
La Roche-sur-Yon			30.21	767.2	53.6	12.0	83	SW			2		5		NE	0.118	3.0	Cloudy	Normal School.
Rochefort, Observatory			30.07	763.6	56.7	13.7	72	WSW			4		10		NE	0	0	Covered	Naval Observatory.
Rouen			29.98	761.4	55.4	13.0	77	SSW			3		10		W	0.413	10.5	Covered	Normal School.
Saint Lo			30.01	762.3	53.8	12.1	95	W			1		8		SW	0.31	8.		Normal School.
Tarbes			30.29	769.3	59.0	15	51	NW			1		0			0.31	8.	Clear	Normal School.
Toulouse																			Normal School
Villefranche			30.16	766.0	57.0	13.9	88	SE			2		8			0.31	8.	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.93	760.1	77.4	25.2	82	NE			2		5k						L'Abbé Marchési.
Gorée																			
Marseilles			30.08	764.1	64.8	18.2	51	WNW			6		5			0	0	Cloudy	Marseilles Observatory.
Mont-Louis	25.02	635.4	30.36	771.2	54.3	12.4	39	SSW	3.7	1.67			4		SSW	0	0		—. Falguère.
Montsouris, Paris			30.03	762.7	55.2	12.9	80	WSW			3		10		W	0.173	4.4		Montsouris Observ'tory.
Perpignan			30.21	767.3	64.8	18.2		N	24.2	10.83			2		W	0	0		Dr. Fines.
Pic du Midi, (Summit) H. P.	21.40	543.6			30.9	— 0.6		NW			4		2			0	0	Clear	M. Baylac.
Saint Maur, (near Paris)			30.04	763.0	55.6	13.1	74	SW			3		10			0.295	7.5	Covered	E. Renou.
Toulouse			30.33	770.3	58.3	14.6	60	NW			1		1			0	0		Toulouse Observatory.
Tours			30.13	765.4	55.4	13.0	77	WSW			5		9		W	0.520	13.2		C. Marquet.
Versailles, (near Paris)			30.03	762.8	55.0	12.8	77	W			3		10			0.162	4.12	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,580.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

* Near Marseilles.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.83	757.6	44.6	6.9	94	W			2		10			0.236	6.0	Raining	Prof. T. Hoh.
Berlin			29.89	759.2	47.3	8.5	66	S			1		4			0.236	6.0		Prof. Arndt.
Breslau			29.93	760.3	42.8	6.0	71	W			2		8			0	0		Dr. P. Naugebaue
Carlsruhe			29.97	761.1	52.0	11.1	92	SW			10		10			0.591	15.0	Raining	A. Senz.
Cassel			29.78	756.4	42.8	6.0	86	SSE			2		10			0.173	4.4		Dr. H. Möhl.
Cologne																			Dr. Garthe
Emden																			Prof. Prestel.
Frankfort on the Main			29.91	759.7	46.6	8.1	82	S			1		10			0.441	11.2	Rain & fog	Physical Society
Friedrichshafen			30.10	764.4	46.4	8.0	88	W			3		10			0.083	2.1	Raining	M. Wilhelm.
Hamburg			29.81	757.2	44.1	6.7	90	SE			2		10k			0.031	0.8	Good	Deutsche Seewarte.
Kiel			29.81	757.2	43.0	6.1	85	SW			1		10			0	0		Prof. G. Karsten.
Königsberg			29.88	758.9	36.1	2.3	89	N			2		9			0.020	0.5		Prof. E. Luther.
Köslin			29.85	758.3	40.3	4.6		W			2		10			0	0		H. Müller.
Leipsic			29.89	759.1	45.7	7.6	73	SW			2		9	W		0.069	4.3		Prof. Bruhns.
Memel			29.73	755.1	33.1	0.6	85	NNW			2		10			0	0		Reinbrecht & Skalweit.
Münster			29.86	758.5	46.9	8.3	78	SW			2		10			0.220	5.6	Raining	Prof. E. Heis.
Neufahrwasser			29.80	757.0	37.4	3.0	95	Calm			0		10			0.031	0.8		A. Lothes.
Posen			29.93	760.3	43.3	6.3	78	W			5		9			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.05	763.3	53.1	11.7	82	WSW			2		10			0.134	3.4	Raining	Dr. Schur.
Stuttgart			29.95	760.8	53.1	11.7	78	W					10			0.504	12.8	Raining	Prof. Schoder.
Thorn			29.85	758.3	39.4	4.1	98	W			3		10			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.90	759.5	52.7	11.5	79	W			7		10			0.063	1.6	Misty	Prof. Flesch.
Wustrow, Naval School			29.80	756.8	41.0	5.0	87	SW			3		6			0	0		E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—12.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—12.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.92	760.0	54.0	12.2	57	SW	2.5	1.1			6			0	0		
Padua			29.93	760.1	52.0	11.1	73	SE	3.8	1.7			6	NW		0	0		
Vicenza			29.92	759.9	53.2	11.8	68	SE	1.3	0.6			3			0	0		
Verona			29.92	759.9	59.0	15.0	57	E			1		0			0	0		
Bergamo	28.55	725.1	29.87	758.6	55.4	13.0	59	S			2		2			0	0		
Domodossola	28.84	732.6	29.87	758.6	66.6	19.2	31	NNE			8		3			0	0		
Milan			30.00	761.9	61.0	16.1	43	NW			1		3			0	0		
Pavia			29.94	760.4	58.8	14.9	44	W			6		2	SW		0	0		
Moncalieri			29.97	761.1	55.8	13.2	42	NNW	4.9	2.2			5	W		0	0		
Mondovi	28.05	712.4	29.97	761.1	51.6	10.9	43	W			2		4	NNW		0	0		
Porto Maurizio			30.04	762.9	59.0	15.0		E			4		7	SE		0	0		
Genoa			30.00	762.0	59.2	15.1	64	SE	10.5	4.7			2			0	0		
Piacenza			29.95	760.6	59.0	15.0	47	NW	28.6	12.8			2	N		0	0		
Parma			29.96	760.9	54.7	12.6	67	NW			2		1			0	0		
Bologna			30.00	762.0	56.8	13.8	35	SW			6		4	E		0	0		
Florence			30.03	762.7	59.0	15.0	61	SW			4		6	SW		0	0		
Leghorn			30.04	762.9	57.7	14.3	52	SSW	4.9	2.2			4			0	0		
Siena	28.78	731.1	30.00	762.0	56.7	13.7	61	W	0	0			4	W		0	0		
Urbino	28.41	721.7	29.98	761.4	53.6	12.0	57	SSW			2		2			0.374	9.5		
Pesaro																			
Ancona			30.05	763.2	54.3	12.4	65	SE			4		1			0	0		
Grosseto			30.02	762.6	59.4	15.2	56	S			2		4	SE		0	0		
Rome			30.03	762.7	61.7	16.5	47	NW	3.8	1.7			2	NW		0	0		
Naples, O. U.			30.02	762.5	60.4	15.8	50	NW			1		1	NW		0.118	3.0		
Lecce			29.92	760.0	56.3	13.5	58	NW	19.2	8.6			2			0	0		
Cosenza			29.98	761.5	57.2	14.0	78	NW	3.1	1.4			4			0.087	2.2		
Riposto, (Sicily)			29.98	761.4	60.4	15.8	71	N			6		2			0	0		
Palermo			29.63	752.6	59.4	15.2	56	WNW	10.5	4.7			4	WNW		0	0		
Caltanissetta	27.98	710.7	29.94	760.4	53.8	12.1	60	WNW			8		4	ESE		0	0		
Sub-Series.																			
Naples, S. R.			30.02	762.6	58.3	14.6	55	SW	4.9	2.2						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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters., or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—12.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Tokio																			

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—12.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.85	758.2	50.7	10.4		W			5								
Groningen			29.65	752.2	43.7	6.5		S			3								
Helder			29.66	753.3	45.3	7.4		SW			4								
Utrecht			29.72	754.8	49.5	9.7	94	WSW			5		10					Dull	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—12.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.41	747.1	40.3	4.6	81	S	17.7	7.9			10			0.374	9.5		
Brönö			29.43	747.5	31.8	− 0.4	59	Calm	0	0			1			0	0		
Christiania			29.61	752.2	27.9	− 2.3	96		1.3	0.6			10			0.106	2.7	Light fog	
Tromsö			29.47	748.5	21.0	− 6.1	74	E	2	1			0			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 1—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Angra, (Azores,)			30.42	722.6	57.0	13.9	76	N	9.4	4.20			3			0.079	2.0		Dr. J. A. N. Sampaio.
Campo Major			30.28	769.1	69.4	20.8	32	E	5.2	2.33			0			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.37	771.3	63.0	17.2	65	SSW	3.6	1.61			10			0	0		Capt. D. A. da Cunha.
Lisbon			30.34	770.5	64.4	18.0	39	NNE	7.4	3.3			0			0	0		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 1—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Warsaw			29.82	757.5	37.9	3.3	95	W	13	6			10						Astronomical Obs.
Wilna			29.80	756.9	36.7	2.6	85	S	4	2			10					Raining	Astronomical Obs.
Dorpat			29.82	757.5	36.0	2.2	88	S	7	3			10						Physical Cabinet.
St. Petersburg			29.85	758.3	32.9	0.5	82	SSE	18	8			10						Central Physical Obs.
Kuopio			29.63	752.6	32.2	0.1	100	S	22	10			10						Ch. Forsten.
Kieff			29.99	761.7	26.6	— 3.0	87	ESE	11	5			10						Physical Cabinet.
Nikolaiev			29.99	761.8	32.9	0.5	85	ENE	9	4			10						Kurdakof.
Kertch			29.89	759.2	38.8	3.8	88	NNE	7	3			10					Misty	Lagorio.
Moscow			30.28	769.0	20.3	— 6.5	71	SSE	9	4			2						Meteorological Obs.
Lugan			30.04	763.1	24.8	— 4.0	80	E	22	10			9			Blank	Blank		Meteorological Obs.
Archangel			29.91	759.8	28.0	— 2.2	87	S-W	22	10			10						Ogorodnikof.
Tiflis	28.47	723.0	29.90	759.4	45.7	7.6	60	NNW	9	4			7						Physical Observatory.
Astrakhan			30.21	767.2	25.7	— 3.5	85	E	13	6			10			Blank	Blank		Sebastianof.
Kasan			30.45	773.4	8.6	—13.0	72	S	4	2			0						Physical Cabinet.
Orenburg			30.63	778.1	4.1	—15.5	72	NE	2	1			0						Tschernischef.
Ekaterinburg	29.36	745.7	30.44	773.2	16.9	— 8.4	58	SW	9	4			1						Meteorological Obs.
Nukuss			30.08	764.0	39.9	4.4	56	ENE	13	6			0						
Kasaly																			Bobrof.
Tashkend	28.46	722.9	30.21	767.4	42.8	6.0	72	N	13	6			0						Michelson.
Barnaul			30.39	771.9	—15.3	—26.3	67	Calm	0	0			0						Meteorological Obs.
Yeniseisk			30.06	763.5	—13.2	—25.1	68	WNW	2	1			0						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.15	765.9	44.1	6.7	29	Calm	0	0			0						Physical Observatory.
Nertchinsk	27.71	703.9	29.96	760.9	2.8	—16.2	86	SSE	4	2			0						Meteorological Obs.
Vladivostock			30.13	765.3	15.6	— 9.1	57	N	2	1			0						
Nikolaievsk, on the Amoor					— 7.8	—22.1	77	Calm	0	0			0						

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 396.4? m., or 1,305.2? ft.; Tashkend, in 494.2?, or 1,621.3? ft.; Irkutsk, 392. m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.6 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 1—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Madrid			30.30	769.5	64.9	18.3	39	SE	2.2	1.00		1	0	W		0	0	Light clouds	Royal Observatory.
San Fernando			30.28	769.2	75.0	23.9	47	ESE	11.2	5.0		1	2	SE	W	0	0		The Naval Observatory

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 1—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Haparanda			29.51	749.6	32.4	0.2	92	SE			2		10			0.472	12.0	Snowing	
Umea			29.47	748.4	29.8	— 1.2	84	NNE			2		10			0.398	10.1	Snowing	
Hernosand			29.48	748.7	33.6	0.9	73	WSW			2		3			0.295	7.5		
Stockholm			29.66	753.3	30.7	— 0.7	90	SW			2		10			0.071	1.8		
Wisby			29.84	757.8	39.2	4.0	89	W			4		3			0.031	0.8		
Sub-Series.																			
Upsala			29.65	753.2	28.2	— 2.1	90	SW	13.7	6.1			10			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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Geneva	28.78	730.9	30.20	767.1	54.5	12.5	68	WSW			1		9			0.480	12.2	Raining	The Observatory.
Zurich	28.47	723.1	30.13	765.2	48.6	9.2	88	SW			4		10		SW	0.961	24.4	Raining	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +5.5 mm.; Thermometer, +6.5 cent.; Relative Humidity, +3 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople			29.84	758.0	49.5	9.7	52	NE	4	2.0			8		WNW	0	0		
Fao, (Persian Gulf)			30.04	763.0	65.5	18.6		NW			3		5						
Salonica			29.85	758.2	61.7	16.5		S			1		5						
Valona			29.78	756.3	57.9	14.4		NW			3		2						
Varna			29.84	758.0	48.2	9.0		N			2		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.95	760.6	66.7	19.3	73	NW			2		10n		SW	0	0	Threatening	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. 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	4.5	—15.3	82	Calm	0	0						0	0		Hon. J. Ferguson.
Brockville, Ontario			30.37	771.4	6	—14.4		Calm	0	0		0	0			0	0	Clear	W. R. Bigg.
*Chatham, N. B.			29.93	760.2	10	—12.2	79	NW	6	2.7		0	0			0.01	0.3	Clear	G. A. Blair.
Charlottetown, P. E. Island			29.79	756.7	18	— 7.8	94	N	19	8.5			10s			0.01	0.3	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.31	769.9	5.7	—14.6	83	W			1	1c				0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			30.03	762.7	7.9	—13.4	77	W			2					0	0		H. A. Johnson.
Esquimault, B. C.			29.53	750.0	41.6	5.3	100	N	1	0.4			10			0.07	1.8	Cloudy	W. H. Bevis.
Fredericton, N. B.			29.99	761.7	12.2	—11.0	73	NW	5	2.2						0	0		Prof. Harrison.
*Fort Garry, Manitoba			30.31	769.9	— 4	—20.0	96	Calm	0	0		Haze	28			0	0	Fair	James Stewart.
Goderich, Ontario			30.45	773.4	11.2	—11.6	80	Calm			0		18			0	0	Fine, clear	H. J. Strang, M. A.
Granton, Ontario			30.44	773.2	5.6	—14.7		W			1					0	0	Clear	James Grant.
*Halifax, N. S.			29.73	755.1	18	— 7.8	70	N	14	6.3			5k8		N	0	0	Fair	F. Allison, M. A.
*Kingston, Ontario			30.40	772.1	7	—13.9	77	Calm	0	0		0	0			0	0	Clear	S. Woods, M. A.
Little Current, Ontario			30.24	768.1	12	—11.1	65	W	8	3.6		0	0			Inap	Inap	Clear	G. B. Abrey, C. E
*Montreal, Quebec			30.30	769.6	3	—16.1	88	W	4	1.8		2c	0	W		0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.36	771.1	— 8	—22.2	66	Calm	0	0		2ck	0	NW		0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.14	773.2	9	—12.8	92	NW	4	1.8		0	0			0	0	Clear	Rev. R. Mooley.
*Port Dover, Ontario			29.67	753.6	20.8	— 6.2		NW	5	2.2		0	0			0	0	Fine	H. Morgan.
Port Hastings, N. S.			30.34	770.6	7.9	—13.4		Calm	0	0			8s			0	0		Peter Grant.
*Port Stanley, Ontario			30.46	773.7	— 1	—18.3	94	NW	5	2.2		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			30.16	766.1	10	—12.2	79	Calm	0	0		0	0			0	0	Clear	Capt. Ash, R. N.
St. John, N. B.			29.96	761.0	14	—10.0	72	N	7	3.1		6k				0	0		G. Murdoch, C. E.
*Saugeen, Ontario			30.38	771.6	7	—13.9	80	Calm	0	0		5c	0			0	0	Fair	K. Stewart.
Stayner, Ontario			30.36	771.1	15	— 9.4	84	NW	3	1.3		5ck	0	NW		0	0	Fair	R. J. Cole.
Stratford, Ontario			30.45	753.4	8.1	—13.3	96	Calm	0	0		1cs				0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.61	752.1	20	— 6.7	97	N	16	7.2			10n			0.25	6.3	Light snow	T. C. Hill.
*Toronto, Ontario			30.40	772.1	9	—12.8	82	NW	4	1.8		8ck	0	NW		0	0	Fair	Magnetic Observatory
Woodstock, Ontario																			J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The latitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			30.24	768.1	9	−12.8	78	Calm	0	0		0	0			Inap.	Inap.	Clear	
Alpena, Mich			30.32	770.1	9	−12.8	78	NW	4	1.8		0	0			0	0	Clear	
Atlantic City, N. J			30.29	769.4	20	− 6.7	70	NW	13	5.8		5c	0	N		Inap.	Inap.	Fair	
Augusta, Ga.			30.44	773.2	33	0.6	85	NE	4	1.8		2cs	0	NW		0	0	Fair	
Baltimore, Md			30.37	771.4	23	− 5.0	60	NW	4	1.8		2c	2s		NW	0	0	Fair	
Barnegat, N. J			30.26	768.6	20	− 6.7	70	NW	19	8.5		0	0			0.03	0.08	Clear	
Benton, Montana	27.10	688.3	29.99	759.4	17	− 8.3	100	Calm	0	0		10c	0			0	0	Cloudy	
Bismarck, Dakota	28.24	717.3	30.02	762.5	11	−11.7	60	SE	2	0.9			10s			0	0	Cloudy	
Boston, Mass			30.11	764.8	18	− 7.8	68	NW	11	4.9		1s	Haze			0	0	Fair	
Breckenridge, Minn			30.28	769.1	6	−14.4	76	SE	8	3.6		0	0			0	0	Clear	
Buffalo, N. Y			30.40	772.1	12	−11.1	71	SW	8	3.6		1c	1k	W	SW	0	0	Clear	
Burlington, Vt			30.26	768.6	10	−12.2	58	Calm	0	0		2c	0			0	0	Fair	
Cairo, Ill			30.53	775.4	37	− 0.6	68	Calm	0	0		1cs	0			0	0	Clear	
Cape Hatteras, N. C			30.25	768.3	34	1.1	61	NE	27	12.1			10s		NE	0.02	0.5	Cloudy	
Cape Henry, Va			30.35	770.9	30	− 1.1	78	N	16	7.2			10s		N	0.08	2.0	Cloudy	
Cape May, N. J			30.31	769.9	22	− 5.6	72	N	20	8.9		0	0			0	0	Clear	
Charleston, S. C			30.41	772.4	35	1.7	52	NE	12	5.4		0	0			0	0	Clear	
Cheyenne, Wyoming	24.02	610.1	29.96	761.0	23	− 5.0	100	W	2	0.9		1c	0			0	0	Clear	
Chicago, Ill			30.48	774.2	23	− 5.0	73	SW	4	1.8		0	Sm'e			0	0	Clear	
Cincinnati, Ohio			30.49	774.4	27	− 2.8	77	N	2	0.9		0	Fog			0	0	Fair	
Cleveland, Ohio			30.18	767.2	15.9	− 8.9	86	SW	8	3.6		0	0			0	0	Clear	
Colorado Springs, Col	24.09	611.9	29.96	761.0	34	1.1	27	NW	4	1.8		0	1s			0	0	Clear	
Corsicana, Tex			30.38	771.6	43	6.1	75	E	6	2.7			10s		SW	0	0	Cloudy	
Davenport, Iowa			30.49	774.4	20	− 6.7	70	Calm	0	0		5cs	Sm'e			0	0	Fair	
Denison, Tex			30.37	771.4	41	5.0	73	SE	4	1.8		0	5s			0	0	Fair	
Denver, Col.	24.82	630.4	30.04	763.0	23	− 5.0	60	S	1	0.4		0	0			0	0	Clear	
Detroit, Mich			30.43	773.2	15	− 9.4	82	W	4	1.8		0	Sm'e			0	0	Clear	
Dodge City, Kan	27.44	697.0	29.80	756.9	37	2.8	54	SE	20	8.9		0	8s		E	0	0	Fair	
Dubuque, Iowa			30.46	773.7	20	− 6.7	70	SW	3	1.3		0	0			0	0	Clear	
Duluth, Minn			30.34	770.6	9	−12.8	67	Calm	0	0		0	0			0	0	Clear	
Eastport, Me			29.95	760.7	17	− 8.3	84	N	14	6.3		0	8s		N	0	0	Fair	
Erie, Pa			30.42	772.7	13	−10.6	80	W	6	2.7		0	Sm'e			0	0	Clear	
Escanaba, Mich			30.36	771.1	9	−12.8	78	SW	4	1.8		0	0			0	0	Clear	
Fort Gibson, Indian Terr			30.35	770.9	37	2.8	54	Calm	0	0		8ck	Haze	NW		0	0	Fair	
Ft. St. Michaels, Alaska			30.20	767.1	− 6	−21.1		NE	28	12.5		0	0			0	0	Clear	
Fort Sill, Indian T	29.07	738.4	30.24	768.1	37	2.8	80	Calm	0	0		0	8ks		S	0	0	Cloudy	
Fort Sully, Dakota	28.30	718.8	30.10	764.5	10	−12.2	90	NW	3	1.3			Fog			0	0	Foggy	
Galveston, Tex			30.33	770.4	55	12.8	68	E	14	6.3		0	0			0	0	Clear	
Grand Haven, Mich			30.40	772.1	30	− 1.1	78	W	14	6.3		2k	5s	W	W	0	0	Fair	
Indianapolis, Ind			30.51	774.9	23	− 5.0	86	Calm	0	0			Fog			0	0	Foggy	
Indianola, Tex			30.32	770.1	61	16.1	70	E	20	8.9		1ck	Haze			0	0	Hazy	
Jacksonville, Fla			30.34	770.6	49	9.4	57	NE	6	2.7		0	8s		NE	0	0	Cloudy	
Keokuk, Iowa			30.47	773.9	23	− 5.0	73	Calm	0	0		8c	0	SW		0	0	Fair	
Key West, Fla			30.16	766.1	65.1	18.4	68	NE	18	8.0		5k	Haze	NE	NE	Inap.	Inap.	Hazy	
Kittyhawk, N. C			30.32	770.1	32	0.0	79	N	32	14.3			10ks		N	0	0	Cloudy	
Knoxville, Tenn			30.52	775.2	23	− 5.0	85	NE	4	1.8		1c	Haze	NW		0	0	Fair	
La Crosse, Wis			30.44	773.2	9	−12.8	57	S	5	2.2		Haze	0			0	0	Hazy	
Leavenworth, Kan			30.33	770.4	30	− 1.1	78	SE	8	3.6		5c	0			0	0	Fair	
Lexington, Ky	29.35	745.5	30.56	776.2	24	− 4.4	74	Calm	0	0		0	0			0	0	Clear	
Long Branch, N. J			30.28	769.1	28	− 2.2	67	NW	14	6.3		0	0			0	0	Clear	
Louisville, Ky			30.52	775.2	30	− 1.1	78	Calm	0	0		2c	0			0	0	Clear	
Lynchburg, Va			30.41	772.4	28	− 2.2	63	NW	2	0.9		0	0			0	0	Clear	
Malone, N. Y			30.27	768.8	9	12.8	78	SW	2	0.9		0	0			0.10	2.5	Clear	
Manhattan, Kan	29.08	738.6	30.29	769.4	27	− 2.8	77	SE	4	1.8		2cs	0			0	0	Clear	
Marquette, Mich			30.32	770.1	22	− 5.6	72	W	4	1.8		0	0			0	0	Clear	
Memphis, Tenn			30.50	774.7	30	− 1.1	78	Calm	0	0		0	Haze			0	0	Clear	
Milwaukee, Wis			30.47	773.9	15	9.4	82	W	9	4.0		0	Fog			0	0	Fair	
Mobile, Ala			30.40	772.1	37	2.8	71	N	10	4.5		0	0			0	0	Clear	
Montgomery, Ala			30.46	773.7	33	0.6	69	N	5	2.2		0	Sm'e			0	0	Clear	
Morgantown, W. Va			30.50	774.7	19	− 7.2	52	Calm	0	0		0	Sm'e			Inap.	Inap.	Smoky	
Mt. Washington, N. H	23.38	593.8	29.74	755.4	− 9	−22.8	100	N	36	16.1			Fog			0.15	3.8	Foggy	
Nashville, Tenn			30.50	774.7	29	− 1.7	67	Calm	0	0		0	0			0	0	Clear	
New Haven, Conn			30.23	767.8	23	− 5.0	60	NW	8	3.6		Haze	0			0	0	Clear	
New London, Conn			30.18	766.6	22	− 5.6	57	NW	13	5.8		0	0			0	0	Clear	
New Orleans, La			30.40	772.1	43	6.1	51	NE	9	4.0		0	Haze			0	0	Clear	
Newport, R. I			30.13	765.3	22	− 5.6	72	NW	16	7.2		0	0			0	0	Clear	
New York, N. Y			30.26	768.6	20	− 6.7	54	NW	6	2.7		2c	0	W		Inap.	Inap.	Clear	
Norfolk, Va			30.36	771.1	28	− 2.2	77	N	15	6.7		5k	2s	N	N	Inap.	Inap.	Fair	
North Platte, Neb	27.17	690.1	29.99	759.4	20	− 6.7	85	Calm	0	0		2c	0			0	0	Clear	
Omaha, Neb	29.14	740.1	30.28	769.1	23	− 5.0	93	SE	6	2.7		0	0			0	0	Clear	
Oswego, N. Y			30.34	770.6	13	−10.6	79	SE	3	1.3		Haze	Fog			0	0	Fair	
Pembina, Dakota			30.25	768.3	− 2	−18.9	83	Calm	0	0		0	0			0	0	Clear	
Philadelphia, Penn			30.34	770.6	21	− 6.1	85	N	16	7.2		2ck	Sm'e	NW		0	0	Fair	
Pike's Peak, Colorado	17.71	449.8	29.92	760.0	9.5	−12.5	70	SW	42	18.8		0	1s			0	0	Clear	
Pittsburgh, Penn			30.47	773.9	16	− 8.9	48	NW	5	2.2		5c	0			0	0	Fair	
Port Huron, Mich			30.40	772.1	15	− 9.4	82	SW	4	1.8		5c	1s	NW		0	0	Fair	
Portland, Me			30.07	763.8	22	− 5.6	72	NW	6	2.7		0	0			0	0	Clear	
Portland, Oregon			29.59	751.6	44	6.7	92	Calm	0	0			10n			0.14	3.6	Light rain	
Punta Rassa, Fla			30.21	767.3	52.5	11.4	68	N	14	6.3		Haze	Sm'e			0	0	Hazy	
Rochester, N. Y			30.35	770.9	13	−10.6	80	W	12	5.4		0	0			0	0	Clear	
Salt Lake City, Utah	25.53	648.4	30.24	768.1	22	− 5.6	60	NW	18	8.0		5c	0	SW		0.02	0.5	Fair	
Sandy Hook, N. J			29.86	758.4	44	6.7	36	SE	4	1.8			10s			0	0	Cloudy	
San Diego, Cal			30.14	765.5	52	11.1	86	N	8	3.6			10s		N	0	0	Cloudy	
San Francisco, Cal			29.77	756.1	51	10.6	86	SW	16	7.2			10n			1.18	30.0	Light rain	
Santa Fe, N. M	23.34	592.8	29.88	758.9	37	2.8	71	E	5	2.2		2s	2ks		SW	0	0	Threatening	
Savannah, Ga			30.40	772.1	40	4.4	56	NE	8	3.6		0	0			0	0	Clear	
Shreveport, La			30.47	773.9	39	3.9	77	NE	1	0.4		5c	0	W		0	0	Fair	
Smithville, N. C			30.39	771.9	29	− 1.7	77	N	9	4.0		0	0			0	0	Clear	
Springfield, Mass			30.20	767.1	19	− 7.2	52	N	12	5.4		0	0			0	0	Clear	
St. Louis, Mo			30.54	775.7	30	− 1.1	68	SE	4	1.8		0	0			Inap.	Inap.	Clear	
St. Marks, Fla			30.37	771.4	37	2.8	62	N	12	5.4		0	0			0	0	Clear	
St. Paul, Minn			30.32	770.1	14.5	− 9.7	73	SE	8	3.6		8c,cs	0			0	0	Fair	
St. Paul's Island, Alaska			29.78	756.4	26	− 3.3	87	E	41	18.3			10s			0.11	2.8		
Thatcher's Island, Mass			30.11	764.8	21	− 6.1	64	NW	18	8.0		0	2k		NW	0	0	Clear	
Toledo, Ohio			30.45	773.4	21	− 6.1	71	SW	6	2.7		0	0			0	0	Clear	
Tucson, Arizona	27.59	700.8	30.18	766.6	53	11.7		SE				0	2s			0	0	Fair	
Tybee Island, Ga			30.40	772.1	40	4.4	71	NE	14	6.3		2k	Haze	NE		0.04	1.0	Hazy	
Vicksburg, Miss			30.49	774.4	36.5	2.5	66	E	3	1.3		5c	Haze	W		0	0	Fair	
Virginia City	24.09	611.9	29.57	751.1	28	− 2.2	63	Calm	0	0		5ck	0	W		0	0	Cloudy	
Washington, D. C			29.40	772.1	22	− 5.6	72	NW	12	5.4		0	Sm'e			Inap.	Inap.	Clear	

UNITED STATES SERIES.—CONTINUED

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.39	771.9	28	— 2.2	67	N	8	3.6		0	0			0.02	0.5	Clear	
Wood's Holl, Mass			30.12	765.0	24	— 4.4	48	NW	20	8.9		2k	0	NW		0.14	3.6	Clear	
Wytheville, Va	27.92	709.2	30.26	768.6	25	— 3.9	85	SW	4	1.8		0	0			Inap.	Inap.	Clear, frost	
Yankton, Dakota	28.87	733.3	30.25	768.3	19	— 7.2	69	SE	7	3.1		0	0			0	0	Clear	
Yuma, Arizona			30.06	763.5	46	7.8		NE				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I			30.05	763.3	78	25.6	95	SE	12	5.4		0	5ks		NE	0	0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.01	762.2	76	24.4	85	E				5pk	5ks			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.24	768.1	75	23.9	71	SSE	6	2.7		2c	2k	SE		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I			30.22	767.6	74	23.3	81	Calm	0	0		2c	2s	SE	SE	0	0		James Gall.
Santiago de Cuba, W. I			29.85	758.2	74	23.3	76	E	1.2	0.5		0	0			0	0	Clear	Robert Mason.
Havana, Cuba, W. I			30.17	766.3	70	21.1	67	N	6.0	2.7		5k	0	NE		0	0	Fair, hazy	Charles Hasselbrink.
St. Georges, Bermudas			29.77	756.1	58.0	14.4	79	NW	29.0	13.0			10pk		NW	0.92	23.4	Threatening	C. F. Allen.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Navassa, W. I																			
Clifton, Jamaica, W. I	27.22	691.4	30.04	763.0	65	18.3	84	N	2.0	0.9		0	0			0	0	Fine & clear	C. Partridge.
Paramaribo, D. Guiana, S. A			30.00	762.0	81	27.2	78	NE			3		8ks			0.330	8.38	Cloudy, rainy	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.03	762.7	80.6	27.0										0	0		Dr. H. Groot.
Medellin, Colombia, S. A	25.21	640.4			64.5	18.1	76		0	0		3c	1s			0.02	0.5	Fair	Thomas Herran.
St. Johns, Newfoundland			29.43	747.5	22.5	— 5.3		NE					10n			0.20	5.1	Snowing	John Delaney.
York Factory, B. A			30.55	776.0	—30.5	—34.7		NW	12	5.4		3cs	Fog	NW		0.08	2.0		J. Fortescue.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	Weather.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Manhattan, 1,125.0 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.3 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MARCH 4, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.19	766.8	62.6	17.0	77	Calm			0		7			0	0	Cloudy	Charnot.
Algiers			30.07	763.8	68.7	20.4	69	Calm			0		7			0	0	Cloudy	Peter.
La Calle																			Kuntz.
Tunis			30.02	762.6	69.4	20.8	37	NNW			4		0			0	0	Clear	Jacques.
Sfax			30.08	763.9	54.0	12.2		W			3		7			Inap.	Inap.	Cloudy	Chauvey.
Saïda			30.15	765.8	77.4	25.2		WNW			4		6			0	0	Fair	Millot.
Tebessa			30.08	763.9	79.2	26.2		N			4		0			0	0	Clear	Colin.
Gerlville			30.19	766.7	68.2	20.1	15	NW			3		2			0	0	Clear	Buard.
Laghouat			30.12	765.1	68.0	20.0	64	NE			2		1			0	0	Clear	Guyot.
Biskra			30.05	763.2	79.9	26.6	14	NW			1		0			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	51.8	11.0	66	SW			4		4			0	0		Prof. Ivan Stosir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.97	761.2	42.8	6.0	79	NE			1		10			0.044	0.1		I. R. Observatory.
Eperies			30.00	761.9	44.2	6.8	67	S			3		5			0	0		Julius Mikolik.
Gratz	28.82	731.9	30.04	763.1	44.4	6.9	73	E			2		8			0.161	4.1		Andreas Rospini.
Hermannstadt	28.55	725.2	30.00	762.0	44.4	6.9	63	WNW			3		5			0	0		Prof. Reissenberger.
Kremsmünster	28.61	726.6	29.95	760.8	50.7	10.4	68	WSW			2		3			0.028	0.7		Prof. C. Wagner.
Lemberg			29.98	761.5	38.5	3.6	88	S			1		6			0	0		Dr. T. Stanecki.
Nyiregyhaza			30.04	763.1	47.5	8.6	65	NW			2		1			0	0		Habzsuda Daniel.
Pola			29.96	760.9	52.7	11.5	80	SW			0		10c		SW	0	0		I.R. Hydrographic Of'ce
Szegedin			30.04	763.1	48.4	9.1	51	N			3		7			0	0		Karl Stancel.
Trieste			29.95	760.6	54.3	12.4	85	Calm			0		0			0	0		Prof. V. Farolfi.
Vienna			29.98	761.6	41.9	5.5	95	S			1		10			0.283	7.2	Foggy	I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.79	756.7	50.5	10.3	67	WSW			2		10			0.030	0.75		Royal Observatory

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

BRITISH SERIES.

ished by the cöoperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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.
Aberdeen			28.87	733.3	43.4	6.3		SSW	21	9.4			4			0	0	Blue sky	William Boswell.
Ardrossan			29.18	741.1	47	8.3		W			8		8					Showery	J. Mayes.
Armagh Observatory			29.48	748.8	51.3	10.7		WSW	26	11.6			10					Showery	S. Cal., for Dr. Robinson
Bidston, Liverpool Obs.			29.51	749.5	45.0	7.2		WSW	48	21.5			6					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			29.68	753.9	42.5	5.8		W			3–4		4					Blue sky	J. Dreyer.
Bradford			29.45	748.0	45.6	7.6		W			4		4			0.04	1.0	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	79.4	26.3		NE			2		6					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			29.65	753.1	47.0	8.3		WSW			3		7					*D. clouds	H. Todd.
Carlington			29.68	753.9	47.0	8.3		W			3		4					Blue sky	John McLaren.
Carlisle			29.31	744.5	40	4.4		SW			8		10			0	0	Raining	Bell, for J. Cartmell.
Chatham, School M. E.			29.67	753.6	54.2	12.3		SW			1		4					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	28.39	721.1	29.92	760.0	38.6	3.7		NW			6		10					Rain and fog	R. E. Power.
Donaghadee			29.36	745.7	45	7.2		W			7		3					*D. clouds	J. Mac Gowan.
Dover			29.73	755.1	47	8.3		WSW			4		0					Clear	J. Costello.
Eccles, (near Manchester)			29.53	750.0	48.0	8.9		SW	13.8	6.2			6					Squally	Thomas Mackereth.
Falmouth Observatory			29.89	759.2	44.8	7.1		W	33	14.8			4					Squally	The Staff.
Fort Napier, (Natal)	27.73	704.3	29.97	761.2	71.5	21.9		NW			1		8					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.86	758.4	87	30.6		N			1		8					*D. clouds	(tis.
Galway, Queen's College			29.63	752.6	42	5.6		W			7		7					Gloomy	G. G. Clare, for Prof. Gar-
Gibraltar, (Mediterranean)			30.18	766.6	61.8	16.6		W			5		10					Overcast	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.09	738.9	43.4	6.3		SW			6		10					Squally	Lewis Stuart.
Great Yarmouth			29.62	752.3	47	8.3		WSW			5		6					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			29.73	755.1	46.6	8.1		W			3		6					*D. clouds	The Staff for G. B. Airy
Guernsey			29.90	759.4	48	8.9		WNW			5		3			Blank	Blank	Squally	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.51	749.5	43.7	6.5		WSW			4		7					*D. clouds	E. J. Crossley.
Helston			29.88	758.9	50	10.0		SW			6		8			0.29	7.4	Gloomy	M. P. Moyle.
Holyhead			29.58	751.3	45	7.2		WSW			6		5					*D. clouds	John Tilston.
Kew Observatory			29.73	755.1	46.0	7.8		W	14	6.3			8					*D. clouds	The Staff.
Kingstown			29.59	751.6	44	6.7		WNW			6		10					Overcast	George Mitchell
Leicester Museum			29.64	752.8	46.3	7.9		W			2		3					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.01	762.2	61.4	16.3		NW			2		6k						Fred Travis, Pvt A.H.C.
Nairn			28.89	733.8	47	8.3		SW			4		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.28	769.1	68.3	20.2		N			6		6					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.60	751.8	47.0	8.3		WSW			4		7d		W	0.010	0.25	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.63	752.6	43.2	6.2		WSW			6–7		6			Blank	Blank	*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.69	754.1	45	7.2		W			4		5					*D. clouds	J. Lucas.
Plymouth			29.85	758.2	49	9.4		WNW			5		6					*D. clouds	John Merrifield.
Roche's Point			29.89	759.2	42	5.6		WNW			6		5					Squally	W. Kennedy.
Saint Ann's Head			29.74	755.4	45	7.2		W			6		7					Squally	John C. Walker.
Saint Helier, (Jersey)			29.91	759.7	48.4	9.1		W			6		5					½ clouded	A. P. Amy.
Sandwick Manse (Orkneys)			29.75	755.6	46	7.8		WNW	17	7.6			8					Showery	Rev. Dr. Clouston.
Scarborough			29.41	747.0	46.9	7.8		WSW			6		7					*D. clouds	F. Shaw.
Scutari Cemetery (Turkey)			29.76	755.9	42.0	5.6		NE			2		10					Raining	Sergt. W. H. Lyne.
Sheffield			29.54	750.3	47.9	8.8		W			4		5			0.007	0.18	Blue sky	W. F. Cooper.
Silloth Rectory			29.30	744.2	41.7	5.4	81	W			6		10			0.205	5.21	Overcast	Rev. Francis Redford
Stonyhurst Observatory			29.48	748.8	43.3	6.3		SW			6		10					Threatening	S. J. Perry.
Stornoway, Lews C. (Hebr.)			28.83	732.3	46	7.8		WNW			4		10					Showery	John Smith.
Stratfield Turgiss			29.74	755.4	45.9	7.7		W			2		4					*D. clouds	Rev. Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Thurso			28.74	730.0	49	9.4		WNW			4		6					*D. clouds	John Trotter.
Truro, Royal Institution			29.89	759.2	47	8.3		NW			7		4					*D. clouds	W. Newcombe.
Valencia Observatory			29.86	758.4	44.3	6.8		WNW	30	13.4			5					*D. clouds	The Staff.
Sub-Series.																			
Cape Good Hope Obs.			30.01	762.2	76.3	24.6	44	SSE	24	10.7			5						The Staff, for E. J. Stone
Calf of Man, (Isle of Man)					45	7.2		W			8		0			0	0		
Leith, Restalrig Park			29.07	738.4	39.8	4.3		W			8		10ks			0.08	2.0	Stormy	Andrew Gibb.
Mauritius			29.81	757.2					11.6	5.2						0.35	8.9		
Monach Lt-house, Hebrides			28.82	732.0	46	7.8		NW			8		10			0.3	7.6		J. Youngclause.
North Unst, (Shetland Is.)			28.71	729.2	45	7.2		SW			3		10			Blank	Blank		

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,490 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.53	750.0	44.2	6.8	81	SW			4		8						
Faröe			29.59	749.2	41.2	5.1	90	WSW			4		1						
Godthaab, (Greenland)			29.43	747.4	6.8	—14.0	79	E			2		2						
Stykkisholm, (Iceland)																			
Thorshavn, (Faröe)			28.79	731.3	43.5	6.4	75	N			2		7						
Vestervig			29.35	745.6	39.2	4.0	77	SW			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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the air. Fahrenheit.	Temperature of the air. Centigrade.	Relative humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	51.8	11	74	NW			3		8cn		NW	0.079	2.0	Very cloudy	Normal School.
Amiens			29.83	757.6	45.0	7.2	88	NW			3		10			0.169	4.3	Covered	Normal School.
Avignon			29.95	760.6	66.9	10.4	42	N			2		0			0	0	Clear	Normal School.
Bar-sur-Seine			29.89	759.2	54.5	12.5	82	SW			2		10		SW	Inap.	Inap.	Covered	C. Saillard.
Beaumette, (near Angers)			29.98	761.5	60.0	10.0	62	W	13.2	5.9					W	0.126	3.2		Beaumette Observatory
Beauvais			29.87	758.7	52.0	11.1	63	WSW			2		10		W	0.020	0.50	Covered	Normal School.
Besançon			29.96	761.0	56.8	13.8	62	SSE			2		0			0.059	1.5	Clear	Normal School.
Bourg en Bresse			30.04	762.0	58.5	14.7	57	S			1		0					Clear	Normal School.
Bourges			30.09	764.3	48.2	9	92	WNW			2		10		SW	0	0	Covered	Normal School.
Brest			29.95	760.8	49.8	9.9	61	WNW			5		6n		WNW	0.256	6.50		Naval Observatory.
Caen																			Normal School
Chartres			29.97	761.1	46.9	8.3		SSW			6		10			0.012	0.3	Covered	Normal School.
Chaumont																			Normal School.
Clermont			29.92	760.0	61.2	16.2	36	W			1		2		W	0	0		Puy de Dome, Obs.
Commercy			29.91	759.7	50.5	10.3	93	SW			6		8n		SW	0.04	1.	Very cloudy	Normal School.
Commune de Gréasque*			29.98	761.4	67.3	19.6	46	NW			2		0			0	0		
Grenoble			29.96	760.9	54.3	12.4	72	E			2		0			0	0	Clear	Normal School.
Le Mans			29.97	761.1	50.2	10.1	66	NW			3		8		NW	0.130	3.3	Very cloudy	Normal School.
Loches			29.75	755.7	51.8	11	86	W			2		10			0.08	2.	Raining	Normal School.
Lons-Le-Saulnier			29.95	760.7	54.5	12.5	88	SSW			2		0			0	0	Clear	Normal School.
Mâcon			29.94	760.4	54.5	12.5	95	Calm			0		0			0	0	Clear	Normal School.
Mirecourt																			Normal School.
Metz			29.94	760.4	50.9	10.5	86	SW			3		10		SW	0.224	5.7		M. Schuster.
Nismes			29.96	760.9	72.0	22.2	27	N			2		2		N	0	0	Slightly cl'dy	Normal School.
Orleans			29.94	760.5	48.2	9	89	WSW			4		8		WSW	0	0	Very cloudy	Normal School.
Paris Observatory			29.91	759.8	46.2	7.9	76	SW			2		10			0.004	0.11	Raining	National Observatory.
Parthenay			30.05	763.2	46.4	8	95	W			2		8		W	0.098	2.5	Very cloudy	Normal School.
Privas			29.95	760.6	61.3	16.3		N			2		0			0	0	Clear	Normal School.
La Roche-sur-Yon			30.09	764.3	51.1	10.6	72	SW			2		5		NE	0.197	5.0	Cloudy	Normal School.
Rochefort, Observatory			30.12	765.0	50.0	10.0	81	W			3		10		E	0.079	2.0	Rainy	Naval Observatory.
Rouen			29.91	759.6	51.4	10.8	65	W			3		8		W	0.047	1.2	Very cloudy	Normal School.
Saint Lo			29.93	760.2	47.8	8.8	90	NW			3		8		NW	0	0		Normal School.
Tarbes			30.04	763.0	59.0	15	73	SW			4		8		E	0	0	Very cloudy	Normal School.
Toulouse																			Normal School.
Villefranche			30.05	763.2	52.5	11.4	79	SE			2		5		NE	0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.93	760.1	77.0	25	85	NE			2		8k,n						L'Abbé Marchési.
Gorée																			
Marseilles			29.96	760.9	63.1	17.3	62	SW			1		0			0	0	Clear	Marseilles Observatory.
Mont-Louis	24.82	630.4	30.13	765.2	54.1	12.3	33	SW	5.6	2.50			2		SW	0	0		—. Faiguère.
Montsouris, Paris			29.91	759.7	45.1	7.3	90	W			3		10		W	0.083	2.1	Covered	Montsouris Observ'tory.
Perpignan			29.96	761.9	60.4	15.8		E	11.2	5.00			3		SW	0	0		Dr. Fines.
Pic du Midi, (Summit) H. P.	21.15	537.3			30.9	− 0.6		SW			3		4			2.17	55.	Snowy	M. Baylac.
Saint Maur, (near Paris)			29.91	759.6	46.4	8.0	87	W			2		10			0.004	0.1	Very cloudy	E. Renou.
Toulouse			30.06	763.4	60.8	16.0	51	WNW			3		3			0	0		Toulouse Observatory.
Tours			29.98	761.6	49.6	9.8	82	WSW			4		10		W	0.126	3.2		C. Marquet.
Versailles, (near Paris)			29.90	759.5	46.4	8.0	86	W			3		10			0.081	2.05	Raining	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

* Near Marseilles.

GERMAN SERIES.

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

Stations.	Barometer. Corrected. Inches.	Barometer. Corrected. Millimeters.	Barometer. Reduced. Inches.	Barometer. Reduced. Millimeters.	Fahrenheit.	Centigrade.	Relative humidity. Per cent.	Wind direction. From—	Miles per hour.	Meters per second.	Force. 0—10.	Clouds. Up'er. 0—10.	Clouds. Low'r. 0—10.	Clouds. Upper. From—	Clouds. Lower. From—	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Bamberg			29.82	757.4	50.7	10.4	85	W			3		10			0.296	7.5		Prof. T. Hoh.
Berlin			29.76	755.9	54.5	12.5	74	S			2		8			0.567	14.4	Heavy rain	Prof. Arndt.
Breslau			29.89	759.2	47.5	8.6	92	SSW			3		10			0.185	4.7	Raining	Dr. P. Neugebauer.
Carlsruhe			29.86	758.5	56.5	13.6	62	SW			5		10			0.004	0.1		A. Senz.
Cassel			29.71	754.7	50.5	10.3	80	S			2		10			0.083	2.1		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main			29.91	759.6	53.2	11.8	70	SW			2		10			0.004	0.1		Physical Society.
Friedrichshafen			29.96	760.9	52.0	11.1	61	W					1			0.362	9.2		M. Wilhelm.
Hamburg			29.67	753.7	50.0	10.0	70	WSW			4		7s,k			0.252	6.4		Deutsche Seewarte.
Kiel			29.65	753.1	47.3	8.5	88	SW			3		8			0.311	7.9		Prof. G. Karsten.
Königsberg			29.76	756.0	37.9	3.3	87	S			2		9			0.067	1.7		Prof. E. Luther.
Köslin			29.69	754.0	47.5	8.6		S			2		10			0.268	6.8		H. Müller.
Leipsic			29.82	757.3	52.7	11.5	77	SW			4		10	WSW		0.343	8.7		Prof. Bruhns.
Memel			29.67	753.5	35.2	1.8	85	S			6		10			0.047	1.2	Light rain	Reinbrecht & Skalweit.
Münster			29.86	758.5	50.9	10.5	76	W			3		5			0.075	1.9	Raining	Prof. E. Heis.
Neufahrwasser			29.72	754.9	38.1	3.4	93	S			4		10			0.087	2.2	Light mist.	A. Lothes.
Posen			29.83	757.7	48.4	9.1	92	SW			5		10			0.232	5.9		Dr. Magener.
Strassburg, (in Alsace)			30.30	769.5	57.0	13.9	61	S			3		8			0	0		Dr. Schur.
Stuttgart			29.88	758.9	57.0	14.2	57	SW					4			0	0		Prof. Schoder.
Thorn			29.77	756.1	39.2	4.0	96	WSW			5		10			0.181	4.6		Dr. Hasenbalg.
Treves, (Trier)			29.78	756.5	48.9	9.4	80	W			2		10			0.244	6.2	Misty	Prof. Flesch.
Wustrow, Naval School			29.63	752.5	44.6	7.0	84	SW			3		5			0.083	2.1		E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Athens																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Udine			29.93	760.3	56.5	13.6	48	Calm	0	0			2			0	0		
Padua			29.93	760.2	55.0	12.8	65	NE	3.1	1.4			4			0	0		
Vicenza			29.94	760.4	55.0	12.8	63	E	1.3	0.6			2			0	0		
Verona			29.92	760.0	60.8	16.0	54	W			1		0			0	0		
Bergamo	28.58	725.8	29.89	759.3	56.3	13.5	62	E			2		1			0	0		
Domodossola	28.74	732.6	29.87	758.6	64.0	17.8	40	SSW			4		0			0	0		
Milan			29.93	760.1	60.1	15.6	64	ESE			1		1			0	0		
Pavia			29.92	760.0	58.5	14.7	61	E			4		0			0	0		
Moncalieri			29.91	759.8	59.4	15.2	60	SSE	3.8	1.7			1			0	0		
Mondovi	28.00	711.3	29.92	760.0	55.8	13.2	51	NW			2		0			0	0		
Porto Maurizio			30.02	762.4	58.5	14.7		E			2		3	W		0	0		
Genoa			29.96	760.9	55.8	13.2	75	SW	1.8	0.8			10	SE		0	0		
Piacenza			29.91	759.8	57.9	14.4	63	SE	14.3	6.4			2			0	0		
Parma			29.94	760.4	57.9	14.4	70	E			2		1	NW		0	0		
Bologna			30.00	761.9	57.4	14.1	25	W			6		4	SE		0	0		
Florence			30.00	761.9	59.2	15.1	64	W			2		0			0	0		
Leghorn			29.97	761.2	58.5	14.7	60	NE	2.5	1.1			4			0	0		
Siena	28.74	730.0	29.96	760.9	58.5	14.7	61	NW	0	0			5	W		0	0		
Urbino	28.41	721.7	29.98	761.4	55.8	13.2	62	NE			2		2			0	0		
Pesaro																			
Ancona			30.08	763.9	55.0	12.8	68	SE			4		2			0	0		
Grosseto			29.97	761.3	60.1	15.6	70	SW			4		6	S		0	0		
Rome			29.98	761.6	63.0	17.2	68	SSW	4.9	2.2			6	SW		0	0		
Naples, O. U.			30.00	761.9	62.4	16.9	61	SSW			1		2	NNW		0	0		
Lecce			29.95	760.8	57.4	14.1	54	NE	24.8	11.1			3			0	0		
Cosenza			29.94	760.5	61.2	16.2	64	SE	11.2	5.0			3			0	0		
Riposto, (Sicily)			29.97	761.2	60.6	15.9	73	E			4		1	SW		0	0		
Palermo			29.95	760.8	59.4	15.2	64	NE	3.8	1.7			10			0	0		
Caltanissetta	28.00	711.1	29.95	760.8	57.6	14.2	55	NW			2		1	NE		0	0		
Sub-Series.																			
Naples, S. R.			29.97	761.1	59.5	15.3	73	SW	1.8	0.8			..0	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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters., or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Tokio																			

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Flushing			29.78	756.3	47.1	8.4		W			4								
Groningen			29.60	751.9	47.5	8.6		WSW			5								
Helder			29.63	752.7	45.5	7.5		SSW			4								
Utrecht			29.67	753.6	51.6	10.9	68	SW			5		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Bergen			29.95	735.3	41.7	5.4	85	S	26.6	11.9			10			0.322	8.2		
Brönö			28.99	736.4	37.4	3.0	59	E	25	11			9			0	0		
Christiania			29.13	740.0	38.1	3.4	92	S	15.7	7.0			8			0.425	10.8		
Tromsö			29.35	745.4	24.1	— 4.4	75	E	0	0			0			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. —to.	Clouds. Amount. Up'er —t.	Clouds. Amount. Low'r —to.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.60	777.3	55.8	13.2	82	SW	7.3	3.28			7			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.21	767.2	57.9	14.4	36	NW	25.0	11.17			5	NW		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.42	772.6	65.8	18.8	56	NE	11.4	5.09			2			0.031	0.8		Capt. D. A. da Cunha.
Lisbon			30.37	771.4	56.3	13.5	44	N	33.6	15.0			6			0	0		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. —to.	Clouds. Amount. Up'er —t.	Clouds. Amount. Low'r —to.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.87	758.8	43.9	6.6	70	SE	18	8			10						Astronomical Obs.
Wilna			29.97	761.2	33.3	0.7	94	S	4	2			10						Astronomical Obs.
Dorpat			29.80	756.8	35.1	1.7	78	S	11	5			10						Physical Cabinet.
St. Petersburg			29.88	758.9	31.6	— 0.2	87	S	11	5			10						Central Physical Obs.
Kuopio			29.73	755.2	28.4	— 2.0	100	S	22	10			10					Snowing	Ch. Forsten.
Kieff			30.14	765.5	27.7	— 2.4	92	SE	9	4			10						Physical Cabinet
Nikolaiev			30.15	765.7	31.8	— 0.1	83	NE	13	6			9						Kurdakof.
Kertch			30.06	763.4	31.6	— 0.2	85	NE	13	6			9						Lagorio.
Moscow			30.30	769.7	17.4	— 8.1	71	SSW	13	6			10					Snowing	Meteorological Obs.
Lugan			30.14	765.6	19.8	— 6.8	75	ENE	18	8			8			Blank	Blank		Meteorological Obs.
Archangel			29.78	756.5	28.8	— 1.8	92	SW	22	10			10						Ogorodnikof.
Tiflis	28.48	723.3	29.91	759.7	47.1	8.4	56	SW	4	2			10						Physical Observatory.
Astrakhan			30.20	767.0	21.4	— 5.9	82	E	9	4			10			Blank	Blank		Sebastianof.
Kasan			30.45	773.3	3.0	—16.1	71	S	7	3			0						Physical Cabinet.
Orenburg			30.60	777.2	3.4	—15.9	71	NE					0						Tschernischef.
Ekaterinburg	29.29	744.0	30.37	771.3	20.8	— 6.2	46	WSW	13	6			7						Meteorological Obs.
Nukuss			30.08	764.1	34.2	1.2	75	NE	7	3			8						
Kasaly																			Bobrof.
Tashkend	28.43	722.1	30.17	766.3	46.4	8.0	64	Calm	0	0			6						Michelson.
Barnaul			30.61	777.6	—21.5	—29.7	71	Calm	0	0			0						Meteorological Obs.
Yeniseisk			30.21	767.3	— 7.6	—22.0	61	SW	2	1			0						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.11	764.9	42.4	5.8	55	Calm	0	0			0						Physical Observatory.
Nertchinsk	27.58	700.4	29.78	756.4	11.1	—11.6	88	Calm	0	0			8						Meteorological Obs.
Vladivostock			30.35	770.9	19.0	— 7.2	61	N	2	1			0						
Nikolaievsk, on the Amoor					— 7.4	—21.9	85	Calm	0	0			0						

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 305.4? m., or 1,005.2? ft.; Tasnkend, m. 494.27, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. —to.	Clouds. Amount. Up'er —t.	Clouds. Amount. Low'r —to.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.01	762.2	58.1	14.5	38	NW	16.4	7.33		0	9			0	0	Almost cov'd	Royal Observatory.
San Fernando			30.23	767.7	62.4	16.9	61	NW	13.7	6.1		2	2	SE	SE	0	0		The Naval Observatory

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. —to.	Clouds. Amount. Up'er —t.	Clouds. Amount. Low'r —to.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.60	751.8	27.0	— 2.8	96	S			4		10			0.354	9.0	Snowing	
Umea			29.41	746.9	30.0	— 1.1	100	S			8		10			0.244	6.2	Snowing	
Hernosand			29.18	741.1	32.0	0.0	96	SE			7		10			0	0	Snowing	
Stockholm			29.34	745.2	34.5	1.4	94	SSW			2		10			0.004	0.1	Foggy	
Wisby			29.51	749.6	36.3	2.4	93	SW			7		10			0.028	0.7		
SUB-SERIES.																			
Upsala			29.31	744.5	34.5	1.4	96	S	20.6	9.2			10			0.152	3.85		Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Geneva	28.53	724.6	29.94	760.5	57.0	13.9	59	NW			1		0			0	0	Clear	The Observatory.
Zurich	28.31	719.1	29.95	760.8	53.4	11.9	74	W			1		3			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —0.8 mm.; Thermometer, +7.8 cent.; Relative Humidity, —6 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Constantinople			29.80	756.9	41.5	5.3	86	NNE	17	7.5			10		NNE	Inap.	Inap.	Light rain	
Fao, (Persian Gulf)			30.08	764.0	66.2	19.0		SE			1		0						
Salonica			29.85	758.2	59.5	15.3		NE			2		2						
Valona			29.76	755.8	59.4	15.2		NW			3		2						
Varna			29.96	761.0	41.0	5.0		NE			2		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y													10ks		S	0.03	0.8	Threatening	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Bathurst, N. B.			30.10	764.5	15.6	— 9.1	77	NW	3.0	1.3						0	0		Hon. J. Ferguson.
Brockville, Ontario			30.47	773.9	11	—11.7		Calm	0	0		2c	0	SW		0	0	Fair	W. R. Bigg.
*Chatham, N. B.			30.13	765.3	15	— 9.4	66	NW	12	5.4		8c	0	NW		0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island.			30.07	763.8	15	— 9.4	81	NW	13	5.8		0	0			0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			30.38	771.6	17.5	— 8.1	75	S			1	3c				0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			30.16	766.1	15.5	— 9.2	68	W			2	5k				0	0		H. A. Johnson.
Esquimault, B. C.			29.63	752.6	37.1	2.8	91	Calm	0	0		1cs				0	0	Clear	W. H. Bevis.
Fredericton, N. B.			30.22	767.6	13.1	—10.5	61	NW	10	4.5		2cs				0	0		Prof. Harrison.
*Fort Garry, Manitoba			29.98	761.5	16	— 8.9	100	Calm	0	0			Fog			0	0	Foggy	James Stewart.
Goderich, Ontario			30.42	772.7	23.7	— 4.6	78	SW			3	10k				0	0	Cloudy	H. J. Strang, M. A.
Granton, Ontario			30.41	772.4	16.4	— 8.7		SW			1							Clear	James Grant.
*Halifax, N. S.			30.11	764.8	18	— 7.8	68	W	7	3.1		0	0			0	0	Clear	F. Allison, M. A.
*Kingston, Ontario			30.46	773.7	13	—10.6	97	Calm	0	0		5c	Sm'e			0	0	Fair	S. Woods, M. A.
Little Current, Ontario			30.31	769.9	14.6	— 9.7		Calm	0	0			10s			0	0		G. B. Abrey, C. E.
*Montreal, Quebec			30.35	770.9	16	— 8.9	75	SW	18	8.0		2cs	2s	W	W	0	0	Fair	C. H. McLeod, C. E.
*Ottawa, Ontario			30.39	771.9	1	—17.2	85	Calm	0	0		2cs	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.39	771.9	6	—14.4	90	E	4	1.8		5ks	2ks	W	W	0	0	Fair	Rev. R. Mooley.
*Port Dover, Ontario			30.45	773.4	14	—10.0	100	SW	6	2.7			Fog		SW	0	0	Foggy	H. Morgan.
Port Hastings, N. S.			30.04	763.0	19.0	— 7.2		NW	10	4.5						0	0	Fine	Peter Grant.
*Port Stanley Ontario			30.43	772.9	24	— 4.4	89	SW	10	4.5		Haze	0			0	0	Fair	M. Payne.
*Quebec, Quebec			30.30	769.6	7	—13.9	88	SW	15	6.7		8k	2ks	SW	SW	0	0	Fair	Capt. Ash, R. N.
St. John, N. B.			30.23	767.8	14	—10.0	82	NW	2	0.9						0	0		G. Murdoch, C. E.
*Saugeen, Ontario			30.34	770.6	20	— 6.7	85	Calm	0	0			10ks			0	0	Cloudy	K. Stewart.
Stayner, Ontario			30.38	771.6	12	—11.1	92	Calm	0	0		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario			30.42	772.7	17.5	— 8.1	90	Calm	0	0		3s				0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.96	761.0	21	— 6.1	67	W	7	3.1		0	0			0.09	2.3	Clear	T. C. Hill.
*Toronto, Ontario			30.43	772.9	18	— 7.8	81	W	1	0.4		8cs	2s	W	W	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario																			J. Montgomery

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	16	— 8.9	83	Calm	0	0		5k	5ks	W	W	0	0	Cloudy	
Alpena, Mich.			30.27	768.8	15	— 9.4	82	S	1	0.4			10s			0	0	Cloudy	
Atlantic City, N. J.			30.48	774.2	25	— 3.9	63	NW	6	2.7		0	0			0	0	Clear	
Augusta, Ga.			30.48	774.2	31	— 0.6	89	Calm	0	0		2cs	Fog			0	0	Fair	
Baltimore, Md.			30.52	775.2	31	— 0.6	68	NW	3	1.3		0	Sm'e			0	0	Fair	
Barnegat, N. J.			30.47	773.9	24	— 4.4	74	NW	9	4.0		0	0			0	0	Clear	
Benton, Montana	26.09	685.5	29.79	756.7	16	— 8.9	100	NE	6	2.7			10s		NE	0	0	Cloudy	
Bismarck, Dakota	27.93	709.4	29.68	753.9	10	—12.2	58	NE	2	0.9		0	0			0	0	Clear	
Boston, Mass.			30.39	771.9	18	— 7.8	68	W	6	2.7		0	Sm'e			0	0	Smoky	
Breckenridge, Minn.			29.90	759.4	9	—12.8	78	E	8	3.6		0	0			0	0	Clear	
Buffalo, N. Y.			30.44	773.2	20	— 6.7	70	SW	5	2.2		Haze	1s			0	0	Fair	
Burlington, Vt.			30.41	772.4	10	—12.2	68	Calm	0	0		0	2s			0	0	Fair	
Cairo, Ill.			30.32	770.1	39	3.9	47	SE	5	2.2		10cs	0	W		0	0	Cloudy	
Cape Hatteras, N. C.			30.42	772.7	38	3.3	63	N	8	3.6		0	0			0	0	Clear	
Cape Henry, Va.			30.49	774.4	38	3.3	63	NE	13	5.8		0	0			0	0	Clear	
Cape May, N. J.			30.50	774.7	27	— 2.8	66	N	6	2.7		0	0			0	0	Clear	
Charleston, S. C.			30.48	774.2	42	5.6	75	N	6	2.7		0	Sm'e			0	0	Clear	
Cheyenne, Wyoming	23.74	603.0	29.68	753.9	29	— 1.7	59	W	4	1.8		1c	0			0	0	Clear	
Chicago, Ill.			30.22	767.6	36	2.2	62	S	5	2.2		0	0			0	0	Clear	
Cincinnati, Ohio			30.38	771.6	31	— 0.6	68	E	1	0.4		1c	Sm'e			0	0	Clear	
Cleveland, Ohio			30.45	773.1	22.4	— 5.3	85	SE	7	3.1		2c	0	W		0	0	Clear	
Colorado Springs, Col.	23.72	602.5	29.69	754.1	48	8.9	23	E	12	5.4		8cs	0	SW		0	0	Fair	
Corsicana, Tex.			30.12	765.0	55	12.8	93	SE	9	4.0			10s		SE	0.11	3.6	Cloudy	
Davenport, Iowa			30.16	766.1	33	0.6	79	S	4	1.8		0	Sm'e			0	0	Clear	
Denison, Tex.			30.05	763.3	54	12.2	73	SE	5	2.2			10s			0.04	1.0	Cloudy	
Denver, Col.	24.52	622.8	29.74	755.4	38	3.3	45	W	2	0.9		0	0			0	0	Clear	
Detroit, Mich.			30.38	771.6	24	— 4.4	87	S	4	1.8		8ck	0	W		0	0	Fair	
Dodge City, Kan.	27.20	790.9	29.48	748.8	42	5.6	74	E	9	4.0		0	0			0	0	Clear	
Dubuque, Iowa			30.12	765.0	33	0.6	69	SE	4	1.8		0	0			0	0	Clear	
Duluth, Minn.			30.01	762.2	20	— 6.7	55	Calm	0	0		2c	0			0	0	Clear	
Eastport, Me.			30.22	767.6	17	— 8.3	67	NW	8	3.6		5c	0	NW		0	0	Fair	
Erie, Pa.			30.43	772.9	20	— 6.7	85	S	8	3.6		Haze	Sm'e			0	0	Hazy	
Escanaba, Mich.			30.17	766.3	17	— 8.3	75	S	5	2.2			10s			0	0	Cloudy	
Fort Gibson, Indian Terr.			30.05	763.3	49	9.4	85	SE	14	6.3			10n			0.06	1.5	Light rain	
Ft. St. Michaels, Alaska			30.02	762.5	2	—16.7		NE	31	13.9		8cs	0	SW		0	0	Fair	
Fort Sill, Indian T.	28.75	730.2	29.86	758.4	50	10.0	71	SE	12	5.4		5ks	2s	SE	SE	0	0	Cloudy	
Fort Sully, Dakota	28.00	711.2	29.77	756.1	9	—12.8	89	Calm	0	0			Fog			0	0	Foggy	
Galveston, Tex.			30.24	768.1	62	16.7	83	SE	2	0.9			10s			0	0	Cloudy	
Grand Haven, Mich.			30.28	769.1	27	— 2.8	83	S	3	1.3		0	1s			0	0	Clear	
Indianapolis, Ind.			30.35	770.9	33	0.6	79	SE	7	3.1		0	0			0	0	Clear	
Indianola, Tex.			30.29	767.1	64	17.8	83	SE	11	4.9			10s		SW	0	0	Cloudy	
Jacksonville, Fla.			30.41	772.4	43	6.1	75	NE	4	1.8		0	0			0	0	Clear	
Keokuk, Iowa			30.15	766.8	34	1.1	71	S	5	2.2		0	0			0	0	Clear	
Key West, Fla.			30.25	768.3	66.1	18.9	68	NE	22	9.8		5k	0	NW		0	0	Fair	
Kittyhawk, N. C.			30.51	774.9	37	2.8	63	N	16	7.2		0	0			0	0	Clear	
Knoxville, Tenn.			30.45	773.7	27	— 2.8	77	Calm	0	0		2c	Fog	NW		0	0	Fair	
La Crosse, Wis.			30.05	763.3	33	— 1.1	59	S	9	4.0		Haze	Haze			0	0	Hazy	
Leavenworth, Kan.			30.00	762.0	38	3.3	71	S	7	3.1		5c	Haze			0	0	Fair	
Lexington, Ky.	29.25	742.9	30.44	773.2	29	— 1.7	67	SE	8	3.6		0	0			0	0	Clear	
Long Branch, N. J.			30.49	774.4	29	1.7	67	NW	4	1.8		0	0			0	0	Clear	
Louisville, Ky.			30.38	771.6	31	— 0.6	79	Calm	0	0		2c	0			0	0	Clear	
Lynchburg, Va.			30.56	776.2	26	— 3.3	76	Calm	0	0		0	Sm'e			0	0	Smoky	
Malone, N. Y.			30.38	771.6	16	— 8.9	65	S	6	2.7		5cs	0	NW		0	0	Fair	
Manhattan, Kan.	28.70	729.0	29.86	758.4	40	4.4	49	SW	10	4.5		0	8ks			0	0	Cloudy	
Marquette, Mich.			30.09	764.3	28	— 2.2	77	E	8	3.6		0	2s			0	0	Fair	
Memphis, Tenn.			30.32	770.1	46	7.8	47	Calm	0	0			10s			0	0	Cloudy	
Milwaukee, Wis.			30.24	768.1	27	— 2.8	77	SE	6	2.7		0	0			0	0	Clear	
Mobile, Ala.			30.35	770.9	44	6.7	67	NW	1	0.4		8k	Sm'e	W		0	0	Cloudy	
Montgomery, Ala.			30.41	772.4	42.5	5.8	62	E	5	2.2		10ck	Sm'e			0	0	Cloudy	
Morgantown, W. Va.			30.50	774.7	21	— 6.1	71	Calm	0	0		0	Sm'e			0	0	Clear	
Mt. Washington, N. H.	23.69	601.7	30.05	763.3	2	—18.9	72	N	34	15.2		8c	0	NW		0	0	Fair	
Nashville, Tenn.			30.36	771.1	33	0.6	79	E	1	0.4		8k	2s	W		0	0	Cloudy	
New Haven, Conn.			30.44	773.2	28	— 2.2	77	Calm	0	0		Haze	Fog			0	0	Fair	
New London, Conn.			30.44	773.2	26	— 3.3	56	NW	4	1.8		0	Haze			0	0	Clear	
New Orleans, La.			30.30	769.6	51	10.6	76	E	5	2.2		9k	Sm'e	W		0	0	Cloudy	
Newport, R. I.			30.41	772.4	23	— 5.0	60	NW	4	1.8		0	0			0	0	Clear	
New York, N. Y.			30.47	773.9	25	— 3.9	62	NW	5	2.2		0	0			0	0	Clear	
Norfolk, Va.			30.51	774.9	32	0.0	69	N	6	2.7		0	Haze			0	0	Clear	
North Platte, Neb.	26.81	681.0	29.43	747.5	29	— 1.7	77	Calm	0	0		0	2s			0	0	Fair	
Omaha, Neb.	28.82	732.0	29.92	760.0	36	2.2	80	Calm	0	0		5c	Haze	W		0	0	Fair	
Oswego, N. Y.			30.43	772.9	25	— 3.9	82	SW	4	1.8			8ks		NW	Inap.	Inap.	Fair	
Pembina, Dakota			29.94	760.5	20	— 6.7	100	W	4	1.8			Fog			0	0	Foggy	
Philadelphia, Penn.			30.51	774.9	26	— 3.3	63	N	12	5.4		0	0			0	0	Clear	
Pike's Peak, Colorado	17.52	445.0	29.73	755.1	8.5	—13.1	77	SW	50	22.4		0	2s			0	0	Fair	
Pittsburgh, Penn.			30.49	774.4	22	— 5.6	70	Calm	0	0			10s			0	0	Cloudy	
Port Huron, Mich.			30.38	771.6	23	— 5.0	86	S	9	4.0			10s			0	0	Cloudy	
Portland, Me.			30.36	771.1	18	— 7.8	68	NW	4	1.8		1c	Haze	NW		0	0	Fair	
Portland, Oregon			29.68	753.9	38	3.3	95	Calm	0	0		0	5s			0.12	3.0	Fair	
Punta Rassa, Fla.			29.33	770.4	54.6	12.6	80	NE	12	5.4		0	0			0	0	Clear	
Rochester, N. Y.			30.42	772.7	17	— 8.3	83	SW	8	3.6		0	2s			0	0	Fair	
Salt Lake City, Utah	25.20	640.1	29.53	750.0	43	6.1	35	S	6	2.7		0	0			0	0	Clear	
Sandy Hook, N. J.			30.47	773.9	26.5	— 3.1	77	N	7	3.1		0	0			0	0	Clear	
San Diego, Cal.			29.98	761.5	53	11.7	86	NW	16	7.2			10n		NW	0.57	14.5	Light rain	
San Francisco, Cal.			29.69	754.1	46	7.8	84	SE	8	3.6			10s			0.65	16.5	Cloudy	
Santa Fe, N. M.	23.18	588.8	29.72	754.9	39	3.9	81	E	4	1.8		2s	2ks	SW	SW	0	0	Threatening	
Savannah, Ga.			30.47	773.9	38	3.3	56	NW	4	1.8		2c	0			0	0	Clear	
Shreveport, La.			30.33	770.4	49	9.4	85	SE	4	1.8			10n			0.11	2.8	Light rain	
Smithville, N. C.			30.49	774.4	35	1.7	64	N	6	2.7		0	0			0	0	Clear	
Springfield, Mass.			30.43	772.9	18	— 7.8	67	NE	4	1.8		0	1s, sm'e			0	0	Clear	
St. Louis, Mo.			30.24	768.1	37	2.8	70	S	12	5.4		0	0			0	0	Clear	
St. Marks, Fla.			30.40	772.1	39	3.9	81	NE	6	2.7		2ck	0	NW		0	0	Fair	
St. Paul, Minn.			29.91	759.7	26.5	— 3.1	77	E	10	4.5		8c	0	W		0	0	Fair	
St. Paul's Island, Alaska			29.67	753.6	31	— 0.6	89	S	15	6.7			10s			1.14	29.0		
Thatcher's Island, Mass.			30.38	771.6	20	— 6.7	55	NW	12	5.4		0	0			0	0	Clear	
Toledo, Ohio			30.37	771.4	25	— 3.9	75	S	1	0.4		8cs	Sm'e	SW		0	0	Fair	
Tucson, Arizona	27.40	698.2	30.08	764.5	50	10.0		SE					10s			0	0	Cloudy	
Tybee Island, Ga.			30.47	773.9	45	7.2	85	NE	4	1.8		2c	Haze	SW		0	0	Hazy	
Vicksburg, Miss.			30.38	771.6	49	9.4	50	SE	4	1.8		10s	Sm'e			0	0	Cloudy	
Virginia City	23.78	604.0	29.26	743.2	36	2.2	70	NE	3	1.3		10k	0	W		0	0	Cloudy	
Washington, D. C.			30.53	775.4	27.5	— 2.5	72	NW	2	0.9		Haze	Sm'e			0	0	Smoky	

UNITED STATES SERIES.—CONTINUED

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Wilmington, N. C			30.50	774.7	34	1.1	79	NE	5	2.2		0	Sm'c			0	0	Clear	
Wood's Holl, Mass			30.41	772.4	25	— 3.9	49	NW	11	4.9		0	0			0	0	Clear	
Wytheville, Va	28.01	711.4	30.34	770.6	23	— 5.0	73	Calm	0	0		0	0			0	0	Clear, frost	
Yankton, Dakota	28.53	724.6	29.88	758.9	21	— 6.1	78	SE	1	0.4		0	0			0	0	Clear	
Yuma, Arizona			29.88	758.9	54	12.2		E				5cs	5s	W	W	0	0	Cloudy	
Sub-Series.																			
Bridgetown, B'b'dos, W. I			30.07	763.8	79	26.1	82	NE	4	1.8		2k	5ks	N	NE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.99	761.7	78	25.6	86	E				2c	5k			0.52	13.2	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.24	768.1	76	24.4	63	ENE	3	1.3		2cs	2k	S		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I			30.23	767.8	74	23.3	81	Calm	0	0		8c	8s	NE	NE	0	0		James Gall.
Santiago de Cuba, W. I			29.91	759.7	72	22.2	67	N	7.2	3.2		0	0			0	0	Clear	Robert Mason.
Havana, Cuba, W. I			30.21	767.3	73	22.8	67	E	8.4	3.8		5k	2n	E		0	0	Cloudy	Charles Hasselbrink.
St. Georges, Bermudas			30.17	766.3	55.5	13.1	65	N	15.0	6.7		0	8fk		N	0.33	8.4	Fair	C. F. Allen.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Navassa, W. I																			
Clifton, Jamaica, W. I	27.26	692.4	30.08	764.0	64	17.8	83	N	0.5	0.2			10k			Inap.	Inap.	Light rain	C. Partridge.
Paramaribo, D. Guiana, S. A			30.02	762.5	81	27.2	78	E			2		6k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.05	763.2	84.2	29										0.177	4.50		Dr. H. Groot.
Medellin, Colombia, S. A	25.22	640.6			64.0	17.8	80		0	0		5ck	5s			0.35	8.9	Cloudy	Thomas Herran.
St. Johns, Newfoundland			29.62	752.3	23.0	— 5.0		W				10k	10s			Blank	Blank	Snowing	John Delaney.
York Factory, B. A			30.41	772.4	—26.5	—32.5		NW	6	2.7		1c	Fog	NW		0.03	0.8		J. Fortescue.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

Note.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Manhattan, 1,125.0 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.5 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 5, 1876.

7:35 A. M. WASHINGTON 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
2:14 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 errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	63.1	17.3	44	NW			2		6			0	0	Fair	Charnot.
Algiers			30.14	765.6	62.6	17.0	58	WSW			1		4			0	0	Fair	Peter.
La Calle																			Kunts.
Tunis			30.02	762.4	67.6	19.8	41	NE			2		7			0	0	Cloudy	Jacques.
Sfax			30.01	762.2	68.4	20.2	65	E			3		1			0	0	Clear	Chauvey.
Saida			30.23	767.8	59.4	10.2		W			3		7			0.276	7.0	Cloudy	Millot.
Tebessa			30.03	762.8	59.2	15.1		NE			4		3			0	0	Fair	Colin.
Geriville			30.19	766.7	40.6	4.8	74	NW			4		5			0	0	Fair	Buard.
Laghouat			30.10	764.5	66.2	19.0	54	NE			2		2			0	0	Clear	Guyot.
Biskra			30.02	762.4	67.6	19.8	16	NW			2		2			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.94	760.5	54.5	12.5	65	SW			3		6			0.012	0.3		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.95	760.7	47.7	8.7	77	NE			1		10			0.008	0.2		I. R. Observatory.
Eperies			30.01	762.2	47.1	8.4	67	S			2		9			0	0		Julius Mikolik.
Gratz	28.74	730.0	29.97	761.1	44.4	6.9	87	E			2		10			0	0		Andreas Rospini.
Hermannstadt	28.58	726.0	30.02	762.6	46.0	7.8	54	ESE			1		3			0	0		Prof. Reissenberger.
Kremsmünster	28.71	729.1	30.08	764.1	41.0	5.0	90	WNW			2		10			0.118	3.0		Prof. C. Wagner.
Lemberg			29.91	759.8	44.6	7.0	69	S			1		6			0.016	0.4		Dr. T. Stanecki.
Nyiregyhaza			30.06	763.4	48.6	9.2	71	S			3		3			0	0		Habzsuda Daniel.
Pola			29.94	760.5	54.7	12.6	85	SE			4		9cks			0	0		I.R. Hydrographic Of'ce
Szegedin			30.02	762.4	48.0	8.9	65	S			3		4			0	0		Karl Stancel.
Trieste			29.96	760.9	56.8	13.8	76	Calm			0		8			0.020	0.5	Rain & Fog.	Prof. V. Farolfi.
Vienna			30.03	762.8	39.4	4.1	87	W			3		10			0.043	1.1	Raining	I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.81	757.1	42.0	5.9	86	SSW			5		10			0.010	0.25		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	47.4	8.6		W	17	7.6			3			0	0	Blue sky	William Boswell.
Ardrossan																			J. Mayes.
Armagh Observatory			29.55	750.6	48.0	8.9		SSW	13	5.8									S. Cali, for Dr. Robinson
Bidston, Liverpool Obs.			29.62	752.3	46.1	7.8		SSW	9	4.0			10					Raining	John Hartnup.
Birr Castle, (Parsonstown)			29.64	752.8	51.7	10.9		WNW			2–3		10					Raining	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			30.03	762.7	80.6	27.0		SE			4		2					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			29.70	754.4	49.0	9.4		SW			1		10					Overcast	H. Todd.
Cardington			29.72	754.9	49.0	9.4		W			1		10					Overcast	John McLaren.
Carlisle			29.54	750.3	45.7	7.6		W			2		10			0.11	2.8	Threatening	[illegible] Bell, for J. Cartmell.
Chatham, School M. E.			29.66	753.4	54.2	12.3		SW			2							Overcast	Capt. J. Fellowes, R. E.
Dartmoor	28.43	722.1	29.91	760.5	46.4	8.0		NW			8		10					Rain and fog	R. E. Power.
Donaghadee			29.52	749.8	46	7.8		SW			3		10					Raining	J. Mac Gowan.
Dover			29.72	754.9	46	7.8		SSW			3		7					Raining	J. Costello.
Eccles, (near Manchester)			29.64	752.8	46.9	8.3		SW	1.2	0.5			10					Overcast	Thomas Mackereth.
Falmouth Observatory			29.91	759.7	53.0	11.7		W	39	17.4			9					Squally	The Staff.
Fort Napier, (Natal)	27.72	704.1	29.95	760.7	71.1	21.7		E			2		8					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	85	29.4		N			2		9					*D. clouds	[illegible]
Galway, Queen's College			29.07	738.4	51	10.6		W			5		10					Raining	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.28	769.1	64.5	18.1		NW			3		0					Blue sky	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.54	750.3	45.2	7.3		W			2		10					Overcast	Lewis Stuart.
Great Yarmouth			29.70	754.4	46	7.8		WSW			4		6					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			29.73	755.1	47.7	8.7		W			1		10			Blank	Blank	Overcast	The Staff for G. B. Airy.
Guernsey			29.91	759.7	50.5	10.3		WSW			6		8					Gloomy	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.65	753.1	44.6	7.0		WSW			2		10			Blank	Blank	Overcast	E. J. Crossley.
Helston			29.87	758.7	55	12.8		W			8		6			0.51	13.0	Foggy	M. P. Moyle.
Holyhead			29.60	751.8	49	9.4		SW			2		10					Drizzling	John Tilston.
Kew Observatory			29.74	755.4	47.0	8.3		WSW	9	4.0			10					Raining	The Staff.
Kingstown			29.59	751.6	52	11.1		W			5		10					Drizzling	George Mitchell
Leicester Museum			29.71	754.6	45.0	7.2		SW			1		10					Drizzling	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.00	762.0	61.6	16.4		NW			2		4k						Fred Travis, Pvt A.H.C.
Nairn			29.40	746.7	48	8.9		W			1		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.35	770.9	68.4	20.2		NE			6		10					Overcast	Surg.-Maj. Henry.
Nottingham			29.69	754.1	46.0	7.8		SW			1		10d		WSW	0	0	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.69	754.1	45.0	7.2		SSW			2		10					Raining	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.73	755.1	48	8.9		SW			1		10					Raining	J. Lucas.
Plymouth			29.85	758.2	54.3	12.4		WNW			5		10					Overcast	John Merrifield.
Roche's Point			29.77	756.1	52	11.1		W			5		8					¾ clouded	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			29.91	759.7	50.6	10.3		W			6		10					Overcast	A. P. Amy.
Sandwick Manse (Orkneys)			29.35	745.5	45	7.2		NW	14	6.3			5					*D. clouds	Rev. Dr. Clouston.
Scarborough																			F. Shaw.
Scutari Cemetery (Turkey)			30.07	763.8	43.2	6.2		NE			2		10					Drizzling	Sergt. W. H. Lyne.
Sheffield			29.63	752.6	47.9	8.8		W			2		10			0.046	1.17	Overcast	W. F. Cooper.
Silloth Rectory			29.57	751.1	47.0	8.3	86	W			3		8			0.220	5.59	*D. clouds	Rev. Francis Redford
Stonyhurst Observatory			29.62	752.3	44.2	6.8		SW			1		10			Blank	Blank	Gloomy	S. J. Perry.
Stornoway, Lewis C. (Heb.)			29.87	758.7	46	7.8		SW			1		10					Overcast	John Smith.
Stratfield Turgiss			29.74	755.4	50.1	10.1		W			1		10					Raining	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.35	745.5	47	8.3		WNW			3		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.88	758.9	54	12.2		W			7		8					Gloomy	W. Newcombe.
Valencia Observatory			29.78	756.4	51.4	10.8		WSW	31	13.9			10					Drizzling	The Staff.
Sub-Series.																			
Cape Good Hope Obs.			29.95	760.7	83.2	28.4	39	SSE	15	6.7			0						The Staff, for E. J. Stone.
Calf of Man, (Isle of Man)					48	8.9		WSW			4		10			0	0		
Leith, Restalrig Park			29.51	749.5	46.1	7.8		W			2		10s			0.16	4.1	Overcast	Andrew Gibb.
Mauritius			29.91	759.7					12.1	5.4						0.01	0.3		
Monach Lt-house, Hebrides			29.36	745.7	45	7.2		S			4		10			0.3	7.6		J. Youngclause.
North Unst, (Shetland Is.)			29.28	743.7	40.5	4.7		N			6		10			Blank	Blank		

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,490 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.48	748.8	39.7	4.3	90	WSW			4		10						
Faröe			29.50	749.4	40.1	4.5	90	WSW			6		10						
Godthaab, (Greenland)			29.42	747.2	3.7	−15.7	100	NW			4		10					Snowing	
Stykkisholm, (Iceland)																			
Thorshavn, (Faröe)			29.38	746.3	40.1	4.3	52	NE			2		4						
Vestervig			29.30	744.1	38.8	3.8	97	SW			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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper. —10.	Clouds. Amount. Lower. —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.85	758.1	50.0	10	86	WSW			3		10			0.213	5.4	Covered	Normal School.
Amiens			29.83	757.6	52.2	11.2	94	NW			8		10			0.291	7.4	Covered	Normal School.
Avignon			30.10	764.6	55.0	12.8	35	N			6		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.05	763.2	43.3	6.3	82	SW			3		10		SW	0.189	4.8	Raining	C. Saillard.
Beaumette, (near Angers)			30.00	762.0	52.2	11.2	86	SW	19.5	8.7			10		W	0.177	4.5	Raining	Beaumette Observatory
Beauvais			29.84	758.0	48.4	9.1	86	WSW			3		10		W	0.096	2.45	Covered	Normal School.
Besançon			30.14	765.6	47.5	8.6	62	S			3		2		SW	0.213	5.4	Slightly cl'dy	Normal School.
Bourg en Bresse			30.21	767.4	48.2	9	92	S			2		10n		N			Raining	Normal School.
Bourges			30.08	764.0	45.0	7.2	91	S			2		10		S	0.098	2.5	Covered	Normal School.
Brest			30.00	762.0	53.4	11.9	83	W			4		10		W	0.305	7.75	Misty	Naval Observatory.
Caen																			Normal School
Chartres			29.71	754.6	46.9	8.3		WSW			6		10			0.098	2.5	Covered	Normal School.
Chaumont																			Normal School.
Clermont			30.11	764.7	45.5	7.5	60	W			3		8		W	0	0		Puy de Dome, Obs.
Commercy			30.05	763.3	43.5	6.4	72	W			8		8n		W	0.165	4.2	Very cloudy	Normal School.
Commune de Gréasque*			30.01	762.3	52.2	11.2	39	NW			6		2		NW	0	0		
Grenoble			30.14	765.6	47.8	8.8	61	NW			8		2		NE	0.12	3.	Slightly cl'dy	Normal School.
Le Mans			29.97	761.3	50.2	10.1	92	W			3		8		W	0.374	9.5	Very cloudy	Normal School.
Loches			29.76	756.0	45.5	7.5	92	S			2		10			0.083	2.1	Raining	Normal School.
Lons-Le-Saulnier			30.19	766.8	46.0	7.8	88	SW			2		5		NW	0.201	5.1	Cloudy	Normal School.
Mâcon			30.15	765.7	51.1	10.6	77	W			2		5		W	0	0	Cloudy	Normal School.
Mirecourt																			Normal School.
Metz			30.07	763.6	45.0	7.2	64	SW			4		10		SW	0.322	8.2		M. Schuster.
Nismes			30.12	765.0	54.7	12.6	28	N			6		0			0	0	Clear	Normal School.
Orleans			29.95	760.8	45.7	7.6	91	WNW			4		8		WNW	0.08	2.	Very cloudy	Normal School.
Paris Observatory			29.88	759.0	45.0	7.7	89	SSW			4		10		SW	0.159	4.03	Rainy	National Observatory.
Parthenay			30.09	764.3	48.4	9.2	95	SW			6		8		W	0.098	2.5	Very cloudy	Normal School.
Privas			30.16	766.0	49.3	9.6		N			6		2		N	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.10	764.5	50.7	10.4	93	SW			2		10			0.118	3.0	Covered	Normal School.
Rochefort, Observatory			30.19	766.7	50.9	10.5	94	W			3		10		E	0.157	4.0	Rainy	Naval Observatory.
Rouen			29.83	757.6	50.7	10.4	89	W			3		10		W	0.091	2.3	Covered	Normal School.
Saint Lo			29.93	760.4	50.0	10	77	W			3		7		W	0.311	7.9		Normal School.
Tarbes			30.34	770.7	55.4	13	73	W			2		8		NE	0.43	11.	Very cloudy	Normal School.
Toulouse																			Normal School
Villefranche			30.16	766.0	51.8	11	93	ESE			3		8		NW	0.16	4.	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.8	77.0	25	76	NE			2		2k						L'Abbé Marchési.
Gorée																			
Marseilles			29.98	761.5	53.6	12.0	54	NW			8		0?			0	0	Cloudy ?	Marseilles Observatory.
Mont-Louis	24.90	632.5	30.32	770.1	39.7	4.3	57	S	9.3	4.17			5		NW	0.008	0.2		—. Falguère.
Montsouris, Paris			29.87	758.8	43.9	6.6	88	WSW			1		10		W	0.217	5.5	Raining	Montsouris Observ'tory.
Perpignan			30.16	766.1	54.7	12.6		NW	28.0	12.50			4		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P†																			M. Baylac.
Saint Maur, (near Paris)			29.92	760.0	45.5	7.5	93	SSW			2		10			0.098	2.5	Rainy	F. Renou.
Toulouse			30.31	769.8	50.4	10.2	64	WNW			4		10			0.039	1.0		Toulouse Observatory.
Tours			30.00	762.1	48.9	9.4	95	WSW			3		10		W	0.205	5.2		C. Marquet.
Versailles, (near Paris)			29.87	758.8	47.1	8.4	92	W			4		10			0.128	3.24	Rain, squalls	Dr. A. Bérigny.
Zi-Ka Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are requently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,089.9 ft.; lermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,336 m., or 7,762.8 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Near Marseilles. † Summit inaccessible; weather snowy; snow-fall on the Plantade 160 millimeters, or 6.3 inches.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper. —10.	Clouds. Amount. Lower. —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.87	758.7	44.6	7.0	63	W			5		5			0.039	1.0		Prof. T. Hoh.
Berlin			29.85	758.2	47.3	8.5	55	SW			1		7			0.110	2.8		Prof. Arndt.
Breslau			29.97	761.3	43.7	6.5	89	SW			5		10			0.134	3.4	Raining	Dr. P. Sangebaue
Carlsruhe			30.02	762.4	46.0	7.8	53	SW			5		9			0.122	3.1		A. Senz.
Cassel			29.80	756.9	46.6	8.1	66	SW			7		4			0.091	2.3		Dr. H. Möhl.
Cologne																			Dr. Garthe
Emden																			Prof. Prestel.
Frankfort on the Main			30.05	763.3	47.3	8.5	48	WSW			4		4			0.106	2.7		Physical Society.
Friedrichshafen			30.11	764.8	42.8	6.0	68	W					5			0.157	4.0		M. Wilhelm.
Hamburg			29.73	755.1	43.3	6.3	78	SW			8		9k, n			0.016	0.4		Deutsche Seewarte.
Kiel			29.67	753.6	42.4	5.8	77	WSW			4		10			0.047	1.2		Prof. G. Karsten.
Königsberg			29.74	755.5	42.4	5.8	74	W			5		6			0.157	4.0		Prof. E. Luther.
Koslin			29.71	754.7	45.5	7.5		SW			5		8			0	0		H. Müller.
Leipsic			29.92	760.0	45.7	7.6	89	SW			6		8	WSW		0.047	1.2	Stormy	Prof. Bruhns.
Memel			29.60	751.7	36.5	2.5	87	SW			3		4	NW		0.146	3.7		Reinbrecht & Skalweit.
Münster			29.95	760.6	46.0	7.8	84	W			3		10			0.150	3.8		Prof. E. Heis.
Neufahrwasser			29.69	754.2	45.1	7.3	69	SW			4		8	WSW		0.114	2.9		A. Lothes.
Posen			29.91	759.8	47.3	8.5	65	WSW			5		9			0.067	1.7		Dr. Magener.
Strassburg, (in Alsace)			30.06	763.5	47.5	8.6	49	W			2		4			0.169	4.3		Dr. Schur.
Stuttgart			30.06	763.5	45.5	7.5	52	W					4			0.059	1.5		Prof. Schoder.
Thorn			29.82	757.5	45.3	7.4	74	WSW			5		9			0.154	3.9		Dr. Hasenbalg.
Treves, (Trier)			29.80	756.8	45.3	7.4	60	SW			8		10			0.169	4.3		Prof. Flesch.
Wustrow, Naval School			29.64	752.9	40.6	4.8	80	SW			6		10			0	0	Rain & snow	E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	50.9	10.5	68	N	2.5	1.1			10			0	0		
Padua			29.90	759.4	52.7	11.5	82	NNE	12.5	5.6			10	ENE		0	0		
Vicenza			29.92	759.9	51.3	10.7	82	NE	3.1	1.4			9			0	0		
Verona			29.88	758.9	60.4	15.8	71	E			4		10			0	0		
Bergamo	28.56	725.3	29.87	758.8	45.5	7.5	91	NW			2		10			0.295	7.5	Raining	
Domodossola	28.91	734.3	29.93	760.3	51.8	11.0	58	ENE			6		3			0	0		
Milan			29.97	761.1	49.3	9.6	38	NE			1		10			0	0		
Pavia			29.93	760.3	48.2	9.0	90	N			1		10			0.071	1.8	Raining	
Moncalieri			29.95	760.8	49.8	9.9	75	ESE	5.6	2.5			10	SW		0	0		
Mondovi	28.02	711.7	29.94	760.4	45.1	7.3	84	NW			2		10			0	0		
Porto Maurizio			29.95	760.6	59.4	15.2		SE			4		9	SW		0	0		
Genoa			29.93	760.1	52.9	11.6	86	E	3.1	1.4			10	SE		0	0		
Piacenza			29.91	759.7	52.0	11.1	76	SE	8.7	3.9			10	E		0.228	5.8		
Parma			29.95	760.6	54.1	12.3	76	E			2		9			0.020	0.5		
Bologna			29.96	760.9	56.8	13.8	25	WNW			1		4	E		0	0		
Florence			29.96	760.9	57.2	14.0	67	E			2		10	S		0	0		
Leghorn			29.92	760.0	59.2	15.1	62	SSW	6.3	2.8			10			0	0		
Siena	28.72	729.5	29.94	760.4	52.5	11.4	52	SW	0.7	0.3			10	SW		0	0		
Urbino	28.45	722.6	30.01	762.3	55.9	13.3	64	SW			2		8			0	0		
Pesaro																			
Ancona			30.03	762.8	57.4	14.1	61	SE			4		4			0	0		
Grosseto			29.95	760.6	56.8	13.8	85	W			4		9	S		0	0		
Rome			29.98	761.6	60.3	15.7	66	SE	4.9	2.2			8	S		0	0		
Naples, O. U.			30.01	762.2	61.7	16.5	59	WSW			2		9	SE		0	0		
Lecce			30.03	762.8	56.8	13.8	45	NNE	0	0			1			0	0		
Cosenza			30.01	762.3	59.0	15.0	71	NW	0.7	0.3			3			0	0		
Riposto, (Sicily)			30.02	762.4	60.8	16.0	66	SSE			2		7	N		0	0		
Palermo			29.90	759.5	59.4	15.2	64	NE	4.3	1.9			10			0	0		
Caltanissetta	28.00	711.2	29.96	760.9	51.3	10.7	77	SE			2		10	NW		0	0		
Sub-Series.																			
Naples, S. R.			30.01	762.3	57.7	14.3	74	SW	3.1	1.4			..k,c	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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 550 meters., or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.82	757.3	42.3	5.7		SSW			4								
Groningen			29.67	753.5	45.0	7.2		SW			5								
Helder			29.72	754.8	43.2	6.2		SSW			4								
Utrecht			29.76	755.9	42.3	5.7	84	SW			5		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.11	739.4	41.7	5.4	82	Calm	0	0			10			0.295	7.5		
Brönö			29.13	739.8	37.4	3.0	83	S	7	3			10			0	0		
Christiania			29.20	741.6	38.8	3.8	83	E	2.2	1.0			10			0.004	0.1	Light rain	
Tromsö			29.34	745.1	32.7	0.4	68	NE	9	4			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er —1.	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.
Angra, (Azores,)			30.56	776.3	59.2	15.1	87	SW	4.1	1.84			1			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.42	772.7	57.7	14.3	38	NNW	20.1	11.67			6	NNW		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.47	773.8	66.0	18.9	45	NNE	2.2	0.98			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.54	775.7	56.8	13.8	46	NNE	27.3	12.2			4			0	0		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er —1.	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.
Warsaw			29.85	758.3	46.6	8.1	81	WSW	18	8			10						Astronomical Obs.
Wilna			29.76	756.0	38.5	3.6	97	S	11	5			10					Raining	Astronomical Obs.
Dorpat			29.54	750.4	34.0	1.1	89	SSW	4	2			10						Physical Cabinet.
St. Petersburg			29.58	751.4	35.4	1.9	93	SSW	7	3			10						Central Physical Obs.
Kuopio			29.39	746.5	34.5	1.4	96	SW	13	6			10					Snowing	Ch. Forsten.
Kieff			30.08	764.0	32.7	0.4	82	SSW	11	5			10						Physical Cabinet.
Nikolaiev			30.25	768.3	29.7	— 1.3	78	Calm	0	0			10						Kurdakof.
Kertch			30.17	766.4	27.9	— 2.3	89	ENE	13	6			10						Lagorio.
Moscow			30.12	765.0	20.3	— 6.5	84	S	9	4			10						Meteorological Obs.
Lugan			30.20	767.0	12.4	—10.9	79	NNE	9	4			10			Blank	Blank		Meteorological Obs.
Archangel			29.65	753.2	24.1	— 4.4	86	SSE	9	4			10					Heavy snow	Ogorodnikof.
Tiflis	28.61	726.6	30.0	763.3	43.2	6.2	79	Calm	0	0			10						Physical Observatory.
Astrakhan			30.28	769.1	20.1	— 6.6	84	NNE	7	3			10						Sebastianof.
Kasan			30.26	768.5	10.4	—12.0	74	S	7	3			0						Physical Cabinet.
Orenburg			30.59	774.6	4.1	—15.5	63	SW	2	1			0						Tschernischef.
Ekaterinburg	29.19	741.3	30.26	768.7	19.8	— 6.8	52	SW	13	6			7						Meteorological Obs.
Nukuss			30.01	762.3	42.1	5.6	40	ENE	13	6			10						
Kasaly																			Bobrof.
Tashkend	28.50	724.0	30.22	767.5	53.4	11.9	58	Calm	0	0			0						Michelson.
Barnaul			30.52	775.2	— 8.1	—22.3	72	Calm	0	0			7						Meteorological Obs.
Yeniseisk			30.17	766.3	— 2.6	—19.[illegible]	81	SSE	7	3			0					Lunar corona	Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.05	763.2	45.3	7.4	43	SSE	4	2			7						Physical Observatory.
Nertchinsk	27.45	697.1	29.58	751.2	21.2	— 6.0	87	NNW	7	3			10			Blank	Blank		Meteorological Obs.
Vladivostock			30.23	767.9	30.7	— 0.7	92	SE	4	2			5						
Nikolaievsk, on the Amoor					1.2	—17.1	85	Calm	0	0			0						

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 403. meters, or 1,414.8 feet; Ekaterinburg, 3[illegible]. 12 m., or 1,015.2[illegible] ft.; Tashkend, [illegible] 494.22, or 1,621.3[illegible] ft.; Irkutsk, 392. m., or 1,286. ft.; Nertchinsk, 592.0[illegible] m., or 1,942.2[illegible] ft.; Oorga, 1,281.0[illegible] m., or 4,202.6[illegible] 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er —1.	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.
Madrid			30.36	771.2	55.8	13.2	39	N	3.7	1.67		3	3	NE		0	0	Cloudy	Royal Observatory.
San Fernando			30.45	773.3	58.8	14.9	58	N	14.5	6.5		3	4	N	NE	0	0		The Naval Observatory

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er —1.	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.
Raparanda			29.35	745.6	32.0	0.0	96	E			2		10			0	0	Snowing	
Umea			29.23	742.4	35.2	1.8	88	SW			2		10			0.087	2.2		
Hernosand			29.19	741.3	36.3	2.4	85	S			2		10			0.236	6.0	Rain & snow	
Stockholm			29.25	742.9	37.4	2.0	89	SSW			2		10			0.024	0.6	Foggy	
Wisby			29.45	748.1	37.0	2.8	89	SW			7		10			0.098	2.5		
SUB-SERIES.																			
Upsala			29.26	743.2	35.2	1.8	94	S	7.8	3.5			10			0.153	3.37	Raining	Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.69	728.7	30.13	765.4	47.3	8.5	40	SSE			2		1			0.169	4.3	Clear	The Observatory.
Zurich	28.45	722.5	30.13	765.2	41.5	5.3	86	W			1		7			0.630	16.0	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +3.4 mm.; Thermometer, +2.3 cent.; Relative Humidity, —24 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.12	765.0	42.3	5.7	70	NE	4	2.0			10		NE	0	0		
Fao, (Persian Gulf)			30.28	769.0	65.3	18.5		SE			6		10						
Salonica			30.11	764.8	63.3	17.4		NE			2		0						
Valona			29.90	759.5	59.0	15.0		W			1		0						
Varna			30.12	765.0	42.8	6.0		N			3		10			Blank	Blank		
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.70	754.4	56.8	13.8	72	E			1		10n		S	1.34	34.0	Rainy	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.																			Hon. J. Ferguson.
Brockville, Ontario			30.40	772.1	14	—10.0		Calm	0	0		5c	0			0	0	Fair	W. R. Bigg.
*Chatham, N. B.			30.38	771.6	7	—13.9	88	W	3	1.3		8ck	0	W		0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island			30.39	771.9	17	— 8.3	88	S	5	2.2		5c	0			0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			30.22	767.6	16.7	— 8.5	88	SE			1		Fog			0	0	Fair	James Smith, M. A.
Dalhousie, N. B.																			H. A. Johnson.
Esquimault, B. C.			29.66	753.4	36.6	2.6	96	N	1	0.4			10			0	0	Cloudy	W. H. Bevis.
Fredericton, N. B.			30.44	773.2	4.9	—15.1	98	N	1	0.4						0	0		Prof. Harrison.
*Fort Garry, Manitoba			29.86	758.4	8	—13.3	96	N	20	8.9			10n			0	0	Cloudy	James Stewart.
Goderich, Ontario			30.20	767.1	40.0	4.4	82	SW			2		10n			0	0	Threatening	H. J. Strang, M. A.
Granton, Ontario			30.25	768.3	30.0	— 1.1		SE			1	1cs		W		0	0	Clear	James Grant.
*Halifax, N. S.			30.42	772.7	27	— 2.8	73	SW	5	2.2		0	0			0	0	Clear	F. Allison, M. A.
*Kingston, Ontario			30.36	771.1	25	— 3.9	89	SW	3	1.3		10c	0			0	0	Fair	S. Woods, M. A.
Little Current, Ontario			30.10	764.5	28.8	— 1.8		SE	2	0.9			10s			0	0		G. B. Abrey, C. E.
*Montreal, Quebec			30.34	770.6	25	— 3.9	68	SW	7	3.1		0	8m'e			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.33	770.4	17	— 8.3	75	S	2	0.9			Fog			0	0	Hazy	J. B. Haney.
*Parry Sound, Ontario			30.20	767.1	23	— 5.0	92	S	11	4.9		2cs	0	S		0	0	Fair	Rev. R. Mooley.
*Port Dover, Ontario			30.31	769.9	28	— 2.2	88	S	5	2.2		10k	0	SW		0	0	Fair	H. Morgan.
Port Hastings, N. S.																			Peter Grant.
*Port Stanley, Ontario			30.29	769.4	31	— 0.6	83	E	5	2.2		8k	0	W		0	0	Cloudy	M. Payne.
*Quebec, Quebec			30.35	770.9	21	— 6.7	85	W	5	2.2			10n		W	0	0	Cloudy	Capt. Ash, R. N.
St. John, N. B.			30.48	774.2	23	— 5.0	66	Calm	0	0						0	0		G. Murdoch, C. E.
*Saugeen, Ontario			30.10	764.5	34	1.1	76	S	6	2.7			10ks		SW	0	0	Cloudy	K. Stewart.
Stayner, Ontario																			R. J. Cole.
Stratford, Ontario			30.25	768.3	33.6	0.9	74	SW	5	2.2			10s			0	0	Fair	C. J. MacGregor, M. A.
*Sydney, C. B.			30.45	773.4	11	—11.7	84	SW	1	0.4		2c	0			0	0	Clear	T. C. Hill.
*Toronto, Ontario			30.30	769.6	22	— 5.6	65	S	2	0.9		5c	0			0	0	Fair	Magnetic Observatory
Woodstock, Ontario																			J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force 0—10	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	18	— 7.8	75	Calm	0	0		0	Haze			0	0	Clear	
Alpena, Mich			30.02	762.5	35	1.7	80	SE	8	3.6			10s		SE	0	0	Cloudy	
Atlantic City, N. J			30.54	775.7	36	2.2	90	S	6	2.7		0	Haze			0	0	Clear	
Augusta, Ga			30.51	774.9	43	6.1	83	Calm	0	0		8k	Sm'e	W		0	0	Cloudy	
Baltimore, Md			30.53	775.4	33	0.6	80	Calm	0	0		Haze	Fog			0	0	Foggy	
Barnegat, N. J			30.52	775.2	36	2.2	70	SW	8	3.6		0	0			0	0	Clear	
Benton, Montana	27.24	691.9	30.04	763.0	— 2	—18.9	100	NW	6	2.7		0	0			0.16	4.1	Clear	
Bismarck, Dakota	28.00	711.2	29.77	756.1	7	—13.9	77	N	24	10.7			10s		N	0	0	Cloudy	
Boston, Mass			30.47	773.9	29	— 1.7	78	SW	5	2.2		Haze	Fog			0	0	Foggy	
Breckenridge, Minn			29.55	750.6	29	— 1.7	94	N	8	3.6			10s			0	0	Cloudy	
Buffalo, N. Y			30.28	769.1	36	2.2	62	S	8	3.6		5cs	Sm'e	SW		0	0	Fair	
Burlington, Vt			30.40	772.1	23	— 5.0	66	S	2	0.9		0	0			0	0	Clear	
Cairo, Ill			30.20	767.1	51	10.6	52	S	11	4.9			10s			0	0	Cloudy	
Cape Hatteras, N. C			30.52	775.2	41	5.0	83	Calm	0	0		Haze	Haze			0	0	Clear	
Cape Henry, Va			30.55	776.0	42	5.6	66	SE	7	3.1		0	0			0	0	Clear	
Cape May, N. J			30.54	775.7	38	3.3	80	S	10	4.5		0	0			0	0	Clear	
Charleston, S. C			30.52	775.2	50	10.0	71	N	6	2.7		0	Sm'e			Inap.	Inap.	Clear	
Cheyenne, Wyoming	23.55	598.2	29.49	749.0	27	— 2.8	77	N	16	7.2		0	1s			0	0	Clear	
Chicago, Ill			29.96	761.0	47	8.3	62	S	13	5.8			10s			0.01	0.3	Cloudy	
Cincinnati, Ohio			30.27	768.8	38	3.3	63	SE	6	2.7		5c	0	W		0	0	Fair	
Cleveland, Ohio			30.30	769.6	37.7	3.2	67	SE	13	5.8		2c	2s	W	W	0	0	Fair	
Colorado Springs, Col	23.71	602.2	29.58	751.3	36	2.2	45	S	4	1.8		0	5s			0	0	Fair	
Corsicana, Tex			29.92	760.0	63	17.2	94	SE	12	5.4			10ks		SE	0.01	0.3	Cloudy	
Davenport, Iowa			29.82	757.4	46	7.8	76	S	20	8.9			10s			0	0	Cloudy	
Denison, Tex			29.87	758.7	60	15.6	94	S	20	8.9			10n			0.13	3.3	Light rain	
Denver, Col			29.53	750.0	42	5.6	42	S	4	1.8		0	0			0	0	Clear	
Detroit, Mich			30.18	766.6	40	4.4	56	S	9	4.0		5ck,k	0			0	0	Fair	
Dodge City, Kan	27.02	686.3	29.20	741.7	56	13.3	80	SE	16	7.2			10s			0	0	Cloudy	
Dubuque, Iowa			29.86	758.4	44	6.7	84	S	8	3.6			10n			0.10	2.5	Heavy rain	
Duluth, Minn			29.69	754.1	32	0.0	89	NE	8	3.6			10n			Inap.	Inap.	Sleeting	
Eastport, Me			30.43	772.9	25	— 3.9	74	SW	4	1.8		Haze	Haze	W		0	0	Hazy	
Erie, Pa			30.28	769.1	38	3.3	80	S	18	8.0		5c	Haze	NW		0	0	Fair	
Escanaba, Mich			29.85	758.2	34	1.1	90	S	12	5.4			Haze			0	0	Hazy	
Fort Gibson, Indian Terr			29.88	758.9	58	14.4	81	SE	16	7.2			10s		S	0.02	0.5	Cloudy	
Ft. St. Michaels, Alaska			29.96	761.0	10	—12.2		S	7	3.1			10s			Blank	Blank	Cloudy	
Fort Sill, Indian T	28.57	725.7	29.65	753.1	60	15.6	94	SE	28	12.5			10s		3E	0	0	Cloudy	
Fort Sully, Dakota	27.98	710.7	29.68	753.9	25	— 3.9	81	N	36	16.1			10s			0	0	Cloudy	
Galveston, Tex			30.03	762.7	64	17.8	89	SE	5	2.2		0	0			0.02	0.5	Clear	
Grand Haven, Mich			30.00	762.0	46	7.8	57	S	24	10.7			10s			0	0	Cloudy	
Indianapolis, Ind			30.17	766.3	48	6.1	58	SE	10	4.5			10s			0	0	Cloudy	
Indianola, Tex			29.99	761.7	66	18.9	90	SE	16	7.2		0	8ks		S	0	0	Cloudy	
Jacksonville, Fla			30.42	772.7	57	13.9	81	N	4	1.8		5k	0	NE		0	0	Fair	
Keokuk, Iowa			29.83	757.7	50	10.0	65	S	14	6.3			10s		S	0	0	Cloudy	
Key West, Fla			30.23	768.6	67.3	19.6	79	E	13	5.8		2k	5ks	E	E	0.04	1.0	Threatening	
Kittyhawk, N. C			30.63	778.0	36	2.2	80	SW	2	0.9		0	Haze			0	0	Clear	
Knoxville, Tenn			30.48	774.2	32	0.0	89	Calm	0	0		8ck	Fog	S		0	0	Cloudy	
La Crosse, Wis			29.76	755.9	43	6.1	100	S	12	5.4			10n		S	0.15	3.8	Heavy rain	
Leavenworth, Kan			29.72	754.9	55	12.8	87	S	20	8.9			10s		SW	0	0	Threatening	
Lexington, Ky	29.22	742.2	30.37	771.4	41	5.0	73	SE	16	7.2		10c	0	SW		0	0	Cloudy	
Long Branch, N. J			30.53	775.4	39	3.9	55	S	5	2.2		0	Haze			0	0	Clear	
Louisville, Ky			30.27	768.8	44	6.7	52	S	8	3.6		2c	8s	SW	S	0	0	Cloudy	
Lynchburg, Va			30.54	775.7	30	— 1.1	78	Calm	0	0		0	Sm'e			0	0	Smoky	
Malone, N. Y			30.33	770.4	30	— 1.1	78	S	8	3.6		0	0			0	0	Clear	
Manhattan, Kan	28.52	724.4	29.63	752.6	54	12.2	73	SW	35	15.6			10s		SW	0	0	Threatening	
Marquette, Mich			29.81	757.2	39	3.9	73	SE	4	1.8			10s		S	0	0	Cloudy	
Memphis, Tenn			30.22	767.6	52	11.1	59	SE	3	1.3			10s		S	0.01	0.3	Cloudy	
Milwaukee, Wis			29.96	761.0	42	5.6	74	SE	17	7.6			10s			0	0	Cloudy	
Mobile, Ala			30.29	769.4	55	12.8	73	Calm	0	0		10ck	Sm'e	NW		0	0	Cloudy	
Montgomery, Ala			30.40	772.1	51.5	10.8	65	SE	7	3.1			10s			0	0	Cloudy	
Morgantown, W. Va			30.42	772.7	40	4.4	64	Calm	0	0		2c	Haze	W		Inap.	Inap.	Fair	
Mt. Washington, N. H	23.85	605.8	30.21	767.3	14	—10.0	82	NW	24	10.7		0	0			0	0	Clear	
Nashville, Tenn			30.30	769.6	47	8.3	62	Calm	0	0			10s			0	0	Cloudy	
New Haven, Conn			30.50	774.7	37	2.8	80	SW	4	1.8		Haze	Fog			0	0	Clear	
New Orleans, La			30.51	774.9	34.5	1.4	74	SW	1	0.4		2c	Haze	NW		0	0	Clear	
Newport, R. I			30.19	766.8	61	16.1	82	E	12	5.4			10ks		S	0	0	Cloudy	
New York, N. Y			30.50	774.7	33	0.6	70	Calm	0	0		0	Haze			0	0	Clear	
Norfolk, Va			30.51	774.9	31	— 0.6	60	SW	8	3.6		0	0			0	0	Clear	
North Platte, Neb			30.57	776.5	36	2.2	70	S	6	2.7		0	Haze			0	0	Clear	
Omaha, Neb	26.57	674.9	29.11	739.4	34	1.1	79	NW	1	0.4			10s			0	0	Cloudy	
Oswego, N. Y	28.45	722.6	29.47	748.5	53	11.7	93	S	22	9.8			10s		S	0	0	Threatening	
Pembina, Dakota			30.36	771.1	25.1	— 3.8	80	SE	9	4.0			Haz			0	0	Cloudy	
Philadelphia, Penn			29.82	757.4	7	—13.9	100	NW	30	13.4			10s			0	0	Cloudy	
Pike's Peak, Colorado			30.54	775.7	32	0.0	79	SW	5	2.2		Haze	Sm'e			0	0	Smoky	
Pittsburgh, Penn	17.29	439.2	29.50	749.3	7	13.9	100	W	8	3.6			10n			0.10	2.5	Light snow	
Port Huron, Mich			30.40	772.1	30	— 1.1	60	Calm	0	0		2c	5s			0	0	Fair	
Portland, Me			30.16	766.1	39	3.9	55	S	12	5.4			10s		SW	0	0	Cloudy	
Portland, Oregon			30.46	773.7	26	— 3.3	75	Calm	0	0		0	Haze			0	0	Clear	
Punta Rassa, Fla			29.87	758.7	42	5.6	74	S	16	7.2			10n			0.03	0.8	Light rain	
Rochester, N. Y			30.35	770.3	59.0	15.0	70	E	14	6.3		Haze	Sm'e	SW	E	0	0	Hazy	
Salt Lake City, Utah			30.31	769.9	30	— 1.1	68	S	8	3.6		Haze	2s		E	0	0	Fair	
Sandy Hook, N. J	25.42	645.7	29.75	755.6	30	— 1.1	89	Calm	0	0			10s			0.54	13.7	Cloudy	
San Diego, Cal*			30.51	774.9	33.5	0.8	79	SW	6	2.7		0	0			0	0	Clear	
San Francisco, Cal																0.23	5.8		
Santa Fe, N. M			30.08	764.0	47	8.3	70	W	4	1.8		0	0			0	0	Clear	
Savannah, Ga	22.84	580.1	29.38	746.2	37	2.8	46	S	14	6.3			1s		SW	0	0	Clear	
Shreveport, La			30.48	774.2	54	12.2	73	E	4	1.8		10k	0	W		0	0	Cloudy	
Smithville, N. C			30.11	764.8	56	13.3	87	SE	9	4.0		10ck	2s	S	SE	0.08	2.0	Clearing	
Springfield, Mass			30.56	776.2	44	6.7	75	N	4	1.8		0	0			0	0	Clear	
St. Louis, Mo			30.48	774.2	26	— 3.3	75	Calm	0	0		0	Sm'e			0	0	Smoky	
St. Marks, Fla			30.06	763.5	50	10.0	58	S	20	8.9			10s			0	0	Cloudy	
St. Paul, Minn			29.40	772.1	54	12.2	73	E	7	3.1			10s			0	0	Cloudy	
St. Paul's Island, Alaska			29.59	751.6	40.5	4.7	100	SE	7	3.1			10n			0.03	0.8	Light rain	
Thatcher's Island, Mass			29.94	760.5	33	0.6	100	SE	6	2.7			Fog			0.06	1.5		
Toledo, Ohio			30.48	774.2	32	0.0	60	SW	6	2.7		0	0			0	0	Clear	
Tucson, Arizona			30.17	766.3	43	6.1	58	S	4	1.8		5ck	Haze	SW		0	0	Fair	
Tybee Island, Ga	27.40	696.0	29.98	761.5	43	6.1		SW				0	5ks		W	0.62	15.7	Fair	
Vicksburg, Miss			30.51	774.9	58	14.4	87	NE	18	8.0		8c	Haze	E		0	0	Fair	
Virginia City			30.22	767.6	52	11.1	86	SE	16	7.2		10k	Sm'e	S		0.03	0.8	Cloudy	
Washington, D. C	23.95	608.3	29.43	747.5	12	—11.1	90	Calm	0	0			10n			0.32	8.1	Light snow	
			30.53	775.4	32.5	0.3	79	Calm	0	0		Haze	Sm'e			0	0	Smoky	

UNITED STATES SERIES.—CONTINUED

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.57	776.5	36	2.2	90	Calm	0	0		0	Fog			0	0	Clear	
Wood's Holl, Mass			30.52	775.2	37	2.8	80	SW	3	1.3		0	0			0	0	Clear	
Wytheville, Va	28.04	712.2	30.35	770.9	28	— 2.2	77	Calm	0	0		0	Sm'e			0	0	Clear, frost	
Yankton, Dakota	28.21	716.5	29.48	748.8	39	3.9	91	E	5	2.2			Fog			0	0	Foggy	
Yuma, Arizona			30.02	762.5	47	8.3		W				0	0			0.03	0.8	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I			30.10	764.5	79	26.1	86	E	4	1.8		5ck	10s	NE		0	0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.03	762.7	74	23.3	85	E				2k	5ks			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.30	769.6	75	23.9	76	NNE	18	8.0		2c	8kn	NE		0.02	0.5	Cloudy	W. S. Cameron.
Kingston, Jamaica, W. I			30.25	768.3	73	22.8	72	Calm	0	0		2c	2s			0	0		James Gall.
Santiago de Cuba, W. I			29.96	761.0	70	21.1	60	N	7.2	3.2		4ck	0	E		0.37	9.4	Fair	Robert Mason
Havana, Cuba, W. I			30.24	768.1	70	21.1	71	E	13.0	5.9		2c	0			0	0	Fair	Charles Hasselbrink
St. Georges, Bermudas			30.38	771.6	58.0	14.4	56	NE	10.0	4.5		0	5fk		NE	0.15	3.8	Fair	C. F. Allen.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Navassa, W. I																			
Clifton, Jamaica, W. I	27.24	691.9	30.06	763.5	63	17.2	88	N	1.5	0.7		2c	2k	NE		0	0	Light rain	C. Partridge.
Paramaribo, D. Guiana, S. A			30.02	762.5	81	27.2	78	E			3		5k			0	0	Dry & fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.05	763.3	83.3	28.5										0	0		Dr. H. Groot.
Medellin, Colombia, S. A	25.18	639.6			64.5	18.1	80		2	0.9		5ck	5s			0	0	Cloudy	Thomas Herran.
St. Johns, Newfoundland			30.48	774.2	8.5	—13.1		W				0	Haze			0.20	5.1	Fair	John Delaney.
York Factory, B. A			30.50	774.7	—43	—41.7		NW	5	2.2		3c	Fog	NW		0	0		J. Fortescue.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,679 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Manhattan, 1,125.0 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.5 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher. *Observation not simultaneous.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MARCH 6, 1876.

7:35 A. M. WASHINGTON 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 Général d'Eudeville, Commandant Supérieur du Génie in Algeria.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	67.1	19.5	38	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.32	770.0	59.7	15.4	85	NNW			1		3			0	0	Fair	Peter.
La Calle																			Kunts.
Tunis			30.14	765.5	64.0	17.8	44	NW			4		3			0	0	Fair	Jacques.
Sfax			30.12	765.1	63.0	17.2	49	N			5		5			0	0	Fair?	Chauvey.
Saida			30.34	770.5	52.0	11.1		NNW			2		2			0	0	Clear	Millot.
Tebessa			30.15	765.7	49.1	9.5		W			4		10			0.157	4.0	Hidden	Colin.
Geriville			30.28	769.0	49.6	9.8	31	NNE			4		2			0.039	1.0	Clear	Buard.
Laghouat			30.20	767.1	68.0	20.0	81	NW			4		2			0	0	Clear	Guyot.
Biskra			30.15	765.8	66.2	19.0	28	NW			4		2			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	758.2	53.6	12.0	63	Calm			0		2			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.66	753.8	47.1	8.4	70	W			3		10			0.110	2.8		I. R. Observatory.
Eperies			29.75	755.6	49.6	9.8	56	S			4		5		NE	0.002	0.05		Julius Mikolik.
Gratz	28.64	727.4	29.85	758.2	47.8	8.8	74	SSW			2		5			0.331	8.4		Andreas Rospini.
Hermannstadt	28.43	722.2	29.86	758.4	48.9	9.4	62	SE			1		5			0	0		Prof. Reissenberger.
Kremsmünster	28.45	722.5	29.80	756.8	46.4	8.0	86	WSW			4		10			0.402	10.2		Prof. C. Wagner.
Lemberg			29.71	754.5	43.2	6.2	72	S			3		5			0.280	7.1		Dr. T. Stanecki.
Nyiregyhaza			29.85	758.1	46.8	8.2	78	SW			4		4			0.124	3.16		Habzsuda Daniel.
Pola			29.99	761.8	52.9	11.6	87	WSW			1		8cks			0.004	0.09		I.R. Hydrographic Of'ce
Szegedin			29.80	759.1	48.6	9.2	65	S			2		3			0	0		Karl Stancel.
Trieste			29.99	761.7	51.8	11.0	99	NNW			1		10			0	0	Foggy	Prof. V. Farolfi.
Vienna			29.76	755.8	50.0	10.0	61	W			4		8			0.039	1.0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.60	751.8	52.7	11.5	75	WNW			4		10			0.213	5.40		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.07	738.4	46.1	7.8		WSW	23	10.3			2			0.020	0.51	Blue sky	William Boswell.
Ardrossan			29.30	744.2	42	5.6		WNW			8		9					Thunder-storm	J. Mayes.
Armagh Observatory			29.53	750.0	40.0	4.4		W	24	10.7			10					Squally, hail	S. Cal., for Dr. Robinson
Bidston, Liverpool Obs.			29.51	749.5	44.8	7.1		WSW	53	23.7			4					Squally	John Hartnup.
Birr Castle, (Parsonstown)			29.69	754.1	42.5	5.8		W			4–5		9					Rain-squalls	J. Dreyer.
Bradford			29.45	748.0	42.4	5.8		W			3		9			0.45	11.4	Gloomy	J. McLandsborough.
Bridgetown, (Barbados)			30.06	763.5	80.4	26.9		E			2		4					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			29.58	751.3	50.5	10.3		W			4		1					Squally	H. Todd.
Cardington			29.62	752.3	46.4	8.0		W			7		4			Blank	Blank	*D. clouds	John McLaren.
Carlisle			29.39	746.5	42.5	5.8		W			8		10			0.36	9.1	Showery	Bell, for J. Cartmell.
Chatham, School M. E.			29.61	752.1	54.2	12.3		W			2		7					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	28.44	722.4	29.95	760.7	44.4	6.9		NW			7		10					Squally	R. E. Power.
Donaghadee			29.40	746.7	46	7.8		WNW			7		10					Raining	J. Mac Gowan.
Dover			29.61	752.1	52	11.1		SW			5		4					Squally	J. Costello.
Eccles, (near Manchester)			29.52	749.8	45.3	7.4		W	23.6	10.5			10					Squally	Thomas Mackereth
Falmouth Observatory			29.93	760.2	50.6	10.3		W	48	21.5			9					Squally	The Staff.
Fort Napier, (Natal)	27.67	702.8	29.90	759.4	77.6	25.3		SE			2		8					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	86	30.0		N			1		9					*D. clouds	Pvt. C. Aitken, A. H. C.
Galway, Queen's College			29.10	739.1	47	8.3		W			8		10					Raining	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.35	770.9	62.0	16.7		W			6		0					Blue sky	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.25	742.9	39.4	4.1		W			3		9					Raining	Lewis Stuart.
Great Yarmouth			29.51	749.5	46	7.8		WNW			5		6					Rainy	G. T. Watson.
Greenwich Royal Obs.			29.66	753.4	51.3	10.7		WSW			6		3			Blank	Blank	*D. clouds	The Staff for G. B. Airy.
Guernsey			29.92	760.0	52	11.1		WNW			6		0					Squally	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.50	749.3	42.4	5.8		WNW			3		7					Showery	L. J. Crossley.
Helston			29.92	760.0	54	12.2		NW			7		2			0.10	2.5	Foggy	M. P. Moyle.
Holyhead			29.59	751.6	47	8.3		W			6		1					Blue sky	John Tilston.
Kew Observatory			29.68	753.9	49.5	9.7		W	31	13.9			5					*D. clouds	The Staff.
Kingstown			29.62	752.3	45	7.2		W			6		5					*D. clouds	George Mitchell
Leicester Museum			29.61	752.1	46.7	8.2		W			5		3					Showery	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.99	761.7	60.0	15.6		NE			2		8k						Fred Travis, Pvt A. H. C.
Nairn			29.06	738.1	43	6.1		NW			3		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.35	770.9	71.5	21.9		NE			6		7					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.60	751.8	45.0	7.2		WNW			6		7c,k,d		WNW	0.555	14.10	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.61	752.1	43.0	6.1		WSW			6		10					Threatening	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.68	753.9	46	7.8		WNW			6		10					Hailing	J. Lucas.
Plymouth			29.89	759.2	53.1	11.7		WNW			6		4					*D. clouds	John Merrifield.
Roche's Point			29.79	756.7	49	9.4		W			5		5					½ clouded	W. Kennedy.
Saint Ann's Head			29.78	756.4	47	8.3		W			6		6					Squally	John C. Walker.
Saint Helier, (Jersey)			29.96	761.0	52.4	11.3		W			6		0					Clear	A. P. Amy.
Sandwick Manse (Orkneys)			28.90	734.0	43.3	6.3		W	28	12.5			4					*D. clouds	Rev. Dr. Clouston.
Scarborough			29.38	746.2	44.2	6.8		W			4		6					*D. clouds	F. Shaw.
Scutari Cemetery (Turkey)			29.97	761.2	49.2	9.6		SW			1		2					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.51	749.5	45.0	7.2		W			6		6			0.218	5.53	*D. clouds	W. F. Cooper.
Silloth Rectory			29.39	746.5	43.9	6.6	92	W			5		7			0.117	2.97	Squally	Rev. Francis Redford
Stonyhurst Observatory			29.50	749.3	42.5	5.8		W			6		10			Blank	Blank	Threatening	S. J. Perry.
Stornoway, Lewis C. (Hebr.)			28.98	736.1	38	3.3		WSW			5		8					Squally	John Smith.
Strathfield Turgiss			29.71	754.6	49.5	9.7		W			2–3		10					Squally	Rev. Charles F. Griffith
Streatley Vicarage																			Rev. John Slater.
Thurso			28.91	734.3	46	7.8		SW			5		6					*D. clouds	John Trotter.
Truro, Royal Institution			29.92	760.0	54	12.2		W			8		6					*D. clouds	W. Newcombe.
Valencia Observatory			29.85	758.2	48.5	9.2		W	40	17.9			10					*D. clouds	The Staff.
Sub-Series.																			
Cape Good Hope Obs.			29.89	759.2	84.2	29.0	39	SE	9	4.0			0						The Staff, for E. J. Stone.
Calf of Man, (Isle of Man)					44	6.7		W			6		3			0.20	5.1		
Leith, Restalrig Park			29.26	743.2	39.0	3.9		W			5		4k			0.07	1.8	Showery	Andrew Gibb.
Mauritius			29.98	761.5					3.5	1.6						0	0		
Monach Lt-house, Hebrides			29.12	739.6	44	6.7		NW			1	5	5	NW		0.2	5.1		J. Youngclause.
North Unst, (Shetland Is.)			28.74	730.0	43	6.1		W			6		10			Blank	Blank		

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,490 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.06	738.2	38.1	3.4	95	SW			6		10					Raining	
Fanöe			29.12	739.7	42.6	5.9	93	WSW			4		9						
Godthaab, (Greenland)			29.61	752.1	— 2.4	—19.1	100	N			6		10						
Stykkisholm, (Iceland)																			
Thorshavn, (Faröe)			28.68	728.5	44.8	7.1	80	S			2		1						
Vestervig			29.03	737.4	39.6	4.2	97	WSW			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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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			29.95	760.6	50.0	10	87	WSW			4		10			0.047	1.2	Covered	Normal School.
Amiens			29.83	757.6	53.6	12.0	92	NW			8		10			0	0	Covered	Normal School.
Avignon			30.15	765.9	62.6	17.0	52	NNW			2		5		NNW	0	0	Cloudy	Normal School.
Bar-sur-Seine			29.95	760.7	55.6	13.1	81	SW			6		10		W	0.736	18.7	Covered	C. Saillard.
Beaumette, (near Angers)			30.02	762.4	55.4	13.0	83	SW	36.2	16.2					SW	0.024	0.6		Beaumette Observatory
Beauvais			29.84	758.0	52.0	11.1	86	WNW			4		10		WNW	0.232	5.90	Covered	Normal School.
Besançon			30.10	764.5	49.6	9.8	86	SW			3		8		SW	0.529	13.7	Very cloudy	Normal School.
Bourg en Bresse			30.18	766.6	47.3	8.5	76	W			2		5n		E			Cloudy	Normal School.
Bourges			30.09	764.3	56.1	13.4	86	WSW			6		10		NW	0.47	12.	Covered	Normal School.
Brest			30.01	762.3	54.5	12.5	72	W			5		6n		WNW	0.039	1.00		Naval Observatory.
Caen																			Normal School.
Chartres			29.90	759.4	54.1	12.3		W			4		9		SE	0.150	3.8	9-10 clouded.	Normal School.
Chaumont																			Normal School.
Clermont			30.12	765.1	53.1	11.7	80	W			4		8		W	0.087	2.2		Puy de Dome, Obs.
Commercy			29.87	758.8	53.1	11.7	80	W			8		10kn		W	0.366	9.3	Covered	Normal School.
Commune de Gréasque*			29.97	761.1	57.4	14.1	57	NW			4		8		NW	0	0		
Grenoble			30.24	767.4	48.7	9.3	80	NE			1		10kn		SW	0.28	7.	Covered	Normal School.
Le Mans			29.97	761.2	53.4	11.9	87	W			4		8		W	0.098	2.5	Very cloudy	Normal School.
Loches			29.86	758.5	52.7	11.5	73	W			6		5		SW	0.248	6.3	Cloudy	Normal School.
Lons-Le-Saulnier			30.13	765.4	47.8	8.8	97	SSW			2		10			0.598	15.2	Raining	Normal School.
Mâcon			30.11	764.8	50.4	10.2	76	S			2		10			0.59	15.	Covered	Normal School.
Mirecourt																			Normal School.
Metz			29.86	758.4	51.6	10.9	85	SW			6		10		SW	0.189	4.8	†Violent hail	M. Schuster.
Nismes			29.94	760.4	62.8	17.1	61	NW			2		10		N	0	0	Covered	Normal School.
Orleans			29.98	761.4	53.6	12	87	W			4		8		W	0.173	4.4	Very cloudy	Normal School.
Paris Observatory			29.87	758.8	55.2	12.9	81	WSW			4		10		WSW	0.209	5.32	Rainy	National Observatory.
Parthenay			30.12	765.1	53.2	11.8	93	SW			6		5		W	0.177	4.5	Cloudy	Normal School.
Privas			30.19	766.8	55.4	13		N			2		8		N	0	0	Very cloudy	Normal School.
La Roche-sur-Yon			30.16	766.0	54.3	12.4	86	SW			6		10			0.118	3.0	Covered	Normal School.
Rochefort, Observatory			30.25	768.3	54.9	12.7	82	W			4		10		E	0.039	1.0	Covered	Naval Observatory.
Rouen			29.84	758.0	52.2	11.2	85	W			8		8		W	0.449	11.4	Very cloudy	Normal School.
Saint Lo			29.97	761.2	52.9	11.6	87	NW			4		6		W	0.126	3.2		Normal School.
Tarbes			30.41	772.3	55.4	13	80	W			3		8		E	0.177	4.5	Very cloudy	Normal School.
Toulouse																			Normal School
Villefranche			30.17	766.2	50.4	10.2	91	NE			3		10		NW	0.016	4.	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.92	760.0	75.6	24.2	82	NE			2		2k						L'Abbé Marchési.
Gorée																			
Marseilles			30.10	764.4	60.6	15.9	59	NW			4		8			0	0	Cloudy	Marseilles Observatory.
Mont-Louis	25.01	635.3	30.42	772.6	44.4	6.9	77	NNW					8		NW	0	0		—, Falguère.
Montsouris, Paris			29.88	759.0	55.4	13.0	88	WSW			2		10			0.118	3.0	Rainy	Montsouris Observ'tory.
Perpignan			30.24	768.1	60.6	15.9	57	NW	7.4	3.33			9		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P‡																			M. Baylac.
Saint Maur, (near Paris)			29.87	758.8	55.8	13.2	72	W			3		10			0.287	7.3	Very cloudy	F. Renou.
Toulouse			30.37	771.3	52.2	11.2	85	W			3		10			0.083	2.1		Toulouse Observatory.
Tours			30.05	763.2	55.9	13.3	79	W			5		10		W	0.177	4.5		C. Marquet.
Versailles, (near Paris)			29.87	758.8	55.8	13.2	81	W			4		10			0.132	3.36	Squally, showers	Dr. A. Bérigny.
Zi-Ka Wei, (near Shanghai)																			H. Le Lec, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,089.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
*Near Marseilles. †It is not certain that the weather remarks refer to the moment of observation. ‡Summit inaccessible; weather snowy; snow-fall on the Plantade 60 millimeters, or 2.4 inches.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Bamberg			29.58	751.4	49.4	9.8	88	W			7		10			0.157	4.0	Raining	Prof. T. Hoh.
Berlin			29.32	744.7	47.8	8.8	94	S			2		10			0.244	6.2	Heavy rain	Prof. Arndt.
Breslau			29.56	750.9	45.5	7.5	74	SSW			5		10			0.276	7.0	Raining	Dr. P. Neugebauer.
Carlsruhe			29.77	756.1	51.4	10.8	85	SW			10		10			0.248	6.3		A. Senz.
Cassel			29.37	745.9	53.8	12.1	77	WSW			8		9			0.185	4.7		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main			29.71	754.5	53.6	12.0	65	SW			4		10			0.280	7.1		Physical Society.
Friedrichshafen			30.00	761.9	46.9	8.3	72	W			3		10			0.354	9.0	Rainy	M. Wilhelm.
Hamburg			29.24	742.6	47.1	8.4	97	W			3		10			0.028	0.7	Raining	Deutsche Seewarte.
Kiel			29.23	742.5	44.4	6.9	95	W			3		10			0.374	9.5		Prof. G. Karsten.
Königsberg			29.39	746.6	44.4	6.9	68	SW			5		6			Inap.	Inap.		Prof. E. Luther.
Köslin			29.29	743.9	39.0	3.9		SW			4		10			0	0	Raining	H. Müller.
Leipsic			29.45	748.0	48.7	9.3	91	SW			4		10	WSW		0.047	1.2	Rainy	Prof. Bruhns.
Memel			29.36	745.8	36.7	2.6	84	SSW			4		8	W		0.031	0.8		Reinbrecht & Skalweit.
Münster			29.43	747.5	51.1	10.6	91	SW			6		10			0.311	7.9	Raining	Prof. E. Hois.
Neufahrwasser			29.35	745.5	43.7	6.5	74	S			3		10	SSW		0.087	2.2		A. Lothes.
Posen			29.48	748.7	44.6	7.0	90	S			2		10			0.354	9.0		Dr. Magener.
Strassburg, (in Alsace)			29.87	758.7	54.3	12.4	73	SW			3		10			0.110	2.8		Dr. Schur.
Stuttgart			30.00	761.9	53.2	11.8	72	W					10			0.378	9.6	Rain, windy	Prof. Schoder.
Thorn			29.46	748.2	43.7	6.5	75	WSW			5		10			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.65	753.0	53.6	12.0	78	SW			9		10			0.079	2.0		Prof. Flesch.
Wustrow, Naval School			29.17	740.9	41.0	5.0	98	SW			6		10			0.047	1.2	Raining	E. F. Schutz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.96	760.9	50.7	10.4	75	SW	0.7	0.3			9			0	0		
Padua			29.96	760.9	53.1	11.7	71	E	2.5	1.1			9	W		0	0		
Vicenza			29.95	760.8	52.9	11.6	71	W	0.7	0.3			5			0	0		
Verona			29.94	760.4	59.0	15.0	87	E			1		10			0	0		
Bergamo	28.60	726.0	29.92	759.9	51.8	11.0	68	SW			1		5			0	0		
Domodossola	28.91	734.4	29.94	760.4	54.0	12.2	57	SSE			2		7			0	0		
Milan			29.98	761.6	57.2	14.0	88	NW			1		6	NW		0	0		
Pavia			29.99	761.7	52.3	11.3	67	W			1		7	SW		0	0		
Moncalieri			29.99	761.8	50.5	10.3	73	WSW	4.3	1.9			6	N		0	0		
Mondovi	28.06	712.7	29.98	761.4	50.2	10.1	55	NW			2		4	NW		0	0		
Porto Maurizio			30.09	764.3	55.6	13.1		WSW			2		9			0	0		
Genoa			30.03	762.7	55.9	13.3	71	SW	5.6	2.5			10	S		0	0		
Piacenza			29.99	761.8	52.7	11.5	66	NNW	5.6	2.5			8	N		0	0		
Parma			29.98	761.6	54.7	12.6	63	NW			2		9			0	0		
Bologna			30.05	763.2	58.6	14.8	27	WNW			1		4	W		0	0		
Florence			30.04	762.9	62.4	16.9	56	SW			2		8	SW		0	0		
Leghorn			30.01	762.3	60.8	16.0	56	WNW	3.8	1.7			0			0	0		
Siena	28.79	731.2	30.00	762.1	58.8	14.9	63	S	0	0			9	W		0	0		
Urbino	28.45	722.5	30.01	762.2	55.9	13.3	60	SSW			2		1			0	0		
Pesaro																			
Ancona			30.15	765.7	52.9	11.6	83	NNW			4		1			0	0		
Grosseto			30.04	763.1	60.8	16.0	66	SE			4		5	S		0	0		
Rome			30.06	763.4	63.0	17.2	61	W	4.9	2.2			7	W		0	0		
Naples, O. U.			30.06	763.5	61.9	16.6	57	WSW			2		3	N		0	0		
Lecce			30.06	763.5	57.9	14.4	68	WSW	6.3	2.8			7			0	0		
Cosenza			30.03	762.8	62.2	16.8	61	NW	3.1	1.4			4			0	0		
Riposto, (Sicily)			30.02	762.6	60.4	15.8	72	SE			2		5			0	0		
Palermo			29.98	761.6	59.9	15.5	66	NE	5.6	2.5			6			0	0		
Caltanissetta	28.06	712.7	30.02	762.4	55.6	13.1	58	NE			4		6	SW		0	0		
Sub-Series.																			
Naples, S. R.			30.07	763.6	59.5	15.3	65	WNW	5.6	2.5			..e	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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.62	752.3	48.6	9.2		W			4								
Groningen			29.29	743.9	46.6	8.1		W			4								
Helder			29.41	746.9	45.3	7.4		WSW			4								
Utrecht			29.44	747.8	48.0	8.9	84	WSW			6		10					Dull	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			28.88	733.6	38.5	3.6	97	SSE	13.0	5.8			10			0.816	21.5	Raining	
Brönö			29.04	737.7	39.2	4.0	61	SSE	11	5			8			0	0		
Christiania			29.00	736.5	35.6	2.0	93		1.3	0.6			10			0	0	Rain & snow	
Tromsö			29.31	744.5	29.8	— 1.2	61	WSW	20	9			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. 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.
Angra, (Azores,)			30.60	777.2	59.5	15.3	89	SW	4.9	2.19			6			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.41	772.3	60.8	16.0	41	NNW	10.2	4.58			2			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.42	772.7	64.4	18.0	62	SW	13.8	6.18			0			0	0		Capt D. A. da Cunha.
Lisbon			30.53	775.5	58.1	14.5	55	NNE	22.4	10.0			4			0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. 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.
Warsaw			29.56	750.7	45.9	7.7	62	SSW	20	9			10						Astronomical Obs.
Wilna			29.56	750.7	41.2	5.1	68	S	9	4			1						Astronomical Obs.
Dorpat			29.32	744.8	35.6	2.0	87	SW	9	4			10						Physical Cabinet.
St. Petersburg			29.26	743.3	36.1	2.3	88	S	7	3			10						Central Physical Obs.
Kuopio			29.18	741.1	33.4	0.8	96	ENE	9	4			10					Snowing	Ch. Forsten.
Kieff			29.79	756.7	32.2	0.1	92	SSW	13	6			10					Snowing	Physical Cabinet
Nikolaiev			30.01	762.9	28.2	— 2.1	81	SE	13	6			9						Kurdakof.
Kertch			30.10	764.4	33.1	0.6	83	NE	2	1			10					Foggy	Lagorio.
Moscow			29.68	753.9	30.7	— 0.7	85	S	9	4			10					Snowing	Meteorological Obs.
Lugan			30.00	762.0	17.8	— 7.9	77	SSW	13	6			4						Meteorological Obs.
Archangel			29.52	749.7	18.0	— 7.8	89	ENE	18	8			10						Ogorodnikof.
Tiflis	28.65	727.7	30.08	764.1	45.7	7.6	67	SSE	13	6			9						Physical Observatory.
Astrakhan			30.32	770.0	16.0	— 8.9	85	NW	2	1			0			Blank	Blank		Sebastianof.
Kasan			29.85	758.3	16.3	— 8.7	83	SW	13	6			10						Physical Cabinet.
Orenburg			30.26	768.7	1.9	—16.7	70	SE					2						Tschernischef.
Ekaterinburg	28.86	733.1	29.92	760.0	23.0	— 5.0	50	S	11	5			10						Meteorological Obs.
Nukuss			30.00	761.9	35.2	1.8	71	NNW	13	6			10						
Kasaly																			Bobrof.
Tashkend	28.39	721.0	30.08	764.0	58.6	14.8	35	Calm	0	0			10						Michelson.
Barnaul			30.34	770.5	8.6	—13.0	76	Calm	0	0			9						Meteorological Obs.
Yeniseisk			29.83	757.6	11.5	—11.4	97	SSE	7	3			10					Snowing	Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.22	767.6	44.2	6.7	16	NNW	13	6			6						Physical Observatory.
Nertchinsk	27.63	701.9	29.89	759.2	17.1	— 8.3	70	NNW	7	3			10			Blank	Blank		Meteorological Obs.
Vladivostock			30.04	763.1	34.7	1.5	83	SE	11	5			10						
Nikolaievsk, on the Amoor					10.4	—11.9	93	ENE	13	6			2						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 305.17 m., or 1,005.27 ft.; Tashkend, m. 494.27, or 1,621.37 ft.; Irkutsk, 392. m., or 1,286. ft.; Nertchinsk, 592.07 m., or 1,942.27 ft.; Oorga, 1,281.0 m., or 4,202.67 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. 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.
Madrid			30.35	771.0	61.3	16.3	42	SW	2.2	1.00		2	0	NE		0	0	Light clouds.	Royal Observatory.
San Fernando			30.42	727.7	60.8	16.0	56	NW	7.6	3.4		1	1	SE	SE	0	0		The Naval Observatory

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. 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.
Haparanda			29.43	747.4	21.6	— 5.8	95	E			2		10			0.472	12.0		
Umea			29.27	743.5	32.7	0.4	92	ENE			2		10			0.047	1.2		
Hernosand			29.15	740.5	31.6	— 0.2	92	E			2		10			0	0		
Stockholm			29.12	739.7	36.3	2.4	94	Calm			0		10			0.098	2.5		
Wisby			29.25	743.0	36.7	2.6	93	SSW			6		7			0.043	1.1		
Sub-Series.																			
Upsala			29.15	740.4	32.9	0.5	94	NNE	4.0	1.8			10			0.271	6.87	Snowing	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Geneva	28.71	729.2	30.15	765.9	47.8	8.8	83	NNE			1		10			0.154	3.9	Covered	The Observatory.
Zurich	28.36	720.3	30.02	762.5	47.3	8.5	74	W			2		10		SW	0.953	24.2	Covered	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +3.9 mm.; Thermometer, +2.5 cent.; Relative Humidity, +19 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Constantinople			30.02	762.5	46.0	7.8	71	S	3	1.5			4		NE	0	0		
Fao, (Persian Gulf)			30.16	766.0	66.7	19.3		NW			4		5						
Salonica			30.04	762.9	64.8	18.2		S			1		0						
Valona			29.93	760.2	61.3	16.3		W			1		0						
Varna			29.94	760.5	50.0	10.0		NW			3		2						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.92	759.9	62.4	16.9	68	NW			1		1k			0.01	0.3	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Bathurst, N. B.			30.04	763.0	35.8	2.1	91	S	4.0	1.8						0	0		Hon. J. Ferguson.
Brockville, Ontario			30.25	768.3	38	3.3		SW	8	3.6			10s		SW	0.32	8.1	Cloudy	W. R. Bigg.
*Chatham, N. B.			30.12	765.0	35	1.7	75	SW	6	2.7		2ck	8ks	SW	SW	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island.			30.15	765.8	35	1.7	84	S	8	3.6			10s			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.11	764.8	40.7	4.8	94	S			1		Fog			0.136	3.45	Unsettled	James Smith, M. A.
Dalhousie, N. B.			30.08	764.0	36	2.2	84	W			1		10s			0	0		H. A. Johnson.
Esquimault, B. C.			29.67	753.6	38.1	3.4	82	W	5	2.2			10			0.10	2.5	Cloudy	W. H. Bevis.
Fredericton, N. B.			30.20	767.1	36.6	2.6	86	SW	2	0.9			10s			0.175	4.45		Prof. Harrison.
*Fort Garry, Manitoba			30.07	763.8	-2	-18.9	97	N	6	2.7		8ck	5ks	N	N	0.08	2.0	Clearing	James Stewart.
Goderich, Ontario			30.12	765.0	45.4	7.4	80	SW			3		10n			0.40	10.2	Threatening	H. J. Strang, M. A.
Granton, Ontario			30.15	765.8	40.0	4.4		S			1		10n			0	0	Cloudy	James Grant.
*Halifax, N. S.			30.25	768.3	35	1.7	81	SW	22	9.8			10n		SW	0	0	Threatening	F. Allison, M. A.
*Kingston, Ontario			30.25	768.3	36	2.2	95	SW	5	2.2			10s			0.38	9.7	Cloudy	S. Woods, M. A.
Little Current, Ontario			29.96	761.0	38.9	3.8		SE	2	0.9			10s			0.17	4.3		G. B. Abrey, C. E.
*Montreal, Quebec			30.17	766.3	39	3.9	95	SW	18	8.0			10n		SW	0.02	0.5	Light rain	C. H. McLeod, C. E.
*Ottawa, Ontario			30.16	766.1	36	2.2	72	Calm	0	0			Fog			0.20	5.1	Foggy	J. B. Haney.
*Parry Sound, Ontario			30.06	763.5	41	5.0	99	S	10	4.5			10n		S	0.54	13.7	Heavy rain	Rev. R. Mooley.
*Port Dover, Ontario			30.20	767.1	37	2.8	90	SW	3	1.3			10n		SW	0.04	1.0	Threatening	H. Morgan.
Port Hastings, N. S.			30.28	769.1	29.1	-1.5		W	5	2.2						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.20	767.1	39	3.9	80	E	5	2.2			10n		SW	0.02	0.5	Cloudy	M. Payne.
*Quebec, Quebec			30.14	765.5	36	2.2	95	Calm	0	0			10n			0.05	1.3	Cloudy	Capt. Ash, R. N.
St. John, N. B.			30.26	768.6	35	1.7	95	SW	12	5.4			10n			0.040	1.02		G. Murdoch, C. E.
*Saugeen, Ontario			30.03	762.7	44	6.7	83	SW	4	1.8			10ks			0.53	13.5	Cloudy	K. Stewart.
Stayner, Ontario			30.06	763.5	46	7.8	65	W	10	4.5			8n		W	Inap.	Inap.	Cloudy	R. J. Cole.
Stratford, Ontario			30.14	765.5	40.6	4.8	80	SW	9	4.0			10s			0.127	3.23	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			30.23	767.8	33	0.6	89	SW	9	4.0		8cs	5n	W	SW	0.01	0.3	Cloudy	T. C. Hill.
*Toronto, Ontario			30.18	766.6	38	3.3	93	Calm	0	0			10ks		W	0.15	3.8	Cloudy	Magnetic Observatory
Woodstock, Ontario																			J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	41	5.0	91	S	10	4.5			10s			0.06	1.5	Cloudy	
Alpena, Mich.			29.90	759.4	43	6.1	83	S	12	5.4			10s		S	0.10	2.5	Cloudy	
Atlantic City, N. J.			30.45	773.4	41	5.0	82	SW	8	3.6		5c	Haze	NW		0	0	Hazy	
Augusta, Ga.			30.47	773.9	51	10.6	86	SE	1	0.4		0	0			0	0	Clear	
Baltimore, Md.			30.45	773.4	40	4.4	82	Calm	0	0		5k	Fog			0	0	Foggy	
Barnegat, N. J.			30.43	772.9	41	5.0	87	SW	12	5.4		8c	Haze			0	0	Fair	
Benton, Montana	27.10	688.3	29.90	759.4	— 6	—21.1	100	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.30	718.8	30.18	766.6	— 9	—22.8	56	NW	8	3.6			10s		NW	0.04	1.0	Cloudy	
Boston, Mass.			30.33	770.4	41	5.0	73	SW	16	7.2		10n	Fog	SW		Inap.	Inap.	Light rain	
Breckenridge, Minn.			30.12	765.0	— 6	—21.1	100	NW	16	7.2			10s			0.07	1.8	Cloudy	
Buffalo, N. Y.			30.18	766.6	48.5	9.2	63	SW	8	3.6			Fog			0.11	2.8	Foggy	
Burlington, Vt.			30.21	767.3	42	5.6	74	S	4	1.8			10s			0.07	1.8	Cloudy	
Cairo, Ill.			30.08	764.0	61	16.1	55	S	17	7.6		2ck	2s			0	0	Fair	
Cape Hatteras, N. C.			30.51	774.9	52	11.1	79	Calm	0	0		0	5ks		S	0	0	Fair	
Cape Henry, Va.			30.52	775.2	57	13.9	58	SW	12	5.4		2c	0			0	0	Clear	
Cape May, N. J.			30.46	773.7	42	5.6	83	SE	10	4.5		0	0			0	0	Clear	
Charleston, S. C.			30.50	774.7	59	15.0	81	SE	5	2.2			10n		S	0.03	0.8	Light rain	
Cheyenne, Wyoming	23.86	606.0	29.80	756.9	21	— 6.1	60	NW	24	10.7		2c	0			0	0	Fair	
Chicago, Ill.			29.90	759.4	55	12.8	74	S	16	7.2			10n			0.03	0.8	Light rain	
Cincinnati, Ohio			30.17	766.3	52	11.1	66	SE	6	2.7		8ck	0	S		0	0	Cloudy	
Cleveland, Ohio			30.19	766.8	53.8	12.1	54	S	16	7.2			10ks		SW	0.09	2.3	Clearing	
Colorado Springs, Col.	23.93	607.8	29.80	756.9	12	—11.1	23	N	1	0.4		8c	0	S		0	0	Fair	
Corsicana, Tex.			29.84	757.9	52	11.1	86	SE	8	3.6		5k	2s	S		1.18	30.0	Cloudy	
Davenport, Iowa			29.77	756.1	56	13.3	74	S	30	13.4		5ck	5ks		S	Inap.	Inap.	Fair	
Denison, Tex.			29.68	753.9	57	13.9	74	S	5	2.2		0	0			1.31	33.3	Clear	
Denver, Col.	24.68	626.9	29.90	759.4	24	— 4.4	61	S	4	1.8		0	0			0.05	1.3	Clear	
Detroit, Mich.			30.10	764.5	46	7.8	69	S	8	3.6			10ks		S	0.03	0.8	Cloudy	
Dodge City, Kan.	27.16	689.8	29.56	750.8	17	— 8.3	100	NW	20	8.9			10n, fog			1.81	46.0	Light snow.	
Dubuque, Iowa			29.79	756.7	51	10.6	78	S	3	1.3			10s			0.27	6.9	Cloudy	
Duluth, Minn.			29.99	759.4	16	— 8.9	83	Calm	0	0			10s			Inap.	Inap.	Cloudy	
Eastport, Me.			30.22	767.6	36	2.2	90	SW	10	4.5			10s			0.15	3.8	Cloudy	
Erie, Pa.			30.17	766.3	54	12.2	68	SW	24	10.7			10s		SW	0.08	2.0	Threatening	
Escanaba, Mich.			29.74	755.4	35	1.7	90	S	8	3.6			10n			0.31	7.9	Light rain	
Fort Gibson, Indian Terr.			29.63	752.6	58	14.4	81	S	12	5.4			10n		S	0.40	10.2	Light rain	
Ft. St. Michaels, Alaska			30.22	767.6	— 3	—19.4		NE	17	7.6		8cs	0	S		0	0	Fair	
Fort Sill, Indian T.																Blank	Blank		
Fort Sully, Dakota	28.40	721.3	30.26	768.6	1	—17.2	71	NE	4	1.8			5s			0	0	Fair	
Galveston, Tex.			29.89	759.2	67	19.4	100	SE	10	4.5			10s		SE	0.04	1.0	Cloudy	
Grand Haven, Mich.			29.91	759.7	53	11.7	69	S	31	13.9			10s		SW	0.29	7.4	Cloudy	
Indianapolis, Ind.			30.10	764.5	53	11.7	72	SE	11	4.9		5cs	2s			Inap.	Inap.	Fair	
Indianola, Tex.			29.99	761.7	50	10.0	100	N	18	8.0			10n			0.27	6.9	Light rain	
Jacksonville, Fla.			30.41	772.4	62	16.7	78	E	8	3.6		0	0			0	0	Clear	
Keokuk, Iowa			29.72	754.9	58	14.4	76	S	26	11.6		5k	5s	S	S	0	0	Cloudy	
Key West, Fla.			30.26	768.6	75.3	24.3	75	E	18	8.0		0	5ks		E	0.02	0.5	Threatening	
Kittyhawk, N. C.			30.58	776.7	45	7.2	84	SW	4	1.8		2cs	Haze	NW		0	0	Fair	
Knoxville, Tenn.			30.34	771.0	40	4.4	83	E	1	0.4		2ck	Fog	SW		0	0	Fair	
La Crosse, Wis.			29.81	757.2	32	0.0	100	NW	6	2.7			10n		NW	0.34	8.6	Light rain	
Leavenworth, Kan.			29.70	754.4	35	1.7	90	N	15	6.7			10n			0.36	9.1	Light rain	
Lexington, Ky.	29.16	740.7	30.28	769.1	51	10.6	64	SE	12	5.4		2c	5s	SW		0	0	Cloudy	
Long Branch, N. J.			30.43	772.9	45	7.2	67	S	2	0.9		8ck	Haze	NW		0	0	Cloudy	
Louisville, Ky.			30.16	766.1	57	13.9	63	S	10	4.5		5ck	5s	S		0	0	Cloudy	
Lynchburg, Va.			30.50	774.7	42	5.6	24	W	3	1.3		0	Haze			0	0	Hazy	
Malone, N. Y.			30.15	765.8	44	6.7	84	SW	10	4.5			10n		SW	0.15	3.8	Light rain	
Manhattan, Kan.	28.47	723.1	29.66	753.4	20	— 6.7	70	NW	6	2.7		0	5ks			0.34	8.6	Fair	
Marquette, Mich.			29.64	752.8	44	6.7	92	S	12	5.4			10n		SE	0.10	2.5	Light rain	
Memphis, Tenn.			30.09	764.3	61	16.1	66	SE	10	4.5			10s		SE	0	0	Cloudy	
Milwaukee, Wis.			29.86	758.4	52	11.1	79	SW	24	10.7		10k	0	W		0.67	17.0	Cloudy	
Mobile, Ala.			30.20	767.1	63	17.2	83	SE	16	7.2		5k	5s	SW	S	0	0	Cloudy	
Montgomery, Ala.			30.32	770.1	56.5	13.6	48	SE	7	3.1		5c	Haze			0	0	Fair	
Morgantown, W. Va.			30.33	770.4	48	8.9	56	S	2	0.9		8c	Sm'e	W		0	0	Fair	
Mt. Washington, N. H.	23.80	604.5	30.16	766.1	26	— 3.3	100	NW	60	26.8			Fog			0	0	Foggy	
Nashville, Tenn.			30.20	767.1	56	13.3	68	SE	5	2.2		10k	0	SW		0	0	Cloudy	
New Haven, Conn.			30.42	772.7	34	3.9	80	SW	4	1.8		5ck	Fog	W		0	0	Fair	
New London, Conn.			30.42	772.7	39.5	4.2	73	SW	5	2.2		2ck	8s	W	SW	0	0	Cloudy	
New Orleans, La.			30.07	763.8	67	19.4	76	SE	20	8.9		2c	5ks	W	S	0.03	0.8	Fair	
Newport, R. I.			30.39	771.9	39	3.9	91	S	8	3.6		5cs	Fog		SW	0	0	Foggy	
New York, N. Y.			30.42	772.7	38	3.3	71	SW	8	3.6			10ks		W	0	0	Cloudy	
Norfolk, Va.			30.54	775.7	45	7.2	76	S	8	3.6		5c	Haze	N		0	0	Fair	
North Platte, Neb.	26.99	685.5	29.72	754.9	15	— 9.4	82	NW	9	4.0			10s			0	0	Cloudy	
Omaha, Neb.	28.75	730.2	29.89	759.2	15	— 9.4	100	NW			2		10n			1.61	40.9	Sleeting	
Oswego, N. Y.			30.22	767.6	43.2	6.2	75	SE	4	1.8			10s			0.13	3.3	Threatening	
Pembina, Dakota			30.14	765.5	—12	—24.4	100	NW	10	4.5		5c	0			0	0	Fair	
Philadelphia, Penn.			30.44	773.2	39	3.9	72	W	7	3.1		8k	Sm'e	W		0	0	Smoky	
Pike's Peak, Colorado	17.42	442.5	29.63	752.6	— 4.5	—20.3	45	N	16	7.2		0	5s			0.03	0.8	Fair	
Pittsburgh, Penn.			30.40	772.1	50	10.0	44	S	4	1.8		5c	0			0	0	Fair	
Port Huron, Mich.			30.48	774.2	47	8.3	62	S	15	6.7			10s		SW	0	0	Cloudy	
Portland, Me.			30.26	768.6	40	4.4	82	SW	6	2.7		5k	5s	W		0.02	0.5	Cloudy	
Portland, Oregon			29.78	756.4	45	7.2	92	S	10	4.5			10s			0.57	14.5	Cloudy	
Punta Rassa, Fla.			30.33	770.4	63.5	17.5	80	E	12	5.4		Haze	1ks		E	0	0	Clear	
Rochester, N. Y.			30.19	766.8	46	7.8	77	SW	8	3.6			10s			0.05	1.3	Cloudy	
Salt Lake City, Utah	25.64	651.2	29.96	761.0	32	0.0	60	Calm	0	0		5k	0			0.03	0.8	Fair	
Sandy Hook, N. J.			30.42	772.7	43	4.4	71	S	5	2.2		10ck	Haze	SW		0	0	Cloudy	
San Diego, Cal.			30.20	767.1	46	7.8	92	NE	8	3.6		0	0			0	0	Clear	
San Francisco, Cal.			30.09	764.3	50	10.0	93	SE	10	4.5			10n			0.19	4.8	Light rain	
Santa Fe, N. M.	23.06	585.7	29.60	751.8	25	— 3.9	75	NW	10	4.5		0	2s			0	0	Fair	
Savannah, Ga.			30.47	773.9	58	14.4	87	SE	2	0.9		0	8ks		S	0	0	Cloudy	
Shreveport, La.			29.84	757.9	66	18.9	86	S	12	5.4			10s		S	0.03	0.8	Cloudy	
Smithville, N. C.			30.54	775.7	57	13.9	81	E	6	2.7		5k	0	SW		0	0	Fair	
Springfield, Mass.			30.36	771.1	45	7.2	64	S	12	5.4			10ks		W	0	0	Cloudy	
St. Louis, Mo.			29.95	760.7	40	15.6	70	S	12	5.4			10s			0	0	Cloudy	
St. Marks, Fla.			30.36	771.1	58	14.4	81	SE	10	4.5		2cs	0			0	0	Fair	
St. Paul, Minn.			29.91	759.7	15	— 9.4	82	NW	12	5.4			10n		NW	0.08	2.0	Sleeting	
St. Paul's Island, Alaska			29.72	754.9	33	0.6	89	SSE	11	4.9			Fog			0.41	10.4		
Thatcher's Island, Mass.			30.33	770.4	36	2.2	90	SW	17	7.6			10n		SW	Inap.	Inap.	Raining	
Toledo, Ohio			30.08	764.0	51	10.6	72	S	12	5.4		8k	Sm'e	S	S	0.11	2.8	Fair	
Tucson, Arizona	27.77	705.4	30.36	771.1	35	1.7		SE				0	0			0	0	Clear	
Tybee Island, Ga.			30.48	774.2	62	16.7	78	SE	4	1.8			10ks		E	0	0	Cloudy	
Vicksburg, Miss.			30.06	763.5	64.5	18.1	89	SE	6	2.7			10s		SE	0	0	Cloudy	
Virginia City	24.06	611.1	29.51	750.3	22	— 5.6	72	SE	4	1.8		1c	0	SW		0.01	0.3	Clear	
Washington, D. C.			30.45	773.4	41	6.7	75	S	4	1.8		3cs,c	2s	NW	NW	0	0	Smoky	

UNITED STATES SERIES.—CONTINUED

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.53	775.4	52	11.1	86	SE	6	2.7		5ks	Sm'e	S		0	0	Fair	
Wood's Holl, Mass			30.42	772.7	41	5.0	83	SW	12	5.4			10s		SW	0	0	Cloudy	
Wytheville, Va	28.03	711.9	30.28	769.1	41	5.0	82	SW	1	0.4		0	Sm'e			0	0	Clear	
Yankton, Dakota	28.74	730.0	30.18	766.6	2	−16.7	72	NW	26	11.6			10s		NW	Inap.	Inap.	Cloudy	
Yuma, Arizona			30.19	766.8	45	7.2		E				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I			30.06	763.5	80	26.7	82	E	6	2.7		2c	8s	E	SE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.03	762.7	73	22.8	95	N					10n			0.3	7.6	Rainy	L. V. Bigard.
St. Thomas, St. T., W. I			30.33	770.4	73	22.8	59	ENE	8	3.6		2c	4ks	NE		0.02	0.5	Clearing	W. S. Cameron.
Kingston, Jamaica, W. I			30.26	768.6	75	23.9	76	Calm	0	0		8c	8s	E	E	0	0		James Gall.
Santiago de Cuba, W. I			29.94	760.5	72	22.2	67	NNE	12.0	5.4		0	2k		E	0	0	Fair	Robert Mason.
Havana, Cuba, W. I			30.23	767.8	72	22.2	71	E	12.0	5.4		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			30.51	774.9	59.0	15.0	62	NE	12.0	5.4		0	5k		NE	0.02	0.5	Fair	C. F. Allen.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Navassa, W. I																			
Clifton, Jamaica, W. I	27.24	691.9	30.05	763.3	63	17.2	88	N	2.0	0.9		2c	2k	N		0	0	Fine, clear	C. Partridge.
Paramaribo, D. Guiana, S. A			30.01	762.2	80	26.7	78	E			2		6ks			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			29.98	761.4	84.2	29										0	0		Dr. H. Groot.
Medellin, Colombia, S. A	25.14	638.6			66.0	18.9	78		1	0.4		1c	2ks			0	0	Fair	Thomas Herran.
St. Johns, Newfoundland			30.44	773.2	25.0	−3.9		SW				Haze	10s			0.30	7.6	Fair	John Delaney.
York Factory, B. A			30.51	774.9	−31	−35.0		Calm	0	0		5c	0	W		0	0		J. Fortescue.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
}																			
}																			
}																			

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Manhattan, 1,125.0 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.3 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 7, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the 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.
Nemours			30.33	770.3	67.6	19.8	39	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.30	769.7	66.9	19.4	43	NW			1		3			0	0	Fair	Peter.
La Calle																			Kunts.
Tunis			30.13	765.4	65.5	18.6	50	NW			6		4			0	0	Fair	Jacques.
Sfax			30.17	766.2	69.8	21.0	41	NNW			3		2			0	0	Clear	Chauvey.
Saïda			30.29	769.4	63.0	17.2		NNE			1		1			0	0	Clear	Millot.
Tebessa			30.17	766.3	53.1	11.7		W			3		8			0.118	3.0	Cloudy	Colin.
Geriville			30.26	768.6	56.8	13.8	30	N			3		0			0	0	Clear	Buard.
Laghouat			30.21	767.4	66.2	19.0	81	SE			2		0			0	0	Clear	Guyot.
Biskra			30.15	765.9	73.0	22.8	20	NNW			1		2			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the 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.
Agram			29.78	756.5	37.0	2.8	93	Calm			0		10			1.205	30.6	Raining	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.55	750.6	40.6	4.8	76	WNW			4		10			0.425	10.8		I. R. Observatory.
Eperies			29.57	751.0	47.5	8.6	55	NW			4		9		SE	0.004	0.10		Julius Mikolik.
Gratz	28.47	723.0	29.68	753.8	43.9	6.6	72	SW			2		10			0	0		Andreas Rospini.
Hermannstadt	28.24	717.3	29.66	753.4	47.1	8.4	50	WNW			4		10			0	0		Prof. Reissenberger.
Kremsmünster	28.35	720.1	29.70	754.4	44.6	7.0	61	W			5		7			0.173	4.4		Prof. C. Wagner.
Lemberg			29.47	748.4	40.6	4.8	65	SW			4		8			0.031	0.8		Dr. T. Stanecki.
Nyiregyhaza			29.65	753.0	46.8	8.2	60	W			3		10			0	0		Habzsuda Daniel.
Pola			29.69	754.0	52.5	11.4	96	SSE			2		108			0	0		I.R. Hydrographic Of'ce
Szegedin			29.74	755.3	49.3	9.6	61	Calm			0		10			0.047	1.20		Karl Stancel.
Trieste			29.67	753.5	51.8	11.0	94	Calm			0		10			0.197	5.0	Foggy	Prof. V. Farolfi.
Vienna			29.64	752.9	46.8	8.2	58	W			5		3			0.114	2.9		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the 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.
Brussels			29.70	754.4	43.7	6.5	63	WNW			6		10			0.047	1.20		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.29	744.0	40.5	4.7		W	30	13.4			2			0	0	Blue sky	William Boswell.
Ardrossan			29.52	749.8	40	4.4		NW			7		8					Showery	J. Mayes.
Armagh Observatory			29.72	754.9	38.0	3.3		W	16	7.2			10					Snowing	S. Cal. for Dr. Robinson.
Bidston, Liverpool Obs			29.68	753.9	41.0	5.0		W	53	23.7			4					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			29.86	758.4	38.1	3.4		WNW			3		4					Showery	J. Dreyer.
Bradford			29.60	751.8	41.1	5.1		W			2		7			0.19	4.8	Hail & snow	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	79.0	26.1		NE			2		7					Gloomy	Sergt. G. H. Hunt.
Cambridge Observatory			29.74	755.4	46.0	7.8		W			4		7					*D. clouds	H. Todd.
Cardington			29.79	756.7	44.0	6.7		NW			6		4					Blue sky	John McLaren.
Carlisle			29.57	751.1	35	1.7		SW			8		4			0.15	3.8	Snowing	Bell, for J. Cartmell.
Chatham, School M. E.			29.73	755.1	48.2	9.0		NW			1		0					Blue sky	Ca . J. Fellowes, R. E.
Dartmoor	28.48	723.4	30.02	762.5	35.0	1.7		NW			6		7					Squally	R. E. Power.
Donaghadee			29.64	752.8	40	4.4		WNW			6		3					*Cl. clouds	J. Mac Gowan.
Dover			29.79	756.7	46	7.8		WNW			5		3					¼ clouded	J. Costello.
Eccles, (near Manchester)			29.58	751.3	41.1	5.1		W	13.4	6.0			8					Showery	Thomas Mackereth
Falmouth Observatory			30.07	763.8	44.6	7.0		WNW	34	15.2			9					Gloomy	The Staff.
Fort Napier, (Natal)	27.45	697.2	29.69	754.1	85.6	29.8		E			2		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	86	30.0		NE			0		5					Blue sky	
Galway, Queen's College			29.29	744.0	44	6.7		W			4		10					Overcast	B. G. Clare, for Prof. Cu
Gibraltar, (Mediterranean)			30.28	769.1	63.7	17.6		W			6		0					Blue sky	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.46	748.3	38.3	3.5		W			2		6					Fine	Lewis Stuart.
Great Yarmouth			29.63	752.6	43	6.1		WNW			6		4					Squally	G. T. Watson.
Greenwich Royal Obs			29.80	756.9	47.2	8.4		WNW			5		3					*D. clouds	The Staff for G. B. Airy
Guernsey			30.04	763.0	46	7.8		WSW			5		5					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs			29.68	753.9	40.3	4.6		WNW			5		8					Sqally. hail	L. J. Cr slev.
Helston			30.05	763.3	47	8.3		NW			6		4			0.22	5.6	Rain & snow	M. P. Moyle.
Holyhead			29.77	756.1	43	6.1		W			6		5					*D. clouds	John Tilston.
Kew Observatory			29.82	757.4	45.2	7.3		W	39	17.4			6					*D. clouds	The Staff.
Kingstown			29.80	756.9	43	6.1		W			6		9					Overcast	George Mitchell
Leicester Museum			29.76	755.9	43.9	6.6		W			4		7					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.97	761.2	61.2	16.2		NW			2		8k						Fred Travis, Pvt A.H.C.
Nairn			29.26	743.2	37	2.8		W			3		10					Snowing	W. D. Penny.
Nassau, (Bahamas)			30.35	770.9	70.5	21.4		NE			6		7					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.75	755.6	41.1	5.1		WNW			6		7k,ks,d		WNW	0.073	1.85	*D. clouds	E. J. Lowe, F. R. S
Oscott, St. Mary's College			29.76	755.9	43.4	6.3		W			6		9			Blank	Blank	*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.71	754.6	45	7.2		W			6		7					*D. clouds	J. Lucas.
Plymouth			30.02	762.5	49.3	9.6		NW			5		1			Blank	Blank	*D. clouds	John Merrifield.
Roche's Point			29.95	760.7	43	6.1		WNW			6		5					Rain-squalls	W. Kennedy.
Saint Ann's Head			29.91	759.7	44	6.7		WNW			6		8					Squally	John C. Walker.
Saint Helier, (Jersey)			30.05	763.3	45.4	9.1		W			6		0					Clear	A. P. Amy.
Sandwick Manse(Orkneys)			28.99	736.3	37.1	2.8		W	50	22.4			10					Raining	Rev Dr. Clouston.
Scarborough			29.53	750.0	41.0	5.0		WNW			5		5					*D. clouds	F. Shaw.
Scutari Cemetery(Turkey)			29.80	756.9	50.0	10.0		S			2		5					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.66	753.4	43.0	6.1		WNW			6		7			0.263	6.68	Overcast	W. F. Cooper.
Silloth Rectory			29.57	751.1	39.3	4.1	90	NW			6		2			0.122	3.10	Squally	Rev Francis Redford
Stonyhurst Observatory			29.65	753.1	40.9	4.9		W			6		8			Blank	Blank	Squally	S. J. Perry.
Stornoway, Lews C. (Hebr.)			29.22	742.2	38	3.3		W			7		10					Snowing	John Smith.
Strathfield Turgiss			29.84	757.9	46.3	7.9		W			1-3		2					Squally	Rev Charles F. Grid
Streatley Vicarage																			Rev. John Slater.
Thurso			29.11	739.4	41	5.0		W			6		6					*D. clouds	John Trotter.
Truro, Royal Institution			30.06	763.5	48	8.9		W			8		6					*D. clouds	W. Newcombe.
Valencia Observatory			30.00	762.0	47.0	8.3		WNW	41	18.3			4					*D. clouds	The Staff.
Sub-Series.																			
Cape Good Hope Obs.			29.90	759.4	64.0	17.8	86	W	10	4.5			10						The Staff, for E. J. Stone
Calf of Man, (Isle of Man)					40	4.4		W			6		5			0	0		
Leith, Restalrig Park			29.47	748.5	35.0	1.7		W			4		6k			0.52	13.2	Stormy	Andrew Gibb.
Mauritius			29.96	761.0					5.4	2.4						0.16	4.1		
Monach Lt-house, Hebrides			29.29	744.0	42	5.6		NW			8	5	5	NW		0.4	10.2		J. Youngclause.
North Unst, (Shetland Is.)			28.80	731.5	42	5.6		W			7		10			Blank	Blank		

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.15	740.3	42.4	5.8	75	WNW			6		7						
Faröe			29.29	744.0	40.1	4.5	82	W			6		5						
Godthaab, (Greenland)			29.15	740.3	1.0	-17.2	100	NNE			6		10					Snowing	
Stykkisholm, (Iceland)																			
Thorshavn, (Faröe)			28.81	731.7	42.6	5.9	75	N			2		5						
Vestervig			29.19	741.5	39.6	4.2	93	W			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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	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			30.06	763.5	51.8	11	66	NW			2		8nk		NW	0.055	1.4	Very cloudy	Normal School.
Amiens			29.81	757.2	45.0	7.2	77	NW			6		2		NW	0.047	1.2	Slightly cl'dy	Normal School.
Avignon			30.03	762.8	63.9	17.7	33	NNW			3		5		NW	0	0	Cloudy	Normal School.
Bar-sur-Seine			29.91	759.6	49.5	9.7	57	E			6		8		W	0.063	1.6	Very cloudy	C. Saillard.
Beaumette, (near Angers)			30.09	764.2	47.5	8.6	59	NW	19.9	8.9					NW	0.043	1.1		Beaumette Observatory
Beauvais			29.93	760.2	46.8	8.2	44	NW			6		5		NW	0.280	7.10	Cloudy	Normal School.
Besançon			29.99	761.8	41.7	5.4	87	SW			4		8		SW	0.63	16.	Very cloudy	Normal School.
Bourg en Bresse			30.03	762.7	51.6	10.9	65	W			2		5kn		E			Cloudy	Normal School.
Bourges			30.08	764.1	49.1	9.5	79	WNW			2		2		W	0.12	3.	Slightly cl'dy	Normal School.
Brest			30.12	765.1	50.2	10.1	62	WNW			5		7n		NW	0.069	1.75		Naval Observatory.
Caen																			Normal School.
Chartres			29.87	758.8	46.8	8.2		SW			6		7		SE	0.181	4.6	7-10 clouded.	Normal School.
Chaumont																			Normal School.
Clermont			30.05	763.2	51.4	10.8	54	W			8		8		W	0.106	2.7		Puy de Dome, Obs.
Commercy			29.87	758.6	43.3	6.3	79	W			8		8kn		WNW	0.28	7.	Very cloudy	Normal School.
Commune de Gréasque*			30.02	762.5	60.3	15.7	44	NW			6		8		NW	0	0		
Grenoble			30.05	763.3	50.4	10.2	70	NNE			2		10k		NE	0.39	10.	Raining	Normal School.
Le Mans			30.08	764.1	46.8	8.2	61	NW			4		5		NW	0.457	11.6	Cloudy	Normal School.
Loches			29.80	756.8	50.0	10	84	W			6		5		W	0.017	0.3	Cloudy	Normal School.
Lons-Le-Saulnier			30.06	763.5	41.4	6.9	94	SW			6		8		SW	0.638	16.2	Raining	Normal School.
Mâcon			30.00	762.0	51.4	10.8	77	WSW			6		10			0.138	3.5	Covered	Normal School.
Mirecourt																			Normal School.
Metz			29.86	758.4	44.6	7.0	80	SW			8		10		SW	0.472	12.0	†Violent hail	M. Schuster.
Nismes			30.04	763.0	62.2	16.8	28	N			6		2		N	0	0	Slightly cl'dy	Normal School.
Orleans			30.01	762.2	49.3	9.6	56	WNW			4		2		NW	0	0	Slightly cl'dy	Normal School.
Paris Observatory			29.96	761.0	41.5	5.3	75	NW			3		5		NW	0.087	2.20	Cloudy	National Observatory.
Parthenay			30.13	765.2	51.8	11	93	SW			6		5		W	0.047	1.2	Cloudy	Normal School.
Privas			30.07	763.7	56.3	13.5		W			6		2		W	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.18	766.6	51.1	10.6	48	W			8		5		E	0	0	Cloudy	Normal School.
Rochefort, Observatory			30.25	768.3	56.7	13.7	60	W			4		2		E	0	0	¼ Covered	Naval Observatory.
Rouen			29.96	761.0	48.0	8.9	61	W			8		8		W	0.276	7.0	Very cloudy	Normal School.
Saint Lo			30.08	764.0	49.6	9.8	66	NW			3		7		NW	0.213	5.4		Normal School.
Tarbes			30.33	770.3	55.4	13	80	W			6		10		E	0	0	Raining	Normal School.
Toulouse																			Normal School.
Villefranche			30.03	762.7	53.6	12	74	NW			4		5		NW	0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.89	759.3	73.4	23	86	NE			2		5ck						L'Abbé Marchesi.
Gorée																			
Marseilles																			
Mont-Louis			29.98	761.4	61.7	16.5	54	WNW			5		6			0	0	Cloudy	Marseilles Observatory.
Montsouris, Paris	24.93	633.3	30.35	770.8	41.9	5.5	83	SW					10		W	0.043	1.1		—. Falguère.
Perpignan			30.95	760.7	44.2	6.8	78	WNW			3		7		NW	0.067	1.7	Squally	Montsouris Observ'tory.
Pic du Midi, (Summit) H. Pt			30.16	766.0	59.5	15.3	61	NW	29.8	13.33			8		W	0	0		Dr. Fines.
Saint Maur, (near Paris)																			M. Baylac.
Toulouse			29.96	761.0	44.6	7.0	76	WNW			3		3			0	0	Cloudy	E. Renou.
Tours			30.29	769.3	53.6	12.0	65	WNW			4		7			0.055	1.4		Toulouse Observatory.
Versailles, (near Paris)			30.09	764.2	49.6	9.8	56	W			6		3		WNW	0.059	1.5		C. Marquet.
Zi-Ka Wei, (near Shanghai)			29.96	760.9	47.8	8.8	48	NW			6		8			0.078	1.99	Very cloudy	Dr. A. Bérigny.
																			H. Le Lec, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7., 8. or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are requently omitted. The altitude of Mont-Louis is 1,580.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft.; lermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. * Near Marseilles. † It is not certain that the weather remarks refer to the moment of observation. ‡ Summit inaccessible; weather snowy; snow-fall on the Plantade 159 millimeters, or 6.2 inches.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	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			29.55	750.5	44.1	6.7	84	W			6		10			0.787	20.0	Raining	Prof. T. Hoh.
Berlin			29.43	747.4	48.0	8.9	65	S			7		9			0.311	7.9	Raining	Prof. Arndt.
Breslau			29.55	750.6	34.5	1.4	100	W			9		2			0.091	2.3	Rain & snow	Dr. P. Saugebauer.
Carlsruhe			29.70	754.3	44.2	6.8	82	SW			10		9			0.315	8.0		A. Senz.
Cassel			29.46	748.3	41.9	5.5	69	W			6		10			0.114	2.9		Dr. H. Möhl.
Cologne																			Dr. Garthe
Emden																			Prof. Prestel.
Frankfort on the Main			29.69	754.0	44.6	7.0	68	SW			3		8			0.268	6.8		Physical Society.
Friedrichshafen			29.84	758.0	41.2	5.1	78	W			2		10			0.398	10.1	Rain, gr'pel., snow	M. Wilhelm.
Hamburg			29.39	746.5	39.7	4.3	89	W			4		4s, k			0.417	10.6	Hail, rain-squalls	Deutsche Seewarte.
Kiel			29.39	746.4	36.9	2.7	91	W			3		10			0.272	6.9		Prof. G. Karsten.
Königsberg			29.10	739.1	35.2	1.8	91	W			7		9			0.394	10.0		Prof. E. Luther.
Köslin			29.24	742.7	40.1	4.5		W			7		7			0.642	16.3		H. Müller.
Leipsic			29.52	749.9	45.5	7.5	85	WSW			7		9	WSW		0.402	10.2	Rain, graupel	Prof. Bruhns.
Memel			28.90	734.0	35.4	1.9	91	W			6		10			0.205	5.2	Raining	Reinbrecht & Skalweit.
Münster			29.54	750.4	42.8	6.0	75	SW			6		10			0.315	8.0	Rain & snow	Prof. E. Heis.
Neufahrwasser			29.09	738.9	39.6	4.2	82	W			7		10			0.126	3.2	Rain, squally	A. Lothes.
Posen			29.42	747.3	41.7	5.4	70	NW			9		6			0.075	1.9	Graupelnd	Dr. Magener.
Strassburg, (in Alsace)			29.80	756.9	40.5	4.7	89	W			2		10			0.154	3.9	Raining	Dr. Schur.
Stuttgart			29.76	756.0	42.1	5.6	83	W					8			0.150	3.8	Rain & snow	Prof. Schoder.
Thorn			29.28	743.7	43.7	6.5	68	W			7		8			0.327	8.3		Dr. Hasenbalg.
Treves, (Trier)			29.66	753.4	42.1	5.6	78	WNW			8		8			0.272	6.9		Prof. Flesch.
Wustrow, Naval School			29.28	743.7	38.5	3.6	89	W			5		4			0.051	1.3		E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.66	753.4	47.5	8.6	85	E	2.5	1.1			10			0.173	4.4	Raining	
Padua			29.66	753.3	52.5	11.4	76	NW	2.5	1.1			9	W		0	0		
Vicenza			29.67	753.5	50.5	10.3	63	NE			1?		8			0	0		
Verona			29.65	753.1	58.6	14.8	65	E			1		10			0	0		
Bergamo	28.30	718.9	29.62	752.4	53.6	12.0	76	S			4		7			0	0		
Domodossola	28.69	728.7	29.72	754.8	53.2	11.8	41	WNW			6		10			0	0		
Milan			29.74	755.3	58.1	14.5	75	W			1		5	W		0	0		
Pavia			29.69	754.1	58.1	14.5	65	W			4		0			0	0		
Moncalieri			29.73	755.1	61.0	16.1	23	NW	14.3	6.4			1			0	0		
Mondovi	27.84	707.1	29.76	755.8	57.0	13.9	43	NNW			4		0			0	0		
Porto Maurizio			29.82	757.3	55.2	12.9		E			4		1			0	0		
Genoa			29.76	755.8	59.2	15.1	67	SW	4.3	1.9			0			0	0		
Piacenza			29.74	755.4	54.7	12.6	71	N	3.1	1.4			1			0	0		
Parma			29.69	754.1	57.0	13.9	50	NW			2		1			0	0		
Bologna			29.72	755.0	60.4	15.8	20	W			1		3	E		0	0		
Florence			29.77	756.2	55.4	13.0	79	NW			2		10	SW		0	0	Rain & hail.	
Leghorn			29.77	756.1	58.1	14.5	70	W	9.8	4.4			9			0	0		
Siena	28.56	725.4	29.78	756.3	53.4	11.9	86	W	0	0			10	W		0	0		
Urbino	28.19	715.9	29.75	755.6	52.9	11.6	71	SW			6		10			0	0		
Pesaro																			
Ancona			29.84	758.0	55.9	13.3	73	SE			4		9			0	0		
Grosseto			29.78	756.5	62.2	16.8	50	WNW			4		9	NW		0	0		
Rome			29.82	757.3	59.9	15.5	75	SSE	10.5	4.7			6	W		0.059	1.5		
Naples, O. U.			29.89	759.2	58.1	14.5	75	SW			6		10	SSW		0	0		
Lecce			29.86	758.5	61.2	16.2	55	WNW	12.5	5.6			5			0	0		
Cosenza			29.95	760.6	60.8	16.0	78	NW	2.5	1.1			10			0.055	1.4	Raining	
Riposto, (Sicily)			29.93	760.1	60.8	16.0	71	SE			2		1			0	0		
Palermo			29.89	759.3	66.6	19.2	49	WSW	7.4	3.3			1			0	0		
Caltanissetta	28.01	711.4	29.97	761.1	54.0	12.2	67	W			4		2	E		0	0		
Sub-Series.																			
Naples, S. R.			29.89	759.2	55.0	12.8	89	WSW	5.6	2.5			..k	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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.75	755.7	44.2	6.8		NW			5								
Groningen			29.42	747.3	40.3	4.6		N			5								
Helder			29.54	750.2	41.9	5.5		W			6								
Utrecht			29.56	750.9	44.1	6.7	60	WNW			6		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			28.96	735.5	41.0	5.0	84	SW	21.3	9.5			8			0.858	21.8		
Brönø			29.09	738.8	30.2	— 1.0	63	E	11	5			2			0	0		
Christiania			29.06	738.0	34.3	1.3	78	E	0.2	0.1			10			0.291	7.4	L't snow, fog	
Tromsö			29.32	744.7	23.4	— 4.8	55	W	2	1			0			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.60	777.2	57.6	14.2	80	SSW	4.1	1.84			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.35	770.8	65.8	18.8	42	NNE	13.6	6.08			3	NNE		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.43	772.9	65.7	18.7	65	SW	8.0	3.58			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.48	774.1	62.2	16.8	52	NNE	24.8	11.1			3	NW		0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.32	744.7	40.5	4.7	74	WSW	34	15			8						Astronomical Obs.
Wilna			29.08	738.6	39.0	3.9	75	W	9	4			10						Astronomical Obs.
Dorpat			28.91	734.3	34.5	1.4	89	Calm	0	0			10						Physical Cabinet.
St. Petersburg			29.04	737.7	34.5	1.4	81	SE	13	6			8						Central Physical Obs.
Kuopio			29.10	739.0	25.9	— 3.4	100	ENE	9	4			10					Snowing	Ch. Forsten.
Kieff			29.29	743.9	41.7	5.4	66	WNW	11	5			10						Physical Cabinet.
Nikolaiev			29.60	751.8	40.5	4.7	87	SW	20	9			7						Kurdakof.
Kertch			29.70	754.3	44.8	7.1	78	SSW	18	8			10						Lagorio.
Moscow			29.36	745.8	33.1	0.6	87	SSE	4	2			9						Meteorological Obs.
Lugan			29.56	750.9	33.4	0.8	82	SSW	22	10			10			Blank	Blank		Meteorological Obs.
Archangel			29.49	749.0	6.4	—14.2	75	E	18	8			5						Ogorodnikof.
Tiflis	28.51	724.2	29.93	760.2	51.1	10.6	50	Calm	0	0			1						Physical Observatory.
Astrakhan			30.07	763.7	29.8	— 1.2	84	SSW	9	4			10						Sebastianof.
Kasan			29.54	750.4	15.1	— 9.4	94	WSW	4	2			10						Physical Cabinet.
Orenburg			30.00	761.9	6.6	—14.1	75	S	18	8			10						Tschernischef.
Ekaterinburg	28.56	725.3	29.61	752.0	20.1	— 6.6	44	SW	13	6			10						Meteorological Obs.
Nukuss			30.10	764.5	31.6	— 0.2	81	NE	9	4			0						
Kasaly																			Bobrof.
Tashkend	28.37	720.6	30.11	764.8	47.1	8.4	86	Calm	0	0			10					Raining	Michelson.
Barnaul			30.02	762.6	12.0	—11.1	44	Calm	0	0			3						Meteorological Obs.
Yeniseisk			29.73	755.1	19.4	— 7.0	89	SW	11	5			10					Snowing	Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.25	768.4	34.9	1.6	50	SW	7	3			0						Physical Observatory.
Nertchinsk	27.75	704.9	30.07	763.8	—10.8	—23.8	51	NNW	4	2			0						Meteorological Obs.
Vladivostock			30.05	763.3	19.9	— 6.7	63	NW	4	2			0						
Nikolaievsk, on the Amoor					19.6	— 6.9	86	WNW	4	2			10					Snowing	

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 401. meters, or 1,411.8 feet; Ekaterinburg, 301.12 m., or 1,005.22 ft.; Tashkend, 494.22?, or 1,621.3? ft.; Irkutsk, 392. m., or 1,286. ft.; Nertchinsk, 592.02 m., or 1,942.22 ft.; Oorga, 1,281.06 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.39	769.6	63.9	17.7	43	NE	1.5	0.67		1	1	N		0	0	Cloudy	Royal Observatory.
San Fernando			30.37	771.3	61.0	16.1	79	WNW	4.9	2.2		0	0			0	0		The Naval Observatory

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.36	745.7	12.9	—10.6	93	S			2		10			0	0		
Umea			29.21	742.0	13.5	—10.3	100	NE			6		10			0	0	Snowing	
Hernosand			29.15	740.5	18.1	— 7.7	95	N			4		10			0	0	Snowing	
Stockholm			28.95	735.2	28.4	— 2.0	80	N			4		10			0.169	4.3	Snowing	
Wisby			28.94	735.1	32.4	0.2	100	N			6		10			0.130	3.3	Snowing	
Sub-Series.																			
Upsala			29.02	737.2	23.0	— 5.0	88	NNW	18.1	8.1			10		N	0.026	0.67	Snowing	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.56	725.5	30.00	762.0	50.2	10.1	51	SW			8		6			0.102	2.6	Cloudy	The Observatory.
Zurich	28.19	716.0	29.86	758.4	45.1	7.3	75	W			4		7			0.461	11.7	Raining	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +0.3 mm.; Thermometer, +3.7 cent.; Relative Humidity, -13 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.85	758.3	52.2	11.2	70	SW	11	5.0			5		SW	0	0		
Fao, (Persian Gulf)			30.12	765.0	69.8	21.0		NW			3		10						
Salonica			29.84	757.8	59.4	15.2		S			2		0						
Valona			29.82	757.5	62.1	16.7		SW			2		5						
Varna			29.72	755.0	39.2	4.0		N			8		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			30.00	762.0	66.0	18.9	68	SW			2		1k		SW	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			30.20	767.1	21.7	— 5.7	86	NE	14.7	6.6						0	0		Hon. J. Ferguson.
Brockville, Ontario			29.95	760.7	47	8.3		SW	5	2.2		5c	2s	SW		0	0	Fair	W. R. Bigg.
*Chatham, N. B.			30.13	765.3	26	— 3.3	93	NE	9	4.0			10s		NE	0.16	4.1	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			30.06	763.5	33	0.6	98	N	9	4.0			Fog			0.160	4.06	Foggy	H. J. Cundall, C. E.
Cornwall, Ontario			29.88	758.9	49.7	9.8	72	SE			1	8c				0	0	Fair	James Smith, M. A.
Dalhousie, N. B.			30.25	768.3	23.5	— 4.7	93	NE			4		10n			0.04	1.0		H. A. Johnson.
Esquimault, B. C.			29.14	740.1	35.1	1.7	91	SW	3	1.3			10			0.36	9.1	Raining	W. H. Bevis.
Fredericton, N. B.			30.06	763.5	38.5	3.6	89	W	2	0.9			10s			0	0		Prof. Harrison.
*Fort Garry, Manitoba			30.16	766.1	— 6	—21.1	100	NE	1	0.4			10n			0	0	Cloudy	James Stewart.
Goderich, Ontario			29.68	753.9	53.7	12.1	72	S			3		10n			0.40	10.2	Threatening	H. J. Strang, M. A.
Granton, Ontario			29.77	756.1	47.0	8.3		SE			2		10n			0	0	Raining	James Grant.
*Halifax, N. S.			30.02	762.5	39	3.9	88	S	2	0.9		2k	0	S		0	0	Fair	F. Allison, M. A.
*Kingston, Ontario			29.91	759.7	44	6.7	88	S	15	6.7		8ck	0			0	0	Fair	S. Woods, M. A.
Little Current, Ontario			29.57	751.1	45.0	7.2		W	7	3.1			10s			0.32	8.1		G. B. Abrey, C. E.
*Montreal, Quebec			29.90	759.4	44	6.7	77	S	15	6.7		5ck	5ks	W	W	0.01	0.3	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.89	759.2	39	3.9	73	Calm	0	0		5ck	Fog	SW		0.04	1.0	Fair	J. B. Haney.
*Parry Sound, Ontario			29.70	754.4	48	8.9	85	S	20	8.9			10n		SW	0.13	3.3	Heavy rain	Rev. R. Mooley.
*Port Dover, Ontario			29.85	758.2	42	5.6	83	S	6	2.7			10n		SW	0	0	Light rain	H. Morgan.
Port Hastings, N. S.			30.11	764.8	30.1	— 1.1		NW	5	2.2						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			29.83	757.7	42	5.6	87	SE	3	1.3			10n		SW	0.06	1.5	Light rain	M. Payne.
*Quebec, Quebec			30.03	762.7	25	— 3.9	94	NE	30	13.4			10n		NE	0.75	19.1	Cloudy	Capt. Ash, R. N.
St. John, N. B.			30.07	763.8	36	2.2	90	Calm	0	0			10ks			0.010	0.25		G. Murdoch, C. E.
*Saugeen, Ontario			29.61	752.8	51	10.6	86	S	15	6.7			10ks		SW	0.06	1.5	Cloudy	K. Stewart.
Stayner, Ontario			29.71	754.6	53	11.7	88	SE	9	4.0			10n		W	0	0	Threatening	R. J. Cole.
Stratford, Ontario			29.77	756.1	47.8	8.8	89	SW	12	5.4			10n		NE	0	0	Raining	C. J. MacGregor, M. A.
*Sydney, C. B.			30.03	762.7	37	2.8	94	Calm	0	0			10s		W	0.02	0.5	Cloudy	T. C. Hill.
*Toronto, Ontario			29.84	757.9	44	6.7	81	SE	2	0.9			10n		SW	0	0	Cloudy	Magnetic Observatory
Woodstock, Ontario																			J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	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.	.....	.....	30.05	763.3	46	7.8	76	S	1	0.4	.....	2cs	Haze	SW	S	0	0	Fair	
Alpena, Mich	.....	.....	29.51	749.5	42	5.6	91	S	9	4.0	.....	.....	10s	.....	S	0.05	1.3	Cloudy	
Atlantic City, N. J	.....	.....	30.20	767.1	43	6.1	91	S	10	4.5	.....	0	Haze	.....	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.24	768.1	58	14.4	94	SE	3	1.3	.....	5k	5ks	SE	SE	0	0	Cloudy	
Baltimore, Md	.....	.....	30.16	766.1	50	10.0	79	S	2	0.9	.....	2ck	Sm'e	W	.....	0	0	Smoky	
Barnegat, N. J	.....	.....	30.19	766.8	44	6.7	87	SW	13	5.8	.....	0	Haze	.....	.....	0	0	Clear	
Benton, Montana	26.97	685.0	29.77	756.1	1	−17.2	100	NE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Bismarck, Dakota	28.16	715.3	30.02	762.5	−8	−22.2	56	SE	8	3.6	.....	5k	0	SE	.....	0	0	Fair	
Boston, Mass	.....	.....	30.11	764.8	53	11.7	66	SW	12	5.4	.....	5c	Fog	.....	.....	Inap.	Inap.	Foggy	
Breckenridge, Minn	.....	.....	30.13	765.3	−12	−24.4	75	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y	.....	.....	29.82	757.4	55	12.8	55	S	11	4.9	.....	Haze	5ks	.....	SW	0	0	Fair	
Burlington, Vt	.....	.....	29.99	761.7	50	10.0	72	S	4	1.8	.....	2k	5s	.....	.....	0	0	Cloudy	
Cairo, Ill	.....	.....	29.92	760.0	48	8.9	70	W	14	6.3	.....	.....	10ks	.....	W	1.00	25.4	Cloudy	
Cape Hatteras, N. C	.....	.....	30.28	769.1	59	15.0	81	S	10	4.5	.....	5c	Haze	.....	.....	0	0	Fair	
Cape Henry, Va	.....	.....	30.27	768.8	60	15.6	65	S	12	5.4	.....	10ck	Haze	SW	.....	0	0	Cloudy	
Cape May, N. J	.....	.....	30.22	767.6	45	7.2	84	S	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Charleston, S. C	.....	.....	30.31	769.9	63	17.2	83	S	12	5.4	.....	.....	10n	.....	.....	0.04	1.0	Light rain	
Cheyenne, Wyoming	23.82	605.0	29.76	755.9	36	2.2	45	W	16	7.2	.....	5c	2s	.....	.....	0	0	Fair	
Chicago, Ill	.....	.....	29.71	754.6	37	2.8	80	SW	14	6.3	.....	.....	10s	.....	SW	0.33	8.4	Cloudy	
Cincinnati, Ohio	.....	.....	29.74	755.4	60	15.6	76	SW	12	5.4	.....	.....	10n	.....	SW	0.11	2.8	Light rain	
Cleveland, Ohio	.....	.....	29.76	755.9	60.6	15.9	59	S	27	12.1	.....	.....	10ks	.....	SW	Inap.	Inap.	Cloudy	
Colorado Springs, Col	23.98	609.1	29.85	758.[illegible]	37	2.8	54	NW	2	0.9	.....	10k	0	.....	.....	0	0	Cloudy	
Corsicana, Tex	.....	.....	30.30	769.6	34	1.1	79	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Davenport, Iowa	.....	.....	29.88	758.9	23	−5.0	86	W	24	10.7	.....	.....	10ks	.....	W	0.14	3.6	Cloudy	
Denison, Tex	.....	.....	30.27	768.8	35	1.7	79	W	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Denver, Col	24.63	625.6	29.85	758.2	41	5.0	74	S	8	3.6	.....	.....	8s	.....	.....	0	0	Cloudy	
Detroit, Mich	.....	.....	29.62	752.3	55	12.8	68	SW	21	9.4	.....	.....	10s	.....	SW	Inap.	Inap.	Cloudy	
Dodge City, Kan	27.44	697.0	29.80	759.2	18	−7.8	84	W	2	0.9	.....	0	0	.....	.....	0.05	1.3	Clear	
Dubuque, Iowa	.....	.....	29.79	756.7	25	−3.9	75	NW	16	7.2	.....	.....	10s	.....	NW	0.44	11.2	Cloudy	
Duluth, Minn	.....	.....	29.96	761.0	6	−14.4	76	NW	6	2.7	.....	.....	10s	.....	.....	0.02	0.5	Cloudy	
Eastport, Me	.....	.....	30.02	762.5	39	3.9	81	SW	5	2.2	.....	5c	8s	W	W	0	0	Cloudy	
Erie, Pa	.....	.....	29.79	756.7	58	14.4	64	S	32	14.3	.....	5ck	5s	SW	S	Inap.	Inap.	Fair	
Escanaba, Mich	.....	.....	29.67	753.6	9	−12.8	78	NW	16	7.2	.....	.....	10n	.....	.....	0.51	13.0	Light snow	
Fort Gibson, Indian Terr	.....	.....	30.21	767.3	30	−1.1	68	W	3	1.3	.....	0	0	.....	.....	0.08	2.0	Clear	
Ft. St. Michaels, Alaska	.....	.....	29.94	761.5	7	−13.9	.....	E	70	31.3	.....	.....	10s	.....	S	0	0	Cloudy	
Fort Sill, Indian T	28.97	735.8	30.15	765.8	31	−0.6	69	Calm	0	0	.....	0	2s	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.23	717.0	30.08	764.0	−3	−19.4	66	SE	16	7.2	.....	0	1s	.....	.....	0	0	Clear	
Galveston, Tex	.....	.....	30.23	767.8	52	11.1	53	N	12	5.4	.....	0	0	.....	.....	0.56	14.2	Clear	
Grand Haven, Mich	.....	.....	29.62	752.3	43	6.1	91	SW	11	6.3	.....	.....	10s	.....	W	0.27	6.9	Cloudy	
Indianapolis, Ind	.....	.....	29.74	755.4	54	12.2	73	W	6	2.7	.....	.....	10s	.....	SW	0.10	2.5	Cloudy	
Indianola, Tex	.....	.....	30.29	769.1	53	11.7	60	NE	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Jacksonville, Fla	.....	.....	30.29	769.4	63	17.2	78	SE	8	3.6	.....	8k	0	SE	.....	0	0	Fair	
Keokuk, Iowa	.....	.....	29.94	760.5	22	−5.6	72	NW	16	7.2	.....	.....	10s	.....	NW	0.58	14.7	Cloudy	
Key West, Fla	.....	.....	30.27	768.8	71.2	21.8	71	SE	18	8.0	.....	2k	5s	SE	SE	0	0	Cloudy	
Kittyhawk, N. C	.....	.....	30.32	770.1	55	12.8	80	SW	12	5.4	.....	2c	2s	SW	.....	0	0	Fair	
Knoxville, Tenn	.....	.....	29.99	761.7	61	16.1	70	S	16	7.2	.....	.....	10ks	.....	S	0.02	0.5	Cloudy	
La Crosse, Wis	.....	.....	29.86	758.1	17	−8.3	67	N	13	5.8	.....	.....	10s	.....	N	0.54	13.7	Cloudy	
Leavenworth, Kan	28.75	731.2	30.13	765.3	18	−7.8	84	NW	3	1.3	.....	0	0	.....	.....	0.23	5.8	Clear	
Lexington, Ky	.....	.....	29.82	757.4	60	15.6	82	S	36	16.1	.....	.....	10s	.....	SW	0	0	Threatening	
Long Branch, N. J	.....	.....	30.17	766.3	46	7.8	85	S	5	2.2	.....	5c	Haze	SW	.....	0	0	Fair	
Louisville, Ky	.....	.....	29.83	757.7	55	12.8	87	S	9	4.0	.....	.....	10n	.....	SW	0.32	8.1	Light rain	
Lynchburg, Va	.....	.....	30.16	766.1	58	14.4	73	S	5	2.2	.....	.....	10s	.....	SW	0	0	Cloudy	
Malone, N. Y	.....	.....	29.87	758.7	53	11.7	66	S	14	6.3	.....	5ck	0	NW	.....	0	0	Fair	
Manhattan, Kan	28.92	731.6	30.05	763.3	18	−7.8	67	SE	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Marquette, Mich	.....	.....	29.74	755.4	5	−15.0	87	W	20	8.9	.....	.....	10s	.....	NW	0.17	4.3	Cloudy	
Memphis, Tenn	.....	.....	30.04	763.0	45	7.2	67	W	10	4.5	.....	.....	10ks	.....	W	1.58	40.1	Cloudy	
Milwaukee, Wis	.....	.....	29.96	753.4	35	1.7	9[illegible]	W	23	10.3	.....	.....	10s	.....	W	0.30	7.6	Cloudy	
Mobile, Ala	.....	.....	30.09	764.3	66	18.9	9[illegible]	SW	10	4.5	.....	.....	10s	.....	SW	0.52	13.2	Cloudy	
Montgomery, Ala	.....	.....	30.03	763.5	62.5	16.9	94	S	16	7.2	.....	.....	10[illegible]	.....	SW	0.28	7.1	Light rain	
Morgantown, W. Va	.....	.....	29.93	760.2	60	15.6	55	S	8	3.6	.....	8c	0	SW	.....	0	0	Fair	
Mt. Washington, N. H	23.80	604.5	30.16	766.1	37	2.8	90	NW	48	21.5	.....	5s	Haze	NW	.....	0	0	Fair	
Nashville, Tenn	.....	.....	29.89	759.2	55	12.8	87	W	6	2.7	.....	.....	10n	.....	W	0.46	11.7	Light rain	
New Haven, Conn	.....	.....	30.16	766.1	42	5.6	90	S	4	1.8	.....	Haze	Fog	.....	.....	0	0	Fair	
New Orleans, La	.....	.....	30.24	767.4	42	5.6	82	SW	2	0.9	.....	0	Haze	.....	.....	0	0	Clear	
Newport, R. I	.....	.....	30.14	765.5	57.5	14.2	78	NW	5	2.2	.....	8k	0	SW	.....	1.15	29.2	Clearing	
New York, N. Y	.....	.....	30.19	766.8	41	5.0	91	S	4	1.8	.....	0	Haze	.....	.....	0	0	Clear	
Norfolk, Va	.....	.....	30.17	766.3	49	9.4	78	S	4	1.8	.....	2ck	Fog	W	.....	Inap.	Inap.	Fair	
North Platte, Neb	26.97	685.0	29.64	753.4	21	−6.1	71	SW	1	0.4	.....	8k	0	.....	.....	0	0	Fair	
Omaha, Neb	28.92	734.6	30.09	764.3	9	−12.8	89	Calm	0	0	.....	2c	0	.....	.....	0	0	Clear	
Oswego, N. Y	.....	.....	29.91	759.7	48	8.9	67	SE	11	4.9	.....	0	0	.....	.....	0.26	6.6	Clear	
Pembina, Dakota	.....	.....	30.18	766.6	−20	−28.9	100	Calm	0	0	.....	.....	10s	.....	W	0	0	Cloudy	
Philadelphia, Penn	.....	.....	30.18	766.6	52	11.1	79	SW	9	4.0	.....	2ck	0	.....	.....	0	0	Clear	
Pike's Peak, Colorado	17.54	445.5	28.75	755.6	8.5	−13.1	56	W	44	19.7	.....	2c	Sm'e	W	.....	0	0	Smoky	
Pittsburgh, Penn	.....	.....	29.92	760.0	56	13.3	62	S	4	1.8	.....	5c	8s	.....	.....	0	0	Cloudy	
Port Huron, Mich	.....	.....	29.64	752.8	55	12.8	68	S	19	8.5	.....	.....	0	.....	.....	0	0	Fair	
Portland, Me	.....	.....	30.05	763.3	44	6.7	84	SW	14	6.3	.....	Haze	10n	.....	SW	Inap.	Inap.	Light rain	
Portland, Oregon	.....	.....	29.32	744.7	44	6.7	84	W	4	1.8	.....	.....	Haze	.....	.....	0	0	Hazy	
Punta Rassa, Fla	.....	.....	30.31	769.9	65.2	18.4	73	E	14	6.3	.....	.....	10n	.....	.....	1.26	32.0	Light rain	
Rochester, N. Y	.....	.....	29.85	758.2	55	12.8	62	SW	10	4.5	.....	.....	10ks	.....	SE	0	0	Cloudy	
Salt Lake City, Utah	25.44	646.2	29.77	756.1	42	5.6	75	S	12	5.4	.....	10cs	0	W	.....	0	0	Cloudy	
Sandy Hook, N. J	.....	.....	30.15	765.8	48.5	9.2	85	S	18	8.0	.....	.....	10s	.....	.....	0	0	Cloudy	
San Diego, Cal	.....	.....	30.15	765.8	48	8.9	93	Calm	0	0	.....	5cs	Haze	SW	.....	0	0	Fair	
San Francisco, Cal	.....	.....	29.88	758.9	52	11.1	86	S	8	3.6	.....	0	2s	.....	.....	0	0	Fair	
Santa Fe, N. M	23.28	591.3	29.82	757.4	9	−1.7	67	N	3	1.3	.....	.....	10s	.....	S	1.59	40.4	Threatening	
Savannah, Ga	.....	.....	30.29	769.4	65	18.3	83	SW	8	3.6	.....	0	5s	.....	.....	0	0	Fair	
Shreveport, La	.....	.....	30.27	768.8	39	3.9	77	NW	4	1.8	.....	.....	10ks	.....	SW	0.03	0.8	Cloudy	
Smithville, N. C	.....	.....	30.33	770.4	60	15.6	81	S	16	7.2	.....	0	0	.....	.....	1.14	29.0	Clear	
Springfield, Mass	.....	.....	30.12	765.0	48	8.9	77	S	8	3.6	.....	10ck	0	SW	.....	0	0	Cloudy	
St. Louis, Mo	.....	.....	30.00	762.0	33	0.6	69	NW	16	7.2	.....	1cs	Sm'e	.....	.....	0	0	Fair	
St. Marks, Fla	.....	.....	30.24	768.1	63	17.2	88	S	10	4.5	.....	.....	10s	.....	.....	0.93	23.6	Cloudy	
St. Paul, Minn	.....	.....	29.91	759.7	12	−11.1	79	NW	12	5.4	.....	8cs	0	SW	.....	0	0	Fair	
St. Paul's Island, Alaska	.....	.....	29.45	748.0	38	3.3	90	SSW	37	16.5	.....	8c	0	W	.....	0	0	Fair	
Thatcher's Island, Mass	.....	.....	30.10	764.5	39	3.9	91	SW	15	6.7	.....	.....	10s	.....	.....	0.69	17.5	.....	
Toledo, Ohio	.....	.....	29.65	753.1	59	15.0	70	SW	22	9.8	.....	2c	0	SW	.....	0	0	Clear	
Tucson, Arizona	27.66	702.6	30.25	768.3	40	4.4	.....	E	.....	.....	.....	.....	10s	.....	SW	0	0	Threatening	
Tybee Island, Ga	.....	.....	30.24	768.1	64	17.8	88	SE	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Vicksburg, Miss	.....	.....	30.18	766.9	49	9.4	75	NW	12	5.4	.....	0	8ks	.....	N	0.02	0.5	Cloudy	
Virginia City	23.82	605.0	29.30	744.2	38	3.3	63	SW	7	3.1	.....	2k	8ks	W	W	2.84	72.1	Cloudy	
Washington, D. C	.....	.....	30.16	766.1	55.5	13.1	76	S	8	3.6	.....	10ck	0	SW	.....	0	0	Cloudy	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5cs	2s	W	W	0	0	Smoky	

UNITED STATES SERIES.—CONTINUED

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.33	770.4	63	17.2	67	S	10	4.5			10s		SW	0	0	Cloudy	
Wood's Holl, Mass			30.19	766.8	44	6.7	89	SW	12	5.4		2c	0	SW		0	0	Clear	
Wytheville, Va	27.75	704.8	29.87	758.7	58	14.4	69	S	3	1.3		10k	0	S		0	0	Cloudy	
Yankton, Dakota	28.76	730.5	30.21	767.3	—2	—18.9	67	W	1	0.4		0	0			0	0	Clear	
Yuma, Arizona			30.08	764.0	50	10.0		NE				10c	0	NW		0	0	Cloudy	
Sub-Series.																			
Bridgetown, B'b'dos, W. I			30.05	763.3	79	26.1	95	NE	5	2.2		2k	5n	E	E			Light rain	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.98	761.5	74	23.3	67	N				2pc	5k			0.04	1.0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.31	769.9	71	21.7	56	NNE	4	1.8		4c	8k	NE		0	0	Cloudy	W. S. Cameron.
Kingston, Jamaica, W. I			30.24	768.1	73	22.8	76	Calm	0	0		2c	2s			0	0		James Gall.
Santiago de Cuba, W. I			29.97	761.2	69	20.6	52	N	6.0	2.7		0	2ks		NE	0	0	Fair	Robert Mason
Havana, Cuba, W. I			30.24	768.1	72	22.2	63	E	13.2	5.9		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			30.39	771.9	62.5	16.9	62	NE	6.0	2.7		0	5k		NE	0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Navassa, W. I																			
Clifton, Jamaica, W. I	27.24	691.9	30.06	763.5	62	16.7	88	W	5.0	2.2		2c	2k	NE		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A			30.02	762.5	80	26.7	78	NE			2		5k			0	0	Dry & fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.03	762.8	84.2	29										0	0		Dr. H. Groot.
Medellin, Colombia, S. A	25.17	639.4			66.5	19.2	78		4	1.8		6c	4s			0	0	Cloudy	Thomas Herran.
St. Johns, Newfoundland			30.10	764.5	30.5	— 0.8		N					10n			Inap.	Inap.	Cloudy	John Delaney.
York Factory, B. A			30.50	774.7	—27	—32.8		Calm	0	0		1c	Fog	S		0	0		J. Fortescue.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Manhattan, 1,125.0 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,840 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, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.5 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 8, 1876.

7:35 A. M. WASHINGTON 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.
1:13 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	66.9	19.4	46	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.13	765.3	67.3	19.6	47	WNW			1		3			0	0	Fair	Peter.
La Calle																			Kunts.
Tunis			30.11	764.9	63.9	17.7	32	NW			5		0			0	0	Clear	Jacques.
Sfax			30.15	765.8	73.4	23.0	26	W			3		2			0	0	Clear	Chauvey.
Saïda			30.10	764.6	66.6	19.2		NNE			2		2			0	0	Clear	Millot.
Tebessa			30.11	764.7	62.8	17.1		N			3		8			0	0	Cloudy	Colin.
Geriville			30.11	764.8	58.6	14.8	42	NW			1		2			0	0	Clear	Buard.
Laghouat			30.10	764.6	59.0	15.0	58	SE			1		0			0	0	Clear	Guyot.
Biskra			30.06	763.5	75.6	24.2	28	NW			2		3			0	0	Fair	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.77	756.1	48.2	9.0	32	NE			3		4			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.60	751.7	35.6	2.0	75	NW			3		3			0.004	0.1		I. R. Observatory.
Eperies			29.58	751.2	40.5	4.7	68	N			5		6		SE	0	0		Julius Mikolik.
Gratz	28.57	725.6	29.79	756.6	42.1	5.6	45	WNW			5		5			0.004	0.1		Andreas Rospini.
Hermannstadt	28.10	713.8	29.55	750.5	39.4	4.1	56	WNW			4		7			0.098	2.50		Prof. Reissenberger.
Kremsmünster	28.45	722.5	29.82	757.5	37.9	3.3	82	W			3		8			0.386	9.8		Prof. C. Wagner.
Lemberg			29.48	748.9	35.6	2.0	82	NW			2		8			0.055	1.4		Dr. T. Stanecki.
Nyiregyhaza			29.60	751.7	43.9	6.6	74	NW			1		9			0.133	3.38	Graupelnd	Habsuda Daniel.
Pola			29.83	757.7	50.7	10.4	72	W			1		3ks			0.283	7.17		I.R. Hydrographic Of'ce
Szegedin			29.69	754.1	44.4	6.9	44	N			3		5			0	0		Karl Stancel.
Trieste			29.82	757.4	51.1	10.6	64	N			1		4k			0	0		Prof. V. Farolfi.
Vienna			29.71	754.6	39.9	4.4	62	W			4		3			0.071	1.8		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.69	753.9	47.7	8.7	86	WSW			2		10			0.150	3.80		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.11	739.4	40.2	4.6		S	12	5.4			9			0	0	*D. clouds	William Boswell.
Ardrossan			29.04	737.6	44.5	6.9		SSW			6		9					Raining	J. Mayes.
Armagh Observatory			28.92	734.6	46.2	7.9		S	28	12.5			10					Rain-squalls	S. Cali, for Dr. Robinson.
Bidston, Liverpool Obs			29.26	743.2	45.0	7.2		S	23	10.3			10					Raining	John Hartnup.
Birr Castle, (Parsonstown)			29.08	738.6	50.5	10.3		W			3–4		10					*D.clouds	J. Dreyer.
Bradford			29.29	744.0	47.1	8.4		S			2		10			0.10	2.5	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			29.97	761.2	78.6	25.9		NE			2		2					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			29.52	749.8	50.5	10.3		SW			3		10					Threatening	H. Todd.
Cardington			29.49	749.0	50.0	10.0		SW			3		10					Overcast	John McLaren.
Carlisle			29.16	740.7	45.8	7.7		SW			4		8			0.13	3.3	Threatening	J. Bell, for J. Cartmell.
Chatham, School M. E.			29.61	752.1	49.2	9.6		W			1							Overcast	Capt. J. Fellowes, R. E.
Dartmoor	28.18	715.8	29.08	753.9	44.0	6.7		SW			8		10					Raining	R. E. Power.
Donaghadee			29.98	761.5	45	7.2		S			5		10					Raining	J. Mac Gowan.
Dover			29.63	752.6	48	8.9		SW			4		9					Overcast	J. Costello.
Eccles, (near Manchester)			29.33	745.0	47.0	8.3		SW	5.4	2.4			10					Raining	Thomas Mackereth.
Falmouth Observatory			29.51	749.5	49.5	9.7		SSW	41	18.3			10					Rain-squalls	The Staff.
Fort Napier, (Natal)	27.25	692.1	29.49	749.0	75.8	24.3		NW			4		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	87	30.6		NE			0		5					Blue sky	[illegible]
Galway, Queen's College			28.99	736.3	49	9.4		SW			3		10					Overcast	B. G. Clare, for Prof. Cuff.
Gibraltar, (Mediterranean)			30.20	767.1	68.6	20.3		W			5		0					Blue sky	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.00	736.6	44.2	6.8		S			4		10					Overcast	Lewis Stuart.
Great Yarmouth			29.54	750.3	49	9.4		WSW			4		5					Squally	G. T. Watson.
Greenwich Royal Obs			29.59	751.6	50.3	10.2		WSW			4		10					Overcast	The Staff for G. B. Airy.
Guernsey			29.72	754.9	48	8.9		SSW			6		10					Raining	Dr. S. E. Hoskins.
Halifax, Moorside Obs			29.33	745.0	46.0	7.8		SSW			3		10					Threatening	L. J. Crossley.
Helston			29.45	748.0	52	11.1		SW			6		10			0.4	10.2	Raining	M. P. Moyle.
Holyhead			29.06	738.1	48	8.9		SSW			6		10					Raining	John Tilston.
Kew Observatory			29.59	751.6	50.0	10.0		SW	24	10.7			10					Raining	The Staff.
Kingstown			29.05	737.9	49	9.4		S			5		10					Raining	George Mitchell
Leicester Museum			29.48	748.8	47.0	8.3		SW			2		10					Threatening	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.89	759.2	61.4	16.3		NW			4		6k						Fred Travis, Pvt A. H. C.
Nairn			28.91	734.3	44	6.7		Calm			0		2					¼ clouded	W. D. Penny.
Nassau, (Bahamas)			30.20	767.1	69.4	20.8		NE			3		9					Drizzling	Surg.-Maj. Henry.
Nottingham			29.40	746.7	46.3	7.9		SSW			4		10n,d		S	0.078	1.98	Raining	E. J. Lowe, F. R. S
Oscott, St. Mary's College			29.42	747.3	46.0	7.8		S			4		10					Threatening	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.51	749.5	50	10.0		SSW			3		10					Overcast	J. Lucas.
Plymouth			29.56	750.8	48.8	9.3		SSW			6		10					Raining	John Merrifield.
Roche's Point			29.22	742.2	47	8.3		W			7		10					Raining	W. Kennedy.
Saint Ann's Head			29.33	745.0	47	8.3		SW			6		10					Raining	John C. Walker.
Saint Helier, (Jersey)			29.76	755.9	49.4	9.7		SW			6		10					Raining	A. P. Amy.
Sandwick Manse (Orkneys)			28.89	733.8	42.7	5.9		S	30	13.4			0					Blue sky	Rev. Dr. Clouston.
Scarborough			29.35	745.5	46.3	7.9		SSW			3		10					Overcast	F. Shaw.
Scutari Cemetery (Turkey)			29.49	749.0	51.6	10.9		SW			4		9			Blank	Blank	Threatening	Sergt. W. H. Lyne.
Sheffield			29.37	746.0	48.0	8.9		SW			2		10			0.056	1.42	Squally	W. F. Cooper.
Silloth Rectory			29.16	740.7	45.0	7.2	92	SSW			5		10			0.335	8.51	Raining	Rev. Francis Redford.
Stonyhurst Observatory			29.29	744.0	45.1	7.3		S			5		10			Blank	Blank	Wet	S. J. Perry.
Stornoway, Lewis C. (Hebr.)			28.75	730.2	44	6.7		SSE			6		10					Raining	John Smith.
Stratfield Turgiss			29.62	752.3	50.1	10.1		W			0–2		10			Blank	Blank	Squally	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slater.
Thurso			28.89	733.8	44	6.7		S			4		8					*D. clouds	John Trotter.
Truro, Royal Institution			29.42	747.3	52	11.1		SW			8		10					Raining	W. Newcombe.
Valencia Observatory			29.18	741.1	50.9	10.5		WSW	37	16.5			10					Misty	The Staff.
Sub-Series.																			
Cape Good Hope Obs.			29.94	760.5	56.2	13.4	74	SSE	12	5.4			7						The Staff, for E. J. Stone.
Calf of Man, (Isle of Man)					46	7.8		SW			6		10			0.10	2.5		
Leith, Restalrig Park			29.11	739.4	45.9	7.7		SW			3		10k			0.04	1.0	Cloudy	Andrew Gibb.
Mauritius			29.98	761.5					9.2	4.1						0	0		
Monach Lt-house, Hebrides			28.77	730.7	43	6.1		SW			1		10			0.2	5.1		J. Youngclause.
North Unst, (Shetland Is.)			29.04	737.6	42	5.6		S			6	2	4	W					

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.35	745.6	41.5	5.3	71	WNW			4		7						
Faröe			29.48	748.8	41.0	5.0	90	W			4		1						
Godthaab, (Greenland)			29.56	750.9	8.8	−12.9	96	NW			4		10						
Stykkisholm, (Iceland)																			
Thorshavn, (Faröe)			28.84	732.6	41.7	5.4	66	SE			4		7						
Vestervig			29.30	744.2	39.9	4.4	97	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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.89	759.3	51.8	11	86	SW			3		8nk		SW	0.559	14.2	Very cloudy	Normal School.
Amiens			29.86	758.5	51.8	11.0	65	WNW			3		10			0	0	Covered	Normal School.
Avignon			30.12	765.0	57.2	14	37	NNW			3		2		NNW	0	0	Partly cl'dy.	Normal School.
Bar-sur-Seine			29.96	760.9	49.8	9.9	63	W			6		5			0.087	2.2	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.85	758.3	48.6	9.2	86	SW	42.3	18.9			10		SW	0.087	2.2	Raining	Beaumette Observatory
Beauvais			29.84	757.8	51.3	10.9	60	W			3		10		W	0.008	0.20	Covered	Normal School.
Besançon			30.08	763.9	43.5	6.4	79	SW			4		8		SW	0.12	3.	Very cloudy	Normal School.
Bourg en Bresse			30.21	767.4	43.0	6.1	85	SSW			1		5kn		E			Cloudy	Normal School.
Bourges			30.00	762.0	50.4	10.2	76	SW			6		5		W	0	0	Cloudy	Normal School.
Brest			29.72	755.0	49.1	9.5	95	SW			6		10		SW	0.039	1.00	Raining	Naval Observatory.
Caen																			Normal School.
Chartres			29.82	757.5	51.1	10.6		W			6		6		E	0.134	3.4		Normal School.
Chaumont																			Normal School.
Clermont			30.07	763.8	47.3	8.5	55	SW			2		8		W	0.094	2.4		Puy de Dome, Obs.
Commercy			29.90	759.5	43.9	6.6	81	W			6		10kn		W	0.618	15.7	Covered	Normal School.
Commune de Gréasque*			30.08	764.0	50.7	10.4	44	NW			6		2		NW	0	0		
Grenoble			30.14	765.6	46.0	7.8	72	NE			2		5k		S	0.31	8.	Partly cl'dy.	Normal School.
Le Mans			29.94	760.5	47.8	8.8	83	W			3		5		W	0.091	2.3	Cloudy	Normal School.
Loches			29.76	755.9	49.1	9.5	65	W			4		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			30.11	764.7	47.3	8.5	81	SW			6		8		W	0.150	3.8	Very cloudy	Normal School.
Mâcon			30.12	765.0	49.3	9.6	74	W			6		10			0	0	Covered	Normal School.
Mirecourt																			Normal School.
Metz			29.94	760.5	43.2	6.2	91	SW			3		10		SW	0.264	6.7	†Hailing	M. Schuster.
Nismes			30.10	764.6	57.0	13.9	47	NW			6		2		N	0	0	Slightly cl'dy	Normal School.
Orleans			29.93	760.2	50.0	10	70	W			6		8		W	0	0	Very cloudy	Normal School.
Paris Observatory			29.87	758.7	51.4	10.8	75	SW			3		5		W	0.005	0.13	Cloudy	National Observatory.
Parthenay			30.10	764.6	50.0	10	95	W			8		5		SW	0.024	0.6	Cloudy	Normal School.
Privas			30.17	766.3	47.3	8.5		N			2		8		N	0	0	Very cloudy	Normal School.
La Roche-sur-Yon			30.02	762.5	51.1	10.6	72	SW			2		5		NE	0	0	Cloudy	Normal School.
Rochefort, Observatory			30.11	764.7	53.1	11.7	77	SW			6		2		NE	0.433	11.0	¼ covered	Naval Observatory.
Rouen			29.82	757.3	51.8	11.0	61	SW			3		8		W	0.012	0.3	Very cloudy	Normal School.
Saint Lo			29.81	757.2	51.8	11	71	W			3		9		W	0	0		Normal School.
Tarbes			30.28	769.0	57.2	14	55	E			2		0			0.028	7.	Clear	Normal School.
Toulouse																			Normal School
Villefranche			30.02	762.4	48.2	9	85	WSW			2		5		N	0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.85	758.3	73.4	23	69	NE			2		2k						L'Abbé Marchési.
Gorée																			
Marseilles			30.06	763.4	54.0	12.2	40	NW			8		3			0	0		Marseilles Observatory.
Mont-Louis	24.86	631.4	30.24	768.0	44.4	6.9	34	SSW					2		W	0	0		—. Falguère.
Montsouris, Paris			29.88	758.9	50.9	10.5	75	W			3		8			0	0		Montsouris Observ'tory.
Perpignan			30.13	765.3	55.6	12.8	49	N	16.8	7.50			1		W	0	0		Dr. Fines.
Pic du Midi, (Summit) H. P‡																			M. Baylac.
Saint Maur, (near Paris)			29.87	758.7	52.2	11.2	65	WSW			4		9			0.098	2.5	Very cloudy	E. Renou.
Toulouse			30.23	767.8	50.4	10.2	64	NW			2		9			0	0		Toulouse Observatory.
Tours			29.96	761.0	52.3	11.3	59	W			5		7		W	0	0		C. Marquet.
Versailles, (near Paris)			29.79	756.6	49.6	9.8	66	W			4		10			0	0	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lee, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 ft.; Clermont 383 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Near Marseilles. † It is not certain that the weather remarks refer to the moment of observation. ‡ Summit inaccessible; weather clear; rain-fall on the Plantade 0.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.67	753.6	40.1	4.8	74	WNW			5		9			0.197	5.0	Graupelnd	Prof. T. Hoh.
Berlin			29.63	752.6	43.5	6.3	65	SW			3		8			0.244	6.2		Prof. Arndt.
Breslau			29.64	752.8	33.6	0.9	90	WNW			8		10			0.035	0.9	Snowing	Dr. P. Saugebauer.
Karlsruhe			29.80	756.2	39.6	4.2	90	SW			3		10			0.087	2.2	Raining	A. Senz.
Cassel			29.65	753.1	42.1	5.6	79	SSW			4		8			0.319	8.1		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main			29.89	759.3	42.8	6.0	58	WSW			2		10			0.059	1.5		Physical Society
Friedrichshafen			29.99	761.8	40.1	4.5	60	W			2		9			0.075	1.9	Rain & snow	M. Wilhelm.
Hamburg			29.59	751.5	43.5	6.4	62	WNW			4		5k			0.146	3.7	Fine	Deutsche Seewarte.
Kiel			29.54	750.4	41.7	5.4	64	W			4		5			0.071	1.8		Prof. G. Karsten.
Königsberg			29.35	745.4	35.6	2.0	87	NW			7		9			0.315	8.0		Prof. E. Luther.
Köslin			29.42	747.3	33.4	0.8		W			4		10			0	0	Raining	H. Müller.
Leipsic			29.71	754.6	39.7	4.3	63	W			6		9	WNW		0.122	3.1	Stormy	Prof. Bruhns.
Memel			29.20	741.7	32.0	0.0	83	NW			5		10			0.193	4.9		Reinbrecht & Skalweit.
Münster			29.70	754.4	41.9	5.5	88	SW			3		10			0.488	12.4	Raining	Prof. E. Reis.
Neufahrwasser			29.32	744.8	41.0	5.0	69	W			5		10			0.083	2.1		A. Lothes.
Posen			29.56	750.7	40.1	4.5	70	W			7		9			0	0	Graupelnd	Dr. Magener.
Strassburg, (in Alsace)			29.93	760.3	42.4	5.8	77	SW			3		10			0.031	0.8	Raining	Dr. Schur.
Stuttgart			29.92	760.0	39.9	4.4	74	W					10			0.043	1.1	Raining	Prof. Schoder.
Thorn			29.45	748.0	41.2	5.1	64	WSW			5		9			0.094	2.4		Dr. Hasenbalg.
Treves, (Trier)			29.75	755.6	42.4	5.8	85	W			5		10			0.154	3.9		Prof. Flesch.
Wustrow, Naval School			29.48	748.8	38.1	3.4	83	W			5		3			0.008	0.2		E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 113.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.78	756.5	50.0	10.0	33	E	3.8	1.7			10			0	0		
Padua			29.80	756.9	54.9	12.7	29	WNW	21.7	9.7			10			0	0		
Vicenza			29.80	757.0	54.5	12.5	21	NW	4.9	2.2			2			0	0		
Verona			29.80	757.0	59.0	15.0	58	E			4		10			0	0		
Bergamo	28.49	723.6	29.81	757.1	49.6	9.8	29	W			6		1			0	0		
Domodossola	28.88	733.6	29.91	759.6	50.0	10.0	70	NNE			6		7			0	0		
Milan			29.89	759.3	54.0	12.2	30	NW			4		2	NW		0	0		
Pavia			29.90	759.5	53.1	11.7	29	NW			4		0			0	0		
Moncalieri			29.89	759.3	54.7	12.6	19	NW	8.7	3.9			4	N		0	0		
Mondovi	27.98	710.7	29.90	759.4	49.3	9.6	23	NW			2		1	NW		0	0		
Porto Maurizio			30.02	762.5	54.1	12.3		SW			4		2			0	0		
Genoa			29.91	759.7	57.9	14.4		NW					2			0	0		
Piacenza			29.90	759.5	54.1	12.3	48	SW	6.3	2.8			0			0	0		
Parma			29.89	759.2	54.5	12.5	49	NW			6		0			0	0		
Bologna			29.91	759.7	54.3	12.4	33	W			6		3	N		0	0		
Florence			29.90	759.5	55.6	13.1	13	WNW			2		1			0	0		
Leghorn			29.91	759.8	55.9	13.3	29	WSW	4.9	2.2			4			0	0		
Siena	28.67	728.3	29.89	759.2	51.4	10.8	20	NNW	3.1	1.4			4	N		0	0		
Urbino	28.32	719.3	29.88	759.0	48.2	9.0	14	NNE			2		0			0	0		
Pesaro																			
Ancona			29.99	761.8	50.7	10.4	65	NW			4		0			0	0		
Grosseto			29.91	759.6	58.3	14.6	22	NW			4		3	N		0	0		
Rome			29.88	758.9	57.6	14.2	11	N	19.9	8.9			3			0	0		
Naples, O. U.			29.83	757.7	55.4	13.0	53	ENE			6		9	NW		0.047	1.2		
Lecce			29.74	755.4	54.0	12.2	50	NNE	24.8	11.1			9			0	0		
Cosenza			29.82	757.3	60.1	15.6	75	NW	8.1	3.6			9			0.197	5.0	Rain & hail.	
Riposto, (Sicily)			29.79	756.7	64.2	17.9	49	NNE			6		3	S		0	0		
Palermo			29.87	758.8	58.3	14.6	55	WNW	21.0	9.4			9			0	0		
Caltanissetta	27.90	708.7	29.86	758.4	54.7	12.6	40	W			6		4	E		0	0		
Sub-Series.																			
Naples, S. R.			29.84	757.8	52.0	11.1	60	NW	0.7	0.3			10k	N		0.008	0.2	Raining	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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.71	754.6	46.8	8.2		W			5								
Groningen			29.54	750.4	41.5	5.3		SW			2								
Helder			29.56	750.7	43.9	6.6		SW			4								
Utrecht			29.60	751.7	41.7	5.4	84	SSW			3		10					Dull	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.10	739.1	41.7	5.4	78	SW	8.9	4.0			8			0.118	3.0		
Brönø			29.13	740.0	25.7	— 3.5	58	E	18	8			2			0	0		
Christiania			29.21	742.0	32.4	0.2	96	SE	2.9	1.3			10			0.043	1.1	Snow, l't fog	
Tromsö			29.30	744.2	22.5	— 5.3	66	W	7	3			0			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.50	774.7	59.0	15.0	89	W	7.3	3.28			3			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.23	767.9	63.3	17.4	45	SW	4.3	1.92			7	WNW		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.37	771.4	64.4	18.0	62	SW	6.0	2.69			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.34	770.7	58.5	14.7	54	NNW	16.1	7.2			2	WNW		0	0		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.46	748.2	36.7	2.6	82	WSW	25	11			10					Graupel, hail	Astronomical Obs.
Wilna			29.26	743.6	34.3	1.3	96	W	11	5			10						Astronomical Obs.
Dorpat			29.06	738.0	34.7	1.5	89	ENE	4	2			10						Physical Cabinet.
St. Petersburg			29.07	738.4	35.6	2.0	90	ESE	7	3			10						Central Physical Obs.
Kuopio			29.25	743.0	21.7	— 5.7	100	NE	9	4			10					Snowing	Ch. Forsten.
Kiew			29.43	747.5	40.3	4.6	65	SSW	7	3			10						Physical Cabinet
Nikolaiev			29.49	749.0	38.7	3.7	90	ESE	18	8			10					Raining	Kurdakof.
Kertch			29.58	751.2	44.4	6.9	90	Calm	0	0			10						Lagorio.
Moscow			29.29	743.9	37.0	2.8	77	S	4	2			8						Meteorological Obs.
Lugan			29.51	749.5	37.6	3.1	81	SW	9	4			9						Meteorological Obs.
Archangel			29.54	750.2	9.7	—12.4	92	E	22	10			0						Ogorodnikof.
Tiflis	28.41	721.6	29.80	757.0	59.0	15.0	21	NE	5	2			2						Physical Observatory.
Astrakhan			29.92	759.9	40.5	4.7	76	SSW	9	4			4						Sebastianof.
Kasan			29.26	743.3	22.5	— 5.3	98	SSE	4	2			10					Light snow	Physical Cabinet.
Orenburg					26.4	— 3.1	96	S	4	2			10					Snowing	Tschernischef.
Ekaterinburg	28.69	728.7	29.74	755.5	15.4	— 9.2	66	SSE	4	2			8						Meteorological Obs.
Nukuss			30.06	763.4	44.2	6.8	34	E	7	3			2						
Kasaly																			Bobrof.
Tashkend	28.44	722.4	30.20	767.1	41.7	5.4	89	N	4	2			10					Light rain	Michelson.
Barnaul			29.84	757.9	20.7	— 6.3	82	SW	2	1			10						Meteorological Obs.
Yeniseisk			29.47	748.5	21.2	— 6.0	58	SSW	2	1			0					Lunar corona	Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.10	764.4	38.7	3.7	49	SW	4	2			3						Physical Observatory.
Nertchinsk	27.75	704.9	30.09	764.2	—12.5	—24.7	72	Calm	0	0			0						Meteorological Obs.
Vladivostock			30.04	763.1	18.1	— 7.7	72	Calm	0	0			0						
Nikolaievsk, on the Amoor					8.4	—13.1	88	W	4	3			5						

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 305.4? m., or 1,005.2? ft.; Tashkend, is 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.18	766.5	59.5	15.3	46	SW	6.0	2.67		4	1	NE		0	0	Cloudy	Royal Observatory.
San Fernando			30.26	768.7	63.5	17.5	69	WNW	0	0		0	0						The Naval Observatory

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.45	748.0	6.8	—14.0	100	NE			4		10			0.079	2.0	Snowing	
Umea			29.39	746.4	7.9	—13.4	100	NE			4		10			0.024	0.6	Snowing	
Hernosand			29.33	744.9	15.8	— 9.0	94	NE			2		10			0.016	0.4	Snowing	
Stockholm			29.25	743.0	20.7	— 6.3	93	NNW			2		10			0.075	1.9		
Visby			29.28	743.8	23.4	— 4.8	95	NW			4		10			0.209	5.3		
SUB-SERIES.																			
Upsala			29.30	744.1	18.3	— 7.6	88	NNW	11.9	5.3			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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	727.8	30.11	764.7	44.2	6.8	65	S			2		9			0.083	2.1	Covered	The Observatory.
Zurich	28.35	720.1	30.04	763.0	38.7	3.7	83	W			4		9		SW	0.043	1.1	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +2.7 mm.; Thermometer, +0.2 cent.; Relative Humidity, +2 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.54	750.3	53.6	12.0	71	SW	17	7.5			10		SW	0.512	13.0		
Fao, (Persian Gulf)			30.20	767.0	69.8	21.0		W			3		10						
Salonica			29.60	751.7	62.2	16.8		NE			6		0						
Valona			29.85	758.2	56.7	13.7		W			1		5						
Varna			30.04	763.0	48.2	9.0		N			8		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.89	759.2	70.2	21.2	52	SW			1		2c,ks		S	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.90	759.4	15.6	— 9.1	92	Calm	0	0						0	0		Hon. J. Ferguson.
Brockville, Ontario			29.79	756.7	35	1.7		W	5	2.2			10s		W	0.40	10.2	Cloudy	W. R. Bigg.
*Chatham, N. B.			29.96	761.0	13	—10.5	95	Calm	0	0			10ks			0.21	5.3	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			29.93	760.2	30	— 1.1	99	E	3	1.3			Fog			0	0	Foggy	H. J. Cundall, C. E.
Cornwall, Ontario			29.63	752.6	41.7	5.4	85	S			1		10n			0.442	11.23	Rainy	James Smith, M. A.
Dalhousie, N. B.			29.97	761.2	13.5	—10.3	91	E			4		10n			0.20	5.1		H. A. Johnson.
Esquimault, B. C.			29.60	751.8	33.6	0.9	96	W	3	1.3			10			0.39	9.9	Snowing	W. H. Bevis.
Fredericton, N. B.			29.94	760.5	14.1	— 9.9	98	E	6	2.7			10n			0.040	1.02		Prof. Harrison.
*Fort Garry, Manitoba			29.99	761.7	6	—14.4	90	SE	10	4.5		5k	5n	SE	NE	0	0	Cloudy	James Stewart.
Goderich, Ontario			30.12	765.0	14.8	— 9.6	87	NW			3		10n			Inap.	Inap.	Threatening	H. J. Strang, M. A.
Granton, Ontario			30.04	763.0	18.3	— 7.6		NW			1		10n			0	0	Cloudy	James Grant.
*Halifax, N. S.			29.98	761.5	43	6.1	95	SW	7	3.1			10n			0.11	2.8	Cloudy	F. Allison, M. A.
*Kingston, Ontario			29.84	757.9	26	— 3.3	89	W	20	8.9		10cs	0	W		0.61	15.5	Fair	S. Woods, M. A.
Little Current, Ontario			30.08	764.0	7.6	—13.6		SW	6	2.7			8s			0	0		G. B. Abrey, C. E.
*Montreal, Quebec			29.65	753.1	33	0.6	97	SW	8	3.6			10n			0.38	9.7	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.80	756.9	37	2.8	82	W	19	8.5			10ks		W	0.19	4.8	Cloudy	J. B. Haney.
*Parry Sound, Ontario			29.97	761.2	14	—10.0	89	W	15	6.7		5k	5ks	W	W	0.02	0.5	Cloudy	Rev. R. Mooley.
*Port Dover, Ontario			30.02	762.5	22	— 5.6	86	NW	16	7.2		10k	0	NW		0.14	3.6	Cloudy	H. Morgan.
Port Hastings, N. S.			30.02	762.5	31.9	— 0.1		Calm	0	0						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.03	762.7	23	— 5.0	86	W	18	8.0			10n		W	0.10	2.5	Cloudy	M. Payne.
*Quebec, Quebec			29.68	753.9	27	— 2.8	94	NE	17	7.6			10n		NE	0.10	2.5	Sleeting	Capt. Ash, R. N.
St. John, N. B.			29.93	760.2	29	— 1.7	94	Calm	0	0			10n			0.270	6.86		G. Murdoch, C. E.
*Saugeen, Ontario			30.03	762.7	14	—10.0	82	N	11	4.9			10s			0.07	1.8	Cloudy	K. Stewart.
Stayner, Ontario			30.04	763.0	14	—10.0	83	N	13	5.8			10n		N	0.10	2.5	Cloudy	R. J. Cole.
Stratford, Ontario			30.05	763.3	16.8	— 8.4	86	NW	18	8.0			10n		W	0.312	7.92	Snowing	C. J. MacGregor, M. A.
*Sydney, C. B.			30.09	764.3	33	0.6	93	S	5	2.2			10n			0.03	0.8	Light rain	T. C. Hill.
*Toronto, Ontario			30.00	762.0	21	— 6.1	83	NW	15	6.7		2ck	0	W		0	0	Fair	Magnetic Observatory
Woodstock, Ontario																			J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.62	753.3	50	10.0	100	Calm	0	0			10n			0.04	1.0	Light rain	
Alpena, Mich.			30.11	764.8	5	—15.0	75	NW	12	5.4		2k	0	NW		Inap.	Inap.	Fair	
Atlantic City, N. J.			29.67	753.6	44	6.7	92	SW	8	3.6			10s		S	0.02	0.5	Cloudy	
Augusta, Ga.			30.09	764.3	44	6.7	76	NW	4	1.8		2cs	0	W		0.31	7.9	Fair	
Baltimore, Md.			29.77	756.1	46	7.8	69	NW	25	11.2		5k	5ks	W	NW	0.43	10.9	Cloudy	
Barnegat, N. J.			29.64	752.8	44	6.7	100	SW	20	8.9			Fog			0.01	0.3	Foggy	
Benton, Montana	27.20	690.9	30.00	762.0	— 4	—20.0	100	NW	16	7.2			10n		NW	0.18	4.6	Light snow	
Bismarck, Dakota	27.92	709.2	29.68	753.9	6	—14.4	64	NE	1	0.4			10s			0	0	Cloudy	
Boston, Mass.			29.73	755.1	53	11.7	93	S	21	9.4			10s		S	0	0	Threatening	
Breckenridge, Minn.			29.78	756.4	18	— 7.8	92	SE	22	9.8			10s		SE	0	0	Cloudy	
Buffalo, N. Y.			29.95	760.7	27	— 2.8	77	NW	8	3.6			10s		NW	0.59	15.0	Cloudy	
Burlington, Vt.			29.65	753.1	52	11.1	100	Calm	0	0			10n			0.21	5.3	Light rain	
Cairo, Ill.			30.16	766.1	38	3.3	80	SE	2	0.9		8c	0			0	0	Fair	
Cape Hatteras, N. C.			29.81	757.2	58	14.4	81	W	16	7.2		8c	0	W		1.02	25.9	Fair	
Cape Henry, Va.			29.78	756.4	62	16.7	72	SW	9	4.0		2c	0	SW		0.54	13.7	Clear	
Cape May, N. J.			29.71	754.6	45	7.2	92	S	10	4.5			Fog			0.21	5.3	Foggy	
Charleston, S. C.			30.04	763.5	51	10.6	64	W	12	5.4		5ck	0	W		0.27	6.9	Fair	
Cheyenne, Wyoming	23.63	600.2	29.57	751.1	41	5.0	35	S	8	3.6		8c	0	W		0	0	Fair	
Chicago, Ill.			30.09	764.3	30	— 1.1	78	W	2	0.9		2k	5s	W		0	0	Fair	
Cincinnati, Ohio			30.14	764.5	32	0.0	69	W	6	2.7		1k	0	NW		0.30	7.6	Clear	
Cleveland, Ohio			30.06	763.5	28.3	— 2.1	87	W	15	6.7			10n		W	0.14	3.6	Light snow	
Colorado Springs, Col.	23.72	602.5	29.59	751.6	51	10.6	16	NW	4	1.8			10ks			0	0	Cloudy	
Corsicana, Tex.			30.02	762.5	45	7.2	76	S	7	3.1		2cs	0	W		0	0	Fair	
Davenport, Iowa			30.06	763.5	27	— 2.8	77	SE	8	3.6		7cs	0			0	0	Fair	
Denison, Tex.			29.93	760.2	53	11.7	60	S	14	6.3		8c	0	S		0	0	Fair	
Denver, Col.	21.41	620.0	29.63	752.6	48	8.9	36	SW	12	5.4			8s		SW	0	0	Cloudy	
Detroit, Mich.			30.07	763.8	24	— 4.4	74	NW	9	4.0			10s			0.04	1.0	Cloudy	
Dodge City, Kan.	27.06	687.3	29.62	744.7	39	3.9	81	S	8	3.6			10s			0	0	Cloudy	
Dubuque, Iowa			30.07	763.8	24	— 4.4	74	E	8	3.6		5cs	0			0	0	Fair	
Duluth, Minn.			30.12	765.0	11	—11.7	79	NE	16	7.2			10s			0	0	Cloudy	
Eastport, Me.			29.84	757.9	38	3.3	100	S	4	1.8			Fog			0.01	0.3	Foggy	
Erie, Pa.			30.00	762.0	28	— 2.2	88	NW	18	8.0			10ks		NW	0.37	9.4	Cloudy	
Escanaba, Mich.			30.19	766.8	9	—12.8	78	W	4	1.8			1s			0.02	0.5	Cloudy	
Fort Gibson, Indian Terr.			29.86	758.4	52	11.1	47	SE	14	6.3		8c	0	W		0	0	Fair	
Ft. St. Michaels, Alaska			29.68	753.0	25	— 3.9		S	3	1.3		0	2ks			Blank	Blank	Fair	
Fort Sill, Indian T.	28.63	727.2	29.74	755.4	45	7.2	85	S	12	5.4			10s		S	0	0	Cloudy	
Fort Sully, Dakota	27.89	708.4	29.64	752.8	12	—11.1	90	NW	16	7.2			10s			0	0	Cloudy	
Galveston, Tex.			30.09	764.3	58	14.4	81	SE	3	1.3		0	0			0	0	Clear	
Grand Haven, Mich.			30.12	765.0	24	— 4.4	88	NW	12	5.4			10s		NW	0.03	0.8	Cloudy	
Indianapolis, Ind.			30.12	765.0	30	— 1.1	79	W	4	1.8		2cs	2s	W	W	Inap.	Inap.	Fair	
Indianola, Tex.			30.07	763.8	61	16.1	88	SE	10	4.5		0	0			0	0	Clear	
Jacksonville, Fla.			30.12	765.0	56	13.3	62	NW	4	1.8		0	0			0.05	1.3	Clear	
Keokuk, Iowa			29.98	761.5	30	— 1.1	78	E	10	4.5		10c	0	SW		0	0	Fair	
Key West, Fla.			30.13	765.3	72.1	22.3	71	S	8	3.6		5k	Haze	S		0	0	Fair	
Kittyhawk, N. C.			29.84	757.9	52	11.1	94	SW	16	7.2		5k	5ks	NW	NW	0.69	17.5	Cloudy	
Knoxville, Tenn.			30.22	767.6	32	0.0	89	Calm	0	0		0	Sm'e			0.72	18.3	Fair	
La Crosse, Wis.			30.03	762.7	22	— 5.6	58	SE	2	0.9			10s			0	0	Cloudy	
Leavenworth, Kan.			29.70	754.4	45	7.2	53	S	16	7.2			10s			0	0	Cloudy	
Lexington, Ky.	29.02	737.1	30.18	766.6	33	0.6	79	SW	4	1.8		0	0			0.40	10.2	Clear	
Long Branch, N. J.			29.58	751.3	44	6.7	100	S	28	12.5			10n			0.17	4.3	Light rain	
Louisville, Ky.			30.15	765.8	35	1.7	80	SW	6	2.7		5c	Sm'e	W	SW	0.15	3.8	Fair	
Lynchburg, Va.			29.90	759.4	43	6.1	55	W	16	7.2		5k		W		0.24	6.1	Fair	
Malone, N. Y.			29.63	752.6	46	7.8	84	W	12	5.4			10n		W	0.28	7.1	Light rain	
Manhattan, Kan.	28.49	723.6	29.63	752.6	40	4.4	81	SW	6	2.7			10s		SW	0	0	Cloudy	
Marquette, Mich.			29.20	767.1	10	—12.2	79	NW	4	1.8			10s			0	0	Cloudy	
Memphis, Tenn.			30.17	766.3	40	4.4	72	Calm	0	0		9ck	Sm'e		W	0	0	Smoky	
Milwaukee, Wis.			30.14	765.5	22	— 5.6	85	Calm	0	0			10ks			0.06	1.5	Cloudy	
Mobile, Ala.			30.21	767.3	48	8.9	77	N	3	1.3		0	0			0	0	Clear	
Montgomery, Ala.			30.23	767.8	44	6.7	75	N	2	0.9		0	Haze			1.33	33.8	Clear	
Morgantown, W. Va.			30.05	763.3	35	1.7	85	W	10	4.5			10n		W	0.57	14.5	Light rain	
Mt. Washington, N. H.	23.50	596.9	29.86	758.4	37	2.8	100	SW	36	16.1			Fog			0	0	Foggy	
Nashville, Tenn.			30.18	766.6	35	1.7	90	Calm	0	0			Fog			0.10	2.5	Foggy	
New Haven, Conn.			29.66	753.1	48	8.9	100	S	18	8.0			Fog			0.26	6.6	Foggy	
New London, Conn.			29.74	755.4	44	4.4	92	S	11	4.9			10s		SW	0.09	2.3	Cloudy	
New Orleans, La.			30.15	765.8	51	10.6	59	E	10	4.5		2c	0	W		0	0	Clear	
Newport, R. I.			29.76	755.9	47	8.3	92	S	16	7.2			10s		SE	0.04	1.0	Cloudy	
New York, N. Y.			29.50	751.6	46	7.8	100	SE	20	8.9			10n			0.09	2.3	Light rain	
Norfolk, Va.			29.80	756.9	54.5	12.5	87	SW	12	5.4		2k	2s	S	W	0.48	12.2	Fair	
North Platte, Neb.	26.57	677.4	29.28	743.7	24	— 4.4	74	W	1	0.4		2c	2s	W	W	0	0	Fair	
Omaha, Neb.	28.60	726.4	29.67	753.6	36	2.2	94	SE	13	5.8		5cs	0	W		0	0	Fair	
Oswego, N. Y.			29.87	758.7	29	— 1.7	72	NW	16	7.2			10ks		NW	0.66	16.8	Cloudy	
Pembina, Dakota			29.95	760.4	10	—12.2	79	S	12	5.4		10c	0			0	0	Cloudy	
Philadelphia, Penn.			29.64	752.8	53	11.7	93	W	10	4.5			10n		W	0.11	2.8	Light rain	
Pike's Peak, Colorado	17.42	442.5	29.63	752.6	10	—12.2	79	SW	42	18.8			Fog		W	0	0	Foggy	
Pittsburgh, Penn.			30.01	762.2	32	0.0	79	NW	6	2.7			10ks		NW	0.34	8.6	Cloudy	
Port Huron, Mich.			30.07	763.8	20	— 6.7	85	NW	9	4.0			10s			0.01	0.3	Cloudy	
Portland, Me.			29.76	755.9	46	7.8	92	S	7	3.1			Fog			0	0	Foggy	
Portland, Oregon			29.70	754.4	38	3.3	81	S	5	2.2			10s			0.73	18.5	Cloudy	
Punta Rassa, Fla.			30.14	765.5	64.1	17.8	83	SE	6	2.7		0	Haze			0	0	Clear	
Rochester, N. Y.			29.87	758.7	27	— 2.8	88	NW	20	8.9			10s		E	0.31	7.9	Cloudy	
Salt Lake City, Utah	25.24	641.1	29.57	751.1	32	0.0	100	N	20	8.9			10n			0.15	3.8	Light snow	
Sandy Hook, N. J.			29.57	751.1	47	8.3	92	S	17	7.6			10s		SW	0.27	6.9	Threatening	
San Diego, Cal.			29.94	760.5	53	11.7	93	S	16	7.2			10n		S	0.25	6.3	Light rain	
San Francisco, Cal.			29.78	756.4	45	7.2	68	W	12	5.4		0	5s			0.32	8.1	Fair	
Santa Fe, N. M.	23.09	586.5	29.63	752.6	41	5.0	73	NW	1	0.4			10s			0	0	Cloudy	
Savannah, Ga.			30.11	764.8	50	10.0	64	NW	8	3.6		10ck	0	W		0.13	3.3	Cloudy	
Shreveport, La.			30.15	765.8	45	7.2	80	SE	1	0.4		2cs	0			0	0	Fair	
Smithville, N. C.			29.97	761.2	53	11.7	86	W	8	3.6		10k	0		NW	0.48	12.2	Cloudy	
Springfield, Mass.			29.68	753.9	51.5	10.8	93	S	8	3.6			10n			0.12	3.0	Light rain	
St. Louis, Mo.			30.09	764.3	38	3.3	71	S	12	5.4		0	0			0	0	Clear	
St. Marks, Fla.			30.16	766.1	47	8.3	70	N	9	4.0		0	0			0.16	4.1	Clear	
St. Paul, Minn.			29.92	760.0	18.5	— 7.5	68	E	18	8.0		10cs	0	SW		0	0	Cloudy	
St. Paul's Island, Alaska			29.51	749.5	35	1.7	80	WSW	19	8.5		1ck	8k	WSW		0.47	11.9		
Thatcher's Island, Mass.			29.77	756.1	41	5.0	91	S	18	8.0						0	0	Dense fog	
Toledo, Ohio			30.05	763.3	30	— 1.1	78	W	9	4.0			10s		W	0.07	1.8	Cloudy	
Tucson, Arizona			30.03	762.7	50	10.0		SE					10s			0	0	Cloudy	
Tybee Island, Ga.	27.44	697.0	30.08	764.0	49	9.4	71	NW	8	3.6		2c	0	W		0	0	Fair	
Vicksburg, Miss.			30.19	766.8	45	7.2	57	E	8	3.6		8cs	0	NW		0	0	Fair	
Virginia City	23.70	602.0	29.18	741.1	26	3.3	88	SW	2	0.9			10n		W	0.11	2.8	Heavy snow	
Washington, D. C.			29.81	757.2	42	5.6	67	NW	20	8.9			10s		NW	0.62	15.7	Cloudy	

UNITED STATES SERIES.—CONTINUED

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			29.94	760.5	54	12.2	79	W	12	5.4		0	0			0.72	18.3	Clear	
Wood's Holl, Mass			29.80	756.9	45	7.2	92	S	27	12.1			10s		S	0	0	Cloudy	
Wytheville, Va	27.62	701.5	29.85	758.2	31	— 0.6	60	W	16	7.2		1k	0	W		0.76	19.3	Clear	
Yankton, Dakota	28.36	720.3	29.65	753.1	34	1.1	79	SE	8	3.6			10s		SE	0	0	Cloudy	
Yuma, Arizona			29.83	757.7	55	12.8		E				0	5s		SW	0	0	Fair	
Sub-Series.																			
Bridgetown, B'b'dos, W. I			30.02	762.5	80	26.7	95	NE	7	3.1		2k	5ks			1.80	45.7	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.96	761.0	70	21.1	75	N				2k	2ks			0.01	0.3	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.23	767.8	71	21.7	56	SSE	1	0.4		2c	8kn	NE		0	0	Cloudy	W. S. Cameron.
Kingston, Jamaica, W. I			30.21	767.3	71	21.7	75	Calm	0	0		2c	2s	E	E	0	0		James Gall.
Santiago de Cuba, W. I			29.86	758.4	70	21.1	60	NE	8.4	3.8		0	0			0	0	Clear	Robert Mason.
Havana, Cuba, W. I			30.14	765.5	69	20.6	71	SE	3.6	1.6		2c	0			0	0	Fair	Charles Hasselbrink.
St. Georges, Bermudas			30.18	766.6	61.0	16.1	74	E	4.0	1.8			10k		E	0	0	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Navassa, W. I																			
Clifton, Jamaica, W. I	27.24	691.9	30.06	763.5	64	17.8	88	NW	1.5	0.7		2c	2k	NW		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A			29.98	761.5	81	27.2	78	E			2		6k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.03	762.8	83.3	28.5										0	0		Dr. H. Groot.
Medellin, Colombia, S. A	25.15	638.7			64.0	17.8	85		8	3.6		6c	4s			0.21	5.3	Cloudy	Thomas Herran.
St. Johns, Newfoundland			30.48	774.2	12.5	—10.8		E					10			0	0	Overcast	John Delaney.
York Factory, B. A			30.22	767.6	—12.5	—24.7	75	S	4	1.8		3ck	Fog	S		0	0		J. Fortescue.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Manhattan, 1,125.0 ft., or 342.9 m.; Medellin, 4,012 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.5 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 9, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.92	760.0	70.2	21.2	44	Calm			0		2			0	0	Clear	Charnot.
Algiers			29.94	760.5	66.9	19.4	57	NNW			2		1			0	0	Clear	Peter.
La Galle																			Kunts.
Tunis			29.98	761.5	72.0	22.2	30	W			4		4			0	0	Fair	Jacques.
Sfax			30.07	763.7	64.8	18.2	60	S			3		1			0	0	Clear	Chauvey.
Saida			29.89	759.3	70.2	21.2		NW			9		1			0	0	Clear	Millot.
Tebessa			29.98	761.4	66.7	19.3		N			4		2			0	0	Clear	Colin.
Gerlville			29.96	760.9	61.2	16.2	26	NNW			2		2			0	0	Clear	Buard.
Laghouat			29.99	761.7	62.6	17.0	70	SE			0		1			0	0	Clear	Guyot.
Biskra			29.96	760.9	72.3	22.4	37	NE			1		2			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.54	750.2	49.3	9.6	66	SW			5		10			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.38	746.2	41.7	5.4	65	NW			1		10			0	0		I. R. Observatory.
Sperles			29.55	750.6	39.6	4.2	73	S			4		9		N	0	0		Julius Mikolik.
Gratz	28.23	717.0	29.43	747.4	46.0	7.8	55	SW			2		8			0	0		Andreas Rospini.
Hermannstadt	28.26	717.8	29.71	754.6	40.6	4.8	45	NW			3		1			0	0		Prof. Reissenberger.
Kremsmünster	27.94	709.6	29.28	743.6	41.7	5.4	85	N			1		10			0.197	5.0		Prof. C. Wagner.
Lemberg			29.48	748.8	38.8	3.8	52	S			2		5			0	0		Dr. T. Stanecki.
Nyiregyhaza			29.63	752.5	43.5	6.4	65	S			1		0			0	0		Habsuda Daniel.
Pola			29.66	753.3	51.8	10.9	75	S			4		10s			0	0		I.R. Hydrographic Of'ce
Szegedin			29.63	752.7	47.3	8.5	48	S			3		5			0	0		Karl Stancel.
Trieste			29.63	752.5	54.9	12.7	76	WSW			2		10k			0.039	1.0	Drizzling	Prof. V. Farolfi.
Vienna			29.33	745.0	45.1	7.3	64	SE			1		9			0.047	1.2		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmünster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			28.91	734.3	44.2	6.8	72	SW			3		10			0.547	13.90		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			28.11	714.0	35.4	1.9		WSW	29	13.0			10			0.310	7.87	Snowing	William Boswell.
Ardrossan			28.37	720.6				SW			7		8					Snow & hail.	J. Mayes.
Armagh Observatory			28.58	725.9	36.6	2.6		SW	13	5.8			5			Blank	Blank	*D. clouds	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			28.61	726.7	39.2	4.0		WSW	41	18.3			5					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			28.62	726.9	33.0	0.6		SSW			1		10					Snowing	J. Dreyer.
Bradford			28.55	725.2	36.1	2.3		W			4		8			0.47	11.9	Squally	J. McLandsborough.
Bridgetown, (Barbados)			29.90	759.4	79.0	26.1		NE			4		2					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			28.78	731.0	41.9	5.5		SW			5		7					Squally	H. Todd.
Cardington			28.79	731.3	39.0	3.9		SW			6		4					*D. clouds	John McLaren.
Carlisle			28.45	722.6	35.8	2.1		W			8		10			0.29	7.4	Hailing	J. Bell, for J. Cartmell.
Chatham, School M. E.			28.80	731.5	43.2	6.2		WSW			2		7					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	27.49	698.2	29.00	736.6	31.0	—0.6		SW			8		10					Snowing	R. E. Power.
Donaghadee			28.50	723.9	38	3.3		WSW			6		8					*D. clouds	J. Mac Gowan.
Dover			28.85	732.8	43	6.1		WSW			5		5					½ clouded	J. Costello.
Eccles, (near Manchester)			28.64	727.4	39.5	4.2		SW	14.4	6.4			8					Squally	Thomas Mackereth.
Falmouth Observatory			28.95	735.3	36.3	2.4		W	34	15.2			10					Rain-squalls	The Staff.
Fort Napier, (Natal)	27.48	698.0	29.72	754.9	63.7	17.6		S			5		1					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	85	29.4		N			2		4					Blue sky	
Galway, Queen's College			28.54	724.9	45	7.2		SW			1		7					*D. clouds	B. G. Clare, for Prof. Carey.
Gibraltar, (Mediterranean)			30.10	764.5	63.0	17.2		NW			6		2					Blue sky	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			28.33	719.6	34.2	1.2		W			4		10					Rain-squalls	Lewis Stuart.
Great Yarmouth			28.76	730.5	42	5.6		WSW			6		4					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			28.84	732.5	41.5	5.3		WSW			7		7			Blank	Blank	*D. clouds	The Staff for G. B. Airy.
Guernsey			29.07	738.4	40	4.4		WSW			6		7					Hail-squalls.	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			28.61	726.7	34.8	1.6		WSW			4		9					Threatening	L. J. Crossley.
Helston			28.97	735.8	48	8.9		W			7		8			0.20	5.1	Squally.	M. P. Moyle.
Holyhead			28.60	726.4	41	5.0		SW			4		5			Blank	Blank	*D. clouds	John Tilston.
Kew Observatory			28.84	732.5	41.8	5.4		WSW	30	13.4			7					*D. clouds	The Staff.
Kingstown			28.59	726.2	38	3.3		W			5		4					*D. clouds	George Mitchell
Leicester Museum			28.72	729.5	40.0	4.4		SW			4		8					Showery	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.07	763.8	62.0	16.7		SW			3		2k						Fred Travis, Pvt A.H.C.
Nairn			28.14	714.7	36	2.2		WSW			3		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.10	764.5	71.6	22.0		S			4		0					Blue sky	Surg.-Maj. Henry.
Nottingham			28.68	728.5	40.3	4.6		SW			6		7c,ks,d	WNW	W	0.164	4.16	Snowing	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			28.71	729.2	41.9	5.5		SW			4		7			Blank	Blank	*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			28.72	729.5	40	4.4		SW			3		5			Blank	Blank	*D. clouds	J. Lucas.
Plymouth			28.94	735.1	38.5	3.6		WSW			6		10					Snow-squalls	John Merrifield.
Roche's Point			28.71	729.2	36	2.2		W			5		10					Snowing	W. Kennedy.
Saint Ann's Head			28.73	729.7	40	4.4		W			6		8			Blank	Blank	Squally	John C. Walker.
Saint Helier, (Jersey)			29.08	738.6	40.0	4.4		W			7		10					Raining	A. P. Amy.
Sandwick Manse (Orkneys)			27.99	710.9	37.2	2.9		N	35	15.6			10					Raining	Rev. Dr. Clouston.
Scarborough			28.53	724.6	32.3	0.2		WSW			6		10					Snowing	F. Shaw.
Scutari Cemetery (Turkey)			29.72	754.9	41.2	5.1		N			2		10					Raining	Sergt. W. H. Lyne.
Sheffield			28.63	727.2	41.2	5.1		WNW			6		6			0.254	6.45	Snow-showers	W. F. Cooper.
Stilloth Rectory			28.47	723.1	37.7	3.2	73	W			5		10			0.010	0.25	Threatening	Rev. Francis Redford.
Stonyhurst Observatory			28.59	726.2	36.0	2.2		SW			5		10					Snow-squalls	S. J. Perry.
Stornoway, Lewis C. (Hebr.)			28.20	716.3	38	3.3		WNW			1		10					Snowing	John Smith.
Stratfield Turgiss			28.87	733.3	39.4	4.1		SW			2–3		8					Overcast	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slater.
Thurso			28.09	711.2	39	3.9		NNW			6		10					Raining	John Trotter.
Truro, Royal Institution			28.93	734.8	38	3.3		W			7		10					Raining	W. Newcombe.
Valencia Observatory			28.66	728.0	38.3	3.5		W	36	16.1			10					*D. clouds	The Staff.
Sub-Series.																			
Cape Good Hope Obs.			30.19	766.8	65.6	18.7	56	WSW	9	4.0			10						The Staff, for E. J. Stone.
Calf of Man, (Isle of Man)					36	2.2		W			6		3			0	0		
Leith, Restalrig Park																			Andrew Gibb.
Mauritius			29.97	761.2					12.1	5.4						0.04	1.0		
Monach Lt-house, Hebrides			28.30	718.8	34	1.1		NW			7		10			0.4	10.2		J. Youngclause.
North Unst, (Shetland Is.)			28.10	713.7	40.5	4.7		E			8		10			Blank	Blank		

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			28.71	729.1	36.7	2.6	96	S			4		10						
Faröe			28.69	728.6	39.7	4.3	77	SW			4		9						
Godthaab, (Greenland)			29.94	760.4	11.5	—11.4	78	N			4		8						
Stykkisholm, (Iceland)																			
Thorshavn, (Faröe)			28.36	720.4	40.6	4.8	81	ENE			8		10					Raining	
Vestervig			28.58	725.8	37.8	3.2	97	SW			6		4					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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er —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.
Alençon			29.14	740.1	50.0	10	53	NW			4		8nk		NW	0.236	6.0	Very cloudy	Normal School.
Amiens			29.04	737.7	46.8	8.2	78	NW			8		10			0.165	4.2	Covered	Normal School.
Avignon			29.64	752.9	55.8	13.2	68	SSE			4		8		SSE	0	0	Very cloudy	Normal School.
Bar-sur-Seine			29.13	740.0	47.5	8.6	78	S			6		10			0.520	13.2	Covered	C. Saillard.
Beaumette, (near Angers)			29.24	742.6	46.0	7.8	51	W	28.2	12.6					WSW	0.532	13.5		Beaumette Observatory
Beauvais			29.06	738.1	43.9	6.6	74	WSW			5		5		WSW	0.604	15.35	Cloudy	Normal School.
Besançon			29.30	744.2	49.3	9.6	69	S			10		8		SW	0.12	3.	Very cloudy	Normal School.
Bourg en Bresse			29.44	747.8	48.7	9.3	63	S			8		10n		N			Covered	Normal School.
Bourges			29.29	743.9	49.5	9.7	84	SW			8		10		W	0.59	15.	Covered	Normal School.
Brest			29.13	740.0	45.1	7.3	62	W			6		9n		W	0.217	5.50		Naval Observatory.
Caen																			Normal School
Chartres			29.12	739.7	40.5	4.7		W			6		10			0.839	21.3	Covered	Normal School.
Chaumont																			Normal School.
Clermont			29.33	745.0	49.3	9.6	73	SW			10		10		SW	0	0		Puy de Dome, Obs.
Commercy			29.11	739.3	45.3	7.4	83	WSW			6		10n		WSW	0.764	19.4	Covered	Normal School.
Commune de Gréasque*			29.48	748.8	55.4	13.0	64	SE			4		10		SE	0	0		
Grenoble			30.03	762.8	46.0	7.8	88	SSE			4		10		WSW	0.08	2.	Misty	Normal School.
Le Mans			29.20	741.7	43.2	6.2	67	W			3		2		W	0.126	3.2	Slightly cl'dy	Normal School.
Loches			29.03	737.3	49.1	9.5	59	W			6		10			0.602	15.3	Covered	Normal School.
Lons-Le-Saulnier			29.32	744.7	49.1	9.5	81	SSW			8		8		SW	0.165	4.2	Light rain	Normal School.
Mâcon			29.35	745.4	50.0	10	79	S			6		10			0.087	2.2	Covered	Normal School.
Mirecourt																			Normal School.
Metz			29.08	738.5	44.1	6.7	96	SW			6		10		SW	0.484	12.3	Hailing †	M. Schuster.
Nismes			29.60	751.7	54.0	12.2	81	SW			2		10		S	0	0	Covered	Normal School.
Orleans			29.17	740.8	46.4	8	72	W			4		8		W	0.28	7.	Very cloudy	Normal School.
Paris Observatory			29.12	739.6	37.5	3.1	97	W			2		10			0.475	12.08	Raining	National Observatory.
Parthenay			29.28	743.8	43.7	6.5	96	SW			8		10			0.91	23.	Covered	Normal School.
Privas			29.60	751.8	50.0	10		S			2		10		S	0	0	Covered	Normal School.
La Roche-sur-Yon			29.32	744.6	45.7	7.6	86	SW			6		5		NE	0.579	14.7	Cloudy	Normal School.
Rochefort, Observatory			29.45	748.1	48.2	9.0	81	SW			5		10		NE	0.157	4.0	Covered	Naval Observatory.
Rouen			29.03	737.4	43.2	6.2	62	W			6		8		S	0.551	14.0	Very cloudy	Normal School.
Saint Lo			29.10	739.2	40.1	4.5	96	W			4		9		W	0.594	15.1		Normal School.
Tarbes			30.35	771.0	59.0	15	40	W			2		8		NE	0	0	Very cloudy	Normal School.
Toulouse																			Normal School
Villefranche			29.45	748.0	50.0	10	94	WNW			6		5		NW	0.031	0.8	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.93	760.3	73.4	23	66	NE			2		0						L'Abbé Marchési.
Gorée																			
Marseilles			29.98	755.8	55.4	13.0	88	S			3		10			0	0	Covered	Marseilles Observatory.
Mont-Louis	24.48	621.8	29.79	756.6	43.0	6.1	72	SSW					4		WSW	0	0		—. Faïguère.
Montsouris, Paris			29.11	739.3	41.9	5.5	85	W			1		7		WSW	0.484	12.3		Montsouris Observ'tory.
Perpignan			29.59	751.5	55.4	13.0	64	E	3.7	1.67			6		E	0	0		Dr. Fines.
Pic du Midi, (Summit) H.Pt‡																			M. Baylac.
Saint Maur, (near Paris)			29.12	739.7	57.4	3.0	95	W			1		10			0.354	9.0	Raining	E. Renou.
Toulouse			29.60	751.9	57.2	14.0	63	SE			2		10			0.013	1.1		Toulouse Observatory.
Tours			29.24	742.6	45.4	8.0	67	NW			6		10		W	0.559	14.2		C. Marquet.
Versailles, (near Paris)			29.10	739.0	42.8	6.0	82	W			6		8			0.456	11.58	Snow & hail-Squalls.	Dr. A. Bérigny.
Zi-Ka Wei, (near Shanghai)																			H. Le Lee, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are requently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,030.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Near Marseilles. † It is not certain that the weather remarks refer to the moment of observation. ‡ Summit inaccessible; weather cloudy; amount of precipitation on the Plantade 15 millimeters, or 0.6 inches.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er —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.
Bamberg			29.01	736.8	47.7	8.7	83	SW			5		10			0.709	18.0	Raining	Prof. T. Hoh.
Berlin			28.91	734.3	45.4	8.0	79	SW			3		10			0.287	7.3		Prof. Arndt.
Breslau			29.17	741.0	41.0	5.0	75	SW			9		10			0.063	1.6		Dr. P. Neugebauer.
Carlsruhe			29.08	738.5	47.3	8.5	87	SW			10		10			0.732	18.6	Raining	A. Senz.
Cassel			28.92	734.5	41.2	5.1	78	S			2		10			0.185	4.7		Dr. H. Möhl.
Cologne																			Dr. Garthe
Emden																			Prof. Prestel.
Frankfort on the Main			29.13	739.9	43.0	6.1	77	SW			1		10			0.630	16.0	Raining	Physical Society
Friedrichshafen			29.29	743.9	43.5	6.4	69	SW					10			0.480	12.0		M. Wilhelm.
Hamburg			28.82	732.1	44.1	6.7	90	WSW			4		10s,k			0.248	6.3		Deutsche Seewarte.
Kiel			28.84	732.4	43.0	6.1	67	WSW			3		10			0.319	8.1		Prof. G. Karsten.
Königsberg			29.19	741.5	42.4	5.8	60	SE			5		6			0.047	1.2	Snowing	Prof. E. Luther.
Köslin			28.95	735.2	35.2	1.8		S			4		10			0.185	4.7	Raining	H. Müller.
Leipsic			28.98	736.0	47.5	8.6	71	SSW			4		9	SW		0.067	1.7	Rainy	Prof. Bruhns.
Memel			29.15	740.5	36.3	2.4	79	S			4		4			0.004	0.1		Reinbrecht & Skalweit.
Münster			28.92	734.6	44.6	7.0	82	SW			3		10			0.055	1.4		Prof. E. Heis.
Neufahrwasser			29.06	738.2	41.0	5.0	64	S			6		10			0.130	3.3	Squally, rain	A. Lothes.
Posen			29.11	739.3	41.9	5.5	81	SSW			8		10			0.051	1.3		Dr. Magener.
Strassburg, (in Alsace)			29.11	739.5	50.0	10.0	75	S			5		10			0.102	2.6	Raining	Dr. Schur.
Stuttgart			29.13	739.9	47.3	8.5	77	W					10			0.579	14.7	Rain, windy	Prof. Schoder.
Thorn			29.15	740.5	39.0	3.9	86	S			6		10			0	0		Dr. Hasenbalg.
Treves, (Trier)			28.98	736.2	40.1	4.5	96	SW			7		10			1.193	30.3		Prof. Flosch.
Wustrow, Naval School			28.76	730.6	42.1	5.6	92	S			8		4			0.055	1.4		E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.61	752.1	49.5	9.7	54	S	1.8	0.8			10			0	0		
Padua			29.61	752.0	46.9	8.3	58	E	5.6	2.5			10			0	0		
Vicenza			29.60	751.9	46.4	8.0	54	SE	0.7	0.3			9			0	0		
Verona			29.58	751.2	50.4	10.2	42	E			2		10			0	0		
Bergamo	28.20	716.2	29.51	749.6	50.0	10.0	46	SW			1		9			0	0		
Domodossola	28.53	724.6	29.55	750.6	48.6	9.2	58	SSW			4		10			0	0		
Milan			29.59	751.6	51.8	11.0	63	WSW			2		7	WSW		0	0		
Pavia			29.58	751.4	49.5	9.7	49	NE			1		9			0	0		
Moncalieri			29.54	750.4	49.5	9.7	58	ESE	4.3	1.9			9	NW		0	0		
Mondovi	27.63	701.9	29.55	750.6	48.0	8.9	46	NNW			4		8	WSW		0	0		
Porto Maurizio			29.65	753.1	54.1	12.3		WSW			4		9	NE		0	0		
Genoa			29.62	752.3	54.3	12.4	78	SSW	15.0	6.7			10	SW		0	0		
Piacenza			29.59	751.5	48.6	9.2	58	NE	2.5	1.1			10			0	0		
Parma			29.58	751.3	53.6	12.0	55	W			4		10			0	0		
Bologna			29.65	753.1	56.1	13.4	36	ENE			8		5	S		0	0		
Florence			29.72	754.8	58.1	14.5	38	SW			6		10	SW		0.016	0.4		
Leghorn			29.76	755.8	51.8	11.0	74	S	18.1	8.1			10			0	0		
Siena	28.54	724.9	29.76	755.8	53.6	12.0	57	SW	3.8	1.7			10	SW		0	0		
Urbino	28.13	714.6	29.70	754.3	50.0	10.0	53	SW			6		10			0	0		
Pesaro																			
Ancona			29.84	758.0	55.8	13.2	52	SSW			4		10			0	0		
Grosseto			29.79	756.6	57.2	14.0	71	SSW			6		8	S		0	0		
Rome			29.89	759.3	57.6	14.2	61	SSW	16.1	7.2			9	W		0	0		
Naples, O. U.			29.96	760.9	59.9	15.5	39	WSW			6		6	W		0	0		
Lecce			29.97	761.3	56.1	13.4	30	WNW	28.6	12.8			5			0	0		
Cosenza			30.04	763.1	58.3	14.6	62	NW	4.3	1.9			3	WNW		0	0		
Riposto, (Sicily)			30.00	762.0	59.0	15.0	57	NNE			2		1	S		0	0		
Palermo			29.97	761.1	62.6	17.0	46	WSW	13.0	5.8			0			0	0		
Caltanissetta	28.06	712.8	30.02	762.5	63.1	17.3	62	SW			4		2	NE		0	0		
Sub-Series.																			
Naples, S. R.			29.95	760.6	54.0	12.2	68	SW	7.4	3.3			..ck	SW		0.075	1.9	Foggy	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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet: Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			28.89	733.8	43.3	6.3		W			4								
Groningen			28.75	730.2	42.4	5.8		WSW			6								
Helder			28.76	730.6	41.5	5.3		SW			5								
Utrecht			28.82	731.9	45.0	7.2	67	SW			5		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			28.33	719.6	38.8	3.8	70	SSE	8.1	3.6			10			0.087	2.2	Raining	
Brönö			28.88	733.6	27.3	— 2.6	64	ENE	18	8			1			0	0		
Christiania			28.69	728.7	31.3	— 0.4	89	E	15.7	7.0			10			0.039	1.0	Snowing	
Tromsö			29.01	736.9	22.6	— 5.2	66	SW	11	5			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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,)			30.42	772.7	61.2	16.2	83	WNW	5.7	2.56			4			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.02	762.6	57.0	13.9	78	WSW	18.3	8.17			1	WSW		0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.30	769.7	63.3	17.4	57	SW	10.0	4.46			8			0	0		Capt D. A. da Cunha.
Lisbon			30.11	764.8	56.1	13.4	92	WSW	19.9	8.9			10			0.031	0.8	Showery	The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Warsaw			29.30	744.2	41.5	5.3	56	SSE	36	16			10					Solar corona	Astronomical Obs.
Wilna			29.35	745.5	36.9	2.7	80	W	11	5			8						Astronomical Obs.
Dorpat			29.26	743.3	30.6	— 0.8	91	WSW	7	3			10						Physical Cabinet.
St. Petersburg			29.21	741.9	33.1	0.6	80	S	4	2			10						Central Physical Obs.
Kuopio			29.21	742.0	28.4	— 2.0	100	E	9	4			10					Snowing	Ch. Forsten.
Kieff			29.52	749.8	36.5	2.5	69	W	16	7			3						Physical Cabinet
Nikolaiev			29.71	754.7	43.2	6.2	58	NW	13	6			6						Kurdakof.
Kertch			29.67	753.6	43.3	6.3	78	N	7	3			8						Lagorio.
Moscow			29.45	748.1	34.3	1.3	78	S	4	2			10						Meteorological Obs.
Lugan			29.48	748.9	36.1	2.3	77	WSW	29	13			9						Meteorological Obs.
Archangel			29.50	749.3	11.8	—11.2	93	SE	22	10			5						Ogorodnikof.
Tiflis	28.35	720.0	29.73	755.2	63.3	17.4	30	Calm	0	0			9						Physical Observatory.
Astrakhan			29.87	758.8	39.4	4.1	72	ESE	4	2			9						Sebastianof.
Kasan			29.71	754.5	26.6	— 3.0	83	S	4	2			10						Physical Cabinet.
Orenburg					31.5	— 0.3	92	S	4	2			10						Tschernischef.
Ekaterinburg	28.93	734.9	30.00	762.0	17.2	— 8.2	85	NE	4	2			10					Snowing	Meteorological Obs.
Nikuss			30.02	762.6	56.8	13.8	60	SE	11	5			1						
Kasaly																			Bobrof.
Tashkend	28.57	725.7	30.33	770.4	41.7	5.4	85	Calm	0	0			10						Michelson.
Barnaul			30.10	764.4	15.6	— 9.1	75	Calm	0	0			10						Meteorological Obs.
Yeniseisk			29.77	756.1	14.2	— 9.9	77	SW	7	3			3						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.11	764.8	39.4	4.1	49	SW	4	2			1						Physical Observatory.
Nertchinsk	27.81	706.3	30.10	764.6	— 5.4	—20.8	78	Calm	0	0			0						Meteorological Obs.
Vladivostock			29.96	760.9	19.9	— 6.7	65	N	16	7			0						
Nikolaievsk, on the Amoor					11.5	—11.4	93	W	25	11			10						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 401. meters, or 1,111.8 feet; Ekaterinburg, 305.42 m., or 1,035.2? ft.; Tashkend, m. 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Madrid			29.88	759.0	52.3	11.3	72	SW	38.0	17.00		0	7			0	0	Cloudy	Royal Observatory.
San Fernando			30.19	766.8	55.8	14.9	71	W	6.5	2.9		0	6		W	0	0		The Naval Observatory

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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			29.28	743.6	15.1	— 9.4	94	E			2		10			0.039	1.0		
Umea			29.20	741.6	17.2	— 8.2	100	ENE			2		10			0.063	1.6	Snowing	
Hernosand			29.15	740.3	15.4	— 9.2	98	NE			2		10			0	0		
Stockholm			29.03	737.3	27.3	— 2.6	90	ESE			4		10			0	0	Foggy	
Wisby			29.08	738.7	38.5	3.6	73	S			6		5			0	0		
Sub-Series.																			
Upsala			29.08	738.7	24.1	— 4.4	97	ESE	11.4	5.1			10			0.151	5.84		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	27.96	710.3	29.40	746.8	50.4	10.2	55	SW			8		10			0.071	1.8	Covered	The Observatory.
Zurich	27.68	703.0	29.35	745.6	43.2	6.2	85	SW			2		10		SW	0.535	13.6	Raining	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —14.8 mm.; Thermometer, +3.5 cent.; Relative Humidity, —8 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople			29.76	755.8	40.5	4.7	86	N	15	6.5			10		N	0.528	13.4	Light snow		
Fao, (Persian Gulf)			30.16	766.0	68.0	20.0		SE			1		10					Light rain		
Salonica			29.87	758.6	68.4	20.2		N			1		0							
Valona			29.84	757.8	56.7	13.7		SW			3		0							
Varna			29.92	760.0	50.0	10.0		N			2		5							
Sub-Series.																				
Beirut, (Syria,) Lee Obs'y			29.84	757.9	70.0	21.1	66	SW			2		7k		SW	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. 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	23.2	— 4.9	86	N	3.0	1.3						0	0			Hon. J. Ferguson.
Brockville, Ontario			30.24	768.1	18	— 7.8		NE	8	3.6			10s		NE	0	0	Cloudy		W. R. Bigg.
*Chatham, N. B.			29.93	760.2	26	— 3.3	95	NW	5	2.2			10ks		NW	0.04	1.0	Cloudy		G. A. Blair.
Charlottetown, P. E. Island			29.86	758.4	34	1.1	99	N	11	4.9			10n			0	0	Cloudy		H. J. Cundall, C. E.
Cornwall, Ontario			30.13	765.3	19.8	— 6.8	88	NW			1		10s			0	0	Threatening		James Smith, M. A.
Dalhousie, N. B.			30.06	763.5	18	— 7.8	84	W			4	3k				0.30	7.6			H. A. Johnson.
Esquimault, B. C.			29.74	755.4	31.0	— 0.6	89	N	7	3.1		1cs				0	0	Clear		W. H. Bevis.
Fredericton, N. B.			29.95	760.9	32.0	0.0	79	N	12	5.4			10s			0.255	6.48			Prof. Harrison.
*Fort Garry, Manitoba			29.92	760.0	12	—11.1	100	N	4	1.8			10n			0.04	1.0	Light snow		James Stewart.
Goderich, Ontario			30.19	766.8	19.8	— 6.8	88	Calm			0	6k	4s	W		0	0	Cloudy		H. J. Strang, M. A.
Granton, Ontario			30.13	765.3	20.3	— 6.5		SE			1	2cs		NW		0	0	Clear		James Grant.
*Halifax, N. S.			29.82	757.4	39	3.9	98	Calm	0	0			Fog			0.03	0.8	Foggy		F. Allison, M. A.
*Kingston, Ontario			30.23	767.8	19	— 7.2	91	NE	5	2.2		5ck	0	NE		0	0	Fair		S. Woods, M. A.
Little Current, Ontario			30.23	767.8	11.6	—11.3		NE	6	2.7			7s			0	0			G. B. Abrey, C. E.
*Montreal, Quebec			30.15	765.8	21	— 6.1	73	N	7	3.1			10ks			0.04	1.0	Cloudy		C. H. McLeod, C. E.
*Ottawa, Ontario			30.20	767.1	17	— 8.3	82	NW	8	3.6		10k	0	W		0	0	Cloudy		J. B. Haney.
*Parry Sound, Ontario			30.25	768.3	11	—11.7	90	NE	6	2.7		2cs	2ks	NE	NE	0	0	Fair		Rev. R. Mooley.
*Port Dover, Ontario			30.17	766.3	22	— 5.6	86	NE	4	1.8		10ck	0	NW		0	0	Fair		H. Morgan.
Port Hastings, N. S.			29.90	759.4	38.0	3.3		S	2	0.9								Dull		Peter Grant.
*Port Stanley, Ontario			30.16	766.1	25	— 3.9	85	E	3	1.3			8ks		SW	0	0	Cloudy		M. Payne.
*Quebec, Quebec			30.09	764.3	23	— 5.0	86	N	5	2.2			10n			0.10	2.5	Cloudy		Capt. Ash, R. N.
St. John, N. B.			29.87	758.7	36	2.2	90	N	8	3.6			10n			0.730	18.54			G. Murdoch, C. E.
*Saugeen, Ontario			30.19	766.8	16	— 8.9	83	NW	1	0.4		8cs	0			0.07	1.8	Cloudy		K. Stewart.
Stayner, Ontario			30.19	766.8	19	— 7.2	83	Calm	0	0		5c	0	NW		0	0	Fair		R. J. Cole.
Stratford, Ontario			30.18	766.6	19.9	— 6.7	86	SE	6	2.7		7cs		NW		0.050	1.27	Fair		C. J. MacGregor, M. A.
*Sydney, C. B.			29.92	760.0	38	3.3	98	S	2	0.9			Fog			0.05	1.3	Foggy		T. C. Hill.
*Toronto, Ontario			30.21	767.3	20	— 6.7	82	N	1	0.4		8cs	0	W		Inap.	Inap.	Fair		Magnetic Observatory
Woodstock, Ontario																				J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			30.06	763.5	29	— 1.7	89	NW	11	4.9			10s			0.42	10.7	Cloudy	
Alpena, Mich.			30.13	765.3	22	— 5.6	72	SE	11	4.9			10s		SE	0	0	Cloudy	
Atlantic City, N. J.			30.03	762.7	30	— 1.1	78	N	12	5.4		5c	0	W		Inap.	Inap.	Fair	
Augusta, Ga.			30.08	764.0	42	5.6	87	Calm	0	0		0	Sm'e			0	0	Clear	
Baltimore, Md.			30.10	764.5	35	1.7	70	NW	5	2.2		2c	Sm'e	W		0.03	0.8	Fair	
Barnegat, N. J.			30.01	762.2	30	— 1.1	78	N	18	8.0		0	0			Inap.	Inap.	Clear	
Benton, Montana	27.35	690.7	30.15	765.8	—25	—31.7	100	Calm	0	0		10c	0			0.05	1.3	Cloudy	
Bismarck, Dakota	28.11	714.0	29.91	759.7	2	—16.7	100	NW	6	2.7			10n			0.46	11.7	Heavy snow	
Boston, Mass.			29.91	759.7	35	1.7	70	NW	16	7.2			10s		NW	0.07	1.8	Cloudy	
Breckenridge, Minn.			29.75	755.6	21	— 6.1	100	N	12	5.4			10n			0.05	1.3	Light snow	
Buffalo, N. Y.			30.16	766.1	24	— 4.4	68	S	4	1.8			10s			Inap.	Inap.	Cloudy	
Burlington, Vt.			30.13	765.3	24	— 4.4	74	N	12	5.4			10s			0.30	7.6	Cloudy	
Cairo, Ill.			29.90	759.4	53	11.7	48	SE	8	3.6		8c	0			0	0	Fair	
Cape Hatteras, N. C.			30.00	762.0	45	7.2	67	N	15	6.7		0	0			0.01	0.3	Clear	
Cape Henry, Va.			30.08	764.6	45	7.2	68	N	16	7.2		0	0			0.07	1.8	Clear	
Cape May, N. J.			30.05	763.3	33	0.6	69	NW	14	6.3		0	0			0.12	3.0	Clear	
Charleston, S. C.			30.08	764.0	51	10.6	64	NW	4	1.8		2c	Sm'e			0	0	Clear	
Cheyenne, Wyoming	23.57	598.7	29.51	749.5	3	—16.1	100	NE	12	5.4			10n			Inap.	Inap.	Light snow	
Chicago, Ill.			29.80	756.9	42	5.6	66	SE	6	2.7			10s		S	0	0	Cloudy	
Cincinnati, Ohio			29.96	761.0	42	5.6	65	SE	5	2.2		5cs	0	W		0	0	Fair	
Cleveland, Ohio			30.12	765.0	30.1	— 1.1	78	E	8	3.6			10ks		W	Inap.	Inap.	Cloudy	
Colorado Springs, Col.	23.56	598.4	29.43	747.5	42	5.6	65	SW	8	3.6		8k	0	SW		0	0	Fair	
Corsicana, Tex.			29.78	756.4	65	18.3	90	S	6	2.7			10ks		S	0	0	Cloudy	
Davenport, Iowa			29.66	753.4	46	7.8	68	SE	2	0.9			10ks			0	0	Cloudy	
Denison, Tex.			29.69	754.1	68	20.0	84	S	7	3.1			10s			0	0	Cloudy	
Denver, Col.	24.37	619.0	29.59	751.6	16	— 8.9	66	N	12	5.4			10s			0	0	Cloudy	
Detroit, Mich.			30.08	764.0	30	— 1.1	78	E	7	3.1		10ck	0	W		0	0	Cloudy	
Dodge City, Kan.	27.00	685.8	29.23	742.4	45	7.2	68	W	4	1.8		0	5s		W	0	0	Fair	
Dubuque, Iowa			29.69	754.1	38	3.3	71	E	2	0.9		5k	5s	E		0	0	Cloudy	
Duluth, Minn.			29.91	759.7	18	— 7.8	84	NE	16	7.2			10n			0.05	1.3	Light snow	
Eastport, Me.			29.86	758.4	32	0.0	89	NW	19	8.5			10n		NW	0.73	18.5	Light rain	
Erie, Pa.			30.12	765.0	28	— 2.2	88	N	6	2.7		10k	Haze			0	0	Cloudy	
Escanaba, Mich.			29.97	761.2	23	— 5.0	86	E	8	3.6			10s			0	0	Cloudy	
Fort Gibson, Indian Terr.			29.78	756.4	64	17.8	78	S	13	5.8			10ks		SW	0	0	Cloudy	
Ft. St. Michaels, Alaska			29.66	753.4	27	— 2.8		S	37	16.5			10s					Light snow	
Fort Sill, Indian T.	28.47	723.1	29.54	750.3	55	12.8	93	S	4	1.8		8cs	Fog	S		0	0	Cloudy	
Fort Sully, Dakota	28.19	716.0	30.00	762.0	5	—15.0	75	N V	24	10.7			10s			Inap.	Inap.	Cloudy	
Galveston, Tex.			29.87	758.7	66	18.9	94	SE	10	4.5			10s			0	0	Cloudy	
Grand Haven, Mich.			29.93	760.2	32	0.0	79	SE	7	3.1			10s		W	0	0	Cloudy	
Indianapolis, Ind.			29.89	759.2	44	6.7	67	SE	8	3.6		5c	Sm'e			0	0	Fair	
Indianola, Tex.			29.88	758.9	67	19.4	94	S	10	4.5			10ks		S	0	0	Cloudy	
Jacksonville, Fla.			30.07	763.8	46	7.8	77	W	1	0.4		0	0			0	0	Clear	
Keokuk, Iowa			29.65	753.1	50	10.0	51	SE	3	1.3		8c	2s	SW	SE	0	0	Cloudy	
Key West, Fla.			30.06	763.5	71.2	21.8	75	S	2	0.9		0	Sm'e		S	0	0	Dense smoke	
Kittyhawk, N. C.			30.08	764.0	39	3.9	82	NW	16	7.2		0	Haze			0	0	Clear	
Knoxville, Tenn.			30.09	764.3	37	2.8	81	N	3	1.3		2cs	Fog	W		0	0	Fair	
La Crosse, Wis.			29.78	756.4	29	— 1.7	78	NE	3	1.3			10s			0	0	Cloudy	
Leavenworth, Kan.			29.52	749.8	56	13.3	71	S	6	2.7			10s		SW	0	0	Cloudy	
Lexington, Ky.	28.92	734.6	30.04	763.0	42	5.6	65	SE	12	5.4		8c	0	S		0	0	Cloudy	
Long Branch, N. J.			30.02	762.5	35	1.7	52	NW	16	7.2		0	0			0.02	0.5	Clear	
Louisville, Ky.			29.95	760.7	46	7.8	62	SE	7	3.1		5c	Sm'e			0	0	Fair	
Lynchburg, Va.			30.10	764.5	39	3.9	71	Calm	0	0		0	0			0	0	Clear	
Malone, N. Y.			30.13	765.3	21	— 6.1	85	N	6	2.7			10n		NW	0.05	1.3	Light snow	
Manhattan, Kan.	28.42	721.9	29.56	750.8	39	3.9	91	SW	5	2.2		0	8s			0	0	Cloudy	
Marquette, Mich.			30.00	762.0	21	— 6.1	71	SE	4	1.8			10s			0	0	Cloudy	
Memphis, Tenn.			29.92	760.0	54	12.2	61	S	3	1.3		8cs	2s			0	0	Fair	
Milwaukee, Wis.			29.87	758.7	35	1.7	90	SE	10	4.5			10s		SW	0	0	Cloudy	
Mobile, Ala.			30.37	763.8	46	7.8	92	S	1	0.4			Fog			0	0	Foggy	
Montgomery, Ala.			30.11	764.8	45.5	7.5	88	Calm	0	0		2c	Sm'e			0	0	Fair	
Morgantown, W. Va.			30.13	765.3	33	0.6	79	SW	1	0.4		10ck	Haze	NW		Inap.	Inap.	Cloudy	
Mt. Washington, N. H.	23.56	598.4	29.92	760.0	26	— 3.3	40	Calm	0	0		0	8s			0.69	17.5	Fair	
Nashville, Tenn.			29.99	761.7	46	7.8	61	E	2	0.9		0	0			0	0	Clear	
New Haven, Conn.			29.97	761.2	31	— 0.6	79	N	21	8.9			10s		N	0	0	Cloudy	
New London, Conn.			29.95	760.7	35	1.7	67	N	12	5.4			10s		N	0.14	3.6	Cloudy	
New Orleans, La.			30.02	762.5	56	13.3	87	SE	6	2.7		0	Sm'e			0	0	Clear	
Newport, R. I.			29.91	759.7	36	2.2	80	NW	12	5.4			10s		NW	0.06	1.5	Cloudy	
New York, N. Y.			30.04	763.0	30	— 1.1	65	NW	8	3.6		0	0			0.04	1.0	Clear	
Norfolk, Va.			30.09	764.3	39	3.9	73	N	7	3.1		0	Haze			0.01	0.3	Clear	
North Platte, Neb.	26.81	681.0	29.54	750.3	10	—12.2	89	N	16	7.2			10s			0	0	Cloudy	
Omaha, Neb.	28.51	724.1	29.58	751.3	33	0.6	90	NW	13	5.8			10n			0	0	Cloudy	
Oswego, N. Y.			30.17	766.3	26	— 3.3	76	N	5	2.2			10s		W	0	0	Cloudy	
Pembina, Dakota			29.89	759.2	13	—10.6	81	NW	8	3.6			10s			0.05	1.3	Cloudy	
Philadelphia, Penn.			30.07	763.8	30	— 1.1	68	N	18	8.0		5k	0	N		Inap.	Inap.	Fair	
Pike's Peak, Colorado	17.20	436.9	29.40	746.7	7	—13.9	100	W	30	13.4			10n		W	0.09	2.3	Light snow	
Pittsburgh, Penn.			30.13	765.3	32	0.0	60	SE	2	0.9		8k	0			0	0	Fair	
Port Huron, Mich.			30.11	764.8	23	— 5.0	86	E	5	2.2		5c	5s	NW		0	0	Cloudy	
Portland, Me.			29.93	760.2	38	3.3	72	N	12	5.4			10s			0.11	2.8	Cloudy	
Portland, Oregon			29.68	753.9	37	2.8	80	Calm	0	0		5k	5s	N		0.08	2.0	Cloudy	
Punta Rassa, Fla.			30.09	764.3	67.2	19.6	94	N	5	2.2			10ks,s		SW, NE	0	0	Cloudy	
Rochester, N. Y.			30.14	765.5	25	— 3.9	88	NW	4	1.8			10s		SE	Inap.	Inap.	Cloudy	
Salt Lake City, Utah	25.07	636.8	29.40	746.7	30	— 1.1	78	N	3	1.3			10ks		SW	0.54	13.7	Cloudy	
Sandy Hook, N. J.			30.00	762.0	31	— 0.6	69	NW	20	8.9		2c	0	SW		0.02	0.5	Fair	
San Diego, Cal.			29.81	757.2	50	10.0	86	NW	20	8.9			10n		NW	0.56	14.2	Heavy rain	
San Francisco, Cal.			29.62	752.3	43	6.1	59	NW	12	5.4		0	0			0.49	12.4	Clear	
Santa Fe, N. M.	22.86	580.6	29.40	746.7	38	3.3	46	SE	7	3.1		1ck	5s	SW		0	0	Fair	
Savannah, Ga.			30.08	764.0	50	10.0	64	NW	4	1.8		0	Fog			0	0	Clear	
Shreveport, La.			29.92	760.0	61	16.1	88	SE	5	2.2			10s		SE	0	0	Threatening	
Smithville, N. C.			30.08	764.0	41	6.7	67	N	5	2.2		2cs	0			0	0	Fair	
Springfield, Mass.			29.99	761.7	33.5	0.8	69	N	12	5.4		0	8s			0.10	2.5	Cloudy	
St. Louis, Mo.			29.78	756.4	51	10.6	52	S	16	7.2		5c	0	SW		0	0	Fair	
St. Marks, Fla.			30.09	764.3	40	4.4	91	Calm	0	0		0	0			0	0	Clear	
St. Paul, Minn.			29.70	754.4	28	— 2.2	77	E	10	4.5			10s			0	0	Cloudy	
St. Paul's Island, Alaska			30.14	765.5	32	0.0	79	W	20	8.9		1ck	5k	W		0.01	0.3		
Thatcher's Island, Mass.			29.90	759.4	35	1.7	90	N	17	7.6			10ks		NE	0	0	Cloudy	
Toledo, Ohio			30.04	763.0	35	1.7	80	E	4	1.8			10ks		E	0	0	Cloudy	
Tucson, Arizona	27.26	693.2	29.88	758.9	51	11.7		S				0	8ks		SW	0	0	Fair	
Tybee Island, Ga.			30.07	763.8	55	12.8	68	N	4	1.8		Haze	Haze			0.04	1.0	Hazy	
Vicksburg, Miss.			30.04	763.0	52.5	11.4	86	SE	4	1.8		5cs	2ks	W	S	0	0	Fair	
Virginia City	23.76	603.5	29.21	742.7	— 9	—22.8	78	E	19	8.5			10n		W	0.10	2.5	Light snow	
Washington, D. C.			30.11	764.8	34	1.1	74	NW	4	1.8		Haze	Sm'e			0.02	0.5	Smoky	

UNITED STATES SERIES.—CONTINUED

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.09	764.3	44	6.7	67	NE	2	0.9		1c	8m'e	NW		0	0	Clear	
Wood's Holl, Mass			29.88	758.9	36	2.2	90	N	16	7.2			10s		N	0.05	1.3	Cloudy	
Wytheville, Va	27.67	702.8	29.87	758.7	39	3.9	72	W	2	0.9		0	0			0	0	Clear	
Yankton, Dakota	28.46	722.9	29.83	757.7	14	—10.0	82	NW	28	12.5			10n			0.01	0.3	Light snow	
Yuma, Arizona			29.68	753.9	50	10.0		NW				2cs	5s	W	W	0	0	Fair	
Sub-Series.																			
Bridgetown, B'b'dos, W. I			30.02	762.5	79	26.1	74	NE	6	2.7		2k	5ks	N	SE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.98	761.5	69	20.6	75	N				2k	0			0	0	Clear	L. V. Bigard.
St. Thomas, St. T., W. I			30.24	768.1	73	22.8	45	ENE	4	1.8		2cs	2k	W		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I			30.19	766.8	71	21.7	75	Calm	0	0		0	0			0.03	0.8		James Gall.
Santiago de Cuba, W. I			29.84	757.9	70	21.1	67	Calm	0	0		0	0			0	0	Clear	Robert Mason.
Havana, Cuba, W. I			30.09	764.3	69	20.6	75	SE	2.4	1.1		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			29.78	756.4	60.0	15.6	85	SW	15.0	6.7		0	5k		SW	0.01	0.3	Fair	C. F. Allen.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Navassa, W. I																			
Clifton, Jamaica, W. I	27.24	691.9	30.05	763.3	63	17.2	83	N	2.0	0.9		5c	0	NW		0	0	Fine & clear	C. Partridge.
Paramaribo, D. Guiana, S. A			29.98	761.5	80	26.7	82	SE			3		8ks			0.710	18.03	Rainy	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.02	762.6	84.2	29										0.374	9.50		Dr. H. Groot.
Medellin, Colombia, S. A	25.14	638.6			65.0	18.3	87		0	0		6c	4s			0.20	5.1	Cloudy	Thomas Herran.
St. Johns, Newfoundland			30.13	765.3	36.0	2.2	90	S				5ck	10s			0.40	10.2	Fair	John Delaney.
York Factory, B. A			30.20	767.1	—21.5	—29.7		N	12	5.4			10n			0.13	3.3		J. Fortescue.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
}																			
}																			
}																			

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Manhattan, 1,125.0 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.5 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 10, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.91	759.8	70.2	21.2	44	NNW			1		5			0	0	Fair	Charnot.
Algiers			29.99	761.8	66.9	19.4	57	W			2		8			0	0	Cloudy	Peter.
La Galle																			Kunts.
Tunis			29.87	75 .6	72.0	22.2	30	NE			2		0			0	0	Clear	Jacques.
Sfax			29.95	760.6	64.8	18.2	60	S			5		1			0	0	Clear	Chauvey.
Saida			29.87	758.7	70.2	21.2		WNW			3		7			0.039	1.0	Cloudy	Millot.
Tebessa			29.90	759.5	66.7	19.3		SW			4		0			0	0	Clear	Colin.
Geriville			29.92	760.0	61.2	16.2	26	NW			3		1			0	0	Clear	Ruard.
Laghouat			29.93	760.2	62.6	17.0	70	NW			1		2			0	0	Clear	Guyot.
Biskra			29.91	759.8	72.3	22.4	37	NW			1		1			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.32	744.7	42.8	6.0	88	NE			3		10			0.331	8.4	Raining	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.25	743.0	45.3	7.4	72	W			1		10			0.012	0.3		I. R. Observatory.
Sperles			29.26	743.3	42.8	6.0	88	S			2		10		N	0.136	3.45		Julius Mikolik.
Gratz	28.15	714.9	29.37	745.9	36.7	2.6	83	S			2		10			0.272	6.9		Andreas Rospini.
Hermannstadt	28.05	712.5	29.45	748.8	51.6	10.9	44	S			5		5			0	0		Prof. Reissenberger.
Kremsmünster	27.96	710.3	29.32	744.7	37.4	3.0	93	WSW			1		10			0.315	8.0		Prof. C. Wagner.
Lemberg			29.25	742.9	46.4	8.0	69	S			3		7			0.327	8.3		Dr. T. Stanecki.
Nyiregyhaza			29.27	743.5	49.3	9.6	76	S			4		10			0.124	3.16		Habzsuda Daniel.
Pola			29.34	745.1	56.1	13.4	82	SW			3		9ks			0	0		I.R. Hydrographic Of'ce
Szegedin			29.26	743.2	57.7	14.3	50	S			4		6			0.295	7.50		Karl Stancel.
Trieste			29.34	745.1	54.1	12.3	94	Calm			0		10			0.272	6.9	Rainy	Prof. V. Farolfi.
Vienna			29.32	744.6	40.1	4.5	87	SW			1		10			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmünster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			28.88	733.5	44.6	7.0	68	SW			5		10			0.122	3.10		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			28.23	717.0	34.5	1.4		WNW	37	16.5			10			1.000	25.40	Rain, snow-sq'ls	William Boswell.
Ardrossan			28.48	723.4	44.5	6.9		WNW			6		7					*D. clouds	J. Mayes.
Armagh Observatory			28.72	729.5	41.4	5.2		WNW	16	7.2			7					*D. clouds	S. Cali, for Dr. Robinson
Bidston, Liverpool Obs			28.57	725.7	42.1	5.6		WSW	40	17.9			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			28.84	732.5	42.8	6.0		W			1		7					*D. clouds	J. Dreyer.
Bradford			28.50	723.9	40.1	4.5		W			4		7			0.06	1.5	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			29.79	756.7	80.0	26.7		NE			2		4					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			28.67	728.2	44.0	6.7		SW			3		10					Overcast	H. Todd.
Cardington			28.68	728.5	47.0	8.3		W			3		9					Threatening	John McLaren.
Carlisle			28.51	724.1	43.3	6.3		SW			4		9			0.07	1.8	*D. clouds	J. Bell, for J. Cartmell.
Chatham, School M. E.			28.77	730.7	42.2	5.7		WSW			2		8					Raining	Capt. J. Fellowes, R. E.
Dartmoor	27.43	696.7	28.81	731.8	39.0	3.9		N			6		6					*D. clouds	R. E. Power.
Donaghadee			28.60	726.4	46	7.8		NW			6		8					*D. clouds	J. Mac Gowan.
Dover			28.75	730.2	45	7.2		SW			6		5					½ clouded	J. Costello.
Eccles, (near Manchester)			28.58	725.9	40.3	4.6		SW	17.8	8.0			10					Showery	Thomas Mackereth.
Falmouth Observatory			28.83	732.3	43.9	6.6		WNW	32	14.3			5					Squalls	The Staff.
Fort Napier, (Natal)	27.76	705.1	30.00	762.0	69.3	20.7		NE			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	86	30.0		N			0		6					Blue sky	[tis.
Galway, Queen's College			28.86	733.0	44	6.7		NW			5		10					Raining	B. G. Clare, for Prof. Chur-
Gibraltar, (Mediterranean)			29.98	761.5	59.5	15.3		NW			6		4					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			28.44	722.4	43.0	6.1		WNW			3		7					Fine	Lewis Stuart.
Great Yarmouth			28.66	728.0	45	7.2		WSW			5		6					Squally	G. T. Watson.
Greenwich Royal Obs			28.75	730.2	40.5	4.7		SSW			4		5			Blank	Blank	*D. clouds	The Staff for G. B. Airy.
Guernsey			28.87	733.3	44	6.7		SE			3		8			Blank	Blank	Gloomy	Dr. S. E. Hoskins.
Halifax, Moorside Obs			28.56	725.4	40.8	4.9		WSW			3		10					Drizzling	L. J. Crossley.
Helston			28.81	731.8	47	8.3		NW			6		8			0.29	7.4	Squally	M. P. Moyle.
Holyhead			28.67	728.2	46	7.8		WNW			6		5					*D. clouds	John Tilston.
Kew Observatory			28.73	729.7	42.3	5.7		SSW	21	9.4			9					*D. clouds	The Staff.
Kingstown			28.70	729.0	45	7.2		WNW			6		5					*D. clouds	George Mitchell
Leicester Museum			28.66	728.0	42.4	5.8		W			1		10					Overcast	Wm. J. Harrison, F.G.S
Malta, (Mediterranean)			29.86	758.4	66.0	18.9		SW			2		1k						Fred Travis, Pvt A.H.C.
Nairn			28.36	720.3	41	5.0		NNW			5		10					Raining	W. D. Penny.
Nassau, (Bahamas)			30.12	765.0	70.6	21.4		N			4		7					*D. clouds	Surg.-Maj. Henry.
Nottingham			28.61	726.7	46.3	7.9		SW			4	0	5k,ck,d	W	WSW	0.042	1.07	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			28.64	727.4	43.7	6.5		WSW			4		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			28.61	726.7	46	7.8		SW			2		10			Blank	Blank	Overcast	J. Lucas.
Plymouth			28.75	730.2	49.5	9.7		NW			4		10					Squally	John Merrifield.
Roche's Point			28.89	733.8	44	6.7		NNW			5		5					Squally	W. Kennedy.
Saint Ann's Head			28.78	731.0	42	5.6		NW			3		10					Overcast	John C. Walker.
Saint Helier, (Jersey)			28.67	728.2	44.4	6.9		SW			7		10					Raining	A. P. Amy.
Sandwick Manse (Orkneys)			28.34	719.8	40.3	4.6		NE	34	15.2			6					*D. clouds	Rev. Dr. Clouston.
Scarborough			28.48	723.4	39.1	3.9		WSW			4		9					Overcast	F. Shaw.
Scutari Cemetery (Turkey)			29.86	758.4	51.8	11.0		SSW			2		4					*D. clouds	Sergt. W. H. Lyne.
Sheffield			28.60	726.4	41.0	5.0		SW			2		10			0.119	3.02	Gloomy	W. F. Cooper.
Silloth Rectory			28.50	723.9	45.5	7.5	71	NW			2		10			0	0	Overcast	Rev Francis Redford
Stonyhurst Observatory			28.53	724.6	41.5	5.3		W			5		10					Snowing	S. J. Perry.
Stornoway, Lews C. (Hebr.)			28.50	723.9	41	5.0		NNE			6		10					Rain-squalls	John Smith.
Stratfield Turgiss			29.74	730.0	42.8	6.0		SW			1		5					*D. clouds	Rev Charles H. Griffith.
Streatley Vicarage																			Rev. John Slater.
Thurso			28.30	718.8	43	6.1		N			6		6					*D. clouds	John Trotter.
Truro, Royal Institution			28.93	734.8	47	8.3		NW			4		10					Gloomy	W. Newcombe.
Valencia Observatory			29.03	737.3	49.2	9.6		WNW	31	13.9			4					*D. clouds	The Staff.
Sub-Series.																			
Cape Good Hope Obs.			30.20	767.1	75.0	23.9	44	ESE	10	4.5			1						The Staff, for E. J. Stone.
Calf of Man, (Isle of Man)					40	4.4		NW			6		5			0	0		
Leith, Restalrig Park									17.1	7.6						0.01	0.3		Andrew Gibb.
Mauritius			29.89	759.2												0.4	10.2		
Monach Lt-house, Hebrides			28.56	725.4	43	6.1		N			7		10			Blank	Blank		J. Youngclause.
North Unst, (Shetland Is.)			28.45	722.6	41	5.0		E			7	3	4	NE					

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			28.78	731.1	39.4	4.1	79	SSE			4		6						
Fanöe			28.71	729.3	39.6	4.2	89	SW			4		5						
Godthaab, (Greenland)			30.09	764.3	11.8	—11.2	93	NNE			4		5						
Stykkisholm, (Iceland)																			
Thorshavn, (Faröe)			28.78	731.1	36.1	2.3	87	NE			5		10					Rain & snow	
Westervig			28.65	727.7	37.8	3.2	87	SSW			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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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			28.95	735.2	50.0	10	84	SW			3		10			0.291	7.4	Covered	Normal School.
Amiens			28.91	734.3	48.6	9.2	63	NW			6		0			0.268	6.8	Clear	Normal School.
Avignon			29.48	748.4	52.2	11.2	59	SSW			3		8	WNW	SSW	0.134	3.4	Very cloudy	Normal School.
Bar-sur-Seine			29.11	740.1	43.3	6.3	75	SW			6		10		SW	0.512	13.0	Covered	C. Saillard.
Beaumette, (near Angers)			28.93	734.8	45.9	7.7	77	SW	52.6	23.5			10		SW	0.311	7.9	Raining	Beaumette Observatory
Beauvais			28.97	735.7	47.8	8.8	58	SW			4		8		WSW	0.12	3.	Very cloudy	Normal School.
Besançon			29 24	742.7	45.3	7.4	55	S			6		8		SW	0.39	10.	Very cloudy	Normal School.
Bourg en Bresse			29.37	746.0	46.2	7.9	61	S			4		10n		N			Covered	Normal School.
Bourges			29.13	739.8	42.6	5.9	85	SW			6		8		W	0.098	.2.5	Very cloudy	Normal School.
Brest			28.87	733.3	46.2	7.9	64	NW			6		9n		NW	0.128	3.25		Naval Observatory.
Caen																			Normal School
Chartres			29.01	736.9	44.4	6.9		NW			6		10			0.382	9.7	Covered	Normal School.
Chaumont																			Normal School.
Clermont			29.27	743.5	43.2	6.2	75	SW			6		8		W	0.634	16.1		Puy de Dome, Obs.
Commercy			29.14	740.2	43.2	6.2	67	SW			8		5ck		SW	0.480	12.2	Cloudy	Normal School.
Commune de Gréasque*			29.52	749.9	44.6	7.0	81	NW			2		10		NW	0.071	1.8	Light rain	
Grenoble			29.37	746.1	49.6	9.8	50	WNW			4		10k			0.217	5.5	Raining	Normal School.
Le Mans			28.90	736.3	40.6	4.8	87	SW			4		8		SW	0.091	2.3	Very cloudy	Normal School.
Loches			28.86	733.1	46.4	8	76				6		10			0.169	4.3	Raining	Normal School.
Lons-Le-Saulnier			29.26	743.3	47.7	8.7	83	WSW			6		8		SW	0.43	11.	Very cloudy	Normal School.
Mâcon			29.30	744.1	44.8	7.1	85	SW			2		10			0.16	4.	Cove ed	Normal School.
Mirecourt																			Normal School.
Metz			29.16	740.7	44.2	6.8	65	SW			6		8		SW	0.394	10.0	Hailing †	M. Schuster.
Nismes			29.69	754.1	53.8	12.1	65	S			2		10		W	0.08	2.	Covered	Normal School.
Orleans			29.06	738.0	45.0	7.2	85	SW			6		8		W	0.075	1.9	Very cloudy	Normal School.
Paris Observatory			29.01	736.8	46.4	8.0	61	S			4		8		SW	0.130	3.30	Almost cov'd	National Observatory.
Parthenay			29.08	738.6	45.3	7.4	94	SW			4		8		SW	0.335	8.5	Very cloudy	Normal School.
Privas			29.42	747.3	50.7	10.4		W			2		5		W	0.228	5.8	Cloudy	Normal School.
La Roche-sur-Yon			29.08	738.5	47.1	8.4	72	S			6		10			0.230	6.0	Covered	Normal School.
Rochefort, Observatory			29.23	742 2	48.6	9.2	58	W			10		10		E	0.236	6.0	Covered	Naval Observatory.
Rouen			28.89	734.8	46.9	8.3	65	SSE			6		10		S	0.142	3.6	Covered	Normal School.
Saint Lo			28.81	731.8	47.1	8.4	83	SW			3		9		W	0.185	4.7		Normal School.
Tarbes			30.35	771.0	53.6	12	70	W			8		10		SE	0.47	12.	Raining	Normal School.
Toulouse																			Normal School.
Villefranche			29.20	741.6	50.0	10	86	WSW			6		8		NW	0.008	0.2	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.73	760.2	75.2	24	83	NE			2		2k						L'Abbé Marchési.
Gorée																			
Marseilles			29.52	749.8	47.8	8.8	86	W			2		10			0.008	0.2	Raining	Marseilles Observatory.
Mont-Louis	24.31	617.3	29.63	752.5	36.5	2.5	70	SSW					8		W	0.049	1.2		—. Faiguère.
Montsouris, Paris			28.99	736.4	45.1	7 3	67	WSW			3		10			0.114	2.9		Montsouris Observ'tory.
Perpignan			29.54	750.4	52.3	11.3	70	S	13.0	5.83			8		W	0.180	4.6		Dr. Fines.
Pic du Midi, (Summit) H.P.‡																			M. Baylac.
Saint Maur, (near Paris)			29.01	736.9	45.4	8.0	65	SSW			4		10			0.346	8.8	Very cloudy	F. Renou.
Toulouse			29.52	749.8	41.7	5.4	88	WNW			3		10			0.181	4.6	Raining	Toulouse Observatory.
Tours			29.08	738.7	47.1	8.4	57	WNW			8		10		WSW	0.110	2.8		C. Marquet.
Versailles, (near Paris)			29.00	736.3	46.4	8.0	59	SW			6		10			0.051	1.29	Heavy squalls	Dr. A. Bérigny.
Zi-Ka Wei, (near Shanghai)																			H. Le Lee, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are requently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,089.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,360 m., or 7,742.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Near Marseilles. † It is not certain that the weather remarks refer to the moment of observation. ‡ Summit inaccessible; weather storm; amount of precipitation on the Plantade 55 millimeters, or 2.2 inches.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Bamberg			29. 9	738.8	45.3	7.4	58	SW			6		7			0.197	5.0		Prof. T. Hoh.
Berlin			29.03	737.3	45.1	7.3	64	SW			6		10			0.138	3.5	Raining	Prof. Arndt.
Breslau			29.23	742.5	43.0	6.1	55	SSW			4		9			0	0		Dr. P. Neugebauer.
Carlsruhe			29.15	740.3	44.8	7.1	64	SW			8		9			0.224	5.7		A. Senz.
Cassel			28.91	734 2	45.5	7.5	67	SSW			9		5			0.028	0.7		Dr. H. Möhl.
Cologne																			Dr. Garthe
Emden																			Prof. Prestel.
Frankfort on the Main			29.17	741.0	46.8	8.2	46	SW			5		7			0.453	11.5		Physical Society
Friedrichshafen			29.25	742 9	45.5	7.5	60	W			2		7			0.059	1.5		M. Wilhelm.
Hamburg			28.87	733.3	41.7	5.4	71	SW			9		8k,n			0.091	2.3	Very squally	Deutsche Seewarte.
Kiel			28.86	733.0	38.7	3.7	85	SW			3		8			0.087	2.2		Prof. G. Karsten.
Königsberg			29.15	740.3	43.3	6.3	59	S			5		2			0.272	6.9		Prof. E. Luther.
Köslin			29.01	736.8	43.7	6.5		SSW			3		8			0	0		H. Müller.
Leipsic			29.07	738.4	44.2	6.8	52	SW			6		4	SW		0.079	2.0	Stormy	Prof. Bruhns.
Memel			29.03	737.4	37.2	2.9	85	SW			3		5	W		0.303	7.7		Reinbrecht & Skalweit.
Münster			28.91	734.2	37.0	3.1	98	SW			3		10			0.154	3.9	Snowing	Prof. E. Heis.
Neufahrwasser			29.04	737.5	43.3	6.3	65	S			4		3			0.453	11.5		A. Lothes.
Posen			29.19	741.3	45.5	7.5	65	SW			7		10			0.004	0.1		Dr. Magener.
Strassburg, (in Alsace)			29.19	741.3	46.2	7.9	59	SW			6		7			0.083	2.1		Dr. Schur.
Stuttgart			29.20	741.6	43.3	6.3	60	SW					4			0.035	0.9	Rainy	Prof. Schoder.
Thorn			29.17	740.9	43.3	6.3	61	SW			6		6			0.131	3.4		Dr. Hasenbalg
Treves, (Trier)			29.02	737.0	44.2	6.8	59	SW			8		7			0.161	4.1		Prof. Flesch.
Wustrow, Naval School			28.84	732.5	40.8	4.9	82	S			8		6			0.016	0.4	Rain & snow	E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.30	744.2	50.4	10.2	77	S	4.3	1.9			9			0	0		
Padua			29.28	743.8	55.4	13.0	66	SW	15.0	6.7			10			0	0		
Vicenza			29.28	743.7	54.5	12.5	60	SW	4.3	1.9			5			0	0		
Verona			29.29	743.9	56.3	13.5	65	E			1		10			0	0		
Bergamo	27.93	709.4	29.25	742.9	51.8	11.0	50	S			2		1			0	0		
Domodossola	28.25	717.6	29.28	743.6	51.8	11.0	77	Calm			0		9			0	0		
Milan			29.30	744.1	54.0	12.2	61	SSE			2		6	WSW		0	0		
Pavia			29.30	744.2	53.1	11.7	64	SSW			2		7	SW		0.059	1.5		
Moncalieri			29.28	743.7	56.7	13.7	30	SW	8.1	3.6			1	W		0	0		
Mondovi	27.40	696.0	29.32	744.7	53.6	12.0	19	NW			6		3	SW		0	0		
Porto Maurizio			29.43	747.4	54.3	12.4		WSW			4		3	NE		0	0		
Genoa			29.35	745.4	55.9	13.3	58	SW	19.2	8.6			4			0	0		
Piacenza			29.30	744.1	55.0	12.8	59	E	3.1	1.4			8	W		0	0		
Parma			29.33	744.9	56.8	13.8	39	SSW			8		7			0	0		
Bologna			29.43	747.5	58.3	14.6	34	WSW			6		5	E		0	0		
Florence			29.46	748.3	57.9	14.4	61	SW			6		9	SW		0	0		
Leghorn			29.44	747.7	57.2	14.0	59	W	20.6	9.2			7			0	0		
Siena	28.26	717.8	29.48	748.7	47.7	8.7	81	SW	5.6	2.5			9	W		0.142	3.6		
Urbino	27.87	707.9	29.43	747.6	50.9	10.5	67	SW			6		10			0.500	12.7		
Pesaro																			
Ancona			29.52	749.9	55.8	13.2	75	SW			6		10			0	0		
Grosseto			29.49	749.0	55.2	12.9	76	NNW			2		10	SW		0	0		
Rome			29.56	750.9	63.0	17.2	64	SSW	16.8	7.5			9			0	0		
Naples, O. U.			29.67	753.6	61.3	16.3	74	SW			8		9	WSW		0	0		
Lecce			29.80	756.8	59.7	15.4	75	SSW	26.2	11.7			6			0	0		
Cosenza			29.80	757.0	68.0	20.0	66	SE	4.3	1.9			3	SE		0	0		
Riposto, (Sicily)			29.80	757.0	62.2	16.8	71	NNE			2		0			0	0		
Palermo			29.68	753.9	71.4	21.9	36	WSW	24.2	10.8			9			0	0		
Caltanissetta	28.88	708.2	29.84	757.9	56.8	13.8	67	S			4		0			0	0		
Sub-Series.																			
Naples, S. R.			29.68	753.9	59.0	15.0	75	SW	7.4	3.3			..ck	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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

NETHERLANDS' SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			28.83	732.2	45.1	7.3		SW			5								
Groningen			28.71	729.3	37.8	3.2		S			4								
Helder			28.71	729.1	38.7	3.7		S			5								
Utrecht			28.78	731.0	43.3	6.3	76	SSW			6		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			28.52	724.5	42.1	5.6	43	SE	10.5	4.7			0			0	0		
Brönö			28.84	732.4	32.4	0.2	67	NE	18	8			9			0	0		
Christiania			28.79	731.2	35.4	1.9	75	ESE	1.6	0.7			10			0.142	3.6		
Tromsö			28.97	735.8	23.5	— 4.7	69	SE	0	0			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	770.5	60.3	15.7	83	W	3.2	1.45			2			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.00	759.4	52.0	11.0	80	WNW	17.5	7.84			9	WNW		0.114	2.9	Raining	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.24	768.2	64.4	18.0	63	SW	2.4	1.07			2			0	0		Capt D. A. da Cunha.
Lisbon			29.98	761.6	55.2	12.9	64	W	19.9	8.9			8	WNW		0.197	5.0		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.22	742.3	44.1	6.7	67	S	9	4			10						Astronomical Obs.
Wilna			29.22	742.3	4[illegible].8	4.9	70	W	9	4			10						Astronomical Obs.
Dorpat			28.92	734.6	35.8	2.1	89	SSW	9	4			1						Physical Cabinet.
St. Petersburg			29.08	738.6	35.4	1.9	71	SE	22	10			10					Snowing	Central Physical Obs.
Kuopio			29.10	739.2	29.8	— 1.2	100	E	18	8			10					Snowing	Ch. Forsten.
Kieff			29.49	749.1	35.4	1.9	78	S	16	7			10						Physical Cabinet.
Nikolaiev			29.84	757.8	43.5	6.4	72	SSE	31	14			4						Kurdakof.
Kertch			29.97	761.2	49.8	9.9	69	SSE	7	3			6						Lagorio.
Moscow			29.57	751.1	36.3	2.4	68	SSW	4	2			3						Meteorological Obs.
Lugan			29.80	756.9	35.8	2.1	78	W	22	10			6						Meteorological Obs.
Archangel			29.34	745.0	23.0	— 5.0	90	SE	18	8			10						Ogorodnikof.
Tiflis	28.42	721.8	29.82	757.3	56.5	13.6	74	NNE	11	5			9						Physical Observatory.
Astrakhan			29.86	758.1	37.4	3.0	84	NW	2	1			10						Sebastianof.
Kasan			29.62	752.3	33.6	0.9	77	SW	7	3			7						Physical Cabinet.
Orenburg					32.2	0.1	87	SE	2	1			10						Tschernischef.
Ekaterinburg	28.83	732.3	29.87	758.7	30.2	— 1.0	88	SSE	13	6			10						Meteorological Obs.
Nukuss			29.98	761.5	57.6	14.2	37	SE	11	5			4						
Kasaly																			Bobrof.
Tashkend	28.61	726.7	30.32	770.2	54.1	12.3	58	Calm	0	0			0						Michelson.
Barnaul			30.34	770.6	15.2	— 9.2	72	Calm	0	0			10						Meteorological Obs.
Yeniseisk			30.19	766.7	8.2	—13.2	72	NW	2	1			0						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.00	762.1	41.7	5.4	38	Calm	0	0			7						Physical Observatory.
Nertchinsk	27.77	705.3	30.04	762.7	— 1.1	—18.4	88	Calm	0	0			4						Meteorological Obs.
Vladivostock			30.16	766.0	19.6	— 6.9	57	N	4	2			0						
Nikolaievsk, on the Amoor					6.6	—14.1	79	WNW	7	3			1						

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 403. meters, or 1,411.8 feet; Ekaterinburg, 3[illegible]5.4? m., or 1,035.2? ft.; Tashkend, m 4[illegible]4.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.74	755.5	48.0	8.9	74	SW	29.8	13.33			10			0.008	0.2	Covered	Royal Observatory.
San Fernando			30.03	76.28	59.7	15.4	78	W	9.2	4.1		0	10		W	0.067	1.7		The Naval Observatory.

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.15	740.3	27.3	— 2.6	100	NE			2		10			0	0		
Umea			29.05	737.9	25.5	— 3.6	95	NE			2		10			0.047	1.2		
Hernosand			29.06	738.1	24.8	— 4.0	100	E			4		10			0.142	3.6	Snowing	
Stockholm			28.87	733.3	34.7	1.5	83	W			2		4			0.150	3.8		
Wisby			28.97	735.9	36.7	2.6	93	SSW			4		3			0.205	5.2		
SUB-SERIES.																			
Upsala			28.87	733.3	34.7	1.5	90	NW	2.9	1.3			7		WNW	0.020	0.50		Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Geneva	27.89	708.4	29.34	745.3	46.4	8.0	48	S			6		10			0.421	10.7	Covered	The Observatory.
Zurich	27.64	702.1	29.31	744.4	46.0	7.8	54	W			4		3			0.031	0.8	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —16.5 mm.; Thermometer, +1.2 cent.; Relative Humidity, —15 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Constantinople			29.93	760.1	50.7	10.4	62	SW	9	4.0			3		SW	0	0		
Fao, (Persian Gulf)			30.09	764.3	68.4	20.2		SE			3		10					Stormy, raining.	
Salonica			29.82	757.3	60.6	15.9		W			2		2						
Valona			29.71	754.7	63.3	17.4		S			6		5						
Varna			29.72	755.0	56.3	13.5		NE			3		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			29.98	761.6	55.4	13.0	66	SW			2		9n		SW	0.23	5.8	Rainy	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Bathurst, N. B.			30.19	766.8	20.4	— 6.4	84	NE	16.2	7.2		2c	0	N		0	0		Hon. J. Ferguson.
Brockville, Ontario			30.25	768.3	26	— 3.3		NE	4	1.8						0	0	Fair	W. R. Bigg.
*Chatham, N. B.			30.15	765.8	20	— 6.7	90	N	11	4.9			10s		N	0.01	0.3	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			29.97	761.2	24	— 4.4	96	N	15	6.7			10s			Inap.	Inap.	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.22	767.6	24.0	— 4.4	73	E			1					0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			30.23	767.8	20.8	— 6.2	58	N			1	10c				0	0		H. A. Johnson.
Esquimault, B. C.			29.84	757.9	24.0	— 4.4	87	N	2	0.9		1cs				0	0	Clear	W. H. Bovis.
Fredericton, N. B.			30.15	765.8	19.7	— 6.8	74	NE	8	3.6			10s			0	0		Prof. Harrison.
*Fort Garry, Manitoba			30.11	764.8	— 8	—22.2	100	N	10	4.5			10n			0.432	10.97	Cloudy	James Stewart.
Goderich, Ontario			30.00	762.0	32.6	0.3	90	NE			2	6k		W		0	0	Fine	H. J. Strang, M. A.
Granton, Ontario			30.03	762.7	28.2	— 2.1		E			1	2cs		W		0	0	Clear	James Grant.
*Halifax, N. S.			29.86	758.4	25	— 3.9	87	N	15	6.7			1on			0.03	0.8	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.25	768.3	24	— 4.4	73	NE	8	3.6		8c	0			0	0	Fair	S. Woods, M. A.
Little Current, Ontario			30.03	762.7	28.8	— 1.8		NE	16	7.2			10s			0	0		G. B. Abrey, C. E.
*Montreal, Quebec			30.23	767.8	23	— 5.0	86	NE	8	3.6		Haze	5n		NE	0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.24	768.1	15	— 9.4	77	N	3	1.3		2c	0	N		0	0	Clear	J. B. [illegible].
*Parry Sound, Ontario			30.11	764.8	26	— 3.3	76	SE	12	5.4		2k	5ks	E	E	0	0	Fair	Rev. R. Mooley.
*Port Dover, Ontario			30.07	763.8	28	— 2.2	88	NE	12	5.4		5ck	0	NW		0	0	Fair	H. Morgan.
Port Hastings, N. S.			29.88	758.9	28.9	— 1.7		NW	8	3.6						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.03	762.7	31	— 0.6	80	NE	4	1.8		2k	0	W		0	0	Clear	M. Payne.
*Quebec, Quebec			30.29	769.4	17	— 8.3	67	NE	20	8.9			10n		NE	0	0	Cloudy	Capt. Ash, R. N.
St. John, N. B.			30.06	763.5	19	— 7.2	84	N	14	6.3			9ks			0	0		G. Murdoch, C. E.
*Saugeen, Ontario			29.97	761.2	32	0.0	90	SE	8	3.6		8ks	0			0.01	0.3	Cloudy	K. Stewart.
Stayner, Ontario			30.08	764.0	29	— 1.7	78	SE	10	4.5			10s		NW	0	0	Cloudy	R. J. Cole.
Stratford, Ontario			30.06	763.5	28.0	— 2.2	82	SE	11	4.9		7cs		NW		0	0	Fair	C. J. MacGregor, M. A.
*Sydney, C. B.			29.87	758.7	30	— 1.1	95	NE	12	5.4			10n			0.07	1.8	Light snow	T. C. Hill.
*Toronto, Ontario			30.13	765.3	29	— 1.7	79	E	10	4.5		5cs	2n	W	E	0	0	Fair	Magnetic Observatory
Woodstock, Ontario																			J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.	.....	.....	30.15	765.8	26	— 3.3	76	NW	7	3.1	.....	1k	0	NW	.....	0	0	Clear	
Alpena, Mich.	.....	.....	29.91	759.7	31	— 0.6	79	SE	11	4.9	.....	2c	Haze	W	.....	0.06	1.5	Fair	
Atlantic City, N. J.	.....	.....	30.13	765.3	34	1.1	69	NE	12	5.4	.....	1cs	0	NW	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.10	764.5	46	7.8	84	Calm	0	0	.....	2cs	Haze	.....	.....	0	0	Fair	
Baltimore, Md.	.....	.....	30.16	766.1	39	3.9	73	N	1	0.4	.....	Haze	Sm'e	.....	.....	0	0	Smoky	
Barnegat, N. J.	.....	.....	30.13	765.3	34	1.1	79	N	12	5.4	.....	2c	0	.....	.....	0	0	Clear	
Benton, Montana	27.21	691.1	30.01	762.2	—41	—40.6	100	Calm	0	0	.....	10c	0	.....	.....	0.04	1.0	Cloudy	
Bismarck, Dakota	28.12	714.2	29.95	760.7	— 5	—20.6	68	N	14	6.3	.....	.....	10ks	.....	N	0.48	12.2	Cloudy	
Boston, Mass.	.....	.....	30.09	764.3	30	— 1.1	100	NW	12	5.4	.....	10s	Fog	NW	.....	0	0	Cloudy	
Breckenridge, Minn.	.....	.....	29.99	761.7	— 3	—19.4	100	NW	24	10.7	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Buffalo, N. Y.	.....	.....	30.05	763.3	30	— 1.1	78	NE	10	4.5	.....	5c	Sm'e	W	.....	0	0	Fair, frost	
Burlington, Vt.	.....	.....	30.20	767.1	23	— 5.0	73	N	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Cairo, Ill.	.....	.....	29.85	758.2	64	17.8	67	S	9	4.0	.....	2k	8s	W	W	0.02	0.3	Threatening	
Cape Hatteras, N. C.	.....	.....	30.06	763.5	48	8.9	85	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	
Cape Henry, Va.	.....	.....	30.11	764.8	44	6.7	76	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	
Cape May, N. J.	.....	.....	30.13	765.3	35	1.7	70	NE	7	3.1	.....	2c	Haze	W	.....	0	0	Fair	
Charleston, S. C.	.....	.....	30.12	765.0	55	12.8	80	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Smoky	
Cheyenne, Wyoming	23.45	595.6	29.39	746.5	3	—16.1	100	NE	4	1.8	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow	
Chicago, Ill.	.....	.....	29.72	754.9	55	12.8	74	SW	7	3.1	.....	5k	2s	SW	.....	0	0	Cloudy	
Cincinnati, Ohio	.....	.....	29.84	757.9	58	14.4	64	SE	4	1.8	.....	0	8ks	.....	S	Inap.	Inap.	Cloudy	
Cleveland, Ohio	.....	.....	29.94	760.5	42.4	5.8	66	SE	12	5.4	.....	2c	Sm'e	SW	SE	0	0	Fair	
Colorado Springs, Col.	23.59	599.2	29.46	748.3	10	—12.2	100	E	4	1.8	.....	.....	10n	.....	.....	0.06	1.5	Light snow	
Corsicana, Tex.	.....	.....	29.65	753.1	70	21.1	84	S	17	7.6	.....	8k	0	S	.....	0	0	Cloudy	
Davenport, Iowa	.....	.....	29.71	754.6	41	5.0	74	Calm	0	0	.....	5ck	Sm'e	SW	.....	0	0	Fair	
Denison, Tex.	.....	.....	29.55	750.6	70	21.1	75	S	14	6.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Denver, Col.	24.36	618.7	29.58	751.3	10	—12.2	100	NE	8	3.6	.....	.....	10n	.....	.....	0.10	2.5	Light snow	
Detroit, Mich.	.....	.....	29.92	760.0	34	1.1	79	E	4	1.8	.....	0	Haze	.....	.....	0	0	Clear	
Dodge City, Kan.	27.07	687.6	29.46	778.3	16	— 8.9	100	NW	20	8.9	.....	.....	Fog	.....	.....	0.01	0.3	Threatening	
Dubuque, Iowa	.....	.....	29.69	754.1	43	6.1	83	SW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Duluth, Minn.	.....	.....	29.78	756.4	28	— 2.2	77	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Eastport, Me.	.....	.....	30.06	763.5	20	— 6.7	70	N	26	11.6	.....	.....	10n	.....	N	0.13	3.3	Light snow	
Erie, Pa.	.....	.....	29.99	761.7	31	— 0.6	89	E	4	1.8	.....	5c	Haze	W	.....	0	0	Fair	
Escanaba, Mich.	.....	.....	29.80	756.9	32	0.0	89	NE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Fort Gibson, Indian Terr.	.....	.....	29.54	750.3	68	20.0	74	S	14	6.3	.....	5c	1s	S	S	0	0	Fair	
Fort St. Michaels, Alaska	.....	.....	30.23	767.8	15	— 9.4	.....	SW	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy	
Fort Sill, Indian T.	28.34	719.8	29.30	746.5	64	17.8	88	S	4	1.8	.....	0	8ks	.....	.....	0	0	Cloudy	
Fort Sully, Dakota	28.21	716.5	30.05	763.3	0	—17.8	55	NW	15	6.7	.....	Haze	0	.....	.....	Inap.	Inap.	Clear	
Galveston, Tex.	.....	.....	29.83	757.7	67	19.4	95	SE	4	1.8	.....	2c	Fog	W	SE	0	0	Fair	
Grand Haven, Mich.	.....	.....	29.77	756.1	40	4.4	82	E	8	3.6	.....	5ck	0	W	.....	Inap.	Inap.	Fair	
Indianapolis, Ind.	.....	.....	29.80	757.9	58	14.4	87	SE	6	2.7	.....	.....	10n	.....	.....	0.13	3.3	Heavy rain	
Indianola, Tex.	.....	.....	29.81	757.2	67	19.4	94	SE	10	4.5	.....	2c	0	SW	.....	0	0	Fair	
Jacksonville, Fla.	.....	.....	30.10	764.5	48	8.9	85	Calm	0	0	.....	0	Fog	.....	.....	0	0	Foggy	
Keokuk, Iowa	.....	.....	29.66	753.4	41	6.7	76	NE	8	3.6	.....	.....	10s	.....	NE	0	0	Cloudy	
Key West, Fla.	.....	.....	30.09	764.3	71.2	21.8	85	NE	5	2.2	.....	0	1ks	.....	.....	0	0	Clear	
Kittyhawk, N. C.	.....	.....	30.12	765.0	42	5.6	91	Calm	0	0	.....	0	Fog	.....	.....	0	0	Foggy	
Knoxville, Tenn.	.....	.....	30.05	763.3	50	10.0	78	E	6	2.7	.....	.....	10ks	.....	W	0	0	Cloudy	
La Crosse, Wis.	.....	.....	29.69	754.1	36	2.2	90	NE	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Leavenworth, Kan.	.....	.....	29.64	752.8	32	0.0	89	N	8	3.6	.....	.....	10n	.....	.....	0.01	0.3	Light rain	
Lexington, Ky.	28.87	733.3	29.95	760.7	59	15.0	48	SE	12	5.4	.....	.....	10ks	.....	SW	0	0	Cloudy	
Long Branch, N. J.	.....	.....	30.14	765.5	41	5.0	57	N	11	4.9	.....	0	0	.....	.....	0	0	Clear	
Louisville, Ky.	.....	.....	29.86	758.4	62	16.7	46	S	6	2.7	.....	10s	Fog	S	SW	0	0	Cloudy	
Lynchburg, Va.	.....	.....	30.12	765.0	42	5.6	88	Calm	0	0	.....	Haze	Haze	.....	.....	0	0	Hazy	
Malone, N. Y.	.....	.....	30.20	767.1	24	— 4.4	72	Calm	0	0	.....	0	0	.....	.....	0.01	0.3	Clear	
Manhattan, Kan.	28.53	724.6	29.71	754.6	23	— 5.0	86	NW	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Marquette, Mich.	.....	.....	29.79	755.9	36	2.2	80	SE	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	29.89	759.2	63	17.2	88	S	2	0.9	.....	.....	8ks	.....	SW	0	0	Fair	
Milwaukee, Wis.	.....	.....	29.77	756.1	35	1.7	90	Calm	0	0	.....	8c	Fog	.....	.....	0	0	Fair	
Mobile, Ala.	.....	.....	30.02	762.5	58	14.4	93	Calm	0	0	.....	5c	Sm'e	S	.....	0	0	Fair	
Montgomery, Ala.	.....	.....	30.07	763.8	53.5	11.9	83	SE	2	0.9	.....	2c	Sm'e	.....	.....	0	0	Fair	
Morgantown, W. Va.	.....	.....	30.01	762.2	43	6.1	70	Calm	0	0	.....	8c	0	W	.....	0	0	Fair	
Mt. Washington, N. H.	23.59	599.2	29.95	760.7	23	— 5.0	47	NW	12	5.4	.....	0	8s	.....	NW	0	0	Fair	
Nashville, Tenn.	.....	.....	29.95	760.7	59	15.0	48	SE	2	0.9	.....	.....	10s	.....	SW	0	0	Cloudy	
New Haven, Conn.	.....	.....	30.14	765.5	31	— 0.6	79	N	12	5.4	.....	Haze	0	.....	.....	0	0	Clear	
New London, Conn.	.....	.....	30.33	770.4	33	0.6	69	N	6	2.7	.....	0	8s	.....	N	0	0	Fair	
New Orleans, La.	.....	.....	29.96	761.0	66	18.9	92	S	12	5.4	.....	8k	0	S	.....	0	0	Cloudy	
Newport, R. I.	.....	.....	30.10	764.5	34	1.1	71	N	10	4.5	.....	.....	10s	.....	N	0	0	Cloudy	
New York, N. Y.	.....	.....	30.15	765.8	32	0.0	60	NW	8	3.6	.....	0	.....	.....	.....	0	0	Clear	
Norfolk, Va.	.....	.....	30.13	765.3	43.5	6.4	83	Calm	0	0	.....	0	Fog	.....	.....	0	0	Fair	
North Platte, Neb.	26.80	680.7	29.57	751.1	4	—15.6	87	N	14	6.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Omaha, Neb.	28.62	726.9	29.75	755.6	16	— 8.9	91	N	8	3.6	.....	.....	10s	.....	NE	Inap.	Inap.	Cloudy	
Oswego, N. Y.	.....	.....	30.18	766.6	27	— 2.8	77	Calm	0	0	.....	Haze	2s	.....	.....	0	0	Fair	
Pembina, Dakota	.....	.....	30.05	763.3	— 9	—22.8	100	NW	16	7.2	.....	0	5s	.....	.....	0.12	3.0	Fair	
Philadelphia, Penn.	.....	.....	30.16	766.1	34	1.1	69	NE	7	3.1	.....	0	Sm'e	.....	.....	0	0	Clear	
Pike's Peak, Colorado	16.99	431.5	29.20	741.7	— 0.5	—18.1	100	SW	20	8.9	.....	.....	10n	.....	.....	0.25	6.3	Heavy snow	
Pittsburgh, Penn.	.....	.....	30.00	762.0	38	3.3	38	E	2	0.9	.....	0	Sm'e	.....	.....	0	0	Smoky	
Port Huron, Mich.	.....	.....	29.93	760.2	34	1.1	79	SE	4	1.8	.....	1c	0	.....	.....	0	0	Clear	
Portland, Me.	.....	.....	30.14	765.5	28	— 2.2	77	NE	13	5.8	.....	.....	10s	.....	NE	0	0	Cloudy	
Portland, Oregon	.....	.....	29.88	758.9	35	1.7	90	Calm	0	0	.....	.....	10s	.....	.....	0.03	0.8	Cloudy	
Punta Rassa, Fla.	.....	.....	30.10	764.5	64.5	18.3	78	NE	4	1.8	.....	0	Haze	.....	.....	0	0	Clear	
Rochester, N. Y.	.....	.....	30.12	765.0	26	— 3.3	88	E	8	3.6	.....	5ck	0	E	.....	0	0	Fair	
Salt Lake City, Utah	25.12	638.0	29.44	747.8	25	— 3.9	88	N	12	5.4	.....	.....	10n	.....	.....	0.08	2.0	Light snow	
Sandy Hook, N. J.	.....	.....	30.14	765.5	31	— 0.6	69	N	8	3.6	.....	Haze	Haze	.....	.....	0	0	Hazy	
San Diego, Cal.	.....	.....	29.94	760.5	45	7.2	75	NW	16	7.2	.....	.....	10s	.....	NW	0.08	2.0	Cloudy	
San Francisco, Cal.	.....	.....	29.84	757.9	41	5.0	57	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Santa Fe, N. M.	22.75	577.8	29.29	744.0	23	—5.0	80	SW	2	0.9	.....	.....	10s	.....	.....	0.10	2.5	Cloudy	
Savannah, Ga.	.....	.....	30.11	764.8	50	10.0	86	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Shreveport, La.	.....	.....	29.82	757.4	70.5	21.4	89	S	10	4.5	.....	10k	0	S	.....	0.01	0.3	Cloudy	
Smithville, N. C.	.....	.....	30.11	764.8	55	12.8	79	W	4	1.8	.....	1c	0	.....	.....	0	0	Fair	
Springfield, Mass.	.....	.....	30.14	765.5	30	— 1.1	67	NE	8	3.6	.....	1k	0	N	.....	0	0	Clear	
St. Louis, Mo.	.....	.....	29.74	755.4	63	17.2	83	S	12	5.4	.....	0	8s	.....	S	0.11	2.8	Fair	
St. Marks, Fla.	.....	.....	30.09	764.3	44	6.7	92	NW	5	2.2	.....	0	0	.....	.....	0	0	Clear	
St. Paul, Minn.	.....	.....	29.75	755.6	30	— 1.1	78	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
St. Paul's Island, Alaska	.....	.....	30.41	772.4	31	1.1	89	SW	2	0.9	.....	.....	10k	.....	.....	0.01	0.3		
Thatcher's Island, Mass.	.....	.....	30.11	764.8	31	— 0.6	79	NE	16	7.2	.....	.....	10s	.....	NE	0	0	Cloudy	
Toledo, Ohio	.....	.....	29.87	758.7	36	2.2	80	NE	8	3.6	.....	8k	Sm'e	E	NE	0	0	Fair	
Tucson, Arizona	27.37	695.2	29.66	761.0	43	6.1	.....	SE	.....	.....	.....	.....	10s	.....	SW	0.26	6.6	Threatening	
Tybee Island, Ga.	.....	.....	30.11	764.8	53	11.7	93	Calm	0	0	.....	Haze	Fog	.....	.....	0	0	Foggy	
Vicksburg, Miss.	.....	.....	29.95	760.7	66.5	19.2	84	SE	8	3.6	.....	2cs	5k	.....	S	0	0	Fair	
Virginia City	23.82	605.0	29.30	744.2	—13	—25.0	74	Calm	0	0	.....	1c	0	W	.....	0.02	0.5	Clear	
Washington, D. C.	.....	.....	30.15	765.8	37	2.8	80	NW	1	0.4	.....	5cs	Sm'e	.....	.....	0	0	Smoky	

UNITED STATES SERIES.—CONTINUED

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.12	765.0	50	10.0	86	S	2	0.9		1k	Sm'e	W		0	0	Smoky	
Wood's Holl, Mass			30.10	764.5	34	1.1	61	NE	8	3.6			10s		NE	0	0	Cloudy	
Wytheville, Va	27.72	704.1	29.88	758.9	47	8.3	69	Calm	0	0		10k	0			0	0	Cloudy	
Yankton, Dakota	28.54	724.9	29.93	760.2	9	—12.8	78	NW	13	5.8			10s			0.01	0.3	Cloudy	
Yuma, Arizona			29.84	757.9	43	6.1		S				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I			30.00	762.0	78	25.6	82	NE	4	1.8		5ck	8s	NE	SE	0	0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.00	762.0	71	21.7	81	NE				5k	2k			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.25	768.3	73	22.8	56	NNE	2	0.9		2c	2k	NE		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I			30.20	767.1	72	22.2	71	Calm	0	0		2c	2s			0	0		James Gall.
Santiago de Cuba, W. I			29.86	758.4	70	21.1	63	NNE	9.6	4.3		0	0			0	0	Clear	Robert Mason.
Havana, Cuba, W. I			30.10	764.5	70	21.1	75	SE	2.4	1.1		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			29.83	757.7	62.0	16.7	67	W	26.0	11.6			10k		W	0.04	1.0	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Navassa, W. I																			
Clifton, Jamaica, W. I	27.24	691.9	30.06	763.5	65	18.3	83	N	2.0	0.9		2c	0	N		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A			29.98	761.5	81	27.2	78	E			3		6k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.03	762.8	82.4	28										0	0		Dr. H. Groot.
Medellin, Colombia, S. A	25.19	639.7			64.8	18.2	81		1	0.4		6k	4s			0.21	5.3	Cloudy	Thomas Herran.
St. Johns, Newfoundland			29.86	758.4	32.5	0.3	100	NE					10n			0.12	3.0	Cloudy	John Delaney.
York Factory, B. A			30.28	769.1	—31	—35.0		N	4	1.8		2c	0			0.19	4.8		J. Fortescue.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Manhattan, 1,125.0 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.3 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.176 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MARCH 11, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.07	763.6	62.1	16.7	64	NNW			2		8			0	0	Cloudy	Charnot.
Algiers			30.01	762.3	62.6	17.0	75	NW			3		7			0	0	Cloudy	Peter.
La Calle																			Kunts.
Tunis			29.97	761.2	68.7	20.4	40	W			4		7			0	0	Cloudy	Jacques.
Sfax			30.03	762.7	68.0	20.0	64	Calm			0		1			0	0	Clear	Chauvey.
Saida			30.02	762.5	52.0	11.1		NW			2		6			0	0	Fair	Millot.
Tebessa			30.00	762.1	68.2	20.1		W			3		1			0	0	Clear	Colin.
Gerlville			30.05	763.2	56.8	13.8	40	NNW			3		2			0	0	Clear	Buard.
Lagtouat			30.00	762.0	68.0	20.0	72	NW			4		1			0	0	Clear	Guyot.
Biskra			29.97	761.3	75.7	24.3	32	NW			3		5			0	0	Fair	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.40	746.8	55.6	13.1	52	SW			4		4			0.106	2.7		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.31	744.5	47.1	8.4	67	W			1		5			0	0		I. R. Observatory.
Eperies			29.38	746.2	43.2	6.2	90	S			3		10			0.148	3.75		Julius Mikolik.
Gratz	28.20	716.3	29.40	746.8	44.4	6.9	73	SSW			2		5			0.709	18.0		Andreas Rospini.
Hermannstadt	28.04	712.1	29.45	748.1	44.2	6.8	91	NW			3		10			0.065	1.65		Prof. Reissenberger.
Kremsmünster	28.01	711.5	29.34	745.3	46.4	8.0	59	SW			3		3			0.098	2.5		Prof. C. Wagner.
Lemberg			29.33	744.9	44.2	6.8	70	S			2		10			0.016	0.4		Dr. T. Stanecki.
Nyiregyhaza			29.42	747.3	46.4	8.0	83	SW			2		10			0.115	2.93		Habasuda Daniel.
Pola			29.49	749.1	54.5	12.5	68	SSW			3		9cks			0	0		I.R. Hydrographic Office
Szegedin			29.42	747.3	52.0	11.1	85	SW			2		7			0.961	24.40		Karl Stancel.
Trieste			29.47	748.4	55.8	13.2	78	Calm			0		10			0.157	4.0		Prof. V. Farolfi.
Vienna			29.32	744.7	50.9	10.5	46	W			5		3			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.11	739.4	45.9	7.7	60	WNW			4		9			0.055	1.40		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			28.92	734.6	42.0	5.6		NW	9	4.0			2			0.400	10.16	Blue sky	William Boswell.
Ardrossan			28.99	736.3	46	7.8		WNW			5		5					*D. clouds	J. Mayes.
Armagh Observatory			29.16	740.7	43.9	6.6		W	17	7.6			5					*D. clouds	S. Call, for Dr. Robinson
Bidston, Liverpool Obs.			29.07	738.4	42.8	6.0		W	40	17.9			6					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			29.24	742.7	47.6	8.7		NW			1		5					*D. clouds	J. Dreyer.
Bradford			28.98	736.1	43.9	6.6		NW			2		1			0.02	0.5	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			29.95	760.7	81.0	27.2		NE			1		7					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			29.07	738.4	47.5	8.6		W			3		7					Showery	H. Todd.
Cardington			29.10	739.1	47.0	8.3		W			3		7					*D. clouds	John McLaren.
Carlisle			28.97	735.8	41.9	5.5		W			4		7			0.05	1.3	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.12	739.6	48.2	9.0		SW			2		4					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	27.87	707.9	29.37	746.0	41.2	5.1		NW			2		8					Fine	R. E. Power.
Donaghadee			29.07	738.4	46	7.8		NW			5		5					*D. clouds	J. Mac Gowan.
Dover			29.13	739.9	48	8.9		W			4		3					¼ clouded	J. Costello.
Eccles, (near Manchester)			29.04	737.6	42.1	5.6		WNW	8.6	3.8			8					Gloomy	Thomas Mackereth.
Falmouth Observatory			29.34	745.2	43.5	6.4		W	13	5.8			10					Overcast	The Staff.
Fort Napier, (Natal)	27.70	703.6	29.94	760.5	77.1	25.1		E			2		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	85	29.4		N			8		6					Blue sky	[tis.
Galway, Queen's College			29.18	741.1	46	7.8		NE			1		0					Blue sky	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.14	765.5	62.0	16.7		NW			3		4					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			28.96	735.6	43.1	6.2		W			2		8					*D. clouds	Lewis Stuart.
Great Yarmouth			28.90	734.0	44	6.7		W			4		7					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			29.13	739.9	49.1	9.5		W			5		6					*D. clouds	The Staff for G. B. Airy.
Guernsey			29.32	744.7	47	8.3		WSW			3		6					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.02	737.1	43.2	6.2		WNW			3		9					Showery	L. J. Crossley.
Helston			29.28	743.7	48	8.9		W			4		6			0.11	2.8	Rain & snow	M. P. Moyle.
Holyhead			29.15	740.4	44	6.7		WNW			6		2					Blue sky	John Tilston.
Kew Observatory			29.14	740.1	48.1	8.9		W	26	11.6			8					*D. clouds	The Staff.
Kingstown			29.18	741.1	44	6.7		WNW			5		5					*D. clouds	George Mitchell
Leicester Museum			29.10	739.1	45.0	7.2		W			6		10					Threatening	Wm. J. Harrison, F.G.S
Malta, (Mediterranean)			29.86	758.4	65.6	18.7		NW			2		4k						Fred Travis, Pvt A.H.C.
Nairn			28.89	733.8	43	6.1		Calm			0		8					Hail showers	W. D. Penny.
Nassau, (Bahamas)			30.15	765.8	70.4	21.3		NE			4		9					Overcast	Surg.-Maj. Henry.
Nottingham			29.07	738.4	44.8	7.1		WNW			5		9k,ks,d		WNW	0.080	2.03	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.09	738.9	43.0	6.1		WNW			4		9					Hailing	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.05	737.9	46	7.8		W			4		6					*D. clouds	J. Lucas.
Plymouth			29.28	743.7	49.8	9.9		WSW			3		10					Overcast	John Merrifield.
Roche's Point			29.27	743.4	46	7.8		NW			3		5					⅓ clouded	W. Kennedy.
Saint Ann's Head			29.23	742.4	45	7.2		NW			3		5					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.32	744.7	50.0	10.0		W			5		10					Overcast	A. P. Amy.
Sandwick Manse (Orkneys)			28.93	734.8	39	3.9		N	16	7.2			10					*D. clouds	Rev. Dr. Clouston.
Scarborough			28.94	735.1	42.9	6.1		NW			2		8					Overcast	F. Shaw.
Scutari Cemetery (Turkey)			29.73	755.1	56.4	13.6		SW			3		5			Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.05	737.9	42.9	6.1		WNW			5		5			0.096	2.44	*D. clouds	W. F. Cooper.
Silloth Rectory			28.99	736.3	50.8	10.4	61	NW			2		2			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			29.03	737.3	41.9	5.5		NW			5		10			Blank	Blank	Squally	S. J. Perry.
Stornoway, Lews C. (Hebr.)			28.92	734.6	42	5.6		NNW			4		10					Showery	John Smith.
Stratfield Turgiss			29.16	740.7	46.7	8.2		W			1-2		2					Blue sky	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			28.92	734.6	45	7.2		N			3		3					Blue sky	John Trotter.
Truro, Royal Institution			29.33	745.0	50	10.0		W			4		6					*D. clouds	W. Newcombe.
Valencia Observatory			29.27	743.4	44.5	6.9		WSW	4	1.8			10					*D. clouds	The Staff.
Sub-Series.																			
Cape Good Hope Obs.			30.04	763.0	76.0	24.4	46	SSE	17	7.6			0						The Staff, for E. J. Stone.
Calf of Man, (Isle of Man)					39	3.9		NW			6		5			0	0		
Leith, Restalrig Park																			Andrew Gibb.
Mauritius			29.84	757.9					15.9	7.1						0	0		
Monach Lt-house, Hebrides			28.97	735.8	43	6.1		N			1	5	5	N		0.3	7.6		J. Youngclause.
North Unst, (Shetland Is.)			28.86	733.0	40	4.4		N			6	2	3						

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			28.78	731.1	42.1	5.6	85	S			2		8						
Fanöe			28.63	727.1	39.7	4.3	92	S			6		9						
Godthaab, (Greenland)			30.06	763.5	18.5	— 7.5	89	SSE			6		8						
Stykkisholm, (Iceland)																			
Thorshavn, (Faröe)			29.21	741.8	31.6	— 0.2	85	N			4		5						
Vestervig			28.62	726.9	36.7	2.6	96	SE			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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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			29.37	746.1	50.0	10	66	WSW			1		8nk		WSW	0.402	10.2	Very cloudy	Normal School.
Amiens			29.25	742.9	48.9	9.4	64	N			8		2		NW	0	0	Slightly cl'dy	Normal School.
Avignon			29.61	752.2	51.8	11	54	SW			3		8		W	0.126	3.2	Very cloudy	Normal School.
Bar-sur-Seine			29.37	746.1	47.1	8.4	59	S			6		8		WNW	0.315	8.0	Raining	C. Saillard.
Beaumette, (near Angers)			29.41	747.0	47.7	8.7	72	SW	22.4	10.0			10		SW	0.055	1.4	Raining	Beaumette Observatory
Beauvais			30.17	766.4	48.7	9.3	56	W			3		8		W	0.12	3.	Very cloudy	Normal School.
Besançon			29.48	748.8	41.4	5.2	71	S			3		8		SW	0.138	3.5	Very cloudy	Normal School.
Bourg en Bresse			29.57	751.1	41.9	5.5	91	SW			1		5n		NE			Cloudy	Normal School.
Bourges			29.47	748.4	44.2	6.8	88	SW			2		5		W	0.20	5.	Cloudy	Normal School.
Brest			29.35	745.6	48.7	9.3	73	W			4		10		WNW	0.236	6.00	Raining	Naval Observatory.
Caen																			Normal School
Chartres			29.31	744.5	48.6	9.2		E			3		5		E	0.413	10.5		Normal School.
Chaumont																			Normal School.
Clermont			29.47	748.4	46.2	7.9	64	W			8		10		W	0.484	12.3		Puy de Dome, Obs.
Commercy			29.33	745.0	43.9	6.6	77	W			8		8n		W	0.402	10.2	Very cloudy	Normal School.
Commune de Gréasque*			29.60	754.0	45.0	7.2	76	W			4		10		W	0.31	8.		
Grenoble			29.57	751.1	42.4	5.8	85	NW			2		10k			0.24	6.	Raining	Normal School.
Le Mans			29.41	746.9	50.2	10.1	50	W			3		8		W	0.16	4.	Very cloudy	Normal School.
Loches			29.25	743.0	46.4	8	73	W			2		10			0.134	3.4	Covered	Normal School.
Lons-Le-Saulnier			29.54	750.2	40.6	4.8	100	S			2		10			0.087	2.2	Covered	Normal School.
Mâcon			29.51	749.6	41.7	5.4	91	SW			4		10			0.031	0.8	Covered	Normal School.
Mirecourt																			Normal School.
Metz			29.36	745.7	42.1	5.6	71	SW			3		7		SW	0.189	4.8		M. Schuster.
Nismes			29.60	751.7	51.4	10.8	52	N			2		5		W	0	0	Cloudy	Normal School.
Orleans			29.37	746.1	48.6	9.2	71	W			4		8		W	0.173	4.4	Very cloudy	Normal School.
Paris Observatory			29.33	745.0	48.7	9.3	54	WSW			3		8		W	0.056	1.42	Very cloudy	National Observatory.
Parthenay			29.48	748.9	44.4	6.9	95	W			4		10			0.205	5.2	Covered	Normal School.
Privas			29.57	751.1	52.7	11.5		W			1		8		W	0	0	Very cloudy	Normal School.
La Roche-sur-Yon			29.47	748.4	47.5	8.6	83	W			2		10			0.224	5.7	Covered	Normal School.
Rochefort, Observatory			29.59	751.5	48.6	9.2	78	W			3		10		W	0.236	6.0	Covered	Naval Observatory.
Rouen			29.29	743.9	52.5	11.4	56	W			3		5		W	0.110	2.8	Cloudy	Normal School.
Saint Lo			29.36	745.8	48.0	8.9	82	NW			2		5		NW	0.126	3.2		Normal School.
Tarbes			29.74	755.4	50.0	10	81	W			4		8		E	0.16	4.	Very cloudy	Normal School.
Toulouse																			Normal School.
Villefranche																			
Sub-Series.																			
Fort de France, Martinique			29.58	751.3	47.3	8.5	86	SW			6		8		N	0	0	Very cloudy	Normal School.
Gorée			29.89	759.2	78.8	26	76	NE			2		5ck						L'Abbé Marchésl.
Marseilles																			
Mont-Louis			29.66	753.3	50.0	100	74	W			4		10			0.252	6.4	Raining	Marseilles Observatory.
Montsouris, Paris	24.50	622.4	29.85	758.1	37.0	2.8	71	SSW					7		WSW	0.118	3.0		—. Falguère.
Perpignan			29.33	744.9	49.3	9.6	60	W			3		7		W	0.075	1.9		Montsouris Observ'tory.
Pic du Midi, (Summit) H.P†			30.13	765.3	55.4	13.0	53	NW	22.4	10.00			5		W	0	0		Dr. Fines.
Saint Maur, (near Paris)																			M. Baylac.
Toulouse			29.34	745.1	45.6	7.6	77	WSW			2		9			0.083	2.1	Showery	E. Renou.
Tourd			29.75	755.7	44.2	6.8	88	W			6		10			0.516	13.1	Raining	Toulouse Observatory.
Versailles, (near Paris)			29.45	748.0	48.0	8.9	73	W			4		8		WNW	0.43	5.4		C. Marquet.
Zi-Ka Wei, (near Shanghai)			29.34	745.3	42.8	6.0	75	NW			4		9			0.128	3.26	Almost cov'd.	Dr. A. Bérigny.
																			H. Le Lee, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Clermont, 342 m., or 1,030.9 ft.; Iermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Near Marseilles. † Summit inaccessible; weather storm; amount of precipitation on the Plantade 85 millimeters, or 3.3 inches.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Bamberg			29.13	739.9	44.6	7.0	71	WSW			6		5			0.118	3.0		Prof. T. Hoh.
Berlin			29.04	737.5	48.7	9.3	57	SW			4		7			0	0		Prof. Arndt.
Breslau			29.26	743.2	47.8	8.8	51	SW			7		7			0	0		Dr. P. Neugebauer.
Carlsruhe			29.27	743.4	44.2	6.8	84	SW			10		10			0.126	3.2	Raining	A. Senz.
Cassel			29.04	736.6	48.2	9.0	71	SW			5		4			0.087	2.2		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main			29.28	743.8	47.1	8.4	46	SW			6		8			0.240	6.1		Physical Society.
Friedrichshafen			29.40	746.7	46.0	7.2	65	W			3		8			0.276	7.0		M. Wilhelm.
Hamburg			28.88	733.5	41.9	5.5	83	SW			8		9ck, k			0.102	2.6	Squally	Deutsche Seewarte.
Kiel			28.84	732.4	43.7	6.5	76	SSW			5		7			0.134	3.4		Prof. G. Karsten.
Königsberg			29.15	740.3	47.1	8.4	65	S			5		5			0	0		Prof. E. Luther.
Köslin			28.98	736.0	43.9	6.6		S			6		7			0.594	15.1		H. Müller.
Leipsic			29.11	739.4	46.8	8.2	77	SW			4		9	SW		0	0	Stormy	Prof. Brehms.
Memel			29.05	737.8	40.3	4.6	78	S			5		1	S		0.079	2.0		Reinbrecht & Skalweit.
Münster			28.97	735.7	43.9	6.6	79	SW			3		10			0.232	5.9	Raining	Prof. E. Heis.
Neufahrwasser			29.02	737.2	46.6	8.1	67	S			3		5			0.008	0.2	Smoke-haze	A. Lothes.
Posen			29.15	740.5	40.1	9.5	63	W			5		3			0	0		Dr. Magener.
Strasburg, (in Alsace)			29.33	745.0	45.3	7.4	68	SW			4		7			0.122	3.1		Dr. Schur.
Stuttgart			29.30	744.2	45.0	7.2	66	SW					5			0.024	0.6	Light rain	Prof. Schoder.
Thorn			29.14	740.1	46.4	8.0	63	SW			6		6			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.18	741.2	42.8	6.0	76	W			8		6			0.177	4.5		Prof. Flesch.
Wustrow, Naval School			28.87	733.4	43.5	6.4	74	SSW			9		7			0.008	0.2	Rain & snow	E. F. Schultz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—12.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—12.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.43	747.5	54.0	12.2	56	SW	6.3	2.8			6			0	0		
Padua			29.40	746.8	56.5	13.6	41	W	15.4	6.9			8			0	0		
Vicenza			29.39	746.6	55.0	12.8	44	SW	3.8	1.7			6			0	0		
Verona			29.41	746.9	59.0	15.0	50	SW			1		0			0	0		
Bergamo	28.04	712.2	29.36	745.1	51.8	11.0	39	NW			2		9			0	0		
Domodossola	28.33	719.5	29.35	745.6	54.3	12.4	43	SSW			4		10			0	0		
Milan			29.43	747.5	57.2	14.0	50	S			1		7	NE		0	0		
Pavia			29.41	746.9	54.0	12.2	54	N			4		2			0	0		
Moncalieri			29.39	746.5	55.9	13.3	9	ESE	3.8	1.7			7	W		0	0		
Mondovi	27.47	697.8	29.39	746.5	55.0	12.8	25	NNW			6		8			0	0		
Porto Maurizio			29.47	748.4	56.5	13.6		W			8		7			0	0		
Genoa			29.43	747.4	58.1	14.5	50	SE	8.7	3.9			10	S		0	0		
Piacenza			29.42	747.3	57.2	14.0	38	S	2.5	1.1			10			0	0		
Parma			29.43	747.5	58.1	14.5	44	SSW			8		10			0	0		
Bologna			29.46	748.2	58.0	14.8	27	SW			8		3	NE		0	0		
Florence			29.60	751.8	56.3	13.5	60	SW			8		9	WSW		0.157	4.0		
Leghorn			29.59	751.5	55.6	13.1	61	S	24.2	10.8			10			0	0		
Siena	28.39	721.0	29.60	751.7	53.6	12.0	54	SW	11.2	5.0			7	W		0	0		
Urbino	27.99	710.9	29.56	750.8	49.6	9.8	57	SW			6		10			0	0		
Pesaro																			
Ancona			29.55	750.5	57.6	14.7	40	SW			6		10			0	0		
Grosseto			29.63	752.7	57.2	14.0	68	SSW			4		5	NW		0	0		
Rome			29.72	755.0	59.4	15.2	55	SW	11.2	5.0			9	SW		0	0		
Naples, O. U.			29.78	756.4	60.6	15.9	46	W			4		1	NW		0.087	2.2		
Lecce			29.74	755.3	61.3	16.3	49	WSW	15.0	6.7			10			0	0		
Cosenza			29.85	758.2	62.2	16.8	62	NW	3.8	1.7			10			0.102	2.6		
Riposto, (Sicily)			29.80	756.8	65.5	18.6	60	S			2		8	N		0	0		
Palermo			29.78	756.3	67.5	19.7	40	WSW	9.4	4.2			9			0	0		
Caltanissetta	27.99	708.6	29.85	758.3	56.8	13.8	57	WSW			2		10	ENE		0	0		
Sub-Series.																			
Naples, S. R.			29.79	756.6	58.6	14.8	53	WSW	4.3	1.9			8	SW		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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—12.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Tokio																			

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—12.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.12	739.6	45.0	7.2		W			5								
Groningen			28.80	731.4	43.2	6.2		W			6								
Helder			28.88	733.6	43.5	6.4		WSW			5								
Utrecht			28.95	735.4	46.0	7.8	70	WSW			5		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—12.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			28.70	728.9	40.6	4.8	44	NE	2.9	1.3			0			0	0		
Brönö			28.88	733.6	33.1	0.6	73	ENE	11	5			2			0	0		
Christiania			28.71	729.2	34.2	1.2	82	NE	4.7	2.1			10			0.094	2.4		
Tromsö			28.95	735.4	25.2	— 3.8	73	SE	2	1			3			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er —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.
Angra, (Azores,)			30.20	767.0	59.9	15.5	89	W	5.7	2.56			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.10	764.5	56.3	13.5	60	WSW	8.9	4.00			9	WNW		0.028	0.7		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.29	769.4	63.9	17.7	64	Calm?	2.62	1.182			10			0	0		Capt D. A. da Cunha.
Lisbon			30.17	766.4	57.2	14.0	67	W	12.5	5.6			9			0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er —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.
Warsaw			29.22	742.1	47.8	8.8	56	SSE	20	9			10						Astronomical Obs.
Wilna			29.30	744.2	44.1	6.7	67	SE	9	4			3						Astronomical Obs.
Dorpat			29.25	743.0	37.4	3.0	81	SSW	7	3			0						Physical Cabinet.
St. Petersburg			29.22	742.2	36.1	2.3	77	S	7	3			8						Central Physical Obs
Kuopio			29.11	739.3	32.5	0.3	100	WSW	9	4			10					Snowing	Ch. Forsten.
Kieff			29.47	748.4	35.8	2.1	100	S	4	2			10					Rain and fog	Physical Cabinet.
Nikolaiev			29.62	752.4	48.6	9.2	75	S	31	14			2						Kurdakof.
Kertch			29.87	758.8	50.2	10.1	76	S	18	8			5						Lagorio.
Moscow			29.48	748.9	36.1	2.3	87	SSW	9	4			10						Meteorological Obs.
Lugan			29.84	757.9	35.4	1.9	88	S	13	6			7						Meteorological Obs.
Archangel			29.12	739.6	32.4	0.2	78	SSW	29	13			10						Ogorodnikof.
Tiflis	28.54	724.8	29.91	759.6	66.7	19.3	36	SE	4	2			2						Physical Observatory.
Astrakhan			30.19	766.9	35.4	1.9	88	N	4	2			10						Sebastianof.
Kasan			29.89	759.3	32.2	0.1	76	S	4	2			0						Physical Cabinet.
Orenburg			30.04	762.9	33.6	0.9	79	NE	2	1			10						Tschernischef.
Ekaterinburg	28.98	736.1	30.02	762.6	30.7	— 0.7	71	W	13	6			4						Meteorological Obs.
Nukuss			29.91	759.7	68.5	20.3	26	ENE	9	4			2						
Kasaly																			Bobrof.
Tashkend	28.49	723.7	30.18	766.5	61.3	16.3	34	Calm	0	0			2						Michelson.
Barnaul			30.54	775.8	13.8	—10.1	70	Calm	0	0			5						Meteorological Obs.
Yeniseisk			30.47	773.9	5.5	—14.7	60	WSW	2	1			0						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.15	765.7	43.2	6.2	72	ESE	4	2			5						Physical Observatory.
Nertchinsk	27.77	705.3	29.98	761.5	10.0	—12.2	82	Calm	0	0			7						Meteorological Obs.
Vladivostock			30.21	767.3	29.1	— 1.6	80	Calm	0	0			0						
Nikolaievsk, on the Amoor					0.7	—17.4	89	NW	7	3			0						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 430. meters, or 1,411.8 feet; Ekaterinburg, 3[illegible]. 12 m., or 1,095.2[illegible] ft.; Tashkend, [illegible] 494.2[illegible], or 1,621.3[illegible] ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0[illegible] m., or 1,942.2[illegible] ft.; Oorga, 1,281.0[illegible] m., or 4,202.6[illegible] 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er —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.
Madrid			29.98	761.4	51.1	12.3	49	W	20.1	9.00		0	6			0	0	Cloudy	Royal Observatory.
San Fernando			30.21	767.2	59.9	15.5	67	NNW	7.2	3.2		1	6	NW	WSW	0	0		The Naval Observatory

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er —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.
Haparanda			29.12	739.6	31.6	— 0.2	96	N			2		10			0	0		
Umea			29.07	738.3	29.1	— 1.6	84	SW			2		10			0	0		
Hernosand			29.03	737.3	27.3	— 2.6	98	E			2		10			0.217	5.5	Snowing	
Stockholm			28.90	734.1	36.7	2.6	82	SE			4		10			0.024	0.6		
Wishy			29.04	737.7	40.6	4.8	74	S			6		7			0.059	1.5		
Sub-Series.																			
Upsala			28.92	734.6	35.6	2.0	84	SE	15.2	6.8			10	SSW	SSE	0.028	0.70		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Geneva	28.06	712.8	29.53	750.1	40.3	4.6	83	SW			7		10			0.094	2.4	Raining	The Observatory.
Zurich	27.80	706.2	29.48	748.8	42.6	5.9	67	W			5		10			0.087	2.2	Covered	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —12.1 mm.; Thermometer, —2.5 cent.; Relative Humidity, +21 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Constantinople			29.80	756.8	59.7	15.4	56	SW	15	6.5			4		SW	0	0		
Fao, (Persian Gulf)			30.08	764.0	64.4	18.0		NW			4		0						
Salonica			29.66	753.4	71.2	21.8		SE			6		2						
Valona			29.67	753.5	59.4	15.2		S			2		10						
Varna			29.61	752.0	69.8	21.0		N			3		2						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			30.09	764.2	65.7	18.7	60	W			2		1k		S	0.01	0.3	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Bathurst, N. B.			30.46	773.7	21.5	— 5.8	83	NE	18.2	8.1						0	0		Hon. J. Ferguson.
Brockville, Ontario			30.24	768.1	24	— 4.4		E	5	2.2			10s			0	0	Cloudy	W. R. Bigg.
*Chatham, N. B.			30.48	774.2	21	— 6.1	90	N	10	4.5			10ks		NE	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			30.33	770.4	26	— 3.3	89	N	13	5.8			10s			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.20	767.1	26.0	— 3.3	87	E			4	10c				0	0	Stormy	James Smith, M. A.
Dalhousie, N. B.			30.56	776.2	16.5	— 8.6	63	E			1	10cs				0	0		H. A. Johnson.
Esquimault, B. C.			29.81	757.2	34.1	1.2	79	N	5	2.2			10			0	0	Snowing	W. H. Bevis.
Fredericton, N. B.			30.44	773.2	23.0	— 5.0	79	NE	10	4.5			10s			0	0		Prof. Harrison.
*Fort Garry, Manitoba			29.96	761.0	— 4	—20.0	100	N	22	9.8			10n			0.520	13.21	Cloudy	James Stewart.
Goderich, Ontario			29.88	758.9	42.6	5.9	88	S			2		10n			0.48	12.2	Drizzling	H. J. Strang, M. A.
Granton, Ontario			29.92	760.0	37.0	2.8		E			1		10n			0	0	Cloudy	James Grant.
*Halifax, N. S.			30.29	767.1	27	— 2.8	93	N	15	6.7		2k	0	N		0.02	0.5	Fair	F. Allison, M. A.
*Kingston, Ontario			30.18	766.6	25	— 3.9	86	NE	11	4.9		2cs	8s	W		0.01	0.3	Cloudy	S. Woods, M. A.
Little Current, Ontario			29.87	758.7	31.8	— 0.1		SE	15	6.7			10s			0.45	11.4		G. B. Abrey, C. E.
*Montreal, Quebec			30.31	769.9	27	— 2.8	76	E	11	4.9		2cs	0	NW		0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.21	767.3	24	— 4.4	74	E	22	9.8		10k	0	E		0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario			29.97	761.2	33	0.6	90	S	16	7.2			10n		SW	0.02	0.5	Heavy rain	Rev. R. Mooley.
*Port Dover, Ontario			29.96	761.0	34	1.1	89	N	12	5.4		10k	0	SW		0	0	Fair	H. Morgan.
Port Hastings, N. S.			30.23	767.8	28.9	— 1.7		NE	10	4.5						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			29.92	760.0	40	4.4	86	E	5	2.2			10n		W	0	0	Cloudy	M. Payne.
*Quebec, Quebec			30.42	772.7	24	— 4.4	87	NE	7	3.1			10n		NE	0	0	Cloudy	Capt. Ash, R. N.
St. John, N. B.			30.40	772.1	23	— 5.0	73	NE	11	4.9			10s			0	0		G. Murdoch, C. E.
*Saugeen, Ontario			29.83	757.7	41	5.0	90	SE	15	6.7			10n		W	0.22	5.6	Light rain	K. Stewart.
Stayner, Ontario			29.96	761.0	32	0.0	90	SE	13	5.8			10n		S	0.09	2.3	Cloudy	R. J. Cole.
Stratford, Ontario			29.95	760.7	33.3	0.7	93	SE	9	4.0			10s			0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			30.24	768.1	28	— 2.2	79	NE	18	8.0			10n		NE	0.10	2.5	Cloudy	T. C. Hill.
*Toronto, Ontario			30.02	762.5	32	0.0	79	E	16	7.2			10n		E	0	0	Cloudy	Magnetic Observatory
Woodstock, Ontario																			J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			30.31	769.9	27	-2.8	88	Calm	0	0			10s		W	0	0	Cloudy	
Alpena, Mich.			29.70	754.4	37	2.8	90	SE	12	5.4			10s			0	0	Cloudy	
Atlantic City, N. J.			30.28	769.1	38	3.3	80	E	20	8.9			10s		E	0	0	Cloudy	
Augusta, Ga.			30.11	764.8	54	12.2	80	Calm	0	0		Haze	Haze			0	0	Hazy	
Baltimore, Md.			30.25	768.3	43	6.1	83	NE	7	3.1		8k	Sm'e		E	0.02	0.5	Cloudy	
Barnegat, N. J.			30.31	769.9	38	3.3	81	SE	14	6.3			10s		SE	0	0	Cloudy	
Benton, Montana	27.35	694.7	30.15	765.8	-34	-36.7	100	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.20	716.3	30.05	763.3	-6	-21.1	100	NW	25	11.2			10n			0.95	24.1	Light snow	
Boston, Mass.			30.36	771.1	29	-1.7	78	N	8	3.6			10s		N	0	0	Cloudy	
Breckenridge, Minn.			29.85	758.2	-5	-20.6	82	W	19	8.5		0	0			0.11	2.8	Clear	
Buffalo, N. Y.			29.92	760.0	43	6.1	83	NE	4	1.8		1c	2ks	W	SW	0.01	0.3	Fair	
Burlington, Vt.			30.32	770.1	26	-3.3	63	Calm	0	0		2c	0			0	0	Fair	
Cairo, Ill.			29.81	757.2	58	14.4	93	N	8	3.6			10n			0.37	9.4	Heavy rain	
Cape Hatteras, N. C.			30.12	765.0	56	13.3	87	E	1	0.4			10ks		N	0	0	Cloudy	
Cape Henry, Va.			30.19	766.8	48	8.9	92	SE	11	4.9		8c	0			0	0	Fair	
Cape May, N. J.			30.26	768.6	41	5.0	83	E	16	7.2			10s		E	0	0	Cloudy	
Charleston, S. C.			30.16	766.1	60	15.6	88	Calm	0	0		Haze	Sm'e			0	0	Smoky	
Cheyenne, Wyoming	23.77	603.8	29.71	754.6	-1	-18.3	100	SW	2	0.9		1c	0	NW		0.02	0.5	Clear	
Chicago, Ill.			29.87	758.7	39	3.9	72	W	10	4.5			10s			0.08	2.0	Cloudy	
Cincinnati, Ohio			29.81	757.2	60	15.6	59	SE	4	1.8		8k	0	W		0	0	Cloudy	
Cleveland, Ohio			29.87	758.7	57	13.9	69	SE	10	4.5			10ks		SW	0	0	Cloudy	
Colorado Springs, Col.	23.90	607.0	29.76	755.0	11	-11.7	100	S	12	5.4			10n			0.04	1.0	Light snow	
Corsicana, Tex.			29.75	755.6	56	13.3	87	NW	8	3.6		2k	5s	NW		0	0	Threatening	
Davenport, Iowa			30.04	763.0	25	-3.9	88	NW	16	7.2			10ks		NW	1.03	26.2	Cloudy	
Denison, Tex.			29.88	758.9	35	1.7	100	N	16	7.2			10s			0.48	12.2	Light rain	
Denver, Col.	24.62	625.3	29.81	757.9	7	-13.9	77	Calm	0	0		0	2s			0.06	1.5	Clear	
Detroit, Mich.			29.82	757.4	49	9.4	85	S	5	2.2			10n		S	0.04	1.0	Light rain	
Dodge City, Kan.	27.48	698.0	29.97	761.2	13	-10.6	81	Calm	0	0		0	0			0.01	0.3	Clear	
Dubuque, Iowa			30.02	762.5	23	-5.0	73	NW	8	3.6			10s			0.63	16.0	Cloudy	
Duluth, Minn.			29.83	757.7	5	-15.0	62	W	14	6.3		2k	0	SW		0.13	3.3	Clear	
Eastport, Me.			30.36	771.1	24	-4.4	74	NE	24	10.7			10s		NE	0	0	Cloudy	
Erie, Pa.			29.86	758.1	56	13.3	80	S	20	8.9		2k	8s	SW	SW	Inap.	Inap.	Cloudy	
Escanaba, Mich.			29.68	753.0	35	2.2	75	SW	12	5.4			10s		SW	2.14	54.4	Cloudy	
Fort Gibson, Indian Terr.			29.95	760.7	31	-0.6	100	N	19	8.5			10n		N	0.86	21.8	Heavy rain	
Ft. St. Michaels, Alaska			30.34	770.6	7	-13.9		Calm	0	0		8cs	0			0	0	Fair	
Fort Sill, Indian T.	28.77	730.7	29.95	760.7	25	-3.9	60	N	20	8.9		5cs	0	N		0	0	Fair	
Fort Sully, Dakota	28.41	721.6	30.32	770.1	-10	-23.3	54	NW	12	5.4		0	0			0.02	0.5	Clear	
Galveston, Tex.			29.78	756.4	68	20.0	94	SE	8	3.6		0	5s		S	0	0	Clear	
Grand Haven, Mich.			29.82	757.4	43	6.1	83	W	15	6.7		3cs	2s	SW	SW	0.10	2.5	Fair	
Indianapolis, Ind.			29.80	756.9	59	15.0	90	N	2	0.9			10s		S	0.68	17.3	Threatening	
Indianola, Tex.			29.73	755.1	70	21.1	90	SE	18	8.0			10s		S	0	0	Threatening	
Jacksonville, Fla.			30.12	765.0	59	15.0	87	E	4	1.8		0	0			0	0	Clear	
Keokuk, Iowa			29.98	761.5	26	-3.3	75	NW	12	5.4			10s		NW	0.10	2.5	Cloudy	
Key West, Fla.			30.03	764.3	72.2	22.3	71	E	4	1.8		2k	Sm'e	E	E	0	0	Smoky	
Kittyhawk, N. C.			30.18	766.6	49	9.4	85	SE	8	3.6		5c	Haze			0	0	Fair	
Knoxville, Tenn.			30.02	762.5	53	11.7	66	E	4	1.8			10s			0	0	Cloudy	
La Crosse, Wis.			30.05	763.3	14	-10.0	62	W	12	5.4		5k	0	W		0.81	20.6	Fair	
Leavenworth, Kan.			30.14	765.5	13	-10.6	81	NW	16	7.2		0	2s			0.06	1.5	Clear	
Lexington, Ky.	28.82	732.0	29.89	759.2	60	15.6	49	S	12	5.4		5k	0	SW		0	0	Fair	
Long Branch, N. J.			30.33	770.4	35	1.7	89	E	19	8.5			10s		E	0	0	Cloudy	
Louisville, Ky.			29.80	756.9	63	17.2	47	SE	8	3.6		10ck	Sm'e	SW		0	0	Cloudy	
Lynchburg, Va.			30.16	766.1	49	9.4	65	SE	3	1.3		Haze	Haze			0	0	Hazy	
Malone, N. Y.			30.20	767.1	23	-5.0	72	NE	2	0.9		5c	0	NW		0	0	Fair	
Manhattan, Kan.	28.91	734.3	30.16	766.1	11	-11.7	79	NW	2	0.9		0	8ks			0	0	Cloudy	
Marquette, Mich.			29.57	751.1	38	3.3	81	SW	24	10.7		8cs	0	SW		0.97	24.6	Cloudy	
Memphis, Tenn.			29.84	756.9	66	18.9	82	S	18	8.0			10ks		SW	0	0	Cloudy	
Milwaukee, Wis.			29.81	757.2	32	0.0	79	W	18	8.0			10ks		W	0.03	0.8	Cloudy	
Mobile, Ala.			29.99	761.7	67	19.4	90	Calm	0	0		5c	5s	SW	SW	0	0	Cloudy	
Montgomery, Ala.			30.05	763.3	57.5	14.2	96	S	2	0.9			Fog			0	0	Foggy	
Morgantown, W. Va.			29.99	761.7	50	10.0	85	Calm	0	0		10c	Haze	W		0.34	8.6	Cloudy	
Mt. Washington, N. H.	23.83	605.3	30.19	766.8	32	0.0	59	NW	10	4.5		0	8s		NW	0	0	Fair	
Nashville, Tenn.			29.88	758.9	62	16.7	61	SE	6	2.7		10c	0	SW		0	0	Cloudy	
New Haven, Conn.			30.37	771.4	31	-0.6	69	NE	12	5.4		0	0			0	0	Clear	
New London, Conn.			30.33	770.6	31	-0.6	67	N	7	3.1		0	8s		E	0	0	Cloudy	
New Orleans, La.			29.94	760.5	67	19.4	89	S	6	2.7		2ck	5ks	W	S	0	0	Fair	
Newport, R. I.			30.56	776.2	32	0.0	69	NE	4	1.8			10s		NE	0	0	Cloudy	
New York, N. Y.			30.33	770.4	34	1.1	79	NE	14	6.3			10s			0	0	Cloudy	
Norfolk, Va.			30.19	766.8	48	8.9	81	SE	9	4.0		0	8s			0	0	Fair	
North Platte, Neb.	27.12	688.8	30.02	762.5	-6	-21.1	61	Calm	0	0		2c	0			0.18	4.6	Clear	
Omaha, Neb.	29.01	737.6	30.22	767.6	8	-13.3	89	NW	8	3.6		2ck	0	SW		0.04	1.0	Fair	
Oswego, N. Y.			30.37	771.8	37.2	2.9	71	SE	12	5.4			10ks			0	0	Cloudy	
Pembina, Dakota			29.86	758.4	-3	-19.4	101	N	24	10.7			10n			0.23	5.8	Light snow	
Philadelphia, Penn.			30.30	769.6	37	2.8	89	E	12	5.4			10ks			0	0	Cloudy	
Pike's Peak, Colorado	17.22	437.4	29.43	747.5	-16	-26.7	79	W	12	5.4		2cs	8s	W		0.11	2.8	Cloudy	
Pittsburgh, Penn.			29.99	761.7	50	10.0	78	Calm	0	0			10s			0	0	Cloudy	
Port Huron, Mich.			29.85	758.2	46	7.8	85	S	11	4.9			10s		S	Inap.	Inap.	Cloudy	
Portland, Me.			30.42	772.7	29	-1.7	78	NE	14	6.3			10s		SE	Inap.	Inap.	Cloudy	
Portland, Oregon			30.07	763.8	37	2.8	80	S	3	1.3			10s			0.13	3.3	Cloudy	
Punta Rassa, Fla.			30.12	765.0	68.5	20.3	79	E	6	2.7		Haze	Sm'e		E	0	0	Hazy	
Rochester, N. Y.			29.99	761.7	37	2.8	100	NE	4	1.8			10n			0.12	3.0	Light rain	
Salt Lake City, Utah	25.53	648.4	29.86	758.4	23	-5.0	86	N	1	0.4		5k	5s	NW		0.02	0.5	Cloudy	
Sandy Hook, N. J.			30.30	769.6	36	2.2	80	E	24	10.7			10s		E	0	0	Cloudy	
San Diego, Cal.			30.13	765.3	41	5.0	91	E	4	1.8		0	0			0.08	2.0	Clear	
San Francisco, Cal.			30.14	765.5	43	6.1	83	NW	4	1.8		0	0			0	0	Clear	
Santa Fe, N. M.	23.03	585.0	29.57	751.1	5	-15.0	50	E	1	0.4		0	0			0.08	2.0	Clear	
Savannah, Ga.			30.14	765.5	56	13.3	87	Calm	0	0		8k	Fog			0	0	Cloudy	
Shreveport, La.			29.89	759.9	70	21.1	78	SW	4	1.8			10ks		S	Inap.	Inap.	Cloudy	
Smithville, N. C.			30.16	766.1	58	14.4	93	Calm	0	0		0	0			0	0	Clear	
Springfield, Mass.			30.39	771.9	33	0.6	60	NE	8	3.6		5ck	2ks			0	0	Fair	
St. Louis, Mo.			29.94	760.5	40	4.4	81	N	16	7.2			10n		NW	0.19	4.8	Light rain	
St. Marks, Fla.			30.10	764.5	48	8.9	92	Calm	0	0		2ck	0	S		0	0	Fair	
St. Paul, Minn.			29.98	761.5	9	-12.8	78	W	12	5.4		0	0			0.05	1.3	Clear	
St. Paul's Island, Alaska			30.31	770.0	34	1.1	89	SSW	6	2.7			10k			0	0		
Thatcher's Island, Mass.			30.38	771.6	30	-1.1	68	NE	18	8.0			10s		E	0	0	Cloudy	
Toledo, Ohio			29.79	756.7	56	13.3	87	S	6	2.7			10n		SW	Inap.	Inap.	Light rain	
Tucson, Arizona	27.59	700.8	30.18	766.6	42	5.6		SE				0	8ks			0.13	3.3	Fair	
Tybee Island, Ga.			30.17	766.3	58	14.4	81	SE	4	1.8		5c	Fog	E	SE	0	0	Foggy	
Vicksburg, Miss.			29.90	759.4	67	19.4	84	S	4	1.8		2c	8k		S	0	0	Cloudy	
Virginia City	23.97	608.8	29.45	748.0	3	-16.1	87	W	1	0.4		10ck	0	SW		0	0	Cloudy	
Washington, D. C.			30.22	767.6	43	6.1	83	E	4	1.8		2k	5s	W	W	0.02	0.5	Smoky	

UNITED STATES SERIES. CONTINUED

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.16	766.1	57	13.9	87	Calm	0	0		0	Sm'e			0	0	Smoky	
Wood's Holl, Mass			30.36	771.1	33	0.6	79	NE	5	2.2			10s		NE	0	0	Cloudy	
Wytheville, Va	27.72	704.1	29.87	758.7	50	10.0	86	S	1	0.4		0	Sm'e			0	0	Clear	
Yankton, Dakota	28.87	733.3	30.33	770.4	— 2	—18.9	67	W	4	1.8		0	0			0.02	0.5	Clear	
Yuma, Arizona			30.16	766.1	42	5.6		N				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.02	762.5	80	26.7	78	E	4	1.8		2k	10ks	N		0	0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.99	761.7	75	23.9	76	NE				5k	5k			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I.			30.23	767.8	73	22.8	56	NNE	4	1.8		2ck	2k	NE		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I.			30.19	766.8	70	21.1	90	Calm	0	0		2c	2s	SE	SE	0	0		James Gall.
Santiago de Cuba, W. I.			29.83	757.7	72	22.2	71	NE	1.0	0.4		0	0			0	0	Clear	Robert Mason.
Havana, Cuba, W. I.			30.09	764.3	69	20.6	71	E	3.6	1.6		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			29.97	761.2	60.5	15.8	69	N	26.0	11.6		0	10k		N	0	0	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.17	690.1	30.00	762.0	65	18.3	83	Calm	0	0		5c	0			0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.			29.98	761.5	81	27.2	74	E			2		5k			0	0	Dry & fair	C. J. Hering.
Batavia, Dutch Guiana, S. A.			30.02	762.6	84.2	29										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.19	639.7			64.0	17.8	85		6	2.7			10n			0.21	5.3	Light rain	Thomas Herran.
St. Johns, Newfoundland			30.21	767.3	32.0	0.0		NE				10k	10s			0	0	Cloudy	John Delaney.
York Factory, B. A.			30.26	768.6	--28	—33.3		N	8	3.6			10s			0.02	0.5		J. Fortescue.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1.100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Manhattan, 1,125.0 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 12, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	64.4	18.0	53	NW			1		0			0	0	Clear	Charnot.
Algiers			30.02	762.6	64.4	18.0	74	N			1		1			0	0	Clear	Peter.
La Galle																			Kunts.
Tunis			30.01	762.2	70.2	21.2	31	NW			3		3			0	0	Fair	Jacques.
Sfax			30.10	764.6	69.8	21.0	49	E			3		1			0	0	Clear	Chauvey.
Saida			30.12	765.1	70.2	21.2		ESE			2		1			0	0	Clear	Millot.
Tebessa			30.05	763.2	60.3	15.7		W			3		2			0	0	Clear	Colin.
Geriville			30.13	765.2	65.8	18.8	24	W			2		0			0	0	Clear	Buard.
Laghouat			30.08	763.9	71.6	22.0	61	NE			2		0			0	0	Clear	Guyot.
Biskra			30.03	762.7	73.8	23.2	31	NW			1		0			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.56	750.9	57.2	14.0	44	SW			3		3			0	0		Prof. Ivan Stostr.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.47	748.5	48.9	9.4	49	W			2		3			0	0		I. R. Observatory.
Sperles			29.55	750.5	43.7	6.5	90	Calm			0		9		N	0.156	3.95	Snowing	Julius Mikolik.
Gratz	28.26	717.8	29.45	747.9	51.1	10.6	54	SW			2		0			0	0		Andreas Rospini.
Hermannstadt	28.18	715.7	29.57	751.1	54.7	12.6	46	SSE			2		3			0	0		Prof. Reissenberger.
Kremsmünster	28.04	712.1	29.37	745.9	46.9	8.3	66	E			2		10			0	0		Prof. C. Wagner.
Lemberg			29.48	748.7	43.2	6.2	76	S			1		10			0.098	2.5		Dr. T. Stanecki.
Syiregyhaza			29.57	751.1	48.2	9.0	92	SW			1		5			0.204	5.19		Habesuda Daniel.
Pola			29.65	753.1	55.8	13.2	80	S			2		10ks			0	0		I.R. Hydrographic Of'ce
Szegedin			29.63	752.7	51.4	10.8	70	S			2		6			0.028	0.70		Karl Stancel.
Trieste			29.63	752.6	54.5	12.5	83	Calm			0		..k			0	0		Prof. V. Farolfi.
Vienna			29.42	747.3	53.6	12.0	40	SSE			2		3			0.031	0.8		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			28.71	729.2	45.5	7.5	86	W			7		10			0.602	15.30	Storm	Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the 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			29.12	739.6	39.0	3.9		N	22	9.8			6			0	0	*D.clouds	William Boswell.
Ardrossan																			J. Mayes.
Armagh Observatory			29.10	739.1	40.7	4.8		NNW	11	4.9									S. Cale, for Dr. Robinson
Bidston, Liverpool Obs.			28.90	734.0	41.4	5.2		NNE	15	6.7			7					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			29.12	739.6	42.5	5.8		NNW			1		5					*D. clouds	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			29.96	761.0	80.0	26.7		NE			2		6					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			28.62	726.9	33.0	0.6		NE			3-4		10					Snowing	H. Todd.
Cardington			28.62	726.9	33.0	0.6		NE			8		10					Snowing	John McLaren.
Carlisle			28.95	735.3	42.8	6.0		NE			2		5			0	0	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.22	742.2	46.2	7.9		WSW			7		7					Snow & rain	Capt. J. Fellowes, R. E.
Dartmoor	27.43	696.7	28.93	734.8	33.6	0.9		N			8		8					Snowing	R. E. Power.
Donaghadee			29.04	737.6	42	5.6		NNE			4		5					*D. clouds	J. Mac Gowan.
Dover			28.51	724.1	38	3.3		WSW			7		7					Threatening	J. Costello.
Eccles, (near Manchester)			28.88	733.5	42.1	5.6		NE	3.4	1.5			8					Gloomy	Thomas Mackereth.
Falmouth Observatory			29.10	739.1	42.8	6.0		NNW	26	11.6			7			†1.25	†31.7	Drizzling	The Staff.
Fort Napier, (Natal)	27.62	701.5	29.86	758.4	86.4	30.2		E			2		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.93	760.2	88	31.1		N			0		5					Blue sky	
Galway, Queen's College			29.48	748.8	42	5.6		E			4		2					*D. clouds	B. G. Clare, for Prof. Curtis
Gibraltar, (Mediterranean)			30.09	764.3	66.0	18.9		W			5		7					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.06	738.1	40.6	4.8		W			1		10					Overcast	Lewis Stuart.
Great Yarmouth			28.64	727.4	35	1.7		ENE			6		8					Snow & rain	G. T. Watson.
Greenwich Royal Obs.			28.44	722.4	46.3	7.9		NNW			5		10			Blank	Blank	Squally	The Staff for G. B. Airy.
Guernsey			29.94	755.1	45	7.2		WSW			7		7					Squally	Dr. S. E. Hoskins.
Halifax, Moorside Obs.																			L. J. Crossley.
Helston			29.07	738.4	47	8.3		NW			8		6			1.05	26.7	Rain & mist	M. P. Moyle.
Holyhead			29.02	737.1	46	7.8		NNW			5		5					*D. clouds	John Tilston.
Kew Observatory			28.47	723.1	36.3	2.4		NNW	23	10.3			10					Rain & snow	The Staff.
Kingstown			29.06	738.1	41	5.0		NW			5		3					Blue sky	George Mitchell
Leicester Museum			28.77	730.7	34.0	1.1		NE			2		10					Snowing	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.04	763.0	63.8	17.7		NW			2		4k						Fred Travis, Pvt A.H.C.
Nairn			29.16	740.7	37	2.8		NNW			2		5					½ clouded	W. D. Penny.
Nassau, (Bahamas)			30.14	765.5	73.4	23.0		NE			4		7					*D clouds	Surg.-Maj. Henry.
Nottingham			28.83	732.3	36.4	2.4		NNW			4		10d		NE	0.058	1.47	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			28.82	732.0	33.0	0.6		NNE			3-4		10					Snowing	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			28.64	727.4	33	0.6		NNW			5		10					Snowing	J. Lucas.
Plymouth			28.99	736.3	43.8	6.6		N			5		10					Overcast	John Merrifield.
Roche's Point			29.14	740.1	39	3.9		NNW			6		10					Raining	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			28.88	733.5	43.8	6.6		W			8		8					¾ clouded	A. P. Amy.
Sandwick Manse (Orkneys)			29.14	740.1	36.5	2.5		N	24	10.7			5					Showery	Rev. Dr. Clouston.
Scarborough																			F. Shaw.
Scutari Cemetery (Turkey)			29.74	755.4	48.4	9.1		Calm			0		10					Raining	Sergt. W. H. Lyne.
Sheffield			28.84	732.5	38.8	3.8		NNE			2		10			0.040	1.02	Hazy	W. F. Cooper.
Silloth Rectory			28.95	735.3	43.5	6.4	88	N			3		5			0	0	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			28.89	733.8	40.9	4.9		N			2		6			Blank	Blank		S. J. Perry.
Stornoway, Lewis C. (Hebr.)			29.20	741.7	35	1.7		NNE			4		5					*D. clouds	John Smith.
Strathfield Turgiss			28.49	723.6	37.6	3.1		NE			1		10					Rain & snow	Rev Charles H. Griffith.
Streatley Vicarage																			Rev. John Slater.
Thurso			29.12	739.6	36	2.2		N			6		5					*D. clouds	John Trotter.
Truro, Royal Institution			29.19	741.4	47	8.3		NW			7		7					Gloomy	W. Newcombe
Valencia Observatory			29.22	742.2	43.7	6.5		NNW	30	13.4			7					*D. clouds	The Staff.
Sub-Series.																			
Cape Good Hope Obs.			29.87	758.7	77.5	25.3	49	S	2	0.9			0						The Staff, for E. J. Stone.
Calf of Man, (Isle of Man)					42	5.6		NE			3		5			0	0		
Leith, Restalrig Park			29.06	738.1	38.2	3.4		NE			4		10k			0.19	4.8	Showery	Andrew Gibb.
Mauritius			29.86	758.4					12.1	5.4						0	0		
Monach Lt-house, Hebrides			29.20	741.7	35	1.7		NE			4	3	5	N		0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.00	736.6	33	0.6		N			6	3	4			Blank	Blank		

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds. † Estimated.

DANISH SERIES.

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

Copenhagen			29.03	737.3	41.5	5.3	71	SE			4		4						
Fanöe			29.00	736.6	39.9	4.4	90	S			4		6						
Godthaab, (Greenland)			29.28	743.6	27.7	— 2.4		SSW			8		10					Snowing	
Stykkisholm, (Iceland)																			
Thorshavn, (Faröe)			29.32	744.8	23.5	— 4.7	79	NNE			3		5					Snowing	
Vestervig			28.96	735.5	41.0	5.0	89	SW			2		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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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			29.00	736.6	50.0	10	80	W			8		8nk		W	0.102	2.6	Very cloudy	Normal School.
Amiens			28.83	732.2	47.8	8.8	73	N			8		5		N	0.110	2.8	Cloudy	Normal School.
Avignon			29.76	755.8	60.8	16	55	SW			2		8		W	0	0	Very cloudy	Normal School.
Bar-sur-Seine			29.18	741.1	54.3	12.4	81	SSW			6		10		SW	0.402	10.2	Covered	C. Saillard.
Beaumette, (near Angers)			29.25	742.9	51.1	10.6	74	SW	30.3	35.9					SW	0.350	8.9		Beaumette Observatory
Beauvais			28.88	733.6	54.9	12.7	58	WSW			8		8		W	0.502	12.75	Very cloudy	Normal School.
Besançon			29.37	745.9	52.2	11.2	70	SSW			8		10		SW	0.476	12.1	Covered	Normal School.
Bourg en Bresse			29.49	749.1	53.1	11.7	69	S			6		..en		NE				Normal School.
Bourges			29.32	744.6	55.4	13	87	W			6		10		SW	0.47	12.	Covered	Normal School.
Brest			29.15	740.4	52.0	11.1	70	W			6		10n		W	0.404	10.25		Naval Observatory.
Caen																			Normal School
Chartres			28.99	736.3	55.0	12.8		NE			6		10			0.390	9.9	Covered	Normal School.
Chaumont																			Normal School.
Clermont			29.37	745.9	57.6	14.2	57	SW			10		8		W	0.087	2.2	Storm	Puy de Dome, Obs.
Clermont			29.10	739.1	49.6	9.8	96	W			8		10kn		W	0.43	11.	Covered	Normal School.
Commerey			29.79	756.6	58.1	14.5	72	NW			2		8		NW	0.335	8.5		
Commune de Gréasque*			29.30	744.1	48.7	9.8	75	SSW			4		..k,n		SW	0.413	10.5		Normal School.
Grenoble			29.12	739.7	55.2	12.9	64	W			6		5		W	0.571	14.5	Cloudy	Normal School.
Le Mans			29.00	736.7	50.9	10.5	86	W			8		10			0.051	1.3	Raining	Normal School.
Loches			29.45	748.0	48.7	9.3	86	SSW					8		W	0.868	22.05	Raining	Normal School.
Lons-Le-Saulnier			29.47	748.5	47.7	8.7	89	S			2		10			0.492	12.5	Covered	Normal School.
Mâcon																			Normal School.
Mirecourt			29.13	739.8	48.2	9.0	95	SW			6		10		SW	0.496	12.6	Storm †	M. Schuster.
Metz			29.76	755.8	57.4	14.1	66	NE			2		5		W	0.04	1.	Cloudy	Normal School.
Nismes			29.15	740.5	52.9	11.6	53	WSW			10		8		WSW	0.283	7.2	Very cloudy	Normal School.
Orleans			28.96	735.6	58.3	14.6	68	SW			8		10		WSW	0.283	7.21	Covered	National Observatory.
Paris Observatory			29.32	744.7	51.4	10.8	97	SW			8		10			0.728	18.5	Covered	Normal School.
Parthenay			29.72	755.0	50.7	10.4		S			1		10		S	0	0	Covered	Normal School.
Privas			29.37	746.0	48.4	9.1	97	SW			6		10			0.685	17.4	Covered	Normal School.
La Roche-sur-Yon			29.47	748.6	54.0	12.2	86	WSW			10		10		ENE	0.591	15.0	Covered	Naval Observatory.
Rochefort, Observatory			28.85	732.9	58.3	14.6	61	S			10		5		W	0.374	9.5	Cloudy	Normal School.
Rouen			28.95	735.4	51.4	10.8	76	W			8		8		NW	0.598	15.2		Normal School.
Saint Lô			29.72	754.8	54.0	15	57	SSW			2		2		E	0.31	8.	Slightly cl'dy	Normal School.
Tarbes																			Normal School
Toulouse			29.51	749.6	53.1	11.7	84	SE			6		10		S	0.51	13.	Covered	Normal School.
Villefranche																			
Sub-Series.																			
Fort de France, Martinique			29.89	759.1	77.0	25	83	NE			2		8ck,8						L'Abbé Marchési.
Gorée																			
Marseilles			29.78	756.5	56.1	13.4	84	SW			2		10			0	0	Covered	Marseilles Observatory.
Mont-Louis	24.65	626.0	29.97	761.2	46.0	7.8	71	SSW					6		W	0	0		—. Faïguère.
Montsouris, Paris			29.01	736.8	58.6	14.8	73	WSW			7		8		WSW	0.350	8.9		Montsouris Observ'tory.
Perpignan			29.73	755.2	63.1	17.3	46	S	5.6	2.50			7		W	0	0		Dr. Fines.
Pic du Midi, (Summit) H. P‡																			M. Baylac.
Saint Maur, (near Paris)			28.98	736.2	57.2	14.0	77	SW			6		10			0.260	6.6	Covered	E. Renou.
Toulouse			29.74	755.5	64.9	18.3	47	WNW			4		8			0.020	0.5		Toulouse Observatory.
Tours			29.26	743.1	55.2	12.9	88	SW			8		10		WSW	0.339	8.6		C. Marquet.
Versailles, (near Paris)			28.98	736.0	58.3	14.6	68	W			10		8			0.374	9.50	Storm	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are requently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 342 m., or 1,030.9 ft.; lermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Near Marseilles. † It is not certain that the weather remarks refer to the moment of observation. ‡ Summit inaccessible; rain-fall on the Plantade 0.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Bamberg			29.13	739.8	39.7	4.3	100	SSE			7		10			0.630	16.0	Raining	Prof. T. Hoh.
Berlin			29.19	741.3	47.5	8.5	83	S			4		8			0.248	6.3	Raining	Prof. Arndt.
Breslau			29.41	747.0	47.3	8.5	50	SW			6		2			0.031	0.8		Dr. P. Neugebauer.
Carlsruhe			29.06	738.2	48.2	9.0	95	SW			10		10			0.551	14.0	Raining	A. Senz.
Cassel			28.91	734.2	38.3	3.5	79	SE			7		10			0.314	7.9		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main			29.11	739.4	41.4	5.2	83	SSW			1		10			0.579	14.7	Raining	Physical Society.
Friedrichshafen			29.40	746.7	44.6	7.0	87	W					10			1.126	28.6		M. Wilhelm.
Hamburg			29.04	737.7	42.3	5.7	80	SE			3		10			0.051	1.3		Deutsche Seewarte.
Kiel			29.08	738.6	39.4	4.1	96	ESE			2		10			0.087	2.2		Prof. G. Karsten.
Königsberg			29.28	743.6	43.7	6.5	63	SW			5		2			0.039	1.0		Prof. E. Luther.
Koslin			29.21	741.8	42.6	5.9		S			4		8			0	0		H. Müller.
Leipsic			29.20	741.6	44.2	6.8	73	SSE			6		10			0.035	0.9		Prof. Brahms.
Memel			29.09	738.9	37.9	3.3	82	SW			5		10	W		0.008	0.2	Rain, squally	Reinbrecht & Skalweit.
Münster			28.86	733.1	43.3	6.3	87	E			3		10			0.370	9.4	Raining	Prof. E. Heis.
Neufahrwasser			29.21	742.0	44.1	6.7	72	SW			4		10			0	0		A. Lothes.
Posen			29.35	745.6	47.8	8.8	61	SW			8		6			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.16	740.7	50.7	10.4	71	S			3		10			0.075	1.9		Dr. Schur.
Stuttgart			29.19	741.3	47.3	8.5	76	W					10			0.094	2.4	Raining	Prof. Schoder.
Thorn			29.37	745.5	44.2	6.8	72	W			6		7			0	0		Dr. Hasenbalg
Treves, (Trier)			28.91	734.2	51.3	10.7	88	S			10		10			0.650	16.5		Prof. Flesch.
Wustrow, Naval School			29.10	739.0	40.1	4.5	86	S			4		7			0.012	0.3		E. F. Schulz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.61	752.1	54.3	12.4	65	SE	3.1	1.4			6			0	0		
Padua			29.60	751.7	54.3	12.4	55	NW	2.5	1.1			6	WSW		0	0		
Vicenza			29.60	751.7	54.9	12.7	61	SE	0.7	0.3			3			0	0		
Verona			29.61	752.1	61.0	16.1	66	W			1		10			0	0		
Bergamo	28.24	717.2	29.56	750.7	54.5	12.5	33	S			1		2			0	0		
Domodossola	28.57	725.6	29.60	751.7	52.2	11.2	66	NNE			6		10			0	0		
Milan			29.61	752.1	57.4	14.1	50	S			2		2	NE		0	0		
Pavia			29.60	751.8	56.3	13.5	43	NE			2		1			0	0		
Moncalieri			29.61	752.0	55.2	12.9	44	ESE	3.1	1.4			2	W		0	0		
Mondovi	27.69	703.2	29.60	751.9	50.5	10.3	54	NW			4		0			0	0		
Porto Maurizio			29.60	751.9	55.4	13.0		WSW			8		4	SSE		0	0		
Genoa			29.62	752.3	58.6	14.8	57	SE	11.2	5.0			6	SE		0	0		
Piacenza			29.60	751.8	57.9	14.4	42	NE	4.9	2.2			6	NNW		0	0		
Parma			29.62	752.3	61.2	16.2	50	SE			2		4			0	0		
Bologna			29.61	752.0	61.5	16.4	24	NE			1		5	E		0	0		
Florence			29.75	755.7	56.3	13.5	74	S			2		10	SW		0.008	0.2		
Leghorn			29.72	754.8	61.9	16.6	56	SW	12.5	5.6			9			0	0		
Siena	28.54	725.0	29.75	755.7	54.9	12.7	73	SSW	4.9	2.2			10	W		0	0		
Urbino	28.13	714.4	29.70	754.3	52.3	11.3	65	WSW			6		10			0.315	8.0		
Pesaro																			
Ancona			29.71	754.6	59.0	15.0	55	SSW			4		8			0.071	1.8		
Grosseto			29.77	756.2	61.2	16.2	73	SSW			4		9	S		0	0		
Rome			29.89	754.1	60.8	16.0	65	SW	7.4	3.3			10	SW		0	0		
Naples, O. U.			29.95	760.7	60.3	15.7	61	WSW			2		10	W		0	0		
Lecce			29.91	759.7	61.5	16.4	43	W	13.7	6.1			5			0	0		
Cosenza			30.02	762.5	60.8	16.0	64	NW	1.8	0.8			10			0	0		
Riposto, (Sicily)			30.00	762.0	64.4	18.0	59	E			2		5	W		0	0		
Palermo			29.96	760.9	65.5	18.6	33	W	6.9	3.1			10			0	0		
Caltanissetta	28.06	712.6	30.01	762.3	54.5	12.5	50	WNW			2		1	SE		0	0		
Sub-Series.																			
Naples, S. R.			29.95	760.7	57.6	14.2	68	SW	9.4	4.2			..k	W		0	0	Foggy	Prof. F. Briosel i.

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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			28.67	728.1	46.8	8.2		WSW			6								
Groningen			28.79	731.3	38.5	3.6		ESE			2								
Helder			28.76	730.5	37.8	3.2		E			5								
Utrecht			28.67	728.3	34.2	1.2	96	E			4		10					Overcast	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			28.91	734.3	36.7	2.6	52	N	13.4	6.0			2			0	0		
Brönö			28.81	731.8	35.1	1.7	69	SE	7	3			4			0	0		
Christiania			28.85	732.8	35.2	1.8	66	SSW	0.4	0.2			2			0.059	1.5		
Tromsö			28.87	733.2	32.0	0.0	63	SE	13	6			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.10	764.4	62.2	16.8	90	W	17.2	7.69			3			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.12	765.1	59.0	15.0	56	SW	7.4	3.33			9	WNW		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.28	769.1	64.0	17.8	61	Calm	0	0			10			0	0		Capt D. A. da Cunha.
Lisbon			30.17	766.3	56.8	13.8	79	SW	12.5	5.6			10			0.004	0.1		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.39	746.5	48.7	9.3	50	S	20	9			6						Astronomical Obs.
Wilna			29.39	746.4	43.7	6.5	67	S	9	4			7						Astronomical Obs.
Dorpat			29.26	743.2	40.1	4.5	71	S	7	3			9						Physical Cabinet.
St. Petersburg			29.32	744.6	35.2	1.8	83	SSE	13	7			10						Central Physical Obs.
Kuopio			29.18	741.2	31.3	— 0.4	92	ESE	22	10			10					Snowing	Ch. Forsten.
Kieff			29.61	752.1	37.4	3.0	98	S	7	3			10					Misty	Physical Cabinet
Nikolaiev			29.72	754.8	47.8	8.8	89	SW	4	2			10						Kurdakof.
Kertch			29.76	756.0	50.9	10.5	76	S	13	6			8						Lagorio.
Moscow			29.50	749.4	36.3	2.4	85	S	4	2			10						Meteorological Obs.
Lugan			29.70	754.4	39.6	4.2	73	SE	34	15			8						Meteorological Obs.
Archangel			29.54	750.2	33.4	0.9	82	WSW	9	4			10						Ogorodnikof.
Tiflis	28.47	723.2	29.84	757.9	67.3	19.6	32	S	9	4			0						Physical Observatory.
Astrakhan			30.20	767.0	33.8	1.0	81	E	9	4			10						Sebastianof.
Kasan			29.91	759.7	32.0	0.0	79	S	7	3			9						Physical Cabinet.
Orenburg			30.27	768.8	26.8	— 2.9	90	SE	2	1			0						Tschernischef.
Ekaterinburg	29.07	738.3	30.09	764.2	38.5	3.6	41	SSW	9	4			9						Meteorological Obs.
Nukuss			29.97	761.3	69.6	20.9	23	SE	9	4			0						
Kassaly																			Bobrof.
Tashkend	28.52	724.3	30.19	766.8	64.4	18.0	27	Calm	0	0			0						Michelson.
Barnaul			30.34	770.7	15.3	— 9.3	75	Calm	0	0			10						Meteorological Obs.
Yeniseisk			30.15	765.8	15.8	— 9.0	74	ENE	2	1			10						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.07	763.6	41.0	5.0	76	Calm	0	0			8						Physical Observatory.
Nertchinsk	27.85	707.4	30.08	764.0	7.2	—13.8	67	NW	9	4			1			Blank	Blank		Meteorological Obs.
Vladivostock			30.10	764.6	33.6	0.9	56	SE	4	2			1						
Nikolaievsk, on the Amoor					16.5	— 8.6	91	W	7	3			0						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 393.4? m., or 1,305.2? ft.; Tashkend, in 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.98	761.6	59.0	15.0	54	SW	20.9	9.34		1	1			0	0	Light clouds	Royal Observatory.
San Fernando			30.20	767.1	61.3	16.3	75	WNW	12.3	5.5		3	4	NE	N	0	0		The Naval Observatory

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.10	739.2	32.4	0.2	96	SE			4		10			0	0	Snowing	
Umea			28.96	735.5	34.2	1.2	100	SSE			4		10			0.012	0.3	Snowing	
Hernosand			28.83	732.2	33.4	0.8	96	SE			2		10			0.307	7.8	Snowing	
Stockholm			28.76	730.4	34.9	1.6	89	SSW			2		10			0.028	0.7		
Wisby			29.01	736.8	38.5	3.6	73	SW.			6		0			0.008	0.2		
Sub-Series.																			
Upsala			28.78	731.0	34.0	1.1	98	ESE	4.0	1.8			10			0.056	1.42	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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Geneva	28.13	714.4	29.56	750.9	50.0	10.0	68	SSW			8		10			0.425	10.8	Covered	The Observatory.
Zurich	27.80	706.1	29.47	748.4	46.2	7.9	81	SW			5		10			1.890	48.0	Raining	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —10.5 mm.; Thermometer, +2.7 cent.; Relative Humidity, +6 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Constantinople			29.79	756.6	48.6	9.2	94	N	0	0			10		SW	0.748	19.0		
Fao, (Persian Gulf)			30.17	766.4	64.4	18.0		NW			3		0						
Salonica			29.81	757.1	64.8	18.2		SW			2		5						
Valona			29.84	757.9	62.2	16.8		W			1		0						
Varna			30.04	763.0	53.6	12.0		NW			2		10			Blank	Blank		
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			30.04	763.1	64.9	18.3	68	W			1		6ks		SW	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Bathurst, N. B.																			Hon. J. Ferguson.
Brockville, Ontario			30.13	765.3	36	2.2		Calm	0	0		0	10s			0.02	0.5	Cloudy	W. R. Bigg.
*Chatham, N. B.			30.41	772.4	22	— 5.6	92	N	1	0.4		2k	0	N		0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island.			30.35	770.9	25	— 3.9	94	N	10	4.5		0	0			0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			30.04	763.0	25.5	— 3.6	74	E			1		10s			0	0	Dull	James Smith, M. A.
Dalhousie, N. B.																			H. A. Johnson.
Esquimault, B. C.			29.44	747.8	38.1	3.4	91	NE	3	1.3		3ck				0.24	5.3	Clear	W. H. Bevis.
Fredericton, N. B.			30.40	772.1	25.0	— 3.9	81	E	2	0.9		9ck				0	0		Prof. Harrison.
*Fort Garry, Manitoba			30.59	777.0	—14	—25.6	100	Calm	0	0			10ks			0	0	Cloudy	James Stewart.
Goderich, Ontario			30.03	762.7	31.5	— 0.3	95	NW			2		10n			0	0	Drizzling	H. J. Strang, M. A.
Granton, Ontario			29.94	760.5	34.0	1.1		N			2		10n			0.32	8.1	Raining	James Grant.
*Halifax, N. S.			30.25	768.3	30	— 1.1	87	NE	12	5.4		0	0			0	0	Clear	F. Allison, M. A.
*Kingston, Ontario			30.09	764.3	35	1.7	90	S	2	0.9			10s			0.08	2.0	Cloudy	S. Woods, M. A.
Little Current, Ontario			30.08	764.0	31.3	— 0.4		Calm	0	0			10s			0	0		G. B. Abrey, C. E.
*Montreal, Quebec			30.12	765.0	33	0.6	84	S	26	11.6		5k	5ks	SW	SW	0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.09	764.3	34	1.1	76	E	8	3.6			10n		E	0.03	0.8	Threatening	J. B. Haney.
*Parry Sound, Ontario			29.9	761.5	35	1.7	100	E	4	1.8			10n		E	0.66	16.8	Foggy	Rev. R. Mooley.
*Port Dover, Ontario			29.90	759.4	38	3.3	96	N	5	2.2			Haze		N	0.14	3.6	Cloudy	H. Morgan.
Port Hastings, N. S.																			Peter Grant.
*Port Stanley, Ontario			29.91	759.7	39	3.9	91	N	10	4.5			10n		N	0.37	9.4	Light rain	M. Payne.
*Quebec, Quebec			30.25	768.3	27	— 2.8	100	S	10	4.5			10n		S	Inap.	Inap.	Light rain	Capt. Ash, R. N.
St. John, N. B.			30.39	771.9	23	— 5.0	80	N	3	1.3						0	0		G. Murdoch, C. E.
*Saugeen, Ontario			29.99	761.7	32	0.0	94	N	6	2.7			10n			0.20	5.1	Light rain	K. Stewart.
Stayner, Ontario																			R. J. Cole.
Stratford, Ontario			29.94	760.5	34.8	1.3	97	NE	8	3.6			10n			0.866	21.99	Raining	C. J. MacGregor, M. A.
*Sydney, C. B.			30.86	783.8	30	— 1.1	76	NE	9	4.0		2c	5ks		NE	0	0	Fair	T. C. Hill.
*Toronto, Ontario			29.96	761.0	39	3.9	94	NW	2	0.9			10n			0.23	5.8	Cloudy	Magnetic Observatory
Woodstock, Ontario																			J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the 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.			30.25	768.3	32	0.0	89	SE	6	2.7			10s			0	0	Cloudy	
Alpena, Mich.			30.00	762.0	23	− 5.0	73	NW	12	5.4			10s		NW	0	0	Cloudy	
Atlantic City, N. J.			30.23	767.8	37	2.8	90	E	18	8.0			10s		E	0	0	Cloudy	
Augusta, Ga.			30.06	763.5	63	17.2	89	SE	3	1.3			10s		S	0	0	Cloudy	
Baltimore, Md.			30.25	768.3	39	3.9	91	E	6	2.7			10n			Inap.	Inap.	Light rain	
Barnegat, N. J.			30.25	768.3	37	2.8	80	SE	16	7.2			10s			0	0	Cloudy	
Benton, Montana	27.18	690.4	29.98	761.5	−13	−25.0	100	E	6	2.7		10c	0	SW		0	0	Cloudy	
Bismarck, Dakota	28.61	726.7	30.60	777.2	−22	−30.0	50	NW	3	1.3		Haze	0	NW		0.09	2.3	Clear	
Boston, Mass.			30.32	770.1	31	− 0.6	89	NE	6	2.7			10s		E	0	0	Cloudy	
Breckenridge, Minn.			30.61	777.5	−19	−28.3	66	NW	6	2.7		0	0			0	0	Clear	
Buffalo, N. Y.			29.90	759.4	44	6.7	75	Calm	0	0			10s		W	0.01	0.3	Cloudy	
Burlington, Vt.			30.19	766.8	34	1.1	71	S	16	7.2			10s			0	0	Cloudy	
Cairo, Ill.			30.07	763.8	33	0.6	81	N	17	7.6			10n		N	2.29	58.2	Sleeting	
Cape Hatteras, N. C.			30.09	764.3	60	15.6	88	Calm	0	0		2c	Fog			0	0	Fair	
Cape Henry, Va.			30.15	765.8	47	8.3	92	NE	9	4.0			10s		NE	0	0	Cloudy	
Cape May, N. J.			30.22	767.6	41	5.0	81	E	11	4.9			10ks		E	0	0	Cloudy	
Charleston, S. C.			30.12	765.0	63	17.2	88	S	3	1.3		2ck	2cs			0	0	Fair	
Cheyenne, Wyoming	24.02	610.1	29.96	761.0	10	−12.2	100	SW	8	3.6		0	1s		SW	0	0	Clear	
Chicago, Ill.			30.11	764.8	28	− 2.2	67	N	18	8.0			10s		N	0	0	Cloudy	
Cincinnati, Ohio			29.74	755.4	47	8.3	85	E	4	1.8		5k	5s	W	E	0.75	19.1	Cloudy	
Cleveland, Ohio			29.70	759.1	34.7	1.5	100	NW	6	2.7			Fog		NW	0.06	1.5	Foggy	
Colorado Springs, Col.	24.16	613.6	30.03	762.7	7	−13.9	64	N	4	1.8		0	0			0.01	0.3	Clear	
Corsicana, Tex.			30.23	767.8	30	− 1.1	78	NW	12	5.4		0	0			0	0	Clear	
Davenport, Iowa			30.29	769.4	18	− 7.8	84	NW	20	8.9		5cs	7k	SW	SW	0	0	Cloudy	
Denison, Tex.			30.39	771.9	28	− 2.2	77	N	7	3.1		0	0			0.04	1.0	Clear	
Denver, Col.	24.84	630.9	30.06	763.5	15	− 9.4	65	S	6	2.7		0	0			0	0	Clear	
Detroit, Mich.			29.95	760.7	33	0.6	89	NE	10	4.5			10n		NE	0.33	8.4	Light rain	
Dodge City, Kan.	27.72	704.1	30.24	768.1	14	−10.0	81	N	8	3.6		0				0	0	Clear	
Dubuque, Iowa			30.32	770.1	17	− 8.3	50	N	8	3.6		5c	2s			0	0	Fair	
Duluth, Minn.			30.49	774.4	− 1	−18.3	68	NW	4	1.8		0	0			0	0	Clear	
Eastport, Me.			30.34	770.6	27	− 2.8	77	NE	11	4.9		8c	0	W		0	0	Fair	
Erie, Pa.			29.84	757.9	49	9.4	71	SE	12	5.4			10s			0.01	0.3	Cloudy	
Escanaba, Mich.			30.20	767.1	13	−10.6	81	NW	16	7.2			10s		NW	0	0	Cloudy	
Fort Gibson, Indian Terr.			30.45	773.4	24	− 4.4	87	N	25	11.2			10ks		N	0.07	1.8	Cloudy	
Ft. St. Michaels, Alaska			30.24	768.1	12	−11.1		SW	38	17.0			10s					Snowing	
Fort Sill, Indian T.	29.11	739.4	30.32	770.1	22	− 5.6	72	N	12	5.4		0	0			0	0	Clear	
Fort Sully, Dakota	28.70	729.0	30.66	778.7	−10	−23.3	77	NW	3	1.3		0	0			0	0	Clear	
Galveston, Tex.			30.14	765.5	47	8.3	62	N	30	13.4		0	0			0.09	2.3	Clear	
Grand Haven, Mich.			30.05	763.3	34	1.1	79	N	6	2.7			10s		W	0	0	Cloudy	
Indianapolis, Ind.			29.94	760.5	33	1.1	90	NW	16	7.2			10n		W	2.26	57.4	Light rain	
Indianola, Tex.			30.19	766.8	63	6.1	75	N	48	21.5		1cs	0	SW		0	0	Clear	
Jacksonville, Fla.			30.08	764.0	64	17.8	83	SE	4	1.8		0	0			0	0	Clear	
Keokuk, Iowa			30.26	768.6	20	− 6.7	70	NW	19	8.5			10s		NW	0	0	Cloudy	
Key West, Fla.			30.04	763.0	73	22.8	67	SE	11	4.9		5k	0	SE		0	0	Fair	
Kittyhawk, N. C.			30.16	766.1	48	8.9	100	Calm	0	0		8k	Haze	W		0	0	Fai	
Knoxville, Tenn.			29.80	759.2	64	17.8	57	SW	20	8.9			10ks		SW	0	0	Cloudy	
La Crosse, Wis.			30.41	772.4	8	−13.3	55	NW	12	5.4		0	0			0	0	Clear	
Leavenworth, Kan.			30.44	773.2	10	−12.2	79	N	14	6.3		0	2s			0	0	Clear	
Lexington, Ky.	28.71	729.2	29.79	756.7	53	11.7	93	SW	5	2.2			10n		SW	0.20	5.1	Light rain	
Long Branch, N. J.			30.28	769.1	35	1.7	90	SE	12	5.4			10n		SE	0.03	0.8	Light rain	
Louisville, Ky.			29.86	758.4	45	7.2	92	W	12	5.4			10s		W	1.54	39.1	Cloudy	
Lynchburg, Va.			30.15	765.8	45	7.2	92	NE	4	1.8			10n			0.01	0.3	Light rain	
Malone, N. Y.			30.05	763.3	40	4.4	81	S	1	0.4			10s		SW	0.15	3.8	Cloudy	
Manhattan, Kan.	29.18	741.1	30.16	773.7	8	−13.3	78	NW	10	4.5		0	0			0	0	Clear	
Marquette, Mich.			30.34	770.6	11	−11.7	80	NNW	12	5.4			8s		S	0	0	Cloudy	
Memphis, Tenn.			30.07	763.8	36	2.2	100	NW	17	7.6			10n			1.95	49.5	Light rain	
Milwaukee, Wis.			30.19	766.8	21	− 6.1	85	NW	17	7.6			8ks		W	0	0	Cloudy	
Mobile, Ala.			30.00	762.0	63	17.2	94	NW	6	2.7			10n		SW	0.24	6.1	Light rain	
Montgomery, Ala.			30.04	763.0	62.5	16.9	80	NW	16	7.2			10ks		W	0	0	Threatening	
Morgantown, W. Va.			29.87	758.7	59	15.0	59	SE	3	1.3			10s			0	0	Cloudy	
Mt. Washington, N. H.	23.85	605.8	30.21	767.3	37	2.8	97	NW	12	5.4		8c	2s	NW		0	0	Fair	
Nashville, Tenn.			29.81	757.2	55	12.8	93	W	3	1.3			10s			0.88	22.4	Cloudy	
New Haven, Conn.			30.30	769.6	37	2.8	71	E	4	1.8			10s			Inap.	Inap.	Cloudy	
New Orleans, La.			30.43	772.4	35	1.7	71	NE	3	1.3		2ck	Haze	W		0	0	Fair	
Newport, R. I.			29.94	760.5	64	17.8	89	SE	4	1.8			10ks		S	1.16	29.5	Threatening	
New York, N. Y.			30.31	769.9	34	1.1	79	NE	3	1.3			8ks		NW	0	0	Cloudy	
Norfolk, Va.			30.30	769.6	32	0.0	89	NE	10	4.5			10n			0.16	4.1	Light snow	
North Platte, Neb.			30.16	766.1	47.5	8.6	85	NE	8	3.6			10s		E	0	0	Cloudy	
Omaha, Neb.	27.34	694.4	30.24	768.1	1	−17.2	71	Calm	0	0		0	2s			0	0	Clear	
Oswego, N. Y.	29.33	745.0	30.54	775.7	5	−15.0	100	NW	9	4.0		0	1s			0	0	Clear	
Pembina, Dakota			30.02	762.5	38.5	3.6	71	SE	12	5.4			10ks		NW	Inap.	Inap.	Cloudy	
Philadelphia, Penn.			30.60	777.2	−14	−25.6	100	NW	4	1.8		2c	0			0.07	1.8	Clear	
Pike's Peak, Colorado			30.27	768.8	36	2.2	90	E	7	3.1			10n		E	Inap.	Inap.	Light rain	
Pittsburgh, Penn.	17.15	443.2	29.66	753.4	− 8	− 2.2	58	NW	40	17.9		0	2s		W	Inap.	Inap.	Fair	
Port Huron, Mich.			29.87	758.7	48	8.9	77	NE	3	1.3			10s			0	0	Cloudy	
Portland, Me.			29.98	761.5	30	− 1.1	89	N	19	8.5			10n		N	0.12	3.0	Light rain	
Portland, Oregon			30.37	771.4	31	− 0.6	89	NE	5	2.2			10s			0	0	Cloudy	
Punta Rassa, Fla.			29.67	753.6	40	4.4	82	S	10	4.5			10ks		NW	1.01	25.7	Cloudy	
Rochester, N. Y.			30.08	764.0	68	20.0	74	SE	12	5.4		0	1ks		SE	0	0	Clear	
Salt Lake City, Utah			29.92	760.0	45	7.2	75	S	8	3.6		Haze	Sm'e			0	0	Fair	
Sandy Hook, N. J.	25.66	651.8	29.99	761.7	26	− 3.3	76	S	2	0.9			10s			Inap.	Inap.	Cloudy	
San Diego, Cal.			30.28	769.1	36	2.2	90	SE	11	4.9			10s		SE	0.28	7.1	Cloudy	
San Francisco, Cal.			30.16	766.1	41	5.0	91	Calm	0	0		0	0			0	0	Clear	
Santa Fe, N. M.			30.11	764.8	49	9.4	85	SE	12	5.4			10s			0.02	0.5	Threatening	
Savannah, Ga.	23.27	591.0	29.81	757.2	14	−10.0	63	N	11	4.9		0	0			0	0	Clear	
Shreveport, La.			30.09	764.3	65	18.3	90	SW	4	1.8		10ck	0	SW		0	0	Cloudy	
Smithville, N. C.			30.23	767.8	39.5	4.2	82	NW	9	4.0			10s		NW	2.81	71.4	Cloudy	
Springfield, Mass.			30.14	765.5	63	17.2	91	S	1	0.4		10k	0	SW		0	0	Cloudy	
St. Louis, Mo.			30.31	769.9	38	3.2	79	NE	4	1.8		5ck	5s			0	0	Cloudy	
St. Marks, Fla.			30.21	767.3	25	− 3.9	100	N	16	7.2			10n			0.21	5.3	Heavy snow	
St. Paul, Minn.			30.08	764.0	62	16.7	88	Calm	0	0		5ck	5s	NW	S	0	0	Cloudy	
St. Paul's Island, Alaska			30.45	773.4	2	−16.7	85	NW	7	3.1		0	0			0	0	Clear	
Thatcher's Island, Mass.			30.60	777.2	32	0.0	89	NW	5	2.2		2ck	1k	NW		0.14	3.6		
Toledo, Ohio			30.34	770.6	33	0.6	69	NE	11	4.9			10s		NE	0	0	Cloudy	
Tucson, Arizona			29.88	758.9	36	2.2	90	N	10	4.5			10n		N	0.20	5.1	Light rain	
Tybee Island, Ga.	27.65	702.3	30.34	768.1	34	1.8		S				0	0			0	0	Clear	
Vicksburg, Miss.			30.08	764.0	63	17.2	83	S	1	0.4		8c	0			0	0	Fair	
Virginia City			30.08	764.0	48	8.9	85	N	18	8.0			10s		N	1.54	39.1	Cloudy	
Washington, D. C.	24.01	609.6	29.48	748.8	13	−10.6	71	Calm	0	0		10ck	0	SW		0	0	Cloudy	
			30.22	767.6	37.5	3.1	100	NE	6	2.7			10n		E	0.91	0.3	Light rain	

UNITED STATES SERIES.—CONTINUED

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.13	765.3	63	17.2	88	SE	3	1.3		5cs	5ks		SW	0	0	Cloudy	
Wood's Holl, Mass			30.32	770.1	35	1.7	70	NE	2	0.9			10s			0	0	Cloudy	
Wytheville, Va	27.66	702.6	29.80	756.9	53	11.7	86	E	1	0.4		10k	0	S		0	0	Cloudy	
Yankton, Dakota	29.15	740.4	30.64	778.2	— 4	—20.0	65	W	1	0.4		5cs	0	W		0	0	Fair	
Yuma, Arizona			30.16	766.1	46	7.8		E				2c	0	W		0	0	Fair	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.07	763.8	79	26.1	86	E	7	3.1		2k	8ks	N	NE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.97	761.2	70	21.1	75	NE				0	2k			0	0	Clear	L. V. Bigard.
St. Thomas, St. T., W. I.			30.22	767.6	76	24.4	72	NNE	9	4.0		2c, cs	8kn	NE		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I.			30.14	765.5	73	22.8	71	Calm	0	0		5c	5s	SE	SE	0	0		James Gall.
Santiago de Cuba, W. I.			29.79	756.7	71	21.7	63	NNE	10.8	4.8		0	0			0	0	Clear	Robert Mason.
Havana, Cuba, W. I.			30.15	765.8	71	21.7	71	SE	6.0	2.7		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			29 92	760.0	60.0	15.6	68	N	33.0	14.8		0	8k		N	Inap.	Inap.	Stormy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.23	691.6	30.04	763.0	63	17.2	88	NE	1.5	0.7		2c	0	NE		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.			29.96	761.0	81	27.2	74	E			3		5k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A.			30.03	762.7	82.4	28										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.15	638.9			64.8	18.2	87		0	0		6k	4s			0.28	7.1	Cloudy	Thomas Herran.
St. Johns, Newfoundland			30.47	773.9	32.5	0.3	74	NE				0	5s			0.10	2.5	Fair	John Delaney.
York Factory, B. A.			30.43	772.9	—34	—36.7		W	4	1.8		0	0			0.02	0.5		J. Fortescue.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—

Note.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Manhattan, 1,125.0 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 13, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	761.2	68.0	20.0	58	NW			2		8			0	0	Cloudy	Charnot.
Algiers			30.07	763.6	71.6	22.0	40	WSW			2		7			0	0	Cloudy	Peter.
La Calle																			Kuntz.
Tunis			30.06	763.5	74.1	23.4	28	W			3		3			0	0	Fair	Jacques.
Sfax			30.10	764.4	70.9	21.6	51	S			4		1			0	0	Clear	Chauvey.
Salda			30.10	764.5	64.8	18.2		N			2		1			0	0	Clear	Millot.
Tebessa			30.05	763.2	71.2	21.8		W			4		4			0	0	Fair	Colin.
Geriville			30.09	764.3	68.7	20.4	27	WNW			2		3			0	0	Fair	Buard.
Laghouat			30.08	763.9	78.8	26.0	73	SE			1		1			0	0	Clear	Guyot.
Biskra			30.07	763.6	77.9	25.5	26	NE			1		2			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.51	749.5	60.8	16.0	44	SW			6		10			1.130	28.7		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.59	751.5	45.3	7.4	69	W			3		10			0.020	0.5		I. R. Observatory.
Eperies			29.52	749.8	49.5	9.7	86	S			1		10		N	0.002	0.04		Julius Mikolik.
Gratz	28.28	718.4	29.49	749.0	43.3	6.3	55	NE			5		10			0	0		Andreas Rospini.
Hermannstadt	28.26	717.8	29.65	753.1	61.2	16.2	47	SE			1		6			0	0		Prof. Reissenberger.
Kremsmünster	28.30	718.8	29.68	753.9	34.2	1.2	92	WNW			2		10			0.335	8.5		Prof. C. Wagner.
Lemberg			29.47	748.5	47.8	8.8	73	S			3		10			0.650	16.5		Dr. T. Stanecki.
Nyiregyhaza			29.60	751.7	51.4	10.8	93	SW			1		10			0.400	10.16		Habzsuda Daniel.
Pola			29.60	751.8	55.8	13.2	74	SSE			4		10ks			0	0		I.R. Hydrographic Of'ce
Szegedin			29.60	751.8	55.9	13.3	65	S			2		10			0.012	0.30		Karl Stancel.
Trieste			29.56	750.9	56.7	13.7	77	S			1		10			1.158	29.4	Rainy	Prof. V. Farolfi.
Vienna			29.61	752.1	39.2	4.0	63	NW			1		10			0.047	1.2	Raining	I. R. Central Institute

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 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.62	752.4	40.6	4.8	89	WSW			1	1	6	W		0.102	2.60		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	35.0	1.7		SW	10	4.5			10			0.130	3.30	Snowing	William Boswell.
Ardrossan			29.31	744.5	39	3.9		WSW			6		7					*D. clouds	J. Mayes.
Armagh Observatory			29.44	747.8	40.9	4.9		SW	17	7.6			10					Squally	S. Cal. for Dr. Robinson
Bidston, Liverpool Obs			29 53	750.0	40.9	4.9		WSW	29	13.0			9					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			29.61	752.1	40.3	4.6		W			1		10					Overcast	J. Dreyer.
Bradford			29.46	748.3	39.6	4.2		SW			2		3			0.07	1.8	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			29.99	761.7	80.0	26.7		NE			7		4					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			29.64	752.8	42.2	5.7		W			2		7					Drizzling	H. Todd.
Cardington			29.66	753.4	41.0	5.0		W			1		3					Blue sky	John McLaren.
Carlisle			29.35	745.5	39.2	4.0		SW			6		10			0	0	Overcast	. Bell, for J. Cartmell.
Chatham, School M. E.			29.78	756.4	38.2	3.4		W			1		5					*D. clouds	Ca . J. Fellowes, R. E.
Dartmoor	28.31	719.1	29.84	757.9	36.0	2.2		NW			4		10					Snow-show'rs	R. E. Power.
Donaghadee			29.43	747.5	42	5.6		W			4		8					*D. clou s	J. Mac Gowan.
Dover			29.68	753.9	41	5.0		NW			4		3					¼ cl uded	J. Costello.
Eccles, (near Manchester)			29.54	750.3	42.7	5.9		SW	10.0	4.5			8					Gloomy	Thomas Mackereth.
Falmouth Observatory			29.80	756.9	44.5	6.9		W	26	11.6			10					Overcast	The Staff.
Fort Napier, (Natal)	27.61	701.3	29.84	757.9	84.5	29.2		NE			2		1					*D. clouds	Pvt. G. Salmon, A. H. C. (tis.
Free Town, (Sierra Leone)			29.93	760.2	86	30.0		N			0		5					Blue sky	
Galway, Queen's College			29.53	750.0	47	8.3		W			1		7					Gloomy	B. G. Clare, for Prof. Curr
Gibraltar, (Mediterranean)			30.06	763.5	67.0	19.4		W			5		3					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.29	744.0	36.1	2.3		SW			2		10					Raining	Lewis Stuart.
Great Yarmouth			29.62	752.3	38	3.3		W			3		4					Hazy	G. T. Watson.
Greenwich Royal Obs			29.69	754.1	42.7	5.9		W			2		4			Blank	Blank	*D. clouds	The Staff for G. B. Airy.
Guernsey			29.82	757.4	46	7.8		NW			3		3					Squally	Dr. S. E. Hoskins.
Halifax, Moorside Obs			29.55	750.6	36.4	2.4		WSW			2		10					Snowing	L. J. Cr sley.
Helston			29.77	756.1	48	8.9		NW			6		6			0.8	20.3	F ggy	M. P. Moyle.
Holyhead			29.54	750.3	43	6.1		WSW			5		5					*D. clouds	John Tilston.
Kew Observatory			29.70	754.4	41.0	5.0		W	14	6.3			5					*D. clouds	The Staff.
Kingstown			29.58	751.3	42	5.6		W			4		9					Overcast	George Mitchell.
Leicester Museum			29.64	752.8	40.4	4.7		W			1		10					Overcast	Wm. J. Harrison, F.G.S
Malta, (Mediterranean)			29.98	761.5	66.2	19.0		SW			2		4k						Fred Travis, Pvt A.H.C.
Nairn			29.18	741.1	40	4.4		NW			1		8					¾ clouded	W. D. Penny.
Nassau, (Bahamas)			30.15	765.8	71.2	21.8		NE			3		7					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.59	751.6	45.8	7.7		WSW			4		7k,d		WSW	0.010	0.25	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.61	752.1	40.6	4.8		SW			4		9					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.68	753.9	42	5.6		WSW			1		8					Overcast	J. Lucas.
Plymouth			29.77	756.1	45.2	7.3		SW			2		10			Blank	Blank	Overcast	John Merrifield.
Roche's Point			29.74	755.4	44	6.7		WNW			3		8					¾ clouded	W. Kennedy.
Saint Ann's Head			29.66	753.4	44	6.7		W			4		5					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.82	757.4	47.8	8.8		NNW			4		5					½ clouded	A. P. Amy.
Sandwick Manse (Orkneys)			29.19	741.4	32.4	0.2		NW	4	1.8			6					*D. clouds	Rev. Dr. Clouston.
Scarborough			29.48	748.8	40.4	4.7		WSW			2		8					Overcast	F. Shaw.
Scutari Cemetery (Turkey)			29.91	759.7	59.6	15.3		S			1		1					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.53	750.0	42.2	5.7		WSW			5		6			0.053	1.35	*D. clouds	W. F. Cooper.
Silloth Rectory			29.10	746.7	41.9	5.5	80	W			4		8			0.350	8.89	Squally	Rev Francis Redford.
Stonyhurst Observatory			29.50	749.3	39.6	4.2		W			4		10			Blank	Blank	Threatening	S. J. Perry.
Stornoway, Lews C. (Hebr.)			29.18	741.1	37	2.8		SE			1		8					Threatening	John Smith.
Strathfield Turgiss			29.71	754.6	44.3	6.8		W			1–2		3					*D. clouds	Rev Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.18	741.1	33	0.6		S			1		10					Overcast	John Trotter.
Truro, Royal Institution			29.80	756.9	49	9.4		W			6		5					*D. clouds	W Newcombe
Valencia Observatory			29.73	755.1	46.9	8.3		W	27	12.1			10					Hazy	The Staff.
Sub-Series.																			
Cape Good Hope Obs.			29.03	760.2	70.0	21.1	60	NW	16	7.2			1						The Staff, for E. J. Stone.
Calf of Man, (Isle of Man)					40	4.4		W			4		5			0	0		
Leith, Restalrig Park			29.31	744.5	38.0	3.3		SW			4		10s			0.02	0.5	Overcast	Andrew Gibb.
Mauritius			29.95	760.7					12.1	5.4						0	0		
Monach Lt-house, Hebrides			29.08	738.6	43	6.1		W			4	5	5	W		0.6	15.2		J. Youngclause.
North Unst, (Shetland Is.)			29.17	740.9	29	— 1.7		NW			4		10			Blank	Blank		

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.22	742.2	39.4	4.1	65	NW			6		4						
Fanöe			29.37	745.9	38.3	3.5	60	NNW			6		9						
Godthaab, (Greenland)			29.85	758.1	3.9	—15.6		N			4		8						
Stykkisholm, (Iceland)																			
Thorshavn, (Faröe)			29.08	738.7	28.9	— 1.7	80	W			2		8						
Vestervig			29.25	743.0	33.8	1.0	81	NW			7		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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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			29.78	756.5	50.0	10	69	NW			3		5nk		NW	0.031	0.8	Cloudy	Normal School.
Amiens			29.71	754.5	48.9	9.4	61	NW			6		5		NW	0	0	Cloudy	Normal School.
Avignon			29.77	756.1	55.0	12.8	47	NW			2		10			0	0	Covered	Normal School.
Bar-sur-Seine			29.78	756.3	44.2	6.8	66	SW			3		10		NW	0.461	11.7	Covered	C. Saillard.
Beaumette, (near Angers)			29.82	757.5	48.2	9.0	38	NW	23.7	10.6					N	0.197	5.0		Beaumette Observatory
Beauvais			29.72	754.8	45.3	7.4	56	WNW			2		8		WNW	0.254	6.45	Very cloudy	Normal School.
Besançon			29.78	756.4	41.7	5.4	90	NW			2		10		SW	1.976	50.2	Covered	Normal School.
Bourg en Bresse			29.80	756.8	48.2	9	73	NW			1		..k		E				Normal School.
Bourges			29.78	756.4	44.6	7	89	W			2		2		W	0.689	17.5	Slightly cl'dy	Normal School.
Brest			29.85	758.1	51.6	10.9	65	W			3		6		WNW	0.039	1.00	Raining	Naval Observatory.
Caen																			Normal School.
Chartres			29.77	756.1	41.5	5.3		S			3		5		E	0.205	5.2		Normal School.
Chaumont																			Normal School.
Clermont			29.69	754.2	46.9	8.3	64	NW			3		5			0.587	14.9		Puy de Dome, Obs.
Commercy			29.74	755.5	40.8	4.9	77	W			2		10k		W	0.71	18.	Covered	Normal School.
Commune de Gréasque*			29.76	756.0	50.7	10.4	55	NW			6		10		NW	0	0		
Grenoble			29.78	756.4	46.9	8.3	80	ENE			2		..k,n		SE	0.295	7.5		Normal School.
Le Mans			29.81	757.1	45.7	7.6	55	NW			4		2		NW	0.098	2.5	Slightly cl'dy	Normal School.
Loches			29.88	758.9	46.4	8	72	NW			2		5		W	0.291	7.4	Cloudy	Normal School.
Lons-Le-Saulnier			29.80	756.8	46.4	8	81	WSW			2		8		W	1.322	33.60	Very cloudy	Normal School.
Mâcon			29.80	756.9	46.6	7.8	80	W			2		5		W	0.346	8.8	Cloudy	Normal School.
Mirecourt																			Normal School.
Metz			29.76	755.8	44.8	7.1	70	SW			4		10		SW	0.748	19.0	Storm †	M. Schuster.
Nismes			29.78	756.5	55.0	12.8	45	N			2		10		W	0	0	Covered	Normal School.
Orleans			29.75	755.6	48.2	9	61	W			4		5		W	0.39	10.	Cloudy	Normal School.
Paris Observatory			29.75	755.7	38.7	3.7	90	W			3		8		WNW	0.007	0.19	Almost cov'd	National Observatory.
Parthenay			29.83	757.6	47.5	8.6	93	W			6		5		N	0.650	16.5	Cloudy	Normal School.
Privas			29.78	756.4	52.7	11.5		S			1		8		S	0.130	3.3	Very cloudy	Normal School.
La Roche-sur-Yon			29.88	759.0	49.6	9.8	54	NW			1		2		SE	0.118	3.0	Slightly cl'dy	Normal School.
Rochefort, Observatory			29.93	760.3	55.4	13.0	69	WNW			3		5		SE	0.236	6.0	½ covered	Naval Observatory.
Rouen			29.71	754.7	45.3	7.4	55	WNW			3		5		NW	0	0	Cloudy	Normal School.
Saint Lo			29.84	757.8	46.8	8.2	69	N			1		2		N	0.012	0.3		Normal School.
Tarbes			29.68	761.5	59.0	15	81	W			4		2		E	0.16	4.	Slightly cl'dy	Normal School.
Toulouse																			Normal School.
Villefranche			29.85	758.3	47.3	8.5	80	NW			6		8		NW	0.20	5.	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.8	77.4	25.2	83	NE			2		5ck						L'Abbé Marchési.
Gorée																			
Marseilles			29.72	755.	54.3	12.4	76	NW			4		10			0	0	Covered	Marseilles Observatory.
Mont-Louis	24.62	625.3	30.02	762.4	33.4	0.8	81	NNE					10			0.031	0.8		—. Faiguère.
Montsouris, Paris			29.74	755.2	40.3	4.6	90	WNW			3		10		W	0	0		Montsouris Observ'tory.
Perpignan			29.84	758.0	54.5	12.5	55	N	24.2	10.83			9		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P‡																			M. Baylac.
Saint Maur, (near Paris)			29.74	755.5	41.9	5.5	75	NW			2		9			0.059	1.5	Threatening	L. Renou.
Toulouse			29.94	760.2	51.4	10.8	56	W			3		9			Inap.	Inap.		Toulouse Observatory.
Vergeilles, (near Paris)			29.85	758.3	46.8	8.2	67	NW			3		7		NW	0.319	8.1		C. Marquet.
Zi-Ka Wei, (near Shaughai)			29.74	755.3	43.9	6.6	67	NW			2		7			0.031	0.80	Cloudy	Dr. A. Bérigny.
																			H. Le Lee, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,546.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,0 0.9 ft.; lermont 388 m., o 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,76 2.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Near Marseilles. † It is not certain that the weather remarks refer to the moment of observation. ‡ Summit inaccessible; weather snowy; snow-fall on the Plantade 47 millimeters, or 1.9 inches.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Bamberg			29.48	748.7	41.4	5.2	72	WNW			4		10			0.827	21.0		Prof. T. Hoh.
Berlin			29.50	749.2	46.0	7.8	63	SW			4		5			0.890	22.6		Prof. Arndt.
Breslau			29.59	751.5	42.4	5.8	54	W			7		10			0	0		Dr. P. Naugebauer.
Carlsruhe			29.68	753.9	42.8	6.0	70	SW			8		9			0.244	6.2		A. Senz.
Cassel			29.50	749.4	42.8	6.0	69	WSW			5		7			0.287	7.3		Dr. H. Möhl.
Cologne																			Dr. Garthe
Dresden																			Prof. Prestel.
Frankfort on the Main			29.71	754.7	45.9	7.7	52	SW			4		5			0.295	7.5		Physical Society
Friedrichshafen			29.79	756.7	35.6	2.0	85	N					10			0.110	2.8	Rain & snow	M. Wilhelm.
Hamburg			29.43	747.6	38.7	3.7	90	W			3		10			0.449	11.4	Showery	Deutsche Seewarte.
Kiel			29.44	747.7	38.8	3.8	76	W			3		10			0.445	11.3		Prof. G. Karsten.
Königsberg			29.24	742.8	40.6	4.8	69	W			7		2			0.146	3.7		Prof. E. Luther.
Köslin			29.32	744.7	41.2	5.1		W			5		7			0.626	15.9		H. Müller.
Leipsic			29.56	750.9	44.8	7.1	54	WSW			3		8	W		0.193	4.9		Prof. Bruhns.
Memel			28.81	731.8	36.3	2.4	82	WNW			10		10			0.295	7.5	Stormy	Reinbrecht & Skalweit.
Munich			29.55	750.6	40.8	4.9	94	W			3		5			0.059	1.5	Rain & hail.	Prof. E. Hois.
Neufahrwasser			29.21	742.0	42.3	5.7	63	WNW			7		5			0.291	7.4		A. Lothes.
Posen			29.50	749.3	43.9	6.6	71	W			9		10			0.283	7.2		Dr. Magener.
Strasburg, (in Alsace)			29.73	755.1	42.6	5.9	82	S			1		10			0.031	0.8		Dr. Schur.
Stuttgart			29.71	754.5	4 .1	5.6	67	W					8			0.059	1.5		Prof. Schoder.
Thorn			29.38	746.2	42.1	5.6	63	W			7		7			0.291	7.4		Dr. Hasenbalg
Treves, (Trier)			29.60	751.7	43.5	6.4	71	WSW			8		8			0.209	5.3		Prof. Fesch.
Wismar, Naval School			29.35	745.4	38.1	3.4	79	NW			6		5			0.083	2.1		E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, o 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.53	750.0	50.7	10.4	90	SE	1.8	0.8			10			0.189	4.8	Raining	
Padua			29.48	748.8	54.5	12.5	79	N	8.7	3.9			10	SW		0	0		
Vicenza			29.50	749.2	53.6	12.0	81	E	0	0			5			0	0		
Verona			29.48	748.9	59.9	15.5	68	W			2		10			0	0		
Bergamo	28.15	714.9	29.47	748.4	52.3	11.3	71	NW			1		9			0	0		
Domodossola	28.49	723.7	29.52	749.8	62.6	17.0	77	Calm			0		10			0.039	1.0		
Milan			29.49	749.1	58.8	14.9	71	W			1		8	W		0	0		
Pavia			29.48	748.9	59.5	15.3	61	N			4		9	NW		0	0		
Moncalieri			29.50	749.2	57.7	14.3	57	SW	2.5	1.1			9	NE		0	0		
Mondovi	27.60	701.1	29.52	749.8	57.2	14.0	52	NNW			2		8	SW		0	0		
Porto Maurizio			29.53	750.0	60.8	16.0		WSW			6		9	NE		0	0		
Genoa			29.57	751.0	56.5	13.6	82	SE	8.1	3.6			10	S		0.067	1.7		
Piacenza			29.45	748.1	60.4	15.8	58	NNW	26.6	11.9			10	W		0	0		
Parma			29.47	748.4	62.6	17.0	51	SW			6		9			0	0		
Bologna			29.52	749.9	61.9	16.6	37	SW			8		7	NW		0	0		
Florence			29.67	753.5	60.8	16.0	48	S			8		7	SW		0	0		
Leghorn			29.64	752.9	62.1	16.7	68	SSE	22.4	10.0			10			0	0		
Siena	28.45	722.5	29.65	753.2	55.8	13.2	77	S	11.2	5.0			10	SW		0	0		
Urbino	28.10	713.6	29.67	753.5	56.1	13.4	59	SSW			6		10			0	0		
Pesaro																			
Ancona			29.65	753.2	62.2	16.8	44	SSW			4		9			0	0		
Grosseto			29.71	754.5	60.1	15.6	74	SSE			6		9	S		0	0		
Rome			29.81	757.2	62.6	17.0	63	S	21.0	9.4			7	SW		0	0		
Naples, O. U.			29.92	760.0	62.1	16.7	77	SSW			6		10	SW		0	0		
Lecce			29.92	760.0	62.8	17.1	47	SW	12.5	5.6			5			0	0		
Cosenza			29.98	761.5	64.4	18.0	65	NW	1.3	0.6			3			0	0		
Riposto, (Sicily)			29.95	760.8	63.7	17.6	72	E			2		1			0	0		
Palermo			29.86	758.5	71.4	21.9	40	WSW	12.5	5.6			4			0	0		
Caltanissetta	28.04	712.1	29.99	761.8	55.9	13.3	66	SSW			2		2	N		0	0		
Sub-Series.																			
Naples, S. R.			29.92	759.9	57.9	14.4	77	WSW	6.3	2.8			10k	SW		0	0	Raining	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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.67	753.6	42.4	5.8		NW			4								
Groningen			29.45	748.0	40.3	4.6		NW			4								
Helder			29.55	750.5	39.2	4.0		W			4								
Utrecht			29.53	750.0	47.3	8.5	73	WSW			3		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.06	738.2	32.0	0.0	85	NW	7.8	3.5			8			0.098	2.5		
Brönö			28.81	733.6	32.4	0.2	64	WSW	25	11			8			0	0	Snowing	
Christiania			29.04	737.5	31.6	— 0.2	60	WNW	1.8	0.8			10			0	0		
Tromsö			28.70	728.9	34.5	1.4	71	SW	9	4			10			0.087	2.2		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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,)			30.35	770.8	57.6	14.2	86	E	13.1	5.86			5			0.646	16.4		Dr. J. A. N. Sampaio.
Campo Major			30.01	762.2	49.1	9.5	84	NNW	12.7	5.67			10	NNW		0.039	1.0	Light rain	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.22	767.6	64.9	18.3	66	SW	8.2	3.66			9			0	0		Capt. D. A. da Cunha.
Lisbon			30.09	764.2	61.0	16.1	78	N	18.6	8.3			10			0.248	6.3	Raining	The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Warsaw			29.43	747.6	42.6	5.9	63	WSW	34	15			10						Astronomical Obs.
Wilna			29.08	738.7	41.0	5.0	72	SSW	31	14			10					Raining	Astronomical Obs.
Dorpat			29.06	738.2	37.9	3.3	93	SSW	13	6			10					Snowing	Physical Cabinet.
St. Petersburg			28.78	731.1	34.0	1.1	97	SE	25	11			10					Rain & snow	Central Physical Obs.
Knopio			28.89	733.8	35.6	2.0	93	E	18	8			10					Snowing	Ch. Forsten.
Kieff			29.61	752.2	45.9	7.7	76	S	13	6			7						Physical Cabinet
Nikolaiev			29.87	758.6	51.8	11.0	67	SE	20	9			4						Kurdakof.
Kertch			29.91	759.8	53.4	11.9	74	N	4	2			2						Lagorio.
Moscow			29.66	753.4	34.0	1.1	89	S	18	8			10						Meteorological Obs.
Lugan			29.87	758.6	36.0	2.2	87	SE	9	4			10						Meteorological Obs.
Archangel			29.38	746.2	35.6	2.0	78	SSE	18	8			10						Ogorodnikof.
Tiflis	28.46	722.9	29.82	757.5	69.1	20.6	24	NW	11	5			0						Physical Observatory.
Astrakhan			30.17	766.3	37.0	2.8	82	E	4	2			10						Sebastianof.
Kasan			29.98	761.6	28.4	— 2.0	94	S	7	3			10						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	29.08	738.6	30.09	764.3	43.5	6.4	30	S	4	2			5						Meteorological Obs.
Nukuss			29.92	759.9	69.4	20.6	25	NE	18	8			8						
Kasaly																			Bobrof.
Tashkend	28.41	721.5	30.08	763.9	66.2	19.0	20	Calm	0	0			1						Michelson.
Barnaul			30.45	773.3	13.5	—10.3	73	Calm	0	0			1						Meteorological Obs.
Yeniseisk			29.89	759.3	23.7	— 4.6	100	WSW	7	3			10					Snowing	Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.23	767.8	36.0	2.2	34	NNW	9	4			0			Blank	Blank		Physical Observatory.
Nertchinsk	27.89	708.3	30.13	765.3	4.1	—15.5	52	NW	7	3			0						Meteorological Obs.
Vladivostock			29.83	757.7	30.7	— 0.7	81	NW	16	7			10			Blank	Blank		
Nikolaievsk, on the Amoor					1.2	—17.0	100	WNW	7	3			4						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 304.42 m., or 1,000.22 ft.; Tashkend, 494.22, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.07 m., or 1,942.22 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Madrid			29.97	761.1	47.8	8.8	71	N	6.0	2.67			10			0.031	0.8	Rainy	Royal Observatory.
San Fernando			30.11	764.7	62.8	17.1	81	W	10.1	4.5		0	6		W	0.008	0.2		The Naval Observatory

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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			28.85	732.8	33.1	0.6	94	SE			2		10			0.118	3.0		
Umea			28.86	733.0	36.3	2.4	82	SW			2		10			0.134	3.4	Snowing	
Hernosand			28.84	732.6	33.8	1.0	75	NW			2		3			0.079	2.0		
Stockholm			28.85	732.8	34.0	1.1	77	W			4		9			0.059	1.5		
Wisby			29.03	737.3	32.7	0.4	92	NW			4		3			0.142	3.6		
Sub-Series.																			
Upsala			28.87	733.3	33.3	0.7	89	WNW	5.6	5.6			10			0.030	0.75	Rain & snow	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Geneva	28.33	719.6	29:78	756.5	45.3	7.4	64	SSW			6		8			0.272	6.9	Covered	The Observatory.
Zurich	28.10	713.6	29.80	756.9	34.7	1.5	96	NW			1		10			0.394	10.0	Snowing	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —5.2 mm.; Thermometer, 0 cent.; Relative Humidity, +3 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Constantinople			29.96	760.9	57.9	14.4	58	SSW	0	0			3		WSW	0	0		
Fao, (Persian Gulf)																			
Salonica			29.91	759.6	57.9	14.4		S			2		0						
Valona			29.83	757.6	63.3	17.4		S			3		0						
Varna			29.80	757.0	60.8	16.0		N			2		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			29.99	761.8	67.8	19.9	69	SW			3		5ks		SW	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Bathurst, N. B.			30.01	762.2	29.0	— 1.7	93	Calm	0	0						0	0		Hon. J. Ferguson.
Brockville, Ontario			29.78	756.4	34	1.1		SW	10	4.5			10s		SW	0.47	11.9	Light rain	W. R. Bigg.
*Chatham, N. B.			30.11	764.8	25	— 3.9	93	NE	1	0.4		5k	5ks	NE	NE	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island.			30.08	764.0	31	— 0.6	98	N	3	1.3			8ks		N	0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.66	753.4	35.7	2.1	93	SE			1		10n			0.185	4.70	Rainy	James Smith, M. A.
Dalhousie, N. B.			30.05	763.3	26.5	— 3.1	92	E			4					0	0	Overcast	H. A. Johnson.
Esquimault, B. C.			29.88	758.9	38.1	3.4	91	W	7	3.1		10k		W		0.05	1.3	Cloudy	W. H. Bevis.
Fredericton, N. B.			30.05	763.3	32.0	0.0	90	Calm	0	0			10s			0	0		Prof. Harrison.
*Fort Garry, Manitoba			30.52	775.2	—18	—27.8	100	Calm	0	0		10k	10ks	S	S	0	0	Cloudy	James Stewart.
Goderich, Ontario			30.20	767.1	16.9	— 8.4	83	NW			5		10n			0.178	4.52	Snowing	H. J. Strang, M. A.
Granton, Ontario			30.14	765.5	16.3	— 8.7		NW			2		10n			0.61	15.5	Snowing	James Grant.
*Halifax, N. S.			30.04	763.0	34	1.1	98	N	2	0.9			10n			0	0	Threatening	F. Allison, M. A.
*Kingston, Ontario			29.79	756.7	31	— 0.6	100	SW	16	7.2			10n		SW	0.73	18.5	Heavy snow	S. Woods, M. A.
Little Current, Ontario			30.23	767.8	0.6	—17.4		NW	12	5.4			10s			0.20	5.1		G. B. Abrey, C. E.
*Montreal, Quebec			29.70	754.4	35	1.7	98	S	16	7.2			10n			0.18	4.6	Light rain	C. H. McLeod, C. E.
*Ottawa, Ontario			29.70	754.4	28	— 2.2	79	NW	8	3.6			10n		NW	0.14	3.6	Light snow	J. B. Haney.
*Parry Sound, Ontario			30.10	764.5	2	—16.7	94	N	13	5.8			10n		N	0.480	12.2	Light snow	Rev. R. Mooley.
*Port Dover, Ontario			30.10	764.5	20	— 6.7	85	NW	15	6.7			10n		NW	0.33	8.4	Cloudy	H. Morgan.
Port Hastings, N. S.			30.11	764.8	34.7	1.5		Calm	0	0						0	0	Fine	Peter Grant.
*Port Stanley Ontario			30.17	766.3	19	— 7.2	75	NW	30	13.4			10n		NW	0.50	12.7	Cloudy	M. Payne.
*Quebec, Quebec			29.81	757.2	31	— 0.6	94	NE	15	6.7			Fog		NE	Inap.	Inap.	Light rain	Capt. Ash, R. N.
St. John, N. B.			30.06	763.5	33	0.6	89	E	1	0.4			10s			0.110	2.79		G. Murdoch, C. E.
*Saugeen, Ontario			30.13	765.3	14	—10.0	80	N	12	5.4			10s			0.51	13.0	Light snow	K. Stewart.
Stayner, Ontario			30.08	764.0	10	—12.2	98	NW	18	8.0			10n		NW	1.10	27.9	Light snow.	R. J. Cole.
Stratford, Ontario			30.11	764.8	16.0	— 8.9	93	NW	17	7.6			10n			0.300	7.62	Snowing	C. J. MacGregor, M. A.
*Sydney, C. B.			30.11	764.8	32	0.0	91	NE	6	2.7			10n		NE	0	0	Cloudy	T. C. Hill.
*Toronto, Ontario			30.03	762.7	15	— 9.4	91	NW	20	8.9			10n			0.44	11.2	Heavy snow	Magnetic Observatory
Woodstock, Ontario																			J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.79	756.7	35	1.7	90	S	7	3.1			10s		S	0.22	5.6	Threatening	
Alpena, Mich.			30.24	768.1	7	−13.9	77	NW	16	7.2			10s		NW	0.01	0.3	Cloudy	
Atlantic City, N. J.			29.82	757.4	49	9.4	93	W	16	7.2			10s		W	0.09	2.3	Cloudy	
Augusta, Ga.			30.22	767.6	42	5.6	66	NW	7	3.1		0	0			0.05	1.3	Clear	
Baltimore, Md.			29.97	761.2	43	6.1	59	NW	12	5.4		8k	2ks	SW	NW	0.25	6.3	Clearing	
Barnegat, N. J.			29.79	756.7	47	8.3	100	W	12	5.4			10n			0.11	2.8	Light rain	
Benton, Montana	27.24	691.9	30.04	763.0	− 8	−22.2	100	SW	7	3.1		10c	0	E		0.02	0.5	Cloudy	
Bismarck, Dakota	28.24	717.3	30.06	763.5	3	−16.1	86	E	6	2.7			10n			0.08	2.0	Light snow	
Boston, Mass.			29.90	759.4	33	0.6	100	E	13	5.8			Fog			0	0	Threatening	
Breckenridge, Minn.			30.37	771.4	1	−17.2	100	SE	8	3.6			10n			Inap.	Inap.	Light snow	
Buffalo, N. Y.			30.00	762.0	20	− 6.7	85	W	20	8.9			10n		W	0.42	10.7	Light snow	
Burlington, Vt.			29.76	755.9	38	3.3	100	S	7	3.1			10s			0.14	3.6	Cloudy	
Cairo, Ill.			30.48	774.2	31	− 0.6	79	NW	1	0.4		0	0			0.08	2.0	Clear	
Cape Hatteras, N. C.			29.86	758.4	62	16.7	88	SW	14	6.3			10ks		SW	0.20	5.1	Cloudy	
Cape Henry, Va.			29.96	761.0	54	12.2	80	W	19	8.5		5k	5s	W	W	0	0	Cloudy	
Cape May, N. J.			29.89	759.2	46	7.8	85	NW	22	9.8			10s			0.05	1.3	Clearing	
Charleston, S. C.			30.11	764.8	50	10.0	64	W	18	8.0		0	0			0	0	Clear	
Cheyenne, Wyoming	23.84	605.5	29.78	756.4	26	− 3.3	67	Calm	0	0		2ck	0	SW		0	0	Fair	
Chicago, Ill.			30.38	771.6	23	− 5.0	73	W	5	2.2		0	0			0	0	Clear	
Cincinnati, Ohio			30.33	770.4	28	− 2.2	67	NW	9	4.0		0	0			0.40	10.2	Clear	
Cleveland, Ohio			30.21	768.1	21	− 6.1	85	W	16	7.2			10n		W	0.20	5.1	Light snow	
Colorado Springs, Col.	23.97	608.8	29.84	757.9	22	− 5.6	31	N	4	1.8		5cs	0	NW		0	0	Fair	
Corsicana, Tex.			30.41	772.1	33	0.6	69	N	4	1.8		2c	0			0	0	Clear	
Davenport, Iowa			30.48	774.2	18	− 7.8	76	NW	1	0.4		0	0			0	0	Clear	
Denison, Tex.			30.36	771.1	40	4.4	63	Calm	0	0		0	0			0	0	Clear	
Denver, Col.	24.65	625.1	29.87	758.7	21	− 6.1	86	S	4	1.8		0	0			0	0	Clear	
Detroit, Mich.			30.26	768.6	15	− 9.4	73	NW	11	4.9		0	8s		NW	0.59	15.0	Clearing	
Dodge City, Kan.	27.47	697.7	29.86	758.4	30	− 1.1	78	SE	10	4.5		5c	0			0	0	Fair	
Dubuque, Iowa			30.46	773.7	15	− 9.4	65	NW	2	0.9		2c	0	NW		0	0	Clear	
Duluth, Minn.			30.52	775.2	− 6	−21.1	61	Calm	0	0		2c	0			0	0	Clear	
Eastport, Me.			30.02	762.5	33	0.6	100	Calm	0	0			Fog		E	0	0	Foggy	
Erie, Pa.			30.11	764.8	23	− 5.0	100	NW	24	10.7			10n			0.53	13.5	Light snow	
Escanaba, Mich.			30.42	772.7	2	−16.7	72	NW	16	7.2		0	0			0	0	Clear	
Fort Gibson, Indian Terr.			30.39	771.9	31	− 0.6	68	E	1	0.4		0	0			0	0	Clear	
Ft. St. Michaels, Alaska			30.52	775.2	3	−16.1		Calm	0	0		2ck	0	SW		Blank	Blank	Fair	
Fort Sill, Indian T.	29.06	738.1	30.25	768.3	29	− 1.7	77	Calm	0	0		0	0			0	0	Clear	
Fort Sully, Dakota	28.22	716.8	30.01	762.2	9	−12.8	89	E	14	6.3		0	2s			0	0	Hazy	
Galveston, Tex.			30.36	771.1	48	8.9	56	N	15	6.7		0	0			0	0	Clear	
Grand Haven, Mich.			30.35	770.9	16	− 8.9	75	N	20	8.9		0	8s		NW	0	0	Cloudy	
Indianapolis, Ind.			30.39	771.9	26	− 3.3	74	W	4	1.8		0	0			0.41	10.4	Clear	
Indianola, Tex.			30.35	770.9	50	10.0	64	NE	26	11.6		8os	0	W		0	0	Cloudy	
Jacksonville, Fla.			30.16	766.1	57	13.9	62	NW	8	3.6		0	0			0	0	Clear	
Keokuk, Iowa			30.42	772.7	20	− 6.7	70	Calm	0	0		0	0			0	0	Clear	
Key West, Fla.			29.99	761.3	73.2	22.9	67	SE	9	4.0		2k	0	SE		0	0	Clear	
Kittyhawk, N. C.			29.91	759.7	63	17.2	89	SW	16	7.2		8k	0	SW		0	0	Fair	
Knoxville, Tenn.			30.49	774.1	34	1.1	61	W	14	6.3		3k	Haze	NW		0.24	6.1	Fair	
La Crosse, Wis.			30.47	774.0	10	−12.2	58	NE	6	2.7		5c	0	E		0	0	Fair	
Leavenworth, Kan.			30.38	771.6	22	− 5.6	72	SE	6	2.7		0	0			0	0	Clear	
Lexington, Ky.	29.22	742.2	30.40	772.1	29	− 1.7	88	W	7	3.1		0	0			0.31	7.9	Clear	
Long Branch, N. J.			29.76	755.9	43	6.1	100	S	5	2.2			10n		S	0.38	9.7	Light rain	
Louisville, Ky.			30.30	771.9	29	− 1.7	77	SW	7	3.1		2c	0	N		0.22	5.6	Clear	
Lynchburg, Va.			30.11	764.8	42	5.6	39	NW	16	7.2		0	0			0.11	2.8	Clear	
Malone, N. Y.			29.64	752.8	43	6.1	83	S	5	2.2			10s		SW	0.20	5.1	Cloudy	
Manhattan, Kan.	29.03	737.3	30.25	768.3	26	− 3.3	76	SW	5	2.2		0	0			0	0	Clear	
Marquette, Mich.			30.47	773.9	3	−16.1	73	NW	12	5.4		0	0			0	0	Clear	
Memphis, Tenn.			30.50	774.7	34	1.1	80	Calm	0	0		0	Sm'e		NE	0.04	1.0	Smoky	
Milwaukee, Wis.			30.36	773.7	10	−12.2	79	N	10	4.5		2k	0	N		0.16	4.1	Clear	
Mobile, Ala.			30.38	771.6	38	3.3	71	N	14	6.3		0	0			0.11	2.8	Clear	
Montgomery, Ala.			30.41	772.4	35.5	1.9	75	N	12	5.4		0	0			0.07	1.8	Clear	
Morgantown, W. Va.			30.20	767.1	31	− 0.6	79	NW	18	8.0			10n		W	0.72	18.3	Light snow	
Mt. Washington, N. H.	23.49	596.6	29.85	758.2	34	1.1	100	SW	80	35.8			Fog			0	0	Foggy	
Nashville, Tenn.			30.46	773.7	39	− 1.1	78	NW	2	0.9		0	0			0.19	4.8	Clear	
New Haven, Conn.			29.41	757.2	38	3.3	90	E	12	5.4			10n			0.48	12.2	Light rain	
New London, Conn.			29.86	758.4	37	2.8	100	SE	16	7.2			10n		SE	0.02	0.5	Light rain	
New Orleans, La.			30.37	771.4	43.5	6.4	55	NE	16	7.2		0	0			0.10	2.5	Clear	
Newport, R. I.			29.87	758.7	36	2.2	90	SE	20	8.9			10s		SE	0	0	Cloudy	
New York, N. Y.			29.79	756.7	41	5.0	100	NE	6	2.7			10n			0.40	10.2	Light rain	
Norfolk, Va.			29.96	761.0	55	12.8	65	NW	16	7.2			10s		W	Inap.	Inap.	Cloudy	
North Platte, Neb.	27.01	685.8	29.69	754.1	22	− 5.6	86	SE	6	2.7		0	5s			0	0	Fair	
Omaha, Neb.	29.13	739.9	30.29	769.4	19	− 7.2	84	SE	14	6.3		0	0			0	0	Clear	
Oswego, N. Y.			29.85	758.2	29	− 1.7	83	W	26	11.6			10n			0.43	10.9	Light snow	
Pembina, Dakota			30.49	774.1	−14	−25.6	100	Calm	0	0		5c	0			0	0	Fair	
Philadelphia, Penn.			29.87	758.7	46	7.8	85	W	8	3.6			10ks		W	0.28	7.1	Cloudy	
Pike's Peak, Colorado	17.50	444.5	29.71	754.6	5	−15.0	50	W	56	25.0		0	2s			0	0	Fair	
Pittsburgh, Penn.			30.18	766.6	27	− 2.8	77	NW	14	6.3		8k	0	NW		0.79	20.1	Fair	
Port Huron, Mich.			30.23	767.8	15	− 9.4	82	NW	7	3.1			10s			0.60	15.2	Cloudy	
Portland, Me.			29.98	761.5	38	3.3	90	SE	5	2.2			Fog			0.01	0.3	Foggy	
Portland, Oregon			30.12	765.0	38	3.3	90	Calm	0	0			10n			0.47	11.9	Light rain	
Punta Rassa, Fla.			30.14	765.5	71.5	21.9	84	SW	5	2.2		Haze	5ks	S	SW	0	0	Cloudy	
Rochester, N. Y.			29.90	759.4	23	− 5.0	85	W	24	10.7			10s		E	0.95	24.1	Cloudy	
Salt Lake City, Utah	25.29	642.4	29.62	752.3	42	5.6	42	W	14	6.3			10s			0	0	Cloudy	
Sandy Hook, N. J.			29.76	755.9	43	6.1	100	NW	8	3.6			Fog			0.70	17.8	Foggy	
San Diego, Cal.			30.05	763.3	44	6.7	92	Calm	0	0		0	0			0	0	Clear	
San Francisco, Cal.			30.04	763.0	49	9.4	78	W	4	1.8			10s			0.37	9.4	Cloudy	
Santa Fe, N. M.	23.22	589.8	29.76	755.9	24	− 4.4	61	NE	4	1.8		0	1s	NE		0	0	Clear	
Savannah, Ga.			30.18	766.6	48	8.9	54	NW	12	5.4		0	0			0	0	Clear	
Shreveport, La.			30.47	773.9	37	2.8	84	NE	5	2.2		2cs	0	W		0	0	Fair	
Smithville, N. C.			30.01	762.2	62	16.7	68	NW	9	4.0		1k	0	NW		0	0	Clear	
Springfield, Mass.			29.86	758.4	36	2.2	90	NE	8	3.6			10n			0.26	6.6	Heavy rain	
St. Louis, Mo.			30.48	774.2	27	− 2.8	77	NE	8	3.6		0	0			0.01	0.3	Clear	
St. Marks, Fla.			30.25	768.3	42	5.6	75	N	15	6.7		0	0			0.26	6.6	Clear	
St. Paul, Minn.			30.41	772.4	11.5	−11.4	70	SE	7	3.1		10c,cs	0			0	0	Cloudy	
St. Paul's Island, Alaska			30.64	778.2	31	− 0.6	89	Calm	0	0			Fog			0	0		
Thatcher's Island, Mass.			29.96	761.0	36	2.2	90	SE	10	4.5						0	0	Dense fog	
Toledo, Ohio			30.26	768.6	22	− 5.6	72	W	6	2.7		5k	0	W		0.15	3.8	Fair	
Tucson, Arizona	27.50	698.5	30.09	764.3	40	4.4		SE				2c	0	SW		0	0	Clear	
Tybee Island, Ga.			30.16	766.1	46	7.8	54	NW	6	2.7		0	0			0	0	Clear	
Vicksburg, Miss.			30.48	774.2	37	2.8	68	NE	5	2.2		0	0			0	0	Clear	
Virginia City	23.94	608.1	29.42	747.3	17	− 8.3	83	N	1	0.4		10k	0	SW		0.06	1.5	Cloudy	
Washington, D. C.			30.00	762.0	43	4.4	48	W	28	12.5		0	5s		SW	0.10	2.5	Clearing	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			29.99	761.7	63	17.2	62	W	14	6.3		1cs	2ks	SW	W	0.03	0.8	Fair	
Wood's Holl, Mass			29.91	759.7	36	2.2	80	SE	19	8.5			10s		SE	0	0	Cloudy	
Wytheville, Va	27.77	705.4	30.02	762.5	32	0.0	60	NW	20	8.9		5k	0	NW		0.01	0.3	Fair	
Yankton, Dakota	28.84	732.5	30.24	768.1	14	—10.0	72	SE	14	6.3		0	0			0	0	Clear	
Yuma, Arizona			29.94	760.5	47	8.3		N				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I			30.04	763.0	80	26.7	78	NE	5	2.2		2c	5s	N	NE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.99	761.7	75	23.9	76	E				10c	0			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.25	768.3	76	24.4	67	ENE	2	0.9		2ck	4kn	NE		0	0	Clearing	W. S. Cameron.
Kingston, Jamaica, W. I			30.19	766.8	73	22.8	81	Calm	0	0		2c	2s			0	0		James Gall.
Santiago de Cuba, W. I			29.84	757.9	71	21.7	71	NE	7.2	3.2		0	0			0	0	Clear	Robert Mason.
Havana, Cuba, W. I			30.10	764.5	72	22.2	75	Calm	0	0		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			29.96	761.0	63.0	17.2	72	N	7.5	3.4		0	10k		N	Inap.	Inap.	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Navassa, W. I																			
Clifton, Jamaica, W. I	27.24	691.9	30.06	763.5	64	17.8	88	N	1.0	0.4		2c	0	NE		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A			30.00	762.0	80	26.7	82	E			3		3c			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.09	764.2	83.3	28.5										0	0		Dr. H. Groot.
Medellin, Colombia, S. A	25.17	639.4			63.5	17.5	90		0	0		2c	4s			0.35	8.9	Fair	Thomas Herran.
St. Johns, Newfoundland			30.17	766.3	34.0	1.1	100	NE					10n			0.08	2.0	Raining	John Delaney.
York Factory, B. A			30.47	773.9	—27.5	—33.1		SW	2	0.9		0	0			0	0		J. Fortescue.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Manhattan, 1,125.0 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 14, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	762.8	64.6	18.1	71	SE			3		3			0	0	Fair	Charnot.
Algiers			30.11	764.8	58.3	14.6	89	ENE			3		8			0	0	Cloudy	Peter.
La Calle																			Kunts.
Tunis			30.17	766.4	66.6	19.2	50	NW			4		5			0	0	Fair	Jacques.
Sfax			30.18	766.6	68.7	20.4	55	NE			4		1			0	0	Clear	Chauvey.
Saida			30.05	763.2	75.0	23.9		NW			6		1			0	0	Clear	Millot.
Tebessa			30.11	764.9	80.8	27.1		W			3		2			0	0	Clear	Colin.
Geriville			30.08	764.1	69.3	20.7	24	S			3		2			0	0	Clear	Buard.
Laghouat			30.12	765.1	77.0	25.0	68	SW			5		2			0	0	Clear	Guyot.
Biskra			30.15	765.8	81.9	27.7	66	Calm			0		2			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.99	761.7	44.1	6.7	77	SW			3		4			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.82	757.4	44.6	7.0	52	W			2		10			0.004	0.1		I. R. Observatory.
Eperies			29.79	756.6	44.8	7.1	78	Calm			0		9		N	0.532	13.50		Julius Mikolik.
Gratz	28.71	729.1	29.92	760.0	47.8	8.8	36	NW			5		0			0.752	19.1		Andreas Rospini.
Hermannstadt	28.26	717.9	29.69	754.1	48.6	9.2	75	NW			4		10			0.201	5.10	Raining	Prof. Reissenberger.
Kremsmünster	28.56	725.3	29.92	760.0	43.2	6.2	53	WNW			3		8			0.051	1.3		Prof. C. Wagner.
Lemberg			29.76	755.9	38.1	3.4	87	W			1		8			0.146	3.7		Dr. T. Stanecki.
Nyiregyhaza			29.84	757.9	45.3	7.4	69	N			1		6			Inap.	Inap.		Habzsuda Daniel.
Pola			29.94	760.4	51.8	11.0	65	WNW			3		3ks			0.014	0.36		I.R. Hydrographic Of'ce
Szegedin			29.87	758.7	44.6	7.0	71	N			3		10			0.010	0.25		Karl Stancel.
Trieste			29.98	761.5	51.8	11.0	77	Calm			0		2k			0	0		Prof. V. Farolfi.
Vienna			29.88	759.0	43.5	6.4	43	W			5		9			0.181	4.6		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.62	752.4	49.1	9.5	77	W			3		10			0.207	5.25		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	45.0	7.2		SW	21	9.4			6			0.075	1.91	*D.clouds	William Boswell.
Ardrossan			29.06	738.1	45	7.2		W			8		8					Raining	J. Mayes.
Armagh Observatory			29.26	743.2	49.1	9.5		SW	33	14.8			10					Squally	S. Cal., for Dr. Robinson.
Bidston, Liverpool Obs.			29.35	745.5	52.1	11.2		WSW	61	27.3			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.49	749.0	49.5	9.7		WSW			4–5		10					Overcast	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			30.05	763.3	81.0	27.2		NE			4		7					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			29.54	750.3	51.0	10.6		SW			4		10			Blank	Blank	Squally	H. Todd.
Cardington			29.55	750.6	51.0	10.6		W			4		9					Overcast	John McLaren.
Carlisle			29.20	741.7	45.9	7.7		SW			8		10			0.21	5.3	Showery	. Bell, for J. Cartmell.
Chatham, School M. E.			29.55	750.6	52.2	11.2		W			1		4					Blue sky	Capt. J. Fellowes, R. E.
Dartmoor	28.33	719.6	29.83	757.7	47.6	8.7		WNW			7		5					*D. clouds	R. E. Power.
Donaghadee			29.18	741.1	50	10.0		W			8		10					Overcast	J. Mac Gowan.
Dover			29.63	752.6	48	8.9		WSW			5		7					Threatening	J. Costello.
Eccles, (near Manchester)			29.39	746.5	50.4	10.2		WNW	15.4	6.9			10					Squally	Thomas Mackereth.
Falmouth Observatory			29.83	757.7	53.1	11.7		W	35	15.0			3					Squally	The Staff.
Fort Napier, (Natal)	27.58	700.5	29.81	757.2	88.8	31.6		E			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.93	760.2	88	31.1		N			6		3					Blue sky	
Galway, Queen's College			29.40	746.7	49	9.4		SW			8		10					Gloomy	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.04	762.7	59.9	15.5		E			6		9					Levanter	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.00	736.6	42.9	6.1		W			3		10					Raining	Lewis Stuart.
Great Yarmouth			29.46	748.3	50	10.0		W			5		5					Squally	G. T. Watson.
Greenwich Royal Obs.			29.62	752.3	52.5	11.4		W			5		8					*D. clouds	The Staff for G. B. Airy.
Guernsey			29.87	758.7	62	16.7		WSW			6		4					Squally	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.37	746.0	48.0	8.9		WSW			6		10			Blank	Blank	Threatening	L. J. Crossley.
Helston			29.80	756.9	55	12.8		W			6		0			0.8	20.3	Foggy	M. P. Moyle.
Holyhead			29.42	747.3	49	9.4		WSW			6		10					Hazy	John Tilston.
Kew Observatory			29.27	743.4	48.0	8.9		W	32	14.3			7					*D. clouds	The Staff.
Kingstown			29.41	747.0	51	10.6		W			8		9					Overcast	George Mitchell
Leicester Museum			29.49	749.0	50.2	10.1		W			6		7					Hazy	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.10	764.5	63.6	17.6		NW			2		4k						Fred Travis, Pvt A.H.C.
Nairn			29.78	756.4	41	5.0		WSW			3		10					Sleet-showers	W. D. Penny.
Nassau, (Bahamas)			30.19	766.8	73.6	23.1		E			4		6					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.4[illegible]	747.3	60.3	10.2		WSW			6		5k,ck.d		W	0.230	5.84	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.45	748.0	50.1	10.1		WSW			8		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.47	748.5	51	10.6		W			4		10					Overcast	J. Lucas.
Plymouth			29.78	756.4	55.8	13.2		WNW			5		4					*D. clouds	John Merrifield.
Roche's Point			29.65	753.1	48	8.9		WNW			6		5					½ clouded	W. Kennedy.
Saint Ann's Head			29.62	752.3	49	9.4		W			6		6					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.90	759.4	51.2	10.7		W			6		5					½ clouded	A. P. Amy.
Sandwick Manse (Orkneys			28.64	727.4	39.2	4.0		SW	28	12.5			10					Showery	Rev. Dr. Clouston.
Scarborough			29.24	742.7	48.8	9.3		WSW			5		10					Overcast	F. Shaw.
Scutari Cemetery (Turkey			29.82	757.4	64.0	17.8		S			1		6			Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.35	745.5	52.4	11.3		W			6		6			0.264	6.70	Overcast	W. F. Cooper.
Silloth Rectory			29.16	740.7	45.3	7.4	86	W			5		10			0.305	7.75	Overcast	Rev Francis Redford.
Stonyhurst Observatory			29.35	745.5	45.8	7.7		SW			6		10			Blank	Blank	Squally	S. J. Perry.
Stornoway, Lews C. (Hebr.			28.70	729.0	43	6.1		W			5		10					Rain & snow	John Smith.
Stratfield Turgiss			29.63	752.6	50.6	10.3		NW			1–2		7					Squally	Rev Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			28.66	728.0	44	6.7		W			5		6					*D. clouds	John Trotter.
Truro, Royal Institution			29.82	757.4	53	11.7		W			7		4					*D. clouds	W. Newcombe.
Valencia Observatory			29.70	754.4	50.8	10.4		WSW	36	16.1			10					*D. clouds	The Staff.
Sub-Series.																			
Cape Good Hope Obs.			29.80	756.9	67.7	19.8	65	WNW	25	11.2			10						The Staff, for E. J. Stone.
Calf of Man, (Isle of Man)					45	7.2		W			6		10			0	0		
Leith, Restalrig Park			29.01	736.8	43.0	6.1		W			7		10ks			0.06	1.5	Overcast	Andrew Gibb.
Mauritius			30.02	762.5					24.1	10.8						0.08	2.0		
Monach Lt-house, Hebrides			28.72	729.5	44	6.7		W			1		10			0.3	7.6		J. Young Jause.
North Unst, (Shetland Is.)			28.50	723.9	40	4.4		W			7		10			Blank	Blank		

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	34.9	1.6	94	SSW			6		10					Rain & snow	
Fanöe			29.17	740.9	40.6	4.8	97	SW			4		10					Raining	
Godthaab, (Greenland)			30.14	765.6	8.1	—13.3		ENE			4		8						
Stykkisholm, (Iceland)																			
Thorshavn, (Faröe)			28.35	720.0	36.7	2.6	63	WNW			5		7						
Vestervig			29.04	737.5	40.3	4.6	97	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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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			29.96	761.0	51.8	11	86	SW			2		5ck		SW	0	0	Cloudy	Normal School.
Amiens			29.77	756.2	50.4	10.2	72	NW			3		0			0.165	4.2	Clear	Normal School.
Avignon			30.22	767.5	54.5	12.5	43	NW			2		8		NW	0	0	Very cloudy	Normal School.
Bar-sur-Seine			29.98	761.5	47.5	8.6	74	SW			6		10		NW	0.039	1.0	Light rain	C. Saillard.
Beaumette, (near Angers)			30.03	762.7	52.9	11.6	59	W	41.6	18.6					SW	0.016	0.4		Beaumette Observatory
Beauvais			29.69	754.2	52.7	11.5	56	W			6		8		W	0.043	1.10	Very cloudy	Normal School.
Besançon			30.10	764.6	44.6	7	77	SSE			8		10		SW	0.20	5.	Covered	Normal School.
Bourg en Bresse			30.22	767.7	45.9	7.7	77	S			3		..cn		W				Normal School.
Bourges			30.13	765.2	50.9	10.5	79	W			6		8		SW	0	0	Very cloudy	Normal School.
Brest			29.95	760.7	55.6	13.1	74	W			4		8		W	0.020	0.50	Misty	Naval Observatory.
Caen																			Normal School.
Chartres			29.93	760.3	52.9	11.6		E			3		6		E	0	0		Normal School.
Chaumont																			Normal School.
Clermont			29.72	754.9	45.9	7.7	69	W			2		5		W	0.118	3.0		Puy de Dome, Obs.
Commercy			29.92	759.9	41.7	5.4	97	W			8		10kn		W	0.12	3.	Covered	Normal School.
Commune de Gréasque*			30.20	767.1	50.0	10.0	53	NW			4		5		NW	0	0		
Grenoble			30.24	768.0	49.3	9.6	52	NE			2		..k,n		S	0.08	2.		Normal School.
Le Mans			30.00	762.0	51.8	11	56	WSW			4		2		WSW	0	0	Slightly cl'dy	Normal School.
Loches			29.70	754.4	48.2	9	76				6		5		SW	0.016	0.4	Cloudy	Normal School.
Lons-Le-Saulnier			30.15	765.9	45.5	7.5	91	SSW			6		10			0.165	4.2	Covered	Normal School.
Mâcon			30.12	765.0	45.9	7.7	71	S			2		10			0.008	0.2	Covered	Normal School.
Mirecourt																			Normal School.
Metz			29.91	759.7	41.9	5.5	94	SW			3		10		SW	0.280	7.1		M. Schuster.
Nismes			30.21	767.3	56.5	13.6	41	NE			2		2		NE	0	0	Slightly cl'dy	Normal School.
Orleans			29.95	760.8	52.2	11.2	83	SW			6		5		W	0	0	Cloudy	Normal School.
Paris Observatory			29.91	759.6	52.5	11.4	49	W			4		5		W	0.006	0.15	Cloudy	National Observatory.
Parthenay			30.11	764.8	51.8	11	86	W			8		5		N	0	0	Cloudy	Normal School.
Privas			30.23	767.8	50.2	10.1		S			1		8		S	0.004	0.1	Very cloudy	Normal School.
La Roche-sur-Yon			30.15	765.9	53.2	11.8	93	SW			6		8		E	0.098	2.5	Very cloudy	Normal School.
Rochefort, Observatory			30.22	767.5	53.1	11.7	69	W			3		10		E	0	0	Covered	Naval Observatory.
Rouen			29.85	758.3	54.5	12.5	50	WSW			3		2		NW	0	0	Slightly cl'dy	Normal School.
Saint Lo			29.94	760.4	52.5	11.4	67	W			3		6		W	0.016	0.4		Normal School.
Tarbes			30.34	770.6	57.2	14	70	S			2		0			0	0	Clear	Normal School.
Toulouse																			Normal School.
Villefranche			30.17	766.2	47.3	8.5	78	SE			3		10		NW	0	0	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.97	761.1	77.2	25.1	87	NE			2		5c, kn						L'Abbé Marchési.
Gorée																			
Marseilles			30.18	766.5	53.8	12.1	65	WNW			4		2			0	0	Clear	Marseilles Observatory.
Mont-Louis	24.95	633.6	30.37	771.3	41.0	5.0	36	SSW					2		W	0.012	0.3		—. Faiguère.
Montsouris, Paris			29.89	759.3	54.5	12.5	59	W			4		9		W	Inap.	Inap.		Montsouris Observ'tory.
Perpignan			30.28	769.2	55.4	13.0	22	W	14.9	6.66			1			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.†	21.25	539.8			25.5	— 3.6		N			3		1			1.46	37.	Clear	M. Baylac.
Saint Maur, (near Paris)			29.91	759.6	55.0	12.8	54	WSW			4		8			0.004	0.1	Very cloudy	E. Renou.
Toulouse			30.33	770.3	52.3	11.3	51	WNW			3		4			Inap.	Inap.		Toulouse Observatory.
Tours			30.04	762.9	54.7	12.6	57	W			5		7		W	0.12	0.3		C. Marquet.
Versailles, (near Paris)			29.90	759.5	52.9	11.6	57	W			3		9			0.006	0.14	Very cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,580.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

* Near Marseilles.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Bamberg			29.67	753.6	43.0	6.1	76	WSW			6		9			0.197	5.0		Prof. T. Hoh.
Berlin			29.54	750.3	41.5	5.3	84	SW			4		10			0.079	2.0	Raining	Prof. Arndt.
Breslau			29.76	755.9	44.6	7.0	43	SW			4		6			0.020	0.5		Dr. P. Neugebauer.
Carlsruhe			29.84	757.8	42.4	5.8	84	SW			10		10			0.280	7.1	Raining	A. Senz.
Cassel			29.54	750.2	44.8	7.1	73	SSW			7		7			0.055	1.4		Dr. H. Möhl.
Cologne																			Dr. Garthe
Emden																			Prof. Prestel.
Frankfort on the Main			29.82	757.3	43.2	6.2	73	SW			3		10			0.098	2.5	Raining	Physical Society.
Friedrichshafen			30.03	762.8	42.4	5.8	51	W			2		10			0	0	Föhn	M. Wilhelm.
Hamburg			29.37	745.9	40.5	4.7	97	SW			6		10			0.118	3.0	Snow-shower	Deutsche Seewarte.
Kiel			29.34	745.1	39.2	4.0	92	SW			3		10			0.154	3.9		Prof. G. Karsten.
Königsberg			29.63	752.6	41.0	5.0	65	S			5		5			0.004	0.1		Prof. E. Luther.
Köslin			29.52	749.7	41.7	5.4		SW			6		7			0	0		H. Müller.
Leipsic			29.64	752.9	42.8	6.0	66	SW			6		10			0.008	0.2	Raining	Prof. Bruhns.
Memel			29.54	750.4	36.7	2.6	79	SSW			4		2	SSW		0	0		Reinbrecht & Skalweit.
Münster			29.53	750.1	44.2	6.8	93	SW			5		10			0.114	2.9		Prof. E. Reis.
Neufahrwasser			29.55	750.6	41.7	5.4	66	SSW			3		6			0	0		A. Lothes.
Posen			29.70	754.3	45.1	7.3	62	SW			5		3			0.059	1.5		Dr. Magener.
Strassburg, (in Alsace)			29.93	760.1	44.4	6.9	78	SW			3		10			0.008	0.2		Dr. Schur.
Stuttgart			29.92	759.9	42.3	5.7	79	W					10			0.024	0.6	Light rain	Prof. Schoder.
Thorn			29.66	753.4	42.1	5.6	70	W			5		5			0.083	2.1		Dr. Hasenbalg
Treves, (Trier)			29.72	754.8	44.6	7.0	86	SW			8		10			1.122	3.1		Prof. Flesch.
Wustrow, Naval School			29.36	745.7	36.7	2.6	93	SSW			8		10			0.004	0.1	Raining	E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.93	760.1	52.0	11.1	51	SW	1.8	0.8			3			0	0		
Padua			29.97	761.1	51.1	10.6	61	SW	3.8	1.7			3	NNW		0	0		
Vicenza			29.96	760.9	52.2	11.2	50	SW	6.3	2.8			2			0	0		
Verona			29.95	760.8	60.1	15.6	55	W			1		0			0	0		
Bergamo	28.60	726.5	29.92	760.0	50.0	10.0	60	SW			4		3			0	0		
Domodossola	28.90	734.1	29.93	760.2	56.3	13.5	32	NE			6		5			0	0		
Milan			29.99	761.7	57.7	14.3	37	NW			2		3	NW		0	0		
Pavia			29.99	761.7	55.9	13.3	43	SE			4		3	SW		0	0		
Moncalieri			29.97	761.1	55.6	13.1	24	ESE	14.3	6.4			2	NW		0	0		
Mondovi	28.04	712.1	29.95	760.8	53.6	12.0	17	ENE			2		1	NNW		0	0		
Porto Maurizio			30.04	763.0	56.8	13.8		SW			4		3	SW		0	0		
Genoa			29.97	761.3	60.3	15.7	17	NW	3.8	1.7			2	N		0	0		
Piacenza			29.99	761.8	54.1	12.3	67	SSW	1.8	0.8			5			0	0		
Parma			29.99	761.7	55.0	12.8	68	SSW			2		1			0	0		
Bologna			30.02	762.6	54.1	12.3	37	N			1		4	E		0	0		
Florence			29.99	761.8	58.1	14.5	42	NE			4		3	NE		0	0		
Leghorn			29.97	761.3	57.9	14.4	54	W	4.3	1.9			3			0	0		
Siena	28.74	729.9	29.95	760.6	53.4	11.9	57	NNW	2.5	1.1			4	N		0	0		
Urbino	28.39	721.1	29.96	761.0	46.6	8.1	78	N			4		8			0	0		
Pesaro																			
Ancona			30.04	763.0	54.7	12.6	70	NW			2		3			0.157	4.0		
Grosseto			29.96	761.0	60.4	15.8	47	NNW			6		4	NW		0	0		
Rome			29.97	761.1	61.0	16.1	42	W	14.3	6.4			1			0	0		
Naples, O. U.			30.02	762.4	57.2	14.0	54	WNW			8		1	NW		0	0		
Lecce			29.93	760.3	62.6	17.0	59	W	18.6	8.3			10			0	0		
Cosenza			30.02	762.5	59.7	15.4	65	NW	1.3	0.6			10			0	0		
Riposto, (Sicily)			29.98	761.6	66.9	19.4	61	SSE			2		1	NW		0	0		
Palermo			30.10	764.5	58.3	14.6	55	NE	4.9	2.2			0			0	0		
Caltanissetta	28.09	713.4	30.04	763.1	57.6	14.2	59	W			2		4	E		0	0		
Sub-Series.																			
Naples, S. R.			30.01	762.3	56.5	13.6	60	SW	18.6	8.3			..k	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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.62	752.3	47.1	8.4		W			5								
Groningen			29.34	745.1	44.6	7.0		WSW			6								
Helder			29.41	746.9	45.0	7.2		NW			5								
Utrecht			29.47	748.6	47.5	8.6	85	WSW			6		10					Overcast	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			28.78	731.1	33.8	1.0	92	S	29.5	13.2			10			0.441	11.2		
Brönö			28.91	734.2	32.4	0.2	43	S	20	9			2			0	0		
Christiania			29.06	738.1	30.2	— 1.0	65	Calm	0	0			9			0	0		
Tromsö			28.87	733.2	29.1	— 1.6	72	SW	7	3			0			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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,)			30.39	771.9	57.6	14.2	82	SSW	4.1	1.84			6			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.12	765.1	58.3	14.6	33	E	21.3	9.50			5	E		0.083	2.1		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.20	767.1	61.9	16.6	47	SW	4.00	1.79			8			0	0		Capt. D. A. da Cunha.
Lisbon			30.15	765.8	55.4	13.0	47	NE	28.6	12.8			8	ENE		0.067	1.7		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Warsaw			29.73	755.2	43.7	6.5	67	WSW	11	5			7						Astronomical Obs.
Wilna			29.70	754.3	39.2	4.0	78	S	9	4			6						Astronomical Obs.
Dorpat			29.62	752.4	35.4	1.9	69	SW	13	6			0						Physical Cabinet.
St. Petersburg			29.56	750.7	34.9	1.6	71	WSW	13	6			5						Central Physical Obs.
Kuopio			29.26	743.3	32.0	0.0	96	SW	22	10			8					Snowing	Ch. Forsten.
Kieff			29.62	752.3	45.7	7.6	80	WNW	4	2			10					Raining	Physical Cabinet.
Nikolaiev			29.85	758.2	51.1	10.6	70	S	25	11			4						Kurdakof.
Kertch			30.01	762.2	47.5	8.6	87	S	9	4			10					Misty	Lagorio.
Moscow			29.78	756.5	34.5	1.4	91	S	4	2			10					Snowing	Meteorological Obs.
Lugan			29.92	759.9	40.5	4.7	76	SSW	13	6			3						Meteorological Obs.
Archangel			29.16	740.7	35.2	1.8	85	WSW	34	15			10					Raining	Ogorodnikof.
Tiflis	28.60	726.5	29.98	761.4	65.8	18.8	35	S	11	5			3						Physical Observatory.
Astrakhan			30.22	767.5	42.4	5.8	81	Calm	0	0			0						Sebastianof.
Kasan			29.93	760.3	29.3	— 1.5	92	SW	4	2			8						Physical Cabinet.
Orenburg			30.37	771.3	29.3	— 1.5	88	E	2	1			10						Tschernischef.
Ekaterinburg	29.08	738.7	30.09	764.2	46.0	7.8	47	SW	4	2			1						Meteorological Obs.
Nukuss			30.00	762.1	59.9	15.5	32	NNE	13	6			2						
Kasaly																			
Tashkend	28.43	722.1	30.12	764.9	60.8	16.0	41	E	4	2			10						Bobrof.
Barnaul			30.18	766.5	28.3	— 6.4	73	W	2	1			5						Michelson.
Yeniseisk			29.66	753.4	25.9	— 3.4	94	SW	7	3			10					Snowing	Meteorological Obs.
Irkutsk																			Marks.
Oorga																			Usolzef.
Peking, (China)			30.00	761.9	36.7	2.6	54	SSW	4	2			3						Mossin.
Nertchinsk	27.59	700.8	29.89	759.1	— 6.7	—21.5	79	Calm	0	0			0						Physical Observatory.
Vladivostock			29.95	760.6	22.1	— 5.5	34	Calm	0	0			0						Meteorological Obs.
Nikolaievsk, on the Amoor					12.9	—10.6	90	W	13	6			10					Snowing	

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 400. meters, or 1,311.8 feet; Ekaterinburg, 395.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Madrid			30.24	768.2	52.9	11.6	42	NE	9.7	4.34		0	0			0	0	Clear	Royal Observatory.
San Fernando			30.05	763.2	63.9	17.7	61	ESE	16.1	7.2		0	10		E	0	0		The Naval Observatory

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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			29.08	738.5	30.2	— 1.0	96	SW			2		8			0	0		
Umea			29.11	739.3	27.5	— 2.5	77	SW			2		1			0.319	8.1		
Hernosand			29.06	738.0	28.4	— 2.0	96	NW			2		0			0	0		
Stockholm			29.20	741.7	34.5	1.4	71	S			4		10			0.028	0.7		
Wisby			29.47	748.5	35.6	2.0	78	SW			6		5			0.087	2.2		
Sub-Series.																			
Upsala			29.18	741.1	32.2	0.1	91	SSW	19.5	8.7			10			0.046	1.18	Snowing	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.72	729.5	30.17	766.4	44.2	6.8	54	S			4		10			0.016	0.4	Covered	The Observatory.
Zurich	28.39	721.0	30.07	763.8	40.5	4.7	78	W			2		10			0	0	Covered	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +4.7 mm.; Thermometer, —0.7 cent.; Relative Humidity, —7 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.89	759.1	64.4	18.0	52	S	4	2.0			2		SW	0	0		
Fao, (Persian Gulf)			30.19	766.9	71.6	22.0		SE			3		0						
Salonica			29.81	757.2	68.7	20.4		S			1		0						
Valona			29.77	756.2	63.5	17.5		S			3		10						
Varna			29.74	755.5	60.8	16.0		N			2		2						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			30.08	764.0	66.9	19.4	63	W			2		2ks		SW	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.58	751.3	24.7	— 4.1	81	NW	0.2	0.1						0	0		Hon. J. Ferguson.
Brockville, Ontario			30.50	774.7	6	—14.4		SW	10	4.5		0	0			0.13	3.3	Clear	W. R. Bigg.
*Chatham, N. B.			29.60	751.8	32	0.0	97	SW	13	5.8			10ks		SW	0.16	4.1	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			29.61	752.1	33	0.6	99	S	3	1.3			10n			0.05	1.3	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.34	770.6	6.7	—14.1	41	W			2					0.030	0.76	Bright	James Smith, M. A.
Dalhousie, N. B.			30.67	779.0	22.3	— 5.4	88	W			5					0.05	1.3	Overcast	H. A. Johnson.
Esquimault, B. C.			30.17	766.3	33.1	0.6	89	Calm	0	0		4cs				0	0	Cloudy	W. H. Bevis.
Fredericton, N. B.			29.77	756.1	13.3	—10.4	76	N	19	8.5			10s			0.170	4.32		Prof. Harrison.
*Fort Garry, Manitoba			30.62	777.7	—16	—26.7	100	Calm	0	0		0	2s			0	0	Fair	James Stewart.
Goderich, Ontario			30.54	775.7	12.7	—10.7	71	NW			2	6ck		W		0	0	Fine	H. J. Strang, M. A.
Granton, Ontario			30.51	774.9	10.6	—11.9		SW			1	1cs		E		0	0	Clear	James Grant.
*Halifax, N. S.			29.62	752.3	32	0.0	95	SE	1	0.4			Fog			0.08	2.0	Foggy	F. Allison, M. A.
*Kingston, Ontario			30.52	775.2	5	—15.0	74	NW	10	4.5		0	0			0.10	2.5	Clear	S. Woods, M. A.
Little Current, Ontario			30.56	776.2	7.6	—13.6		NW	2	0.9			0			0	0		G. B. Abrey, C. E.
*Montreal, Quebec			30.26	768.6	5	—15.0	63	W	36	16.1		0	2ks			0.12	3.0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.39	771.9	— 2	—18.9	90	W	14	6.3		0	0			0.20	5.1	Clear	J. B. Haney.
*Parry Sound, Ontario			30.57	776.5	— 9	—22.8	78	W	3	1.3		0	0			0.10	2.5	Clear	Rev. R. Mooley.
*Port Dover, Ontario			30.55	776.0	6	—14.4	90	Calm	0	0		2k	0	NW		0.07	1.8	Fair	H. Morgan.
Port Hastings, N. S.			29.64	752.8	32.7	0.4		SE	3	1.3						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.52	775.2	8	—13.3	78	NW	5	2.2			10ks		W	0	0	Cloudy	M. Payne.
*Quebec, Quebec			30.01	762.2	3	—16.1	95	SW	13	5.8			10n		SW	0.60	15.2	Cloudy	Capt. Ash, R. N.
St. John, N. B.			29.64	752.8	23	— 5.0	80	NW	12	5.4			10s			0.060	1.52		G. Murdoch, C. E.
*Saugeen, Ontario			30.52	775.2	1	—17.2	60	Calm	0	0		0	0			0.12	3.0	Clear	K. Stewart.
Stayner, Ontario			30.53	775.4	5	—15.0	85	Calm	0	0		0	0			0.20	5.1	Clear	R. J. Cole.
Stratford, Ontario			30.53	775.4	9.3	—12.6	94	Calm	0	0		3cs		NW		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.65	753.1	36	2.2	93	NE	1	0.4			10n			0.03	0.8	Light rain	T. C. Hill.
*Toronto, Ontario			30.56	776.2	8	—13.3	78	NW	9	4.0		0	0			0.05	1.3	Clear	Magnetic Observatory
Woodstock, Ontario																			J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			30.33	770.4	13	−10.6	62	NW	13	5.8		2k	0	NW		0.10	2.5	Clear	
Alpena, Mich.			30.52	775.2	7	−13.9	77	NW	4	1.8		5c	0	W		Inap.	Inap.	Fair	
Atlantic City, N. J.			30.34	770.6	26	− 3.3	64	W	14	6.3		0	0			0	0	Clear	
Augusta, Ga.			30.38	771.6	44	6.7	84	NE	2	0.9		0	0			0	0	Clear	
Baltimore, Md.			30.40	772.1	28	− 2.2	65	NW	6	2.7		0	Sm'e			0	0	Clear	
Barnegat, N. J.			30.31	769.9	27	− 2.8	.77	NW	21	9.4		0	0			Inap.	Inap.	Clear	
Benton, Montana	27.52	699.0	30.32	770.1	−33	−36.1	100	Calm	0	0		0	0			0.01	0.3	Clear	
Bismarck, Dakota	28.51	724.1	30.40	772.1	− 4	−20.0	64	N	7	3.1		5k	0	NW		0.34	8.6	Fair	
Boston, Mass.			30.07	763.8	18.5	− 7.5	76	W	22	9.8		Haze	1s		W	0.08	2.0	Clear	
Breckenridge, Minn.			30.33	770.4	10	−12.2	80	NE	12	5.4			10s			0.04	1.0	Cloudy	
Buffalo, N. Y.			30.51	774.9	11.5	−11.4	60	NW	8	3.6		0	0			0.01	0.3	Clear	
Burlington, Vt.			30.28	769.1	7	−13.9	65	N	12	5.4		2k	0	N		0.24	6.1	Fair	
Cairo, Ill.			30.29	769.4	39	3.9	55	SE	12	5.4		5cs	0			0	0	Fair	
Cape Hatteras, N. C.			30.31	769.9	41	5.6	64	NE	21	9.4		0	0			0	0	Clear	
Cape Henry, Va.			30.41	772.4	42	5.6	58	N	20	8.9		0	0			0	0	Clear	
Cape May, N. J.			30.36	771.1	28	− 2.2	67	NW	24	10.7		0	0			0	0	Clear	
Charleston, S. C.			30.37	771.4	47	8.3	48	S	10	4.5		0	0			0	0	Clear	
Cheyenne, Wyoming	23.82	605.0	29.76	755.9	8	−13.3	100	N	24	10.7			10n			0.13	3.3	Light snow	
Chicago, Ill.			30.33	770.4	34	1.1	61	SE	10	4.5		2c	5s	W		0	0	Fair	
Cincinnati, Ohio			30.42	772.7	32	0.0	79	E	4	1.8		5ck	0			0	0	Fair	
Cleveland, Ohio			30.54	775.7	11.8	− 9.6	84	E	5	2.2		0	Sm'e		E	0.01	0.3	Smoky	
Colorado Springs, Col.	23.81	604.8	29.68	753.9	23	− 5.0	60	E	22	9.8		0	8ks		SW	0	0	Fair	
Corsicana, Tex.			30.03	762.7	49	9.4	85	E	4	1.8			10s		S	0.01	0.3	Cloudy	
Davenport, Iowa			30.20	767.1	34	1.1	69	SE	8	3.6		10cs	0			0	0	Cloudy	
Denison, Tex.			29.97	761.2	50	10.0	71	SE	8	3.6			10s			0	0	Cloudy	
Denver, Col.	24.64	625.8	29.86	758.4	21	− 6.1	86	N	10	4.5			10s			0.10	2.5	Threatening	
Detroit, Mich.			30.50	774.7	20	− 6.7	70	SE	5	2.2		2cs	0			0	0	Clear	
Dodge City, Kan.	27.10	688.3	29.37	746.0	40	4.4	64	W	19	8.5			10s			0	0	Cloudy	
Dubuque, Iowa			30.24	768.1	32	0.0	79	SE	8	3.6			10s			0	0	Cloudy	
Duluth, Minn.			30.45	773.4	11	−11.7	79	NE	12	5.4			10s			0	0	Cloudy	
Eastport, Me.			29.79	756.7	12	−11.1	61	NW	26	11.6		2c	8s		NW	0.15	3.8	Cloudy	
Erie, Pa.			30.54	774.7	13	−10.6	81	NW	2	0.9		2cs	Sm'e			Inap.	Inap.	Fair	
Escanaba, Mich.			30.54	775.7	7	−13.9	77	N	8	3.6			10s			0	0	Cloudy	
Fort Gibson, Indian Terr.			29.99	761.7	46	7.8	47	SE	14	6.3		10cs	0			0	0	Cloudy	
Ft. St. Michaels, Alaska			30.47	773.9	21	− 6.1		S	38	17.0			10s			0	0	Cloudy	
Fort Sill, Indian T.	28.05	727.7	29.77	756.1	43	6.1	75	S	24	10.7			10n		S	0	0	Threatening	
Fort Sully, Dakota	28.43	722.1	30.25	768.3	10	−12.2	89	NE	21	9.4			10n			Inap.	Inap.	Light snow	
Galveston, Tex.			30.01	762.7	62	16.7	95	E	6	2.7			10n		E	0.20	5.1	Light rain	
Grand Haven, Mich.			30.42	772.7	21	− 6.1	71	E	7	3.1			10s		W	Inap.	Inap.	Cloudy	
Indianapolis, Ind.			30.40	772.1	31	− 0.6	79	E	8	3.6		5cs	2s	W	W	0	0	Fair	
Indianola, Tex.			30.01	762.2	60	15.6	94	NE	14	6.3			10n			0.39	9.9	Light rain	
Jacksonville, Fla.			30.28	769.1	52	11.1	73	NE	8	3.6		0	0			0	0	Clear	
Keokuk, Iowa			30.19	766.8	37	2.8	62	SE	7	3.1		8k	0	SE		0	0	Fair	
Key West, Fla.			30.14	765.5	72.8	22.7	81	E	9	4.0		0	1ks		E	0	0	Clear	
Kittyhawk, N. C.			30.44	773.2	38	3.3	63	NE	24	10.7		0	0			0	0	Clear	
Knoxville, Tenn.			30.40	772.1	34	0.0	69	NE	4	1.8		1c	Fog	SW		0	0	Fair	
La Crosse, Wis.			30.25	768.3	27	− 2.8	100	SE	7	3.1			10n			Inap.	Inap.	Light snow	
Leavenworth, Kan.			29.96	761.0	39	3.9	55	SE	8	3.6		0	5s			0	0	Fair	
Lexington, Ky.	29.26	743.2	30.14	773.2	29	− 1.7	78	NE	4	1.8		5c	0			0	0	Fair	
Long Branch, N. J.			30.32	770.1	26	− 3.3	52	NW	20	8.9		2k	0	NW		Inap.	Inap.	Clear	
Louisville, Ky.			30.29	769.4	37	2.8	53	NE	5	2.2		8c	2s	W		0	0	Cloudy	
Lynchburg, Va.			30.43	772.9	36	2.2	41	NW	6	2.7		10k	0	W		0.11	2.8	Clear	
Malone, N. Y.			30.35	770.9	1	−17.2	78	W	18	8.0		0	0			0.16	4.1	Clear	
Manhattan, Kan.	28.60	726.4	29.75	755.6	39	3.9	81	SW	15	6.7		0	8ks			0	0	Cloudy	
Marquette, Mich.			30.55	776.0	9	−12.8	78	NW	4	1.8			8s		W	0	0	Cloudy	
Memphis, Tenn.			30.25	768.3	40	4.4	61	SE	2	0.9			10s			0	0	Cloudy	
Milwaukee, Wis.			30.41	772.4	25	− 3.9	88	E	11	4.9			10s			0	0	Cloudy	
Mobile, Ala.			30.23	767.8	46	7.8	84	E	6	2.7		10c	0			0	0	Cloudy	
Montgomery, Ala.			30.31	769.9	43	6.1	54	NE	6	2.7		0	Sm'e			0	0	Clear	
Morgantown, W. Va.			30.50	774.7	26	− 3.3	64	Calm	0	0		0	0			Inap.	Inap.	Clear	
Mt. Washington, N. H.	23.07	586.0	29.43	747.5	−30	−28.9	100	NW	60	26.8			Fog			0.14	3.6	Foggy	
Nashville, Tenn.			30.32	770.1	37	2.8	71	Calm	0	0		5cs	0			0	0	Fair	
New Haven, Conn.			30.23	767.8	20	− 6.7	39	NW	24	10.7		0	0			0.02	0.5	Clear	
New London, Conn.			30.24	767.1	19.5	− 6.9	54	NW	25	11.2		0	0			0.17	4.3	Clear	
New Orleans, La.			30.18	766.6	51	10.6	72	NE	8	3.6		8c	Haze	W		0	0	Fair	
Newport, R. I.			30.14	765.5	21	− 6.1	71	W	20	8.9		0	0			0.20	5.1	Clear	
New York, N. Y.			30.31	769.9	20	− 6.7	53	NW	22	9.8		0	0			Inap.	Inap.	Clear	
Norfolk, Va.			30.43	772.9	35	1.7	54	N	7	3.1		0	Haze			0	0	Clear	
North Platte, Neb.	26.91	683.5	29.60	751.8	19	− 7.2	84	N	20	8.9			10s			0	0	Cloudy	
Omaha, Neb.	28.80	731.5	29.88	758.9	40	4.4	64	SE	6	2.7		8cs	Haze			0	0	Cloudy	
Oswego, N. Y.			30.46	773.7	12	−11.1	79	NW	15	6.7		0	0			Inap.	Inap.	Clear	
Pembina, Dakota			30.59	777.0	−20	−28.9	100	NW	4	1.8		0	0			0	0	Clear	
Philadelphia, Penn.			30.37	771.4	26	− 3.3	64	N	24	10.7		0	0			0	0	Clear	
Pike's Peak, Colorado	17.36	440.9	29.57	751.1	7	−13.9	100	SW	12	5.4			10n			0.09	2.3	Light snow	
Pittsburgh, Penn.			30.51	774.9	22	− 5.6	59	NW	4	1.8		2c	0			0	0	Fair	
Port Huron, Mich.			30.53	775.4	12	−11.1	8	W	3	1.3		1c	2s			Inap.	Inap.	Fair	
Portland, Me.			30.00	762.0	16	− 8.9	66	N	8	3.6		1k	0	N		0.38	9.7	Clear	
Portland, Oregon			30.36	771.1	38	3.3	90	S	8	3.6			10s			0	0	Clear	
Punta Rassa, Fla.			30.19	766.8	65	18.3	63	NE	16	7.2			10ks		NE	0	0	Cloudy	
Rochester, N. Y.			30.48	774.2	14	−10.0	82	W	10	4.5		0	1cs			0.02	0.5	Clear	
Salt Lake City, Utah	25.44	646.2	29.77	756.1	28	− 2.2	88	N	6	2.7			10n			0.24	6.1	Light snow	
Sandy Hook, N. J.			30.30	769.6	22	− 5.6	72	NW	45	20.1		0	1s		NW	0	0	Clear	
San Diego, Cal.			29.97	761.2	53	11.7	79	W	4	1.8		0	10s			0	0	Cloudy	
San Francisco, Cal.			30.13	765.3	47	8.3	48	N	16	7.2		0	0			0	0	Clear	
Santa Fe, N. M.	22.96	583.2	29.50	749.3	32	0.0	69	SE	5	2.2		2cs	5s	SW		0	0	Fair	
Savannah, Ga.			30.35	770.9	47	8.3	60	NE	8	3.6		0	0			0	0	Clear	
Shreveport, La.			30.19	766.8	48.5	9.2	81	Calm	0	0		5cks	5ks	SW		0.01	0.3	Cloudy	
Smithville, N. C.			30.39	771.9	42	5.6	48	N	12	5.4		0	0			0	0	Clear	
Springfield, Mass.			30.22	767.6	18	− 7.8	35	NW	20	8.9		0	0			0.27	6.9	Clear	
St. Louis, Mo.			30.27	768.8	36	2.2	70	S	4	1.8		5c	0			0	0	Fair	
St. Marks, Fla.			30.27	768.8	44	6.7	67	NE	6	2.7		0	0			0	0	Clear	
St. Paul, Minn.			30.20	767.1	21	− 6.1	78	NE	9	4.0			10n			0.10	2.5	Light snow	
St. Paul's Island, Alaska			30.70	779.8	30	− 1.1	89	SE	1	0.4			10s			0	0		
Thatcher's Island, Mass.			30.07	763.8	18	− 7.8	52	NW	26	11.6		0	0			0.3	7.6	Clear	
Toledo, Ohio			30.45	773.4	23	− 5.0	73	Calm	0	0		0	Sm'e			0	0	Clear	
Tucson, Arizona	27.32	693.9	29.91	759.7	46	7.8		E				2c	0			0	0	Clear	
Tybee Island, Ga.			30.35	770.9	53	11.7	59	NE	18	8.0		2c	Haze	E		0	0	Fair	
Vicksburg, Miss.			30.23	767.8	46	7.8	54	SE	1	0.4		8ck	2s	SW		0	0	Cloudy	
Virginia City	24.17	613.9	29.65	753.1	15	− 9.4	65	Calm	0	0		10ck	0			0.02	0.5	Cloudy	
Washington, D. C.			30.44	773.2	28.5	− 1.9	59	NW	12	5.4		Haze	Sm'e			0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.40	772.1	42	5.6	42	NE	7	3.1		0	0			0	0	Clear	
Wood's Holl, Mass			30.11	764.8	24	— 4.4	61	NW	25	11.2		0	0			0.13	3.3	Clear	
Wytheville, Va	27.93	709.4	30.22	767.6	29	— 1.7	67	Calm	0	0		0	0			0	0	Clear, frost	
Yankton, Dakota	28.65	727.7	29.99	761.7	27	— 2.8	82	NE	13	5.8			10s			0	0	Cloudy	
Yuma, Arizona			29.90	759.4	57	13.9		NW				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I			30.08	764.0	81	27.2	70	NE	6	2.7		5k	8ks	SE	NE	0	0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.03	762.7	75	23.9	81	E				10c	0			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.29	769.4	74	23.3	63	ENE	2	0.9		4ck	4kn	NE		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I			30.21	767.3	73	22.8	81	Calm	0	0		2c	2s			0	0		James Gall.
Santiago de Cuba, W. I			29.89	759.2	72	22.2	71	N	7 2	3.2		0	0			0	0	Clear	Robert Mason.
Havana, Cuba, W. I			30.16	766.1	72	22.2	76	SE	24	10.7		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			30.02	762.5	62.0	16.7	91	N	24.0	10.7			10n		N	0.06	1.5	Light rain	C. F. Allen.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Navassa, W. I																			
Clifton, Jamaica, W. I	27.20	690.9	30.02	762.5	61	16.1	78	N	5.0	2.2		2c	0	NNE		0	0	Fair, clear	C. Partridge.
Paramaribo, D. Guiana, S. A			29.98	761.5	80	26.7	87	E			2		6ks			0.180	4.57	Rainy	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.02	762.4	77.0	25										0.079	2.00		Dr. H. Groot.
Medellin, Colombia, S. A	25.17	639.3			64.0	17.8	85		0	0		4k	3s			0.15	3.8	Fair	Thomas Herran.
St. Johns, Newfoundland			29.82	757.4	35.0	1.7	100	NE					10n			0.25	6.3	Light rain	John Delaney.
York Factory, B. A			30.62	777.7	—31	—35.0		NW	8	3.6		1c	Fog	W		0	0		J. Fortescue.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Manhattan, 1,125.0 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 15, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	61.3	16.3	67	NNW			2		10			0	0	Hidden.	Charnot.
Algiers			30.03	762.8	62.6	17.0	90	NE			1		2			0	0	Clear	Peter.
La Calle																			Kuntz.
Tunis			30.10	764.5	62.4	16.9	55	E			4		2			0	0	Clear	Jacques.
Sfax			30.15	765.7	66.2	19.0	54	N			2		1			0	0	Clear	Chauvey.
Saida			30.09	761.9	84.2	29.0		SE			6		6			0	0	Fair	Millot.
Tebessa			30.07	763.7	82.6	28.1		SSW			4		2			0	0	Clear	Colin.
Gerlville			30.03	762.7	70.3	21.3	14	SE			2		1			0	0	Clear	Buard.
Laghouat			30.06	763.5	68.0	20.0	64	N			2		1			0	0	Clear	Guyot.
Biskra			30.08	763.9	76.5	24.7	26	ENE			1		3			0	0	Fair	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.95	760.6	55.8	13.2	42	SW			6		2			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.71	754.7	54.3	12.4	40	WSW			4		7			0	0		I. R. Observatory.
Sperles			29.82	757.5	52.5	11.4	55	S			4		6		N	0	0		Julius Mikolik.
Gratz	28.77	730.8	29.98	761.4	52.5	11.4	55	SW			2		0			0	0		Andreas Rospini.
Hermannstadt	28.54	725.0	29.98	761.5	48.2	9.0	57	NW			3		3			0	0		Prof. Reissenberger.
Kremsmünster	28.37	720.5	29.70	754.4	50.0	10.0	57	N			3		2			0	0		Prof. C. Wagner.
Lemberg			29.77	756.1	45.0	7.2	66	S			3		2			0	0		Dr. T. Stanecki.
Nyiregyhaza			29.94	760.5	54.0	12.2	63	SW			3		5			0	0		Habzsuda Daniel.
Pola			30.05	763.3	54.0	12.2	74	SSE			2		18			0	0		I.R. Hydrographic Of'ce
Szegedin			29.98	761.4	54.7	12.6	49	W			2					0	0		Karl Stancel.
Trieste			30.04	763.0	52.5	11.4	78	NW			1		0			0	0		Prof. V. Farolfi.
Vienna			29.71	754.6	61.7	16.5	36	SSE			2		3			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.30	744.2	46.2	7.9	91	NW			7		10			0.039	1.00	Storm	Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			28.63	727.2	34.0	1.1		W	30	13.4			10			0.050	1.27	Snow-squalls	William Boswell.
Ardrossan			28.94	735.1	43	6.1		WNW			7		7					*D. clouds	J. Mayes.
Armagh Observatory			29.22	742.2	36.9	2.7		NW	19	8.5			7					*D. clouds	S. Cal., for Dr. Robinson
Bidston, Liverpool Obs.			29.05	737.9	42.2	5.7		W	56	25.0			6					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			29.35	745.5	43.2	6.2		WNW			4–5		7					*D. clouds	J. Dreyer.
Bradford			28.97	735.8	41.1	5.1		W			4		2			0.55	14.0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	80.6	27.0		NE			3		6					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			29.19	741.4	48.2	9.0		WSW			4		10			Blank	Blank	Overcast	H. Todd.
Cardington			29.21	741.9	48.0	8.9		W			7		3					*D. clouds	John McLaren.
Carlisle			28.92	734.6	41	5.0		W			8		4			0.31	7.9	*D. clouds	Capt. Bell, for J. Cartmell.
Chatham, School M. E.			29.24	742.7	45.2	7.3		SW			2		7					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	28.02	711.7	29.52	749.8	42.0	5.6		NW			8		6					*D. clouds	R. E. Power.
Donaghadee			29.09	738.9	44	6.7		WNW			6		10					Overcast	J. Mac Gowan.
Dover			29.28	743.7	45	7.2		W			6		3					¼ clouded	J. Costello.
Eccles, (near Manchester)			29.06	738.1	36.9	2.7		W	31.0	13.9			10					Squally	Thomas Mackereth.
Falmouth Observatory			29.52	749.8	47.2	8.4		WNW	46	20.6			6					Squally	The Staff.
Fort Napier, (Natal)	27.53	699.2	29.77	756.1	87.3	30.7		Calm			0		9					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	87	30.6		N			1		4					Blue sky	
Galway, Queen's College			29.49	749.0	43	6.1		WNW			7		8					Raining	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.02	762.5	62.5	16.9		SE			4		7					Levanter	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			28.84	732.5	39.8	4.3		W			7		6					Squally	Lewis Stuart.
Great Yarmouth			29.10	739.1	46	7.8		W			6		4					Squally	G. T. Watson.
Greenwich Royal Obs.			29.26	743.2	49.0	9.4		W			6		7			Blank	Blank	*D. clouds	The Staff for G. B. Airy.
Guernsey			29.50	749.3	46	7.8		WNW			6		10					Squally	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.05	737.9	41.4	5.2		W			5		7			Blank	Blank	Squally	L. J. Cresley.
Helston			29.50	749.3	51	10.6		W			4		6			0.5	12.7	Showery	M. P. Moyle.
Holyhead			29.20	741.7	44	6.7		WNW			8		3					*D. clouds	John Tilston.
Kew Observatory			29.27	743.4	48.0	8.9		W	32	14.3			7					*D. clouds	The Staff.
Kingstown			29.24	742.7	43	6.1		WNW			7		9					Squally	George Mitchell.
Leicester Museum			29.16	740.7	44	6.7		W			6		8					Squally	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.13	765.3	60.0	15.6		NW			1		2k						Fred Travis, Pvt A.H.C.
Nairn			28.72	729.5	40	4.4		WNW			6		10			Blank	Blank	Overcast	W. D. Penny.
Nassau, (Bahamas)			30.22	767.6	75.6	24.2		E			4		5					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.11	739.4	47.2	8.4		SW			6		6k,ka,d	SW	W	0.309	7.85	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.14	740.1	45.0	7.2		W			6		8					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.15	740.4	47	8.3		W			5		4					*D. clouds	J. Lucas.
Plymouth			29.46	748.3	49	9.4		WNW			5		2					*D. clouds	John Merrifield.
Roche's Point			29.47	748.5	41	6.7		WNW			7		10					Raining	W. Kennedy.
Saint Ann's Head			29.29	744.0	44	6.7		WNW			8		7					Squally	John C. Walker.
Saint Helier, (Jersey)			29.51	749.5	47.5	8.6		W			6		10					Raining	A. P. Amy.
Sandwick Manse (Orkneys)			28.57	725.7	38.8	3.8		NW	40	17.9			7					Showery	Rev. Dr. Clouston.
Scarborough			28.89	733.8	43.0	6.1		W			7		5					*D. clouds	F. Shaw.
Scutari Cemetery (Turkey)			29.95	760.7	43.0	6.1		N			2		10					Rain & mist	Sergt. W. H. Lyne.
Sheffield			29.04	737.6	41.3	5.2		W			6		10			0.574	14.58	Hailing	W. F. Cooper.
Silloth Rectory			28.94	735.1	45.1	7.3	72	NW			6		5			0.100	2.54	Overcast	Rev. Francis Redford.
Stonyhurst Observatory			29.02	737.1	39.6	4.2		W			6		9			Blank	Blank	Squally	S. J. Perry.
Stornoway, Lewis C. (Hebr.)			28.84	732.5	38	3.3		NW			8		10					Snowing	John Smith.
Stratfield Turgiss			29.29	744.0	47.8	8.8		W			2–3		5					Squally	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			28.58	725.9	40	4.4		NNW			7		7					Showery	John Trotter.
Truro, Royal Institution			29.55	750.6	50	10.0		NW			6		10					*D. clouds	W. Newcombe.
Valencia Observatory			29.56	750.8	38.0	3.3		W	25	11.2			10					*D. clouds	The Staff.
Sub-Series.																			
Cape Good Hope Obs.			29.86	758.4	66.4	19.1	80	WNW	9	4.0			10						The Staff, for E. J. Stone.
Calf of Man, (Isle of Man)					40	4.4		NW			8		5			0	0		
Leith, Restalrig Park			28.82	732.0	43.9	6.6		W			6		3k			0.44	11.2	Cloudy	Andrew Gibb.
Mauritius			30.02	762.5					24.1	10.8						0	0		
Monach Lt-house, Hebrides			29.02	737.1	40	4.4		NNW			7	5	5	NW		0.2	5.1		J. Youngclause.
North Unst, (Shetland Is.)			28.44	722.4	39	3.9		N			4		10			Blank	Blank		

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.84	732.5	39.2	4.0	93	SW			6		10					Misty	
Fanöe			28.84	732.4	36.1	2.3	84	W			6		10					Hailing	
Godthaab, (Greenland)			30.08	764.0	11.1	—11.6		ENE			6		5						
Stykkisholm, (Iceland)																			
Thorshavn, (Faröe)			28.91	734.3				N			6		10					Snowing	
Vestervig			28.69	728.6	39.2	4.0	84	SW			7		6					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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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			29.65	753.0	50.0	10	81	SW			6		10			0.094	2.4	Covered	Normal School.
Amiens			29.56	750.8	46.8	8.2	89	N			3		5		N	0.173	4.4	Cloudy	Normal School.
Avignon			30.07	763.7	60.1	15.6	39	WNW			2		0			0	0	Very clear	Normal School.
Bar-sur-Seine			29.78	756.3	48.6	9.2	64	SSW			6		10		SW	0.031	0.8	Covered	C. Saillard.
Beaumette, (near Angers)			29.74	755.3	49.6	9.8	92	SW	45.6	20.4			10		SW	0.083	2.1	Raining	Beaumette Observatory
Beauvais			29.52	749.8	50.9	10.5	72	SW			6		10		WSW	0.010	0.25	Covered	Normal School.
Besançon			29.89	759.3	50.0	10	62	SW			6		5		W	0.024	0.6	Cloudy	Normal School.
Bourg en Bresse			29.94	760.4	59.0	15	78	S			6								Normal School.
Bourges			29.87	758.7	48.9	9.4	79	W			8		10		SW	0	0	Covered	Normal School.
Brest			29.60	751.8	51.6	10.9	86	SW			5		10		SW	0.010	0.25	Raining	Naval Observatory.
Caen																			Normal School.
Chartres			29.64	752.8	49.1	9.5		NE			6		10		E	0	0	Covered	Normal School.
Chaumont																			Normal School.
Clermont			29.89	759.2	56.3	13.5	32	SW			2		5		SW	0	0		Puy de Dome, Obs.
Commercy			29.74	755.3	45.1	7.3	77	SW			8		10kn		SW	0.110	2.8	Covered	Normal School.
Commune de Gréasque*			30.10	764.6	57.2	14.0	57	NW			2		0			0	0		
Grenoble			29.72	754.9	54.0	12.2	50	NW			2		0			0	0	Clear	Normal School.
Le Mans			29.72	754.8	50.5	10.3	74	WNW			6		8		WNW	0	0	Very cloudy	Normal School.
Loches			29.59	751.5	48.2	9	82	SE			6		10			0	0	Covered	Normal School.
Lons-Le-Saulnier			29.86	758.4	49.5	9.7	76	W			2		2			0	0	Slightly cl'dy	Normal School.
Mâcon			29.98	761.5	47.3	8.7	86	Calm			0		0			0	0	Clear	Normal School.
Mirecourt																			Normal School.
Metz			29.72	754.8	46.9	8.3	78	SW			8		10		SW	0.122	3.1	Storm †	M. Schuster.
Nismes			30.06	763.4	62.4	16.9	50	S			2		0			0	0	Clear	Normal School.
Orleans			29.73	755.2	50.0	10	76	SW			6		5		W	0	0	Cloudy	Normal School.
Paris Observatory			29.61	752.1	51.3	10.7	71	SW			6		10		SW	Inap.	Inap.	Covered	National Observatory.
Parthenay			29.89	759.2	48.9	9.4	81	W			8		5		N	0	0	Cloudy	Normal School.
Privas			30.02	762.6	55.8	13.2		E			2		1		E	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			29.89	759.2	51.4	10.8	73	S			6		10			0.008	0.2	Covered	Normal School.
Rochefort, Observatory			30.00	761.9	51.1	10.6	74	WSW			5		10		ENE	0.354	9.0	Covered	Naval Observatory.
Rouen			29.51	749.5	50.7	10.4	82	SW			6		10		W	0	0	Covered	Normal School.
Saint Lo			29.54	750.4	49.5	9.7	97	NW			3		6		W	0	0		Normal School.
Tarbes			30.03	762.7	57.2	14	49	S			2		0			0	0	Clear	Normal School.
Toulouse																			Normal School.
Villefranche			30.03	762.8	56.1	13.4	82	NW			1		0			0.012	0.3	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			30.00	762.1	77.2	25.1	83	NE			2		8c,kn						L'Abbé Marchési.
Gorée																			
Marseilles			30.09	764.2	54.3	12.4	66	W			2		0			0	0	Clear	Marseilles Observatory.
Mont-Louis	24.85	631.1	30.2[illegible]	767.0	48.[illegible]	8.9	25	WSW					0			0	0		—. Faïguère.
Montsouris, Paris			29.61	752.1	50.7	10.4	77	SW			5		10		SW	Inap.	Inap.		Montsouris Observ'tory.
Perpignan			30.09	764.3	54.1	12.2	69	SE	5.6	2.50			1		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.20	538.6			32.9	0.5	92	W			2		0			0	0	Clear	M. Baylac.
Saint Maur, (near Paris)			29.62	752.3	50.4	11.[illegible]	74	SW			6		10			0	0	Covered	E. Renon.
Toulouse			30.10	764.6	53.1	11.7	57	WSW			1		0			0	0		Toulouse Observatory.
Tours			29.99	756.6	52.0	11.1	65	WSW			6		10		W	0.008	0.2		C. Marquet.
Versailles, (near Paris)			29.64	752.8	50.7	10.4	74	W			6		10			0	0	Squally	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lee, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,76[illegible].6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Near Marseilles. † It is not certain that the weather remarks refer to the moment of observation.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Bamberg			29.58	751.2	46.9	8.3	58	SW			8		9			0.059	1.5		Prof. T. Hoh.
Berlin			29.27	743.4	49.6	9.8	59	SW			8		8			0.087	2.2		Prof. Arndt.
Breslau			29.60	751.9	53.8	12.1	46	SW			8		7			0	0		Dr. P. Neugebauer.
Carlsruhe			30.97	753.6	49.6	9.8	52	SW			8		9			0.039	1.0		A. Senz.
Cassel			29.26	743.4	47.8	8.8	67	SSW			8		8			0.240	6.1		Dr. H. Möhl.
Cologne																			Dr. Garthe
Emden																			Prof. Prestel.
Frankfort on the Main			29.65	753.1	46.4	8.0	62	SW			5		9			0.118	3.0	Raining	Physical Society.
Friedrichshafen			29.79	756.6	48.2	9.0	48	W			2		3			0.209	5.3	Föhn	M. Wilhelm.
Hamburg			29.08	738.5	37.0	2.8	96	W			6		10			0.283	7.2		Deutsche Seewarte.
Kiel			29.02	737.2	37.9	3.3	90	SW			5		10			0.811	20.6		Prof. G. Karsten.
Königsberg			29.29	744.0	46.9	8.3	63	SW			7		9			0.059	1.5		Prof. E. Luther.
Köslin			29.19	741.3	47.1	8.4		SW			8		10			0.146	3.7		H. Müller.
Leipsic			29.44	747.7	48.9	9.4	54	SW			8		9	WSW		0.016	0.4	Storm	Prof. Bruhns.
Memel			29.15	740.3	40.1	4.5	87	SW			6		10			0.126	3.2	Showery, squally	Reinbrecht & Skalweit.
Münster			29.18	741.1	46.9	8.3	84	SW			5		10			0.154	3.9		Prof. E. Heis.
Neufahrwasser			29.22	742.1	48.9	9.4	63	SW			7		10			0	0		A. Lothes.
Posen			29.50	749.4	50.0	10.0	89	SSW			8		10			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.75	755.6	50.9	10.5	46	SW			6		10			0.146	3.7		Dr. Schur.
Stuttgart			29.71	754.5	51.3	10.7	47	W					4			0.193	4.9		Prof. Schoder.
Thorn			29.44	747.8	48.2	9.0	64	W			6		9			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.51	749.6	46.4	8.0	78	W			10		10			0.331	8.4	Graupeln	Prof. Flesch.
Wustrow, Naval School			29.0[illegible]	736.6	37.6	3.1	100	SSW			9		10			0.047	1.2	Raining	E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.00	762.0	53.1	11.7	61	S	1.8	0.8			8			0	0		
Padua			30.00	762.0	53.2	11.8	62	SW	0	0			0			0	0		
Vicenza			30.00	762.0	53.2	11.8	56	N	1.3	0.6			0			0	0		
Verona			30.00	761.9	59.0	15.0	46	W			2		0			0	0		
Bergamo	28.61	726.7	29.93	760.2	54.5	12.5	43	SW			4		2			0	0		
Domodossola	28.92	734.6	29.95	760.7	57.6	14.2	31	SSW			4		1			0	0		
Milan			30.02	762.6	57.4	14.1	52	WNW			4		8	SSW		0	0		
Pavia			30.01	762.2	56.7	13.7	35	WSW			4		0			0	0		
Moncalieri			30.00	762.1	54.7	12.6	46	SSE	1.8	0.8			3			0	0		
Mondovi	28.07	712.9	29.98	761.6	51.8	11.0	35	N			2		1	NNW		0	0		
Porto Maurizio			30.11	764.7	55.4	13.0		SW			2		2	NE		0	0		
Genoa			30.08	764.0	58.1	14.5	55	S	8.7	3.9			4	S		0	0		
Piacenza			30.03	762.7	57.2	14.0	33	NE	6.3	2.8			0			0	0		
Parma			29.99	761.8	59.0	15.0	42	SW			4		1	NW		0	0		
Bologna			30.09	764.3	60.4	15.8	24	ESE			1		2	SW		0	0		
Florence			30.11	764.8	59.0	15.0	48	SW			2		3	SW		0	0		
Leghorn			30.11	764.8	57.7	14.3	56	SSE	4.3	1.9			0			0	0		
Siena	28.86	733.0	30.07	763.7	56.3	13.5	47	SW	0.7	0.3			0			0	0		
Urbino	28.59	724.0	30.08	764.1	54.7	12.6	44	SSW			4		0			0	0		
Pesaro			30.04	763.0	60.1	15.6	49	SE			2		0			0	0		
Ancona			30.11	764.7	59.7	15.4	44	SSW			4		1	S		0	0		
Grosseto			30.13	765.3	63.1	17.3	53	SSW	7.4	3.3			2	W		0	0		
Rome			30.15	765.9	62.2	16.8	55	SSW			2		1	NW		0	0		
Naples, O. U.			30.12	765.0	55.6	13.1	58	N	21.7	9.7			1			0	0		
Lecce			30.12	765.0	61.7	16.5	65	NW	1.8	0.8			3			0	0		
Cosenza			30.12	765.0	64.0	17.8	63	SSE			2		1			0	0		
Riposto, (Sicily)			30.11	764.8	59.4	15.2	60	NE	3.1	1.4			0			0	0		
Palermo			30.11	764.8	55.4	13.0	47	N			1		0			0	0		
Caltanissetta	28.15	715.1	30.11	764.8	55.4	13.0	47	N			1		0			0	0		
Sub-Series.																			
Naples, S. R.			30.16	766.1	59.7	15.4	65	SW	4 9	2.2			..k,c	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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.27	743.5	43.2	6.2		W			5								
Groningen			29.00	736.7	41.4	5.2		SW			5								
Helder			29.08	738.5	44.2	6.8		NW			5								
Utrecht			29.15	740.3	41.9	5.5	83	WSW			6		10					Overcast	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			28.42	721.9	38.1	3.4	60	SSE	10.7	4.8			5			0.008	0.2		
Brönö			29.00	724.0	37.0	2.8	52	E	9	4			7			0	0		
Christiania			28.48	723.5	37.2	2.9	76	S	0.4	0.2			10			0.177	4.5		
Tromsö			28.78	731.1	23.7	— 4.6	74	SE	11	5			0			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.23	767.8	58.6	14.8	93	SSW	1.6	0.73			8			0.039	1.0		Dr. J. A. N. Sampaio.
Campo Major			30.07	763.6	63.5	17.5	37	NE	4.3	1.94			1			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.24	768.1	62.6	17.0	51	SW	6.0	2.69			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.14	765.5	61.5	16.4	41	N	18.6	8.3			2			0	0		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.55	750.5	52.0	11.1	55	SSW	27	12			10						Astronomical Obs.
Wilna			29.47	748.5	42.8	6.0	82	S	25	11			10						Astronomical Obs.
Dorpat			29.23	742.4	37.2	2.9	88	S	11	5			10						Physical Cabinet.
St. Petersburg			29.27	743.4	34.3	1.3	92	S	22	11			10						Central Physical Obs.
Kuopio			29.07	738.3	33.4	0.8	85	S	34	15			10					Snowing	Ch. Forsten.
Kieff			29.88	759.0	43.7	6.5	87	NW	4	2			2						Physical Cabinet.
Nikolaiev			29.92	759.9	42.8	6.0	81	N	20	9			7						Kurdakof.
Kertch			29.84	758.0	49.5	9.7	84	SSE	7	3			10					Misty	Lagorio.
Moscow			29.80	756.9	38.3	3.5	77	SSW	4	2			2						Meteorological Obs.
Lugan			29.81	757.1	42.6	5.9	84	ESE	13	6			2						Meteorological Obs.
Archangel			29.47	748.6	37.0	2.8	59	SW	13	6			0						Ogorodnikof.
Tiflis	28.48	723.5	29.86	758.4	66.9	19.4	31	SSE	9	4			2						Physical Observatory.
Astrakhan			29.12	765.0	53.8	12.1	61	ESE	7	3			0						Sebastianof.
Kasan			29.78	758.7	30.7	— 0.7	88	S	7	3			10						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.98	735.3	29.95	760.7	48.4	9.1	46	SW	4	2			2						Meteorological Obs.
Nukuss			30.00	761.9	50.7	10.4	31	NE	13	6			0						
Kasaly																			Bobrof.
Tashkend	28.40	721.4	30.11	764.9	54.0	12.2	74	NE	13	6			8						Michelson.
Barnaul			30.22	767.5	19.9	— 6.7	76	Calm	0	0			10						Meteorological Obs.
Yeniseisk			30.00	761.9	12.6	—10.8	59	WNW	2	1			2						Marks.
Irkutsk																			Usoizef.
Oorga																			Mossin.
Peking, (China)			29.95	760.6	44.1	6.7	34	SSW	4	2			0						Physical Observatory.
Nertchinsk	27.53	699.2	29.80	756.9	— 5.3	—20.7	78	Calm	0	0			0						Meteorological Obs.
Vladivostock			29.93	760.1	30.9	— 0.6	98	SE	7	3			3						
Nikolaievsk, on the Amoor					16.9	— 8.4	94	WSW	18	8			10						

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 405. meters, or 1,341.8 feet; Ekaterinburg, 305.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.08	763.9	59.0	15.5	34	SE	1.5	0.67		0	0			0	0	Clear	Royal Observatory.
San Fernando			30.09	764.2	60.6	15.9	69	ESE	4.0	1.8		0	10		E	0	0		The Naval Observatory

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			28.95	735.3	31.6	— 0.2	92	SE			4		10			0	0		
Umea			28.73	729.8	32.7	0.4	92	SE			6		10			0	0	Snowing	
Hernosand			28.53	725.7	34.0	1.1	94	S			2		10			0.020	0.5		
Stockholm			28.66	728.0	39.6	4.2	77	SSW			4		10			0.028	0.7		
Wisby			28.91	734.3	38.8	3.8	90	SW			7		10			0.110	2.8		
SUB-SERIES.																			
Upsala			28.67	728.3	36.7	2.6	93	SSW	17.4	7.8			10		SW	0.122	3.10	Raining	Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.48	723.3	29.89	759.2	58.5	14.7	27	SW			5		0			0	0	Clear	The Observatory.
Zurich	28.17	715.6	29.82	757.3	52.5	11.4	58	SW			2		3			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —1.4 mm.; Thermometer, +7.0 cent.; Relative Humidity, —34 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.98	761.5	43.0	6.1	88	NNW	10	4.5			10		N	0.276	7.0		
Fao, (Persian Gulf)			30.19	766.9	72.1	22.3		SE			3		0						
Salonica			30.00	762.1	69.4	20.8		NW			2		0						
Valona			29.89	759.3	58.1	14.5		W			2		0						
Varna			30.12	765.0	50.0	10.0		N			3		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			30.00	762.0	65.5	18.6	64	W			2		9ks		S	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.61	752.1	5.5	—14.7	66	NW	11	4.9						0	0		Hon. J. Ferguson.
Brockville, Ontario			30.62	777.7	10	—12.2		Calm	0	0		0	0			0	0	Clear	W. R. Bigg.
*Chatham, N. B.			29.66	753.4	6	—14.4	76	W	14	6.3		2k	8ks		W	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island.			29.61	752.1	8	—13.3	75	NW	16	7.2			10s			0.20	5.1	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.51	774.9	8.2	—13.2	73	W			2	0	0			0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			29.73	755.1	3.4	—15.9	76	W			5	5k				0	0	Overcast	H. A. Johnson.
Esquimault, B. C.			29.87	758.7	37.1	2.8	96	S	3	1.3			10			0.28	7.1	Rainy	W. H. Bevis.
Fredericton, N. B.			29.[illegible]1	757.2	2.1	—16.6	69	N	20	8.9			10s			0	0		Prof. Harrison.
*Fort Garry, Manitoba			30.58	776.7	—10	—23.3	95	N	9	4.0		5cs	5ks	N	N	0	0	Fair	James Stewart.
Goderich, Ontario			30.50	774.7	20.8	— 6.2	78	Calm			0	6k	4s	W		0	0	Cloudy	H. J. Strang, M. A.
Granton, Ontario			30.50	774.7	14.4	— 9.8		E			2	2cs		W		0	0	Clear	James Grant.
*Halifax, N. S.			29.59	751.6	10	—12.2	70	NW	18	8.0			10n		NW	0.06	1.5	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.63	778.0	8	—13.3	75	N	2	0.9		0	0			0	0	Clear	S. Woods, M. A.
Little Current, Ontario			30.60	777.2	8.6	—13.0		SE	3	1.3			0			0	0		G. B. Abrey, C. E.
*Montreal, Quebec			30.45	773.4	7	—13.9	60	W	22	9.8		0	0			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.55	776.0	2	—16.7	86	W	12	5.4		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.66	778.7	— 8	—22.2	78	N	7	3.1		0	0			0	0	Clear	Rev. R. Mooley.
*Port Dover, Ontario			30.52	775.2	16	— 8.9	66	E	6	2.7		8ck	0	NW		0	0	Fair	H. Morgan.
Port Hastings, N. S.			29.49	749.0	12.0	—11.1		NW	18	8.0						0	0	Stormy	Peter Grant.
*Port Stanley Ontario			30.48	774.2	17	— 8.3	83	E	15	6.7			10n		E	0	0	Cloudy	M. Payne.
*Quebec, Quebec			30.23	767.8	3	—16.1	95	SW	9	4.0		0	0			0	0	Clear	Capt. Ash, R. N.
St. John, N. B.			29.79	756.7	2	—16.7	72	NW	19	8.5			10ks			0	0		G. Murdoch, C. E.
*Saugeen, Ontario			30.54	775.7	11	—11.7	63	SE	6	2.7		5ks	0			0	0	Fair	K. Stewart.
Stayner, Ontario			30.59	777.0	11	—11.7	77	Calm	0	0		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario			30.52	775.2	13.7	—10.2	68	E	13	5.8		7cs		NW		0	0	Fair	C. J. MacGregor, M. A.
*Sydney, C. B.			30.39	771.9	16	— 8.9	88	W	16	7.2			10n			0.29	7.4	Light snow	T. C. Hill.
*Toronto, Ontario			29.59	751.6	12	—11.1	69	NE	9	4.0		2c	0	NW		0	0	Fair	Magnetic Observatory
Woodstock, Ontario																			J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	13	−10.6	62	NW	20	8.9		0	0			0	0	Clear	
Alpena, Mich.			30.51	774.9	18	−7.8	68	SE	14	6.3		8ck	0	W		0	0	Fair	
Atlantic City, N. J.			30.45	773.4	26	−3.3	64	N	10	4.5		0	0			0	0	Clear	
Augusta, Ga.			30.25	768.3	54	12.2	74	SE	3	1.3			10s		SW	0	0	Cloudy	
Baltimore, Md.			30.46	773.7	32	0.0	59	NE	4	1.8		8ck	Sm'e	SW		0	0	Cloudy	
Barnegat, N. J.			30.43	772.9	25	−3.9	80	N	15	6.7		0	0			0	0	Clear	
Benton, Montana	27.30	693.4	30.10	764.5	−4	−20.0	100	NE	1	0.4			10s			0	0	Cloudy	
Bismarck, Dakota	28.48	723.4	30.32	770.1	5	−15.0	50	NE	8	3.6			10s			0	0	Cloudy	
Boston, Mass.			30.23	767.8	15	−9.4	49	W	10	4.5		Haze	Haze			0	0	Hazy	
Breckenridge, Minn.			30.26	768.6	14	−10.0	100	NE	18	8.0			10n			0.07	1.8	Light snow	
Buffalo, N. Y.			30.52	775.2	16	−8.9	66	E	8	3.6		2ck	2s	NW	NW	0	0	Fair	
Burlington, Vt.			30.45	773.4	8	−13.3	66	N	11	4.9		0	0			0	0	Clear	
Cairo, Ill.			29.99	761.7	45	7.2	100	E	9	4.0			10n		E	0.28	7.1	Light rain	
Cape Hatteras, N. C.			30.34	770.6	49	9.4	71	E	8	3.6		10ck	0	W		0	0	Cloudy	
Cape Henry, Va.			30.40	772.1	44	6.7	68	SE	11	4.9			10s			0	0	Cloudy	
Cape May, N. J.			30.45	773.4	30	−1.1	59	NW	8	3.6		2c	0	W		0	0	Fair	
Charleston, S. C.			30.28	769.1	60	15.6	88	NE	6	2.7		5cs	5s	W		0	0	Cloudy	
Cheyenne, Wyoming	23.83	605.3	29.77	756.1	1	−17.2	100	N	12	5.4			10n			0.02	0.5	Light snow	
Chicago, Ill.			30.12	765.0	36	2.2	90	E	13	5.8			10n			0.20	5.1	Light snow	
Cincinnati, Ohio			30.13	765.3	42	5.6	65	E	7	3.1			10s			Inap.	Inap.	Cloudy	
Cleveland, Ohio			30.40	772.1	23.7	−4.6	74	E	5	2.2			10s		W	0	0	Cloudy	
Colorado Springs, Col.	23.87	606.3	29.74	755.4	6	−14.4	52	N	16	7.2		0	0			0.22	5.6	Clear	
Corsicana, Tex.			29.62	752.3	60	15.6	94	SE	11	4.9			10s			0	0	Cloudy	
Davenport, Iowa			30.02	762.5	38	3.3	80	E	12	5.4			10n			Inap.	Inap.	Light rain	
Denison, Tex.			29.54	750.3	57	13.9	100	SE	6	2.7			10n			0.47	11.9	Light rain	
Denver, Col.	24.08	620.9	29.90	759.4	10	−12.2	79	Calm	0	0			10n			0.10	2.5	Light snow	
Detroit, Mich.			30.38	771.6	24	−4.4	74	E	13	5.8		5k	2s	W	E	Inap.	Inap.	Fair	
Dodge City, Kan.	27.21	691.1	29.63	752.6	15	−9.4	100	NW	25	11.2			10n			0.01	0.3	Light snow	
Dubuque, Iowa			30.08	764.0	33	0.6	89	E	8	3.6			10n			0.02	0.5	Light snow	
Duluth, Minn.			30.38	771.6	15	−9.4	82	NE	20	8.9			10n			0.05	1.3	Light snow	
Eastport, Me.			29.83	757.7	4	−15.6	74	NW	30	13.4		0	8s		NW	0	0	Fair	
Erie, Pa.			30.46	773.7	21	−6.1	85	E	8	3.6		3c	5s	W	W	0	0	Fair	
Escanaba, Mich.			30.42	772.7	17	−8.3	84	NE	12	5.4			10n			0.04	1.0	Light snow	
Fort Gibson, Indian Terr.			29.66	753.4	52	11.1	86	E	8	3.6			10n		S	0.45	11.4	Heavy rain	
Ft. St. Michaels, Alaska			30.30	769.6	25	−3.9		SW	4	1.8			10s			0	0	Cloudy	
Fort Sill, Indian T.	28.46	722.9	29.61	751.8	32	0.0	79	NW	20	8.9			10n		SW	0.19	4.8	Light rain	
Fort Sully, Dakota	28.45	722.6	30.20	769.4	75	23.9	88	N	12	5.4			10s			0.05	1.3	Cloudy	
Galveston, Tex.			29.76	755.9	66	18.9	100	SE	5	2.2			10s		SE	1.56	39.6	Cloudy	
Grand Haven, Mich.			30.28	769.1	23	−5.0	79	E	26	11.6			10s			Inap.	Inap.	Cloudy	
Indianapolis, Ind.			30.10	764.5	40	4.4	81	NE	5	2.2			10s			0.02	0.5	Cloudy	
Indianola, Tex.			29.71	754.6	68	20.0	94	S	14	6.3			10ks		S	3.31	84.1	Cloudy	
Jacksonville, Fla.			30.19	766.8	63	17.2	88	N	4	1.8		10k	0	N		0	0	Cloudy	
Keokuk, Iowa			29.89	759.2	41	5.0	91	E	13	5.8			10s		E	0.04	1.0	Cloudy	
Key West, Fla.			30.14	765.5	74.8	23.8	64	SE	14	6.3		2k	Haze	SE	SE	0	0	Clear	
Kittyhawk, N. C.			30.40	772.1	44	6.7	76	SE	12	5.4		5ck	2s	NW		0	0	Fair	
Knoxville, Tenn.			30.22	767.6	44	6.7	83	NE	1	0.4			10n			0.08	2.0	Light rain	
La Crosse, Wis.			30.17	766.3	27	−2.8	88	E	8	3.6			10s		E	0.25	6.3	Cloudy	
Leavenworth, Kan.			29.78	756.4	44	6.7	92	SE	5	2.2			10n			0.06	1.5	Light rain	
Lexington, Ky.	29.08	738.6	30.21	767.1	46	7.8	61	SE	8	3.6			10n			0.01	0.3	Light rain	
Long Branch, N. J.			30.44	773.2	29	−1.7	59	NW	15	6.7		0	0			0	0	Clear	
Louisville, Ky.			30.13	765.3	48	8.9	78	SE	6	2.7			10n			0.02	0.5	Light rain	
Lynchburg, Va.			30.35	770.9	43	6.1	50	NE	2	0.9			10s			0	0	Cloudy	
Malone, N. Y.			30.52	775.2	6	−14.4	76	NW	5	2.2		0	0			0	0	Clear	
Manhattan, Kan.	28.61	727.7	29.82	757.4	33	0.6	89	N	10	4.5			10n			0.07	1.8	Light rain	
Marquette, Mich.			30.48	774.2	17	−8.3	67	E	4	1.8		5cs	0			0	0	Fair	
Memphis, Tenn.			29.89	759.2	51	10.6	78	E	2	0.9		5k	8s	SW		0.13	3.3	Cloudy	
Milwaukee, Wis.			30.24	768.1	28	−2.2	94	E	21	9.4			10n			0.04	1.0	Light snow	
Mobile, Ala.			30.03	762.7	62	16.7	94	Calm	0	0			10s		S	0	0	Cloudy	
Montgomery, Ala.			30.12	765.0	59.5	15.3	73	SE	8	3.6		10cs	Haze	S		0	0	Cloudy	
Morgantown, W. Va.			30.29	769.4	36	2.2	75	NE	5	2.2			10n		NE	Inap.	Inap.	Light rain	
Mt. Washington, N. H.	23.25	590.5	29.61	752.1	−19	−28.3	100	NW	80	35.8			Fog			0	0	Foggy	
Nashville, Tenn.			30.03	762.7	50	10.0	78	E	5	2.2			10s			0.02	0.5	Cloudy	
New Haven, Conn.			30.36	771.1	24	−4.4	48	NW	16	7.2		0	0			0	0	Clear	
New London, Conn.			30.32	770.1	21	−6.1	56	NW	10	4.5		0	0			0	0	Clear	
New Orleans, La.			29.92	760.0	65.5	18.6	92	SE	12	5.4			10s		SE	Inap.	Inap.	Cloudy	
Newport, R. I.			30.30	769.6	19	−7.2	54	W	20	8.9		0	0			0	0	Clear	
New York, N. Y.			30.42	772.7	23	−5.0	60	NW	10	4.5		0	0			0	0	Clear	
Norfolk, Va.			30.04	763.0	49	9.4	85	SE	14	6.3			10s		SE	0.05	1.3	Threatening	
North Platte, Neb.	27.01	686.0	29.79	756.7	8	−13.3	89	NW	14	6.3			10s			0.02	0.5	Cloudy	
Omaha, Neb.	28.72	729.5	29.80	756.9	40	4.4	95	SE	7	3.1			Fog			0.06	1.5	Foggy	
Oswego, N. Y.			30.58	776.7	13.5	−10.3	70	N	10	4.5		0	Haze			0	0	Clear	
Pembina, Dakota			30.53	775.4	−6	−21.1	100	N	4	1.8		8c	0			0	0	Cloudy	
Philadelphia, Penn.			30.47	773.9	24	−4.4	61	N	12	5.4		1c	0	NW		0	0	Clear	
Pike's Peak, Colorado	17.24	437.9	29.45	748.0	0	−17.8	70	NW	4	1.8		0	5s			0.25	6.3	Fair	
Pittsburgh, Penn.			30.36	771.1	28	−2.2	67	E	4	1.8			10s			0	0	Cloudy	
Port Huron, Mich.			30.45	773.4	18	−7.8	68	E	12	5.4			10s			Inap.	Inap.	Cloudy	
Portland, Me.			30.12	765.0	17	−8.3	67	Calm	0	0		0	Haze			0	0	Clear	
Portland, Oregon			30.11	764.8	40	4.4	82	S	10	4.5			10n			0.14	3.6	Light rain	
Punta Rassa, Fla.			30.16	766.1	65.6	18.7	90	E	6	2.7		Haze	2s		SW	0	0	Cloudy	
Rochester, N. Y.			30.55	776.0	17	−8.3	67	NE	10	4.5		0	0			0	0	Clear	
Salt Lake City, Utah			29.90	759.4	21	−6.1	71	SW	2	0.9		0	0			0	0	Clear	
Sandy Hook, N. J.	25.57	649.5	30.41	772.4	24	−4.4	72	NW	20	8.9		0	0			0	0	Clear	
San Diego, Cal.			30.07	763.8	45	7.2	85	Calm	0	0		0	0			0	0	Clear	
San Francisco, Cal.			30.19	766.5	45	7.2	84	Calm	0	0		0	0			0	0	Clear	
Santa Fe, N. M.			29.40	746.7	21	−6.1	100	SW	11	4.9			10n			0.06	1.5	Heavy snow	
Savannah, Ga.	22.85	580.6	30.25	768.3	59	15.0	81	SE	2	0.9			10cs		SW	0	0	Cloudy	
Shreveport, La.			29.82	757.4	57	13.9	100	SE	12	5.4			10n		S	0.43	10.9	Light rain	
Smithville, N. C.			30.33	770.4	58	14.4	81	E	6	2.7		10cs	0			0	0	Cloudy	
Springfield, Mass.			30.34	770.6	22	−5.6	41	NW	16	7.2		0	0			0	0	Clear	
St. Louis, Mo.			29.94	760.5	45	7.2	84	SE	12	5.4			10n			0.19	4.8	Light rain	
St. Marks, Fla.			30.16	766.1	60	15.6	82	NE	5	2.2			10s			0	0	Cloudy	
St. Paul, Minn.			30.13	765.3	21	−6.1	85	NE	10	4.5			10n		NE	0.25	6.3	Light snow	
St. Paul's Island, Alaska			30.62	777.7	33	0.6	89	NW	5	2.2			Fog			0.01	0.3		
Thatcher's Island, Mass.			30.17	766.3	15	−9.4	47	NW	27	12.1		0	0			0	0	Clear	
Toledo, Ohio			30.33	770.4	27	−2.8	77	E	7	3.1			10s			0	0	Cloudy	
Tucson, Arizona	27.59	700.8	30.18	766.3	40	4.4		E				0	0			0	0	Clear	
Tybee Island, Ga.			30.22	767.6	63	17.2	78	E	3	1.3		5k	2s	SE		0	0	Fair	
Vicksburg, Miss.			29.91	759.7	58	14.4	97	S	16	7.2		8s	2n	S	S	2.42	61.5	Cloudy	
Virginia City	27.04	610.6	29.52	749.8	13	−10.6	71	Calm	0	0		10k	0	W		0	0	Cloudy	
Washington, D. C.			30.45	773.4	31	−0.6	74	NE	8	3.6			10s		W	0	0	Threatening	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.32	770.1	54	12.2	86	E	7	3.1		10cs	0	W		0	0	Cloudy	
Wood's Holl, Mass			30.24	768.1	22	— 5.6	44	NW	28	12.5		0	0			0	0	Clear	
Wytheville, Va	27.84	707.1	30.04	763.0	43	6.1	58	E	1	0.4			10s			0	0	Cloudy	
Yankton, Dakota	28.66	728.0	30.02	762.5	21	— 6.1	85	N	12	5.4			10n			0.10	2.5	Light snow	
Yuma, Arizona			30.11	764.8	47	8.3		NW				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			29.04	763.0	79	26.1	82	E	4	1.8		2ck	2s	N	W	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.08	764.0	74	23.3	76	NE				0	5k			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I.			29.33	770.4	75	23.9	56	ENE	6	2.7		2cs	2k	NE		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I.			30.26	768.6	73	22.8	72	Calm	0	0		8c	8s	SE	SE	0	0		James Gall.
Santiago de Cuba, W. I.			29.91	759.7	71	21.7	67	NE	4.8	2.1		0	0			0.13	3.3	Clear	Robert Mason.
Havana, Cuba, W. I.			30.14	765.5	72	22.2	71	E	6.0	2.7		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			30.27	768.8	59.5	15.3	70	N	23.0	10.3		10c	5k	N	N	0	0	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.23	691.6	30.04	763.0	64	17.8	88	E	2.0	0.9		5c	0	SE		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A			30.01	762.2	83	28.3	71	E			3		5ks			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.07	763.7	83.2	28.5										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.19	639.7			65.0	18.3	83		0	0		5c	2s			0.04	1.0	Fair	Thomas Herran.
St. Johns, Newfoundland			29.29	744.0	33.0	0.6	100	E					10n			0.28	7.1	Foggy	John Delaney.
York Factory, B. A.			30.62	777.7	—31	—35.0		W	5	2.2		0	Fog			0	0		J. Fortescue.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Manhattan, 1,125.0 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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

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

BULLETIN
OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,
TAKEN SIMULTANEOUSLY ON MARCH 16, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.02	762.6	63.3	17.4	78	NW			1		10			0.126	3.2	Hidden	Charnot.
Algiers			29.98	761.4	60.8	16.0	89	NNE			2		10			Inap.	Inap.	Hidden	Peter.
La Calle																			Kuntz.
Tunis			29.97	761.1	73.4	23.0	47	W			4		3			0	0	Fair	Jacques.
Sfax			29.99	761.7	68.0	20.0	67	NE			3		5			0	0	Fair	Chauvey.
Sadda			29.99	761.8	61.9	16.6		NNW			3		7			0	0	Cloudy	Millot.
Tebessa			29.94	760.5	80.1	26.7		E			3		4			0	0	Fair	Colin.
Geriville			29.97	761.2	70.2	21.2	28	SSE			2		3			0	0	Fair	Buard.
Laghouat			29.87	758.7	66.2	19.0	63	NE			2		1			0	0	Clear	Guyot.
Biskra			29.85	758.1	79.7	26.5	20	NW			1		0			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.71	754.6	53.6	12.0	43	SW			5		8			0	0		Prof. Ivan Stozir.
Buda-Pesth																			
Cracow			29.58	751.2	42.8	6.0	79	W			7		10			0.031	0.8		I. R. Cen. M. I., Hungary
Eperies			29.55	750.6	47.5	8.6	68	Calm			0		8			0	0		I. R. Observatory.
Gratz	28.46	722.9	29.67	753.5	46.4	8.0	42	NW			7		10			0	0		Julius Mikolik.
Hermannstadt	28.24	717.4	29.64	752.8	54.7	12.6	35	E			1		1			0	0		Andreas Rospini.
Kremsmünster	28.43	722.0	29.80	756.9	38.8	3.8	77	WSW			6		7			0.217	5.5		Prof. Reissenberger.
Lemberg			29.49	749.1	49.3	9.6	52	SW			2		8			0.094	2.4		Prof. C. Wagner.
Nyiregyhaza			29.60	751.8	53.2	11.8	67	W			3		4			Inap.	Inap.		Dr. T. Stanecki.
Pola			29.70	756.7	55.2	12.9	74	SSW			3		9cs			0	0		Habzsuda Daniel.
Szegedin			29.68	753.9	54.5	12.5	44	W			3		10			0.030	0.75		I.R. Hydrographic Of'ce
Trieste			29.77	756.1	57.6	13.9	85	SW			1		4			0	0	Partly cov'd	Karl Stancel.
Vienna			29.67	753.5	42.4	5.8	63	W			7		10			0.126	3.2		Prof. V. Farolfi.
																			I. R. Central Institute

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 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.62	752.3	45.5	7.5	57	WNW			3		7			0.520	13.20		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.30	744.2	37.0	2.8		WNW	27	12.1			2			0.080	2.03	Blue sky	William Boswell.
Ardrossan			29.40	746.7	39	3.9		NW			6		5					*D.clouds	J. Mayes.
Armagh Observatory			29.62	752.3	34.4	1.3		WNW	19	8.5			10			Blank	Blank	Overcast	S. Call, for Dr. Robinson
Bidston, Liverpool Obs.			29.55	750.6	38.0	3.3		W	39	17.4			4					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			29.73	755.1	41.4	5.2		WNW			1–2		9					*D. clouds	J. Dreyer.
Bradford			29.52	749.8	39.1	3.9		W			4		5			0.13	3.3	Snow-show'rs	J. McLandsborough.
Bridgetown, (Barbados)			30.05	763.3	82.0	27.8		NE			4		6					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			29.61	752.1	41.8	5.4		WNW			3		10					Hailing	H. Todd.
Cardington			29.62	752.3	42.0	5.6		NW			6		8					Hailing	John McLaren.
Carlisle			29.46	748.3	34.1	1.2		W			7		10			0.05	1.3	Snowing	J. Bell, for J. Cartmell.
Chatham, School M. E.			29.64	752.8	45.2	7.3		W			2							Blue sky	Capt. J. Fellowes, R. E.
Dartmoor	28.32	719.3	29.85	758.2	41.0	5.0		NW			6		7					*D. clouds	R. E. Power.
Donaghadee			29.52	749.8	40	4.4		W			5		3					*D. clouds	J. Mac Gowan.
Dover			29.66	753.4	48	8.9		W			4		4					½ clouded	J. Costello.
Eccles, (near Manchester)			29.54	750.3	38.3	3.5		WNW	5.4	2.4			7					Squally	Thomas Mackereth.
Falmouth Observatory			29.81	757.2	47.2	8.4		WNW	23	10.3			7					Overcast	The Staff.
Fort Napier, (Natal)	27.42	696.5	29.65	753.1	91.5	33.1		NW			3		8					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	87.0	30.6		N			1		7					*D. clouds	
Galway, Queen's College			29.69	754.1	43	6.1		NW			5		6					*D. clouds	B. G. Clare, for Prof. Cur[illegible]
Gibraltar, (Mediterranean)			30.01	762.2	66.0	18.9		E			3		1					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.36	745.7	36.1	2.3		W			2		3					Fine	Lewis Stuart.
Great Yarmouth			29.53	750.0	42	5.6		WNW			6		5			Blank	Blank	Squally	G. T. Watson.
Greenwich Royal Obs.			29.66	753.4	46.3	7.9		W			4		8					*D. clouds	The Staff for G. B. Airy.
Guernsey			29.82	757.4	47.5	8.6		WSW			3		4					Showery	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.53	750.0	38.0	3.3		WNW			4		6			Blank	Blank	*D clouds	L. J. Crossley.
Helston			29.78	756.4	51	10.6		NW			4		6k			0.4	10.2	Fine	M. P. Moyle.
Holyhead			29.62	752.3	52	5.6		WNW			6		4			Blank	Blank	*D. clouds	John Tilston.
Kew Observatory			29.66	753.4	45.9	7.7		W	27	12.1			9					Overcast	The Staff.
Kingstown			29.65	753.1	40	4.4		WNW			6		8					Overcast	George Mitchell.
Leicester Museum			29.63	752.6	35.0	1.7		W			2		10					Snowing	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.97	761.2	65.2	18.4		SE			2		4k						Fred Travis, Pvt A.H.C.
Nairn			29.31	744.5	42	5.6		NW			2		5					½ clouded	W. D. Penny.
Nassau, (Bahamas)			30.17	766.3	76.2	24.6		SE			5		7					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.58	751.3	39.6	4.2		WNW			4		10d		WNW	0.02	0.5	Snowing	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.61	752.1	38.0	3.3		NW			3		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.55	750.6	45	7.2		W			6		9					Overcast	J. Lucas.
Plymouth			29.77	756.1	49.7	9.8		NW			3		10					Overcast	John Merrifield.
Roche's Point			29.76	755.9	45	7.2		NW			5		8					¾ clouded	W. Kennedy.
Saint Ann's Head			29.71	754.6	43	6.1		WNW			3		4			Blank	Blank	*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.83	757.7	50.8	10.4		W			6		5					½ clouded	A. P. Amy.
Sandwick Manse (Orkneys)			29.30	744.2	32.1	0.1		N	28	12.5			4						Rev. Dr. Clouston.
Scarborough			29.42	747.3	41.0	5.0		WNW			5		4					*D. clouds	F. Shaw.
Scutari Cemetery (Turkey)			29.87	758.7	51.6	10.9		SW			2		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.53	750.0	40.8	4.9		NW			3		9			0.080	2.26	Overcast	W. F. Cooper.
Silloth Rectory			29.44	747.8	38.5	3.6	83	NW			5		10			0.110	2.79	Snowing	Rev Francis Redford.
Stonyhurst Observatory			29.51	749.5	37.6	3.1		W			6		8			Blank	Blank	Squally	S. J. Perry.
Stornoway, Lews C. (Hebr.			29.31	744.5	33	0.6		ENE			1		8					*D. clouds	John Smith.
Stratfield Turgiss			29.69	754.1	44.6	7.0		NW			1–2		6					Squally	Rev Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.27	743.4	38	3.3		NNW			5		5					*D. clouds	John Trotter.
Truro, Royal Institution			29.79	756.7	51	10.6		NW			6		7					*D. clouds	W. Newcombe.
Valencia Observatory			29.82	757.4	45.3	7.4		NNW	17	7.6			10					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					38?	3.3?		NW			8		0			0	0		The Staff, for E. J. Stone.
Cape Good Hope Obs.			30.10	764.5	68.0	20.0	47	SW	7	3.1			6						
Leith, Restalrig Park			29.34	745.2	34.0	1.1		W			3		10ks			0.02	0.5	Cloudy	Andrew Gibb.
Mauritius			30.07	736.8					25.1	11.2						0.09	2.3		
Monach Lt-house, Hebrides			29.34	745.2	34	1.1		W			1					0	0	Snow-show'rs	J. Youngclause.
North Unst, (Shetland Is.)			29.18	741.1	32	0.0		N			8		10			Blank	Blank		

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.10	739.0	41.5	5.3	50	WSW			7		5						
Fanöe			29.18	741.2	37.6	3.1	84	WSW			6		5						
Godthaab, (Greenland)			30.01	762.3	19.0	— 7.2	72	Calm			0		10						
Stykkisholm, (Iceland)																			
Thorshavn, (Faröe)			29.41	747.1	23.7	— 4.7	44	N			6		5						
Vestervig			29.04	737.5	37.4	3.0	83	W			7		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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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			29.66	753.4	51.8	11	73	W			4		8ok		W	0.039	1.0	Very cloudy	Normal School.
Amiens			29.77	756.2	47.1	8.4	72	WSW			3		0			0.020	0.5	Clear	Normal School.
Avignon			29.97	761.1	64.0	17.8	47	WNW			2				NW	0	0	Light clouds	Normal School.
Bar-sur-Seine			29.87	758.8	49.5	9.7	54	SW			3		5			0.209	5.3	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.88	759.0	50.4	10.2	62	W	11.2	5.0					SW	0.012	0.3		Beaumette Observatory
Beauvais			29.81	757.1	49.1	9.5	59	W			4		8		W	0.364	9.25	Very cloudy	Normal School.
Besançon			29.96	760.9	46.0	7.8	62	SSW			3		5		SW	0.862	21.9	Cloudy	Normal School.
Bourg en Bresse			30.04	763.1	53.6	12	54	W			2		..k		N				Normal School.
Bourges			29.95	760.7	46.0	7.8	83	SW			2		5		SW	0	0	Cloudy	Normal School.
Brest			29.82	757.5	54.5	12.5	69	WSW			3		9		W	0.138	3.50	Misty	Naval Observatory.
Caen																			Normal School.
Chartres			29.84	757.8	50.4	10.2		E			3		7		NE	0.386	9.8	7 cloudy	Normal School.
Chaumont																			Normal School.
Clermont			29.92	759.9	51.4	10.8	46	W			2		8		W	0.039	1.0		Puy de Dome, Obs.
Commercy			29.85	758.3	45.3	7.4	59	W			8		8k		W	0.374	9.5	Very cloudy	Normal School.
Commune de Gréasque*			29.99	761.8	57.7	14.3	53	NW			4		5		NW	0	0		
Grenoble			30.02	762.6	51.3	10.7	82	WNW			2		10kn		NW	0.16	4.	Covered	Normal School.
Le Mans			29.91	759.8	49.8	9.9	52	W			4		2		W	0.177	4.5	Slightly cl'dy	Normal School.
Loches			29.88	758.9	47.3	8.5	74	W			2		5		W	0.16	4.	Cloudy	Normal School.
Lons-Le-Saulnier			29.99	761.8	49.1	9.5	56	SW			2		2		SW	0	0	Slightly cl'dy	Normal School.
Mâcon			29.95	760.6	49.3	9.6	66	SW			2		5		W	0.102	2.6	Cloudy	Normal School.
Mirecourt																			Normal School.
Metz			29.88	758.9	44.6	7.0	63	SW			6		10		SW	0.307	7.8		M. Schuster.
Nismes			30.11	764.9	61.2	16.2	73	N			2		2		NW	0	0	Slightly cl'dy	Normal School.
Orleans			29.87	758.7	50.4	10.2	60	SW			4		5		W	0.012	0.3	Cloudy	Normal School.
Paris Observatory			29.83	757.6	50.7	10.4	49	WNW			2		8			0.168	4.26	Almost cov'd	National Observatory.
Parthenay			30.26	768.5	51.8	11	86	SW			4		5		NW	0.24	6.	Cloudy	Normal School.
Privas			29.96	761.0	50.0	10		SE			2		5		SE	0	0	Cloudy	Normal School.
La Roche-sur-Yon			29.97	761.2	53.2	11.8	67	SW			2		5		E	0.315	8.0	Cloudy	Normal School.
Rochefort, Observatory			30.01	762.3	54.0	12.2	71	WSW			2		5		ENE	0.315	8.0	½ covered	Naval Observatory.
Rouen			29.82	757.4	50.0	10.0	70	SSW			3		2		W	0.339	8.6	Slightly cl'dy	Normal School.
Saint Lo			29.86	758.5	48.9	9.4	84	W			2		4		SW	0.322	8.2		Normal School.
Tarbes			30.09	761.3	57.2	14	45	SW			2		10		E	0	0	Covered	Normal School.
Toulouse																			Normal School.
Villefranche			29.97	761.1	49.1	9.5	80	SE			1		8			0	0	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			30.01	762.2	75.9	24.4	88	NE			2		10kn						L'Abbé Marchésl.
Gorée																			
Marseilles			29.95	760.8	59.0	15.0	68	W			2		4			0	0	Cloudy	Marseilles Observatory.
Mont-Louis			30.17	766.2	48.4	9.1	69	SE					7		W	0	0		—. Falguère.
Montsouris, Paris	24.82	630.5	29.82	757.3	51.6	10.9	60	W			4		8		W	0.189	4.8		Montsouris Observ'tory.
Perpignan			30.50	767.1	64.4	18.0	58	NW	7.4	3.33			5		NW	0.016	0.4		Dr. Fines.
Pic du Midi, (Summit) H.P†																			M. Baylac.
Pic du Midi, (Plantade)	22.48	571.1			35.8	2.1	81	NW			2		10					Dense fog	E. Renou.
Saint Maur, (near Paris)			29.82	757.5	50.9	10.5	51	WSW			3		9			0.220	5.6	Cloudy	Toulouse Observatory.
Toulouse			30.07	763.6	57.7	14.3	74	WNW			3		10			0	0		C. Marquet.
Tours			29.93	761.1	50.4	10.2	60	WSW			3		7		W	0.189	4.8		Dr. A. Bérigny.
Versailles, (near Paris)			29.82	757.4	50.4	10.2	52	W			3		9			0.188	4.78	Almost cov'd	
Zi-Ka Wei, (near Shanghai)																			H. Le Lee, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7., 8. or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,089.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
*Near Marseilles. †Summit inaccessible.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Bamberg			29.59	751.5	40.6	4.8	73	W			8		4			0.236	6.0	Rain & snow	Prof. T. Hoh.
Berlin			29.48	748.7	46.0	7.8	56	SW			6		8			0.154	3.9		Prof. Arndt.
Breslau			29.57	751.1	43.9	6.6	46	W			9		9			Blank	Blank		Dr. P. Neugebauer.
Karlsruhe			29.76	756.0	45.3	7.4	53	SW			10		9			0.591	15.0		A. Senz.
Cassel			29.48	748.8	45.5	7.5	43	W			7		6			0.114	2.9	Snowing	Dr. H. Möhl.
Cologne																			Dr. Garthe
Emden																			Prof. Prestel.
Frankfort on the Main			29.76	755.8	40.1	9.5	48	SW			5		8			0.087	2.2		Physical Society.
Friedrichshafen	28.45	722.5	29.91	759.6	42.8	6.0	61	SW			4		9			0.035	0.9	Rain & snow	M. Wilhelm.
Hamburg			29.35	745.5	41.9	5.5	67	WSW			6		10	WSW		0.122	3.1	Hail & snow-sq'lls	Deutsche Seewarte.
Kiel			29.30	744.2	34.9	1.6	86	W			5		10			0.370	9.4		Prof. G. Karsten.
Königsberg			29.28	743.6	43.3	6.3	60	W			7		5			0.110	2.8		Prof. E. Luther.
Köslin			29.30	744.3	43.0	6.1		W			6		8			0.075	1.9		H. Müller.
Leipsic			29.58	751.3	41.2	5.1	61	WNW			3		1	W		0.142	3.6		Prof. Brühns.
Memel			29.09	738.8	39.0	3.9	77	SW			6		9			0.020	0.5		Reinbrecht & Skalweit.
Münster			29.47	748.5	35.2	1.8	96	SW			5		6			0.209	5.3	Snowing	Prof. E. Heis.
Neufahrwasser			29.24	742.8	46.6	8.1	89	W			6		10			0.173	4.4	Rain & hail-sq'lls	A. Lothes.
Posen			29.49	749.0	44.8	7.1	63	W			8		9			0.051	1.3		Dr. Magener.
Strassburg, (in Alsace)			29.84	757.9	46.6	8.1	56	WSW			4		9			0	0		Dr. Schur.
Stuttgart			29.78	756.5	44.1	6.7	54	W			4		4			0.213	5.4		Prof. Schoder.
Thorn			29.66	753.4	43.7	6.5	61	W			7		4			0	0		Dr. Hasenbalg
Treves, (Trier)			29.67	753.6	41.9	5.5	89	WSW			8		5			0.091	2.3		Prof. Flesch.
Wustrow, Naval School			29.29	744.0	36.5	2.5	89	WSW			8		10			0.047	1.2	Rain & snow	E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.74	755.5	51.3	10.7	66	SW	1.8	0.8			10			0	0		
Padua			29.71	754.6	58.8	14.9	47	W	22.4	10.0			4	W		0	0		
Vicenza			29.70	754.4	58.6	14.8	48	SW	9.4	4.2			2			0	0		
Verona			29.72	754.8	62.2	16.8	51	W			4		0			0	0		
Bergamo	28.38	720.8	29.70	754.3	55.4	13.0	53	SSW			2		2			0	0		
Domodossola	28.67	728.1	29.69	754.2	60.4	15.8	49	SSE			4		3			0	0		
Milan			29.76	756.0	59.2	15.1	53	WNW			4		8	SW		0	0		
Pavia			29.76	755.9	59.0	15.0	53	W			4		8	SW		0	0		
Moncalieri			29.76	755.9	55.2	12.9	56	SSW	2.5	1.1			6	N		0	0		
Mondovi	27.82	706.7	29.74	755.4	57.9	14.4	51	SSE			2		6	NW		0	0		
Porto Maurizio			29.80	757.0	59.0	15.0		E			4		9			0	0		
Genoa			29.80	757.0	55.6	13.1	76	SE	6.3	2.8			10	S		0	0		
Piacenza			29.77	756.2	56.8	13.8	57	N	6.9	3.1			4	SW		0	0		
Parma			29.76	755.8	61.7	16.5	46	SW			6		2			0	0		
Bologna			29.80	756.8	60.4	15.8	25	NW			1		5	E		0	0		
Florence			29.90	759.5	57.2	14.0	64	SW			2		10	SW		0	0		
Leghorn			29.90	759.5	55.0	12.8	72	S	4.9	2.2			10			0	0		
Siena	28.67	728.2	29.88	758.9	54.9	12.7	67	SSW	2.5	1.1			10	SW		0	0		
Urbino	28.27	718.0	29.84	757.9	54.0	12.2	52	WSW			6		10			0	0		
Pesaro																			
Ancona			29.83	757.7	60.4	15.8	49	WSW			2		7			0	0		
Grosseto			29.92	759.9	60.1	15.6	57	SSE			4		9	S		0	0		
Rome			29.97	761.3	61.0	16.1	58	S	8.7	3.9			8	SSW		0	0		
Naples, O. U.			30.00	762.1	62.4	16.9	56	SSW			4		7	W		0	0		
Lecce			29.93	760.2	61.2	16.2	34	SSE	18.6	8.3			1			0	0		
Cosenza			29.98	761.4	64.0	17.8	70	NW	4.3	1.9			0			0	0		
Riposto, (Sicily)			30.00	761.9	63.1	17.3	65	SSE			2		0			0	0		
Palermo			29.96	761.0	60.4	15.8	63	NE	3.8	1.7			0			0	0		
Caltanissetta	28.04	712.1	29.99	761.8	61.0	16.1	49	SSW			1		0			0	0		
Sub-Series.																			
Naples, S. R.			30.00	762.1	57.0	13.9	68	SW			4		..k,c	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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.65	753.0	42.8	6.0		WNW			5								
Groningen			29.33	745.0	40.3	4.6		W			7								
Helder			29.46	748.2	39.9	4.4		WSW			6								
Utrecht			29.50	749.2	39.2	4.0	76	W			6		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			28.85	732.9	39.2	4.0	64	NNW	8.9	4.0			5			0	0		
Brönö			28.55	725.1	37.4	3.0	66	Calm	0	0			9			0.669	17.0		
Christiania			28.80	731.4	37.2	2.9	54	Calm	0	0			2			0.004	0.1		
Tromsö			28.59	726.2	33.4	0.8	18	W	0	0			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.18	766.5	61.0	16.1	89	SW	9.8	4.39			7			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.06	763.5	69.4	20.8	34	NNE	3.0	1.33			3			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.29	769.3	61.3	16.4	59	S	0.6	0.27			10	S		0	0		Capt. D. A. da Cunha.
Lisbon			30.16	766.1	60.8	16.0	69	N	26.2	11.7			3	N		0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.45	747.9	43.0	6.1	66	W	18	8			10						Astronomical Obs.
Wilna			29.37	745.9	44.6	7.0	66	S	11	5			10						Astronomical Obs.
Dorpat			29.12	739.7	38.3	3.5	77	S	11	5			10						Physical Cabinet.
St. Petersburg			29.10	739.2	39.2	4.0	71	SSW	18	8			5						Central Physical Obs
Kuopio			28.80	731.5	35.2	1.8	82	S	22	10			10					Rain & snow	Ch. Forsten.
Kieff			29.62	752.4	48.0	8.9	77	S	27	12			4						Physical Cabinet.
Nikolaiev			29.86	758.5	45.3	7.4	85	Calm	0	0			7						Kurdakof.
Kertch																			Lagorio.
Moscow			29.71	754.5	37.2	2.9	73	S	9	4			2						Meteorological Obs.
Lugan			29.78	756.4	42.4	5.8	79	ESE	9	4			0						Meteorological Obs.
Archangel			29.12	739.7	35.2	1.8	35	SSE	29	13			10					Raining	Ogorodnikof.
Tiflis	28.48	723.4	29.86	758.4	64.8	18.2	42	S	4	2			4						Physical Observatory.
Astrakhan			30.12	765.0	54.5	12.5	60	ESE	9	4			0						Sebastianof.
Kasan			29.94	760.4	33.8	1.0	90	S	2	1			10						Physical Cabinet.
Orenburg					28.2	— 2.1	87	SE	2	1			0						Tschernischef.
Ekaterinburg	28.96	735.6	29.99	761.8	33.8	1.0	73	W	4	2			10						Meteorological Obs.
Nukuss			30.03	762.7	49.6	9.8	38	NW	9	4			0						
Kasaly																			Bobrof.
Tashkend	28.42	721.8	30.10	764.6	61.0	16.1	48	Calm	0	0			5						Michelson.
Barnaul			30.22	767.6	12.6	—10.8	69	Calm	0	0			0						Meteorological Obs.
Yeniseisk			29.91	759.8	18.7	— 7.4	67	ESE	7	3			9						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.54	757.9	55.8	13.2	16	NNW	13	6			7						Physical Observatory.
Nertchinsk	27.72	704.0	29.96	760.9	3.6	—15.8	81	Calm	0	0			0						Meteorological Obs.
Vladivostock			30.18	766.5	31.8	— 0.1	71	SE	9	4			1						
Nikolaievsk, on the Amoor					3.0	—16.1	76	Calm	0	0			0						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 305.4? m., or 1,005.2? ft.; Tashkend, m 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.03	762.7	66.7	19.3	32	N	3.0	1.33		1	0	SW		0	0	Light clouds	Royal Observatory.
San Fernando			30.08	764.1	62.2	16.8	75	WNW	4.9	2.2		1	5	W	W	0	0		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			28.55	725.1	33.8	1.0	81	S			4		10			0.236	6.0		
Umea			28.54	725.0	33.6	0.9	87	SW			4		10			0.496	12.6		
Hernosand			28.54	724.9	39.2	4.0	73	SSW			2		5			0.315	8.0	Snowing	
Stockholm			28.66	728.0	39.2	4.0	73	SSW			2		8			0.008	0.2		
Wisby			28.87	733.3	37.0	2.8	89	SW			8		10			0	0		
Sub-Series.																			
Upsala			28.68	728.5	36.7	2.6	80	SSW	7.6	3.4			5	WSW	SW	0.032	0.81		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Geneva	28.52	724.5	29.96	761.0	50.7	10.4	60	S			3		6			0.181	4.6	Cloudy	The Observatory.
Zurich	28.26	717.7	29.93	760.3	43.0	6.1	69	NW			4		8			0.217	5.5	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, −0.2 mm.; Thermometer, +2.6 cent.; Relative Humidity, −1 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Constantinople			29.91	759.7	51.3	10.7	68	S	2	1.0			0			0	0		
Fao, (Persian Gulf)			30.18	768.9	71.6	22.0		SE			3		10						
Salonica			29.93	760.1	59.5	15.3		SW			2		0						
Valona			29.96	761.0	60.4	15.8		S			3		0						
Varna			30.04	763.0	58.1	14.5		N			3		0			Blank	Blank		
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			29.87	758.6	67.8	19.9	61	SW			2		0			0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Bathurst, N. B.			29.91	759.7	12.6	−10.8	45	NW	12	5.4						0	0		Hon. J. Ferguson.
Brockville, Ontario			30.35	770.9	14	−10.0		NE	15	6.7		0	2s		NE	0	0	Fair	W. R. Bigg.
*Chatham, N. B.			29.93	760.2	12	−11.1	59	NW	24	10.7		0	0			0.08	2.0	Clear	G. A. Blair.
Charlottetown, P. E. Island.			29.74	753.4	16	− 8.9	83	NW	16	7.2		2k	0			0.10	2.5	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			30.37	771.4	12.2	−11.0	57	E			3	7ck				0	0	Threatening	James Smith, M. A.
Dalhousie, N. B.			30.05	763.3	5.7	−14.6	70	W			5					0	0		H. A. Johnson.
Esquimault, B. C.			30.06	763.5	33.1	0.6	80	NE	2	0.9		10cs				0	0	Cloudy	W. H. Bevis.
Fredericton, N. B.			30.04	763.0	10.1	−12.2	53	W	18	8.0						0	0		Prof. Harrison.
*Fort Garry, Manitoba			30.22	767.6	10	−12.2	89	N	19	8.5			10n			0	0	Cloudy	James Stewart.
Goderich, Ontario			29.75	755.6	23.5	− 4.7	76	E			7		10n			0	0	Threatening	H. J. Strang, M. A.
Granton, Ontario			29.77	756.1	23.2	− 4.9		E			4		10n			0	0	Cloudy	James Grant.
*Halifax, N. S.			29.69	754.1	20	− 6.7	74	NW	23	10.3		0	0			0.34	8.6	Clear	F. Allison, M. A.
*Kingston, Ontario			30.29	769.4	14	−10.0	86	NE	6	2.7		10cs	0			0	0	Cloudy	S. Woods, M. A.
Little Current, Ontario			30.03	762.7	14.6	− 9.7		E	30	13.4			10s			0	0		G. B. Abrey, C. E.
*Montreal, Quebec			30.40	772.1	8	−13.3	55	NE	14	6.3		0	0			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.38	771.6	7	−13.9	79	NE	8	3.6		2cs	0	NE		0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.11	764.8	15	− 9.4	65	E	24	10.7			10n		E	0	0	Cloudy	Rev. R. Mooley.
*Port Dover, Ontario			29.88	758.9	23	− 5.0	86	NE	13	5.8			10n		NE	0.12	3.0	Light rain	H. Morgan.
Port Hastings, N. S.			29.44	747.8	19.0	− 7.2		NW	30	13.4						0	0	Stormy	Peter Grant.
*Port Stanley, Ontario			29.76	755.9	26	− 3.3	93	NE	30	13.4			10n		NE	0.05	1.3	Sleeting	M. Payne.
*Quebec, Quebec			30.39	771.9	5	−15.0	62	SW	8	3.6		0	0			0	0	Clear	Capt. Ash, R. N.
St. John, N. B.			30.00	762.0	12	−11.1	80	NW	8	3.6						0	0		G. Murdoch, C. E.
*Saugeen, Ontario			29.86	758.4	18	− 7.8	84	E	18	8.0			10s			Inap.	Inap.	Light snow	K. Stewart.
Stayner, Ontario			30.00	762.0	15	− 9.4	84	SE	15	6.7			10n		SE	0	0	Cloudy	R. J. Cole.
Stratford, Ontario			29.89	759.2	21.9	− 5.6	85	E	32	14.3			10s			0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			29.46	748.3	24	− 4.4	67	NW	12	5.4			10ks			0.12	3.0	Fair	T. C. Hill.
*Toronto, Ontario			30.05	763.3	22	− 5.6	87	E	24	10.7			10n		E	Inap.	Inap.	Light snow.	Magnetic Observatory
Woodstock, Ontario																			J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	769.4	18	— 7.8	84	NW	8	3.6		10k	0	W		0	0	Cloudy	
Alpena, Mich			29.79	756.7	18	— 7.8	100	E	36	16.1			10n			0.04	1.0	Heavy snow	
Atlantic City, N. J			30.19	766.8	38	3.3	71	E	24	10.7			10s			0	0	Cloudy	
Augusta, Ga.			29.85	758.2	66	18.9	84	S	12	5.4			10ks		S	0.01	0.3	Cloudy	
Baltimore, Md.			30.16	766.1	39	3.9	73	E	7	3.1			10n			0.04	1.0	Light rain	
Barnegat, N. J			30.23	767.8	36	2.2	90	E	22	9.8			10s			0	0	Cloudy	
Benton, Montana	27.05	687.1	29.85	758.2	10	—12.2	100	SE	7	3.1			10n			0.27	6.9	Snowing	
Bismarck, Dakota	28.16	715.3	29.95	760.7	7	—13.9	100	N	48	21.5			10n		N	0.46	11.7	Light snow	
Boston, Mass			30.24	768.1	21	— 6.1	41	W	16	7.2		Haze	Sm'e			0	0	Smoky	
Breckenridge, Minn			29.78	756.4	16	— 8.9	100	NE	16	7.2			10n			0.66	16.8	Heavy snow	
Buffalo, N. Y			29.91	759.7	27	— 2.8	88	E	20	8.9			10n		SE	0.05	1.3	Sleeting	
Burlington, Vt.			30.40	772.1	10	—12.2	58	N	7	3.1		0	0			0	0	Clear	
Cairo, Ill			29.40	746.7	46	7.8	69	W	28	12.5		8k	0	W		1.20	30.5	Clearing	
Cape Hatteras, N. C.			30.03	762.7	61	16.1	78	SE	28	12.5			10ks		SE	Inap.	Inap.	Cloudy	
Cape Henry, Va			30.06	763.5	48	8.9	92	SE	20	8.9			10s		SE	0.14	3.6	Cloudy	
Cape May, N. J			30.17	766.3	40	4.4	64	E	20	8.9			10s			0	0	Cloudy	
Charleston, S. C.			29.96	761.0	66	18.9	90	S	16	7.2		8c	0	S		0.13	3.3	Fair	
Cheyenne, Wyoming	23.74	603.0	29.68	753.9	14	—10.0	83	NW	20	8.9		0	1s			Inap.	Inap.	Clear	
Chicago, Ill			29.19	741.4	36	2.2	90	E	14	6.3			10n			1.65	41.9	Light rain	
Cincinnati, Ohio			29.22	742.2	56	13.3	87	SE	16	7.2			10s		S	0.83	21.1	Cloudy	
Cleveland, Ohio			29.51	749.5	40	4.4	90	SE	23	10.3			10n		SE	0.24	6.1	Light rain	
Colorado Springs, Col.	23.77	603.8	29.64	752.8	26	— 3.3	63	NW	20	8.9		2k	0			0	0	Clear	
Corsicana, Tex.			30.01	762.2	33	0.6	69	NW	8	3.6		0	0			0.02	0.5	Clear	
Davenport, Iowa			29.19	741.4	35	1.7	90	NE	8	3.6			10n			0.99	25.1	Light rain	
Denison, Tex.			30.01	762.2	32	0.0	79	NW	6	2.7		0	0			0.62	15.7	Clear	
Denver, Col.	24.60	624.8	29.82	757.4	28	— 2.2	54	NW	8	3.6		5c	0	NW		Inap.	Inap.	Fair	
Detroit, Mich			29.50	749.3	31	— 0.6	100	E			4		10n		E	0.45	11.4	Light rain	
Dodge City, Kan	27.25	692.1	29.68	753.9	14	—10.0	81	W	12	5.4		0	0			0.01	0.3	Clear	
Dubuque, Iowa			29.26	743.2	32	0.0	100	NW	6	2.7			10n			0.93	23.6	Sleeting	
Duluth, Minn			29.78	756.4	19	— 7.2	84	NE	36	16.1			10n			0.50	12.7	Heavy snow	
Eastport, Me.			30.07	763.8	13	—10.6	62	NW	19	8.5		0	0			0	0	Clear	
Erie, Pa.			29.71	754.6	37	2.8	90	E	6	2.7			10n		SE	0.08	2.0	Light rain	
Escanaba, Mich			29.73	755.1	18	— 7.8	84	NE	32	14.3			10n			0.10	2.5	Heavy snow	
Fort Gibson, Indian Terr.			29.86	758.4	29	— 1.7	68	W	20	8.9		0	5ks		NW	0.90	22.9	Fair	
Ft. St. Michaels, Alaska			30.28	769.1	6	—14.4		N	11	4.9			10s			0	0	Cloudy	
Fort Sill, Indian T.	28.79	731.3	29.96	761.0	26	— 3.3	77	W	16	7.2		0	0			0.04	1.0	Clear	
Fort Sully, Dakota	28.20	716.3	30.02	762.5	2	—16.7	86	N	25	11.2		0	5s			0.02	0.5	Fair	
Galveston, Tex.			30.02	762.5	49	9.4	57	N	18	8.0		0	0			0	0	Clear	
Grand Haven, Mich			29.33	745.0	28	— 2.2	88	E	34	15.2			10n		E	0.18	4.6	Light sleet	
Indianapolis, Ind			29.15	740.4	54	12.2	93	SE	12	5.4			10s			0.37	9.4	Threatening	
Indianola, Tex.			30.09	764.3	50	10.0	58	N	24	10.7		0	0			0	0	Clear	
Jacksonville, Fla			29.97	761.2	68	20.0	79	SE	16	7.2		0	0			0.03	0.8	Clear	
Keokuk, Iowa			29.09	738.9	45	7.2	100	N	2	0.9			10n		N	0.64	16.3	Light rain	
Key West, Fla			30.[illegible]7	763.8	74.7	23.7	76	SE	15	6.7		2k	Haze	SE	SE	0	0	Fair	
Kittyhawk, N. C.			30.11	764.5	51	10.6	93	SE	18	8.0			10ks		SW	0.03	0.8	Cloudy	
Knoxville, Tenn			29.63	752.6	55	12.8	87	S	20	8.9			10n		SW	2.30	58.4	Light rain	
La Crosse, Wis.			29.41	747.0	23	— 5.0	100	N	11	4.9			10n		N	0.47	11.9	Heavy snow	
Leavenworth, Kan			29.54	750.3	33	0.6	89	NW	28	12.5			10s		NW	0.58	14.7	Cloudy	
Lexington, Ky.	28.30	718.8	29.35	745.5	56	13.3	80	S	24	10.7			10ks		SW	0.30	7.6	Threatening	
Long Branch, N. J.			30.27	768.8	32	0.0	60	NE	18	8.0			10s		NE	0	0	Cloudy	
Louisville, Ky.			29.29	744.0	58	14.4	82	S	13	5.8		2k	5s	SW	S	1.45	36.8	Clearing	
Lynchburg, Va			29.99	761.7	39	3.9	91	NE	5	2.2			10n			0.49	12.4	Light rain	
Malone, N. Y.			30.34	770.6	12	—11.1	61	NE	5	2.2		2ck	0	NW		0	0	Fair	
Manhattan, Kan.	28.57	725.7	29.79	756.7	13	—10.6	64	NW	12	5.4		2ck	0			0.36	9.1	Clear	
Marquette, Mich			29.90	759.4	19	— 7.2	100	NE	21	8.9			10n		E	0.02	0.5	Light snow	
Memphis, Tenn			29.66	753.4	44	6.7	90	W	20	8.9			10ks			1.71	43.4	Cloudy	
Milwaukee, Wis			29.34	745.2	30	— 1.1	100	NE	22	9.8			10n			1.08	27.4	Sleeting	
Mobile, Ala			29.88	758.9	60	15.6	59	NW	6	2.7		5k	5s	W		0.76	19.3	Cloudy	
Montgomery, Ala			29.84	757.9	57	13.9	93	S	9	4.0		8k	0	SW		2.68	68.1	Fair	
Morgantown, W. Va			29.69	754.1	45	7.2	84	SE	14	6.3			10n		SE	0.58	14.7	Light rain	
Mt. Washington, N. H	23.64	600.4	30.00	762.0	16	— 8.9	33	N	24	10.7		0	0			0	0	Clear	
Nashville, Tenn			29.38	746.2	59	15.0	59	S	12	5.4		2k	0	S		1.29	32.8	Fair	
New Haven, Conn			30.26	768.6	27	— 2.8	56	N	8	3.6		8ks	0	N		0	0	Fair	
New London, Conn			30.23	767.8	28.5	— 1.9	65	NW	12	5.4		2ck	0	W		0	0	Clear	
New Orleans, La			29.93	760.2	59	15.0	51	NW	8	3.6		0	0			0.08	2.0	Clear	
Newport, R. I.			30.24	768.1	26	— 3.3	63	N	12	5.4		0	0			0	0	Clear	
New York, N. Y.			30.27	768.8	29	— 1.7	78	NE	12	5.4			10s			0	0	Cloudy	
Norfolk, Va			30.14	763.0	49	9.4	85	SE	14	6.3			10s		SE	0.05	1.3	Threatening	
North Platte, Neb	26.88	682.7	29.68	753.9	2	—16.7	72	NW	8	3.6		0	0			0	0	Clear	
Omaha, Neb.	28.46	722.9	29.56	751.8	20	— 6.7	92	NW	27	12.1			10n			0.32	8.1	Light snow	
Oswego, N. Y			30.17	766.3	24.5	— 4.2	82	E	6	2.7			10s		SW	0	0	Threatening	
Pembina, Dakota			30.08	764.0	12	—11.1	100	N	16	7.2			10n			0.10	2.5	Light snow	
Philadelphia, Penn			30.21	767.3	32	0.0	69	E	18	8.0			10s			0	0	Cloudy	
Pike's Peak, Colorado	17.22	437.4	29.43	747.5	—11.5	—24.2	75	NW	49	21.9			Fog		W	0	0	Foggy	
Pittsburgh, Penn			29.77	756.1	42	5.6	100	SE	6	2.7			10n			0.60	15.2	Light rain	
Port Huron, Mich			29.61	752.1	27	— 2.8	88	E	17	7.6			10n			0.17	4.3	Sleeting	
Portland, Me.			30.26	768.6	23	— 5.0	73	NW	10	4.5		0	0			0	0	Clear	
Portland, Oregon			30.14	765.5	38	3.3	81	Calm	0	0			10s			0.51	13.0	Cloudy	
Punta Rassa, Fla			30.07	763.8	70.2	21.2	87	SE	12	5.4			8ks		SE	0	0	Cloudy	
Rochester, N. Y			30.11	764.8	21	— 6.1	71	E	12	5.4			10s			Inap.	Inap.	Cloudy	
Salt Lake City, Utah	25.51	647.9	29.84	757.9	34	1.1	69	S	4	1.8			10s			0	0	Cloudy	
Sandy Hook, N. J			30.25	768.3	31	— 0.6	79	NE	11	4.9			10n		NE	Inap.	Inap.	Hailing	
San Diego, Cal.			30.10	764.5	45	7.2	85	NE	4	1.8		0	0			0	0	Clear	
San Francisco, Cal.			30.15	765.8	50	10.0	79	Calm	0	0		5k	0			0	0	Fair	
Santa Fe, N. M	23.11	587.0	29.65	753.1	19	— 7.2	69	SE	10	4.5		0	0			0.03	0.8	Clear	
Savannah, Ga.			29.94	760.5	68	20.0	79	SW	8	3.6		10k	0	SW		0.14	3.6	Cloudy	
Shreveport, La			30.01	762.2	35	1.7	70	W	9	4.0		0	0			0.43	10.9	Clear	
Smithville, N. C.			29.95	760.7	64	17.8	88	S	28	12.5			10n		SW	0.59	15.0	Heavy rain	
Springfield, Mass.			30.28	769.1	27	— 2.8	50	N	12	5.4		0	2s			0	0	Clear	
St. Louis, Mo.			29.26	743.2	44	6.7	92	SW	36	16.1			10s		W	1.02	25.9	Cloudy	
St. Marks, Fla			29.90	759.4	67	19.4	90	S	22	9.8			10s		S	0	0	Cloudy	
St. Paul, Minn			29.50	749.3	22	— 5.6	85	N	12	5.4			10s		N	0.30	7.6	Cloudy	
St. Paul's Island, Alaska			30.37	771.4	20	— 6.7	85	N	32	14.3		0	5k			0	0		
Thatcher's Island, Mass.			30.15	765.8	22	— 5.6	59	N	19	8.5			0			0	0	Clear	
Toledo, Ohio			29.38	746.2	34	1.1	100	E	16	7.2			10n		E	0.25	6.3	Light rain	
Tucson, Arizona	27.63	701.8	30.22	767.6	37	2.8		S				0	0			0	0	Clear	
Tybee Island, Ga.			29.93	760.2	65	18.3	83	S	14	6.3		2c	5k		SW	0.21	5.3	Fair	
Vicksburg, Miss			99.91	759.7	45	7.2	60	W	24	10.7		0	0			0.48	12.2	Clear	
Virginia City	23.88	606.5	29.36	745.7	21	— 6.1	57	NW	8	3.6		10ck	0	W		Inap.	Inap.	Cloudy	
Washington, D. C.			30.12	765.0	35	1.7	85	NE	8	3.6			10n		S	0.15	3.8	Light rain	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			29.94	760.5	62	16.7	94	SE	18	8.0			10n			0.12	3.0	Heavy rain	
Wood's Holl, Mass			30.25	768.3	27	— 2.8	53	N	14	6.3		0	0			0	0	Clear	
Wytheville, Va	27.45	697.2	29.57	751.1	48	8.9	92	E	12	5.4			10n		S	0.18?	4.6?	Heavy rain	
Yankton, Dakota	28.39	721.1	29.76	755.9	12	—11.1	80	NW	24	10.7			10s			1.30	33.0	Cloudy	
Yuma, Arizona			30.10	764.5	47	8.3		NE				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I			30.01	762.2	79	26.1	90	NE	5	2.2		5ck	8s	NE	SE	0	0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.09	764.3	76	24.4	76	E				5c	5ks			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.32	770.1	76	24.4	59	ESE	3	1.3		2ck	2k	SE		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I			30.22	767.6	72	22.2	75	Calm	0	0		2c	2s			0	0		James Gall.
Santiago de Cuba, W. I			29.87	758.7	71	21.7	67	N	4.8	2.1		0	0			0	0	Clear	Robert Mason.
Havana, Cuba, W. I			30.07	763.8	71	21.7	81	SE	24	10.7		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			30.21	767.3	61.0	16.1	61	N	30.0	13.4			10fk		N	0	0	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Navassa, W. I																			
Clifton, Jamaica, W. I	27.23	691.6	30.04	763.0	64	17.8	88	SE	2.0	0.9		5c	0	SE		0.51	13.0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A			30.01	762.2	80	26.7	78	NE			3		7ck, k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.05	763.3	83.3	28.5										0	0		Dr. H. Groot.
Medellin, Colombia, S. A	25.15	638.8			63.0	17.2	79		0	0		0	0			0	0	Clear	Thomas Herran.
St. Johns, Newfoundland			29.47	748.5	27.5	— 2.5		S				5k	5s			0	0	Fair	John Delaney.
York Factory, B. A			30.75	781.0	—37	—38.3		W	3	1.3		0	Fog			0	0		J. Fortescue.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Manhattan, 1,125.0 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 17, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the 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.
Nemours			30.09	764.3	67.3	19.6	43	Calm			0		0			0.157	4.0	Clear	Charnot.
Algiers			29.92	760.0	59.4	15.2	93	NNE			1		10			0	0	Hidden	Peter.
La Calle																			Kuntz.
Tunis			29.82	757.3	63.1	17.3	61	ESE			4		9			0.024	0.6	Hidden	Jacques.
Sfax			29.83	757.7	63.9	17.7	74	NE			5		5			0	0	Fair	Chauvey.
Saida			29.95	760.7	55.9	13.3		WNW			3		7			0	0	Cloudy	Millot.
Tebessa			29.82	757.5	63.1	17.3		SE			3		0			0	0	Clear	Colin.
Geriville			30.02	762.4	43.2	6.2	100	NW			3		7			0.535	13.6	Cloudy	Buard.
Laghouat			29.89	759.1	71.6	22.0	58	N			4		1			0.197	5.0	Clear	Guyot.
Biskra			29.79	756.6	68.0	20.0	53	N			1		0			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the 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.
Agram			29.74	755.4	54.0	12.2	69	SW			4		6			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow																			
Eperies			29.93	752.6	47.1	8.4	61	W			3		9			0.059	1.5		I. R. Observatory.
Gratz			29.70	754.3	46.8	8.2	65	S			2		10		SE	0	0		Julius Mikolik.
Hermannstadt	28.63	727.3	29.86	758.5	41.9	5.5	81	SW			2		10			0	0		Andreas Rospini.
Kremsmünster	28.40	721.4	29.81	757.2	53.4	11.9	25	W			3		1			0	0		Prof. Reissenberger.
Lemberg	28.30	718.8	29.63	752.7	46.8	8.2	66	NW			3		10			0.157	4.0		Prof. C. Wagner.
Nyiregyhaza			29.65	753.1	44.1	6.7	57	S			3		6			0.118	3.0		Dr. T. Stanecki.
Pola			29.81	757.2	50.7	10.4	72	SW			2		5			0	0		Habzsuda Daniel.
Szegedin			29.76	756.0	54.3	12.4	90	SSE			3		10s			0	0		I.R. Hydrographic Of'ce
Trieste			29.82	757.3	50.9	10.5	57	S			2		10			0	0		Karl Stancel.
Vienna			29.75	755.6	57.7	14.3	86	SW			1		10			0	0	Drizzling	Prof. V. Farolfi.
			29.69	754.1	45.5	7.5	80	SSE			2		10			0.024	0.6		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the 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.
Brussels			29.64	752.8	40.1	4.5	50	W			4		10			0.010	0.25		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.51	749.5	32.6	0.3		WSW	18	8.0			4			0.180	4.57	Blue sky	William Boswell.
Ardrossan			29.72	754.9	36	2.2		NW			5		5					*D. clouds	J. Mayes.
Armagh Observatory			29.88	758.9	33.9	1.1		WNW	15	6.7			5			Blank	Blank	*D. clouds	S. Cal. for Dr. Robinson
Bidston, Liverpool Obs.			29.88	758.9	34.9	1.6		WNW	38	17.0			7					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			29.95	760.7	41.0	5.0		NW			1-3		7					*D. clouds	J. Dreyer.
Bradford			29.62	752.3	35.5	1.9		W			1		8			0.01	0.3	Gloomy	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	80.0	26.7		NE			4		4					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			29.65	753.1	41.5	5.3		NW			3		7					Snow & hail.	H. Todd.
Cardington			29.68	753.9	41.4	5.2		NW			6		4					*D. clouds	John McLaren.
Carlisle			29.67	753.6	35.8	2.1		NW			2		2			Blank	Blank	*D. clouds	J. Bell, for J. Cartmell.
Chatham, School M. E.			29.70	754.4	42.2	5.7		W			2							Blue sky	Capt. J. Fellowes, R. E.
Dartmoor	28.44	722.4	29.96	761.0	35.4	1.9		N			6		5					*D. clouds	R. E. Power.
Donaghadee			29.69	754.1	34	1.1		NNW			5		8					*D. clouds	J. Mac Gowan.
Dover			29.68	753.9	42	5.6		WNW			5		5					½ clouded	J. Costello.
Eccles, (near Manchester)			29.64	752.8	39.0	3.9		NW	11.8	5.3			3					Squally	Thomas Mackereth.
Falmouth Observatory			29.94	760.5	40.3	4.6		NW	25	11.2			7					Overcast	The Staff.
Fort Napier, (Natal)	27.84	707.1	30.08	764.0	62.0	16.7		E			1		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.85	758.2	88.0	31.1		N			0		5					*D. clouds	(tis.
Galway, Queen's College			29.76	755.9	50	10.0		NW			2		3					*D. clouds	B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			30.07	763.8	66.5	19.2		W			6		1					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.66	753.4	34.0	1.1		NW			1		3					Fine	Lewis Stuart.
Great Yarmouth			29.54	750.3	36	2.2		NW			6		4			Blank	Blank	Squally	G. T. Watson.
Greenwich Royal Obs.			29.70	754.4	39.5	4.2		NW			5		3			Blank	Blank	*D. clouds	The Staff for G. B. Airy.
Guernsey			29.87	758.7	42	5.6		NW			3		7					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.65	753.1	35.3	1.8		NW *			4		5			Blank	Blank	*D. clouds	L. J. Crossley.
Helston			29.90	759.4	46	7.8		NW			4		3k			0.8	20.3	Fine	M. P. Moyle.
Holyhead			29.79	756.7	39	3.9		NNW			6		5					Hailing	John Tilston.
Kew Observatory			29.72	754.9	39.3	4.1		WNW	26	11.6			8					Snowing	The Staff.
Kingstown			29.87	758.7	37	2.8		WNW			6		5					*D. clouds	George Mitchell.
Leicester Museum			29.68	753.9	36.0	2.2		W			5		5					Snow-squalls	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.86	758.4	59.8	15.4		NE			1		10kn					Overcast	Fred Travis, Pvt A.H.C.
Nairn			29.54	750.3	36	2.2		NW			6		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.09	764.3	76.1	24.5		SE			4		7					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.65	753.1	37.3	2.9		NW			6		7k,d		NW	0.01	0.3	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.71	754.6	33.0	0.6		NW			5		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.72	754.9	40	4.4		W			4		7					*D. clouds	J. Lucas.
Plymouth			29.89	759.2	43.8	6.6		NW			3		1					*D. clouds	John Merrifield.
Roche's Point			29.99	761.7	40	4.4		NNW			5		8					¾ clouded	W. Kennedy.
Saint Ann's Head			29.91	759.7	39	3.9		NW			1		2					Squally	John C. Walker.
Saint Helier, (Jersey)			29.87	758.7	46.6	8.1		N			4		8					¾ clouded	A. P. Amy.
Sandwick Manse (Orkneys)			29.43	747.5	31.3	— 0.4		N	25	11.2			10					Snowing	Rev. Dr. Clouston.
Scarborough			29.51	749.5	37.0	2.8		NNW			6		8			Blank	Blank	Overcast	F. Shaw.
Scutari Cemetery (Turkey)			29.94	760.5	53.0	11.7		SSW			1		2					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.60	751.8	38.4	3.6		NW			6		4			0.003	0.08	Blue sky	W. F. Cooper.
Silloth Rectory			29.66	753.4	43.0	6.1	65	NW			3		2			0	0	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			29.64	752.8	36.5	2.5		NW			3		6			Blank	Blank	Squally	S. J. Perry.
Stornoway, Lews C. (Hebr.)			29.54	750.3	34	1.1		WNW			4		8					*D. clouds	John Smith.
Stratfield Turgiss			29.74	755.4	43.8	6.6		NW			2		3					Squally	Rev Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.34	745.2	33	0.6		N			6		10					Snowing	John Trotter.
Truro, Royal Institution			29.95	760.7	45	7.2		NW			8		5					*D. clouds	W. Newcombe.
Valencia Observatory			30.07	763.8	42.0	5.6		NNW	27	12.1			4					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					33	0.6		NW			8		10			0	0		The Staff, for E. J. Stone.
Cape Good Hope Obs.			30.22	767.6	70.2	21.2	50	SSE	19	8.5			0						
Leith, Restalrig Park			29.65	753.1	35.2	1.8		NW			4					0.02	0.5	Fine	Andrew Gibb.
Mauritius			30.08	764.0					22.1	9.9						0.02	0.5		
Monach Lt-house, Hebrides																			J. Youngclause.
North Unst, (Shetland Is.)			29.35	745.5	31	— 0.6		NE			6	3	4	N					

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.13	740.0	39.6	4.2	85	WSW			4		9						
Fanöe			29.19	741.5	35.8	2.1	87	W			6		5						
Godthaab, (Greenland)			29.92	759.9	28.0	— 2.2		E			6		10						
Stykkisholm, (Iceland)																			
Thorshavn, (Faröe)			29.77	756.2	26.1	— 3.3	58	N			7		10					Snowing	
Vestervig			29.06	738.1	36.3	2.4	89	NW			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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	50.0	10	80	NW			3		8ck		NW	0	0	Very cloudy	Normal School.
Amiens			29.74	755.5	43.5	6.4	80	NW			6		2		NW	0	0	Slightly cl'dy	Normal School.
Avignon			29.81	757.2	66.6	19.2	41	W			2		10			0	0	Very cloudy	Normal School.
Bar-sur-Seine			29.77	756.1	47.7	8.7	76	SW			3		8			0.008	0.2	Very cloudy	C. Saillard.
Beaumette, (near Angers)			29.83	757.6	44.2	6.8	77	NNW	11.2	5.0			10		N	0.063	1.6	Raining	Beaumette Observatory
Beauvais			29.80	756.9	43.6	6.1	47	WNW			4		8		WNW	0.030	0.75	Very cloudy	Normal School.
Besançon			29.82	757.3	45.0	7.2	91	SW			2		8		SW	0.217	5.5	Very cloudy	Normal School.
Bourg en Bresse			30.29	769.3	51.8	11	80	NW			2		8n		E				Normal School.
Bourges			29.85	758.1	48.7	9.3	92	SW			2		10		SW	0.335	8.50	Covered	Normal School.
Brest			29.87	758.7	44.1	6.7	70	N			3		9n		N	0.039	1.00		Naval Observatory.
Caen																			Normal School.
Chartres			29.76	756.0	43.5	6.4		S			3		10		S	0.051	1.3	Covered	Normal School.
Chaumont																			Normal School.
Clermont			30.00	762.0	46.4	8.0	97	NE			2		10			0.193	4.9		Puy de Dome, Obs.
Commercy			29.76	755.9	44.6	7	71	W			6		10kn		W	0	0	Covered	Normal School.
Commune de Gréasque*			29.80	758.4	61.7	16.5	56	NW			2		8		NW	0	0		
Grenoble			29.91	759.7	50.0	10.0	84	NE			1		10kn		S	0.098	2.5	Covered	Normal School.
Le Mans			29.84	758.0	45.3	7.4	60	N			3		8		N	0	0	Very cloudy	Normal School.
Loches			29.59	751.6	48.2	9	75				2		5		NW	0.047	1.2	Cloudy	Normal School.
Lons-Le-Saulnier			29.85	758.2	48.0	8.9	92	SW			2		8		SW	0.252	6.4	Very cloudy	Normal School.
Mâcon			29.82	757.5	50.9	10.5	84	W			2		10			0	0	Covered	Normal School.
Mirecourt																			Normal School.
Metz			29.78	756.3	45.1	7.3	61	SW			3		10		SW	0.004	0.1	Snowing†	M. Schuster.
Nismes			29.89	759.2	72.0	22.2	69	W			2		2		NW	0	0	Slightly cl'dy	Normal School.
Orleans			29.79	756.6	49.3	9.6	69	WSW			3		10		W	0	0	Covered	Normal School.
Paris Observatory			29.79	756.7	43.9	6.6	55	NW			3		8		W	0.018	0.45	Very cloudy	National Observatory.
Parthenay			29.84	758.0	49.1	9.5	94	NW			2		10			0.08	2.	Covered	Normal School.
Privas			29.84	757.8	57.7	14.3		NW			2		5		SE	0	0	Cloudy	Normal School.
La Roche-sur-Yon			29.90	759.4	49.6	9.8	84	SW			2		10			0.071	1.8	Covered	Normal School.
Rochefort, Observatory			29.86	758.5	53.8	12.1	86	NE			2		10		SW	0.433	11.0	Rainy	Naval Observatory.
Rouen			29.82	757.3	43.5	6.4	53	NNW			3		2		W	0.059	1.5	Slightly cl'dy	Normal School.
Saint Lo			29.90	759.4	42.3	5.7	87	NW			2		6		N	0.024	0.6		Normal School.
Tarbes			30.00	761.9	55.4	13	74	SW			2		10		E	0	0	Covered	Normal School.
Toulouse																			Normal School.
Villefranche			29.95	760.8	50.4	10.2	93	NW			2		8		N	0	0	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			30.08	764.1	77.7	25.4	76	NE			2		2k						L'Abbé Marchési.
Gorée																			
Marseilles			29.82	757.5	61.5	16.4	61	W			2		3			0	0		Marseilles Observatory.
Mont-Louis	24.74	628.5	30.10	764.4	44.8	7.1	88	NNE					10		WSW	0.055	1.4		—. Falguère.
Montsouris, Paris			29.78	756.1	44.1	6.7	74	W			3		9		W	0.024	0.6		Montsouris Observ'tory.
Perpignan			29.90	759.5	65.3	18.5	56	N	20.5	9.17			4		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.Pt‡																			M. Baylac.
Pic du Midi, (Plantade)	22.39	568.7			35.7	2.5	67	NW			3		10					Snowy	E. Renou.
Saint Maur, (near Paris)			29.78	756.5	45.5	7.5	62	WNW			1		8			0.016	0.4	Very cloudy	Toulouse Observatory.
Toulouse			29.95	760.7	59.5	15.3	67	WNW			3		8			0.067	1.7		C. Marquet.
Tours			29.83	757.6	51.1	10.6	63	WNW			2		10		W	0.016	0.4		Dr. A. Bérigny.
Versailles, (near Paris)			29.79	756.6	43.9	6.6	57	NW			3		8			0.016	0.40	Very cloudy	
Zi-Ka Wei, (near Shanghai)																			H. Le Lee, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,76 2.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Near Marseilles. † It is not certain that the weather remarks refer to the moment of observation. ‡ Summit inaccessible.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.57	751.1	37.1	3.3	95	W			4		10			0.787	20.0	Rain & snow	Prof. T. Hoh.
Berlin			29.47	748.5	39.4	4.1	70	SW			4		7			0.067	1.7		Prof. Arndt.
Breslau			29.60	751.9	40.8	4.9	68	W			3		10			0	0	Raining	Dr. P. Neugebauer.
Carlsruhe			29.65	753.2	44.2	6.8	88	W			3		10			0	0	Raining	A. Senz.
Cassel			29.47	748.6	37.4	3.0	58	WNW			5		8			0.031	0.8	Snowing	Dr. H. Möhl.
Cologne																			Dr. Garthe
Emden																			Prof. Prestel.
Frankfort on the Main			29.67	753.6	46.0	7.8	50	WSW			3		8			0.110	2.8		Physical Society.
Friedrichshafen	28.28	718.3	29.74	755.4	43.9	6.6	77	SW			2		10			0.563	14.3	Raining	M. Wilhelm.
Hamburg			29.38	746.3	36.7	2.6	74	WSW			6		5k	WSW		0.039	1.0	Hail, rain-squalls	Deutsche Seewarte.
Kiel			29.34	745.1	36.0	2.2	86	W			3		8			0.287	7.3		Prof. G. Karsten.
Königsberg			29.41	746.9	35.2	1.8	86	SW			5		5			0.102	2.6		Prof. E. Luther.
Köslin			29.33	745.0	37.0	2.8		SW			6		10			0	0		H. Müller.
Letpsic			29.54	750.3	41.9	5.5	59	WNW			3		9	W		0	0	Light rain	Prof. Bruhns.
Memel			29.24	742.8	33.8	1.0	90	SW			5		10			0.075	1.9	Snowing	Reinbrecht & Skalweit.
Münster			29.46	748.3	38.3	3.5	73	SW			5		10			0.028	0.7	Snowing	Prof. E. Heis.
Neufahrwasser			29.33	745.0	40.5	4.7	68	SW			4		8			0.016	0.4	Snow-squalls	A. Lothes.
Posen			29.52	749.7	40.1	4.5	69	W			7		9			0.016	0.4	Graupelnd	Dr. Magener.
Strassburg, (in Alsace)			29.70	754.4	47.5	8.6	80	SW			1		10			0.039	1.0		Dr. Schur.
Stuttgart			29.65	753.1	47.1	8.4	65	NW			2		10			0.024	0.6	Light rain	Prof. Schoder.
Thorn			29.46	748.2	37.9	3.3	88	W			6		4			0.035	0.9	Snowing	Dr. Hasenbalg.
Treves, (Trier)			29.60	751.9	44.4	6.9	60	WSW			8		10			0	0		Prof. Flesch.
Wustrow, Naval School			29.28	743.7	34.5	1.4	80	WSW			7		7			0.020	0.5	Snow & rain	E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.74	755.3	52.9	11.6	77	S	3.8	1.7			10			0	0		
Padua			29.72	754.9	56.5	13.6	71	NW	4.3	1.9			10	SW		0	0		
Vicenza			29.72	755.0	56.3	13.5	68	E	1.8	0.8			5			0	0		
Verona			29.72	754.8	64.2	17.9	64	W			2		10			0	0		
Bergamo	28.37	720.7	29.69	754.2	53.6	12.0	68	W			1		9			0	0		
Domodossola	28.65	727.6	29.67	753.7	57.6	14.2	71	SSW			4		10			0	0		
Milan			29.74	755.4	57.7	14.3	66	NE			2		9	NE		0	0		
Pavia			29.73	755.2	55.8	13.2	69	NE			1		8	SW		0	0		
Moncalieri			29.74	755.4	55.9	13.3	66	WSW	2.5	1.1			3	W		0	0		
Mondovi	27.81	706.4	29.73	755.1	53.2	11.8	69	NW			2		6	SW		0	0		
Porto Maurizio			29.77	756.2	63.7	17.6		E			2		8	SW		0	0		
Genoa			29.74	755.5	60.1	15.6	65	SE	9.8	4.4			6			0	0		
Piacenza			29.74	755.5	59.0	15.0	60	NE	3.8	1.7			5	S		0	0		
Parma			29.72	754.8	62.8	17.1	60	SE			2		9			0	0		
Bologna			29.77	756.2	62.1	16.7	29	WSW			6		5	NE		0	0		
Florence			29.83	757.6	58.1	14.5	77	W			2		10	W		0	0		
Leghorn			29.79	756.7	57.7	14.3	77	S	8.7	3.9			10			0	0		
Siena	28.58	725.9	29.79	756.6	56.3	13.5	77	SSW	0	0			10	W		0	0		
Urbino	28.26	717.8	29.83	757.7	55.0	12.8	62	SSW			4		9			0	0		
Pesaro																			
Ancona			29.80	756.8	61.2	16.2	52	SW			2		8			0	0		
Grosseto			29.80	757.0	64.4	18.0	58	SSE			6		5	NW		0	0		
Rome			29.87	758.8	62.2	16.8	64	S	13.0	5.8			9	SW		0	0		
Naples, O. U.			29.94	760.4	61.0	16.1	53	SW			2		10	SW		0	0		
Lecce			29.91	759.6	62.6	17.0	62	SSE	31.1	13.9			4			0	0		
Cosenza			29.91	759.8	72.9	22.7	67	SW	0	0			8			0	0		
Riposto, (Sicily)			29.92	759.9	63.0	17.2	70	NE			2		9			0	0		
Palermo			29.87	758.8	59.4	15.2	69	NE	1.8	0.8			10			0	0		
Caltanissetta	27.95	709.9	29.91	759.6	61.3	16.3	52	E			1		8	W		0	0		
Sub-Series.																			
Naples, S. R.			29.93	760.1	58.1	14.5	73	SW	4.3	1.9			..k,c	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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.66	753.3	40.3	4.6		WNW			5								
Groningen			29.35	745.6	37.4	3.0		W			6								
Helder			29.44	747.7	38.8	3.8		WSW			6								
Utrecht			29.51	749.5	37.9	3.3	90	W			6		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.24	742.7	34.5	1.4	93	N	24.8	11.1			5			0	0		
Brône			28.76	730.6	36.7	2.6	82	N	9	4			9			0	0		
Christiania			29.11	739.5	37.8	3.2	58	Calm	0	0			0			0	0		
Tromsö			28.84	732.6	36.1	2.3	57	SE	0	0			1			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.16	766.0	60.4	15.8	81	SW	4.1	1.84			4			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.07	763.7	66.6	19.2	50	WNW	11.6	5.17			6	NNE		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.24	768.0	63.9	17.7	56	SW	6.2	2.78			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.21	767.2	60 6	15.9	76	NNW	17.4	7.8			5	NNW		0	0		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.52	749.8	40.3	4.6	65	SW	13	6			10					Raining	Astronomical Obs.
Wilna			29.43	747.4	35.6	2.0	71	W	9	4			10						Astronomical Obs.
Dorpat			29.28	743.8	38.1	3.4	73	S	4	2			9						Physical Cabinet.
St. Petersburg			29.24	742.7	37.2	2.9	73	SSW	11	5			10						Central Physical Obs.
Kuopio			28.97	735.7	35.4	1.9	86	S	29	13			10					Snowing	Ch. Forsten.
Kieff			29.61	752.2	43.0	6.1	60	W	27	12			6						Physical Cabinet.
Nikolaiev			29.84	757.8	50.0	10.0	54	NW	18	8			2						Kurdakof.
Kertch																			Lagorio.
Moscow			29.50	749.4	35.1	1.7	85	S	4	2			10						Meteorological Obs.
Lugan			29.71	754.7	37.6	3.1	87	SSW	9	4			10			Blank	Blank		Meteorological Obs.
Archangel			29.27	743.4	38.1	3.4	73	SSW	18	8			10						Ogorodnikof.
Tiflis	28.48	723.4	29.86	758.4	63.7	17.6	45	SE	11	5			2						Physical Observatory.
Astrakhan			30.10	764.6	51.3	10.7	43	SE	18	8			0						Sebastianof.
Kasan			29.91	759.7	37.2	2.9	78	S	7	3			3						Physical Cabinet.
Orenburg			30.43	773.0	28.6	— 1.9	85	E	4	2			0						Tschernischef.
Ekaterinburg	29.11	739.4	30.13	765.2	42.6	5.9	69	Calm	0	0			0						Meteorological Obs.
Nukuss			30.08	764.1	52.9	11.6	27	NE	11	5			0						
Kasaly																			Bobrof.
Tashkend	28.54	725.0	30.20	768.5	52.9	11.6	77	Calm	0	0			8						Michelson.
Barnaul			30.17	766.4	25.0	— 3.9	73	Calm	0	0			0						Meteorological Obs.
Yeniseisk			29.69	754.0	30.2	— 1.0	88	W	7	3			10					Snowing	Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.26	768.5	42.3	5.7	37	NNW	18	8			0						Physical Observatory.
Nertchinsk	28.00	711.2	30.25	768.4	8.8	—12.9	54	Calm	0	0			0						Meteorological Obs.
Vladivostock			29.96	760.9	34.7	1.5	98	Calm	0	0			10			Blank	Blank		
Nikolaievsk, on the Amoor					10.6	—11.9	93	NE	2	1			4						

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.96	761.0	66.6	19.2	42	S	3.0	1.33		0	5			0	0	Cloudy	Royal Observatory.
San Fernando			30.13	765.3	58.5	14.7	83	WSW	4.0	1.8		0	10		W	0	0		The Naval Observatory.

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			28.82	732.0	33.4	0.8	94	SE			2		10			0.354	9.0		
Umea			28.79	731.2	33.4	0.8	89	Calm			0		6			0	0		
Hernosand			28.85	732.7	38.8	3.8	51	W			2		9			0	0		
Stockholm			29 06	738.0	39.4	4.1	71	SSW			2		2			0	0		
Wisby			29.21	742.0	36.0	2.2	65	SW			4		5			0.047	1.2		
Sub-Series.																			
Upsala			29.06	738.0	38.5	3.6	60	SW	9.2	4.1			0			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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.36	720.3	29.79	756.7	51.8	11.0	76	SW			3		10			0.028	0.7	Covered	The Observatory.
Zurich	28.10	713.8	29.78	756.5	41.5	5.3	96	SE			1		10			1.264	32.1	Raining	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —4.3 mm.; Thermometer, +3.1 cent.; Relative Humidity, +15 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.98	761.5	55.8	13.2	64	SW	7	3.0			0			0	0		
Fao, (Persian Gulf)			30.04	763.0	66.0	20.0		SE			4		10					Raining, stormy.	
Salonica			29.93	760.2	70.3	21.3		SE			2		10						
Valona			29.81	757.2	61.5	16.4		W			1		0						
Varna			29.88	759.0	59.9	15.5		NW			6		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.96	761.0	66.0	18.9	70	SW			1		9ks		W	0.12	3.0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.																			Hon. J. Ferguson.
Brockville, Ontario			30.45	773.4	26	— 3.3		Calm	0	0			10s		NE	0.70	17.8	Cloudy	W. R. Bigg.
*Chatham, N. B.			29.78	756.4	14	—10.0	93	N	1	0.4			10ks		N	0.04	1.0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island.			29.76	755.9	17	— 8.3	88	N	5	2.2			10n			Inap.	Inap.	Light snow	H. J. Cundall, C. E.
Cornwall, Ontario			29.38	746.2	22.8	— 5.1	87	NE			1		10n			0.50	12.7	Snowing	James Smith, M. A.
Dalhousie, N. B.			29.75	755.6	13.7	—10.2	67	W			1					0	0	Snowing	H. A. Johnson.
Esquimault, B. C.			30.03	762.7	33.6	0.9	95	N	2	0.9			10			0.32	8.1	Snow & sleet	W. H. Bevis.
Fredericton, N. B.			29.73	755.1	15.4	— 9.2	93	NE	6	2.7			10n			0	0		Prof. Harrison.
*Fort Garry, Manitoba			30.60	777.2	—10	—23.3	100	NE	11	4.9		0	2s		NE	0	0	Fair	James Stewart.
Goderich, Ontario			29.32	744.7	26.9	— 2.8	86	SW			4		10n			0.10	2.5	Threatening	H. J. Strang, M. A.
Granton, Ontario			29.32	744.7	26.2	— 3.2		S			2		10n			0.49	12.4	Cloudy	James Grant.
*Halifax, N. S.			29.72	754.9	22	— 5.6	90	SE	4	1.8			10n		SE	0.01	0.3	Light snow.	F. Allison, M. A.
*Kingston, Ontario			29.41	747.0	24	— 4.4	95	NE	1	0.4			10n			0.47	11.9	Light snow	S. Woods, M. A.
Little Current, Ontario			29.42	747.3	9.6	—12.4		NE	15	6.7			10s			0.30	7.6		G. B. Abrey, C. E.
*Montreal, Quebec			30.39	771.9	19	— 7.2	95	NE	10	4.5			10n		NE	1.05	26.7	Heavy snow	C. H. McLeod, C. E.
*Ottawa, Ontario			29.35	745.5	22	— 5.6	79	Calm	0	0			10n		NE	1.15	29.2	Light snow	J. B. Haney.
*Parry Sound, Ontario			29.36	745.7	17	— 8.3	95	N	16	7.2			10n		N	0.50	12.7	Light snow	Rev. R. Mooley.
*Port Dover, Ontario			29.36	745.7	30	— 1.1	78	SW	14	6.3		10k	0	SW		0.79	20.1	Fair	H. Morgan.
Port Hastings, N. S.			29.66	753.4	21.1	— 6.1		NW	3	1.3						0.40	10.2	Fine	Peter Grant.
*Port Stanley, Ontario			29.36	745.7	29	— 1.7	90	W	22	9.8			10n		SW	0.75	19.1	Cloudy	M. Payne.
*Quebec, Quebec			30.58	776.7	15	— 9.4	100	NE	30	13.4			10n		NE	0.30	7.6	Heavy snow	Capt. Ash, R. N.
St. John, N. B.			29.72	754.9	21	— 6.1	85	NE	2	0.9			10n			0.085	2.16		G. Murdoch, C. E.
*Saugeen, Ontario			29.25	742.9	28	— 2.2	98	SW	8	3.6			10n		W	0.16	4.1	Light snow	K. Stewart.
Stayner, Ontario			29.32	744.7	20	— 6.7	84	Calm	0	0			10n			Inap.	Inap.	Light snow	R. J. Cole.
Stratford, Ontario			29.32	744.7	26.8	— 2.9	87	SW	11	4.9			10s			0.200	5.08	Fair	C. J. MacGregor, M. A.
*Sydney, C. B.			29.74	755.4	23	— 5.0	64	NW	5	2.2		8cs	0			0	0	Fair	T. C. Hill.
*Toronto, Ontario			30.35	770.9	31	— 0.6	81	SW	5	2.2		5ck	5s	SW		0.41	10.4	Cloudy	Magnetic Observatory
Woodstock, Ontario																			J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.40	746.7	29	— 1.7	88	Calm	0	0			10n			0.26	6.6	Light snow	
Alpena, Mich.			29.36	745.7	16	— 8.9	100	NE	24	10.7			10n			0.96	24.4	Heavy snow	
Atlantic City, N. J.			29.39	746.5	39	3.9	100	NW	4	1.8			Fog			0.36	9.1	Foggy	
Augusta, Ga.			29.93	760.2	49	9.4	44	W	7	3.1		0	0			0.38	9.7	Clear	
Baltimore, Md.			29.49	749.0	39	3.9	82	NW	1	0.4		8k	Sm'e	SW		1.11	28.2	Clearing	
Barnegat, N. J.			29.38	746.2	38	3.3	100	N	18	8.0			Fog			0.68	17.3	Light rain	
Benton, Montana	27.52	699.0	30.32	770.1	—28	—33.3	100	Calm	0	0		0	0			0.04	1.0	Clear	
Bismarck, Dakota	28.63	727.2	30.49	774.4	5	—15.0	50	N	8	3.6		5k	0	N		0.07	1.8	Fair	
Boston, Mass.			29.42	747.3	33	0.6	100	N	12	5.4		10n	Fog			0.35	8.9	Light rain	
Breckenridge, Minn.			30.31	769.9	1	—17.2	85	N	30	13.4			10s		N	0.59	15.0	Cloudy	
Buffalo, N. Y.			29.34	745.2	30	— 1.1	80	W	20	8.9			10n		SW	0.70	17.8	Light snow	
Burlington, Vt.			29.38	746.2	32	0.0	79	S	6	2.7			10s			0.32	8.1	Cloudy	
Cairo, Ill.			29.95	760.7	31	— 0.6	60	W	16	7.2		0	0			0.01	0.3	Clear	
Cape Hatteras, N. C.			29.53	750.0	61	16.1	70	W	24	10.7		0	0			0.35	8.9	Clear	
Cape Henry, Va.			29.48	748.8	61	16.1	31	W	24	10.7		0	0			0.57	14.5	Clear	
Cape May, N. J.			29.44	747.8	40	4.4	100	NW	24	10.7			Fog			0.66	16.8	Foggy	
Charleston, S. C.			29.93	760.2	55	12.8	27	W	18	8.0		0	0			0.10	2.5	Clear	
Cheyenne, Wyoming	24.10	612.1	30.04	763.0	11	—11.7	100	W	12	5.4		5ck	5s	NW		Inap.	Inap.	Cloudy	
Chicago, Ill.			29.58	751.3	21	— 6.1	71	W	8	3.6		2ck	5s	W		0.26	6.6	Fair	
Cincinnati, Ohio			29.61	752.1	29	— 1.7	78	W	20	8.9			10s		W	0.12	3.0	Cloudy	
Cleveland, Ohio			29.40	746.7	27.2	— 2.7	73	W	20	8.9		2ck	5ks	W	SW	0.33	8.4	Threatening	
Colorado Springs, Col.	23.19	589.0	30.06	763.5	19	— 7.2	39	N	4	1.8		5k	0	NW		0	0	Fair	
Corsicana, Tex.			30.05	763.3	41	5.0	73	S	4	1.8		2c	0	W		0	0	Fair	
Davenport, Iowa			29.81	757.2	17	— 8.3	83	NW	16	7.2			10n			0.83	21.1	Light snow	
Denison, Tex.			30.19	766.8	42	5.6	57	NE	6	2.7		5c	0	N		0	0	Fair	
Denver, Col.	24.91	632.4	30.12	765.0	23	— 5.0	73	E	4	1.8		0	5s		W	0	0	Fair	
Detroit, Mich.			29.33	745.0	25	— 3.9	88	SW	18	8.0			10n		SW	0.73	18.5	Light snow	
Dodge City, Kan.	27.65	702.3	30.13	765.3	18	— 7.8	84	N	17	7.6		0	0			0	0	Clear	
Dubuque, Iowa			29.80	756.9	15	— 9.4	65	NW	8	3.6			10s		NW	0.88	22.4	Cloudy	
Duluth, Minn.			30.15	765.8	5	—15.0	75	NE	16	7.2			10n			1.20	30.5	Light snow	
Eastport, Me.			29.60	751.8	26	— 3.3	100	E	16	7.2			10n		SE	0.03	0.8	Light snow	
Erie, Pa.			29.38	746.2	28	— 2.2	100	W	26	11.6			10n			0.32	8.1	Light snow	
Escanaba, Mich.			29.71	754.6	5	—15.0	87	N	36	16.1			10n			0.21	5.3	Light snow	
Fort Gibson, Indian Terr.			30.25	768.3	32	0.0	69	NW	13	5.8		2ck	0	W		0	0	Clear	
Ft. St. Michaels, Alaska			30.20	767.1	8	—13.3		N	23	10.3		0	0			0	0	Clear	
Fort Sill, Indian T.	29.07	738.4	30.25	768.3	33	0.6	69	N	16	7.2		0	0			0	0	Clear	
Fort Sully, Dakota	28.65	727.7	30.52	775.2	5	—15.0	87	NW	20	8.9			10n			Inap.	Inap.	Light snow	
Galveston, Tex.			30.09	764.3	58	14.4	59	SE	4	1.8		0	0			0	0	Clear	
Grand Haven, Mich.			29.44	747.8	22	— 5.6	86	NW	18	8.0			10n		NW	0.42	10.7	Light snow	
Indianapolis, Ind.			29.65	753.1	25	— 3.9	88	W	6	2.7			10n			0.76	19.3	Light snow	
Indianola, Tex.			30.10	764.5	58	14.4	76	SE	10	4.5		1ck	0	W		0	0	Clear	
Jacksonville, Fla.			30.01	762.0	59	15.0	48	W	8	3.6		0	0			0.73	18.5	Clear	
Keokuk, Iowa			29.80	756.9	18	— 7.8	70	NW	17	7.6		5k	0	NW		0.14	3.6	Fair	
Key West, Fla.			30.05	763.3	75.8	24.3	81	Calm	0	0		2k	Sm'e	NW		0	0	Smoky	
Kittyhawk, N. C.			29.53	750.0	59	15.0	54	W	24	10.7		0	0			0.32	8.1	Clear	
Knoxville, Tenn.			29.77	756.1	41	5.0	41	SW	18	8.0		0	0			0.02	0.5	Clear	
La Crosse, Wis.			29.88	758.9	8	—13.3	100	N	25	11.2			10n		N	0.77	19.6	Heavy snow	
Leavenworth, Kan.			30.21	767.3	15	— 9.4	80	NW	16	7.2		0	0			Inap.	Inap.	Clear	
Lexington, Ky.	28.61	726.7	29.73	755.1	31	— 0.6	68	W	32	14.3			10n			0.23	5.8	Light snow	
Long Branch, N. J.			29.41	746.7	34	1.1	100	N	14	6.3			10n			1.13	28.7	Light rain	
Louisville, Ky.			29.74	755.4	30	— 1.1	78	W	21	9.4			10n			0.34	8.6	Light snow	
Lynchburg, Va.			29.53	750.0	47	8.3	35	W	6	2.7		5k	0	W		0.40	10.2	Fair	
Malone, N. Y.			29.29	744.0	28	— 2.2	88	Calm	0	0			10n			0.40	10.2	Light snow	
Manhattan, Kan.	28.94	735.1	29.99	761.7	12	—11.1	80	NW	20	8.9		0	0			0	0	Clear	
Marquette, Mich.			29.87	758.7	6	—14.4	100	N	20	8.9			10n			0.23	5.8	Light snow	
Memphis, Tenn.			30.06	763.5	41	5.0	48	W	8	3.6		5k	2s	W		0	0	Fair	
Milwaukee, Wis.			29.66	753.4	15	— 9.4	91	N	15	6.7			10n			0.60	15.2	Light snow	
Mobile, Ala.			30.09	764.3	46	7.8	61	Calm	0	0		2c	Sm'e			0	0	Fair	
Montgomery, Ala.			30.10	764.5	46.5	8.1	65	W	6	2.7		8c	0	W		0	0	Fair	
Morgantown, W. Va.			29.50	749.3	33	0.6	89	W	14	6.3			10n		W	0.48	12.2	Light snow	
Mt. Washington, N. H.	23.13	587.5	29.49	749.0	19	— 7.2	100	NW	24	10.7			Fog			0.18	4.6	Foggy	
Nashville, Tenn.			29.88	758.9	41	5.0	48	W	12	5.4		0	0			0	0	Clear	
New Haven, Conn.			29.40	746.7	31	— 0.6	89	N	10	4.5			10n			Inap.	Inap.	Light sleet	
New London, Conn.			29.41	747.0	34	1.1	100	N	4	1.8			10s		N	0.48	12.2	Threatening	
New Orleans, La.			30.10	764.5	53.5	11.9	58	Calm	0	0		0	0			0	0	Clear	
Newport, R. I.			29.40	746.7	35	1.7	90	N	6	2.7			Fog			0.84	21.3	Foggy	
New York, N. Y.			29.44	747.8	35	1.7	89	NE	10	4.5			Fog			0.67	17.0	Foggy	
Norfolk, Va.			29.52	749.8	58	14.4	37	W	20	8.9		0	0			0.32	8.1	Clear	
North Platte, Neb.	27.33	694.2	30.29	767.1	5	—15.0	75	W	4	1.8		0	2s			0	0	Clear	
Omaha, Neb.	29.03	737.4	30.19	766.8	15	— 9.4	91	NW	19	8.5			5n		NW	0.01	0.3	Light snow	
Oswego, N. Y.			29.34	745.2	38.5	3.6	71	SW	3	1.3			10s		SW	0.36	9.1	Cloudy	
Pembina, Dakota			30.55	776.0	— 7	—21.7	100	NW	12	5.4		5c	0			0.13	3.3	Fair	
Philadelphia, Penn.			29.49	749.0	35	1.7	100	NW	6	2.7			Fog			0.87	22.1	Light rain	
Pike's Peak, Colorado	17.51	444.7	29.72	754.9	— 2	—18.9	51	NW	44	19.7		0	5s			0	0	Fair	
Pittsburgh, Penn.			29.48	748.8	30	— 1.1	100	NW	10	4.5			10n			0.62	15.7	Light snow	
Port Huron, Mich.			29.28	743.7	26	— 3.3	88	SW	21	9.4			10n			0.59	15.0	Light snow	
Portland, Me.			29.55	750.6	28	— 2.2	77	NE	14	6.3			10n			0.22	5.6	Light snow	
Portland, Oregon			30.10	764.5	42	5.6	91	S	6	2.7			10n			Inap.	Inap.	Light rain	
Punta Rassa, Fla.			30.04	763.0	73.8	23.2	90	SW	12	5.4			8ks		W	0	0	Cloudy	
Rochester, N. Y.			29.33	745.0	35	1.7	80	W	16	7.2			10s		W	0.53	13.5	Cloudy	
Salt Lake City, Utah	25.76	654.3	30.10	764.5	32	0.0	79	Calm	0	0		0	0			0.02	0.5	Clear	
Sandy Hook, N. J.			29.41	747.0	34	1.1	100	NE	13	5.8			Fog			0.97	24.6	Foggy	
San Diego, Cal.			30.06	763.5	50	10.0	75	Calm	0	0		0	0			0	0	Clear	
San Francisco, Cal.			30.15	765.8	52	11.1	93	Calm	0	0			Fog			0	0	Foggy	
Santa Fe, N. M.	23.27	591.0	29.81	757.2	35	1.7	70	N	12	5.4		0	0			0	0	Clear	
Savannah, Ga.			29.98	761.5	55	12.8	34	NW	8	3.6		0	0			0.32	8.1	Clear	
Shreveport, La.			30.16	766.1	40	4.4	87	NE	2	0.9		5cs	0	W		0	0	Fair	
Smithville, N. C.			29.77	756.1	57	13.9	48	W	19	8.5		0	0			0.20	5.1	Clear	
Springfield, Mass.			29.43	747.5	32	0.0	79	N	4	1.8			10s			0.35	8.9	Cloudy	
St. Louis, Mo.			29.94	760.5	24	— 4.4	86	NW	34	15.2			10n			0.21	5.3	Light snow	
St. Marks, Fla.			30.07	763.8	53	11.7	42	N	8	3.6		0	0			0.22	5.6	Clear	
St. Paul, Minn.			30.02	762.5	9.5	—12.5	78	N	24	10.7			10n		N	0.54	13.7	Light snow	
St. Paul's Island, Alaska			30.01	762.2	11	—11.7	70	N	31	13.9		0	8k			0.01	0.3		
Thatcher's Island, Mass.			29.47	748.5	34	1.1	79	NE	13	5.8						0.45	11.4	Dense fog	
Toledo, Ohio			29.38	746.2	30	— 1.1	78	SW	12	5.4			10s		SW	0.21	5.3	Cloudy	
Tucson, Arizona	27.62	701.5	30.21	767.3	41	5.0		S				8cs	0	W		0	0	Fair	
Tybee Island, Ga.			29.93	760.2	55	12.8	53	NW	18	8.0		2c	Haze	E		0.08	2.0	Hazy	
Vicksburg, Miss.			30.17	766.3	45	7.2	75	N	1	0.4		5cs	0	W		0	0	Fair, frost	
Virginia City	24.29	617.0	29.77	756.1	10	—12.2	79	Calm	0	0		5cs	0			0.08	2.0	Cloudy	
Washington, D. C.			29.50	749.3	38	3.3	90	Calm	0	0		0	1s		SW	0.78	19.8	Smoky	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			29.74	755.4	58	14.4	31	W	20	8.9		0	0			0.40	12.4	Clear	
Wood's Holl, Mass			29.37	746.0	36	2.2	90	NW	7	3.1			Fog			0.59	15.0	Dense fog	
Wytheville, Va	27.22	691.4	29.36	745.7	37	2.8	46	W	20	8.9		5k	0	W		0.93	23.6	Fair	
Yankton, Dakota	28.94	735.1	30.38	771.6	8	—13.3	78	NW	17	7.6		1cs	Haze	NW		Inap.	Inap.	Fair	
Yuma, Arizona			30.09	764.3	46	7.8		NE				2c	0	N		0	0	Fair	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.06	763.5	77	25.0	90	E	7	3.1		5ck	8s	NE	N	0	0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.03	762.7	77	25.0	69	E				0	5k			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I.			30.21	768.1	76	24.4	56	SE	2	0.9		2c	2k	E		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I.			30.17	766.3	73	22.8	76	Calm	0	0		2c	2s			0	0		James Gall.
Santiago de Cuba, W. I.			29.82	757.4	71	21.7	75	Calm	0	0		0	2ks		WSW	0	0	Fair	Robert Mason.
Havana, Cuba, W. I.			30.05	763.3	76	24.4	81	Calm	0	0		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			30.04	763.0	67.5	19.7	67	SW	17.0	7.6		5cs	2fk	SW	SW	0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.24	691.9	30.05	763.3	63	17.2	88	E	2.0	0.9		5c	0	E		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A			30.02	762.5	80	26.7	74	E			2		4k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.07	763.8	72.4	28										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.12	638.1			67.5	19.7	80		0	0		0	1s			0	0	Fair	Thomas Herran.
St. Johns, Newfoundland			29.59	751.6	27.0	— 2.8		SW				5ck	5s			0	0	Fair	John Delaney.
York Factory, B. A			30.66	778.7	—31	—35.0		NW	2	0.9		0	0			0	0		J. Fortescue.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, *are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day.* The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,078 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Manhattan, 1,125.0 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.5 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 18, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	764.2	67.8	19.9	50	Calm			0		4			0	0	Fair	Charnot.
Algiers			29.92	760.0	64.0	17.8	70	NW			2		9			0	0	Hidden	Peter.
La Calle																			Kuntz.
Tunis			29.82	757.3	61.9	16.6	73	NW			6		8			0.248	6.3	Cloudy	Jacques.
Sfax			29.85	758.2	66.2	19.0	46	NW			3		4			0	0	Fair	Chauvey.
Saida			29.97	761.1	59.4	15.2		WNW			3		2			0	0	Clear	Millot.
Tebessa			29.86	758.4	54.9	12.7		W			2		8			0	0	Cloudy	Colin.
Geriville			30.06	763.5	55.8	13.2	53	NW			2		2			0	0	Fair	Buard.
Laghouat			29.96	761.0	64.4	18.0	62	NW			0		2			0	0	Fair	Guyot.
Biskra			29.87	758.7	71.2	21.8	42	NW			3		0			0.287	7.3	Fair	Laromer.

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-fal is measured at 7 a. m. local time.

AUSTRIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.52	749.7	36.5	2.5	84	NE			3		10			0.500	12.7	Raining	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.73	755.1	31.6	— 0.2	98	NE			1		10			0.346	8.8		I. R. Observatory.
Eperies			29.58	751.3	37.6	3.1	88	N			1		10			0.396	10.05		Julius Mikolik.
Gratz	28.30	718.9	29.54	750.4	31.1	- 0.5	63	NW			5		10			0.366	9.3		Andreas Rospini.
Hermannstadt	28.15	715.0	29.53	750.1	58.3	14.6	43	SE			4		8			0	0		Prof. Reissenberger.
Kremsmünster	28.43	722.0	29.82	757.5	30.9	— 0.6	92	WNW			3		10			0.197	5.0		Prof. C. Wagner.
Lemberg			29.50	749.2	42.8	6.0	90	NE			1		10			0.256	6.5		Dr. T. Stanecki.
Nyiregyhaza			29.47	748.6	57.6	14.2	65	S			3		8			0.320	8.12		Habzsuda Daniel.
Pola			29.35	745.4	55.0	12.8	89	SE			5		10s			0.010	0.25		I.R. Hydrographic Of'ce
Szegedin			29.46	748.2	45.5	12.5	85	Calm			0		10			0.110	2.80		Karl Stancel.
Trieste			29.33	744.9	57.0	13.9	91	S			2		10			0.169	4.3		Prof. V. Farolfi.
Vienna			29.73	755.1	33.3	0.7	78	NW			3		10			0.331	8.4		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.74	755.3	37.0	2.8	81	WNW			2	1	5	NW		0.421	10.70		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	25.8	— 3.4		NW	19	8.5			10			0.190	4.83	Snow-squalls	William Boswell.
Ardrossan			30.07	763.8	35.5	1.9		NNW			3		6					*D.clouds	J. Mayes.
Armagh Observatory			30.16	766.1	37.6	3.1		WSW	13	5.8			10					Snowing	S. Cal for Dr. Robinson
Bidston, Liverpool Obs.			30.07	763.8	38.2	3.4		NW	20	8.9			1					Blue sky	John Hartnup.
Birr Castle, (Parsonstown)			30.22	767.6	40.2	4.6		WNW			1–2		9					*D. clouds	J. Dreyer.
Bradford			30.02	762.5	36.5	2.5		W			0		1			0.04	1.0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	81.0	27.2		NE			4		8 ?					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			29.99	761.7	40.5	4.7		NNW			4		7					*D. clouds	H. Todd.
Cardington			30.01	762.2	40.4	4.7		NW			3		4					*D. clouds	John McLaren.
Carlisle			30.02	762.5	35.8	2.1		N			1		6			Blank	Blank	*D. clouds	Bell, for J. Cartmell.
Chatham, School M. E.			29.88	758.9	39.7	4.3		NW			2		6					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	28.66	728.0	30.22	767.6	37.6	3.1		N			6		5					*D. clouds	R. E. Power.
Donaghadee			30.10	764.5	37	2.8		NNW			5		5					*D. clouds	J. Mac Gowan.
Dover			29.92	760.0	40	4.4		NW			5		5					Squally	J. Costello.
Eccles, (near Manchester)			30.05	763.3	38.2	3.4		N	1.4	0.6			5					*D. clouds	Thomas Mackereth.
Falmouth Observatory			30.21	767.3	39.0	3.9		WNW	27	12.1			6					Overcast	The Staff.
Fort Napier, (Natal)	27.97	710.4	30.21	767.3	67.6	19.8		E			1		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	89.0	31.7		N			1		5					*D. clouds	[tis.
Galway, Queen's College			29.92	760.0	47	8.3		N			3		4					*D. clouds	B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			30.01	762.2	66.8	19.3		W			6		1					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			30.03	762.7	34.2	1.2		W			1		10					Overcast	Lewis Stuart.
Great Yarmouth			29.87	758.7	37	2.8		NW			0		5			Blank	Blank	Squally	G. T. Watson.
Greenwich Royal Obs.			29.99	761.7	39.8	4.3		NNW			4		6			Blank	Blank	*D. clouds	The Staff for G. B. Airy.
Guernsey			30.12	765.0	45	7.2		NW			4		5					Hailing	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			30.06	763.5	35.4	1.9		NNW			3		2			Blank	Blank	*D. clouds	L. J. Crossley.
Helston			30.17	766.3	46	7.8		NW			6		4k			0.5	12.7	Fine	M. P. Moyle.
Holyhead			30.10	764.5	40	4.4		WNW			6		5			Blank	Blank	*D. clouds	John Tilston.
Kew Observatory			30.01	762.2	40.0	4.4		NNW	26	11.6			5						The Staff.
Kingstown			30.18	766.6	39	3.9		WNW			4		9					Overcast	George Mitchell.
Leicester Museum			30.04	763.0	39.8	4.3		W			1		2					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.62	752.3	64.2	17.9		NW			2		2k						Fred Travis, Pvt A.H.C.
Nairn			30.06	763.5	30	— 1.1		NW			6		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.04	763.0	76.4	24.7		NW			5		6					*D. clouds	Surg.-Maj. Henry.
Nottingham			30.02	762.5	37.9	3.3		WNW			5		7ks,k,d		WNW	0.06	1.5	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.03	762.7	40.0	4.4		NW			3		7					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			30.02	762.5	40	4.4		NW			1		6					*D. clouds	J. Lucas.
Plymouth			30.16	766.1	45.8	7.7		NNW			3		2					*D. clouds	John Merrifield.
Roche's Point			30.28	769.1	40	4.4		NNW			4		8			Blank	Blank	¾ clouded	W. Kennedy.
Saint Ann's Head			30.20	767.1	40	4.4		NW			4		5					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			30.13	765.3	42.6	5.9		NNE			5		8					¾ clouded	A. P. Amy.
Sandwick Manse (Orkneys)			29.95	760.7	31	— 0.6		NNW	36	16.1			5					*D. clouds	Rev. Dr. Clouston.
Scarborough			29.96	761.0	34.6	1.4		NNW			6		4			Blank	Blank	*D. clouds	F. Shaw.
Scutari Cemetery (Turkey)			29.87	758.7	58.0	14.4		S			1		10					Hazy	Sergt. W. H. Lyne.
Sheffield								N			4		4			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			30.05	763.3	43.8	6.6	60	NW			2		2			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			30.06	763.5	35.2	1.8		NW			2		4			Blank	Blank	*D. clouds	S. J. Perry.
Stornoway, Lewis C. (Hebr.)			30.09	764.3	30	— 1.1		NNW			5		10					Snow-show'rs	John Smith.
Stratfield Turgiss			30.03	762.7	43.1	6.2		N			1		5					*D. clouds	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slater.
Thurso			29.95	760.7	28	— 2.2		NNW			5		10					Snowing	John Trotter.
Truro, Royal Institution			30.21	767.3	46	7.8		N			8		4					*D. clouds	W. Newcombe.
Valencia Observatory			30.04	763.0	43.6	6.4		NNW	25	11.2			4					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					33	0.6		N			6	2	5			0	0		The Staff, for E. J. Stone.
Cape Good Hope Obs.			30.02	762.5	88.8	31.6	30	S	7	3.1			0						
Leith, Restalrig Park			30.06	763.5	35.7	2.1		NW			2		7ck			0.02	0.5	Cloudy	Andrew Gibb.
Mauritius			30.02	762.5					14.1	6.3						0.13	3.3		
Monach Lt-house, Hebrides																			J. Youngclause.
North Unst, (Shetland Is.)			29.62	752.3	24	— 4.4		NW			9		10			Blank	Blank		

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Copenhagen			29.44	747.8	40.3	4.6	67	NNW			4		3						
Fanöe			29.60	751.8	37.4	3.0	66	N			6		8						
Godthaab, (Greenland)			29.57	751.0	37.2	2.9	91	Calm			0		10						
Stykkisholm, (Iceland)																			
Thorshavn, (Faröe)			30.14	765.5	23.7	— 4.6	60	N			6		10					Snowing	
Vestervig			29.52	749.8	33.8	1.0	81	NNW			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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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			30.09	764.2	50.0	10	56	NW			4		8nk		NW	0	0	Very cloudy	Normal School.
Amiens			29.95	760.6	39.6	4.2	64	NW			6		5		N	0	0	Cloudy	Normal School.
Avignon			29.89	759.3	46.8	8.2	30	NNW			8		2		NNW	0	0	Somewhat cl'dy	Normal School.
Bar-sur-Seine			29.93	760.2	38.8	3.8	67	S			4		8			0.067	1.7	Very cloudy	C. Saillard.
Beaumette, (near Angers)			30.04	763.0	41.4	5.2	49	NW	16.6	7.4					N	0.008	0.2		Beaumette Observatory
Beauvais			29.98	761.4	41.2	5.1	45	NW			4		8		NW	0.022	0.55	Very cloudy	Normal School.
Besançon			29.97	761.2	38.8	3.8	88	S			2		5		W	0.567	14.4	Cloudy	Normal School.
Bourg en Bresse			29.65	753.0	38.8	3.8	78	N			2		..k,n		E			Snowing	Normal School.
Bourges			30.05	763.2	41.9	5.5	75	NW			2		2		NW	0.16	4.	Slightly cl'dy	Normal School.
Brest			30.17	766.2	45.5	7.5	64	NW			4		5n		NNW	0.010	0.25		Naval Observatory.
Caen																			Normal School.
Chartres			29.97	761.2	41.7	5.4		E			6		5		S	0	0	½ clouded	Normal School.
Chaumont																			Normal School.
Clermont			29.98	761.4	39.4	4.1	67	NW			8		8		NW	0.925	23.5		Puy de Dome, Obs.
Commercy			29.89	759.3	35.8	2.1	63	W			6		5n		W	0	0	Cloudy	Normal School.
Commune de Gréasque*			29.75	755.6	39.9	4.4	34	NW			10		2		NW	0.063	1.6		
Grenoble			29.54	750.2	38.8	3.8	59	NNW			2		5kn		S	0.689	17.5	Cloudy	Normal School.
Le Mans			30.08	764.1	43.2	6.2	39	N			3		2		N	0	0	Slightly cl'dy	Normal School.
Loches			29.81	757.2	43.7	6.5	88				2		5		NW	0.130	3.3	Cloudy	Normal School.
Lons-Le-Saulnier			30.04	762.9	37.2	2.9	70	N			2		5		N	0.441	11.2	Cloudy	Normal School.
Mâcon			30.24	768.0	39.6	3.9	70	SW			6		5		SW	0.280	7.1	Cloudy	Normal School.
Mirecourt																			Normal School.
Metz			29.85	758.3	36.0	2.2	75	WSW			4		5		SSW	0.016	0.4	Snow-storm†	M. Schuster.
Nismes			29.90	759.4	66.9	18.9	39	NW			2		2		W	0	0	Slightly cl'dy	Normal School.
Orleans			29.99	761.8	43.5	6.4	46	W			4		2		NW	0	0	Slightly cl'dy	Normal School.
Paris Observatory			29.97	761.2	41.7	5.4	36	NW			4		5		NW	0.010	0.25	Cloudy	National Observatory.
Parthenay			30.12	765.1	45.7	7.6	94	W			2		10			0.24	6.	Covered	Normal School.
Privas			29.99	761.7	39.7	4.3		SE			6		8		SE	0.08	2.	Very cloudy	Normal School.
La Roche-sur-Yon			30.18	766.6	45.3	7.4	57	NW			4		8		SE	0.177	4.5	Very cloudy	Normal School.
Rochefort, Observatory			30.21	767.4	49.5	9.7	65	WNW			3		2		ESE	0	0	¼ covered	Naval Observatory.
Rouen			30.02	762.4	43.5	6.4	53	NNW			3		2		NW	0.012	0.3	Slightly cl'dy	Normal School.
Saint Lo			30.13	765.4	41.5	5.3	92	NW			1		3		N	0	0		Normal School.
Tarbes			30.21	767.3	55.4	13	51	NW			2		2		E	0.28	7.	Slightly cl'dy	Normal School.
Toulouse																			Normal School.
Villefranche			30.05	763.3	39.9	4.4	92	NW			3		8		N	0	0	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.8	77.0	25.	76	NE			2		2k						L'Abbé Marchési.
Gorée																			
Marseilles			29.76	756.0	44.4	6.9	29	NW			8		1			0	0	Storm	Marseilles Observatory.
Mont-Louis	24.70	627.4	30.15	765.9	27.5	— 2.5	52	NNW					4		W	0.110	2.8		—. Faiguère.
Montsouris, Paris			29.97	761.1	40.8	4.9	54	NW			3		8		NW	0.004	0.1		Montsouris Observ'tory.
Perpignan			30.05	763.2	46.0	7.8	35	N	33.6	15.0			3		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) ‡																			M. Baylac.
Pic du Midi, (Plantade)	23.32	567.0			15.8	— 9.0		N			2		5					Snowy	L. Renou.
Saint Maur, (near Paris)			29.97	761.2	42.4	5.8	46	NW			4		7			0.102	2.6	Cloudy	Toulouse Observatory.
Toulouse			30.18	766.6	43.3	6.3	37	NW			4		7			0.059	1.5		C. Marquet.
Tours			30.07	763.8	45.1	7.3	51	NNW			3		4		N	0.063	1.6		Dr. A. Bérigny.
Versailles, (near Paris)			29.97	761.1	42.4	5.8	56	NW			8		8			0.018	0.45	Very cloudy	
Zi-Ka-Wei, (near Shanghai)																			H. Le Lee, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,589.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet: Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Near Marseilles. † It is not certain that the weather remarks refer to the moment of observation. ‡ Summit inaccessible.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Bamberg			29.63	752.6	33.6	0.9	94	WSW			5		9			0.059	1.5	Snowing	Prof. T. Ross.
Berlin			29.68	753.8	42.8	6.0	49	SW			4		5			0	0	Snowing	Prof. Arndt.
Breslau			29.74	755.3	36.5	2.5	53	WNW			3		10			0.059	1.5		Dr. P. Neugebauer.
Carlsruhe			29.81	757.1	35.6	2.0	68	SW			10		10			0.043	1.1	Graupelnd	A. Senz.
Cassel			29.61	752.2	40.1	4.5	46	WSW			4		6			0.024	0.6	Snowing	Dr. H. Möhl.
Cologne																			Dr. Garthe
Emden																			Prof. Prestel.
Frankfort on the Main			29.80	757.0	46.0	7.8	46	SW			4		7			0.008	0.2		Physical Society.
Friedrichshafen	28.40	721.3	29.89	759.1	34.0	1.1	75	SW			6		10			0.213	5.4	Snow & graupel	M. Wilhelm.
Hamburg			29.64	752.9	39.0	3.9	64	W			4		9k	W		0.106	2.7		Deutsche Seewarte.
Kiel			29.58	751.4	37.4	3.0	82	W			3		5			0.150	3.8		Prof. G. Karsten.
Königsberg			29.56	750.7	36.5	2.5	69	W			5		5			0.008	0.2	Snowing	Prof. E. Luther.
Köslin			29.51	749.5	35.0	2.0		W			4		10			0.098	2.5		H. Müller.
Leipsic			29.74	755.4	39.4	4.1	41	SW			3		8			0	0		Prof. Bruhns.
Memel			29.40	746.7	36.0	2.2	77	SW			4		5			0.031	0.8		Reinbrecht & Skalweit.
Münster			29.69	754.2	40.6	4.8	72	NW			4		10			0.004	0.1	Snowing	Prof. E. Reis.
Neufahrwasser			29.48	748.7	37.0	2.8	82	SW			4		10			0.059	1.5		A. Lothes.
Posen			29.66	753.3	39.9	4.4	53	W			7		10			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.86	758.5	37.9	3.3	56	SW			3		10			0.138	3.5		Dr. Schur.
Stuttgart			29.81	757.2	37.9	3.3	46	SW			6		8			0.028	0.7	Snowing	Prof. Schoder.
Thorn			29.58	751.4	37.9	3.3	65	WSW			6		9			0	0		Dr. Hasenbalg
Treves, (Trier)			29.69	754.0	34.9	1.6	81	SW			7		9			0.118	3.0		Prof. Flesch.
Wustrow, Naval School			29.55	750.5	35.8	2.1	87	WNW			3		7			0.043	1.1	Rain & snow	E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.30	744.3	53.4	11.9	79	S	9.8	4.4			10			0.079	2.0		
Padua			29.23	742.5	54.3	12.4	88	NW	15.4	6.9			10	NW		0.031	0.8		
Vicenza			29.24	742.8	44.1	6.7	72	NNW	10.5	4.7			10			0	0		
Verona			29.25	742.9	54.3	12.4	66	E			4		10			0	0		
Bergamo	27.92	709.2	29.24	742.6	44.6	7.0	42	NW			8		9			0	0		
Domodossola	28.20	716.3	29.23	742.4	42.4	5.8	54	NNE			8		10			0	0		
Milan			29.34	745.2	45.9	7.7	24	N			6		10	W		0	0		
Pavia			29.35	745.6	46.8	8.2	13	N			8		10			0	0		
Moncalieri			29.42	747.2	43.7	6.5	14	NNW	25.5	11.4			9	SW		0	0		
Mondovi	27.54	699.5	29.46	748.2	37.6	3.1	52	NW			6		10			0	0		
Porto Maurizio			29.29	744.0	53.6	12.0		N			4		8	NNW		0	0	Sleeting	
Genoa			29.32	744.7	50.0	10.0	32	N	13.7	6.1			10	N		0	0		
Piacenza			29.33	744.9	47.7	8.7	39	WNW	68.5	30.6			10			0	0	Storm, snow	
Parma			29.30	744.2	48.0	8.9	62	NW			8		10			0.154	3.9		
Bologna			29.32	744.8	63.9	17.7	38	SW			8		5	N		0	0		
Florence			29.34	745.1	64.4	18.0	54	WNW			8		10	SW		0	0		
Leghorn			29.37	745.9	54.3	12.4	77	W	15.4	6.9			8			0	0		
Siena	28.15	714.9	29.35	745.6	61.5	16.4	56	S	3.1	1.4			7	SW		0	0		
Urbino	27.86	707.6	29.43	747.5	53.1	11.7	71	SSW			4		10			0	0		
Pesaro																			
Ancona			29.39	746.6	60.8	16.0	56	SE			2		8			0	0		
Grosseto			29.36	745.8	64.4	18.0	60	SSE			4		8	SW		0	0		
Rome			29.48	748.9	55.9	13.3	90	S	16.1	7.2			10	SSE		0.091	2.3		
Naples, O. U			29.54	750.2	56.1	13.4	91	S			1		10	NNE		0.024	0.6		
Lecce			29.64	752.8	59.9	15.5	81	SSE	18.6	8.3			10			0	0		
Cosenza			29.58	751.3	61.0	16.1	68	NW	0	0			10			0.024	0.6		
Riposto, (Sicily)			29.53	750.0	64.9	18.3	73	SSE			2		10	NW		0	0		
Palermo			29.54	750.3	59.4	15.2	69	WNW	9.8	4.4			10			0	0		
Caltanissetta	27.56	699.9	29.51	749.6	56.8	13.8	63	E			4		10	W		0	0		
Sub-Series.																			
Naples, S. R.			29.54	750.4	53.4	11.9	89	NW	11.2	5.0			..k	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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.81	757.2	33.4	0.8		NW			5								
Groningen			29.64	752.9	38.3	3.5		NW			1								
Helder			29.73	755.1	39.4	4.1		NNW			2								
Utrecht			29.69	754.0	39.0	3.9	87	NNW			4		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.57	751.0	35.6	2.0	78	WNW	16.3	7.3			8			0.008	0.2		
Brönø			28.91	734.3	35.6	2.0	73	Calm	0	0			4			0	0		
Christiania			29.36	745.7	38.3	3.5	44	WNW	3.1	1.4			8			0	0		
Tromsö			29.15	740.5	32.4	0.2	90	NNE	20	9			10			0.063	1.6		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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,)			30.17	766.2	60.8	16.0	85	SE	7.8	3.47			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.05	763.3	65.3	18.5	44	NW	14.2	6.33			5	NW		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.17	766.4	65.7	18.7	65	ESE	5.8	2.59			5			0	0		Capt. D. A. da Cunha.
Lisbon			30.18	766.6	59.0	15.0	67	N	15.0	6.7			5	N		0.004	0.1		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Warsaw			29.64	752.9	37.4	3.0	59	WSW	13	6			10						Astronomical Obs.
Wilna			29.62	752.4	37.8	3.2	56	SW	11	5			7						Astronomical Obs.
Dorpat			29.41	747.1	36.9	2.7	78	S	2	1			8						Physical Cabinet.
St. Petersburg			29.32	744.8	35.1	1.7	70	SSW	11	5			8						Central Physical Obs.
Kuopio			29.14	740.2	33.4	0.8	100	S	18	8			10					Snowing	Ch. Forsten.
Kieff			29.69	754.2	50.4	10.2	55	S	27	12			4						Physical Cabinet.
Nikolaiev			29.97	761.1	50.4	10.2	59	SSW	20	9			4						Kurdakof.
Kertch																			Lagorio.
Moscow			29.73	755.1	39.7	4.3	65	S	9	4			2						Meteorological Obs.
Lugan			30.02	762.5	46.6	8.1	62	SSE	18	8			6						Meteorological Obs.
Archangel			29.21	741.8	33.8	1.0	85	WNW	9	4			0						Ogorodnikof.
Tiflis	28.60	726.3	29.96	760.9	70.5	21.4	22	NW	9	4			3						Physical Observatory.
Astrakhan			30.24	768.1	55.8	13.2	37	ESE	4	2			2						Sebastianof.
Kasan			30.01	762.2	38.5	3.6	93	SSW	4	2			2						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	29.10	739.0	30.10	764.5	48.9	9.4	44	S	4	2			0						Meteorological Obs.
Nukuss			30.17	766.2	57.2	14.0	41	NNE	9	4			0						
Kasaly																			Bobrof.
Tashkend	28.60	726.3	30.28	769.0	62.8	17.1	42	Calm	0	0			0						Michelson.
Barnaul			30.35	770.9	25.3	— 3.7	78	Calm	0	0			0						Meteorological Obs.
Yeniseisk			30.01	762.3	32.0	0.0	66	WSW	2	1			8						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.30	769.6	37.0	2.8	37	Calm	0	0			0						Physical Observatory.
Nertchinsk	27.77	705.4	30.02	762.4	4.1	—15.5	77	Calm	0	0			0						Meteorological Obs.
Vladivostock			30.03	762.7	26.6	— 3.0	87	NW	11	5			0						
Nikolaievsk, on the Amoor					26.8	— 2.9	96	E	11	5			10					Snowing	

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 405. meters, or 1,311.8 feet; Ekaterinburg, 303.4? m., or 1,095.2? ft.; Tashkend, m 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Madrid			30.02	762.4	59.5	15.3	34	N	9.0	4.00		0	1			0	0	Almost clear	Royal Observatory.
San Fernando			30.08	764.0	62.2	16.8	73	WNW	6.5	2.9		0	1		W	0	0		The Naval Observatory.

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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			29.09	738.8	30.2	— 1.0	92	S			2		10			0.236	6.0		
Umea			29.13	740.0	37.8	3.2	78	NNW			2		9			0	0		
Hernosand			29.16	740.7	37.4	3.0	96	N			2		5			0	0		
Stockholm			29.21	742.0	37.8	3.2	50	WNW			2		5			0	0		
Wisby			29.30	744.1	36.0	2.2	79	SW			6		0			0	0		
Sub-Series.																			
Upsala			29.23	742.5	37.0	3.3	47	NW	4.0	1.8			9	NNE		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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	724.1	29.99	761.8	35.3	2.1	68	NNE			1		3			0.409	10.4	Cloudy	The Observatory.
Zurich	28.24	717.3	29.95	760.8	32.5	0.3	83	W			2		8			0.059	1.5	Snowing	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —0.4 mm.; Thermometer, —5.9 cent.; Relative Humidity, +7 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.93	760.2	63.0	17.2	52	SSE	4	2.0			0			0	0		
Fao, (Persian Gulf)			30.08	764.0	73.4	23.0		NW			1		0						
Salonica			29.85	758.2	57.6	14.2		S			1		10						
Valona			29.44	747.7	73.4	23.0		S			3		10						
Varna			30.04	763.0	53.6	12.0		N			2		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			30.07	763.6	63.5	17.5	66	E			2		1k		N	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.18	741.1	14.6	— 9.7	82	NE	13	5.8			8s		N	0.02	0.5	Cloudy	Hon. J. Ferguson.
Brockville, Ontario			30.10	764.5	— 1	—18.3		N	8	3.6			8s		N	1.05	26.7	Light snow	W. R. Bigg.
*Chatham, N. B.			29.11	739.4	15	— 9.4	100	N	19	8.5			10n		N	0.07	1.8	Cloudy	G. A. Blair.
Charlottetown, P. E. Island.			28.93	734.8	27	— 2.8	98	S	23	10.3			10n			0.10	2.5	Snowing	H. J. Cundall, C. E.
Cornwall, Ontario			29.82	757.4	— 0.2	—17.9	97	N			3		10s			0.75	19.1	Snowing	James Smith, M. A.
Dalhousie, N. B.			29.21	741.9	14.3	— 9.8	70	NW			1								H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			29.17	740.9	16.4	— 8.7	78	NW	12	5.4			10n			0.418	10.61		Prof. Harrison.
*Fort Garry, Manitoba			30.61	777.5	—20	—28.9	100	Calm	0	0		2cs	5ks			0	0	Fair	James Stewart.
Goderich, Ontario			29.29	744.0	0.7	—17.4	94	NW			2	10k				0	0	Unsettled	H. J. Strang, M. A.
Granton, Ontario			30.13	765.3	— 1.2	—18.4		NW			3	1cs		E		0	0	Clear	James Grant.
*Halifax, N. S.			29.08	738.6	26	— 3.3	90	SW	24	10.7			8n		W	0.05	1.3	Cloudy	F. Allison, M. A.
*Kingston, Ontario			29.96	761.0	1	—17.2	71	N	13	5.8		10cs	0			0.04	1.0	Cloudy	S. Woods, M. A.
Little Current, Ontario			30.24	768.1	— 8.4	—22.4		N	12	5.4			2s			0	0		G. B. Abrey, C. E.
*Montreal, Quebec			29.71	754.6	4	—15.6	72	N	12	5.4		5ks	5s	N	N	0.38	9.7	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.87	758.7	— 4	—20.0	90	NW	22	9.8		2ks	0	NW		0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.22	767.6	—13	—25.0	63	N	16	7.2		0	0			0.07	1.8	Clear	Rev. R. Mooley.
*Port Dover, Ontario			30.05	763.3	3	—16.1	81	NW	18	8.0		5k	0	N		0.07	1.8	Fair	H. Morgan.
Port Hastings, N. S.			29.14	740.1	18.0	— 7.8		W	10	4.5						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.07	763.8	4	—15.6	85	NW	20	8.9		8cs	0	W		0.05	1.3	Cloudy	M. Payne.
*Quebec, Quebec			29.51	749.5	5	—15.0	75	NE	9	4.0			10n		NE	0.20	5.1	Cloudy	Capt. Ash, R. N.
St. John, N. B.			29.17	740.9	16	— 8.9	83	W	11	4.9			10n			0.050	1.27		G. Murdoch, C. E.
*Saugeen, Ontario			30.20	767.1	— 6	—21.1	70	NE	12	5.4		5k	0			0.07	1.8	Fair	K. Stewart.
Stayner, Ontario			30.21	767.3	— 8	—22.2	96	NW	18	8.0		2c	0	NW		0.18	4.6	Fair	R. J. Cole.
Stratford, Ontario			30.13	765.3	— 3.6	—19.8	81	N	15	6.7		3cs				0.100	2.54	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.14	740.1	33	0.6	80	SW	16	7.2			10ks		SW	0.37	9.4	Cloudy	T. C. Hill.
*Toronto, Ontario			30.05	763.3	— 3	—19.4	77	NW	24	10.7		5cs	0	W		0.02	0.5	Fair	Magnetic Observatory
Woodstock, Ontario																			J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.60	751.8	18	— 7.8	84	NW	9	4.0			10s		W	0.35	8.9	Threatening	
Alpena, Mich.			30.32	770.1	— 6	—21.1	61	NW	12	5.4		5c	0	W		0.23	5.8	Fair	
Atlantic City, N. J.			29.67	753.6	28	— 2.2	67	W	23	10.3			10s	NW		0.06	1.5	Cloudy	
Augusta, Ga.			30.04	763.0	37	2.8	48	NW	10	4.5		0	0			0	0	Clear	
Baltimore, Md.			29.78	756.4	27	— 2.8	64	NW	15	6.7		5k	2ks	SW	W	0.01	0.3	Fair	
Barnegat, N. J.			29.63	752.6	30	— 1.1	68	W	20	8.9		5ck	0	NW		0.10	2.5	Fair	
Benton, Montana	27.46	697.5	30.26	768.6	3	—16.1	100	W	6	2.7			10s			0.41	10.4	Cloudy	
Bismarck, Dakota	28.50	723.9	30.44	773.2	—15	—26.1	42	N	7	3.1		8k	0	N		0	0	Fair	
Boston, Mass.			29.47	748.5	22	— 5.6	86	W	2	0.9		5ck	Fog	W		0.14	3.6	Fair	
Breckenridge, Minn.			30.64	778.2	—27	—32.8	40	Calm	0	0		0	0			0	0	Clear, mirage	
Buffalo, N. Y.			29.96	761.0	5	—15.0	75	NW	11	4.9			10n		N	0.05	1.3	Light snow	
Burlington, Vt.			29.66	753.4	9	—12.8	78	N	15	6.7			10s			0.19	4.8	Cloudy	
Cairo, Ill.			30.42	772.7	21	— 6.1	85	NW	12	5.4			10ks		W	Inap.	Inap.	Cloudy	
Cape Hatteras, N. C.			29.77	756.1	36	2.2	45	NW	23	10.3		0	5ks		W	0	0	Fair	
Cape Henry, Va.			29.81	757.2	33	0.6	70	NW	29	13.0		5k	0	NW		0	0	Fair	
Cape May, N. J.			29.71	754.6	30	— 1.1	67	NW	28	12.5		0	8ks		NW	0.11	2.8	Cloudy	
Charleston, S. C.			29.99	761.7	42	5.6	28	W	18	8.0		0	0			0	0	Clear	
Cheyenne, Wyoming	23.83	605.3	29.77	756.1	15	— 9.4	100	NW	1	0.4			10s			0	0	Cloudy, frost	
Chicago, Ill.			30.32	770.1	11	—11.7	79	NW	12	5.4			10s			0.07	1.8	Cloudy	
Cincinnati, Ohio			30.16	766.1	19	— 7.2	84	NW	10	4.5			10n			0.04	1.0	Light snow	
Cleveland, Ohio			30.10	764.5	11	—11.7	90	NW	22	9.8			10ks		NW	0.01	0.3	Cloudy	
Colorado Springs, Col.	23.95	608.3	29.82	757.4	16	— 8.9	32	Calm	0	0			10ks			0	0	Cloudy	
Corsicana, Tex.			30.38	771.6	73	22.8	79	N	5	2.2		5c	0	W		0	0	Fair	
Davenport, Iowa			30.47	773.9	8	—13.3	78	NW	8	3.6		0	0			0.03	0.8	Clear	
Denison, Tex.			30.38	771.6	33	0.6	69	Calm	0	0		5c	0	NW		0	0	Fair	
Denver, Col.	24.65	626.4	29.88	758.9	23	— 5.0	73	NE	1	0.4			10s			0	0	Cloudy	
Detroit, Mich.			30.19	766.8	8	—13.3	78	N	12	5.4	4		10s		N	0.13	3.3	Cloudy	
Dodge City, Kan.	27.64	702.0	30.11	764.8	22	— 5.6	72	E	10	4.5		5cs	0			0	0	Fair	
Dubuque, Iowa			30.48	774.2	7	—13.9	31	NW	8	3.6		0	0			0.05	1.3	Clear	
Duluth, Minn.			30.58	776.7	— 4	—20.0	64	Calm	0	0		0	0			0.05	1.3	Clear	
Eastport, Me.			29.18	741.1	16	— 8.9	83	NW	18	8.0			10s		NW	0.86	21.8	Cloudy	
Erie, Pa.			30.00	762.0	7	—13.9	88	NW	20	8.9			10ks		NW	0.16	4.1	Cloudy	
Escanaba, Mich.			30.46	773.7	— 2	—18.9	67	N	12	5.4		2c	0			0.02	0.5	Fair	
Fort Gibson, Indian Terr.			30.43	772.9	26	— 3.3	76	N	3	1.3		8cs	0			0	0	Fair	
Ft. St. Michaels, Alaska			29.93	760.2	8	—13.3		N	35	15.6		1c	0	S		0	0	Fair	
Fort Sill, Indian T.	29.12	739.6	30.32	770.1	25	— 3.9	60	Calm	0	0		5ck	0	N		0	0	Fair	
Fort Sully, Dakota	28.59	726.2	30.53	775.4	—11	—23.9	76	E	2	0.9		0	5s		E	Inap.	Inap.	Fair	
Galveston, Tex.			30.26	768.6	50	10.0	45	N	20	8.9		0	0			0	0	Clear	
Grand Haven, Mich.			30.30	769.6	9	—12.8	78	NE	12	5.4		6cs	0	N		Inap.	Inap.	Fair	
Indianapolis, Ind.			30.26	768.6	17	— 8.3	83	NW	12	5.4			10n		NW	0.11	2.8	Light snow	
Indianola, Tex.			30.25	768.3	53	11.7	60	NE	32	14.3		8cs	0	W		0	0	Cloudy	
Jacksonville, Fla.			30.02	762.5	52	11.1	43	NW	4	1.8		0	0			0	0	Clear	
Keokuk, Iowa			30.45	773.4	12	—11.1	80	NW	12	5.4		0	0			0.01	0.3	Clear	
Key West, Fla.			30.06	763.5	70.8	21.6	62	N	13	5.8		1cs	0			0	0	Clear	
Kittyhawk, N. C.			29.83	757.7	32	0.0	53	NW	20	8.9		2k	0	NW		0	0	Clear	
Knoxville, Tenn.			30.21	767.3	21	— 6.1	71	NW	24	10.7			10s		NW	0	0	Cloudy	
La Crosse, Wis.			30.54	775.7	1	—17.2	71	N	2	0.9		0	0			0.11	2.8	Clear	
Leavenworth, Kan.			30.51	774.9	11	—11.7	79	N	6	2.7		0	0			0	0	Clear	
Lexington, Ky.	29.08	738.6	30.29	769.4	16	— 8.9	66	W	20	8.9			10n			0.05	1.3	Light snow	
Long Branch, N. J.			29.69	754.1	30	— 1.1	78	NW	28	12.5		0	8ks			0.08	2.0	Cloudy	
Louisville, Ky.			30.40	772.1	18	— 7.8	68	W	12	5.4		2k	8s	SW	W	0.01	0.3	Cloudy	
Lynchburg, Va.			29.92	760.0	26	— 3.3	63	NW	8	3.6		5k	0	W		0	0	Fair	
Malone, N. Y.			29.74	755.1	0	—17.8	85	NW	11	4.9			10n		W	0.51	13.0	Light snow	
Manhattan, Kan.	29.24	742.7	30.53	775.4	9	—12.8	78	NW	10	4.5		0	8s			0	0	Cloudy	
Marquette, Mich.			30.46	773.7	6	—14.4	88	N	4	1.8			10s		NW	0.05	1.3	Cloudy	
Memphis, Tenn.			30.06	763.5	41	5.0	48	W	8	3.6		5k	2s	W		0	0	Fair	
Milwaukee, Wis.			30.40	772.1	5	—15.0	75	NW	19	8.5		5c	Fog			0.14	3.6	Fair	
Mobile, Ala.			30.24	768.1	44	6.7	45	N	6	2.7		0	0			0	0	Clear	
Montgomery, Ala.			30.24	768.1	36.5	2.5	58	N	16	7.2		0	0			0	0	Clear	
Morgantown, W. Va.			30.00	762.0	18	— 7.8	76	NW	12	5.4			10n		W	0.02	0.5	Light snow	
Mt. Washington, N. H.	22.73	577.3	29.09	738.9	—19	—28.3	100	NW	96	42.9			Fog			0.46	11.7	Foggy	
Nashville, Tenn.			30.35	770.9	21	— 6.1	56	NW	8	3.6		2k	0	NW		0	0	Fair	
New Haven, Conn.			29.59	751.6	29	— 1.7	67	NW	10	4.5			10s		NW	Inap.	Inap.	Cloudy	
New London, Conn.			29.52	749.8	29	— 1.7	82	W	8	3.6			10ks		W	0.20	5.1	Cloudy	
New Orleans, La.			30.24	768.1	51	10.0	34	N	10	4.5		2ck	0	W		0	0	Clear	
Newport, R. I.			29.52	749.8	28	— 2.2	88	N	12	5.4			10ks		W	0.52	13.2	Cloudy	
New York, N. Y.			29.62	752.3	29	— 1.7	59	NW	29	13.0		5ck	0	NW		0.11	2.8	Fair	
Norfolk, Va.			29.83	757.7	32	0.0	30	NW	17	7.6		0	2ks		NW	0	0	Fair	
North Platte, Neb.	27.22	691.4	30.03	762.7	10	—12.2	79	SE	6	2.7		2c	0			0	0	Clear	
Omaha, Neb.	29.32	744.7	30.53	775.4	6	—14.4	88	N	3	1.3		0	0			Inap.	Inap.	Clear	
Oswego, N. Y.			29.87	758.7	10	—12.2	79	NW	13	5.8			10n			Inap.	Inap.	Light snow	
Pembina, Dakota			30.61	777.5	—23	—30.6	100	Calm	0	0		0	0			0	0	Clear	
Philadelphia, Penn.			29.66	753.4	27	— 2.8	77	NW	19	8.5		8k	1s	W	W	0.01	0.3	Cloudy	
Pike's Peak, Colorado	17.41	443.0	29.65	753.1	3	—16.1	73	SW	38	17.0		2c	8s	W		0	0	Cloudy	
Pittsburgh, Penn.			29.98	761.5	16	— 8.9	83	NW	16	7.2			10ks		NW	0.05	1.3	Cloudy	
Port Huron, Mich.			30.17	766.3	5	—15.0	87	NW	19	8.5			10n		NW	0.63	16.0	Light snow	
Portland, Me.			29.42	747.3	21	— 6.1	71	NW	12	5.4			10s			0.54	13.7	Cloudy	
Portland, Oregon			30.27	768.8	46	7.8	85	S	3	1.3			10s			0.60	15.2	Cloudy	
Punta Rassa, Fla.			30.08	764.0	64	17.8	62	N	12	5.4		0	Sm'e			0	0	Clear	
Rochester, N. Y.			29.87	758.7	11	—11.7	100	NW	14	6.3			10n			0.10	2.5	Light snow	
Salt Lake City, Utah	25.40	645.2	29.73	755.1	42	5.6	58	E	2	0.9			10s			0	0	Cloudy	
Sandy Hook, N. J.			29.59	751.6	31	— 0.6	69	NW	30	13.4			8ks		NW	0.17	4.3	Cloudy	
San Diego, Cal.			29.96	761.0	50	10.0	93	NE	4	1.8		0	0			0	0	Clear	
San Francisco, Cal.			30.08	764.0	51	10.6	93	Calm	0	0		0	0			0	0	Clear	
Santa Fe, N. M.	23.15	588.0	29.69	754.1	31	— 0.6	68	SE	5	2.2			10s			0	0	Cloudy	
Savannah, Ga.			30.02	762.5	44	6.7	30	NW	14	6.3		0	0			0	0	Clear	
Shreveport, La.			30.43	772.9	35	1.7	75	N	8	3.6		10c	0	SW		0	0	Fair	
Smithville, N. C.			29.95	760.7	35	1.7	45	N	8	3.6		0	0			0	0	Clear	
Springfield, Mass.			29.54	750.3	28	— 2.2	66	N	8	3.6		5k	2ks	NW		0.70	17.8	Cloudy	
St. Louis, Mo.			29.42	772.7	18	— 7.8	68	N	8	3.6		0	5n			0.03	0.8	Light snow	
St. Marks, Fla.			30.12	765.0	48	8.9	42	NW	9	4.0		0	0			0	0	Clear	
St. Paul, Minn.			30.52	775.2	— 1	—18.3	83	Calm	0	0		0	0			0	0	Clear	
St. Paul's Island, Alaska			29.30	744.2	21	— 6.1	85	N	63	28.2			10s			0.02	0.5		
Thatcher's Island, Mass.			29.45	748.0	22	— 5.6	72	NW	20	8.9			10n		NW	0.14	3.6	Light snow	
Toledo, Ohio			30.17	766.3	11	—11.7	79	NW	10	4.5		10k	0	NW		0.17	4.3	Cloudy	
Tucson, Arizona	27.48	698.0	30.06	763.5	43	6.1		S				0	0			0	0	Clear	
Tybee Island, Ga.			30.00	762.0	43	6.1	42	NW	20	8.9		0	0			0	0	Clear	
Vicksburg, Miss.			30.38	771.6	37	2.8	54	N	12	5.4		2c	0	W		0	0	Fair	
Virginia City	24.03	610.4	29.51	749.5	27	— 2.8	88	Calm	0	0			10n			0.06	1.5	Heavy snow	
Washington, D. C.			29.81	757.2	26	— 3.3	48	NW	28	12.5		Haze	8s		W	0.01	0.3	Fair	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			29.94	760.5	33	0.6	33	NW	16	7.2		0	0			0	0	Clear	
Wood's Holl, Mass			29.50	749.3	29	— 1.7	67	NW	12	5.4			10s		NW	0.16	4.1	Cloudy	
Wytheville, Va	27.50	698.5	29.79	756.7	15	— 9.4	65	NW	16	7.2		5k	0	W		Inap.	Inap.	Fair	
Yankton, Dakota	29.12	739.6	30.66	778.7	—14	—25.6	72	E	1	0.4		0	0			0	0	Clear	
Yuma, Arizona			29.86	758.4	50	10.0		E				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.08	764.0	79	26.1	90	E	9	4.0		5k	2ks	N	E	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.97	761.2	76	24.4	76	E				2k	5ks			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I.			30.22	767.6	75	23.9	76	SE	1	0.4		4ck	8kn	SE		0	0	Clearing	W. S. Cameron.
Kingston, Jamaica, W. I.			30.15	765.8	75	23.9	75	Calm	0	0		2c	2s			0	0		James Gall.
Santiago de Cuba, W. I.			29.76	755.9	73	22.8	76	NE	7.2	3.2		0	0			0	0	Clear	Robert Mason.
Havana, Cuba, W. I.			30.06	763.5	76	24.4	72	N	7.2	3.2		2c	0	N		0	0		Charles Hasselbrink.
St. Georges, Bermudas			29.78	756.4	63.5	17.5	78	SW	15	6.7		10cs	0	SW		1.24	31.5	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.23	691.6	30.05	763.3	63	17.2	83	NE	2.0	0.9		8c	0	NE		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A			30.00	762.0	80	26.7	74	E			3		7ks			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.03	762.8	84.2	29										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.10	637.6			65.0	18.3	78		0	0		0	1s			0	0	Fair	Thomas Herran.
St. Johns, Newfoundland			29.57	751.1	28.5	— 1.9		SE					10n			0.10	2.5	Sleeting	John Delaney.
York Factory, B. A.			30.39	771.9	—23	—30.6		NW	2	0.9		0	0			0	0		J. Fortescue.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,037.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Manhattan, 1,125.0 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 19, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.01	762.3	64.6	18.1	68	Calm			0		5			0	0	Fair	Charnot.
Algiers			29.97	761.3	54.0	12.2	71	N			1		9			0	0	Hidden	Peter.
La Calle																			Kuntz.
Tunis			29.90	759.4	61.2	16.2	40	W			3		6			0	0	Fair	Jacques.
Sfax			29.94	760.5	60.8	16.0	41	S			3		5			0.142	3.6	Fair	Chauvey.
Saida			30.00	762.0															Millot.
Tebessa			29.93	760.1	56.5	13.6		SW			3		6			0.433	11.0	Fair	Colin.
Gerlville			29.99	761.8	55.4	13.0	50	NW			2		2			0	0	Clear	Buard.
Lagllouat			29.91	759.8	62.6	17.0	61	NE			1		0			0	0	Clear	Guyot.
Biskra			29.91	759.7	64.8	18.2	40	NW			1		10			0	0	Hidden	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.59	751.6	34.7	1.5	88	Calm			0		10			0.299	7.6	Snowing	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.44	747.7	34.2	1.2	85	NE			1		10			0.394	10.0		I. R. Observatory.
Eperies			29.45	748.0	36.7	2.6	87	N			1		10			0.915	23.25		Julius Mikolik.
Gratz	28.29	718.5	29.50	749.4	38.8	3.8	59	NNE			5		10			0.055	1.4		Andreas Rospini.
Hermannstadt	28.01	711.4	29.38	746.2	59.9	15.5	57	SE			4		5			0	0		Prof. Reissenberger.
Kremsmünster	28.25	717.6	29.63	752.7	33.1	0.6	89	W			3		10			0.094	2.4		Prof. C. Wagner.
Lemberg			29.37	746.1	40.3	4.6	86	S			2		8			0.024	0.6		Dr. T. Stanecki.
Nyiregyhaza			29.48	748.9	41.0	5.0	94	SW			4		10			0.631	16.02		Habsuda Daniel.
Pola			29.55	750.5	34.0	1.1	90	NNW			2		7ks			0.076	1.94		I.R. Hydrographic Of'ce
Szegedin			29.55	750.5	40.3	4.6	59	W			3		9			0.185	4.70		Karl Stancel.
Trieste			29.60	751.9	39.2	4.0	78	Calm			0		10			0	0	Covered	Prof. V. Farolfi.
Vienna			29.50	749.2	31.1	− 0.5	88	WNW			5		10			0.374	9.5		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.91	759.8	36.1	2.3	82	NW			0		10			0.157	4.00		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.14	765.5	33.0	0.6		NNW	22	9.8			2			0.570	14.48	Squally	William Boswell.
Ardrossan																			J. Mayes.
Armagh Observatory			30.31	769.9	36.0	2.2		NNE	15	6.7						Blank	Blank		S. Call, for Dr. Robinson
Bidston, Liverpool Obs.			30.14	765.5	34.1	1.2		NW	22	9.8			10					Snowing	John Hartnup.
Birr Castle, (Parsonstown)			30.33	770.4	38.7	3.7		N			1		9					*D. clouds	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			30.02	762.5	80.0	26.7		E			4		6					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			30.05	763.3	33.0	0.6		N			1		10					Snowing	H. Todd.
Cardington			30.05	763.3	32.4	0.2		N			2		9					Overcast	John McLaren.
Carlisle			30.17	766.3	37	2.8		N			1		8			0	0	*D. clouds	Bell, for J. Cartmell.
Chatham, School M. E.			29.97	761.2	37.2	2.9		NE			1		6					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	28.62	726.9	30.19	766.8	33.0	0.6		N			6		5					*D. clouds	R. E. Power.
Donaghadee			30.23	767.8	38	3.3		N			6		8					*D. clouds	J. Mac Gowan.
Dover			29.97	761.2	36	2.2		SSW			3		5					½ clouded	J. Costello.
Eccles, (near Manchester)			30.10	764.5	35.3	1.8		NW	4.2	1.9			10					Snowing	Thomas Mackereth.
Falmouth Observatory			30.18	766.6	40.0	4.4		NNW	34	15.2			9					Squally	The Staff.
Fort Napier, (Natal)	27.80	706.1	30.03	762.7	78.3	25.7		NE			2		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.84	757.9	90.0	32.2		N			2		5					*D. clouds	[tis.
Galway, Queen's College			29.96	761.0	48	8.9		NW			4		7					Gloomy	B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			29.97	761.2	63.0	17.2		W			6		0					Blue sky	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			30.23	767.8	34.5	1.4		W			2		2					Fine	Lewis Stuart.
Great Yarmouth			29.98	761.5	37	2.8		NNE			2		3					Blue sky	G. T. Watson.
Greenwich Royal Obs.			30.00	762.0	32.3	0.2		NNE			1		10			Blank	Blank	Overcast	The Staff for G. B. Airy.
Guernsey			30.04	763.0	40	4.4		NNW			5		7					Hailing	Dr. S. E. Hoskins.
Halifax, Moorside Obs.																			L. J. Crossley.
Helston			30.15	765.8	42	5.6		N			7		6k			0.4	10.2	Fair	M. P. Moyle.
Holyhead			30.19	766.8	38	3.3		N			6		4			Blank	Blank	*D. clouds	John Tilston.
Kew Observatory			30.02	762.5	31.0	— 0.6		N	21	9.4			10					Snowing	The Staff.
Kingstown			30.28	769.1	37	2.8		NNW			4		9			Blank	Blank	Overcast	George Mitchell.
Leicester Museum			30.08	764.0	35.3	1.8		N			3		7					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.90	759.4	59.0	15.0		NW			2		6k						Fred Travis, Pvt A.H.C.
Nairn			30.23	767.8	34	1.1		NW			3		2					¼ clouded	W. D. Penny.
Nassau, (Bahamas)			30.17	766.3	70.3	21.3		NE			5		8					*D. clouds	Surg.-Maj. Henry.
Nottingham			30.07	763.8	33.4	0.8		NW			3		10k,d		NNW	0	0	Snowing	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.08	764.0	30.2	— 1.0		NNE			1-2		10					Snowing	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			30.02	762.5	36	2.2		N			3		7					*D. clouds	J. Lucas.
Plymouth			30.12	765.0	41.7	5.4		NNW			4		6					*D. clouds	John Merrifield.
Roche's Point			30.32	770.1	39	3.9		N			5		5					½ clouded	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			30.03	762.7	41.0	5.0		NE			5		8					¾ clouded	A. P. Amy.
Sandwick Manse (Orkneys)			30.18	766.6	30.5	— 0.8		NNW	30	13.4			6					Showery	Rev. Dr. Clouston.
Scarborough																			F. Shaw.
Scutari Cemetery (Turkey)			29.71	754.6	69.0	20.6		SSW			1		10			Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.05	763.3	33.5	0.8		NNE			2		10			0.053	1.35	Snowing	W. F. Cooper.
Silloth Rectory			30.15	765.8	38.0	3.3	62	N			1		5			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			30.11	764.8	33.5	0.8		N			2					Blank	Blank		S. J. Perry.
Stornoway, Lews C. (Hebr.)			30.27	768.8	33	0.6		NNW			3		10					Snow-show'rs	John Smith.
Stratfield Turgiss			30.03	762.7	35.5	1.9		N			1-3		8					*D. clouds	Rev. Charles B. Griffith.
Streatley Vicarage																			Rev. John Slater.
Thurso			30.18	766.6	34	1.1		N			6		7					*D. clouds	John Trotter.
Truro, Royal Institution			30.18	766.6	42	5.6		N			8		8					Gloomy	W. Newcombe.
Valencia Observatory			30.39	771.9	43.2	6.2		NNW	15	6.7			10					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					36	2.2		NW			7		10			0	0		
Cape Good Hope Obs.			29.96	761.0	75.1	23.9	57	SSE	27	12.1			1						The Staff, for E. J. Stone.
Leith, Restalrig Park			30.20	767.1	36.5	2.5		N			2		8k			0.01	0.3	Fine, cloudy	Andrew Gibb.
Mauritius			29.98	761.5					9.2	4.1						0.03	0.8		
Monach Lt-house, Hebrides																			J. Youngclause.
North Unst, (Shetland Is.)			30.07	763.8	32	0.0		N			7	3	5	N		Blank	Blank		

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.62	752.4	37.9	3.3	76	N			2		1						
Faröe			29.76	756.0	40.1	4.5	73	NNW			6		5						
Godthaab, (Greenland)			29.66	753.3	36.3	2.4	93	Calm			0		10						
Stykkisholm, (Iceland)																			
Thorshavn, (Faröe)			30.31	769.9	26.8	— 2.9	44	N			2		10						
Vestervig			29.74	755.5	39.9	4.4	80	N			2		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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	758.0	44.6	7	33	NW			2		10			0.16	4.0	Covered	Normal School.
Amiens			29.98	761.4	41.4	5.2	69	N			3		5		NW	0.031	0.8	Cloudy	Normal School.
Avignon			29.81	757.1	44.4	6.9	33	NNW			6		2		NNW	Inap.	Inap.	Partly cloudy	Normal School.
Bar-sur-Seine			29.89	759.3	38.7	3.7	62	N			2		8		NE	0.091	2.3	Very cloudy	C. Saillard.
Beaumette, (near Angers)			30.02	762.5	34.0	1.1	96	N	7.2	3.2			10		NW	0.079	2.0	Snowing	Beaumette Observatory
Beauvais			29.97	761.3	37.4	3	50	NNE			2		5		NW	0.020	0.50	Cloudy	Normal School.
Besançon			29.87	758.7	35.2	1.8	70	N			2		8		NE	0.228	5.8	Very cloudy	Normal School.
Bourg en Bresse			29.88	759.0	34.9	1.6	78	N			2		10		E			Snowing	Normal School.
Bourges			29.99	761.7	42.1	5.6	96	NW			2		5		NW	0	0	Cloudy	Normal School.
Brest			30.12	765.0	41.2	5.1	74	NNW			5		9n		NNW	0.030	0.75		Naval Observatory.
Caen																			Normal School.
Chartres			29.96	761.0	37.6	3.1		N			3		7		N	0	0		Normal School.
Chaumont																			Normal School.
Clermont																			Normal School.
Commercy			29.90	759.5	33.8	1.0	85	NW			3		5		NW	0.496	12.6		Puy de Dome, Obs.
Commune de Gréasque*			29.92	759.9	33.1	0.6	94	N			6		5kn		N	0	0	Cloudy	Normal School.
Grenoble			29.72	755.0	39.6	4.2	36	NW			6		2		NW	0	0		
Le Mans			29.84	757.9	35.2	1.8	67	NE			1		10			0.098	2.5	Snowing	Normal School.
Loches			30.02	762.6	38.7	3.7	41	W			4		8		W	0.067	1.7	Very cloudy	Normal School.
Lons-Le-Saulnier			29.76	755.9	40.1	4.5	51				2		5		NW	0	0	Cloudy	Normal School.
Mâcon			29.87	758.6	35.4	1.9	74	N			2		5		N	0	0	Cloudy	Normal School.
Mirecourt			29.87	758.8	35.1	1.7	87	NW			2		5		S	0	0	Cloudy	Normal School.
Metz																			Normal School.
Nismes			29.91	759.8	34.7	1.5	60	NNE			2		5		NNE	0.020	0.5	Snowing †	M. Schuster.
Orleans			29.92	760.0	45.0	7.2	43	N			2		2		W	0	0	Slightly cl'dy	Normal School.
Paris Observatory			29.95	760.8	40.3	4.6	56	N			3		2		N	0	0	Slightly cl'dy	Normal School.
Parthenay			29.97	761.1	37.4	3.0	45	NNE			3		5		N	0	0	Cloudy	National Observatory.
Privas			30.02	762.4	42.6	5.9	86	N			2		5		S	0.04	1.	Cloudy	Normal School.
La Roche-sur-Yon			29.90	759.4	37.6	3.1		SE			6		5		SE	0	0	Cloudy	Normal School.
Rochefort, Observatory			30.11	764.8	43.2	6.2	56	NW			4		5		SE	0.138	3.5	Cloudy	Normal School.
Rouen			30.12	765.0	50.4	10.2	70	N			3		5		S	0	0	½ covered	Naval Observatory.
Saint Lo			29.97	761.1	35.6	2.0	67	SSW			2		10		NW	0.008	0.2	Covered	Normal School.
Tarbes			30.03	762.8	40.1	4.5	80	NW			2		7		N	0.031	0.8		Normal School.
Toulouse			30.02	762.6	51.8	11	80	W			4		2		E	0.413	10.5	Slightly cl'dy	Normal School.
Villefranche																			Normal School
Sub-Series.																			
Fort de France, Martinique			29.86	758.5	40.1	4.5	92	NW			2		5		W	0	0	Cloudy	Normal School.
Gorée			29.92	760.0	79.2	26.2	69	NE			2		2k						L'Abbé Marchési.
Marseilles																			
Mont-Louis			29.74	755.3	44.2	6.8	31	NW			5		2			0	0		Marseilles Observatory.
Montsouris, Paris	24.56	623.9	30.05	763.3	19.4	— 7.0	79	N					10		NW	0.094	2.4		—. Faiguère.
Perpignan			29.95	760.8	37.4	3.0	74	N			1		9		N	Inap.	Inap.		Montsouris Observ'tory.
Pic du Midi, (Summit) H.P.‡			29.95	760.6	38.5	3.6	64	NW	26.1	11.67			5		W	0	0		Dr. Fines.
Pic du Midi, (Plantade)	22.16	562.9			13.8	—10.1		NW			1		10					Snowy	M. Baylac.
Saint Maur, (near Paris)			29.95	760.8	39.0	3.9	59	N			1		7			0.04	0.1	Cloudy	E. Renou.
Toulouse			30.04	762.9	38.5	3.6	41	NNW			4		7			0	0		Toulouse Observatory.
Tours			30.00	762.1	41.0	5.0	49	NNW			3		7		NNW	0.047	1.2		C. Marquet.
Versailles, (near Paris)			29.95	760.6	38.5	3.6	47	N			2		8			0	0	Very cloudy	Dr. A. Bérigny.
Zi-Ka Wei, (near Shanghai)																			H. Le Lee, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7., 8. or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Near Marseilles. † It is not certain that the weather remarks refer to the moment of observation. ‡ Summit inaccessible.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.61	752.0	35.6	2.0	64	NW			5		7			0.094	2.4	Snowing	Prof. T. Hoh.
Berlin			29.66	753.4	39.2	4.0	60	NW			3		7			0.004	0.1		Prof. Arndt.
Breslau			29.57	751.0	33.8	1.0	77	NE			6		10			0	0	Snowing	Dr. P. Saugebauer.
Carlsruhe			29.78	756.3	36.1	2.3	61	NE			4		10			0.197	5.0		A. Senz.
Cassel			29.71	754.6	37.0	2.8	60	NNW			4		8			0.075	1.9	Snowing	Dr. H. Möhl.
Cologne																			Dr. Garthe
Emden																			Prof. Prestel.
Frankfort on the Main			29.87	758.6	39.2	4.0	54	NNE			3		8			0.091	2.3		Physical Society.
Friedrichshafen	28.28	718.4	29.76	756.0	29.5	— 1.4	86	E					10			0.126	3.2	Snow & graupel.	M. Wilhelm.
Hamburg			29.73	755.1	38.8	3.8	58	NNW			3		8ck			Inap.	Inap.	Fine	Deutsche Seewarte.
Kiel			29.74	755.5	38.3	3.5	87	NNW			2		2			0	0		Prof. G. Karsten.
Königsberg			29.58	751.2	34.7	1.5	84	NE			2		9			Inap.	Inap.		Prof. E. Luther.
Köln			29.60	751.8	36.7	2.6		NW			2		5			0	0		H. Müller.
Leipsic			29.72	754.8	34.2	1.2	73	NW			3		9	NNW		0	0	Light snow.	Prof. Bruhns.
Memel			29.50	749.4	37.6	3.1	69	NE			1		10			0.012	0.3		Reinbrecht & Skalweit.
Münster			29.82	757.4	35.4	1.9	88	SW			3		10			0.012	0.3	Snowing	Prof. E. Heis.
Neufahrwasser			29.54	750.2	35.4	1.9	88	NE			1		10						A. Lothes.
Posen			29.60	751.9	37.2	2.9	90	NNW			7		10			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.82	757.5	35.2	1.8	66	NNE			1		9			0	0	Snowing	Dr. Schur.
Stuttgart			29.76	755.9	33.4	0.8	82	NE			2		5			0.260	6.6	Snowing	Prof. Schoder.
Thorn			29.53	750.0	37.6	3.1	69	NE			4		9			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.80	756.8	36.7	2.6	54	NW			6		10			0.008	0.2		Prof. Flesch.
Wustrow, Naval School			29.67	753.5	36.7	2.6	78	NW			2		5			0	0		E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.48	748.7	38.3	3.5	80	S	2.5	1.1			10			0.780	19.8		
Padua			29.58	751.4	40.1	4.5	64	SSW	6.9	3.1			10			0	0		
Vicenza			29.57	751.1	42.3	5.7	65	SW	9.8	4.4			8			0	0		
Verona			29.57	751.0	50.0	10.0	72	E			4		10			0	0		
Bergamo	28.19	715.9	29.50	749.4	39.2	4.0	42	NE			4		9			0	0		
Domodossola	28.56	725.4	29.58	751.2	44.2	6.8	30	NNW			6		5			0	0		
Milan			29.56	750.8	46.9	8.3	17	NNE			4		7	NE		0	0		
Pavia			29.56	750.8	47.3	8.5	16	NE			6		7	NW		0	0		
Moncalieri			29.58	751.2	45.7	7.6	11	E	3.8	1.7			7	S		0	0		
Mondovi	27.65	702.2	29.56	750.9	41.4	5.2	30	ESE			2		10			0	0		
Porto Maurizio			29.63	752.7	48.0	8.9		WSW			2		10			0.028	0.7		
Genoa			29.56	750.8	50.2	10.1	19	NE	2.5	1.1			10	NE		0	0		
Piacenza			29.59	751.5	38.7	3.7	60	E	8.7	3.9			10			0	0		
Parma			29.58	751.2	45.0	7.2	71	S			2		7			0	0		
Bologna			29.61	752.0	46.6	8.1	28	SW			6		4	E		0	0	Sleeting	
Florence			29.61	752.1	48.2	9.0	61	S			2		10	SW		0	0		
Leghorn			29.60	751.7	45.3	7.4	49	S	5.6	2.5			10			0	0		
Siena	28.35	720.2	29.56	750.9	43.0	6.1	51	SW	1.3	0.6			4	W		Blank	Blank		
Urbino	28.30	718.8	29.60	751.7	37.8	3.2	67	NW			2		10			0	0		
Pesaro																			
Ancona			29.65	753.2	45.3	7.4	63	NW			2		7			0.098	2.5		
Grosseto			29.66	753.4	43.5	6.4	58	ESE			4		8	NW		0	0		
Rome			29.69	754.2	46.8	8.2	52	NW	8.1	3.6			8	W		0.004	0.1		
Naples, O. U.			29.77	756.1	55.0	12.8	38	W			8		6	WNW		0.012	0.3		
Lecce			29.80	757.0	57.2	14.0	33	WSW	15.0	6.7			6			0	0		
Cosenza			29.82	757.5	58.6	14.8	76	NW	8.1	3.6			7			0.299	7.6		
Riposto, (Sicily)			29.76	756.0	60.4	15.8	70	SE			2		8			0	0		
Palermo			29.79	756.6	56.3	13.5	34	WNW	7.4	3.3			6			0	0		
Caltanissetta	27.84	707.2	29.80	756.9	50.5	10.3	27	WNW			4		4	SE		0	0		
Sub-Series.																			
Naples, S. R.			29.75	755.7	52.2	11.2	43	SW	7.4	3.3			..k,c	SW		0.283	7.2		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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.98	761.5	37.4	3.0		NE			2								
Groningen			29.81	757.1	36.7	2.6		NNW			4								
Helder			29.93	760.5	35.6	2.0		NNW			4								
Utrecht			29.89	759.1	40.5	4.7	48	NNE			4		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.84	757.9	35.2	1.8	90	N	8.7	3.9			10			0.020	0.5	Snowing	
Brönö			29.78	756.3	36.0	2.2	66	Calm	0	0			3			0	0		
Christiania			29.74	755.5	39.9	4.4	37	NNE	2.9	1.3			2			0	0		
Tromsö			29.74	755.3	28.0	— 2.2	75	NW	2	1			10			0.146	3.7	Snowing	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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,)			30.23	767.8	61.3	16.3	89	SE	6.5	2.92			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.06	763.4	60.8	16.0	26	NNW	14.4	6.42			0			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.10	764.4	65.3	18.5	59	ESE	8.2	3.65			3			0	0		Capt. D. A. da Cunha.
Lisbon			30.17	766.3	58.1	14.5	36	N	22.4	10.0			0			0	0		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Warsaw			29.46	748.2	33.6	0.9	92	N	16	7			10					Light snow.	Astronomical Obs.
Wilna			29.47	748.4	34.7	1.5	91	Calm	0	0			10					Snowing	Astronomical Obs.
Dorpat			29.72	754.8	37.9	3.3	73	E	7	3			10						Physical Cabinet.
St. Petersburg			29.76	755.8	36.9	2.7	71	S	4	2			3						Central Physical Obs.
Knoplo			29.65	753.0	36.1	2.3	80	W	9	4			8					Snowing	Ch. Forsten.
Kieff			29.42	747.2	57.0	13.9	59	SE	34	15			2						Physical Cabinet.
Nikolaiev			29.73	755.1	59.0	15.0	60	SSW	20	9			0						Kurdakof.
Kertch																			Lagorio.
Moscow			29.92	760.0	37.2	2.9	76	S	13	6			8						Meteorological Obs.
Lugan			29.95	760.6	41.2	5.1	82	ESE	9	4			9						Meteorological Obs.
Archangel			29.72	754.8	34.5	1.4	69	SW	18	8			10						Ogorodnikof.
Tiflis	28.67	728.1	30.04	762.9	66.7	19.3	39	SE	4	2			3						Physical Observatory.
Astrakhan			30.31	769.8	55.0	12.8	44	ESE	13	6			1						Sebastianof.
Kasan			30.21	767.4	34.9	1.6	78	S	2	1			5						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	29.20	741.7	30.23	767.8	41.2	5.1	58	SW	4	2			0						Meteorological Obs.
Nukuss			30.19	766.8	57.6	14.2	49	NE	13	6			0						
Kasaly																			Bobrof.
Tashkend	28.58	725.9	30.26	768.6	63.0	17.2	79	Calm	0	0			0						Michelson.
Barnaul			30.34	770.6	25.7	− 3.5	76	Calm	0	0			0						Meteorological Obs.
Yeniseisk			29.99	761.8	38.7	3.7	68	S	2	1			10						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.02	762.4	37.9	3.3	50	Calm	0	0			2						Physical Observatory.
Nertchinsk	27.60	701.0	29.78	756.5	14.7	− 9.6	94	Calm	0	0			10			Blank	Blank		Meteorological Obs.
Vladivostock			29.99	761.8	30.9	− 0.6	73	SW	13	6			0						
Nikolaievsk, on the Amoor					29.1	− 1.6	91	NE	18	8			10					Snowing	

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 394.4? m., or 1,005.2? ft.; Tashkend, m 404.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Madrid			30.02	762.6	52.0	11.1	34	SW	18.6	8.33		0	3			0	0	Cloudy	Royal Observatory.
San Fernando			30.05	763.3	62.1	16.7	75	WNW	8.1	3.6		0	0			0	0		The Naval Observatory.

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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			29.85	758.1	30.9	− 0.6	92	N			2		7			0	0		
Umea			29.75	755.7	39.6	4.2	84	NNE			2		9			0	0		
Hernosand			29.74	755.4	40.3	4.6	53	NE			2		1			0	0		
Stockholm			29.65	753.0	37.8	3.2	56	Calm			0		3			0	0		
Wisby			29.63	752.6	33.8	1.6	81	NNE			4		3			0	0		
SUB-SERIES.																			
Upsala			29.70	754.3	37.9	3.3	58	NNE	7.8	3.5			0			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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Geneva	28.34	719.9	29.83	757.7	33.8	1.0	63	N			1		9			0.067	1.7	Covered	The Observatory.
Zurich	28.09	713.4	29.77	756.2	34.2	1.2	75	W			1		10			0.118	3.0	Snowing	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —4.7 mm.; Thermometer, —7.2 cent.; Relative Humidity, +3 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Constantinople			29.76	756.0	69.8	21.0	41	S	7	3.0			10			0	0		
Fao, (Persian Gulf)			30.11	764.8	71.6	22.0		NW			1		0						
Salonica			29.65	753.2	68.4	20.2		S			6		10						
Valona			29.69	754.0	59.5	15.3		W			1		8						
Varna			29.80	757.0	59.0	15.0		W			3		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			30.05	763.2	66.2	19.0	66	NE			2		5c		SW	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Bathurst, N. B.																1.60	40.6		Hon. J. Ferguson.
Brockville, Ontario			30.47	773.9	8	—13.3		Calm	0	0		0	0			0	0	Clear	W. R. Bigg.
*Chatham, N. B.			29.72	754.9	5	—15.0	75	W	8	3.6		0	0			0.10	2.5	Clear	G. A. Blair.
Charlottetown, P. E. Island			29.69	754.1	8	—13.3	91	NW	10	4.5		0	0			0.15	3.8	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			30.34	770.6	8.7	—12.9	79	W			1					0	0	Bright	James Smith, M. A.
Dalhousie, N. B.																			H. A. Johnson.
Esquimault, B. C.			30.27	768.8	40.1	4.5	83	N	2	0.9			10			0.40	10.2	Cloudy	W. H. Bevis.
Fredericton, N. B.			29.82	757.4	5.0	—15.0	62	NW	15	6.7						0	0		Prof. Harrison.
*Fort Garry, Manitoba			30.37	771.4	— 8	—22.2	96	W	1	0.4		0	2ks		W	0	0	Fair	James Stewart.
Goderich, Ontario			30.52	775.2	15.9	— 8.9	83	Calm			0		8n			0	0	Unsettled	H. J. Strang, M. A.
Granton, Ontario			30.52	775.2	7.7	—13.5		Calm			0					0	0	Clear	James Grant.
*Halifax, N. S.			29.72	754.9	14	—10.0	91	W	10	4.5			8n			0.02	0.5	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.46	773.7	5	—15.0	55	N	3	1.3		0	0			0	0	Clear	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			30.24	768.1	0	—17.8	71	W	23	10.3		0	0			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.34	770.6	0	—17.8	91	W	10	4.5		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.51	774.9	—13	—25.0	65	Calm	0	0		0	0			0	0	Clear	Rev. R. Mooley.
*Port Dover, Ontario			30.52	775.2	4	—15.6	97	Calm	0	0		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.																			P. ter Grant.
*Port Stanley Ontario			30.52	775.2	6	—14.4	95	NW	10	4.5		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			30.07	763.8	2	—16.7	57	N	10	4.5		0	0			0	0	Clear	Capt. Ash, R. N.
St. John, N. B.			29.85	758.2	5.0	—15.0	75	NW	12	5.4		3k	0			0	0		G. Murdoch, C. E.
*Saugeen, Ontario			30.52	775.2	— 1	—18.3	65	Calm	0	0		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario																			R. J. Cole.
Stratford, Ontario			30.56	776.2	7.5	—13.6	73	Calm	0	0						0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.66	753.4	19	— 7.2	66	N	12	5.4		0	2k		W	0	0	Clear	T. C. Hill.
*Toronto, Ontario			30.53	775.4	6	—14.4	83	NW	1	0.4		0	0			0	0	Clear	Magnetic Observatory
Woodstock, Ontario			30.55	776.0	5	—15.0	100	Calm			0	0	0			0	0	Fine	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	8	—13.3	78	NW	2	0.9		0	0			0	0	Clear	
Alpena, Mich.			30.55	776.0	— 2	—18.9	67	NW	8	3.6		0	0			0	0	Clear	
Atlantic City, N. J.			30.31	769.9	17	— 8.3	50	NW	15	6.7		0	0			Inap.	Inap.	Clear	
Augusta, Ga.			30.40	772.1	27	— 2.8	64	NE	6	2.7		0	0			0	0	Clear	
Baltimore, Md.			30.43	772.9	16	— 8.9	49	NW	5	2.2		0	Sm'e			0	0	Clear	
Barnegat, N. J.			29.28	769.1	16	— 8.9	67	N	28	12.5		0	0			0	0	Clear	
Benton, Montana	27.61	701.3	30.41	772.4	—30	—34.4	100	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.62	726.9	30.52	775.2	— 6	—21.1	43	NW	9	4.0		0	0			0.16	4.1	Clear	
Boston, Mass.			30.10	764.5	9	—12.8	57	W	12	5.4		5c	Haze	NW		0	0	Clear	
Breckenridge, Minn.			30.45	773.4	5	—15.0	100	Calm	0	0			10n			0.02	0.5	Light snow	
Buffalo, N. Y.			30.48	774.2	8	—13.3	78	NW	4	1.8		0	0			Inap.	Inap.	Clear	
Burlington, Vt.			30.27	768.8	5	—15.0	62	N	4	1.8		0	0			0	0	Clear	
Cairo, Ill.			30.40	772.1	24	— 4.4	100	E	16	7.2			10n			0.12	3.0	Heavy snow	
Cape Hatteras, N. C.			30.28	769.1	28	— 2.2	77	NE	25	11.2			10ks		N	0	0	Cloudy	
Cape Henry, Va.			30.35	770.9	25	— 3.9	87	N	27	12.1		10k	0	N		0	0	Cloudy	
Cape May, N. J.			30.36	771.1	17	— 8.3	50	NW	20	8.9		2k	0	NW		0	0	Fair	
Charleston, S. C.			30.39	771.9	30	— 1.1	40	N	18	8.0		0	0			0	0	Clear	
Cheyenne, Wyoming	24.02	610.1	29.96	761.0	0	—17.8	100	N	28	12.5		0	2s			Inap.	Inap.	Fair	
Chicago, Ill.			30.45	773.4	24	— 4.4	74	SE	2	0.9			10n			0.02	0.5	Light snow	
Cincinnati, Ohio			30.48	774.2	17	— 8.3	75	E	5	2.2		8cs	0			0	0	Cloudy	
Cleveland, Ohio			30.55	776.0	11.2	—11.6	82	NE	1	0.4		2k	5ks	N	N	Inap.	Inap.	Fair	
Colorado Springs, Col.	24.00	609.6	29.87	758.7	13	—10.6	44	N	32	14.3			10s		NW	0.03	0.8	Cloudy	
Corsicana, Tex.			29.83	757.7	46	7.8	67	E	15	6.7			10s			0	0	Cloudy	
Davenport, Iowa			30.46	773.7	18	— 7.8	68	E	12	5.4		5cs	0			0	0	Fair	
Denison, Tex.			29.82	757.4	42	5.6	83	E	9	4.0			10n			Inap.	Inap.	Light rain	
Denver, Col.	24.87	631.7	30.09	764.3	10	—12.2	100	N	6	2.7			10n			0.11	2.8	Light snow	
Detroit, Mich.			30.56	776.2	10	—12.2	79	NW	2	0.9		0	Haze			0	0	Clear	
Dodge City, Kan.	27.39	695.7	29.80	756.9	24	— 4.4	100	NW	23	10.3			10n			0.01	0.3	Light snow	
Dubuque, Iowa			30.52	775.2	13	—10.6	44	E	4	1.8		0	0			0	0	Clear	
Duluth, Minn.			30.48	774.2	1	—17.2	69	Calm	0	0		2k	5s			0	0	Fair	
Eastport, Me.			29.87	758.7	5	—15.0	75	NW	24	10.7		5c	0	S		0	0	Fair	
Erie, Pa.			30.48	774.2	12	—11.1	79	S	1	0.4		0	0			0	0	Clear	
Escanaba, Mich.			30.56	776.2	— 3	—19.4	66	N	4	1.8		0	0			0	0	Clear	
Fort Gibson, Indian Terr.			29.92	760.0	32	0.0	89	E	20	8.9			10n			Inap.	Inap.	Light snow	
Ft. St. Michaels, Alaska			29.48	748.8	10	—12.2		N	28	12.5		1c	0	S		0	0	Fair	
Fort Sill, Indian T.	28.57	725.7	29.69	754.1	38	3.3	90	SE	12	5.4			10n		S	0.08	2.0	Light rain	
Fort Sully, Dakota	28.65	727.7	30.53	775.4	5	—15.0	88	NW	28	12.5			8s			0.02	0.5	Cloudy	
Galveston, Tex.			29.85	758.2	59	15.0	81	E	20	8.9			10s		E	0.24	6.1	Threatening	
Grand Haven, Mich.			30.56	776.2	10	—12.2	89	Calm	0	0		2cs	Sm'e		E	0	0	Fair	
Indianapolis, Ind.			30.49	774.4	18	— 7.8	84	E	6	2.7			10s			0.01	0.3	Cloudy	
Indianola, Tex.			29.81	756.9	62	16.7	100	E	24	10.7			10n		E	0.30	7.6	Light rain	
Jacksonville, Fla.			30.25	768.3	38	3.3	56	NW	8	3.6		5k	0	SW		0	0	Fair	
Keokuk, Iowa			30.36	771.1	20	— 6.7	70	E	14	6.3		8c	0	E		0	0	Fair	
Key West, Fla.			30.12	765.0	63.3	17.4	58	E	11	4.9		1c	Sm'e		E	0	0	Smoky	
Kittyhawk, N. C.			30.36	771.1	23	— 5.0	75	NW	24	10.7		10k	0	NW		0	0	Cloudy	
Knoxville, Tenn.			30.36	773.7	21	— 6.1	56	NE	12	5.4		5ck	0	SW		0	0	Fair	
La Crosse, Wis.			30.48	774.2	8	—13.3	78	Calm	0	0		5c	Haze			0	0	Hazy	
Leavenworth, Kan.			30.20	767.1	24	— 4.4	87	E	8	3.6			10n			0.19	4.8	Light snow	
Lexington, Ky.	29.33	745.0	30.55	776.0	18	— 7.8	68	E	8	3.6			10s			0.03	0.8	Cloudy	
Long Branch, N. J.			30.25	768.3	23	— 5.0	60	NW	20	8.9		0	0			0	0	Clear	
Louisville, Ky.			30.48	774.2	23	— 5.0	60	NE	7	3.1		10cs	Haze			0	0	Cloudy	
Lynchburg, Va.			30.44	773.2	20	— 6.7	36	NW	8	3.6		0	0			0	0	Clear	
Malone, N. Y.			30.33	770.4	2	—16.7	72	W	2	0.9		0	0			0	0	Clear	
Manhattan, Kan.	28.94	735.1	30.10	766.1	23	— 5.0	73	NW	14	6.3			10n			0.20	5.1	Light snow	
Marquette, Mich.			30.55	776.5	0	—17.8	85	W	4	1.8		0	0			0	0	Clear	
Memphis, Tenn.			30.32	770.1	31	— 0.6	60	E	10	4.5			10s			0	0	Cloudy	
Milwaukee, Wis.			30.55	776.0	10	—12.2	79	NW	4	1.8			10n			Inap.	Inap.	Light snow	
Mobile, Ala.			30.23	767.8	41	5.0	41	NE	8	3.6		10cs	0			0	0	Cloudy	
Montgomery, Ala.			30.33	770.4	32.5	0.3	46	NE	10	4.5		2c	0	W		0	0	Clear	
Morgantown, W. Va.			30.53	775.4	12	—11.1	61	N	6	2.7		0	10s		NW	0	0	Cloudy	
Mt. Washington, N. H.	23.05	585.5	29.41	747.0	—17	—27.2	100	N	66	29.5		2s	8s	N	N	0	0	Fair	
Nashville, Tenn.			30.41	772.4	26	— 3.3	64	E	7	3.1			10s			0	0	Cloudy	
New Haven, Conn.			30.24	768.1	13	—10.6	44	N	14	6.3		0	0			0	0	Clear	
New London, Conn.			30.18	766.6	14.5	— 9.7	46	NW	12	5.4		8c	0	W		0	0	Cloudy	
New Orleans, La.			30.13	765.3	51	10.6	65	E	16	7.2			10s			Inap.	Inap.	Threatening	
Newport, R. I.			30.14	765.5	13	—10.6	62	NW	16	7.2		8cs	0	W		0	0	Cloudy	
New York, N. Y.			30.27	768.8	13	—10.6	45	NW	16	7.2		0	0			0	0	Clear	
Norfolk, Va.			30.39	771.9	20	— 6.7	41	N	16	7.2		0	Haze			0	0	Clear	
North Platte, Neb.	27.22	691.4	30.06	763.5	7	—13.9	100	N	16	7.2			10n			0.02	0.5	Light snow	
Omaha, Neb.	29.11	739.4	30.26	768.6	22	— 5.6	100	E	5	2.2			10n			0.11	2.8	Light snow	
Oswego, N. Y.			30.42	772.7	12	—11.1	79	NW	9	4.0		0	Haze			0	0	Clear	
Pembina, Dakota			30.40	772.1	— 3	—19.4	83	N	4	1.8		5c	0			0	0	Fair	
Philadelphia, Penn.			30.37	771.4	15	— 9.4	47	N	35	15.6		0	0			0	0	Clear	
Pike's Peak, Colorado	17.27	438.6	29.48	748.8	—11	—23.9	100	NE	54	24.1			10n			0.16	4.1	Light snow	
Pittsburgh, Penn.			30.51	774.9	11	—11.7	79	N	5	2.2		5k	0	N		0.02	0.5	Fair	
Port Huron, Mich.			30.55	776.0	5	—15.0	62	N	2	0.9		0	10s			Inap.	Inap.	Clear	
Portland, Me.			30.01	762.2	10	—12.2	58	W	8	3.6		5c	Haze	NW		0	0	Fair	
Portland, Oregon			30.37	771.4	43	6.1	91	N	5	2.2			8s			0	0	Cloudy	
Punta Rassa, Fla.			30.14	765.5	54.9	12.7	62	NE	16	7.2		Haze	2ks	NW	SW	0	0	Cloudy	
Rochester, N. Y.			30.44	773.2	10	—12.2	79	W	4	1.8		0	0			0.02	0.5	Clear	
Salt Lake City, Utah	25.77	654.6	30.10	764.5	34	1.1	69	NE	4	1.8			10s			0.67	17.0	Cloudy	
Sandy Hook, N. J.			30.27	768.8	16	— 8.9	52	N	22	9.8		0	0			0	0	Clear	
San Diego, Cal.			30.02	762.5	49	9.4	100	N	8	3.6		0	Fog		N	0	0	Fair	
San Francisco, Cal.			30.08	764.0	51	10.6	86	Calm	0	0		0	0			0	0	Clear	
Santa Fe, N. M.	22.92	582.2	29.46	748.3	29	— 1.7	78	N	10	4.5		5s	2ks	SW		0.03	0.8	Threatening	
Savannah, Ga.			30.36	771.1	34	1.1	45	NE	8	3.6		2c	0			0	0	Clear	
Shreveport, La.			30.07	763.8	43.5	6.4	63	E	12	5.4		10ck	5s	S	E	0	0	Cloudy	
Smithville, N. C.			30.40	772.1	25	— 3.9	48	N	13	5.8		0	0			Inap.	Inap.	Clear	
Springfield, Mass.			30.20	767.1	15	— 9.4	46	NW	4	1.8		2ks	0			Inap.	Inap.	Clear	
St. Louis, Mo.			30.35	770.9	23	5.0	73	E	12	5.4		0	5s			0	0	Fair	
St. Marks, Fla.			30.26	768.6	36	2.2	53	NE	12	5.4		5cs	0	W		0	0	Fair	
St. Paul, Minn.			30.41	772.4	11	—11.7	79	SE	1	0.4			10s			0	0	Cloudy	
St. Paul's Island, Alaska			29.34	745.2	15	— 9.4	82	N	37	16.5		1c	2k			Inap.	Inap.		
Thatcher's Island, Mass.			30.07	763.8	12	—11.1	61	NW	30	13.4		5c	0	NW		Inap.	Inap.	Clearing	
Toledo, Ohio			30.54	775.7	12	—11.1	61	N	1	0.4		0	0			0	0	Clear	
Tucson, Arizona	27.50	698.5	30.09	764.3	46	7.8		N				0	0			0	0	Clear	
Tybee Island, Ga.			30.38	771.6	34	1.1	61	NE	18	8.0		5c	0	N		0	0	Fair	
Vicksburg, Miss.			30.24	768.1	37	2.8	53	SE	12	5.4		10ck	Sm'e	SW		0	0	Cloudy	
Virginia City	24.41	620.0	29.89	758.2	1	—17.2	86	Calm	0	0		1c	0		N	0.16	4.1	Clear	
Washington, D. C.			30.44	773.2	14.5	— 9.7	44	N	16	7.2		0	0			0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.40	772.1	24	— 4.4	48	N	14	6.3		0	0			0	0	Clear	
Wood's Holl, Mass			30.11	764.8	15	— 9.4	47	NW	22	9.8		8c	2s	SW	NW	0	0	Cloudy	
Wytheville, Va	27.90	708.6	30.26	768.6	15	— 9.4	65	NW	3	1.3		0	0			Inap	Inap	Clear	
Yankton, Dakota	28.96	735.6	30.37	771.4	14	—10.0	82	E	1	0.4			10n			0.08	2.0	Light snow.	
Yuma, Arizona			30.09	764.3	58	14.4		NW				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.05	763.3	79	26.1	78	E	7	3.1		2c	5s	E	NE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.01	762.2	77	25.0	78	E				0	8ks			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I.			30.25	768.3	77	25.0	72	E	4	1.8		8ck	4k	E		0	0	Cloudy	W. S. Cameron.
Kingston, Jamaica, W. I.			30.16	766.1	73	22.8	81	Calm	0	0		5c	5s	SE	SE	0	0		James Gall.
Santiago de Cuba, W. I.			29.83	757.7	73	22.8	71	N	12 0	5.4		0	0			0	0	Clear	Robert Mason.
Havana, Cuba, W. I.			30.10	764.5	74	23.3	67	NE	4.8	2.1		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			29.95	760.7	59.0	15.0	68	WNW	42.0	18.8						0.04	1.0	Stormy	C. F. Allen.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.21	691.1	30.02	762.5	62	16.7	83	NW	0.5	0.2		0	0			0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A			30.01	762.2	79	26.1	82	E			2		5k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.03	762.7	84.2	29										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.15	638.7			67.5	19.7	81		0	0			10n			0.06	1.5	Light rain	Thomas Herran.
St. Johns, Newfoundland			29.65	753.1	32.0	0.0		SW				5k	10s			0.30	7.6	Cloudy	John Delaney.
York Factory, B. A.			30.46	773.7	—24	—31.1		N	4	1.8		0	0			0	0		J. Fortescue.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,67? (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Manhattan, 1,125.0 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.5 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 20, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	60.8	16.0	44	ESE			2		1			0	0	Clear	Charnot.
Algiers			30.02	762.5	53.2	11.8	45	NW			2		9			0	0	Hidden	Peter.
La Calle																			Kunts.
Tunis			29.91	759.7	46.4	8.0	74	NW			4		7			0.157	4.0	Cloudy	Jacques.
Sfax			29.94	760.4	61.2	16.2	25	E			1		4			0.031	0.8	Fair	Chauvey.
Saida			29.98	761.6	54.0	12.2		N			1		3			0	0	Fair	Millot.
Tebessa			29.94	760.5	43.0	6.1		W			3		9			0.157	4.0	Hidden	Colin.
Geriville			29.94	760.5	59.0	10.0	44	NE			2		3			0	0	Fair	Buard.
Laghouat			29.92	760.0	64.4	18.0	71	NE			1		1			0	0	Clear	Guyot.
Biskra			29.94	760.5	58.3	14.6	28	NNW			3		0			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.74	755.5	30.4	− 0.9	92	Calm			0		10			0.500	12.7	Snowing	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.90	759.5	38.5	3.6	58	NE			1		4			0.075	1.9		I. R. Observatory.
Eperies			29.87	758.7	36.7	2.6	72	Calm			0		5		N	0.043	1.10		Julius Mikolik.
Gratz	28.49	723.6	29.73	755.2	32.0	0.0	86	NW			2		10			0	0		Andreas Rospini.
Hermannstadt	28.29	718.5	29.71	754.5	52.5	11.4	48	E			3		5			0.063	1.60		Prof. Reissenberger.
Kremsmünster	28.53	724.6	29.90	759.4	32.7	0.4	85	W			1		10			0	0		Prof. C. Wagner.
Lemberg			29.82	757.4	40.8	4.9	52	S			1		2			0.071	1.8		Dr. T. Stanecki.
Nyiregyhaza			29.81	757.2	44.2	6.8	63	NE			2		4			0	0		Habzsuda Daniel.
Pola			29.61	752.0	39.4	4.1	59	ENE			5		9ks			0.107	2.71		I.R. Hydrographic Office
Szegedin			29.65	753.1	45.3	7.4	61	E			4		10			0.339	8.60		Karl Stancel.
Trieste			29.64	752.8	38.7	3.7	60	ENE			3		6			0	0		Prof. V. Farolfi.
Vienna			29.87	758.6	33.4	0.8	67	W			2		10			0.024	0.6		I. R. Central Institute

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 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.89	759.2	39.2	4.0	67	NNE			1		10			0.010	0.25		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.07	763.8	33.4	0.8		WNW	22	9.8			5			0.210	5.33	Blue sky	William Boswell.
Ardrossan			30.15	765.8	38.5	3.6		N			1		6					*D.clouds	J. Mayes.
Armagh Observatory			30.20	767.1	38.8	3.8		WSW	3	1.3			10			Blank	Blank	Overcast	S. Cal. for Dr. Robinson
Bidston, Liverpool Obs.			30.12	765.0	37.3	2.9		NW	14	6.3			3					Blue sky	John Hartnup.
Birr Castle, (Parsonstown)			30.20	767.1	41.8	5.4		SSW			1		10					*D. clouds	J. Dreyer.
Bradford			30.07	763.8	36.4	2.4		NW			1		8			0	0	Gloomy	J. McLandsborough.
Bridgetown, (Barbados)			29.93	760.2	81.0	27.2		E			5		10					Gloomy	Sergt. G. H. Hunt.
Cambridge Observatory			30.03	762.7	39.0	3.9		N			3		7			Blank	Blank		H. Todd.
Cardington			30.06	763.5	39.0	3.9		N			2		6					*D. clouds	John McLaren.
Carlisle			30.10	764.5	38.1	3.4		N			1		8			0	0	*D. clouds	Bell, for J. Cartmell.
Chatham, School M. E.			29.99	761.7	38.2	3.4		NE			2		8					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	28.65	728.0	30.24	768.1	32.0	0.0		N			5		7					Rain & snow	R. E. Power.
Donaghadee			30.15	765.8	38	3.3		NW			4		8					*D. clouds	J. Mac Gowan.
Dover			29.98	761.5	38	3.3		N			4		5					½ clouded	J. Costello.
Eccles, (near Manchester)			30.10	764.5	40.9	4.9		NNW	5.2	2.3			3					Squally	Thomas Mackereth.
Falmouth Observatory			30.19	766.8	36.4	2.4		NNW	2	0.9			10					Snow & fog	The Staff.
Fort Napier, (Natal)	27.60	701.0	29.84	757.9	84.3	29.1		E			1		1					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.84	757.9	86.0	30.0		N			0		9					Overcast	
Galway, Queen's College			30.11	764.8	50	10.0		NW			0		9					Misty	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.00	762.0	62.6	17.0		E			3		3					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			30.11	764.8	35.6	2.0		NW			1		9					*D. clouds	Lewis Stuart.
Great Yarmouth			29.97	761.2	38	3.3		N			4		5					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			30.04	763.0	39.4	4.1		N			2		8					*D. clouds	The Staff for G. B. Airy.
Guernsey			30.12	765.0	37	2.8		NNE			3		5			Blank	Blank	*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			30.12	765.0	36.1	2.3		N			2		6					*D. clouds	L. J. Crossley.
Helston			30.16	766.1	40	4.4		N			2		10			0.10	2.5	Snow & sleet	M. P. Moyle.
Holyhead			30.15	765.8	38	3.3		NNE			3		4					*D. clouds	John Tilston.
Kew Observatory			30.05	763.3	37.2	2.9		N	20	8.9			9					Raining	The Staff.
Kingstown			30.20	767.1	38	3.3		NNW			4		9					Overcast	George Mitchell
Leicester Museum			30.09	764.3	36.8	2.7		N			2		3					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.81	757.2	52.0	11.1		NW			3		8kn					Overcast	Fred Travis, Pvt A.H.C.
Nairn			30.12	765.0	36	2.2		NW			1		0					Clear	W. D. Penny.
Nassau, (Bahamas)			30.07	763.8	75.4	24.1		E			6		6					*D. clouds	Surg.-Maj. Henry.
Nottingham			30.10	764.5	38.3	3.5		N			4		5k,c		NNE	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.08	764.0	37.0	2.8		NNW			3		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			30.06	763.5	38	3.3		N			3		5					*D. clouds	J. Lucas.
Plymouth			30.15	765.8	40.5	4.7		N			3		10					Overcast	John Merrifield.
Roche's Point			30.11	764.8	40	4.4		NW			1		5					½ clouded	W. Kennedy.
Saint Ann's Head			30.18	766.6	34	1.1		NE			1		10					Showery	John C. Walker.
Saint Helier, (Jersey)			30.10	764.5	40.2	4.6		NNE			3		8					¾ clouded	A. P. Amy.
Sandwick Manse (Orkneys)			30.06	763.5	34	1.1		N	12	5.4			5					*D. clouds	Rev. Dr. Clouston.
Scarborough			30.03	762.7	37.0	2.8		NNW			4		7			Blank	Blank	*D. clouds	F. Shaw.
Scutari Cemetery (Turkey)			29.80	756.9	72.8	22.7		SW			0		4					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.07	763.8	37.5	8.1		NNE			2		6			0	0	Hazy	W. F. Cooper.
Silloth Rectory			30.09	764.3	41.2	5.1	52	NE			1		2			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			30.09	764.3	36.9	2.7		N			2		4			Blank	Blank	D. clouds	S. J. Perry.
Stornoway, Lewis C. (Heb.)			30.09	764.3	38	3.3		W			1		10					Overcast	John Smith.
Strathfield Turgiss			30.07	763.8	40.6	4.8		N			1		5					*D. clouds	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slater.
Thurso			30.11	764.8	37	2.8		N			3		9					Overcast	John Trotter.
Truro, Royal Institution			30.33	770.4	38	3.3		NW			2		9					Gloomy	W. Newton.
Valencia Observatory			30.22	767.6	44.6	7.0		S	14	6.3			10					Misty	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					36	2.2		N			3		0			0	0		
Cape Good Hope Obs.			30.09	764.3	73.2	22.9	50	SSE	14	6.3			1						The Staff, for E. J. Stone.
Leith, Restalrig Park			30.12	765.0	36.9	2.7		N			2		9k			0	0	Fine, cloudy	Andrew Gibb.
Mauritius			29.99	761.7					13.1	5.9						0.29	7.4		
Monach Lt-house, Hebrides																			J. Youngclause.
North Unst, (Shetland Is.)			30.10	764.5	35	1.7		N			6	2	4	N					

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,490 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.69	754.1	35.4	1.9	80	NNE			2		9						
Faröe			29.79	756.6	38.1	3.4	56	NW			2		5						
Godthaab, (Greenland)			29.58	751.4	34.7	1.5	91	S			7		10					Raining	
Stykkisholm, (Iceland)																			
Thorshavn, (Faröe)			30.08	763.9	34.5	1.4	76	Calm			0		6						
Vestervig			29.77	756.1	37.4	3.0	73	NNE			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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Alengon			30.06	763.4	44.6	7	85	NE			1		8ck		NE	0	0	Very cloudy	Normal School.
Amiens			29.87	758.8	39.2	4.0	88	NW			6		10			0.047	1.2	Covered	Normal School.
Avignon			29.85	758.2	42.8	6	32	N			8		0			0	0	Clear	Normal School.
Bar-sur-Seine			29.94	760.4	35.1	1.7	74	N			2		10			0.016	0.4	Covered	C. Saillard.
Beaumette, (near Angers)			30.05	763.3	32.9	0.5	96	N	3.6	1.6			10		N	0.051	1.3	Snowing	Beaumette Observatory
Beauvais			30.01	762.2	37.9	3.3	61	N			3		10		N	0.010	0.25	Covered	Normal School.
Besançon			30.00	762.0	33.1	0.6	81	S			2		8		SW	0.020	0.5	Very cloudy	Normal School.
Bourg en Bresse			29.98	761.6	35.8	2.1	85	N			2		10kn		S			Covered	Normal School.
Bourges			30.02	762.6	41.5	5.3	63	SW			2		5		W	0.04	1.	Cloudy	Normal School.
Brest			30.10	764.4	41.2	5.1	69	NNE			3		8n		N	0.010	0.25		Naval Observatory.
Caen																			Normal School
Chartres			29.94	760.4	39.7	4.3		NNW			3		8		N	0	0		Normal School.
Chaumont																			Normal School.
Clermont			29.99	761.8	34.9	1.6	56	NW			2		10		NW	0	0		Puy de Dome, Obs.
Commercy			29.97	761.1	32.2	0.1	95	W			2		10n		W	0	0	Covered	Normal School.
Commune de Gréasque*			29.74	755.4	44.2	6.8	9	NW			4		2		NW	0	0		
Grenoble			30.36	771.1	33.4	0.8	85	NW			4		10			0	0	Snowing	Normal School.
Le Mans			30.07	763.7	33.3	0.7	96	N			3		10			0.087	2.2	Covered	Normal School.
Loches			29.71	754.6	37.4	3	99				2		5		NW	0.173	4.4	Cloudy	Normal School.
Lons-Le-Saulnier			30.00	762.0	35.6	2	67	W			2		10			0	0	Covered	Normal School.
Mâcon			29.97	761.2	34.9	1.6	87	NW			2		10			0.035	0.9	Covered	Normal School.
Mirecourt																			Normal School.
Metz			29.99	761.7	31.6	— 0.2	72	SSW			3		10		SSW	0	0	Snowing †	M. Schuster.
Nismes			29.88	758.9	44.8	7.1	46	N			6		0			0	0	Clear	Normal School.
Orleans			29.98	761.4	39.9	4.4	67	N			4		8		N	0	0	Very cloudy	Normal School.
Paris Observatory			29.99	761.7	37.9	3.3	54	NNW			3		10		NW	0	0	Covered	National Observatory.
Parthenay			30.06	763.4	38.3	3.5	93	W			2		10		SW	0.04	1.	Covered	Normal School.
Privas			29.96	761.0	35.6	2		SE			6		2		SE	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.08	764.1	42.1	5.6	61	N			2		0			0	0	Clear	Normal School.
Rochefort, Observatory			30.01	762.3	50.0	10.0	40	WSW			3		1		NNE	0	0	Clear	Naval Observatory.
Rouen			30.00	762.1	41.4	5.2	34	N			2		8		NW	0.008	0.2	Very cloudy	Normal School.
Saint Lo			30.11	764.9	38.3	3.5	75	NE			2		3		N	0.04	1.		Normal School.
Tarbes			30.15	765.7	50.0	10	60	NW			2		2		E	0.110	2.8	Slightly cl'dy	Normal School.
Toulouse																			Normal School
Villefranche			30.22	767.6	39.2	4	87	NW			2		10			0	0	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.93	760.2	78.8	26.	76	NE			3		8ck						L'Abbé Marchési.
Gorée																			
Marseilles			29.73	755.1	45.7	7.6	34	NW			4		2			0	0		Marseilles Observatory.
Mont-Louis			30.10	764.6	19.4	7.0	76	NNW	18.6	8.33			2		NW	0.539	13.7		— Faïguère.
Montsouris, Paris	24.61	625.0	29.96	761.0	38.5	3.6	72	NNW			1		10		NNW	Inap.	Inap.	Vaporous	Montsouris Observ'tory.
Perpignan			29.98	761.6	39.0	3.9	50	N	31.7	14.17			1		NNW	0.118	3.0		Dr. Etues.
Pic du Midi, (Summit) H.P.‡																			M. Baylac.
Pic du Midi, (Plantade)	22.20	564.0			16.2	—12.1		N			2		7					Snowy	E. Renou.
Saint Maur, (near Paris)			29.98	761.4	37.6	3.1	61	NNW			2		10			Inap.	Inap.	Covered	Toulouse Observatory.
Toulouse			30.11	764.8	37.8	3.2	53	NNW			3		5			0	0		C. Marquet.
Tours			30.01	763.0	39.9	4.4	59	NW			2		9		NW	0.079	2.0		Dr. A. Bérigny.
Versailles, (near Paris)			29.97	761.3	39.6	4.2	52	N			2		10			0	0	Covered	H. Le Lec, S. J.
Zi-Ka Wei, (near Shanghai)																			

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Near Marseilles. † It is not certain that the weather remarks refer to the moment of observation. ‡ Summit inaccessible.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Berlin			29.75	755.6	35.1	1.7	85	W			3		9			0.079	2.0	Snowing	Prof. T. Hoh.
Breslau			29.80	756.8	39.0	3.9	69	SW			1		6			0.012	0.3		Prof. Arndt.
Carlsruhe			29.86	758.5	36.7	2.6	54	WSW			2		7			0.161	4.1		Dr. P. Neugebauer.
Cassel			29.91	759.6	36.7	2.6	49	SW			3		10			0	0		A. Senz.
Cologne			29.78	756.4	42.4	5.8	37	NW			2		4			0.031	0.8	Snowing	Dr. H. Möhl.
Emden																			Dr. Garthe
Frankfort on the Main			29.96	760.9	40.1	4.5	42	W			1		8			0.035	0.9		Prof. Prestel.
Friedrichshafen	28.45	722.7	29.95	760.7	32.0	0.0	57	SW					4			0.031	0.8	Light snow	Physical Society.
Hamburg			29.78	756.3	36.3	2.4	63	NW			6		5k	WSW		Inap.	Inap.		M. Wilhelm.
Kiel			29.77	756.2	38.5	3.6	73	NE			1		7			0.012	0.3		Deutsche Seewarte.
Königsberg			29.70	754.3	34.3	1.3	77	W			2		5			0.433	11.0	Snowing	Prof. G. Karsten.
Köslin			29.72	754.9	35.6	2.0		W			1		7			0	0		Prof. E. Luther.
Leipsic			29.83	757.6	39.6	4.2	84	W			2		9	WNW		0	0		H. Müller.
Memel			29.47	748.6	34.5	1.4	82	W			8		8			0.303	7.7	Snow-squall	Prof. Bruhns.
Münster			29.86	758.5	40.3	4.6	97	SW			3		4			0.020	0.5	Snowing	Reinbrecht & Skalweit.
Neufahrwasser			29.66	753.3	37.8	3.2	76	W			3		8			0.252	6.4		Prof. E. Heis.
Posen			29.82	757.5	40.6	4.8	71	SW			7		9			0.043	1.1	Snowing	A. Lothes.
Strassburg, (in Alsace)			29.95	760.6	36.3	2.4	57	Calm			0		10			0	0		Dr. Magener.
Stuttgart			29.91	759.7	34.3	1.3	73	NW			1		8			0.008	0.2		Dr. Schur.
Thorn			29.77	756.2	35.6	2.0	82	W			4		9			0.303	7.7	Snowing	Prof. Schoder.
Treves, (Trier)			29.80	758.5	34.3	1.3	77	W			4		10			0.004	0.1		Dr. Hasenbalg.
Wustrow, Naval School			29.73	755.1	37.6	3.1	83	WNW			3		8			0	0		Prof. Fiesch.
																			E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.66	753.3	43.0	6.1	34	NW	4.3	1.9			9			0.094	2.4		
Padua			29.67	753.6	42.4	5.8	42	E	9.4	4.2			10	E		0	0		
Vicenza			29.67	753.6	44.6	7.0	44	E	4.3	1.9			5			0	0		
Verona			29.65	753.1	50.0	10.0	84	E			1		5			0	0		
Bergamo	28.30	718.8	29.62	752.3	43.7	6.5	28	S			4		2			0	0		
Domodossola	28.69	728.6	29.71	754.7	44.6	7.0	23	NNE			6		0			0	0		
Milan			29.70	754.4	46.0	7.8	21	NW			2		1			0	0		
Pavia			29.71	754.6	45.7	7.6	21	N			1		8	NW		0	0		
Moncalieri			29.71	754.7	46.0	7.8	19	NNW	4.9	2.2			7	S		0	0		
Mondovi	27.78	705.5	29.69	754.2	37.6	3.1	48	NW			6		3	N		0	0	Snowing	
Porto Maurizio			29.74	755.4	48.4	9.1		N			4		9			0	0		
Genoa			29.67	753.6	48.2	9.0	22	NE	6.9	3.1			6	NE		0	0		
Piacenza			29.72	754.9	43.5	6.4	46	S	2.5	1.1			10			0	0		
Parma			29.72	754.9	43.0	6.1	73	SW			4		10			0.079	2.0		
Bologna			29.73	755.1	39.7	4.3	48	SW			6		10			0	0	Sleeting	
Florence			29.66	753.3	43.7	6.5	47	NE			6		10	NE		0	0		
Leghorn			29.63	752.7	47.7	8.7	31	ENE	11.2	5.0			10			0	0		
Siena	28.35	720.1	29.56	750.8	39.7	4.3	58	N	0	0			10	NE		Blank	Blank		
Urbino	28.05	712.5	29.62	752.4	33.6	0.9	92	NE			2		10			0.118	3.0		
Pesaro																			
Ancona			29.62	752.4	42.4	5.8	79	WNW			4		10			0.118	3.0		
Grosseto			29.60	757.9	43.2	6.2	53	ENE			4		10	SE		0	0		
Rome			29.59	751.5	42.4	5.8	85	SSE	9.4	4.2			10			0.110	2.8		
Naples, O. U.			29.64	752.9	48.6	9.2	69	W			6		7	NW		0.579	14.7		
Lecce			29.65	753.0	57.7	14.3	66	S	37.8	16.9			10			0	0		
Cosenza			29.71	754.5	53.2	11.8	74	NW	3.1	1.4			10			0.094	2.4	Rain & hail.	
Riposto, (Sicily)			29.71	754.5	57.4	14.1	68	E			2		10			0	0		
Palermo			29.68	753.9	50.4	10.2	49	NW	15.4	6.9			10			0	0		
Caltanissetta	27.77	705.4	29.73	755.1	43.7	6.5	85	WSW			6		10	NE		0	0		
Sub-Series.																			
Naples, S. R.			29.63	752.7	45.7	7.6	79	WSW	1.3	0.6			..k,c	NW		0.850	21.6		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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.95	760.8	36.3	2.4		NE			2								
Groningen			29.77	756.2	37.8	3.2		NNW			2								
Helder			29.88	758.9	39.0	3.9		N			4								
Utrecht			29.84	758.0	41.4	5.2	63	N			3		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.84	758.0	36.7	2.6	55	WNW	1.8	0.8			5			0	0		
Brönø			29.83	757.6	36.1	2.3	59	S	11	5			2			0	0		
Christiania			29.81	757.2	38.5	3.6	41	ENE	0.9	0.4			3			0	0		
Tromsö			29.82	757.4	28.9	— 1.7	74	SW	7	3			9			0.031	0.8		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.19	766.9	58.5	14.7	85	ESE	12.3	5.50			3			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.10	764.5	55.0	12.8	25	NNE	10.4	4.66			3			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			29.99	761.7	66.9	19.4	43	WSW	6.0	2.69			4			0	0		Capt. D. A. da Cunha.
			30.16	766.1	53.6	12.0	27	NE	18.6	8.3			1			0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.85	758.1	35.4	1.9	77	SW	13	6			10						Astronomical Obs.
Wilna			29.76	756.0	36.1	2.3	65	WSW	20	9			10						Astronomical Obs.
Dorpat			29.58	751.2	36.1	2.3	79	SSE	9	4			10						Physical Cabinet.
St. Petersburg			29.65	753.2	34.2	1.2	97	SE	11	5			10						Central Physical Obs.
Kuopio			29.78	756.5	31.6	— 0.2	100	N	9	4			7						Ch. Forsten.
Kieff			29.87	758.7	41.7	5.4	80	NNW	2	1			10					Raining	Physical Cabinet.
Nikolaiev			29.90	759.4	58.3	14.6	71	SE	13	6			7						Kurdakof.
Kertch																			Lagorio.
Moscow			29.91	759.7	37.9	3.3	90	S	4	2			10						Meteorological Obs.
Lugan			30.00	761.9	47.8	8.8	74	SE	9	4			8						Meteorological Obs.
Archangel			29.82	757.4	34.9	1.6	75	Calm	0	0			0						Ogorodnikof.
Tiflis	28.73	729.8	30.11	764.7	68.0	20.0	32	SE	9	4			6						Physical Observatory.
Astrakhan			30.44	773.1	57.7	14.3	38	ESE	13	6			5						Sebastianof.
Kasan			30.16	766.0	38.4	3.0	76	S	7	3			7						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	29.29	744.0	30.32	770.0	43.2	6.2	49	S	4	2			10						Meteorological Obs.
Nukuss			30.27	768.9	57.7	14.3	50	NNE	9	4			0						
Kasaly																			Bobrof.
Tashkend	28.54	724.9	30.21	767.4	64.6	18.1	35	N	11	5			0						Michelson.
Barnaul			30.37	771.4	16.7	— 8.5	76	Calm	0	0			0						Meteorological Obs.
Yeniseisk			29.88	758.9	34.3	1.3	79	S	2	1			0						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.00	761.9	42.3	5.7	81	Calm	0	0			4						Physical Observatory.
Nertchinsk	27.56	700.8	29.75	[illegible]	14.7	— 9.6	62	NW	13	6			0						Meteorological Obs.
Vladivostock			30.76	755.9	30.4	— 0.9	88	Calm	0	0			4						
Nikolaievsk, on the Amoor					22.3	— 5.4	96	ENE	4	2			5						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 405. meters, or 1,311.8 feet; Ekaterinburg, 393.4? m., or 1,005.2? ft.; Tashkend, in 434.2?, 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 4,202.0? 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.13	765.3	44.2	6.8	39	N	11.2	5.00		0	8			0	0	Cloudy	Royal Observatory.
San Fernando			30.04	763.1	61.9	16.6	50	N	7.2	3.2		0	1		N	0	0		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	23.7	— 4.6	81	NW			2		0			0	0		
Umea			29.95	760.6	29.5	— 1.4	72	NE			2		8			0	0		
Hernosand			29.89	759.3	29.8	— 1.2	69	ENE			2		8			0	0		
Stockholm			29.57	751.1	28.0	— 2.2	75	N			6		10			0.059	1.5	Light snow	
Wisby			29.56	750.9	29.5	— 1.4	96	NE			8		10			0	0	Snowing	
Sub-Series.																			
Upsala			29.66	753.3	26.6	— 3.0	79	N	24.6	11.0			7	S		0.016	0.40		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.47	723.0	29.95	760.8	33.8	1.0	58	NNE			1		7			0	0	Covered	The Observatory.
Zurich	28.24	717.3	29.95	760.7	33.6	0.9	75	W			1		2			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —1.5 mm.; Thermometer, —7.3 cent.; Relative Humidity, —2 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.87	758.6	70.2	21.2	33	S	3	1.5			2		SW	0	0		
Fao, (Persian Gulf)			30.12	765.0	73.8	23.2		NW			3		10						
Salonica			29.74	755.3	67.1	19.5		SE			2		0						
Valona			29.55	750.6	54.5	12.5		S			3		10						
Varna			29.80	757.0	68.0	20.0		N			3		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.97	761.3	71.6	22.0	68	N			1		10			0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			30.16	766.1	10.9	—11.7	63	NW								0	0		Hon. J. Ferguson.
Brockville, Ontario			30.46	773.7	7	—13.9		SW	1	0.4			10s		SW	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B.			30.20	767.1	8	—13.3	68	NW	11	4.9		0	0			0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island			30.12	765.0	10	—12.2	81	NW	12	5.4			8ks			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.41	772.4	5.5	—14.7	87	S			1	10k				0	0	Dull	James Smith, M. A.
Dalhousie, N. B.			30.25	768.3	5.4	—14.8	78	W			4					0	0		H. A. Johnson.
Esquimault, B. C.			30.15	765.8	41.1	5.1	100	N	2	0.9			10			0.08	2.0	Cloudy	W. H. Bevis.
Fredericton, N. B.			30.34	770.6	9.1	—12.7	63	NW	13	5.8						0	0		Prof. Harrison.
*Fort Garry, Manitoba			30.32	770.1	—18	—27.8	100	Calm	0	0		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.19	766.8	17.6	— 8.0	90	NE			1		10n			0	0	Threatening	H. J. Strang, M. A.
Granton, Ontario			30.17	766.3	16.4	— 8.7		E			1		10n			0	0	Cloudy	James Grant.
*Halifax, N. S.			30.16	766.1	15	— 9.4	85	NW	16	7.2		2k	0	N		0.07	1.8	Fair	F. Allison, M. A.
*Kingston, Ontario			30.44	773.2	10	—12.2	79	NE	3	1.3		10c	0			0	0	Fair	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			30.45	773.4	7	—13.9	82	NE	4	1.8		5cs	Fog	N		0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.45	773.4	— 2	—18.9	90	N	4	1.8			10ks		SW	0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario			30.31	769.9	13	—10.6	78	E	11	4.9		2k	5ks	E	E	0	0	Fair	Rev. R. Mooley.
*Port Dover, Ontario			30.19	766.8	19	— 7.2	69	Calm	0	0			10n			0	0	Cloudy	H. Morgan.
Port Hastings, N. S.																			Peter Grant.
*Port Stanley, Ontario			30.16	766.1	18	— 7.8	97	NE	5	2.2			10n		NE	0	0	Light snow	M. Payne.
*Quebec, Quebec			30.42	772.7	13	—10.6	81	SW	4	1.8		Haze	Haze		SW	0	0	Hazy	Capt. Ash, R. N.
St. John, N. B.			30.33	770.4	10.0	—12.2	79	NW	14	6.3						0	0		G. Murdoch, C. E.
*Saugeen, Ontario			30.21	767.3	15	— 9.4	82	SE	6	2.7			10n			0	0	Cloudy	K. Stewart.
Stayner, Ontario			30.21	767.3	17	— 8.3	68	SE	5	2.2			10n			0	0	Cloudy	R. J. Cole.
Stratford, Ontario			30.22	767.6	15.6	— 9.1	79	E	10	4.5			10s			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.99	761.7	13	—10.6	81	W	15	6.7			10n		W	0	0	Cloudy	T. C. Hill.
*Toronto, Ontario			30.30	769.6	22	— 5.6	79	E	16	7.2			10n			0	0	Cloudy	Magnetic Observatory
Woodstock, Ontario			30.17	766.3	17.6	— 8.0	84	E			1		10s			0.35	8.9	Cloudy	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	10	−12.2	79	Calm	0	0		Haze	Haze			0	0	Hazy	
Alpena, Mich.			30.16	766.1	18	− 7.8	84	SE	6	2.7			10s		SE	0	0	Cloudy	
Atlantic City, N. J.			30.39	771.9	31	− 0.6	68	SE	8	3.6		10cs	0			0	0	Cloudy	
Augusta, Ga.			29.80	756.9	43	6.1	96	NE	6	2.7			10n		NE	0.64	16.3	Heavy rain	
Baltimore, Md.			30.38	771.6	27	− 2.8	64	SE	6	2.7			10s			0	0	Cloudy	
Barnegat, N. J.			30.42	772.7	29	− 1.7	67	SE	11	4.9		10cs	0	NW		0	0	Cloudy	
Benton, Montana	27.19	690.6	29.99	761.7	37	2.8	37	SW	12	5.4		0	0			0	0	Clear	
Bismarck, Dakota	28.28	718.3	30.20	767.1	−17	−27.2	37	E	5	2.2			10s			0	0	Cloudy	
Boston, Mass.			30.44	773.2	18	− 7.8	52	N	7	3.1		5ck	Fog	NW		0	0	Fair	
Breckenridge, Minn.			30.38	771.6	−24	−31.1	57	W	4	1.8		0	0			0.01	0.3	Clear	
Buffalo, N. Y.			30.22	767.6	18	− 7.8	52	E	12	5.4			10s			0	0	Cloudy	
Burlington, Vt.			30.45	773.4	14	−10.0	82	Calm	0	0			10s			0	0	Cloudy	
Cairo, Ill.			29.84	757.9	28	− 2.2	100	NW	12	5.4			10n			1.23	31.2	Heavy snow	
Cape Hatteras, N. C.			30.13	765.3	50	10.0	71	E	32	14.3			10ks		S	0	0	Threatening	
Cape Henry, Va.			30.28	769.1	37	2.8	71	E	24	10.7			10s		E	0	0	Cloudy	
Cape May, N. J.			30.38	771.6	32	0.0	79	SE	10	4.5			10s			0	0	Cloudy	
Charleston, S. C.			29.89	759.2	59	15.0	76	E	16	7.2			10s		E	0.02	0.5	Cloudy	
Cheyenne, Wyoming	23.90	607.0	29.84	757.9	27	− 2.8	77	NW	20	8.9			10s			0	0	Cloudy	
Chicago, Ill.			29.92	760.0	25	− 3.9	87	NE	4	1.8			10n			0.09	2.3	Heavy snow	
Cincinnati, Ohio			29.76	755.9	27	− 2.8	88	NE	6	2.7			10n			0.12	3.0	Light snow	
Cleveland, Ohio			30.01	762.2	23.7	− 4.6	87	E	8	3.6			10n			0.02	0.5	Light snow	
Colorado Springs, Col.	24.00	609.6	29.87	758.7	10	−12.2	39	NW	4	1.8		2k	0			0	0	Clear	
Corsicana, Tex.			30.21	767.3	27	− 2.8	88	NW	24	10.7			10s		N	0.92	23.4	Cloudy	
Davenport, Iowa			30.05	763.3	19	− 7.2	84	N	4	1.8		5ck	0			0.07	1.8	Fair	
Denison, Tex.			30.28	769.1	20	− 6.7	84	NW	12	5.4		0	0			0.78	19.8	Clear	
Denver, Col.	24.71	627.6	29.93	760.2	21	− 6.1	57	NE	1	0.4			8s			0.04	1.0	Cloudy	
Detroit, Mich.			30.00	762.0	20	− 6.7	85	E	12	5.4			10n			0.02	0.5	Light snow	
Dodge City, Kan.	27.55	699.8	30.09	764.3	5	−15.0	87	Calm	0	0		0	0			0.07	1.8	Clear	
Dubuque, Iowa			30.05	763.3	15	− 9.4	65	N	1	0.4		8k	0	W		0.08	2.0	Cloudy	
Duluth, Minn.			30.13	765.3	5	−15.0	62	NW	20	8.9		0	0			0.08	2.0	Clear	
Eastport, Me.			30.35	770.9	13	−10.6	62	NW	13	5.8		0	0			0	0	Clear	
Erie, Pa.			30.11	764.5	25	− 3.9	63	SE	3	1.3			10s			0	0	Cloudy	
Escanaba, Mich.			30.09	764.3	14	−10.0	81	N	8	3.6			10n			0.02	0.5	Light snow	
Fort Gibson, Indian Terr.			30.19	766.8	14	−10.0	80	NW	22	9.8			10n			0.23	5.8	Light snow	
Ft. St. Michaels, Alaska			29.41	747.0	9	−12.8		N	17	7.6			10s			Blank	Blank	Cloudy	
Fort Sill, Indian T.	29.09	738.9	30.32	770.1	12	−11.1	79	N	16	7.2		2cs	0	N		0.09	2.3	Clear	
Fort Sully, Dakota	28.63	722.1	30.34	770.6	−10	−23.3	77	Calm	0	0		0	0			0	0	Clear	
Galveston, Tex.			30.06	763.5	40	4.4	63	NW	48	21.5			10s		NW	2.00	50.8	Cloudy	
Grand Haven, Mich.			30.00	762.0	20	− 6.7	85	E	10	4.5			10s			0	0	Cloudy	
Indianapolis, Ind.			29.84	757.9	24	− 4.4	87	N	6	2.7			10n			0.26	6.6	Light snow	
Indianola, Tex.			30.23	767.8	38	3.9	71	NW	36	16.1		0	8s		NW	1.25	31.7	Clearing	
Jacksonville, Fla.			29.79	756.7	66	18.9	64	SE	28	12.5		10k	5s	SW	SE	0	0	Cloudy	
Keokuk, Iowa			30.00	762.0	18	− 7.8	84	N	9	4.0			10s		N	0.02	0.5	Cloudy	
Key West, Fla.			29.92	760.0	73.3	22.9	71	SE	22	9.8		8c	Haze	SW	SE	0	0	Cloudy	
Kittyhawk, N. C.			30.26	768.6	40	4.4	73	E	22	9.8			10s		E	0	0	Cloudy	
Knoxville, Tenn.			29.66	753.4	30	− 1.1	89	NE	16	7.2			10n		S	0.09	2.3	Light snow	
La Crosse, Wis.			30.08	764.0	13	−10.6	100	N	2	0.9			10n			0.06	1.5	Light snow	
Leavenworth, Kan.			30.26	768.6	3	−16.1	74	W	12	5.4		0	0			0.26	6.6	Clear	
Lexington, Ky.	28.62	726.9	29.77	756.1	25	− 3.9	100	NE	16	7.2			10n			0.40	10.2	Light snow	
Long Branch, N. J.			30.43	772.9	25	− 3.9	63	SE	12	5.4		2ck	5s	SW		0	0	Cloudy	
Louisville, Ky.			29.78	756.4	25	− 3.9	100	NE	14	6.3			10n			0.09	2.3	Heavy snow	
Lynchburg, Va.			30.22	767.6	26	− 3.3	88	NE	5	2.2			10n			0.11	2.8	Light snow	
Malone, N. Y.			30.39	771.9	14	−10.0	82	Calm	0	0		10ck	0	W		0	0	Cloudy	
Manhattan, Kan.	29.06	738.1	30.37	771.4	− 3	−19.4	84	NW	2	0.9		0	0			0.42	10.7	Clear	
Marquette, Mich.			30.12	765.0	18	− 7.8	84	Calm	0	0			8n			Inap.	Inap.	Light snow	
Memphis, Tenn.			29.80	756.9	29	− 1.7	94	N	12	5.4			10n			1.10	27.9	Heavy snow	
Milwaukee, Wis.			30.01	762.2	17	− 8.3	92	N	5	2.2			10n			0.44	11.2	Heavy snow	
Mobile, Ala.			29.66	753.4	45	7.2	100	NW	18	8.0			10s		NW	2.95	74.9	Cloudy	
Montgomery, Ala.			29.55	750.6	50	10.0	93	W	6	2.7			10n		W	1.39	35.3	Heavy rain	
Morgantown, W. Va.			30.02	762.5	30	− 1.1	78	SE	5	2.2			10s		SE	0	0	Threatening	
Mt. Washington, N. H.	23.74	603.0	30.10	764.5	5	−15.0	50	Calm	0	0		0	0			0	0	Clear	
Nashville, Tenn.			29.62	752.3	32	0.0	89	NE	4	1.8			10n			0.50	12.7	Light snow	
New Haven, Conn.			30.45	773.4	16	− 8.9	48	NE	10	4.5			10s			Inap.	Inap.	Cloudy	
New London, Conn.			30.46	773.7	21	− 6.1	55	N	4	1.8		5ck	2s	W		0	0	Cloudy	
New Orleans, La.			29.75	755.6	46	7.8	77	NW	24	10.7			10ks			3.98	101.1	Cloudy	
Newport, R. I.			30.45	773.4	20	− 6.7	56	N	8	3.6		0	8ks	W		0	0	Cloudy	
New York, N. Y.			30.44	773.2	19	− 7.2	70	NE	8	3.6		5ck	Fog			0	0	Cloudy	
Norfolk, Va.			30.23	767.8	35	1.7	63	E	9	4.0			10s			0	0	Cloudy	
North Platte, Neb.	27.13	689.1	29.97	761.2	2	−16.7	72	Calm	0	0			10s			Inap.	Inap.	Cloudy	
Omaha, Neb.	29.11	739.4	30.33	770.4	− 3	−19.4	100	NW	9	4.0		0	0			0.15	3.8	Clear	
Oswego, N. Y.			30.37	771.4	19.9	− 6.7	78	SE	7	3.1			10s			0	0	Cloudy	
Pembina, Dakota			30.31	769.9	−16	−26.7	100	Calm	0	0		0	0			0	0	Clear	
Philadelphia, Penn.			30.44	773.2	22	− 5.6	58	E	7	3.1			10s			0	0	Cloudy	
Pike's Peak, Colorado	17.53	445.2	29.74	755.4	9	−12.8	67	N	26	11.6		0	2s			0.01	0.3	Fair	
Pittsburgh, Penn.			30.05	763.3	28	− 2.2	78	SE	7	3.1			10s			0	0	Cloudy	
Port Huron, Mich.			30.10	764.5	18	− 7.8	68	E	11	4.9			10n			Inap.	Inap.	Light snow	
Portland, Me.			30.45	773.4	19	− 7.2	54	NW	5	2.2		5c	Haze	NW		0	0	Fair	
Portland, Oregon			30.21	767.3	50	10.0	100	Calm	0	0			10n			0.19	4.8	Light rain	
Punta Rassa, Fla.			29.90	759.4	69.0	20.6	72	SE	28	12.5		Haze	2ks		SE	0	0	Threatening	
Rochester, N. Y.			30.31	769.9	17	− 8.3	83	SE	12	5.4			10s			0	0	Cloudy	
Salt Lake City, Utah	25.78	654.8	30.11	764.8	32	0.0	69	SW	1	0.4		10cs	0			0	0	Fair	
Sandy Hook, N. J.			30.42	772.7	24	− 4.4	72	E	13	5.8			10s		SW	0	0	Cloudy	
San Diego, Cal.			30.03	762.7	50	10.0	59	Calm	0	0		0	0			0	0	Clear	
San Francisco, Cal.			30.06	763.5	54	12.2	77	W	4	1.8		0	0			0	0	Clear	
Santa Fe, N. M.	23.24	590.3	29.78	756.4	19	− 7.2	69	N	6	2.7		0	0			0.02	0.5	Clear	
Savannah, Ga.			29.77	756.1	62	16.7	83	SE	22	9.8			10n		SE	0.01	0.3	Light rain	
Shreveport, La.			30.02	762.5	33	0.6	89	NW	13	5.8			10n		NW	4.44	112.8	Light snow	
Smithville, N. C.			30.00	762.0	54	12.2	79	SE	32	14.3			10ks		SE	0.28	7.1	Cloudy	
Springfield, Mass.			30.47	773.9	12	−11.1	60	N	4	1.8		8ck	Sm'e	SW		0	0	Fair	
St. Louis, Mo.			29.95	760.7	25	− 3.9	100	N	16	7.2			10n			0.18	4.6	Light snow	
St. Marks, Fla.			29.80	756.9	53	11.7	100	E	14	6.3			10n		SW	1.19	30.2	Heavy rain	
St. Paul, Minn.			30.18	766.6	− 3	−19.4	64	NW	7	3.1		0	1s		NW	0.03	0.8	Clear	
St. Paul's Islands, Alaska			29.56	750.8	12	−11.1	80	N	18	8.0			10k			0	0		
Thatcher's Island, Mass.			30.43	772.9	22	− 5.6	44	N	2	0.9		5c	0	NW		0	0	Clearing	
Toledo, Ohio			29.96	761.0	22	− 5.6	100	NE	12	5.4			10n		NE	0.10	2.5	Light snow	
Tucson, Arizona	27.61	701.3	30.20	767.1	49	9.4		Calm				0	0			0	0	Clear	
Tybee Island, Ga.			29.81	757.2	62	16.7	83	SE	30	13.4			10ks		NW	0.09	2.3	Threatening	
Vicksburg, Miss.			29.83	757.7	34.5	1.4	90	NW	18	8.0			10n		NW	2.05	52.1	Light snow	
Virginia City	24.24	615.7	29.72	754.9	30	− 1.1	78	SE	1	0.4			10n			0.01	0.3	Light snow	
Washington, D. C.			30.34	770.6	27	− 2.8	77	NE	6	2.7		0	10s			0	0	Threatening	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.02	762.5	38	3.3	90	NE	10	4.5			10s		NE	0.12	3.0	Cloudy	
Wood's Holl, Mass			30.46	773.7	27	— 2.8	54	N	6	2.7		5c	0	SW		0	0	Fair	
Wytheville, Va	27.55	699.8	29.81	757.2	23	— 5.0	86	E	8	3.6			10n			0.10	2.5	Heavy snow	
Yankton, Dakota	28.96	735.6	30.46	773.7	— 9	—22.8	56	NW	1	0.4		0	0			0.12	3.0	Clear	
Yuma, Arizona			30.04	763.0	54	12.2		NE				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.05	763.3	80	26.7	82	E	4	1.8		2k	8ks	N	N	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.00	762.0	79	26.1	74	E				2c	8k			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I.			30.26	768.6	78	25.6	65	ESE	6	2.7		2c	2k	W		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I.			30.13	765.3	78	25.6	78	SE	10	4.5		5ck	5s	SE	SE	0	0		James Gall.
Santiago de Cuba, W. I.			29.78	756.4	74	23.3	72	Calm	0	0		8k	0	SSW		0	0	Fair	Robert Mason.
Havana, Cuba, W. I.			29.94	760.5	72	22.2	71	SE	9.6	4.3		2ck	0	S		0	0	Fair, hazy	Charles Hasselbrink.
St. Georges, Bermudas			30.36	771.1	55.5	13.1	66	NE	15.0	6.7		0	10k		NE	0	0	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.17	690.1	29.98	761.5	63	17.2	83	SW	2.0	0.9		5c	2k	SE		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A			30.00	762.0	82	27.8	67	E			3		5k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.07	763.7	82.8	28.2										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.16	639.0			65.0	18.3	80		0	0		2c	1s			0.04	1.0	Fair	Thomas Herran.
St. Johns, Newfoundland			29.72	754.9	25.0	— 3.9		W				..k	10s			0	0	Cloudy	John Delaney.
York Factory, B. A.			30.16	766.1	--14	—25.6	74	S	3	1.3		0	0			0	0		J. Fortescue.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Manhattan, 1,125.0 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.5 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 21, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.92	759.9	59.5	15.3	31	ESE			2		9			0	0	Hidden.	Charnot.
Algiers			29.97	761.1	53.6	12.0	67	WNW			1		9			Inap.	Inap.	Hidden.	Peter.
La Galle																			Kuntz.
Tunis			30.01	762.9	59.4	15.2	64	W			4		5			0.055	1.4	Fair.	Jacques.
Sfax			29.92	759.9	60.1	15.6	32	S			2		3			0	0	Fair.	Chauvey.
Saida			30.03	762.7	52.7	11.5		SSE			6		6			Inap.	Inap.	Fair.	Millot.
Tebessa			30.01	762.3	50.4	10.2		N			2		5			0	0	Fair.	Colin.
Geriville			29.93	760.3	43.9	6.6	77	SSW			2		6			0	0	Fair.	Buard.
Laghouat			30.02	762.4	60.8	16.0	56	SW			2		1			0.122	3.1	Clear.	Guyot.
Biskra			30.00	761.9	58.5	14.7	18	NNW			1		4			0	0	Fair.	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters	Temperature. Fahrenheit.	Temperature. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Agram			29.70	754.3	38.3	3.5	70	SW			4		4			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.44	747.8	38.1	3.4	82	NE			1		7			0.354	9.0		I. R. Observatory.
Eperies			29.55	750.6	39.9	4.4	77	S			3		9		N	0.459	11.65		Julius Mikolik.
Gratz	28.45	722.6	29.68	753.8	38.3	3.5	73	NW			5		8			0.075	1.9		Andreas Rospini.
Hermannstadt	28.22	716.7	29.63	752.5	49.[illegible]	9.8	61	ESE			1		5			0.120	3.05		Prof. Reissenberger.
Kremsmünster	28.39	721.0	29.78	756.3	32.4	0.2	90	WNW			3		10			0.276	7.0		Prof. C. Wagner.
Lemberg			29.49	749.0	43.2	6.2	82	SW			2		6			0.091	2.3		Dr. T. Stanecki.
Nyiregyhaza			29.62	752.3	43.9	6.6	71	S			4		9			0.213	5.41		Habsuda Daniel.
Pola			29.72	755.0	42.8	6.0	56	NNE			0		9ks			0	0		I.R. Hydrographic Of'ce
Szegedin			29.71	754.6	42.1	5.6	67	S			3		8			0	0		Karl Stancel.
Trieste			29.74	755.3	46.2	7.9	48	NW			1		1			0	0		Prof. V. Farolfi.
Vienna			29.60	751.7	30.6	— 0.8	90	W			6		10			0.535	13.6		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters	Temperature. Fahrenheit.	Temperature. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Brussels			29.87	758.8	40.1	4.5	67	W			1		7			0.010	0.25		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.99	761.7	37.4	3.0		ENE	27	12.1			3			0.020	0.51	Blue sky	William Boswell.
Ardrossan			29.94	760.5	42	5.6		E			3		5					*D. clouds	J. Mayes.
Armagh Observatory			29.87	758.7	37.9	3.3		E	17	7.6			10					Raining	S. Call for Dr. Robinson
Bidston, Liverpool Obs.			29.86	758.4	36.8	2.7		ESE	7	3.1			9					Hazy	John Hartnup.
Birr Castle, (Parsonstown)			29.74	755.4	40.9	4.9		NE			1		10					Raining	J. Dreyer.
Bradford			29.85	758.2	37.1	2.8		NE			1		2			0.02	0.5	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.97	761.2	83.4	28.6		E			4		5					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			29.90	759.4	36.8	2.7		SE			1		10					Overcast	H. Todd.
Cardington			29.89	759.2	39.0	3.9		SE			1		10					Overcast	John McLaren.
Carlisle			29.89	759.2	39.4	4.1		E			2		10			0	0	Overcast	. Bell, for J. Cartmell.
Chatham, School M. E.			29.90	759.4	36.0	2.2		NE			1		6					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	28.30	718.8	29.85	758.2	33.0	0.6		E			1		10			†0.37	†9.4	Snowing	R. E. Power.
Donaghadee			29.88	758.9	40	4.4		ESE			3		3					*D. clouds	J. Mac Gowan.
Dover			29.89	759.2	40	4.4		NNE			2		6					½ clouded	J. Costello.
Eccles, (near Manchester)			29.85	758.2	36.3	2.4		NW					10					Hazy	Thomas Mackereth.
Falmouth Observatory			29.72	754.9	40.9	4.9		SSE	27	12.1			10					Raining	The Staff.
Fort Napier, (Natal)	27.67	702.8	29.91	759.7	76.5	24.7		E			2		8					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.85	758.2	88.0	31.1		N			2		5					*D. clouds	[tis.
Galway, Queen's College			29.70	754.4	47	8.3		N			2		4					*D. clouds	B. G. Clare, for Prof. Car-
Gibraltar, (Mediterranean)			29.91	759.7	60.4	15.8		E			6		1					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.92	760.0	39.0	3.9		NE			2		8					*D. clouds	Lewis Stuart.
Great Yarmouth			29.90	759.4	37	2.8		NNE			1		3					Blue sky	G. T. Watson.
Greenwich Royal Obs.			29.88	758.9	37.7	3.2		ESE			1		10			Blank	Blank	Overcast	The Staff for G. B. Airy.
Guernsey			29.84	757.9	39	3.9		SSW			3		8					Overcast	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.90	759.4	35.2	1.8		ENE			2		10					Hazy	L. J. Crossley.
Helston			29.70	754.4	45	7.2		SE			3		10n			0.15	3.8	Raining	M. P. Moyle.
Holyhead			29.83	757.7	39	3.9		E			4		5					*D. clouds	John Tilston.
Kew Observatory			29.89	759.2	37.7	3.2		SSE	11	4.9			10					Hazy	The Staff.
Kingstown			29.82	757.4	38	3.3		ESE			4		10					Raining	George Mitchell.
Leicester Museum			29.89	759.2	36.9	2.7		SW			1		4					Hazy	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.96	761.0	53.8	12.1		NW			2		6k						Fred Travis, Pvt A.H.C.
Nairn			30.02	762.5	40	4.4		NE			1		2					¼ clouded	W. D. Penny.
Nassau, (Bahamas)			29.98	761.5	75.4	24.1		W			6		10					Overcast	Surg.-Maj. Henry.
Nottingham			29.88	758.9	39.1	3.9		SE			1		10k,d		E	0.04	1.0	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.86	758.4	35.7	2.1		S			0–1		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.85	758.2	34	1.1		Calm			0		10					Snowing	J. Lucas.
Plymouth			29.78	756.4	38.5	3.6		SSE			2		10					Raining	John Merrifield.
Roche's Point			29.70	754.4	47	7.8		N			2		8			Blank	Blank	¾ clouded	W. Kennedy.
Saint Ann's Head			29.76	755.9	37	2.8		ESE			4		10					Raining	John C. Walker.
Saint Helier, (Jersey)			29.86	758.4	41.2	5.1		S			5		8					¾ clouded	A. P. Amy.
Sandwick Manse (Orkneys)			30.10	764.5	36.5	2.5		ESE	12	5.4			0					Blue sky	Rev. Dr. Clouston.
Scarborough			29.90	759.4	36.0	2.2		N			2		2					Blue sky	F. Shaw.
Scutari Cemetery (Turkey)			29.78	756.4	72.0	22.2		S			1		2					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.86	758.4	35.0	1.7		SE			1		10			0	0	Overcast	W. F. Cooper.
Silloth Rectory			29.89	759.2	43.0	6.1	59	ENE			2		3			0	0	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			29.86	758.4	37.4	3.0		NE			1		7			Blank	Blank		S. J. Perry.
Stornoway, Lews C. (Hebr.)			30.01	762.2	40	4.4		E			1		2					Blue sky	John Smith.
Strathfield Turgiss			29.89	759.2	36.3	2.4		SE			0–1		10					Snowing	Rev Charles H. Griffith.
Streatley Vicarage																			Rev. John Slater.
Thurso			30.05	763.3	41	5.0		ENE			3		5					*D. clouds	John Trotter.
Truro, Royal Institution			29.70	754.4	42	5.6		SE			8		10					Raining	W. Newcombe
Valencia Observatory			29.75	755.6	49.2	9.6		NNW	13	5.8			10					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					35	1.7		E			4	5	5			0	0		
Cape Good Hope Obs.			30.09	764.3	72.7	22.6	50	SSE	15	6.7			1						The Staff, for E. J. Stone.
Leith, Restalrig Park			29.98	761.5	36.0	2.2		N			1		2ck			0	0		Andrew Gibb.
Mauritius			30.01	762.2					19.1	8.5						0.14	3.6		
Monach Lighthouse, Hebrides																			J. Youngclause.
North Unst, (Shetland Is.)			30.04	763.0	36	2.2		N			4	2	3	NNW					

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds. † Snow in 24 hours.

DANISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.89	759.3	35.6	2.0	71	SE			4		4						
Faröe			29.94	760.5	36.7	2.6	72	Calm			0		7						
Godthaab, (Greenland)			29.60	751.7	35.1	1.7	84	S			7		10					Snowing	
Stykkisholm, (Iceland)																			
Thorshavn, (Faröe)			30.19	766.9	37.6	3.1	58	Calm			0		0						
Vestervig			29.95	760.6	35.6	2.0	64	NE			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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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			29.71	754.6	41.0	5.	54	NE			2		5n,k		NE	0.102	2.6	Cloudy	Normal School.
Amiens			29.89	759.2	41.7	5.4	91	NW			3		2		NW	0	0	Slightly cl'dy	Normal School.
Avignon			29.90	759.5	44.6	7	35	NNW			6		2		NNW	0	0	Partly cloudy	Normal School.
Bar-sur-Seine			29.95	760.7	37.9	3.3	63	W			2		8			0.094	2.4	Very cloudy	C. Saillard.
Beaumette, (near Angers)			29.86	758.5	39.6	4.2	54	SW	4.5	2.0					S	0.012	0.3		Beaumette Observatory
Beauvais			29.93	760.3	40.5	4.7	59	NW			1		10		N	0	0	Covered	Normal School.
Besançon			29.97	761.2	37.8	3.2	47	NE			2		8		NE	Inap.	Inap.	Very cloudy	Normal School.
Bourg en Bresse			29.98	761.4	36.7	2.6	89	N			2		2kn		SE			Slightl' cov'd	Normal School.
Bourges			30.00	761.9	38.1	3.4	52	NW			2		10		W	0.08	2.	Covered	Normal School.
Brest			29.69	754.1	39.4	4.1	90	S			4		10		S	0.030	0.75	Rain & sleet.	Naval Observatory.
Caen																			Normal School
Chartres			29.84	757.9	41.9	5.5		SSW			2		6		NW	0.020	0.5		Normal School.
Chaumont																			Normal School.
Clermont			29.97	761.1	33.8	1.0	73	NE			1		10		N	0	0		Puy de Dome, Obs.
Commercy			29.97	761.2	34.2	1.2	81	NW			2		2k		NW	0	0	Slightly cl'dy	Normal School.
Commune de Gréasque*			29.82	757.3	39.9	4.4	32	NW			6		2		NW	0	0		
Grenoble			29.92	759.9	34.5	1.3	100	NW			4		10			0.039	1.0	Snowing	Normal School.
Le Mans			29.95	760.7	37.6	3.1	57	W			2		5		S	0	0	Cloudy	Normal School.
Loches			29.67	753.6	37.4	3	69				2		5		NW	0.126	3.2	Cloudy	Normal School.
Lons-Le-Saulnier			30.00	761.9	35.1	1.7	82	N			2		5		E	0	0	Cloudy	Normal School.
Mâcon			29.93	760.1	35.8	2.1	79	N			2		10			0.169	4.3	Covered	Normal School.
Mirecourt																			Normal School.
Metz			29.97	761.3	33.3	0.7	75	WNW			3		5		NNW	0	0		M. Schuster.
Nismes			29.88	758.9	44.4	6.9	30	N			4		5		W	0	0	Cloudy	Normal School.
Orleans			29.92	759.9	39.9	4.4	71	W			3		8		W	0	0	Very cloudy	Normal School.
Paris Observatory			29.93	760.3	40.8	4.9	52	WSW			2		8			0	0	Almost cov'd	National Observatory.
Parthenay			29.88	758.0	37.4	3	85	W			2		10			0	0	Cove ed	Normal School.
Privas			29.95	760.8	35.8	2.1		SE			2		5		SE	0	0	Cloudy	Normal School.
La Roche-sur-Yon			29.98	761.6	39.6	4.2	59	SW			2		10			0.016	0.4	Covered	Normal School.
Rochefort, Observatory			30.02	762.6	42.8	6.0	61	S			3		10		N	0.433	11.0	Covered	Naval Observatory.
Rouen			29.91	759.6	41.5	5.3	63	W			2		10		NW	0	0	Covered	Normal School.
Saint Lo			29.87	758.8	41.9	5.5	94	N			1		9		S	0.075	1.9		Normal School.
Tarbes			30.05	763.3	44.6	7	70	W			2		2		SE	0	0	Slightly cl'dy	Normal School.
Toulouse																			Normal School
Villefranche			29.96	760.9	38.3	3.5	84	N			2		10		NW	0.08	2.	Cov red	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.7	75.6	24.2	83	NE			2		10kn						L'Abbé Marchési.
Gorée																			
Marseilles			29.83	757.7	45.1	7.3	18	NW.			6		1			0	0		Marseilles Observatory.
Mont-Louis	24.60	624.7	30.03	762.7	28.2	− 2.1	52	SSW	3.7	1.67			1		NW	0.067	1.7		— Faïguère.
Montsouris, Paris			29.91	759.8	41.2	5.1	63	SW			0		9		W	0.004	0.1		Montsouris Observ'tory.
Perpignan			29.98	761.5	41.0	5.0	47	N	29.8	13.33			3		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P†																			M. Baylac.
Pic du Midi, (Plantade)	22.18	563.3			12.2	−11.0		NNW			5		8					Snowy	General de Nansouty.
Saint Maur, (near Paris)			29.93	760.1	40.8	4.9	55	W			1		10			0	0	Cloudy	E. Renou.
Toulouse			30.06	763.4	37.8	3.2	66	NNW			1		7			0.299	7.6		Toulouse Observatory.
Tours			29.91	760.5	39.2	4.0	51	SW			2		8		SW	0.008	0.2		C. Marquet.
Versailles, (near Paris)			29.91	759.7	42.1	5.6	51	W			1		8			0	0	Fair	Dr. A. Bérigny.
Zi-Ka Wei, (near Shanghai)																			H. Le Lee, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

* Near Marseilles. † Summit inaccessible.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Bamberg			29.75	755.6	36.1	2.3	62	NW			3		6			0.039	1.0	Snowing	Prof. T. Hoh.
Berlin			29.83	757.6	37.2	2.9	84	N			1		10			0	0	Snowing	Prof. Arndt.
Bresla			29.62	752.4	34.2	− 1.0	92	NE			5		10			*0.311	*7.9	Snowing	Dr. P. Neugebauer.
Carlsruhe			29.89	759.3	37.8	3.2	50	SW			3		5			0	0	Foggy	A. Senz.
Cassel			29.78	756.3	42.1	5.6	47	N			6		4			Inap.	Inap.		Dr. H. Möll.
Cologne																			Dr. Garthe
Emden																			Prof. Prestel.
Frankfort on the Main			29.96	760.9	38.8	3.8	46	NE			2		4			0.008	0.2		Physical Society.
Friedrichshafen	28.45	722.5	29.94	760.4	33.4	0.8	59	W					8			0.031	0.8	Snow & graupel.	M. Wilhelm.
Hamburg			29.89	759.2	37.6	3.1	66	NNE			2		6k	N		Inap.	Inap.	Good	Deutsche Seewarte.
Kiel			29.91	760.5	36.7	2.6	75	N			1		5			0.004	0.1		Prof. G. Karsten.
Königsberg			29.86	758.5	33.4	0.8	83	NE			2		10			0.071	1.8	Snowing	Prof. E. Luther.
Köslin			29.82	757.4	35.6	2.0		NE			2		10			0.004	0.1		H. Müller.
Leipsic			29.85	758.2	33.4	0.8	87	NW			3		10	NNW		0.059	1.5	Light snow.	Prof. Brühns
Memel			29.82	757.5	34.9	1.6	71	NE			3		10			0.004	0.1		Reinbrecht & Skalweit.
Münster			29.89	759.1	43.0	6.1	84	NW			2		4			0.016	0.4	Snowing	Prof. E. Heis.
Neufahrwasser			29.78	756.5	33.6	0.9	87	NE			2		10			0.193	4.9	Snow squalls	A. Lothes.
Posen			29.79	756.7	31.1	− 0.5	90	N			7		10			0.465	11.8	Snowing	Dr. Magener.
Strassburg, (in Alsace)			29.93	760.3	37.0	2.8	54	NW			1		4			0	0		Dr. Schur.
Stuttgart			29.90	759.5	36.5	2.5	57	NW			1		4			0	0		Prof. Schoder.
Thorn			29.67	753.7	32.0	0.0	100	NE			6		10			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.84	758.0	40.3	4.6	48	W			6		2			0.020	0.5		Prof. Flesch.
Wustrow, Naval School			29.85	758.3	36.7	2.6	95	NE			2		8			0	0		E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

* Amount of precipitation on the 21st and 22nd.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	42.8	6.0	55	SE	1.3	0.6			3			0	0		
Padua			29.72	754.9	43.7	6.5	46	SE	3.1	1.4			6			0	0		
Vicenza			29.72	754.8	44.6	7.0	35	SE	2.5	1.1			3	E		0	0		
Verona			29.70	754.4	50.0	10.0	44	E			2		0			0	0		
Bergamo	28.34	719.7	29.67	753.5	43.9	6.6	29	S			4		2			0	0		
Domodossola	28.69	728.6	29.72	755.0	43.2	6.2	53	NNE			6		0			0	0		
Milan			29.74	755.4	46.8	8.2	30	NE			1		3	S		0	0		
Pavia			29.73	755.2	44.2	6.8	16	WNW			4		0			0	0		
Moncalieri			29.75	755.7	34.3	1.3	19	SW	4.3	1.9			1			0	0		
Mondovi	27.79	705.8	29.73	755.1	39.6	4.2	30	NNW			2		0			0	0		
Porto Maurizio			29.77	756.2	51.8	11.0		SSE			2		8	SW		0	0		
Genoa			29.74	755.3	49.6	9.8	37	SE	9.4	4.2			4	SW		0	0		
Piacenza			29.74	755.3	43.9	6.6	42	SSE	5.6	2.5			5			0	0		
Parma			29.74	755.4	45.5	7.5	65	SSW			4		8			0	0		
Bologna			29.76	756.0	44.1	6.7	52	W			6		4	E		0	0		
Florence			29.75	755.7	48.9	9.4	32	NW			2		7	W		0	0		
Leghorn			29.75	754.6	43.5	6.4	54	SSW	0.7	0.3			10			0	0		
Siena	28.49	723.6	29.70	754.3	42.3	5.7	36	WSW	0	0			7	W		0	0		
Urbino	28.16	715.3	29.74	755.4	36.1	2.3	70	N			2		10			0	0		
Pesaro																			
Ancona			29.75	755.7	40.6	4.8	76	NW			4		7			0.118	3.0		
Grosseto			29.75	755.6	49.1	9.5	47	ENE			2		6	NW		0	0		
Rome			29.76	756.0	49.5	9.7	48	W	3.8	1.7			8	SSW		0	0		
Naples, O. U.			29.80	756.8	50.5	10.3	62	SSW			2		9	WNW		0.528	13.4		
Lecce			29.73	755.2	54.3	12.4	47	SSW	24.2	10.8			8			0	0		
Cosenza			29.84	758.0	47.8	8.8	73	NW	6.9	3.1			10			0.181	4.6	Light rain	
Riposto, (Sicily)			29.85	758.2	57.2	14.0	59	ESE			2		7			0	0		
Palermo			29.81	757.2	54.0	12.2	36	W	11.2	5.0			7			0	0		
Caltanissetta	27.92	709.2	29.87	758.7	45.7	7.6	51	WSW			6		10	NE		0	0		
Sub-Series.																			
Naples, S. R.			29.79	756.7	45.7	7.6	79	WNW	1.3	0.6			k,c	E		0.429	10.9		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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.93	760.3	38.5	3.6		NNW			1								
Groningen			29.84	757.9	39.2	4.0		E			2								
Helder			29.89	759.2	37.4	3.0		NW			1								
Utrecht			29.85	758.2	40.5	4.7	62	N			2		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.05	763.2	37.4	3.0	73	SSW	3.4	1.5			0			0	0		
Brönö			29.93	760.3	31.6	— 0.2	89	SSW	11	5			10			0	0	Snowing	
Christiania			30.08	764.0	35.4	1.9	52	E	2.9	1.3			0			0	0		
Tromsö			29.79	756.6	27.7	— 2.4	77	SW	9	4			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper. —10.	Clouds. Amount. Lower. —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.10	764.4	58.3	14.6	78	ESE	11.9	5.31			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.00	761.9	59.4	15.2	26	NE	3.5	1.56			1			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			29.93	760.3	66.0	18.9	43	SE	5.0	2.24			0			0	0		Capt D. A. da Cunha.
Lisbon			30.04	762.9	56.7	13.7	25	NNE	3.8	1.7			0			0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper. —10.	Clouds. Amount. Lower. —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.53	750.1	32.0	0.0	100	NE	13	6			10					Snowing	Astronomical Obs.
Wilna			29.83	757.7	37.0	2.8	64	E	9	4			10						Astronomical Obs.
Dorpat			30.11	764.7	35.8	2.1	64	SSW	4	2			10						Physical Cabinet.
St. Petersburg			30.05	763.2	33.1	0.6	90	W	11	5			10					Light snow	Central Physical Obs.
Kuopio			29.96	761.0	29.5	— 1.4	92	NW	9	4			0 ?					Snowing ?	Ch. Forsten.
Kieff			29.62	752.4	59.9	15.5	71	ESE	13	6			6						Physical Cabinet.
Nikolaiev			29.81	757.2	60.8	16.0	55	SSE	20	9			0						Kurdakof.
Kertch																			Lagorio.
Moscow			30.19	766.9	41.7	5.4	74	S	4	2			8						Meteorological Obs.
Lugan			29.97	761.1	52.0	11.1	63	ESE	22	10			3						Meteorological Obs.
Archangel			29.70	754.3	33.8	1.0	79	WSW	34	15			10						Ogorodnikof.
Tiflis	28.79	731.2	30.17	766.4	67.8	19.9	30	SSE	9	4			0						Physical Observatory.
Astrakhan			30.48	774.3	50.2	10.1	45	SE	22	10			0						Sebastianof.
Kasan			30.29	769.4	39.4	4.1	80	SSW	2	1			10						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	29.19	741.3	30.2	767.1	47.1	8.4	45	SSW	18	8			5						Meteorological Obs.
Nukuss			30.34	770.7	50.9	10.5	52	NE	9	4			0						
Kasaly																			Bobrof.
Tashkend	28.58	726.0	30.28	769.2	56.3	13.5	59	Calm	0	0			8						Michelson.
Barnaul			30.54	770.7	19.9	— 6.7	78	Calm	0	0			1						Meteorological Obs.
Yeniseisk			29.82	757.5	32.9	0.5	96	SSW	7	3			10					Snowing	Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.01	762.3	43.3	6.3	28	SSW	11	5			0						Physical Observatory.
Nertchinsk	27.48	698.1	29.67	753.5	12.4	—10.9	51	W	4	2			0						Meteorological Obs.
Vladivostock			29.72	754.8	30.7	— 0.7	68	N	13	6			1			Blank	Blank		
Nikolaievsk, on the Amoor					24.6	— 4.1	94	E	2	1			10					Snowing	

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 404. meters, or 1,341.8 feet; Ekaterinburg, 304.4? m., or 1,035.2? ft.; Tashkend, in 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper. —10.	Clouds. Amount. Lower. —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.00	762.0	52.3	11.3	43	S	3.0	1.33		2	0	NE		0	0	Light clouds	Royal Observatory.
San Fernando			29.93	760.3	61.7	16.5	42	ESE	28.2	12.6		0	3		ESE	0	0		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper. —10.	Clouds. Amount. Lower. —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.02	762.4	16.2	— 8.8	88	S			2		5			0	0		
Umea			30.04	763.1	27.3	— 2.6	74	SW			2		0			0	0		
Hernosand			30.07	763.8	36.0	2.2	94	Calm			0		0			0	0		
Stockholm			30.02	762.6	30.9	— 0.6	51	NNE			2		0			0	0		
Visby			30.06	763.5	32.0	0.0	85	ESE			2		7			0.106	2.7		
Sub-Series.																			
Upsala			30.08	763.9	31.3	— 0.4	59	ENE	8.1	3.6			1	SSW		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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.45	722.6	29.94	760.4	34.0	1.1	58	NNE			3		2			0.039	1.0	Clear	The Observatory.
Zurich	28.24	717.3	29.96	760.9	32.0	0.0	82	NW			1		3			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —1.9 mm.; Thermometer, —7.3 cent.; Relative Humidity, —2 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.84	758.0	67.5	19.7	34	S	0	0			0			0	0		
Fao, (Persian Gulf)			30.12	765.0	73.9	23.3		NW			3		0						
Salonica			29.80	756.8	68.5	20.3		E			2		0						
Valona			29.69	754.2	51.1	10.6		S			3		10			Blank	Blank	Stormy	
Varna			29.65	753.0	59.0	15.0		NE			2		8						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			29.95	760.8	74.8	23.8	49	NE			1		4c			0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			30.35	770.9	15.6	— 9.1	72	SE								0	0		Hon. J. Ferguson.
Brockville, Ontario			29.50	749.3	24	— 4.4		NE	15	6.7			10s		NE	2.40	61.0	Light snow	W. R. Bigg.
*Chatham, N. B.			30.36	771.1	17	— 8.3	67	NE	3	1.3		2k	8ks	NE	NE	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			30.44	773.2	18	— 7.8	84	SE	14	6.3			10s			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.46	748.3	25.2	— 3.8	87	E			6		10n			0.60	15.2	Stormy	James Smith, M. A.
Dalhousie, N. B.			30.37	771.4	15.2	— 9.3	82	E			5		10			0	0		H. A. Johnson.
Esquimault, B. C.			30.16	766.1	41.1	5.1	100	Calm	0	0			0			0	0	Clear	W. H. Bevis.
Fredericton, N. B.			30.23	767.8	21.9	— 5.6	73	SE	17	7.6			10s			0.40	10.2		Prof. Harrison.
*Fort Garry, Manitoba			30.02	762.5	4	—15.6	92	S	10	4.5			10ks			0	0	Cloudy	James Stewart.
Goderich, Ontario			29.63	752.6	20.6	— 6.3	91	NW			3		10n			0	0	Threatening	H. J. Strang, M. A.
Granton, Ontario			29.55	750.6	17.3	— 8.2		NW			1		10n			0	0	Cloudy	James Grant.
*Halifax, N. S.			30.38	771.6	26	— 3.3	90	SE	20	8.9			8n			0	0	Cloudy	F. Allison, M. A.
*Kingston, Ontario			29.42	747.3	25	— 3.9	82	NE	7	3.1			10s		NE	1.31	33.3	Cloudy	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			29.56	750.8	24	— 4.4	98	E	20	8.9			10n			1.05	26.7	Heavy snow	C. H. McLeod, C. E.
*Ottawa, Ontario			29.49	749.0	23	— 5.0	79	E	20	8.9			10n		E	1.00	25.4	Light snow	J. B. Haney.
*Parry Sound, Ontario			29.55	750.6	16	— 8.9	97	N	8	3.6			10n		N	0.51	13.0	Light snow	Rev. R. Mooley.
*Port Dover, Ontario			29.53	750.0	20	— 6.7	98	W	10	4.5			10n		W	0.80	20.3	Threatening	H. Morgan.
Port Hastings, N. S.			30.48	774.2	15.7	— 9.1		SE	8	3.6						0	0	Fine	P. Grant.
*Port Stanley, Ontario			29.57	751.1	20	— 6.7	91	NW	20	8.9			10n		NW	0.70	17.8	Cloudy	M. Payne.
*Quebec, Quebec			29.[illegible]6	758.4	19	— 7.2	100	NE	22	9.8			10n		NE	0.60	15.2	Heavy snow	Capt. Ash, R. N.
St. John, N. B.			30.25	768.3	25.0	— 3.9	75	E	8	3.6			10n			0.985	25.12		G. Murdoch, C. E.
*Saugeen, Ontario			29.55	750.6	18	— 7.8	81	NE	4	1.8		2k	8ks			0.35	8.9	Cloudy	K. Stewart.
Stayner, Ontario			29.52	749.8	16	— 8.9	93	NW	5	2.2			10n		NW	0.50	12.7	Light snow	R. J. Cole.
Stratford, Ontario			29.56	750.8	17.0	— 8.3	92	NW	11	4.9			10s			0.50	12.7	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			30.51	774.9	17	— 8.3	70	W	2	0.9		2c	0			0	0	Clear	T. C. Hill.
*Toronto, Ontario			29.47	748.5	22	— 5.6	93	N	10	4.5			10n			1.50	38.1	Light snow	Magnetic Observatory
Woodstock, Ontario			29.53	750.0	17.6	— 8.0	98	NW			1		10s			0.05	1.3	Cloudy	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.28	743.7	38	3.3	100	SE	1	0.4			10n			0.53	13.5	Heavy rain	
Alpena, Mich			29.65	753.1	16	— 8.9	100	NW	18	5.8			10n			0.34	8.6	Light snow	
Atlantic City, N. J			29.30	744.2	41	5.0	91	W	16	7.2			10s			1.72	43.7	Cloudy	
Augusta, Ga.			29.88	758.9	34	1.1	62	NW	12	5.4		5k	0	NW		0.73	18.5	Fair	
Baltimore, Md			29.43	747.5	37	2.8	62	NW	14	6.3		5k	5ks	S		0.95	24.1	Cloudy	
Barnegat, N. J			29.26	743.2	45	7.2	100	W	20	8.9			10n			2.28	57.9	Light rain	
Benton, Montana	27.12	688.8	29.92	760.0	19	— 7.2	100	N	1	0.4		8c	0			0	0	Fair	
Bismarck, Dakota	28.12	714.2	29.91	759.7	6	—14.4	52	E	1	0.4		8k	0	E		0	0	Fair	
Boston, Mass			29.41	747.8	37	2.8	100	E	24	10.7			10n		SE	0.98	24.9	Light rain	
Breckenridge, Minn			30.21	767.3	—20	—28.9	100	SE	3	1.3		0	5s		SE	0	0	Fair, frost	
Buffalo, N. Y.			29.43	747.5	22.5	— 5.3	86	W	16	7.2			10n		W	0.48	12.2	Light snow	
Burlington, Vt.			29.48	748.8	32	0.0	100	S	14	6.3			10n			0.19	4.8	Light snow	
Cairo, Ill.			30.18	766.6	14	—10.0	64	NW	13	5.8		0	0			0.03	0.8	Clear	
Cape Hatteras, N. C.			29.45	748.0	48	8.9	85	W	18	8.0			10s		W	1.16	29.5	Cloudy	
Cape Henry, Va.			29.49	749.0	42	5.6	91	NW	18	8.0			10s		NW	3.36	85.3	Cloudy	
Cape May, N. J.			29.36	745.7	39	3.9	81	NW	28	12.5		0	0			2.38	60.5	Clear	
Charleston, S. C.			29.85	758.2	38	3.3	54	W	20	8.9			10s			1.12	28.4	Cloudy	
Cheyenne, Wyoming	23.86	606.0	29.80	756.9	26	— 3.3	88	SW	4	1.8		0	2s			0	0	Fair	
Chicago, Ill.			29.92	760.0	17	— 8.3	67	NW	8	3.6		0	0			0.02	0.5	Clear	
Cincinnati, Ohio			29.83	757.2	22	— 5.6	72	NW	12	5.4			10s			0.38	9.7	Cloudy	
Cleveland, Ohio			29.65	753.1	18.7	— 7.4	100	W	19	8.5			10n		W	0.28	7.1	Light snow	
Colorado Springs, Col.	23.96	608.6	29.83	757.7	21	— 6.1	41	N	8	3.6		2k	0	SW		0	0	Fair	
Corsicana, Tex			30.27	768.8	28	— 2.2	88	SW	2	0.9		0	0			0	0	Clear	
Davenport, Iowa			30.12	765.0	8	—13.3	78	W	4	1.8		0	0			Inap.	Inap.	Clear	
Denison, Tex			30.22	767.6	33	0.6	69	SE	4	1.8		0	0			0	0	Clear	
Denver, Col.	21.66	626.4	29.88	758.9	29	— 1.7	77	Calm	0	0		2c	Haze			0	0	Fair	
Detroit, Mich			29.67	753.6	19	— 7.2	77	NW	9	4.0		1k	0	NW		0.39	9.9	Clear	
Dodge City, Kan	27.40	696.0	29.82	757.4	22	— 5.6	85	Calm	0	0		0	0			0	0	Clear	
Dubuque, Iowa			30.08	764.0	13	—10.6	62	NW	8	3.6		0	0			0	0	Clear	
Duluth, Minn			30.10	764.5	10	—12.2	68	Calm	0	0		0	0			Inap.	Inap.	Clear	
Eastport, Me			30.12	765.0	26	— 3.3	100	E	32	14.3			10n		E	Inap.	Inap.	Light snow	
Erie, Pa			29.5	75[illegible].6	19	— 7.2	92		25	11.2			10n			0.03	0.8	Light snow	
Escanaba, Mich			29.88	758.9	14	—10.0	64	NW	20	8.9		0	0			0.05	1.3	Clear	
Fort Gibson, Indian Terr.			30.26	768.6	17	— 8.3	67	NE	6	2.7		0	0			0.01	0.3	Clear	
Ft. St. Michaels, Alaska			29.66	753.4	4	—15.6		N	8	3.6		0	8s			0	0	Cloudy	
Fort Sill, Indian T.	28.92	734.6	30.13	765.3	14	—10.0	61	S	4	1.8		0	0			0	0	Clear	
Fort Sully, Dakota	28.27	718.0	30.12	765.0	0	—17.8	70	SE	3	1.3		2c	2ks	NW		0	0	Fair	
Galveston, Tex			30.27	768.8	39	3.9	46	N	14	6.3		0	0			0	0	Clear	
Grand Haven, Mich			29.82	757.4	21	— 6.1	79	N	13	5.8		2ck	2s	N	N	0.10	2.5	Fair	
Indianapolis, Ind			29.94	760.5	15	— 9.4	82	W	6	2.7			10n		W	0.11	2.8	Light snow	
Indianola, Tex			30.30	769.6	42	5.6	42	NE	12	5.4		0	0			0	0	Clear	
Jacksonville, Fla			29.97	761.2	42	5.6	56	W	18	8.0			10s		W	2.12	53.8	Cloudy	
Keokuk, Iowa			30.13	765.3	11	—11.7	80	NW	5	2.2		0	0			0	0	Clear	
Key West, Fla			30.00	762.0	68.0	20.0	65	NW	28	12.5			10s		NW	0.05	1.3	Cloudy	
Kittyhawk, N. C.			29.49	749.0	43	6.1	100	NW	16	7.2			10n		NW	2.35	59.7	Light rain	
Knoxville, Tenn			29.96	761.0	23	— 5.0	73	W	12	5.4			10ks		W	0.70	17.8	Cloudy	
La Crosse, Wis			30.12	765.0	8	—13.3	78	NW	1	0.4		Haze	Haze			0	0	Hazy	
Leavenworth, Kan			30.23	767.8	12	—11.1	80	N	1	0.4		0	0			0	0	Clear	
Lexington, Ky	28.80	731.5	29.97	761.2	19	— 7.2	69	W	19	8.5		0	2s		W	0.04	1.0	Clear	
Long Branch, N. J			29.21	741.9	48	8.9	100	SW	14	6.3			10n		SW	3.27	83.1	Light rain	
Louisville, Ky			29.98	761.5	18	— 7.8	68	SW	12	5.4		2k	5s	W	NW	0.16	4.1	Cloudy	
Lynchburg, Va			29.58	751.3	32	0.0	60	W	12	5.4		2k	0	W		0.85	21.6	Clear	
Malone, N. Y			29.36	745.7	32	0.0	89	Calm	0	0			10n		NW	0.34	8.6	Heavy snow	
Manhattan, Kan	28.98	736.1	30.24	768.1	11	—11.7	79	NW	4	1.8		0	0			0	0	Clear	
Marquette, Mich			29.95	760.7	16	— 8.9	83	NW	16	7.2		0	2ks		N	Inap.	Inap.	Fair	
Memphis, Tenn			30.21	767.3	19	— 7.2	53	NW	8	3.6		0	0			0.05	1.3	Clear	
Milwaukee, Wis			29.96	761.0	12	—11.1	79	NW	13	5.8		0	0			0.08	2.0	Clear	
Mobile, Ala			30.20	767.1	31	— 0.6	68	NW	3	1.3		0	Sm'e			0	0	Clear	
Montgomery, Ala			30.13	765.3	31	— 0.6	84	NW	10	4.5		2k	0	NW		0.20	5.1	Cloudy	
Morgantown, W. Va			29.66	753.4	26	— 3.3	88	SW	16	7.2			10n			0.36	9.1	Light snow	
Mt. Washington, N. H	23.10	586.7	29.46	748.3	12	—11.1	100	SE	96	42.9			10n		SE	0.58	14.7	Heavy snow	
Nashville, Tenn			30.08	764.0	21	— 6.1	56	NW	6	2.7		2k	0	NW		0.20	5.1	Fair	
New Haven, Conn			29.24	742.7	38	3.3	100	NE	16	7.2			10n			3.25	82.5	Heavy rain	
New London, Conn			29.28	743.7	46	7.8	100	SE	50	22.4			10n		SE	1.89	48.0	Light rain	
New Orleans, La			30.22	767.6	37	2.8	57	N	6	2.7		2k	Haze	NW		Inap.	Inap.	Clear	
Newport, R. I.			29.36	745.7	44	6.7	100	SE	28	12.5		Fog	10n		SE	1.88	47.8	Heavy snow	
New York, N. Y			29.22	742.2	45	7.2	100	NE	4	1.8			10n		E	0.85	21.6	Light rain	
Norfolk, Va			29.31	749.5	41	5.0	78	NW	13	5.8			10s		NW	1.79	45.5	Cloudy	
North Platte, Neb	27.00	685.8	29.68	753.9	25	— 3.9	87	Calm	0	0		5ck	0	W		0	0	Fair	
Omaha, Neb	29.03	737.3	30.21	767.3	6	—14.4	100	Calm	0	0		0	Sm'e		SE	0	0	Clear	
Oswego, N. Y			29.38	746.2	33.2	0.7	89	SE	4	1.8			10n			0.10	2.5	Sleeting	
Pembina, Dakota			30.04	763.0	1	—17.2	85	SE	12	5.4			10s			0	0	Cloudy	
Philadelphia, Penn			29.32	744.7	39	3.9	72	NW	15	6.7		5ck	2s	W	NW	1.47	37.3	Clearing	
Pike's Peak, Colorado	17.56	446.0	29.77	756.1	6.5	—14.2	53	W	11	4.9		0	1s			0.12	3.0	Clear	
Pittsburgh, Penn			29.04	752.8	22	— 5.6	72	NW	12	5.4			10n			0.17	4.3	Light snow	
Port Huron, Mich			29.61	752.1	17	— 8.3	83	NW	12	5.4			10s			0.61?	15.5?	Cloudy	
Portland, Me			29.77	756.1	32	0.0	100	E	26	11.6			10n			0.66	16.8	Sleeting	
Portland, Oregon			30.21	767.3	49	9.4	85	Calm	0	0		0	5s			0.69	17.5	Fair	
Punta Rassa, Fla			30.00	762.0	61.9	16.6	66	NW	30	13.4			10ks		NW	0.14	3.6	Cloudy	
Rochester, N. Y			29.38	746.2	22	— 5.6	87	SW	8	3.6			10s			0.12	3.0	Cloudy	
Salt Lake City, Utah	25.44	646.2	29.77	756.1	38	3.3	80	NE	8	3.6			10n			0.16	4.1	Light rain	
Sandy Hook, N. J			29.21	741.9	46	7.8	100	SW	9	4.0			10n		S	3.63	92.2	Light rain	
San Diego, Cal.			29.90	759.4	54	12.2	86	E	4	1.8			10s			0	0	Cloudy	
San Francisco, Cal			29.93	760.2	53	11.7	76	W	4	1.8		0	0			0	0	Clear	
Santa Fe, N. M	23.12	587.2	29.66	753.4	31	— 0.6	68	E	5	2.2		0	0			0	0	Clear	
Savannah, Ga.			29.90	759.4	38	3.3	63	NW	12	5.4			10s		W	1.48	37.6	Cloudy	
Shreveport, La			30.33	770.4	28	— 2.2	83	NW	2	0.9		0	0			0.02	0.5	Clear	
Smithville, N. C.			29.69	754.1	42	5.6	75	NW	10	4.5			10ks		NW	2.64	67.1	Cloudy	
Springfield, Mass			29.37	746.0	35	1.7	90	NE	12	5.4			10n			2.02	51.3	Light rain	
St. Louis, Mo			30.15	765.8	10	—12.2	89	NW	16	7.2		0	0			0.04	1.0	Clear	
St. Marks, Fla			30.08	764.0	36	2.2	92	NW	8	3.6			10s		NW	2.04	50.9	Cloudy	
St. Paul, Minn			30.12	765.0	2.5	—16.4	72	W	4	1.8		0	0			0	0	Clear	
St. Paul's Island, Alaska			29.63	752.6	11	—11.7	100	N	20	8.9		10	k			0.01	0.3		
Thatcher's Island, Mass			29.59	749.3	35	1.7	100	SE	48	21.5			10n		SE	0.56	14.2	Raining	
Toledo, Ohio			29.70	754.4	19	— 7.2	69	W	5	2.2		2cs	0			0.80	20.3	Clear	
Tucson, Arizona	27.42	696.5	30.02	762.5	47	8.3		S				10ck	0	W		0	0	Cloudy	
Tybee Island, Ga.			29.90	759.4	38	3.3	65	NW	14	6.3			10s		W	2.64	67.1	Cloudy	
Vicksburg, Miss			30.20	769.4	29	— 1.7	78	NW	8	3.6		2k	0	N		0.01	0.3	Clear	
Virginia City	24.06	611.1	29.54	750.3	30	— 1.1	89	Calm	0	0			10n			Inap.	Inap.	Light snow	
Washington, D. C.			29.47	748.5	34	1.1	65	NW	20	8.9		1ck	2s	SW	W	0.80	20.3	Fair	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			29.67	753.6	42	5.6	75	W	16	7.2			10ks		NW	1.95	49.5	Cloudy	
Wood's Holl, Mass			29.43	747.5	43	6.1	100	SE	44	19.7			10n			1.05	26.7	Heavy rain	
Wytheville, Va	27.26	692.4	29.49	749.0	19	−7.2	69	NW	16	7.2			10s		NW	0.37	9.4	Cloudy	
Yankton, Dakota	28.81	731.8	30.28	769.1	−8	−22.2	58	NE	1	0.4		0	0			0	0	Clear	
Yuma, Arizona			29.82	757.4	54	12.2		NE					10s		W	0	0	Cloudy	
Sub-Series.																			
Bridgetown, B'b'dos, W. I			30.04	763.0	80	26.7	82	E	5	2.2		2ck	5s	S	NE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.09	762.0	78	25.6	72	E				10k	2n			0	0	Cloudy	L. V. Bigard.
St. Thomas, St. T., W. I			30.24	768.1	77	25.0	63	ESE	9	4.0		4c,ck	8k,s	E		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I			30.16	766.1	75	23.9	69	Calm	0	0		2ck	2s	SE	SE	0	0		James Gall.
Santiago de Cuba, W. I			29.79	756.7	75	23.9	72	Calm	0	0		2ck	2ks		SW	0	0	Fair	Robert Mason.
Havana, Cuba, W. I			30.03	762.7	70	21.1	63	W	13.2	5.9			10n		NW	0.24	6.1	Cloudy	Charles Hasselbrink.
St. Georges, Bermudas			30.15	765.8	65.0	18.3	68	SSE	26.5	11.8		10c	0			0	0	Hazy	C. F. Allen.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Navassa, W. I																			
Clifton, Jamaica, W. I	27.20	690.9	30.01	762.2	64	17.8	83	SE	1.0	0.4		8c	0	SE		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A			30.01	762.2	81	27.2	74	E			3		6k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			29.99	761.7	82.4	28										0	0		Dr. H. Groot.
Medellin, Colombia, S. A	25.17	639.2			66.5	19.2	82		0	0		8k	2s			0	0	Cloudy	Thomas Herran.
St. Johns, Newfoundland			30.53	775.4	22.0	−5.6		NW				5k	10s			0	0	Fair	John Delaney.
York Factory, B. A			29.95	760.7	3	−16.1	87	NE	3	1.3		4ck	0	NE		0	0		J. Fortescue.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,264.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used incorrecting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 22, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.84	757.9	61.3	16.3	52	N			1		0			0	0	Clear	Charnot.
Algiers			29.83	757.6	64.4	18.0	82	NNW			1		0			0	0	Clear	Peter.
La Galle																			Kuntz.
Tunis			30.00	761.9	61.3	16.3	51	W			4		5			0	0	Fair	Jacques.
Sfax			29.89	759.2	59.7	15.4	61	ESE			3		5			0	0	Fair	Chauvey.
Saida			29.97	761.2	68.7	20.4		W			5		1			0	0	Clear	Millot.
Tebessa			29.95	760.8	56.1	13.4		SSW			3		10			0	0	Hidden	Colin.
Geriville			29.92	760.0	55.0	12.8	50	SSE			3		1			0.138	3.5	Clear	Buard.
Laghouat			30.04	763.1	71.6	22.0	58	NW			4		8			0	0	Cloudy	Guyot.
Biskra			29.93	760.3	64.8	18.2	30	NE			1		0			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.86	758.5	44.1	6.7	54	SW			3		7			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.76	756.0	32.7	0.4	100	WNW			3		10			0	0		I. R. Observatory.
Sperles			29.77	756.2	39.9	4.4	62	SW			4		6			0	0		Julius Mikolik.
Gratz	28.62	726.9	29.84	758.0	42.8	6.0	70	SW			2		0			0	0		Andreas Rospini.
Hermannstadt	28.47	723.2	29.93	760.3	40.6	4.8	57	NW			3		5			0	0		Prof. Reissenberger.
Kremsmünster	28.37	720.6	29.76	755.8	34.2	1.2	78	E			1		3			0	0		Prof. C. Wagner.
Lemberg			29.71	754.6	38.1	3.4	49	SW			4		6			0	0		Dr. T. Stanecki.
Nyiregyhaza			29.87	758.7	41.0	5.0	69	SW			3		9			Inap.	Inap.		Habsuda Daniel.
Pola			29.91	759.8	45.3	7.4	76	SE			1		10ks			0	0		I.R. Hydrographic Of'ce
Szegedin			29.91	759.8	41.4	5.2	66	S			3		6			0	0		Karl Stancel.
Trieste			29.90	759.4	43.7	6.5	90	Calm			0		10			0.197	5.0	Rain and fog	Prof. V. Farolfi.
Vienna			29.78	756.4	37.8	3.2	54	E			2		0			0.059	1.5		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.78	756.5	37.2	2.9	76	E			1		5			0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.09	764.3	36.6	2.6		WNW	17	7.6			7			0.150	3.81	*D.clouds	William Boswell.
Ardrossan			30.14	765.5	43	6.1		N			3		5						J. Mayes.
Armagh Observatory			30.18	766.6	38.7	3.7		NNE	12	5.4			5					*D. clouds	S. Call, for Dr. Robinson
Bidston, Liverpool Obs			30.03	762.7	39.0	3.9		NE	22	9.8			4					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			30.14	765.5	41.2	5.1		NNE			1-2		8					*D. clouds	J. Dreyer.
Bradford			30.00	762.0	39.6	4.2		N			2		3			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			29.93	760.2	81.0	27.2		NE			2		6					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			29.91	759.7	41.0	5.0		N			2		7			Blank	Blank	Gloomy	H. Todd.
Cardington			29.63	752.6	39.0	3.9		NE			2		7					*D. clouds	John McLaren.
Carlisle			30.08	764.0	40.5	4.7		N			2		5			0.05	1.3	*D. clouds	Bell, for J. Cartmell.
Chatham, School M. E.			29.91	759.7	36.2	2.3		NE			1							Snowing	Capt. J. Fellowes, R. E.
Dartmoor	28.43	722.1	29.99	761.7	34.0	1.1		E			6		5					*D. clouds	R. E. Power.
Donaghadee			30.12	765.0	39	3.9		NE			4		5					*D. clouds	J. Mac Gowan.
Dover			29.84	757.9	41	5.0		E			4		5					½ clouded	J. Costello.
Eccles, (near Manchester)			30.01	762.2	41.7	5.4		NE	8.4	3.8			4					Squally	Thomas Mackereth.
Falmouth Observatory			29.94	760.5	38.0	3.3		ENE	28	12.5			7					Overcast	The Staff.
Fort Napier, (Natal)	27.72	704.1	29.95	760.7	72.5	22.5		E			2		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.85	758.2	90.0	32.2		N			0		4					*D. clouds	
Galway, Queen's College			30.10	764.5	47	8.3		NE			5		2					*D. clouds	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			29.79	756.7	59.8	15.4		E			3		3					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			30.10	764.5	40.1	4.5		NNE			1		5					Fine	Lewis Stuart.
Great Yarmouth			29.90	759.4	38	3.3		NE			4		4			Blank	Blank	*D. clouds	G. T. Watson.
Greenwich Royal Obs			29.89	759.2	39.8	4.3		NE			1		5					Snowing	The Staff for G. B. Airy.
Guernsey			29.82	757.4	37	2.8		NE			5		8					Snowing	Dr. S. E. Hoskins.
Halifax, Moorside Obs			30.05	763.3	37.6	3.1		NE			2		7			Blank	Blank	*D. clouds	L. J. Crossley.
Helston			29.89	759.2	40	4.4		NE			2		4k			0.70	17.8	Fine	M. P. Moyle.
Holyhead			30.07	763.8	39	3.9		NNE			4		3					Blue sky	John Tilston.
Kew Observatory			29.90	759.4	37.5	3.1		ENE	15	6.7			6					Hazy	The Staff.
Kingstown			30.13	765.3	39	3.9		ENE			5		5					*D. clouds	George Mitchell
Leicester Museum			29.99	761.7	36.1	2.3		NE			1		5					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.02	762.5	58.0	14.4		SE			3		8k						Fred Travis, Pvt A.H.C.
Nairn			30.12	765.0	38	3.3		NW			1		10					Drizzling	W. D. Penny.
Nassau, (Bahamas)			30.20	767.1	77.4	25.2		N			5		8					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.99	761.7	38.3	3.5		ENE			3		4k,d		NNE	0.09	2.3	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.99	761.7	40.0	4.4		NNE			3		9					Threatening	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.92	760.0	39	3.9		NNE			1		7					*D. clouds	J. Lucas.
Plymouth			29.92	760.0	39.7	4.3		NE			5		2					*D. clouds	John Merrifield.
Roche's Point			30.06	763.5	38	3.3		NE			3		8					¾ clouded	W. Kennedy.
Saint Ann's Head			30.01	762.2	39	3.9		NE			2		7					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.79	756.7	40.2	4.6		ENE			6		10					Snowing	A. P. Amy.
Sandwick Manse (Orkneys)			30.01	762.2	41.8	5.4		NW	27	12.1			10					Showery	Rev. Dr. Clouston.
Scarborough			30.00	762.0	34.2	1.2		NE			4		4					*D. clouds	F. Shaw.
Scutari Cemetery (Turkey)			29.97	761.2	59.0	15.0		S			1		3					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.99	761.7	39.1	3.9		NE			2		9			0	0	Overcast	W. F. Cooper.
Stiloth Rectory			30.08	764.0	39.9	4.4	64	E			2		6			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			30.03	762.7	37.9	3.3		NE			2		5			Blank	Blank	Hazy	S. J. Perry.
Stornoway, Lewis C. (Hebr.			30.14	765.5	41	5.0		W			1		5					*D. clouds	John Smith.
Stratfield Turgiss			29.91	759.7	38.3	3.5		NE			1		2					Blue sky	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slater.
Thurso			30.01	762.2	40	4.4		W			2		10					Gloomy	John Trotter.
Truro, Royal Institution			29.93	760.2	43	6.1		NE			6		6					*D. clouds	W. Newcombe.
Valencia Observatory			30.06	763.5	42.6	5.9		NNE	30	13.4			4					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					40	4.4		N			4	5	2			0	0		
Cape Good Hope Obs.			30.04	763.0	71.0	21.7	53	SSE	32	14.3			1						The Staff, for E. J. Stone.
Leith, Restalrig Park			30.12	765.0	40.5	4.7		NE			2		10k			Fine, cloudy		0.03	0.8	Andrew Gibb.
Mauritius			29.99	761.7					15.6	7.0						0.19	4.8		
Monach Lt-house, Hebrides																			J. Youngclause.
North Unst, (Shetland Is.)			29.98	761.5	38	3.3		N			4		10						

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.51	749.6	32.7	0.4	76	NNE			7		10						
Fanöe			29.75	755.7	37.0	2.8	54	N			4		5						
Godthaab, (Greenland)			30.59	776.9	17.8	— 7.9	80	WSW			4		10					Snowing	
Stykkisholm, (Iceland)			29.78	756.3	40.1	4.5	97	SW			4		10					Raining	
Thorshavn, (Faröe)			30.03	762.7	39.6	4.2	71	NW			2		5						
Vestervig			29.76	756.0	35.2	1.8	67	N			4		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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	754.9	39.2	4	82	NE			3		10			0	0	Covered	Normal School.
Amiens			29.83	757.6	37.0	2.8	87	N			3		0			0	0	Clear	Normal School.
Avignon			29.70	754.4	43.3	6.3	79	ESE			2		10		SSW	0.142	3.6	Covered	Normal School.
Bar-sur-Seine			29.63	752.5	36.9	2.7	61	SW			4		10			0.004	0.1	Covered	C. Saillard.
Beaumette, (near Angers)			29.68	753.8	40.3	4.6	47	E	24.2	10.8					E	0.260	6.6		Beaumette Observatory
Beauvais			29.77	756.1	39.0	3.9	57	ENE			4		8		ENE	0	0	Very cloudy	Normal School.
Besançon			29.59	751.5	32.7	0.4	92	E			2		10		SW	Inap.	Inap.	Covered	Normal School.
Bourg en Bresse			29.54	750.4	37.8	3.2	86	S			4		10					Snowing	Normal School.
Bourges			29.36	745.7	34.2	1.2	96	N			2		10		NE	0.165	4.2	Covered	Normal School.
Brest			29.73	755.1	43.0	6.1	66	NE			4		5n		NE	0.266	6.75		Naval Observatory.
Caen																			Normal School.
Chartres			29.54	750.4	40.1	4.5		NNW			3		4		E	0.114	2.9		Normal School.
Chaumont																			Normal School.
Clermont			29.42	747.3	47.1	8.4	49	W			3		10			0.402	10.2		Puy de Dome, Obs.
Commercy			29.70	754.4	36.9	2.7	96	NE			6		10kn		NE	0	0	Covered	Normal School.
Commune de Gréasque*			29.75	755.7	42.4	5.8	79	SE			2		10		SE	0.689	17.5	Raining	
Grenoble			29.65	753.0	38.8	3.8	83	SW			4		10			0.071	1.8	Rain & snow	Normal School.
Le Mans			29.70	754.4	39.0	3.9	49	E			4		8		E	0.138	3.5	Very cloudy	Normal School.
Loches			29.37	746.0	37.4	3	66	E			2		10			0.126	3.2	Covered	Normal School.
Lons-Le-Saulnier			29.56	750.8	36.1	2.3	93	SE			2		10			0	0	Snowing	Normal School.
Mâcon			29.45	747.9	35.1	1.7	89	S			2		10			0.130	3.3	Covered	Normal School.
Mirecourt																			Normal School.
Metz			29.74	755.5	36.5	2.5	72	NE			2		10			0	0		M. Schuster.
Mismes			30.18	766.6	49.8	9.9	62	N			2		10		N	0	0	Covered	Normal School.
Orleans			29.63	752.5	38.5	3.6	67	ENE			6		8		E	0	0	Very cloudy	Normal School.
Paris Observatory			29.71	754.5	39.4	4.1	47	NE			2		10		NE	0	0	Misty	National Observatory.
Parthenay			29.56	750.9	34.2	1.2	96	NE			2		10			0	0	Covered	Normal School.
Privas			29.71	754.7	39.2	4		N			2		10			0	0	Covered	Normal School.
La Roche-sur-Yon			29.66	753.4	35.2	1.8	79	NE			6		10			0.138	3.5	Covered	Normal School.
Rochefort, Observatory			29.61	752.0	39.2	4.0	77	NE			4		10		S	0	0	Covered	Naval Observatory.
Rouen			29.75	755.7	38.8	3.8	73	NE			3		2		N	0	0	Slightly cl'dy	Normal School.
Saint Lo			29.81	757.1	38.5	3.6	70	NE			5		3		E	0.043	1.1		Normal School.
Tarbes			29.60	751.9	51.8	11	48	W			2		10		E	0	0	Covered	Normal School.
Toulouse																			Normal School
Villefranche			29.91	759.8	32.9	0.5	95	NW			1		10			0.75	19.	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.7	75.4	24.1	83	NE			2		5k						L'Abbé Marchési.
Gorée																			
Marseilles			29.72	754.9	49.3	9.6	74	SSW			3		10			0.457	11.60	Rainy	Marseilles Observatory.
Mont-Louis	24.44	620.7	29.78	756.4	37.0	2.8	66	SSW	37.3	16.66			5		SW	0	0		—. Faiguère.
Montsouris, Paris			29.69	754.1	39.2	4.0	66	ENE			4		10			0.004	0.1	Covered	Montsouris Observ'tory.
Perpignan			29.69	754.1	42.8	6.0	71	E	9.3	4.17			7		W	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P†																			M. Baylac.
Pic du Midi, (Plantade)	22.07	560.7			27.5	− 2.5		NW			3		9					Dense fog	General de Nansouty.
Saint Maur, (near Paris)			29.69	754.2	39.4	4.1	50	ENE			3		10			0.016	0.4	Very cloudy	E. Renou.
Toulouse			29.63	752.7	47.8	8.8	76	ESE			2		10			0.055	1.4		Toulouse Observatory.
Tours			29.63	752.6	38.8	3.8	54	E			5		10		E	0.248	6.3		C. Marquet.
Versailles, (near Paris)			29.69	754.1	39.9	4.4	62	NE			4		5			0.007	0.18	Slightly cov.	Dr. A. Bérigny.
Zi-Ka Wei, (near Shanghai)																			H. Le Lee, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7., 8. or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,580.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,089.9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Near Marseilles. † Summit inaccessible.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.67	753.7	36.5	2.5	74	NW			3		4			0	0		Prof. T. Holt.
Berlin			29.59	751.6	32.2	0.1	100	N			4		10			0.449	11.4		Prof. Arndt.
Breslau			29.68	753.8	32.5	0.3	88	SW			6		10					Snowing	Dr. P. Nangebauer.
Karlsruhe			29.71	754.7	39.9	4.4	43	NE			1		10			0	0		A. Senz.
Cassel			29.69	754.0	39.0	3.9	54	NW			4		7			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe
Emden																			Prof. Prestel.
Frankfort on the Main			29.83	757.7	36.5	2.5	55	NE			1		2			Inap.	Inap.		Physical Society.
Friedrichshafen	28.24	717.2	29.71	754.7	34.9	1.6	60	SE			4		10			0.740	18.8		M. Wilhelm.
Hamburg			29.67	753.6	34.9	1.6	80	WNW			4		10			0	0		Deutsche Seewarte.
Kiel			29.70	754.4	35.4	1.9	62	NNW			4		8			0	0		Prof. G. Karsten.
Königsberg			29.41	747.1	35.8	2.1	82	S			5		5			0.276	7.0	Snowing	Prof. E. Luther.
Köslin			29.36	745.7	32.2	0.1		N			2		10			0	0		H. Müller.
Leipsic			29.71	754.6	33.8	1.0	79	WSW			3		9	W		0.059	1.5	Snowy	Prof. Brahms.
Memel			29.37	746.0	35.1	1.7	77	SE			3		10			0.185	4.7	Light snow	Reinbrecht & Skalweit.
Münster			29.72	755.0	40.1	4.5	71	N			2		4			0	0		Prof. E. Heis.
Neufahrwasser			29.32	744.7	36.1	2.3	82	SW			3		10			0.185	4.7		A. Lothes.
Posen			29.56	750.8	36.5	2.5	78	W			5		10			0.110	2.8	Snowing	Dr. Magener.
Strassburg, (in Alsace)			29.69	754.0	40.3	4.6	56	NE			2		10			0	0		Dr. Schur.
Stuttgart			29.69	754.2	40.1	4.5	52	E			1		6			0.016	0.4		Prof. Schoder.
Thorn			29.47	748.4	32.9	0.5	90	SW			6		8			0	0		Dr. Hasenbalg.
Trevers, (Trier)			29.67	753.7	38.7	3.7	52	E			6		2			0	0		Prof. Fiesch.
Wustrow, Naval School			29.51	749.6	29.1	− 1.6	100	NE			6		10						E. F. Schultz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—12.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—12.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.87	758.8	41.7	5.4	72	SE	1.3	0.6			10			0	0		
Padua			29.87	758.6	44.8	7.1	52	SE	1.8	0.8			10			0.295	7.5		
Vicenza			29.87	758.6	44.8	7.1	48	E	0.7	0.3			6	E		0.087	2.2		
Verona			29.85	758.3	50.4	10.2	47	E			2		10			0.354	9.0		
Bergamo	28.48	723.4	29.81	757.2	33.1	0.6	93	N			2		10			0	0	Snowing	
Domodossola	28.83	732.2	29.87	758.6	37.4	3.0	81	Calm			0		10			0	0	Snowing	
Milan			29.86	758.5	37.2	2.9	88	ESE			1		10			0.189	4.8	Snowing	
Pavia			29.89	759.2	34.9	1.6	65	NE			2		10			0	0	Snowing	
Moncalieri			29.89	759.2	33.1	0.6	61	NNW	4.9	2.2			10	N		0	0		
Mondovi	27.91	708.8	29.85	758.1	31.3	— 0.4	76	NW			4		10			0	0	Snowing	
Porto Maurizio			29.91	759.6	40.8	4.9		N			1		10	SW		0.228	5.8	Raining	
Genoa			29.86	758.5	39.9	4.4	77	N	2.5	1.1			10	S		0.232	5.9	Light rain	
Piacenza			29.88	759.0	37.9	3.3	65	NE	9.4	4.2			10			0	0	Snowing	
Parma			29.86	758.5	44.6	7.0	68	SE			2		10			0.039	1.0	Raining	
Bologna			29.90	759.4	49.1	9.5	35	S			6		6	N		0	0		
Florence			29.93	760.1	51.8	11.0	44	SW			4		10	SW		0	0		
Leghorn			29.89	759.2	48.6	9.2	55	S	9.4	4.2			10			0	0		
Siena	28.66	728.0	29.87	758.7	46.6	8.1	45	S	2.5	1.1			10	SW		0	0		
Urbino	28.35	720.0	29.92	759.9	43.2	6.2	56	WSW			4		8			0	0		
Pesaro																			
Ancona			29.95	760.7	45.9	7.7	65	SSE			2		2			0	0		
Grosseto			29.93	760.2	52.7	11.5	58	SSE			6		7	NW		0.043	1.1		
Rome			30.00	761.9	53.6	12.0	43	SW	8.1	3.6			3	S		0	0		
Naples, O. U.			30.05	763.3	54.9	12.7	62	SSW			4		8	WNW		0.185	4.7		
Lecce			30.08	764.0	53.1	11.7	29	WNW	13.0	5.8			3			0	0		
Cosenza			30.10	764.4	53.6	12.0	76	NW	1.8	0.8			6			0.236	6.0		
Riposto, (Sicily)			30.06	763.5	57.7	14.3	49	SE			2		1			0	0		
Palermo			29.99	761.7	53.6	12.0	39	NE	8.1	3.6			2			0	0		
Caltanissetta	28.08	713.1	30.02	762.6	50.2	10.1	65	SW			2		2	NE		0	0		
Sub-Series.																			
Naples, S. R.			29.65	753.2	49.3	9.6	70	NE	1.8	0.8			..ck	NE		0.291	7.4		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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—12.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Tokio																			

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—12.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.85	758.3	40.6	4.8		NE			2								
Groningen			29.76	756.0	36.7	2.6		N			1								
Helder			29.85	758.2	37.2	2.9		N			4								
Utrecht			29.79	756.6	40.3	4.6	53	NNE			3		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—12.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.88	759.0	39.2	4.0	58	W	0.5	0.2			10			0	0		
Brönö			29.75	755.6	37.4	3.0	83	Calm	0	0			1			0.126	3.2		
Christiania			29.78	756.5	36.9	2.7	54		2.2	1.0			0			0	0		
Tromsö			29.85	758.3	28.0	— 2.2	83	SW	2	1			0			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. 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.
Angra, (Azores,)			30.08	764.1	59.4	15.2	76	ENE	13.9	6.22			4			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.77	756.1	56.8	13.8	41	SW	9.5	4.25			3	SW		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			29.95	760.8	63.0	17.2	53	SE	0.6	0.27			9	SE		0	0		Capt. D. A. da Cunha.
Lisbon			29.83	757.6	52.5	11.4	56	SW	17.4	7.8			0			0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. 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.
Warsaw																			Astronomical Obs.
Wilna			29.58	751.4	34.0	1.1	72	SW	22	10			10						Astronomical Obs.
Dorpat			29.62	752.3	38.7	3.7	65	S	9	4			10						Physical Cabinet.
St. Petersburg			29.59	751.6	39.7	4.3	88	Calm	0	0			10						Central Physical Obs.
Kuopio			29.63	752.6	33.1	0.6	95	E	9	4			10					Light fog	Ch. Forsten.
Kieff			29.81	757.1	28.6	− 1.9	98	NE	9	4			10						Physical Cabinet.
Nikolaiev			29.64	752.8	42.3	5.7	76	W	27	12			4						Kurdakof.
Kertch			29.87	758.7	56.5	13.6	55	SW	40	18			6						Lagorio.
Moscow																			Meteorological Obs.
Lugan			29.88	758.9	38.7	3.7	83	SSE	4	2			7						Meteorological Obs.
Archangel			29.84	758.0	50.5	10.3	61	SSE	18	8			6						Ogorodnikof.
Tiflis			29.98	761.6	32.0	0.0	63	SE	9	4			9						Physical Observatory.
Astrakhan	28.73	729.8	30.11	764.9	68.0	20.0	30	S	9	4			0						Sebastianof.
Kasan			30.39	771.8	51.4	10.8	49	SE	22	10			0						Physical Cabinet.
Orenburg			30.21	767.4	39.6	4.2	68	S	7	3			8						Tschernischef.
Ekaterinburg																			Meteorological Obs.
Nukuss	29.23	742.4	30.25	768.3	45.3	7.4	64	WNW	4	2			8						
Kasaly			30.26	768.5	54.3	12.4	28	N	9	4			0						Bobrof.
Tashkend																			Michelson.
Bajnaul	28.54	724.9	30.26	768.7	49.3	9.6	80	NNE	4	2			10						Meteorological Obs.
Yeniseisk			30.02	762.4	26.8	− 2.9	81	SW	9	4			10						Marks.
Irkutsk			29.61	752.2	34.2	1.2	79	WSW	2	1			10						Usolzef.
Oorga																			Mossin.
Peking, (China)																			Physical Observatory.
Nertchinsk			29.87	758.8	46.9	8.3	37	Calm	0	0			0						Meteorological Obs.
Vladivostock	27.37	695.2	29.58	751.2	6.1	−14.4	76	Calm	0	0			0						
Nikolaievsk, on the Amoor			29.72	754.9	28.6	− 1.9	84	Calm	0	0			0						
					28.2	− 2.1	94	E	16	7			10					Snowing	

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 396.4? m., or 1,305.2? ft.; Tashkend, m. 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. 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.
Madrid			29.67	753.6	55.6	13.1	30	SW	29.1	13.00		3	0	SW		0	0	Light clouds	Royal Observatory.
San Fernando			29.81	757.2	62.4	16.9	62	WSW	8.1	3.6		0	7		WSW	0	0		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. 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.
Haparanda			29.93	760.2	17.6	− 8.0	88	SE			2		0			0	0		
Umea			29.82	757.4	30.7	− 0.7	94	ESE			2		1			0	0		
Hernosand			29.77	756.2	35.6	2.0	96	Calm			0		2			0	0		
Stockholm			29.59	751.6	30.2	− 1.0	76	NNE			4		10			0.063	1.6	Snowing	
Wisby			29.54	750.4	33.8	1.0	92	E			4		10			0.102	2.6	Snowing	
Sub-Series.																			
Upsala			29.65	753.1	30.9	− 0.6	72	N	19.7	8.8			9	ENE		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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.22	716.7	29.73	755.1	27.7	— 2.4	99	ENE			1		10			0	0	Snowing	The Observatory.
Zurich	28.02	711.7	29.73	755.2	32.4	0.2	89	E			2		10			0	0	Snowing	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —7.7 mm.; Thermometer, —11.0 cent.; Relative Humidity, +39 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.03	762.7	55.9	13.3	61	SSE	9	4.0			5		SW	0	0		
Fao, (Persian Gulf)			30.14	765.6	75.2	24.0		S			8		10						
Salonica			30.05	763.2	61.7	16.5		S			2		5						
Valona			29.95	761.8	54.3	12.4		S			3		5			Blank	Blank		
Varna			29.92	760.0	62.6	17.0		N			2		0			Blank	Blank		
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.96	761.0	74.7	23.7	52	NE			1		0			0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.59	751.6	36.8	2.7	98	SE								0	0		Hon. J. Ferguson.
Brockville, Ontario			29.83	757.7	22	— 5.6		NW	8	3.6			8s		W	0.35	8.9	Cloudy	W. R. Bigg.
*Chatham, N. B.			29.66	753.4	37	2.8	90	NE	1	0.4			10ks			0.35	8.9	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			29.80	756.9	35	1.7	96	SE	17	7.6			10n			0.320	8.13	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.65	753.1	25.1	— 3.8	74	E			2		10n			0.25	6.3	Snowing	James Smith, M. A.
Dalhousie, N. B.			29.63	752.6	31.5	— 0.3	99	E			5		10			0.400	10.16	Raining	H. A. Johnson.
Esquimault, B. C.			30.29	769.4	45.3	7.4	92	SW	3	1.3			10			0.09	2.3	Rainy	W. H. Bevis.
Fredericton, N. B.			29.60	751.8	35.8	2.1	90	SE	17	7.6			10n			0.72	18.3		Prof. Harrison.
*Fort Garry, Manitoba			30.08	764.0	6	—14.4	96	W	8	3.6		0	2s		W	0	0	Fair	James Stewart.
Goderich, Ontario			30.16	766.1	15.8	— 9.0	80	Calm			0					0.40	10.2	Fine	H. J. Strang, M. A.
Granton, Ontario			30.12	765.0	13.4	—10.3		W			2	2ck	0	E		0	0	Fair	James Grant.
*Halifax, N. S.			29.75	755.6	36	2.2	95	SE	2	0.9			Fog			1.262	32.05	Light rain	F. Allison, M. A.
*Kingston, Ontario			29.85	758.2	20	— 6.7	86	W	21	9.4		8c	0	NW		0.16	4.1	Fair	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			29.57	751.1	27	— 2.8	88	W	18	8.0			10n			0.93	23.6	Light snow	C. H. McLeod, C. E.
*Ottawa, Ontario			29.70	754.4	20	— 6.7	77	W	16	7.2		5k	2n	W	W	0.15	2.8	Clearing	J. B. Haney.
*Parry Sound, Ontario			29.99	761.7	16	— 8.9	83	N	8	3.6		0	0			0.10	2.5	Clear	Rev. R. Mooley.
*Port Dover, Ontario			30.12	765.0	18	— 7.8	83	W	19	8.5		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.			29.96	761.0	19.0	— 7.2		SE	25	11.2						Blank	Blank	Stormy	Peter Grant.
*Port Stanley Ontario			30.12	765.0	16	— 8.9	83	NW	17	7.6		0	0			0.02	0.5	Clear	M. Payne.
*Quebec, Quebec			29.52	749.8	20	— 6.7	92	NE	5	2.2			10n		NE	1.20	30.5	Light snow	Capt. Ash, R. N.
St. John, N. B.			29.68	753.9	36.0	2.2	100	S	13	5.8			10n			0.160	4.06		G. Murdoch, C. E.
*Saugeen, Ontario			30.02	762.5	20	— 6.7	85	NW	14	6.3		2k	0			0.11	2.8	Clear	K. Stewart.
Stayner, Ontario			29.99	761.7	19	— 7.2	63	NW	11	4.9		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario			30.10	764.5	15.0	— 9.4	93	W	11	4.9		3cs		NW		0.15	3.8	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			30.08	764.0	30	— 1.1	92	SE	24	10.7			10n		NE	0.02	0.5	Light rain	T. C. Hill.
*Toronto, Ontario			30.01	762.2	23	— 5.0	72	W	13	5.8		2cs	0	NW		0.05	1.3	Clear	Magnetic Observatory
Woodstock, Ontario			30.12	765.0	15.0	— 9.4	88	NW			1	0	0			0	0	Fine	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed. give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	27	— 2.8	88	W	8	3.6			10s		NW	0.32	8.1	Cloudy	
Alpena, Mich			30.09	764.3	14	—10.0	63	NW	7	3.1		8ck	0	NW		0.03	0.8	Fair	
Atlantic City, N. J			30.02	762.5	30	— 1.1	78	W	16	7.2		0	0			0	0	Clear	
Augusta, Ga.			30.36	771.1	26	— 3.3	63	NW	3	1.3		2c	0			0	0	Clear	
Baltimore, Md			30.10	764.5	30	— 1.1	67	NW	12	5.4		5ck	Sm'e	NW		0	0	Fair	
Barnegat, N. J			29.99	761.7	30	— 1.1	59	W	19	8.5		0	0			Inap.	Inap.	Clear	
Benton, Montana	27.36	694.9	30.16	766.1	28	— 2.2	67	SW	4	1.8		0	0			0	0	Clear	
Bismarck, Dakota	28.39	721.1	30.17	766.3	15	— 9.4	46	NW	3	1.3		5k	0	NW		0	0	Fair	
Boston, Mass			29.65	753.1	27	— 2.8	77	SW	21	9.4			10n		SW	1.55	39.4	Light snow	
Breckenridge, Minn			30.26	768.6	3	—16.1	73	W	2	0.9		2c	0			0	0	Clear, frost	
Buffalo, N. Y			30.00	762.0	21	— 6.1	85	W	20	8.9		2k	2s	NW	NW	0.01	0.3	Clearing	
Burlington, Vt			29.63	752.6	30	— 1.1	87	SW	2	0.9			10n			0.33	8.4	Light snow	
Cairo, Ill			30.41	772.4	25	— 3.9	63	Calm	0	0			10s			0	0	Cloudy	
Cape Hatteras, N. C			30.16	766.1	34	1.1	44	NW	14	6.3		0	0			0	0	Clear	
Cape Henry, Va			30.20	767.1	34	1.1	62	NW	20	8.9		0	0			0	0	Clear	
Cape May, N. J			30.06	763.5	30	— 1.1	59	NW	24	10.7		0	Haze			0	0	Clear	
Charleston, S. C			30.34	770.6	33	0.6	50	N	6	2.7		0	0			0	0	Clear	
Cheyenne, Wyoming	23.91	607.3	29.85	758.2	27	— 2.8	100	N	16	7.2			10n			0.07	1.8	Light snow	
Chicago, Ill			30.26	768.6	21	— 6.1	85	SW	5	2.2		0	0			0	0	Clear	
Cincinnati, Ohio			30.33	770.4	19.5	— 6.9	77	SW	4	1.8		Haze	Sm'e			0	0	Clear	
Cleveland, Ohio			30.21	767.3	19.5	— 6.9	85	W	12	5.4		0	2ks		NW	Inap.	Inap.	Clear	
Colorado Springs, Col	23.93	607.8	29.85	756.9	33	0.6	69	N	12	5.4			10ks		SW	0	0	Cloudy	
Corsicana, Tex			30.16	766.1	41	5.0	75	SE	7	3.1			10s		S	0	0	Cloudy	
Davenport, Iowa			30.31	769.9	21	— 6.1	85	W	4	1.8		0	0			0	0	Clear	
Denison, Tex			30.16	766.1	44	— 6.7	67	SE	6	2.7			10s			0	0	Cloudy	
Denver, Col.	24.71	627.6	29.93	760.2	32	0.0	79	N	8	3.6			10n			0.02	0.5	Light snow	
Detroit, Mich			30.18	766.6	18	— 7.8	84	W	7	3.1		0	Haze			0	0	Clear	
Dodge City, Kan	27.32	694.0	29.36	755.4	35	1.7	80	E	16	7.2			10s			0	0	Cloudy	
Dubuque, Iowa			30.28	769.1	18	— 7.8	68	SW	4	1.8		8k	0	W		0	0	Cloudy	
Duluth, Minn			30.16	766.1	11	—11.7	60	SW	8	3.6		0	0			0	0	Clear	
Eastport, Me			29.55	750.6	36	2.2	90	S	14	6.3		5c	Sm'e	SW		2.79	70.9	Fair	
Erie, Pa			30.09	764.3	19	— 7.2	84	W	16	7.2		3cs	0	NW		0.02	0.5	Fair	
Escanaba, Mich			30.11	764.8	13	— 0.6	80	SW	1	0.4			10s		SW	0	0	Cloudy	
Fort Gibson, Indian Terr			30.19	766.8	38	3.3	46	SE	6	2.7		10cs	0	W		0	0	Cloudy	
Ft. St. Michaels, Alaska			29.40	746.7	18	— 7.8		N	14	6.3			10s			Blank	Blank	Cloudy	
Fort Sill, Indian T	28.78	731.0	29.92	760.0	40	4.4	71	S	28	12.5			10s		S	0	0	Cloudy	
Fort Sully, Dakota	28.46	722.9	30.25	768.3	21	— 6.1	85	Calm	0	0			10s			Inap.	Inap.	Cloudy	
Galveston, Tex			30.17	766.3	56	13.3	68	E	9	4.0			10s		E	0	0	Cloudy	
Grand Haven, Mich			30.16	766.1	27	— 2.8	77	W	24	10.7		0	8s		NW	0.01	0.3	Cloudy	
Indianapolis, Ind			30.32	770.1	20	— 6.7	85	SW	3	1.3		0	Haze			Inap.	Inap.	Clear	
Indianola, Tex			30.10	764.5	61	16.1	77	SE	12	5.4			10s		S	0	0	Cloudy	
Jacksonville, Fla			30.33	770.4	36	2.2	45	Calm	0	0		0	0			0	0	Clear	
Keokuk, Iowa			30.28	769.1	26	— 3.3	77	Calm	0	0		8c	0			0	0	Fair	
Key West, Fla			30.23	767.8	59.8	15.4	59	N	18	8.0		0	1s			0	0	Clear	
Kittyhawk, N. C			30.23	767.8	31	— 0.6	79	NW	16	7.2		0	0			0.01	0.3	Clear	
Knoxville, Tenn			30.15	765.4	16	— 8.9	83	Calm	0	0		0	Fog			Inap.	Inap.	Fair	
La Crosse, Wis			30.24	768.1	29	— 6.1	56	SW	5	2.2		0	2s			0	0	Fair	
Leavenworth, Kan			30.24	768.1	28	— 2.2	67	SE	6	2.7			10s			0	0	Cloudy	
Lexington, Ky	29.22	742.2	30.45	773.4	14	—10.0	63	W	4	1.8		0	0			0	0	Clear	
Long Branch, N. J			29.94	760.5	31	— 0.6	60	W	21	9.4		0	0			0.03	0.8	Clear	
Louisville, Ky			30.39	771.9	20	— 6.7	70	SW	8	3.6		2c	0	W		0	0	Clear	
Lynchburg, Va			30.24	768.1	28	— 2.2	61	W	3	1.3		0	0			0	0	Clear	
Malone, N. Y			29.64	752.8	24	— 4.4	87	W	14	6.3			10n		W	0.66	16.8	Heavy snow	
Manhattan, Kan	29.93	757.3	30.25	768.3	27	— 2.8	88	NE	4	1.8			10s			0	0	Cloudy	
Marquette, Mich			30.07	763.8	21	— 6.1	85	W	12	5.4			8ks		W	0	0	Cloudy	
Memphis, Tenn			30.40	772.1	26	— 3.3	64	Calm	0	0			10s		W	0	0	Cloudy	
Milwaukee, Wis			30.23	767.8	17	— 8.3	84	W	15	6.7			10ks		W	0	0	Cloudy	
Mobile, Ala			30.38	771.6	33	0.6	61	NE	8	3.6		0	0			0	0	Clear	
Montgomery, Ala			30.41	772.2	29.5	— 1.4	59	NE	6	2.7		5c	Sm'e	W		0	0	Fair	
Morgantown, W. Va			30.25	768.3	26	— 3.3	76	SW	15	6.7			10n		SW	0.02	0.5	Light snow	
Mt. Washington, N. H	23.09	586.5	29.15	748.0	7	—13.9	100	NW	18	8.0			10n		NW	0.67	17.0	Light snow	
Nashville, Tenn			30.42	772.7	17	— 8.3	83	Calm	0	0			10s			0	0	Cloudy	
New Haven, Conn			29.82	757.4	32	0.0	60	NW	21	8.9		0	0			0.25	6.3	Clear	
New London, Conn			29.81	757.2	28	— 2.2	61	W	14	6.3		2k	0	NW		0.27	6.9	Clear	
New Orleans, La			30.12	770.1	42	5.6	62	E	8	3.6		8cs	0	W		0	0	Fair	
Newport, R. I			29.77	756.1	28	— 2.2	65	W	24	10.7		2ck	0	W		0.44	11.2	Fair	
New York, N. Y			29.92	760.0	27	— 2.8	56	W	18	8.0		0	0			0.07	1.8	Clear	
Norfolk, Va			30.22	767.6	31	— 0.6	58	W	9	4.0		0	Haze			0	0	Clear	
North Platte, Neb	27.08	687.8	29.73	755.1	32	0.0	100	NE	2	0.9			10s			0.01	0.3	Cloudy	
Omaha, Neb.	29.07	737.6	30.20	767.1	28	— 2.2	77	Calm	0	0		Haze	0			0	0	Hazy	
Oswego, N. Y			29.87	758.7	25.5	— 3.6	83	NW	20	8.9			10n			Inap.	Inap.	Light snow	
Pembina, Dakota			30.15	765.8	— 2	—18.9	84	Calm	0	0		0	0			0	0	Clear	
Philadelphia, Penn			30.02	762.5	29	— 1.7	67	W	13	5.8		1ck	0	W		0	0	Clear	
Pike's Peak, Colorado	17.50	444.5	29.71	754.6	10	—12.2	100	W	4	1.8			Fog			0.06	1.5	Foggy	
Pittsburgh, Penn			30.20	767.1	23	— 5.0	60	NW	16	7.2		8k	0	NW		Inap.	Inap.	Fair	
Port Huron, Mich			30.15	765.8	15	— 9.4	65	W	9	4.0		0	1s			0.12	3.0	Clear	
Portland, Me			29.50	749.3	32	0.0	90	SW	6	2.7			10n			0.54	13.7	Light snow	
Portland, Oregon			30.42	772.7	41	6.7	92	Calm	0	0			10s			0	0	Cloudy	
Punta Rassa, Fla			30.28	769.1	46.6	8.1	57	NE	12	5.4		0	Haze			0	0	Clear	
Rochester, N. Y			29.92	760.0	23	— 5.0	86	W	16	7.2			10n			0.05	1.3	Light snow	
Salt Lake City, Utah	25.50	647.7	29.83	757.7	42	5.6	83	Calm	0	0			10n			0.18	4.6	Light rain	
Sandy Hook, N. J			29.91	759.7	29	— 1.7	59	NW	40	17.9		2c	0	NW		0.07	1.8	Clear	
San Diego, Cal.			29.79	756.7	55	12.8	87	E	4	1.8			10s		E	0.01	0.3	Cloudy	
San Francisco, Cal			29.92	760.0	60	15.6	44	NW	24	10.7		0	0			0	0	Clear	
Santa Fe, N. M	23.06	585.7	29.60	751.8	32	0.0	79	NE	4	1.8		0	1s			0	0	Clear	
Savannah, Ga.			30.35	770.9	34	1.1	61	N	5	2.2		0	0			0	0	Clear	
Shreveport, La			30.08	764.0	51	10.6	76	SE	2	0.9		10k	0	SW		0	0	Cloudy	
Smithville, N. C			30.30	769.6	30	— 1.1	79	N	6	2.7		0	0			0	0	Clear	
Springfield, Mass			29.76	755.9	31	— 0.6	68	SW	12	5.4		1k	8s	W		0.45	11.4	Cloudy	
St. Louis, Mo			30.35	770.9	27	— 2.8	77	S	4	1.8			10s			0	0	Cloudy	
St. Marks, Fla			30.34	770.6	33	0.6	69	N	10	4.5		0	0			0	0	Clear	
St. Paul, Minn			30.19	766.8	14.5	— 9.7	81	SW	3	1.3		2ck	0	W		0	0	Fair	
St. Paul's Island, Alaska			29.68	753.9	10	—12.2	79	NNW	24	10.7		1c	2k			0.18	4.6		
Thatcher's Island, Mass			29.93	760.2	28	— 2.2	67	W	35	15.6			10s		W	1.5	38.1	Cloudy	
Toledo, Ohio			30.19	766.8	26	— 3.3	76	SW	7	3.1		0	0			0	0	Clear	
Tucson, Arizona	27.31	694.4	29.93	760.2	52	11.1		SE				0	0			0	0	Clear	
Tybee Island, Ga			30.32	770.1	33	0.6	69	N	6	2.7		0	Sm'e			0	0	Clear	
Vicksburg, Miss			30.40	772.1	31	— 0.6	64	E	7	3.1		2cs	5ck		W	0	0	Fair	
Virginia City	24.27	616.4	29.75	755.6	23	— 5.0	73	SE	4	1.8		1c	0			0.03	0.8	Clear	
Washington, D. C			30.15	765.8	29	— 1.7	63	W	12	5.4		0	8s		NW	0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.30	769.6	30	— 1.1	48	NW	11	4.9		0	0			0	0	Clear	
Wood's Holl, Mass			29.75	755.6	33	0.6	69	W	16	7.2		5k	0	W		0.49	12.4	Fair	
Wytheville, Va	27.78	705.6	30.12	765.0	16	— 8.9	67	NW	8	3.6		2k	0	NW		0	0	Fair	
Yankton, Dakota	28.90	737.0	30.28	769.1	22	— 5.6	86	NE	1	0.4			10n			0.01	0.3	Light snow.	
Yuma, Arizona			29.74	755.4	56	13.3		S				0	2ks		S	0	0	Fair	
Sub-Series.																			
Bridgetown, B'b'dos, W. I			30.02	762.5	80	26.7	78	NE	5	2.2		2c	2s	W	E	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.00	762.0	78	25.6	69	E				5k	2k			0.04	1.0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.26	768.6	76	24.4	72	E	4	1.8		8ck	4kn	E		0	0	Clearing	W. S. Cameron.
Kingston, Jamaica, W. I			30.19	766.8	75	23.9	72	Calm	0	0		2c	2s	SE	SE	0	0		James Gall.
Santiago de Cuba, W. I			29.85	758.2	75	23.9	76	N	9.6	4.3			8n		N	Inap	Inap.	Showery	Robert Mason.
Havana, Cuba, W. I			30.19	766.8	67	19.4	60	N	4.8	2.1		5k	5n	NE		0	0	Cloudy	Charles Hasselbrink.
St. Georges, Bermudas			29.98	761.5	64.0	17.8	97	SW	10.0	4.5			10n		SW	0.50	12.7	Raining	C. F. Allen.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Navassa, W. I																			
Clifton, Jamaica, W. I	27.21	691.1	30.03	762.7	59	15.0	81	Calm	0	0		5c	0	E		0.06	1.5	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A			30.01	762.2	80	26.7	82	NE			3		5k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.03	762.7	84.2	29										0	0		Dr. H. Groot.
Medellin, Colombia, S. A	25.21	640.3			63.2	17.3	81		0	0		1c	2s			0.34	8.6	Fair	Thomas Herran.
St. Johns, Newfoundland			30.52	775.2	32.0	0.0		NE					10n			0.18	4.6	Cl'dy & misty	John Delaney.
York Factory, B. A			29.97	761.2	1	—17.2	86	NW	5	2.2			10s			0.18	4.6		J. Fortescue.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

Note.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,263.8 ft., or 1,3[illegible]1.1 m.; Santa Fé, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used incorrecting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 23, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.74	755.3	64.4	18.0	53	N			1		1			0	0	Clear	Charnot.
Algiers			29.73	755.1	63.7	17.6	59	NW			3		0			0	0	Clear	Peter.
La Calle																			Kunts.
Tunis			29.80	757.0	68.0	20.0	55	SE			4		5			0	0	Fair	Jacques.
Sfax			29.85	758.2	62.6	17.0	80	SE			4		6			0	0	Fair	Chauvey.
Safda			29.81	757.1	70.2	21.2		N			2		2			Inap.	Inap.	Clear	Millot.
Tebessa			29.81	757.1	67.3	19.6		N			2		3			0	0	Fair	Colin.
Geriville			29.87	758.7	63.1	17.3	44	WSW			2		2			0	0	Clear	Buard.
Laghouat			29.94	760.5	73.4	23.0	58	NW			2		0			0	0	Clear	Guyot.
Biskra			29.93	760.1	73.0	22.8	15	Calm			0		0			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.84	758.0	53.2	11.8	47	SW			4		10			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.84	757.8	37.8	3.2	89	W			1		10			0.016	0.4		I. R. Observatory.
Eperies			29.80	756.9	42.3	5.7	77	S			1		10		NE	0	0		Julius Mikolik.
Gratz	28.58	725.8	29.78	756.5	47.1	8.4	57	SW			2		5			0	0		Andreas Rospini.
Hermannstadt	28.48	723.5	29.91	759.6	53.8	12.1	38	SSW			1		5			0	0		Prof. Reissenberger.
Kremsmünster	28.45	722.6	29.82	757.3	40.3	4.6	74	E			3		8			0	0		Prof. C. Wagner.
Lemberg			29.76	756.0	43.0	6.1	81	SW			3		7			0.256	6.5		Dr. T. Stanecki.
Nyiregyhaza			29.87	758.6	49.3	9.6	66	W			5		10			Inap.	Inap.		Habsuda Daniel.
Pola			29.89	759.3	52.0	11.1	70	SSE			4		10s			0	0		I.R. Hydrographic Of'ce
Szegedin			29.89	759.0	56.1	13.4	52	S			3		6			0	0		Karl Stancel.
Trieste			29.92	759.9	45.9	7.7	98	Calm			0		10			2.012	51.1	Rain and fog	Prof. V. Farolfi.
Vienna			29.82	757.3	39.7	4.3	53	ENE			1		9			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.87	758.7	37.9	3.3	65	NW			0		1			0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.70	754.4	44.5	6.9		W	14	6.3			5			0.015	0.38	Blue sky	William Boswell.
Ardrossan			29.82	757.4	45.0	7.2		NW			4		7					*D. clouds	J. Mayes.
Armagh Observatory			29.90	759.4	45.3	7.4		WSW	15	6.7			7					*D. clouds	S. Call, for Dr. Robinson
Bidston, Liverpool Obs.			29.89	759.2	43.6	6.4		W	28	12.5			7					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			29.98	761.5	46.6	7.1		WSW			1-3		9					*D. clouds	J. Dreyer.
Bradford			29.82	757.4	44.1	6.7		W			2		3			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			29.91	759.7	81.0	27.2		NE			2		4					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			29.87	758.7	48.0	8.9		NW			1		10					Hazy	H. Todd.
Cardington			29.88	758.9	46.0	7.8		NW			1		6					*D. clouds	John McLaren.
Carlisle			29.82	757.4	41.7	5.4		W			1		10			0	0	Showery	Bell, for J. Cartmell.
Chatham, School M. E.			29.88	758.9	45.2	7.3		NE			1							Blue sky	Capt. J. Fellowes, R. E.
Dartmoor	28.25	717.5	29.79	756.7	37.0	2.8		N			1		5					*D. clouds	R. E. Power.
Donaghadee			29.86	758.4	45	7.2		WNW			4		8					*D. clouds	J. Mac Gowan.
Dover			29.88	758.9	42	5.6		W			3		0					Clear	J. Costello.
Eccles, (near Manchester)			29.87	758.7	43.7	6.5		NW	1.4	0.6			10					Gloomy	Thomas Mackereth.
Falmouth Observatory			30.00	762.0	42.8	5.8		N	19	8.5			6					Overcast	The Staff.
Fort Napier, (Natal)	27.73	704.3	29.97	761.2	76.8	24.9		E			1		3					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.84	757.9	93.0	33.9		N			1		5					*D. clouds	
Galway, Queen's College			30.02	762.5	50	10.0		SE			2		8					Gloomy	B. G. Clare, for Prof. Cu[illegible]tis.
Gibraltar, (Mediterranean)			29.77	756.1	55.0	12.8		W			6		10					Raining	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.76	755.9	44.0	6.7		W			2		10					Overcast	Lewis Stuart.
Great Yarmouth			29.83	757.7	43	6.1		WNW			2		4					Hazy	G. T. Watson.
Greenwich Royal Obs.			29.90	759.4	43.7	6.5		N			1		2			Blank	Blank	Hazy	The Staff for G. B. Airy.
Guernsey			29.95	760.7	41.5	5.3		NNW			3		3					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.88	758.9	40.7	4.8		WNW			2		7					*D. clouds	L. J. Crossley.
Helston			29.96	761.0	46	7.8		N			4		6k			0	0	Fair	M. P. Moyle.
Holyhead			29.90	759.4	45	7.2		W			3		4					*D. clouds	John Tilston.
Kew Observatory			29.91	759.7	43.3	6.3		WNW	9	4.0			6					*D. clouds	The Staff.
Kingstown			29.96	761.0	43	6.1		WNW			4		5					*D. clouds	George Mitchell
Leicester Museum			29.90	759.4	44.0	6.7		N			2		9					Hazy	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.91	759.7	59.8	15.4		NE			2		8k						Fred Travis, Pvt A.H.C.
Nairn			29.68	753.9	47	8.3		W			1		8					¾ clouded	W. D. Penny.
Nassau, (Bahamas)			30.18	766.6	69.4	20.8		N			5		7					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.88	758.9	43.8	6.6		WNW			1		10k,d		WNW	0	0	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.90	759.4	42.0	5.6		NW			2		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.89	759.2	43	6.1		NW			1		8					Overcast	J. Lucas.
Plymouth			29.97	761.2	44.3	6.8		NNE			2		7					*D. clouds	John Merrifield.
Roche's Point			30.04	763.0	43	6.1		NNW			3		2					¼ clouded	W. Kennedy.
Saint Ann's Head			29.99	761.7	44	6.7		NNW			2		5						John C. Walker.
Saint Helier, (Jersey)			29.91	759.7	43.0	6.1		NE			3		8					¾ clouded	A. P. Amy.
Sandwick Manse (Orkneys)			29.57	751.2	43.2	6.2		W	19	8.5			10					Misty	Rev. Dr. Clouston.
Scarborough			29.79	756.7	45.8	7.7		WNW			2		4					Hazy	F. Shaw.
Scutari Cemetery (Turkey)			30.01	762.2	60.0	15.6		N			2		8					Hazy	Sergt. W. H. Lyne.
Sheffield			29.83	757.7	45.0	7.2		NW			3		7			Blank	Blank	*D. clouds	W. F. Cooper.
Silloth Rectory			29.82	757.4	45.3	7.4	76	W			3		5			0.116	2.94	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			29.46	748.3	42.2	5.7		W			3		9					Threatening	S. J. Perry.
Stornoway, Lews C. (Heb.)			29.64	752.8	43	6.1		SW			1		10					Raining	John Smith.
Strathfield Turgiss			29.95	760.7	42.8	6.0		N			1		3					*D. clouds	Rev Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.57	751.1	45	7.2		WSW			3		10					Gloomy	John Trotter.
Truro, Royal Institution			29.99	761.7	46	7.8		N			6		7					*D. clouds	W. Newcombe.
Valencia Observatory			30.06	763.5	45.6	7.6		W	13	5.8			5					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					40	4.4		W			4		10			0	0		The Staff, for E. J. Stone.
Cape Good Hope Obs.			29.81	757.2	84.6	29.2	40	SE	13	5.8			0						
Leith, Restalrig Park			29.76	755.9	46.5	8.1		W			3		9ck			0	0	Fine, cloudy	Andrew Gibb.
Mauritius			29.93	760.2					16.1	7.2						0.63?	16.5?		
Monach Lt-house, Hebrides																			J. Youngclause.
North Unst, (Shetland Is.)			29.60	751.8	40	4.4		SE			3		10			Blank	Blank		

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.56	750.7	37.2	2.9	51	W			2		8						
Faröe			29.56	750.9	39.4	4.1	88	W			4		6						
Godthaab, (Greenland)			30.21	767.4	25.7	— 3.5	76	Calm			0		10						
Stykkisholm, (Iceland)			30.23	767.7	30.4	— 0.9	96	NE			6		0						
Thorshavn, (Faröe)			29.41	747.7	45.9	7.7	73	W			2		7						
Vestervig			29.53	750.1	35.6	2.0	93	E			2		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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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			29.89	759.2	41.0	5	77	NE			2		5nk		NE	0	0	Cloudy	Normal School.
Amiens			29.82	757.3	38.1	3.4	81	NW			3		0			0	0	Clear	Normal School.
Avignon			29.71	754.6	58.1	14.5	55	SE			2		5		SE	0	0	Cloudy	Normal School.
Bar-sur-Seine			29.84	757.9	40.8	4.9	62	NE			2		8		ENE	0.043	1.1	Very cloudy	C. Saillard.
Beaumette, (near Angers)			29.78	756.4	41.5	5.3	54	ENE	28.2	12.6					SW	0	0		Beaumette Observatory
Beauvais			29.91	759.6	39.0	3.9	53	ENE			2		2		NE	0	0	Slightly cl'dy	Normal School.
Besançon			29.81	757.2	39.6	4.2	87	NE			2		10		SW	0.441	11.2	Covered	Normal School.
Bourg en Bresse			29.82	757.5	34.7	1.5	93	N			2		10					Snowing	Normal School.
Bourges			29.88	759.0	35.6	2	78	NE			2		5		NE	0	0	Cloudy	Normal School.
Brest			29.87	758.8	40.1	4.5	67	NNE			4		10n		NNE	0.010	0.25		Naval Observatory.
Caen																			Normal School.
Chartres			29.73	755.1	42.6	5.9		NNE			3		3		W	0	0		Normal School.
Chaumont																			Normal School.
Clermont			29.74	755.5	35.2	1.8	96	W			1		10		NW	0.130	3.3		Puy de Dome, Obs.
Commercy			29.89	759.3	37.0	2.8	95	ENE			2		2k		ENE	0	0	Slightly cl'dy	Normal School.
Commune de Gréasque*			29.75	755.6	54.3	12.4	63	E			4		8		E	1.721	43.7		
Grenoble			29.78	756.5	41.5	5.3	93	NNW			2		10		S	0.118	3.0	Covered	Normal School.
Le Mans			29.87	758.6	39.2	4	80	E			4		8		E	0.028	0.7	Very cloudy	Normal School.
Loches			29.55	750.6	37.4	3	62	E			2		10			0.04	1.	Covered	Normal School.
Lons-Le-Saulnier			29.80	756.9	37.6	3.1	93	NE			2		10			0.811	20.60	Snowing	Normal School.
Mâcon			29.77	756.2	37.2	2.9	99	Calm			0		10			0.453	11.5	Covered	Normal School.
Mirecourt																			Normal School.
Metz			29.90	759.5	37.9	3.3	66	NE			2		2		NE	0	0		M. Schuster.
Nismes			29.98	761.4	55.6	13.1	62	N			2		10		N	0	0	Covered	Normal School.
Orleans			29.76	755.8	40.3	4.6	71	E			4		5		E	0	0	Cloudy	Normal School.
Paris Observatory			29.87	758.6	40.6	4.8	42	ENE			2		2		E	Inap.	Inap.	Slightly cl'dy	National Observatory.
Parthenay			29.76	755.8	34.9	1.6	89	NE			4		10			0.08	2.	Covered	Normal School.
Privas			29.87	758.7	38.5	3.6		S			2		10		S	0.12	3.	Covered	Normal School.
La Roche-sur-Yon			30.19	766.7	40.3	4.6	100	NE			6		5		SE	0	0	Cloudy	Normal School.
Rochefort, Observatory			29.72	755.0	35.1	1.7	92	ENE			5		10		SW	0.157	4.0	Snowing	Naval Observatory.
Rouen			29.88	759.0	45.9	7.7	61	NE			3		2		N	0	0	Slightly cl'dy	Normal School.
Saint Lo			29.93	760.2	41.9	5.5	63	E			2		5		E	0	0		Normal School.
Tarbes			29.59*	751.6	55.4	13	33	N			2		0			0	0	Clear	Normal School.
Toulouse																			Normal School
Villefranche			29.78	756.3	37.4	3	94	NNE			1		10			0.12	3.	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.82	757.3	73.8	23.2	90	NE			2		2k						L'Abbé Marchésl.
Gorée																			
Marseilles			29.69	754.0	56.1	13.4	57	SE			4		8			0.157	4.00	Covered	Marseilles Observatory.
Mont-Louis	24.24	620.3	29.73	755.2	40.8	4.9	68	SW	18.6	8.33			6		SW	0	0		—. Falguères.
Montsouris, Paris			29.85	758.3	42.8	6.0	55	NE			2		5		NNE	0.004	0.1		Montsouris Observ'tory.
Perpignan			29.60	751.9	52.5	11.4	66	N	1.9	0.83			7		W	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P†																			M. Baylac.
Pic du Midi, (Plantade)	22.03	559.6			28.4	- 2.0		W			3		6					Cloudy	General de Nansouty.
Saint Maur, (near Paris)			29.86	758.5	43.3	6.3	59	NE			2		1k			0	0	Clear	E. Renou.
Toulouse			29.61	752.2	57.7	14.3	64	SE			1		8			0.209	5.3		Toulouse Observatory.
Tours			29.85	758.3	39.2	4.0	65	NNE			3		10		E	0	0		C. Marquet.
Versailles, (near Paris)			29.86	758.4	41.2	5.1	51	E			3		3			0.007	0.19	Fair	Dr. A. Bérigny.
Zi-Ka Wei, (near Shanghai)																			H. Le Lee, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7., 8. or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,580.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Near Marseilles. † Summit inaccessible.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Bamberg			29.71	754.7	38.8	3.8	61	N			2		2			0	0		Prof. T. Hoh.
Berlin			29.74	755.3	41.5	5.3	62	S			1		9			0.091	2.3		Prof. Arndt.
Breslau			29.85	758.2	35.4	1.9	65	W			8		9			0	0		Dr. P. Neugebauer.
Karlsruhe			29.84	757.8	42.6	5.9	53	SE			1		5			0	0		A. Senz.
Cassel			29.73	755.1	45.5	7.5	44	SSE			4		0			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe
Emden																			Prof. Prestel.
Frankfort on the Main			29.91	759.6	41.0	5.0	42	NE			1		0			0	0		Physical Society.
Friedrichshafen	28.39	721.0	29.86	758.5	38.1	3.4	73	NW			2		10			0.520	13.2	Rain & snow	M. Wilhelm.
Hamburg			29.68	753.8	37.9	3.3	83	WSW			4		10			0.012	0.3		Deutsche Seewarte.
Kiel			29.65	753.0	37.0	2.8	87	SW			3		10			0.209	5.3		Prof. G. Karsten.
Königsberg			29.60	751.8	34.9	1.6	81	SW			2		5			0.043	1.1	Snowing	Prof. E. Luther.
Köslin			29.64	752.9	34.0	1.1		W			2		10			0.209	5.3		H. Müller.
Leipsic			29.83	757.7	38.7	3.7	54	WSW			3		2	WSW		0	0		Prof. Bruhns.
Memel			29.44	747.7	36.0	2.2	72	Calm			0		4	W		0.043	1.1		Reinbrecht & Skalweit.
Münster			29.81	757.2	42.1	5.6	67	NW			2		5			0	0		Prof. E. Heis.
Neufahrwasser			29.57	751.0	36.1	2.3	79	WSW			3		8			0.051	1.3		A. Lothes.
Posen			29.79	756.7	37.0	2.8	74	W			7		2			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.87	758.6	40.8	4.9	66	Calm			0		9			0	0		Dr. Schur.
Stuttgart			29.85	758.3	38.8	3.8	65	E			1		8			0.028	0.7		Prof. Schoder.
Thorn			29.69	754.0	35.2	1.8	82	SW			0		9			0.508	12.9	Snowing	Dr. Hasenbalg.
Treves, (Trier)			29.80	756.9	41.0	5.0	29	NE			4		0			0	0		Prof. Fiesch.
Wustrow, Naval School			29.59	751.5	34.0	1.1	95	SW			3		10			*0.409	*10.4		E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.
*Amount of precipitation on the 22d, 23d and 24th.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.89	759.3	42.3	5.7	89	E	0.7	0.3			10			0.236	6.0	Raining	
Padua			29.89	759.1	41.7	5.4	89	NNE	7.4	3.3			10			0.449	11.4	Light rain	
Vicenza			29.86	758.4	42.4	5.8	86	N	1.8	0.8			10	E		0.079	2.0	Light rain	
Verona			29.89	759.2	46.6	8.1	74	E			2		10			0.177	4.5	Light rain	
Bergamo	28.50	724.0	29.84	757.8	37.4	3.0	89	NW			1		10			0.374	9.5	Snowing	
Domodossola	28.83	732.3	29.87	758.7	41.9	5.5	59	Calm			0		10			0	0		
Milan			29.92	760.0	36.5	2.5	95	Calm			0		10			0.295	7.5		
Pavia			29.92	759.9	38.7	3.7	76	W			1		10			0	0		
Moncalieri			29.91	759.7	38.5	3.6	57	ESE	3.1	1.4			9	NW		0	0		
Mondovi	27.94	709.6	29.88	758.9	38.8	3.8	49	NW			4		8	S		0	0		
Porto Maurizio			29.84	757.8	52.7	11.5		E			4		4	W		0	0		
Genoa			29.83	757.6	48.9	9.4	54	NW	1.3	0.6			6	SE		Blank	Blank		
Piacenza			29.92	759.9	38.7	3.7	80	NW	19.9	8.9			10			Blank	Blank		
Parma			29.91	759.7	42.3	5.7	80	NW			2		10			0.024	0.6	Light rain	
Bologna			29.93	760.2	39.9	4.4	63	NW			6		10			0	0		
Florence			29.88	758.9	54.5	12.5	71	SE			4		10	SW		0	0		
Leghorn			29.84	757.8	57.2	14.0	84	S	18.6	8.3			10			0	0		
Siena	28.63	727.2	29.84	757.9	49.6	9.8	81	SE	4.9	2.2			10	SW		0	0		
Urbino	28.32	719.4	29.89	759.3	49.5	9.7	59	SW			4		10			0	0		
Pesaro																			
Ancona			29.92	759.9	51.8	11.0	51	SE			4		5	SE		0.039	1.0		
Grosseto			29.86	758.5	56.8	13.8	73	SSE			8		9	S		0.154	3.9		
Rome			29.93	760.2	58.6	14.8	52	SSE	15.0	6.7			10	SSW		0	0		
Naples, O. U.			30.00	762.0	59.7	15.4	56	S			1		0			0	0		
Lecce			30.06	763.4	58.5	14.7	50	S	13.7	6.1			2			0	0		
Cosenza			29.99	761.8	57.9	14.4	70	N	0	0			0			0	0		
Riposto, (Sicily)			30.00	762.1	58.8	14.9	75	ESE			2		9			0	0		
Palermo			29.89	759.1	58.8	14.9	63	NE	6.9	3.1			6			0	0		
Caltanissetta	27.99	711.0	29.94	760.5	53.2	11.8	62	E			4		1	W		0	0		
Sub-Series.																			
Naples, S. R.			29.99	761.8	56.8	13.8	56	S	1.3	0.6				W		0	0	Foggy	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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.91	759.8	39.6	4.2		NW			2								
Groningen			29.68	753.8	38.3	3.5		W			4								
Helder			29.76	756.0	40.3	4.6		WSW			4								
Utrecht			29.80	756.8	45.1	7.3	55	WSW			4		2					Light cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.58	751.4	38.5	3.6	57	S	9.2	4.1			5			0	0		
Brönö			29.74	755.3	32.2	0.1	67	E	9	4			1			0	0		
Christiania			29.63	752.5	37.4	3.0	54	ESE	1.6	0.7			6			0.004	0.1		
Tromsö			29.84	757.8	25.2	-3.8	69	NE	2	1			0			0.150	3.8		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.11	764.8	57.7	14.3	80	E	12.7	5.67			6			0.039	1.0		Dr. J. A. N. Sampaio.
Campo Major			29.66	753.4	54.5	12.5	48	SW	15.3	6.84			5	SW		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			29.96	761.0	64.4	18.0	53	SW	4.2	1.88			6	SW		0	0		Capt. D. A. da Cunha.
Lisbon			29.73	755.1	52.3	11.3	66	W	21.0	9.4			5			0.150	3.8		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.75	755.7	34.2	1.2	83	WSW	16	7			10						Astronomical Obs.
Wilna			29.59	751.6	32.9	0.5	90	SW	11	5			10					Snowing	Astronomical Obs.
Dorpat			29.64	752.9	35.4	1.9	69	SW	4	2			10						Physical Cabinet.
St. Petersburg			29.50	749.3	31.6	— 0.2	93	W	11	5			10					Snowing	Central Physical Obs.
Kiopio			29.43	747.5	27.5	— 2.5	100	N	9	4			10					Snowing	Ch. Forsten.
Kieff			29.81	757.1	48.9	9.4	50	SW	16	7			7						Physical Cabinet.
Nikolajev			30.11	764.8	55.0	12.8	44	SW	31	14			4						Kurdakof.
Kertch																			Lagorio.
Moscow			29.95	760.6	39.7	4.3	54	S	13	6			10						Meteorological Obs.
Lugan			30.04	762.9	56.7	13.7	44	E	9	4			0						Meteorological Obs.
Archangel			29.17	740.9	35.6	2.0	89	S	18	8			10						Ogorodnikof.
Tiflis	28.63	727.1	29.99	761.7	69.1	20.6	45	Calm	0	0			1						Physical Observatory.
Astrakhan			30.28	769.0	56.8	13.8	34	S	18	8			2						Sebastianof.
Kasan			30.23	767.9	38.8	3.8	70	S	4	2			10						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	29.24	742.7	30.25	768.4	48.4	9.1	42	SSW	13	6			9						Meteorological Obs.
Nukuss			30.19	766.8	59.9	15.5	29	NE	9	4			8						
Kasaly																			Bobrof.
Tashkend	28.62	727.0	30.34	770.7	51.4	10.8	66	E	4	2			10						Michelson.
Barnaul			30.15	765.8	29.7	— 1.3	80	SW	22	10			3						Meteorological Obs.
Yeniseisk			29.50	749.3	33.3	0.7	86	WNW	2	1			10					Snowing	Marks.
Irkutsk																			Usolzef.
Gorga																			Mossin.
Peking, (China)			29.59	751.6	56.5	13.6	28	SSW	4	2			3						Physical Observatory.
Nertchinsk	27.50	698.4	29.69	754.2	9.1	—12.7	81	Calm	0	0			0						Meteorological Obs.
Vladivostock			29.70	754.4	25.7	— 3.5	95	N	7	3			0			Blank	Blank		
Nikolaievsk, on the Amoor					22.3	— 5.4	96	E	7	3			10					Snowing	

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, m 494.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Gorga, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.63	752.6	48.7	9.3	67	SW	4.5	2.00			10			0.016	0.4	Rainy	Royal Observatory.
San Fernando			29.80	756.8	55.8	13.2	90	WSW	10.1	4.5			10		WSW	0.122	3.1	Raining	The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.70	754.3	27.5	— 2.5	94	N			4		2			0	0		
Umea			29.67	753.6	26.2	— 3.2	78	NNE			4		6			0	0		
Hernosand			29.66	753.3	32.7	0.4	82	NE			2		5			0	0		
Stockholm			29.56	750.8	28.9	— 1.7	68	NE			2		9			0	0		
Wisby			29.58	751.4	33.4	0.8	89	NE			4		10			0.213	5.4	Snowing	
Sub-Series.																			
Upsala			29.60	751.9	27.3	— 2.6	68	NNW	13.9	6.2			9			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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Geneva	28.35	720.2	29.84	757.8	34.9	1.6	100	NNW			1		10			1.181	30.0	Raining	The Observatory.
Zurich	28.17	715.4	29.86	758.5	36.9	2.7	91	NE			1		10			0.669	17.0	Snowing	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —4.2 mm.; Thermometer, —7.1 cent.; Relative Humidity, +40 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Constantinople			30.07	763.7	56.7	13.7	47	NE	10	4.5			8		SW	0	0		
Fao, (Persian Gulf)			30.14	765.6	75.2	24.0		SE			3		10						
Salonica			30.06	763.4	63.0	17.2		SE			1		0						
Valona			29.90	759.5	59.4	15.2		W			1		0						
Varna			30.01	763.0	57.2	14.0		N			1		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			29.89	759.1	69.1	20.6	84	NE			1	2ck	7ks		S	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Bathurst, N. B.			29.82	757.4	28.7	— 1.8	97	NW								0.40	10.2		Hon. J. Ferguson.
Brockville, Ontario			30.12	765.0	21	— 6.1		NW	5	2.2		0	5s		W	0	0	Fair	W. R. Bigg.
*Chatham, N. B.			29.85	758.9	27	— 2.8	81	SW	7	3.1		2k	8ks	SW	SW	0.01	0.3	Cloudy	G. A. Blair.
Charlottetown, P. E. Island.			29.89	759.2	31	— 0.6	92	SW	3	1.3			10s			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.04	763.0	22.0	— 5.6	70	S			1		1s			0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			29.87	758.7	23.0	— 5.0	93	W			4		2k			0.040	1.02		H. A. Johnson.
Esquimault, B. C.			30.08	764.0	44.3	6.8	83	SW	3	1.3			10			0	0	Cloudy	W. H. Bevis.
Fredericton, N. B.			29.97	761.2	23.7	— 4.6	57	NW	16	7.2			10ks			0	0		Prof. Harrison.
*Fort Garry, Manitoba			29.89	759.2	12	—11.1	96	SW	4	1.8			10ks			0	0	Cloudy	James Stewart.
Goderich, Ontario			30.16	766.1	23.7	— 4.6	78	SW			2	3k		W		0	0	Fine	H. J. Strang, M. A.
Granton, Ontario			30.17	766.3	19.3	— 7.1		SW			2					0	0	Clear	James Grant.
*Halifax, N. S.			29.90	759.4	32	0.0	92	NW	5	2.2		0	2ks		S	0.070	1.78	Fair	F. Allison, M. A.
*Kingston, Ontario			30.15	765.8	19	— 7.2	91	Calm	0	0		2c	Sm'e	W		0	0	Clear	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			30.05	763.3	19	— 7.2	69	SW	20	8.9		2cs	2ks	NW	NW	0	0	Fair	C. H. McLeod, C. E.
*Ottawa, Ontario			30.08	764.0	10	—12.2	77	Calm	0	0		2c	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.06	763.5	20	— 6.7	92	S	17	7.6		5ck	2ks	SW	SW	0	0	Fair	Rev. R. Mooley.
*Port Dover, Ontario			30.18	766.6	22	— 5.6	86	W	8	3.6		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.			30.26	768.6	28.4	— 2.0		Calm	0	0						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.17	766.3	25	— 3.9	86	W	10	4.5		2k	0	W		0	0	Clear	M. Payne.
*Quebec, Quebec			30.02	762.5	19	— 7.2	85	SW	6	2.7		0	0			0	0	Clear	Capt. Ash, R. N.
St. John, N. B.			29.97	761.2	26.0	— 3.3	63	NW	8	3.6		1k				0	0		G. Murdoch, C. E.
*Saugeen, Ontario			30.07	763.8	22	— 5.6	88	SW	1	0.4		2k	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.06	763.5	26	— 3.3	59	SW	5	2.2		8k	0			0	0	Cloudy	R. J. Cole.
Stratford, Ontario			30.17	766.3	18.0	— 7.8	90	SW	3	1.3						0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.90	759.4	32	0.0	83	SW	3	1.3		5cs	5s	SW	SW	1.06	26.9	Cloudy	T. C. Hill.
*Toronto, Ontario			30.14	765.5	22	— 5.6	74	NW	6	2.7		0	0			0	0	Clear	Magnetic Observatory
Woodstock, Ontario			30.17	766.3	19.6	— 6.9	92	W			1	0	0			0	0	Fine	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			30.17	766.3	27	— 2.8	77	W	1	0.4		0	Haze			0	0	Clear	
Alpena, Mich.			30.03	762.7	23	— 5.0	73	W	12	5.4		0	0			0	0	Clear	
Atlantic City, N. J.			30.26	768.6	31	— 0.6	79	NW	5	2.2		10cs	0			0	0	Clear	
Augusta, Ga.			30.33	770.4	38	3.3	81	Calm	0	0			10s			0	0	Cloudy	
Baltimore, Md.			30.28	769.1	32	0.0	59	NW	2	0.9			Sm'e			0	0	Cloudy	
Barnegat, N. J.			30.25	768.3	33	0.6	61	NW	13	5.8		Haze	Haze			0	0	Hazy	
Benton, Montana	27.01	686.0	29.81	757.2	31	— 0.6	49	SW	12	5.4			10s			0	0	Cloudy	
Bismarck, Dakota	27.92	709.2	29.59	751.6	29	— 1.7	59	S	3	1.3			10ks		S	0	0	Cloudy	
Boston, Mass.			30.13	765.3	28	— 2.2	56	W	11	4.9		1cs	Haze			Inap.	Inap.	Hazy	
Breckenridge, Minn.			29.98	761.5	13	—10.6	90	S	16	7.2			10s		S	0	0	Cloudy	
Buffalo, N. Y.			30.14	765.5	25	— 3.9	87	SW	7	3.1		2c	5s	W	W	Inap.	Inap.	Fair	
Burlington, Vt.			30.09	764.3	26	— 3.3	63	S	6	2.7		2c	0			0.01	0.3	Fair	
Cairo, Ill.			30.23	767.8	34	1.1	79	SE	4	1.8			10s			0	0	Cloudy	
Cape Hatteras, N. C.			30.26	768.6	41	5.0	56	NE	9	4.0		8ck	Haze	W		0	0	Cloudy	
Cape Henry, Va.			30.32	770.1	37	2.8	53	NE	10	4.5		2ck	2s		NE	0	0	Fair	
Cape May, N. J.			30.29	769.4	33	0.6	69	NW	10	4.5		5k	0	W		0	0	Fair	
Charleston, S. C.			30.33	770.4	43	6.1	58	NW	4	1.8		5c	0			0	0	Fair	
Cheyenne, Wyoming	23.80	604.5	29.74	755.4	25	— 3.9	88	NW	8	3.6		5c	5	NW		0	0	Fair	
Chicago, Ill.			30.16	766.1	33	0.6	79	SW	2	0.9		0	3m'e			0	0	Clear	
Cincinnati, Ohio			30.23	767.8	32	0.0	89	S	4	1.8			10n			0.03	0.8	Light snow	
Cleveland, Ohio			30.21	767.3	27.6	— 2.4	93	S	8	3.6			10n		W	0.03	0.8	Light snow	
Colorado Springs, Col.	23.89	606.8	29.76	755.9	30	— 1.1	78	SE	1	0.4			10k			0.07	1.8	Cloudy	
Corsicana, Tex.			29.93	760.2	53	11.7	93	SE	6	2.7			10n		SE	0.03	0.8	Light rain	
Davenport, Iowa			30.18	766.6	31	— 0.6	89	Calm	0	0			10s			0.03	0.8	Cloudy	
Denison, Tex.			29.92	760.0	46	7.8	92	SE	5	2.2			10n			Inap.	Inap.	Light rain	
Denver, Col.	24.62	625.3	29.84	757.9	34	1.1	79	Calm	0	0			10s			0.16	4.1	Cloudy	
Detroit, Mich.			30.16	766.1	29	— 1.7	78	SW	5	2.2		10k	0	NW		0	0	Cloudy	
Dodge City, Kan.	27.35	694.7	29.68	753.9	37	2.8	85	NW	3	1.3			10s			0	0	Cloudy	
Dubuque, Iowa			30.18	766.6	24	— 4.4	74	W	1	0.4		0	5s			0	0	Fair	
Duluth, Minn.			30.05	763.3	20	— 6.1	69	Calm	0	0		8k	0	W		0	0	Fair	
Eastport, Me.			29.98	761.5	26	— 3.3	63	W	11	4.9		5k	0	W		0.02	0.5	Fair	
Erie, Pa.			30.16	766.1	28	— 2.2	88	SW	10	4.5			10n			Inap.	Inap.	Light snow	
Escanaba, Mich.			30.11	764.8	16	— 8.9	66	Calm	0	0		0	0			0	0	Clear	
Fort Gibson, Indian Terr.			30.02	762.5	38	3.3	80	E	4	1.8			10s			0.10	2.5	Cloudy	
Ft. St. Michaels, Alaska			29.76	755.9	6	—14.4		N	3	1.3			10s			0	0	Cloudy	
Fort Sill, Indian T.	28.61	726.7	29.78	756.4	40	4.4	100	NE	12	5.4			10n		NE	0.12	3.0	Light rain	
Fort Sully, Dakota	28.08	713.2	29.78	756.4	28	— 2.2	83	SE	12	5.4		0	5s		SE	0	0	Fair	
Galveston, Tex.			29.98	761.5	62	16.7	88	SE	8	3.6			10s		SE	0	0	Cloudy	
Grand Haven, Mich.			30.14	765.5	34	1.1	69	W	11	4.9		0	6			0	0	Clear	
Indianapolis, Ind.			30.23	767.8	31	— 0.6	89	SE	3	1.3			10n		S	0.08	2.0	Light snow	
Indianola, Tex.			29.95	760.7	65	18.3	89	SE	16	7.2			10s		SW	0	0	Cloudy	
Jacksonville, Fla.			30.27	768.8	44	6.7	67	NE	4	1.8		8k	0	W		0	0	Fair	
Keokuk, Iowa			30.13	765.3	31	— 0.6	89	E	2	0.9			10s		E	0.07	1.8	Cloudy	
Key West, Fla.			30.14	765.5	65.2	18.4	78	E	13	5.8		1c	Haze	NW		0	0	Clear	
Kittyhawk, N. C.			30.39	769.6	38	3.3	63	N	5	2.2		8ck	0	NW		0	0	Fair	
Knoxville, Tenn.			30.29	769.4	32	0.0	69	Calm	0	0			10ks		SW	0	0	Cloudy	
La Crosse, Wis.			30.16	766.1	18	— 7.8	52	S	6	2.7		2c	Haze			0	0	Hazy	
Leavenworth, Kan.			30.07	763.8	33	0.6	100	NE	1	0.4			Fog			0.31	7.9	Threatening	
Lexington, Ky.	29.14	740.1	30.32	770.1	27	— 2.8	88	N	4	1.8			10n			0.01	0.3	Light snow	
Long Branch, N. J.			30.24	768.1	31	— 0.6	68	W	6	2.7		10cs	0	NW		Inap.	Inap.	Cloudy	
Louisville, Ky.			30.27	768.8	32	0.0	79	Calm	0	0			10n			Inap.	Inap.	Light snow	
Lynchburg, Va.			30.31	769.9	33	0.6	60	E	2	0.9			10s			0	0	Cloudy	
Malone, N. Y.			30.06	763.5	25	— 3.9	63	SW	8	3.6		5ck	0	W		0.10	2.5	Fair	
Manhattan, Kan.	28.86	733.0	30.01	763.0	33	0.6	79	S	4	1.8			10s			0.04	1.0	Cloudy	
Marquette, Mich.			30.11	764.8	18	— 7.8	68	W	8	3.6		0	0			0	0	Clear	
Memphis, Tenn.			30.22	767.6	33	0.6	79	E	1	0.4			10n			0.03	0.8	Light rain	
Milwaukee, Wis.			30.20	767.1	22	— 5.6	85	W	5	2.2		0	Fog			0	0	Clear	
Mobile, Ala.			30.22	767.6	48	8.9	62	SE	8	3.6			10s		SW	0	0	Cloudy	
Montgomery, Ala.			30.26	768.6	43	6.1	60	SE	10	4.5		1cs	3m'			0	0	Cloudy	
Morgantown, W. Va.			30.26	768.6	33	0.6	74	SW	6	2.7			1'n		W	Inap.	Inap.	Light snow	
Mt. Washington, N. H.	23.38	593.8	29.74	755.4	— 3	—19.4	100	NW	48	21.5			Fog			0.24	6.1	Foggy	
Nashville, Tenn.			30.24	768.1	34	1.1	79	E	2	0.9			10s			0.02	0.5	Cloudy	
New Haven, Conn.			30.20	767.1	33	0.6	69	NW	6	2.7		0	5s		NW	0	0	Fair	
New London, Conn.			30.20	767.1	30.5	— 0.8	78	W	8	3.6		5c	Haze	W		0	0	Fair	
New Orleans, La.			30.16	766.1	52	11.1	73	E	10	4.5		8ck	0	W		0	0	Fair	
Newport, R. I.			30.17	766.3	28	— 2.2	65	W	16	7.2		0	0			0	0	Clear	
New York, N. Y.			30.23	767.8	29	— 1.7	68	SW	4	1.8		8s	0			0	0	Fair	
Norfolk, Va.			30.32	770.1	36	2.2	61	NE	2	0.9		2k	Sm'e			0	0	Fair	
North Platte, Neb.	26.94	684.3	29.57	751.1	32	0.0	90	SE	14	6.3			10s			0.01	0.3	Cloudy	
Omaha, Neb.	28.94	735.1	30.05	763.3	34	0.6	89	S	4	1.8			10s			0.18	4.6	Cloudy	
Oswego, N. Y.			30.14	765.5	30	— 1.1	73	SW	4	1.8			10s		NW	0	0	Cloudy	
Pembina, Dakota			29.87	758.7	17	— 8.3	83	S	12	5.4		8c	0			0	0	Cloudy	
Philadelphia, Penn.			30.28	769.1	30	— 1.1	78	W	7	3.1			10s			0	0	Cloudy	
Pike's Peak, Colorado	17.48	444.0	29.69	754.1	10	—12.2	89	SW	2	0.9			Fog			0.04	1.0	Foggy	
Pittsburgh, Penn.			30.26	768.6	26	— 3.3	88	W	4	1.8			10n			Inap.	Inap.	Light snow	
Port Huron, Mich.			30.14	765.5	25	— 3.9	75	SW	8	3.6		0	1s			0	0	Clear	
Portland, Me.			30.10	764.5	28	— 2.2	77	NW	2	0.9		1k	0			0.06	1.5	Clear	
Portland, Oregon			30.22	767.6	46	7.8	92	S	4	1.8			10s			0	0	Cloudy	
Punta Rassa, Fla.			30.20	767.1	53.7	12.1	73	NE	14	6.3		Haze	Sm'e	NE	NE	0	0	Hazy	
Rochester, N. Y.			30.12	765.0	24	— 4.4	87	SW	6	2.7			10s		SW	Inap.	Inap.	Cloudy	
Salt Lake City, Utah																			
Sandy Hook, N. J.			30.22	767.6	31	— 0.6	99	W	17	7.6		10cs	0	SW		0	0	Cloudy	
San Diego, Cal.			30.02	762.5	52	11.1	86	NE	4	1.8		0	0			0	0	Clear	
San Francisco, Cal.			29.98	761.5	60	15.6	55	W	4	1.8		0	0			0	0	Clear	
Santa Fe, N. M.	23.03	585.0	29.57	751.1	33	0.6	79	SE	18	8.0			10s			0.08	2.0	Cloudy	
Savannah, Ga.			30.33	770.4	42	5.6	75	Calm	0	0		10cs	Sm'e			0	0	Cloudy	
Shreveport, La.			30.08	764.0	51	10.6	70	SE	2	0.9		10k	0	SW		0	0	Cloudy	
Smithville, N. C.			30.31	770.6	40	4.4	56	N	5	2.2		8c	0	W		0	0	Cloudy	
Springfield, Mass.			30.18	766.6	34	1.1	61	W	4	1.8		5ks	2s	W		0.01	0.3	Fair	
St. Louis, Mo.			30.21	767.3	32	0.0	89	S	4	1.8			10n			0.10	2.5	Light snow	
St. Marks, Fla.			30.28	769.1	41	5.0	83	N	4	1.8		2cs	0	W		0	0	Fair	
St. Paul, Minn.			30.08	764.0	14	—10.0	81	Calm	0	0		2c	0			0	0	Clear	
St. Paul's Island, Alaska			30.26	768.6	12	—11.1	80	NW	21	9.4		0	2k			Inap.	Inap.		
Thatcher's Island, Mass.			30.12	765.0	27	— 2.8	54	NW	16	7.2		0	0			0	0	Clear	
Toledo, Ohio			30.15	765.8	33	0.6	89	SW	6	2.7		8k	2s	SW	S	0.01	0.3	Clearing	
Tucson, Arizona	27.46	697.5	30.05	763.3	45	7.2		SW					10s			0.07	1.8	Light rain	
Tybee Island, Ga.			30.31	769.9	45	7.2	75	NW	4	1.8			10s		NW	0	0	Cloudy	
Vicksburg, Miss.			30.16	766.1	48	8.9	70	SE	4	1.8		10s	3m'e	SW		0.01	0.3	Cloudy	
Virginia City	24.03	611.0	29.56	750.8	32	0.0	69	SW	8	3.6		8cs	0	NW		0	0	Cloudy	
Washington, D. C.			30.31	769.9	31.5	— 0.3	69	W	4	1.8			10s		W	0	0	Threatening	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.34	770.6	35	1.7	61	NE	2	0.9		10cs	0	W		0	0	Cloudy	
Wood's Holl, Mass			30.16	766.1	33	0.6	61	NW	15	6.7		0	0			0	0	Clear	
Wytheville, Va	27.81	706.4	30.08	764.0	30	— 1.1	78	Calm	0	0			10s			0	0	Cloudy	
Yankton, Dakota	28.71	729.2	30.05	763.3	29	— 1.7	83	S	12	5.4			10s			0.26	6.6	Cloudy	
Yuma, Arizona			29.96	761.0	48	8.9		E				0	0			0.01	0.3	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			29.96	761.0	79	26.1	86	E	5	2.2		5c	8s	NE	SE	0.15	3.8	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.90	759.4	74	23.3	81	NE				10c	0			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I.			30.17	766.3	76	24.4	69	ENE	4	1.8		2ck	2k	E		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I.			30.16	766.1	77	25.0	78	Calm	0	0		5ck	5s	NE	NE	0	0		James Gall.
Santiago de Cuba, W. I.			29.84	757.9	72	22.2	71	NW	12.0	5.4		4k	0	N		Inap.	Inap.	Fair	Robert Mason.
Havana, Cuba, W. I.			30.10	764.5	67	19.4	68	Calm	0	0		2c	0			0	0	Fair	Charles Hasselbrink.
St. Georges, Bermudas			30.05	763.3	58.0	14.4	64	N	16.0	7.2			19k		N	0.01	0.3	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.21	691.1	30.00	762.0	63	17.2	83	N	2.0	0.9		2c	0	N		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A			29.93	760.2	82	27.8	71	E			3		6ck			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			29.99	761.7	83.3	28.5										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.16	639.0			64.0	17.8	80		0	0		1c	2ks			0	0	Fair	Thomas Herran.
St. Johns, Newfoundland			30.16	766.1	36.0	2.2	86	E					10n			0.02	0.5	Foggy	John Delaney.
York Factory, B. A.			30.09	764.3	--30	—34.4		Calm	0	0		3c	0	NE		0.03	0.8		J. Fortescue.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
}																			
}																			
}																			

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, [illegible] 2,892 ft., or 881.5 m.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,263.8 ft., or 1,3[illegible]1.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used incorrecting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 24, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.69	754.1	54.3	12.4	69	Calm			0		10			0.150	3.8	Hidden.	Charnot.
Algiers			29.64	752.8	54.0	12.2	98	NW			0		10			0.693	17.6	Hidden.	Peter.
La Calle																			Kunts.
Tunis			29.61	752.1	68.5	20.3	54	SE			4		7			0	0	Cloudy	Jacques.
Sfax			29.63	752.5	65.8	18.8	73	NE			2		6			0	0	Fair	Chauvey.
Saida			29.75	755.6	63.0	17.2		SE			7		4			0.039	1.0	Fair	Millot.
Tebessa			29.65	753.0	65.8	18.8		S			3		3			0	0	Fair	Colin.
Geriville			29.83	757.7	54.0	12.7	65	NW			2		2			0	0	Clear	Buard.
Laghouat			29.88	759.0	71.6	22.0	66	SE			1		1			0	0	Clear	Guyot.
Biskra			29.96	760.9	68.5	20.3	57	NE			1		8			0	0	Cloudy	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.77	756.2	55.4	13.0	61	SW			2		5			0.106	2.7	Raining	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.81	757.2	43.2	6.2	82	W			1		4			0.024	0.6		I. R. Observatory.
Sperles			29.81	757.1	46.4	8.0	78	S			2		10		N	0	0		Julius Mikolik.
Gratz	28.60	726.3	29.80	757.0	48.4	9.1	71	SW			2		5			0	0		Andreas Rospini.
Hermannstadt	28.40	721.3	29.78	756.4	63.3	17.4	21	S			5		3			0	0		Prof. Reissenberger.
Kremsmünster	28.39	721.1	29.75	755.7	40.3	4.6	74	ENE			2		1			0	0		Prof. C. Wagner.
Lemberg			29.78	756.3	45.3	7.4	90	SW			1		7			0.051	1.3		Dr. T. Stanecki.
Nyiregyhaza			29.81	757.3	57.2	14.0	65	SW			2		3			0.027	0.68		Habsuda Daniel.
Pola			29.79	756.7	48.4	9.1	98	NNW			1		10ks			1.427	36.25		I.R. Hydrographic Of'ce
Szegedin			29.79	756.7	59.0	15.0	89	S			2		6			0	0		Karl Stancel.
Trieste			29.80	756.8	49.3	9.6	96	Calm			0		10			0	0	Foggy	Prof. V. Farolfi.
Vienna			29.78	756.3	42.1	5.6	60	ENE			1		5			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.71	754.5	45.5	7.5	53	SE			2		0			0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the 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			29.56	750.8	45.2	7.3		SSE	17	7.6			2			0.005	0.13	Blue sky	William Boswell.
Ardrossan			29.44	747.8	46.5	8.1		S			5		7					*D. coluds	J. Mayes.
Armagh Observatory			29.37	741.0	42.9	6.1		SSE	17	7.6			10					Raining	S. Cali, for Dr. Robinson
Bidston, Liverpool Obs			29.53	750.0	45.3	7.4		SSE	19	8.5			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.31	744.5	44.0	6.7		S			1		10					Raining	J. Dreyer.
Bradford			29.55	750.6	47.1	8.4		SE			1		9			0	0	Gloomy	J. McLandsborough.
Bridgetown, (Barbados)			29.94	760.5	84.0	28.9		NE			2		6					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			29.64	752.8	52.0	11.1		SSW			1		1					*D. clouds	H. Todd.
Cardington			29.66	753.4	49.0	9.4		SW			1		3					*D. clouds	John McLaren.
Carlisle			29.55	750.6	46	7.8		SE			3		10			0.02	0.5	Overcast	. Bell, for J. Cartmell.
Chatham, School M. E.			29.69	754.1	49.2	9.6		NE			1		7					*D. clouds	Ca 1. J. Fellowes, R. E.
Dartmoor	28.12	714.2	29.64	752.8	40.0	4.4		S			1		5					*D. clouds	R. E. Power.
Donaghadee			29.29	744.0	45	7.2		SSW			4		7					*D. clouds	J. Mac Gowan.
Dover			29.69	754.1	44	6.7		Calm			0		2					¼ clouded	J. Costello.
Eccles, (near Manchester)			29.55	750.6	47.1	8.4		SSE	6.6	3.0			7					*D. clouds	Thomas Mackereth.
Falmouth Observatory			29.57	751.1	44.8	7.1		S	23	10.3			8					Overcast	The Staff.
Fort Napier, (Natal)	27.58	700.5	29.82	757.4	78.8	26.0		E			1		3					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.82	757.4	90.0	32.2		E			3		5					*D. clouds	tis-
Galway, Queen's College			29.87	758.7	48	8.9		S			1		7					Raining	B. G. Clare, for Prof. Curr.
Gibraltar, (Mediterranean)			29.69	754.1	52.7	11.5		NW			3		6			Blank	Blank	*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.46	748.3	44.8	7.1		S			2		10					Overcast	Lewis Stuart.
Great Yarmouth			29.67	753.6	41	5.0		SSE			4		5					Misty	G. T. Watson.
Greenwich Royal Obs			29.66	753.4	49.7	9.8		S			1		2					Blue sky	The Staff for G. B. Airy.
Guernsey			29.65	753.1	43.5	6.4		SE			2		0					Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs			29.59	751.6	46.1	7.8		S			2		9					*D. clouds	L. J. Cr sley.
Helston			29.54	750.3	48	8.9		S			4		4k			0	0	Fine	M. P. Moyle.
Holyhead			29.46	748.3	45	7.2		S			5		10					Drizzling	John Tilston.
Kew Observatory			29.66	753.4	47.7	8.7		S	10	4.5			9						The Staff.
Kingstown			29.38	746.2	45	7.2		SSE			3		10					Drizzling	George Mitchell
Leicester Museum			29.62	752.5	47.8	8.8		SW			3		5					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.56	750.8	60.8	16.0		NE			3		10k					Hazy	Fred Travis, Pvt A.H.C.
Nairn			29.49	749.0	47	8.3		S			1		2					¼ clouded	W. D. Penny.
Nassau, (Bahamas)			30.10	764.5	70.4	21.3		NE			4		7					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.61	752.1	49.8	9.9		SSW			4		2c.k		SSW	0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.59	751.6	48.0	8.9		S			3		8					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.62	752.3	46	7.8		SSW			1		5					*D. clouds	J. Lucas.
Plymouth			29.60	751.8	47.5	8.6		S			2		7					*D. clouds	John Merrifield.
Roche's Point			29.32	744.7	49	9.4		SSW			4		10					Raining	W. Kennedy.
Saint Ann's Head			29.49	749.0	44	6.7		S			5		10					Hazy	John C. Walker.
Saint Helier, (Jersey)			29.64	752.8	46.0	7.8		S			2		0					Clear	A. P. Amy.
Sandwick Manse (Orkneys)			29.58	751.3	44	6.7		SE	23	10.3			5					*D. clouds	Rev Dr. Clouston.
Scarborough			29.60	751.8	45.6	7.6		SSW			2		10					*D. clouds	F. Shaw.
Scutari Cemetery (Turkey)			29.89	759.2	58.4	14.7		NNE			2		2					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.59	751.6	47.0	8.3		SW			2		5			0	0	Blue sky	W. F. Cooper.
Sillotn Rectory			29.50	749.3	46.2	7.9	78	SW			2		8			0	0	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			29.52	749.8	44.0	6.7		S			4		9			Blank	Blank	Hazy	S. J. Perry.
Stornoway, Lews C. (Hebr.)			29.43	747.5	46	7.8		ESE			3		2					Blue sky	John Smith.
Strathfield Turgiss			29.65	753.1	47.9	8.8		S			1		0					Blue sky	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.53	750.0	48	8.9		SE			3		4					*D. clouds	John Trott F.
Truro, Royal Institution			29.65	753.1	42	5.6		SE			4		3					*D. clouds	W. Newcombe.
Valencia Observatory			29.26	743.2	47.9	8.8		WSW	8	3.6			10					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					42	5.6		S			6		10			0.15	3.8		
Cape Good Hope Obs.			29.88	758.9	69.4	20.8	68	SSE	30	13.4			3						The Staff, for E. J. Stone.
Leith, Restalrig Park			29.54	750.3	48.0	8.9		SW			2		10k			0	0	Fine, cloudy	Andrew Gibb.
Mauritius			29.94	760.5												0.06	1.5		
Monach Lt-house, Hebrides																			J. Youngclause.
North Unst, (Shetland Is.)			29.71	754.6	39	3.9		SE			7		10			Blank	Blank		

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,206 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.72	754.8	33.8	1.0	81	NNE			2		3						
Fanöe			29.78	756.4	37.8	3.2	70	SW			2		6						
Godthaab, (Greenland)			30.19	766.8	34.5	1.4	96	S			4		10					Raining	
Stykkisholm, (Iceland)			29.34	745.1	30.0	— 1.1	92	NE			6		8						
Thorshavn, (Faröe)			29.82	757.3	42.3	5.7	83	ENE			6		8						
Vestervig			29.81	757.2	32.7	0.4	89	NE			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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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			29.63	752.6	41.0	5	74	ESE			1		8sk		ESE			Very cloudy	Normal School.
Amiens			29.74	755.4	46.8	8.2	50	N			3		0			0	0	Clear	Normal School.
Avignon			29.62	752.3	58.6	14.8	55	SE			2		8		SE	0	0	Very cloudy	Normal School.
Bar-sur-Seine			29.64	752.8	52.7	11.5	61	S			1		8			0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)			29.57	751.0	46.4	8.0	64	ESE	3.6	1.6					ESE	0	0		Beaumette Observatory
Beauvais			29.68	753.9	45.1	7.3	41	E			3		8		S	0	0	Very cloudy	Normal School.
Besançon			29.69	754.0	49.8	9.9	76	SW			2		2		SW	0.16	4.	Slightly cl'dy	Normal School.
Bourg en Bresse			29.72	754.9	43.3	6.3	85	SE			1		2kn		S			Slightly cl'dy	Normal School.
Bourges			29.64	752.9	48.7	9.3	81	E			2		2		SE	0	0	Slightly cl'dy	Normal School.
Brest			29.56	750.7	50.2	10.1	58	SSW			2		3k		WSW	0	0		Naval Observatory.
Caen																			Normal School.
Chartres			29.59	751.6	49.6	9.8		E			2		10			0	0	Covered	Normal School.
Chaumont																			Normal School.
Clermont			29.63	752.5	41.7	5.4	81	NE			1		10		NE	0.055	1.4		Puy de Dome Obs.
Commercy			29.74	755.3	44.1	6.7	64	E			2		8k		E	0	0	Very cloudy	Normal School.
Commune de Gréasque*			29.66	753.4	53.8	12.1	65	E			4		10		E	0	0		
Grenoble			29.68	753.8	46.9	8.3	80	ENE			1		2kn		NE	0	0	Slightly cl'dy	Normal School.
Le Mans			29.66	753.3	45.3	7.4	66	E			2		8		E	0	0	Very cloudy	Normal School.
Loches			29.61	752.0	40.1	4.5	62				2		0			0.012	0.3	Clear	Normal School.
Lons-Le-Saulnier			29.69	754.0	44.1	6.7	94	N			2		10			0.150	3.80	Foggy	Normal School.
Mâcon			29.67	753.6	41.9	5.5	97	NNE			2		10			0.138	3.5	Covered	Normal School.
Mirecourt																			Normal School.
Metz			29.77	756.1	41.9	5.5	75	ENE			3		4		ENE	0	0		M. Schuster.
Nismes			29.60	751.7	59.7	15.4	58	S			4		10		S	1.50	38.	Covered	Normal School.
Orleans			29.63	752.7	48.9	9.4	61	ESE			3		2		E	0	0	Slightly cl'dy	Normal School.
Paris Observatory			29.65	753.0	47.3	8.5	46	E			2	.c				0	0	Clear	National Observatory.
Parthenay			29.57	751.0	42.8	6	94	NE			2		10			0	0	Covered	Normal School.
Privas			29.66	753.4	46.0	7.8		SE			2		5		SE	0	0	Cloudy	Normal School.
La Roche-sur-Yon			29.68	753.8	45.0	7.2	74	NE			2		10			0	0	Covered	Normal School.
Rochefort, Observatory			29.62	752.3	42.3	5.7	86	SE			3		10			0.079	2.0	Covered	Naval Observatory.
Rouen			29.67	753.6	48.6	9.2	34	SE			2		5		N	0	0	Cloudy	Normal School.
Saint Lo			29.26	743.2	45.5	7.5	64	SE			2		2		SE	0.020	0.5		Normal School.
Tarbes			29.53	750.0	51.8	11	82	W			4		10		E	0.189	4.8	Covered	Normal School.
Toulouse																			Normal School.
Villefranche			29.84	747.9	44.6	7	77	SSE			1		10			0.24	6.	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique			30.84	757.9	75.2	24.	78	NE			2		5k						L'Abbé Marchési.
Gorée																			
Marseilles			29.59	751.6	57.6	14.2	68	ESE			4		10			0	0	Covered	Marseilles Observatory.
Mont-Louis	24.33	618.0	29.69	754.0	32.2	0.1	100	ESE	5.6	2.50			10			0.098	2.5		—. Faiguère.
Montsouris, Paris			29.64	752.8	49.6	9.8	50	E			1		2			0	0		Montsouris Observ'tory.
Perpignan			29.58	751.4	47.1	8.4	84	E	1.9	0.83			10			0.146	3.7		Dr. Fines.
Pic du Midi, (Summit) H.P.†																			M. Baylac.
Pic du Midi, (Plantade)	21.94	557.2			33.4	0.8		N?			1		10					Snowy	General de Nansouty.
Saint Maur, (near Paris)			29.65	753.0	54.2	10.1	45	NE			1		0?			0	0	Cloudy?	E. Renou.
Toulouse			29.61	752.1	42.1	5.6	88	SW			1		10			0.157	4.0		Toulouse Observatory.
Tours			29.62	752.3	47.3	8.5	71	ESE			2		7		WSW	0	0		C. Marquet.
Versailles, (near Paris)			29.64	752.8	47.8	8.8	48	E			2		5			0	0	Fair	Dr. A. Bérigny.
Zi-Ka Wei, (near Shanghai)																			H. Le Lec, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Near Marseilles. † Summit inaccessible.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Berlin			29.69	754.2	42.3	5.7	87	NW			2		2			0	0		Prof. T. Hoh.
Breslau			29.77	756.2	40.1	4.5	80	SW			2		10			0.094	2.4	Raining	Prof. Arndt.
Carlsruhe			29.82	757.4	42.8	6.0	44	SW			3		3			0	0		Dr. P. Neugebauer.
Cassel			29.71	754.7	47.1	8.4	59	NE			2		7			0	0		A. Senz.
Cologne			29.68	753.9	48.0	8.9	55	ESE			2		4			0	0		Dr. H. Möhl.
Emden																			Dr. Garthe
Frankfort on the Main			29.80	757.0	46.6	8.1	23	E			2		1			0	0		Prof. Prestel.
Friedrichshafen	28.30	718.7	29.78	756.4	37.8	3.2	78	W					2			0	0	Foggy	Physical Society
Hamburg			29.76	755.8	39.2	4.0	73	Calm			0		9ks	NE		0.303	7.7	Good	M. Wilhelm.
Kiel			29.78	756.5	37.6	3.1	62	NE			2		7			0.055	1.4		Deutsche Seewarte.
Königsberg			29.72	754.8	34.3	1.3	81	SW			5		10			0.012	0.3	Snowing	Prof. G. Karsten.
Köln			29.69	754.0	33.6	0.9		SW			4		10			0	0		Prof. E. Luther.
Leipsic			29.79	756.7	45.0	7.2	55	SW			2		9	W		0	0		H. Müller.
Memel			29.61	752.2	32.5	0.3	94	SSE			3		10			0.138	3.5	Heavy snow	Prof. Brahms.
Münster			29.74	755.3	47.8	8.8	73	SW			2		4			0	0		Reinbrecht & Skalweit.
Neufahrwasser			29.62	752.4	37.4	3.0	76	SW			2		9			0.043	1.1		Prof. E. Heis.
Posen			29.81	757.1	39.7	4.3	73	W			4		10			0	0		A. Lothes.
Strassburg, (in Alsace)			29.73	755.1	45.1	7.3	66	Calm			0		2			0	0		Dr. Magener.
Stuttgart			29.72	754.9	46.9	8.3	65	E			1		5			0	0		Dr. Schur.
Thorn			29.74	755.4	33.8	1.0	90	SW			6		10			0.012	0.3	Snowing	Prof. Schoder.
Treves, (Trier)			29.66	753.3	47.3	8.5	30	E			4		0			0	0		Dr. Hasenbalg.
Wustrow, Naval School			29.67	753.6	35.8	2.1	78	W			2		6						Prof. Flesch.
																			E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.1 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Athens																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Udine			29.78	756.5	47.5	8.6	82	SE	1.8	0.8			10			0.024	0.6		
Padua			29.78	756.5	48.2	9.0	77	NNE	2.5	1.1			9	SSW		0.579	14.7		
Vicenza			29.80	756.8	49.3	9.6	79	SSE			1?		9	S		0.256	6.5		
Verona			29.80	756.8	53.4	11.9	59	E			1		10			0	0		
Bergamo	28.42	721.9	29.75	755.7	43.2	6.2	83	NW			1		9			0	0		
Domodossola	28.75	730.3	29.79	756.7	44.6	7.0	71	Calm			0		10			0	0		
Milan			29.83	757.7	45.9	7.7	76	N			1		9	SW		1.280	32.5		
Pavia			29.83	757.7	41.9	5.5	61	SW			1		10			0.197	5.0	Raining	
Moncalieri			29.84	757.8	40.8	4.9	60	SSE	1.8	0.8			10	NW		0.248	6.3	Raining	
Mondovi	27.87	707.8	29.81	757.1	41.2	5.1	70	N			2		10			0	0		
Porto Maurizio			29.75	755.7	59.2	15.1		NE			2		10			0	0		
Genoa			29.74	755.5	48.6	9.2	56	NE	3.8	1.7			10	S		0	0		
Piacenza			29.84	757.8	41.5	5.3	86	NW	1.3	0.6			10			0	0		
Parma			29.84	757.8	40.8	4.9	90	NW			4		10			0	0		
Bologna			29.85	758.3	44.8	7.1	60	NW			1		10			1.339	34.0	Raining	
Florence			29.79	756.6	50.9	10.5	87	W			2		10	W		0.315	8.0		
Leghorn			29.72	754.9	55.9	13.3	62	ESE	8.7	3.9			10			0	0		
Siena	28.52	724.5	29.73	755.2	49.8	9.9	99	SSW	0	0			10	S		0.295	7.5	Raining	
Urbino	28.25	717.6	29.82	757.5	39.4	4.1	100	NNE			2		10			0.386	9.8	Raining	
Pesaro																			
Ancona			29.84	757.8	46.4	8.0	89	NW			4		10			0	0		
Grosseto			29.81	757.2	56.8	13.8	90	SSE			6		10	S		0.295	7.5	Raining	
Rome			29.76	755.9	63.5	17.5	51	SE	9.8	4.4			7	SSW		0	0		
Naples, O. U			29.78	756.3	68.4	20.2	48	WSW			1		1	S		0	0		
Lecce			29.92	760.0	68.4	15.8	38	SSW	12.5	5.6			2			0	0		
Cosenza			29.87	758.6	60.8	16.0	69	N	1.3	0.6			2			0	0		
Riposto, (Sicily)			29.85	758.1	61.2	16.2	85	E			2		9			0	0		
Palermo			29.67	753.6	62.6	17.0	68	NE	4.3	1.9			9			0	0		
Caltanissetta	27.81	706.3	29.76	755.8	52.0	11.1	64	E			6		10	W		0	0		
Sub-Series.																			
Naples, S. R.			29.78	756.5	65.8	18.8	47	WNW	1.8	0.8			..e	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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Tokio																			

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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Flushing			29.74	755.4	44.6	7.0		S			2								
Groningen			29.68	753.8	43.7	6.5		Calm			0								
Helder			29.72	754.9	45.1	7.3		SW			2								
Utrecht			29.70	754.3	51.1	10.6	51	SW			2		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Bergen			29.83	757.7	38.5	3.6	57	NNE	4.7	2.1			5			0.020	0.5		
Brönø			29.92	759.9	32.9	0.5	82	Calm	0	0			0			0	0		
Christiania			29.86	758.5	33.8	1.0	42	E	2.0	0.9			7			0	0		
Tromsö			29.85	758.3	27.3	— 2.6	85	SSW	2	1			9			0.031	0.8		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.13	765.4	57.2	14.0	78	E	6.5	2.92			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.61	752.0	47.5	8.6	60	WNW	11.4	5.08			10	NW		0.091	2.3		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			29.94	760.4	64.2	17.9	41	E	8.0	3.58			2			0	0		Capt. D. A. da Cunha.
Lisbon			29.70	754.4	51.1	10.6	40	NNW	32.2	14.4			6			0.067	1.7		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.80	756.9	40.1	4.5	60	S	18	8			9					Solar corona	Astronomical Obs.
Wilna			29.87	758.8	39.4	4.1	58	S	9	4			8						Astronomical Obs.
Dorpat			29.85	758.1	33.6	0.9	89	W	7	3			6						Physical Cabinet.
St. Petersburg			29.80	751.0	27.9	— 2.3	82	NW	11	5			10						Central Physical Obs.
Kuoplo			29.80	756.8	26.8	— 2.9	100	NE	9	4			10					Snowing	Ch. Forsten.
Kieff			29.87	758.6	56.1	13.4	50	S	9	4			10						Physical Cabinet.
Nikolaiev			30.05	763.2	61.2	16.2	27	SW	11	5			0						Kurdakof.
Kertch																			Lagorio.
Moscow			29.95	760.8	36.5	2.5	80	SSW	9	4			8						Meteorological Obs.
Lugan			30.03	762.7	50.2	10.1	72	NE	18	8			3						Meteorological Obs.
Archangel			29.70	754.3	19.4	— 7.0	78	NNW	22	10			3						Ogorodnikof.
Tiflis	28.62	726.9	30.00	761.9	64.8	18.2	46	S	4	2			0						Physical Observatory.
Astrakhan			30.29	769.3	58.6	14.8	44	SE	18	8			0						Sebastianof.
Kasan			30.07	763.7	36.7	2.6	75	S	7	3			8						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	29.13	739.9	30.14	765.6	48.4	9.1	40	SW	13	6			10						Meteorological Obs.
Nukuss			30.08	764.0	61.7	16.5	30	NE	9	4			8						
Kasaly																			Bobrof.
Tashkend	28.52	724.3	30.20	767.1	60.1	15.6	45	Calm	0	0			5						Michelson.
Barnaul			30.55	776.0	23.9	— 4.5	81	Calm	0	0			0						Meteorological Obs.
Yeniseisk			30.22	767.5	26.2	— 3.2	57	Calm	0	0			2						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Pekinc, (China)			29.99	761.7	47.1	8.4	59	Calm	0	0			3						Physical Observatory.
Nertchinsk	27.75	704.9	29.94	760.5	15.3	— 9.3	75	Calm	0	0			10						Meteorological Obs.
Vladivostock			30.07	763.7	32.4	0.2	52	NW	4	2			0			Blank	Blank		
Nikolaievsk, on the Amoor					21.4	— 5.9	95	Calm	0	0			2						

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 405. meters, or 1,411.8 feet; Ekaterinburg, 305.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, 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.

Stations	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.51	749.5	48.6	11.2	48	SW	13.4	6.00		0	7			0.031	0.8	Cloudy	Royal Observatory.
San Fernando			29.69	754.0	53.4	11.9	58	W	18.3	8.2		0	6		W	0.094	2.4		The Naval Observatory.

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.92	760.0	23.0	— 5.0	71	N			2		0			0	0		
Umea			29.95	760.8	28.4	— 2.0	84	NE			2		7			0	0		
Hernosand			29.95	760.7	31.3	— 0.3	94	NE			2		2			0	0		
Stockholm			29.80	757.0	29.1	— 1.6	60	NE			4		8			0	0		
Wisby			29.76	755.8	33.1	0.6	85	E			2		10			0.039	1.0		
SUB-SERIES.																			
Upsala			29.84	758.0	29.5	— 1.4	52	NE	9.4	4.2			2	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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.29	718.6	29.76	756.0	38.8	3.8	80	N			1		1			0.063	1.6	Clear	The Observatory.
Zurich	28.09	713.4	29.78	756.5	37.4	3.0	70	NW			1		8			0.181	4.6	Covered	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —5.8 mm.; Thermometer, —5.0 cent.; Relative Humidity, +21 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.96	761.0	56.1	13.4	47	NE	13.4	6.0			5		SW	0	0		
Fao, (Persian Gulf)			30.08	764.0	71.6	22.0		SE			3		10						
Salonica			29.99	761.8	66.6	19.2		SE			1		0						
Valona			29.82	757.5	61.2	16.2		W			1		0						
Varna			29.92	760.0	59.0	15.0		N			2		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.78	756.4	73.6	23.1	68	NW			1		5ks		W	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			30.06	763.5	24.7	— 4.1	68	Calm								0	0		Hon. J. Ferguson.
Brockville, Ontario			30.35	770.9	18	— 7.8		Calm	0	0		0	2s		NW	0	0	Fair	W. R. Bigg.
*Chatham, N. B.			30.16	766.1	18	— 7.8	91	W	1	0.4		0	0			0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island			30.12	765.0	27	— 2.8	86	W	4	1.8		5c	0			0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			30.27	768.8	20.2	— 6.6	86	S			1		0			0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			30.12	765.0	19.9	— 6.7	77	SW			1					0	0		H. A. Johnson.
Esquimault, B. C.			30.02	762.5	39.6	4.2	82	W	4	1.8		2cs	0			0	0	Clear	W. H. Bevis.
Fredericton, N. B.			30.19	766.8	13.4	—10.3	85	NW	2	0.9						0	0		Prof. Harrison.
*Fort Garry, Manitoba			29.71	754.6	28	— 2.2	100	Calm	0	0			10n			0	0	Cloudy	James Stewart.
Goderich, Ontario			30.19	766.8	30.7	— 0.7	80	Calm			0	3k		W		0	0	Fine	H. J. Strang, M. A.
Granton, Ontario			30.18	766.6	25.2	— 3.8		Calm			0					0	0	Clear	James Grant.
*Halifax, N. S.			30.14	765.5	30	— 1.1	91	N	12	5.4		0	2ks		S	0	0	Fair	F. Allison, M. A.
*Kingston, Ontario			30.32	770.1	13	—10.6	98	Calm	0	0		2c	Sm'e	W	E	0	0	Fair	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			30.19	766.8	25	— 3.9	64	NW	7	3.1		0	2ks			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.23	767.8	8	—13.3	71	Calm	0	0		0	Fog			0.03	0.8	Clear	J. B. Haney.
*Parry Sound, Ontario			30.23	767.8	16	— 8.9	83	E	7	3.1		0	0			0	0	Clear	Rev. R. Mooley.
*Port Dover, Ontario			30.25	768.3	15	— 9.4	89	N	3	1.3		2ck	0	N		0	0	Fair	H. Morgan.
Port Hastings, N. S.			30.12	765.0	29.4	— 1.4		Calm	0	0						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.19	766.8	20	— 6.7	95	W	4	1.8		0	Haze			0	0	Clear	M. Payne.
*Quebec, Quebec			30.16	766.1	26	— 3.3	88	SW	2	0.9		8k	0	SW		0.10	2.5	Fair	Capt. Ash, R. N.
St. John, N. B.			30.23	767.8	25.0	— 3.9	75	W	1	0.4						0	0		G. Murdoch, C. E.
*Saugeen, Ontario			30.15	765.8	22	— 5.6	80	SE	5	2.2		2cs	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.22	767.6	24	— 4.4	75	NW	1	0.4		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario			30.22	767.6	20.2	— 6.6	94	E	4	1.8			2s			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			30.10	764.5	31	— 0.6	78	W	3	1.3		10cs	2ks	S		0	0	Fair	T. C. Hill.
*Toronto, Ontario			30.25	768.3	23	— 5.0	80	N	6	2.7		0	0			0	0	Clear	Magnetic Observatory
Woodstock, Ontario			30.24	768.1	18.6	— 7.4	99	Calm			0		10s			0.10	2.5	Cloudy	J. Montgomery

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	32	0.0	79	W	4	1.8		0	Haze			0	0	Clear	
Alpena, Mich			30.14	765.5	15	— 9.4	82	NW	3	1.3		0	0			0	0	Clear	
Atlantic City, N. J.			29.20	769.4	34	1.1	79	Calm	0	0		2ck	Haze	W		0	0	Fair	
Augusta, Ga.			30.09	764.3	48	8.9	81	E	4	1.8			10ks		S	0.03	0.8	Cloudy	
Baltimore, Md.			30.31	769.9	35	1.7	70	W	1	0.4		5ck	Sm'e	W		Inap.	Inap.	Smoky	
Barnegat, N. J.			29.28	769.1	36	2.2	75	W	6	2.7		0	0			0	0	Clear	
Benton, Montana	26.97	685.0	29.77	756.1	30	— 1.1	40	NW	1	0.4			10s			0	0	Cloudy	
Bismarck, Dakota	27.93	709.4	29.63	752.6	23	— 5.0	60	NE	2	0.9			Fog			0	0	Foggy	
Boston, Mass			30.20	767.1	32	0.0	64	W	10	4.5		2ck	Fog	W		0	0	Foggy	
Breckenridge, Minn			29.71	754.6	32	0.0	100	S	10	4.5			10s			Inap.	Inap.	Cloudy	
Buffalo, N. Y.			30.22	767.6	25	— 3.9	87	SE	4	1.8		0	0			0	0	Clear, frost	
Burlington, Vt.			30.27	768.8	28	— 2.2	65	N	3	1.3		0	2s			0	0	Fair	
Cairo, Ill.			29.96	753.4	42	5.6	100	SE	16	7.2			10n		SE	1.00	25.4	Heavy rain	
Cape Hatteras, N. C.			30.15	765.8	53	11.7	73	Calm	0	0			10ks		W	0	0	Cloudy	
Cape Henry, Va.			30.26	768.6	43	6.1	59	E	16	7.2			10s			0	0	Cloudy	
Cape May, N. J.			30.29	769.4	36	2.2	70	SW	4	1.8			10s			0	0	Cloudy	
Charleston, S. C.			30.14	765.5	55	—12.8	87	E	4	1.8			10s		SE	0.01	0.3	Cloudy	
Cheyenne, Wyoming	23.65	600.7	29.59	751.6	30	— 1.1	67	W	12	5.4		0	5s			0	0	Fair	
Chicago, Ill.			29.87	758.7	35	1.7	70	E	8	3.6			10s			0	0	Cloudy	
Cincinnati, Ohio			29.91	759.7	38	3.3	71	SE	5	2.2			10s			Inap.	Inap.	Cloudy	
Cleveland, Ohio			30.14	765.5	25.4	— 3.7	86	E	2	0.9		0	Sm'e		E	Inap.	Inap.	Smoky	
Colorado Springs, Col.	23.76	603.5	29.53	750.0	24	— 4.4	62	Calm	0	0		8k	0			0	0	Fair	
Corsicana, Tex			29.55	750.6	63	17.2	100	NW	6	2.7			10s			1.08	27.4	Cloudy	
Davenport, Iowa			29.76	755.9	34	1.1	90	E	12	5.4			10s			0	0	Cloudy	
Denison, Tex.			29.54	750.3	45	7.2	100	NW	9	4.0			10s			0.97	24.6	Cloudy	
Denver, Col.	24.46	621.3	29.68	753.9	33	0.6	80	S	6	2.7		8c	0	NW		0	0	Fair	
Detroit, Mich			30.10	764.5	31	— 0.6	79	E	5	2.2		1ck	0			0	0	Clear	
Dodge City, Kan.	27.07	687.6	29.37	746.0	32	0.0	100	NW	4	1.8			10n, fog			0.25	6.3	Light snow	
Dubuque, Iowa			29.81	757.2	35	1.7	80	E	8	3.6			10s			0	0	Cloudy	
Duluth, Minn.			29.87	758.7	31	— 0.6	79	NE	8	3.6			10n			Inap.	Inap.	Light snow	
Eastport, Me.			30.16	766.1	30	— 1.1	68	Calm	0	0		0	Haze			0	0	Clear	
Erie, Pa.			30.17	766.3	27	— 2.8	88	SE	10	4.5		3c	0	W		Inap.	Inap.	Fair, frost	
Escanaba, Mich			30.08	764.0	18	— 7.8	92	Calm	0	0			Fog			0	0	Dense fog	
Fort Gibson, Indian Terr.			29.48	748.8	43	6.1	91	W	8	3.6			10s		W	0.85	21.6	Cloudy	
Ft. St. Michaels, Alaska			30.20	767.1	— 7	—21.7		SW	1	0.4			10s			0	0	Cloudy	
Fort Sill, Indian T.	28.42	721.9	29.53	750.0	38	3.3	80	N	8	3.6			10s		N	0.11	2.8	Cloudy	
Fort Sully, Dakota	27.98	710.7	29.69	754.1	23	— 5.0	86	Calm	0	0		0	Haze			0	0	Hazy	
Galveston, Tex.			29.66	753.4	59	15.0	95	SE	3	1.3		2c	5s	W	S	0.78	19.8	Fair	
Grand Haven, Mich			29.98	761.5	30	— 1.1	89	E	6	2.7		5cs	0	W		0	0	Fair	
Indianapolis, Ind.			29.87	758.7	36	2.2	90	E	8	3.6			10n			0.01	0.3	Light rain	
Indianola, Tex.			29.72	754.9	58	14.4	97	S	4	1.8		2cs	5s	W	S	0.29	7.4	Cloudy	
Jacksonville, Fla.			30.06	763.5	58	14.4	87	Calm	0	0		10k	Sm'e	SW		0	0	Cloudy	
Keokuk, Iowa			29.63	752.6	32	0.0	100	E	12	5.4			10n		E	0.32	8.1	Light rain	
Key West, Fla.			30.00	762.0	71.1	21.7	66	SE	12	5.4		5k	Sm'e	SE	SE	0	0	Fair	
Kittyhawk, N. C.			30.25	768.6	44	6.7	75	SE	14	6.3			10s			0	0	Cloudy	
Knoxville, Tenn			29.96	761.0	40	4.4	73	NE	8	3.6			10s		NE	0	0	Cloudy	
La Crosse, Wis.			29.86	758.4	35	1.7	80	SE	7	3.1			Fog			0	0	Foggy	
Leavenworth, Kan			29.65	751.8	33	0.6	100	N	8	3.6			10n			0.92	23.4	Heavy snow	
Lexington, Ky.	28.81	731.8	29.55	760.7	35	1.7	100	E	8	3.6			10s			0.01	0.3	Threatening	
Long Branch, N. J.			30.27	768.8	39	3.9	63	W	4	1.8		Haze	Haze			0	0	Hazy	
Louisville, Ky.			29.89	759.2	39	3.9	82	E	6	2.7			10n			0.11	2.8	Light rain	
Lynchburg, Va.			30.21	767.3	38	3.3	71	NE	3	1.3			10s			0	0	Cloudy	
Malone, N. Y.			30.26	768.6	24	— 4.4	81	SW	5	2.2		0	0			0	0	Clear	
Manhattan, Kan.	28.51	724.1	29.66	753.4	34	1.1	90	SE	4	1.8			10n			0.30	7.6	Light snow	
Marquette, Mich			30.02	762.5	30	— 1.1	78	SE	2	0.9		0	0			0	0	Clear	
Memphis, Tenn			29.55	751.6	50	10.0	93	SE	12	5.4			10n		SE	3.25	82.5	Heavy rain	
Milwaukee, Wis.			29.96	761.0	32	0.0	80	E	19	8.5		Haze	2ck		SW	0	0	Fair	
Mobile, Ala.			29.80	756.9	58	14.4	93	SE	8	3.6			10s		S	0	0	Cloudy	
Montgomery, Ala.			29.88	758.9	52	11.1	66	SE	12	5.4			10s		S	Inap.	Inap.	Threatening	
Morgantown, W. Va.			30.09	764.3	38.5	3.6	63	S	4	1.8			10s		SE	0	0	Threatening	
Mt. Washington, N. H.	23.54	597.9	29.90	759.4	13	—10.6	100	NW	30	13.4			10n		NW	0.15	3.8	Light snow	
Nashville, Tenn			29.75	755.6	43	6.1	83	E	4	1.8			10n		SW	0.10	2.5	Light rain	
New Haven, Conn.			30.25	768.6	38	3.3	55	Calm	0	0		0	Fog			0	0	Clearing	
New London, Conn.			30.28	769.1	38	3.3	58	W	3	1.3		2c	Haze	W		0	0	Fair	
New Orleans, La			29.71	754.6	62	16.7	88	S	8	3.6			10n			Inap.	Inap.	Light rain	
Newport, R. I.			30.26	768.6	34	1.1	79	W	4	1.8		2cs	0	W		0	0	Fair	
New York, N. Y.			30.28	769.1	33	0.6	69	W	2	0.9		0	Fog			0	0	Clear	
Norfolk, Va			30.25	768.6	44	6.7	63	SE	6	2.7			10s		SE	0	0	Cloudy	
North Platte, Neb.	26.72	678.7	29.37	744.2	30	— 1.1	89	Calm	0	0		0	2s			0	0	Clear	
Omaha, Neb.	28.58	725.9	29.65	753.1	35	1.7	90	N	4	1.8			10s			0	0	Cloudy	
Oswego, N. Y.			30.29	769.4	30	— 1.1	77	E	2	0.9		0	2ks			0	0	Clear	
Pembina, Dakota			29.69	754.1	27	— 2.8	88	Calm	0	0			10s			0	0	Cloudy	
Philadelphia, Penn.			30.31	769.9	34	1.1	69	W	4	1.8		0	Sm'e			0.35	8.9	Smoky	
Pike's Peak, Colorado	17.35	440.7	29.46	753.8	0.5	—17.5	55	NW	16	7.2			10s			0	0	Cloudy	
Pittsburgh, Penn.			30.15	765.8	28	— 2.2	77	NE	5	2.2		10k	0			0.12	3.0	Cloudy	
Port Huron, Mich			30.15	765.8	27	— 2.8	88	SE	4	1.8		1c	0			0	0	Clear	
Portland, Me.			30.18	766.6	29	— 1.7	78	W	3	1.3		1k	0	NW		0	0	Clear	
Portland, Oregon			30.10	767.1	43	6.1	83	Calm	0	0			10n			0.02	0.5	Light rain	
Punta Rassa, Fla.			30.02	762.5	61.0	16.1	79	E	12	5.4		Haze	2s			0	0	Threatening	
Rochester, N. Y.			30.25	768.3	29	— 1.7	89	S	4	1.8		0	Sm'e			0	0	Clear	
Salt Lake City, Utah																0.45	11.4		
Sandy Hook, N. J.			30.27	768.8	33	0.6	79	W	8	3.6		0	Haze			0	0	Clear	
San Diego, Cal.			30.01	762.2	54	12.2	79	SE	8	3.6			10s			0	0	Cloudy	
San Francisco, Cal.			29.96	761.0	52	11.1	73	NW	10	4.5		0	0			0	0	Clear	
Santa Fe, N. M.	22.96	583.2	29.50	749.3	28	— 2.2	77	NW	5	2.2		2cs	5s	NE	SW	0.06	1.5	Fair	
Savannah, Ga.			30.08	764.0	56	13.3	87	SE	1	0.4			10s			0	0	Cloudy	
Shreveport, La.			29.57	751.1	57	13.9	100	S	4	1.8			10s		SW	1.81	46.0	Cloudy	
Smithville, N. C.			30.18	766.6	52	11.1	72	E	8	3.6			10ks			0	0	Cloudy	
Springfield, Mass			30.26	768.6	31.5	— 0.3	59	S	4	1.8		2ks	Sm'e			0	0	Clear	
St. Louis, Mo.			29.61	752.1	37	2.8	90	SE	16	7.2			10n			0.57	14.5	Heavy rain	
St. Marks, Fla			29.96	761.0	57	13.9	87	SE	12	5.4			10s		SW	0	0	Cloudy	
St. Paul, Minn.			29.81	757.2	33	0.6	89	SE	12	5.4			10n			0.02	0.5	Light snow	
St. Paul's Island, Alaska			30.66	778.7	14	—10.0	81	NW	13	5.8		5	1k			0	0		
Thatcher's Island, Mass.			30.22	767.6	33	0.6	61	SW	19	4.5		8c	0	NW		0	0	Clearing	
Toledo, Ohio			30.04	763.0	34	1.1	69	E	7	3.1		5cs	0			0	0	Fair	
Tucson, Arizona	27.49	698.2	30.08	764.0	45	7.2		S				0	0			0	0	Clear	
Tybee Island, Ga.			30.07	763.8	57	13.9	87	SE	4	1.8			10ks		SW	0	0	Cloudy	
Vicksburg, Miss.			29.62	752.3	60	15.6	94	SW	12	5.4			10n			0.26	6.6	Light rain	
Virginia City	23.93	607.8	29.41	747.0	29	— 1.7	67	SW	2	0.9			10n		N	Inap.	Inap.	Light snow	
Washington, D. C.			30.29	769.4	33	0.6	79	NE	6	2.7			10s			Inap.	Inap.	Threatening	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.19	766.8	49	9.4	63	E	7	3.1			10s			0	0	Cloudy	
Wood's Holl, Mass			30.26	768.6	44	6.7	60	SW	6	2.7		0	0			0	0	Clear	
Wytheville, Va	27.70	703.6	29.92	760.0	37	2.8	71	SE	6	2.7			10s			Inap.	Inap.	Threatening	
Yankton, Dakota	28.41	721.6	29.71	754.6	33	0.6	89	SE	4	1.8			Fog			0	0	Foggy	
Yuma, Arizona			29.90	759.4	59	15.0		SE				2c	0	SW		0	0	Fair	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			29.97	761.2	77	25.0	86	NE	4	1.8		2k	8ks	N	NE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.92	760.0	74	23.3	76	E				2k	2k			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I.			30.17	766.3	76	24.4	69	E	2	0.9		4ck	8ks	E		0	0	Cloudy	W. S. Cameron.
Kingston, Jamaica, W. I.			30.12	765.0	77	25.0	76	Calm	0	0		8c	8s	E	E	0	0		James Gall.
Santiago de Cuba, W. I.			29.76	755.9	74	23.3	69	NE	9.6	4.3		2ck	0	N		0	0	Fair	Robert Mason.
Havana, Cuba, W. I.			30.02	762.5	69	20.6	71	SE	8.4	3.8		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			30.16	766.1	61.5	16.4	66	NE	9.0	4.0		2c	8k	NE	NE	Inap.	Inap.	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.21	691.1	30.00	762.0	64	17.8	83	NE	1.0	0.4		5c	0	NE		0	0	Fine & clear	C. Partridge.
Paramaribo, D. Guiana, S. A.			29.92	760.0	82	27.8	67	E			2		5ck			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A.			30.00	761.9	84.2	29										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.14	638.6			63.0	17.2	85		2	0.9			10n			0.32	8.1	Raining	Thomas Herran.
St. Johns, Newfoundland			30.07	763.8	37.5	3.1	100	SE					10n			0.10	2.5	Foggy, misty	John Delaney.
York Factory, B. A.			29.95	760.7	15	− 9.4	91	NW	12	5.4			10s			0.02	0.5		J. Fortescue.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,264.8 ft., or 1,300.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used incorrecting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 25, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.71	754.6	61.2	16.2	52	NW			2		3			0.630	16.0	Fair	Charnot.
Algiers			29.66	753.4	59.0	15.0	65	W			3		5			0.094	2.4	Fair	Peter.
La Calle																			Kuntz.
Tunis			29.67	753.6	58.6	14.8	58	NW			4		10			0.012	0.3	Hidden	Jacques.
Sfax			29.67	753.7	64.8	18.2	80	S			2		6			0	0	Fair	Chauvey.
Saida			29.79	756.6	63.5	17.5		NW			4		4			0	0	Fair	Millot.
Tebessa			29.60	751.8	56.7	13.7		W			3		6			0	0	Fair	Colin.
Geriville			29.89	759.3	47.7	8.7	55	NW			3		2			0	0	Clear	Buard.
Laghouat			29.90	759.4	69.8	21.0	82	NW			3		0			0	0	Clear	Guyot.
Biskra			29.84	758.0	63.3	17.4	33	NW			4		8			0	0	Cloudy	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.61	752.2	52.0	11.1	86	SW			1		10			0.059	1.5		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.80	756.9	47.5	8.6	84	NE			1		10			0.043	1.1		I. R. Observatory.
Eperies			29.77	756.1	54.7	12.6	75	Calm			0		9		N	0	0		Julius Mikolik.
Gratz	28.48	723.3	29.67	753.5	52.7	11.5	56	NW			5		8			0	0		Andreas Rospini.
Hermannstadt	28.37	720.5	29.74	755.4	66.2	19.0	26	SE			4		3			0	0		Prof. Reissenberger.
Kremsmünster	28.12	714.3	29.46	748.3	45.3	7.4	83	ENE			3		10			0	0		Prof. C. Wagner.
Lemberg			29.78	756.3	52.5	11.4	72	NE			1		3			0	0		Dr. T. Stanecki.
Nytregyhaza			29.76	756.0	64.4	18.0	46	SE			1		1			0	0		Habesuda Daniel.
Pola			29.46	748.2	55.4	13.0	77	ESE			3		10s			0.135	3.43		I.R. Hydrographic Of'ce
Szegedin			29.69	754.0	63.3	17.4	45	S			3		10			0	0		Karl Stancel.
Trieste			29.50	749.2	57.0	13.9	69	ENE			1		10			0.583	14.8	Drizzling	Prof. V. Farolfi.
Vienna			29.62	752.4	52.3	11.3	77	SE			2		8			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.58	751.3	49.1	9.5	52	ENE			4	6		SSW		0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit	Temperature of the Air. 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.
Aberdeen			29.96	761.0	39.1	3.9		SE	16	7.2			9			0.030	0.76	*D. clouds	William Boswell.
Ardrossan			29.89	759.2	52	11.7		ESE			4		6					*D. clouds	J. Mayes.
Armagh Observatory			29.86	758.4	47.6	8.7		E	13	5.8			5					*D. clouds	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			29.79	756.7	47.5	8.6		E	23	10.3			6					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			29.74	755.4	51.0	10.6		ESE			1–2		1					*D. clouds	J. Dreyer.
Bradford			29.83	757.7	42.9	6.1		NE			1		10			0	0	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			29.96	761.0	79.0	26.1		NE			2		5					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			29.76	755.9	45.6	7.6		E			2		10					Overcast	H. Todd.
Cardington			29.75	755.6	45.0	7.2		E			2		7					*D. clouds	John McLaren.
Carlisle			29.87	758.7	44.3	6.8		E			5		4			0	0	*D. clouds	Bell, for J. Cartmell.
Chatham, School M. E.			29.73	755.1	47.2	8.4		NE			1		4					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	28.20	716.3	29.68	753.9	46.2	7.9		E			6		0					Blue sky	R. E. Power.
Donaghadee			29.85	758.2	46	7.8		E			4		7					*D. clouds	J. Mac Gowan.
Dover			29.64	752.8	46	7.8		NE			5		2					¼ clouded	J. Costello.
Eccles, (near Manchester)			29.90	759.4	46.9	8.3		NE	7.2	3.2			7					Hazy	Thomas Mackereth.
Falmouth Observatory			29.59	751.6	47.5	8.6		ENE	33	14.8			5					Hazy	The Staff.
Fort Napier, (Natal)	27.61	701.3	29.85	758.2	79.8	26.6		E			2		1					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.85	758.2	90.0	32.2		N			1		6					*D. clouds	(tis-
Galway, Queen's College			29.86	758.4	49	9.4		SE			1		3					*D. clouds	B. G. Clare, for Prof. Cur.
Gibraltar, (Mediterranean)			29.75	755.6	57.0	13.9		W			4		8					Overcast	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.90	759.4	45.8	7.7		ENE			2		3					Fine	Lewis Stuart.
Great Yarmouth			29.77	756.1	41	5.0		ENE			5		5					Misty	G. T. Watson.
Greenwich Royal Obs.			29.70	754.4	50.8	10.4		ENE			5		6					*D. clouds	The Staff for G. B. Airy.
Guernsey			29.54	750.3	49	9.4		NE			4		0					Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.86	758.4	42.7	5.9		E			3		9					*D. clouds	L. J. Crossley.
Helston			29.55	750.6	51	10.6		E			4		4k			0	0	Fine	M. P. Moyle.
Holyhead			29.77	756.1	47	8.3		ENE			5		0					Blue sky	John Tilston.
Kew Observatory			29.70	754.4	48.7	9.3		E	27	12.1								Hazy	The Staff.
Kingstown			29.79	756.7	45	7.2		E			4		1					Blue sky	George Mitchell
Leicester Museum			29.80	756.9	45.0	7.2		E			2		8					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.43	747.5	67.8	19.9		SW			2		10k					Hazy	Fred Travis, Pvt A.H.C.
Nairn			29.92	760.0	45	7.2		SSE			1		5					½ clouded	W. D. Penny.
Nassau, (Bahamas)			30.04	763.0	75.1	23.9		SE			4		6					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.81	757.2	44.2	6.8		ENE			4		10k		ENE	0	0	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.76	755.9	48.4	9.1		ENE			4		8					D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.70	754.4	49	9.4		E			2		7					*D. clouds	J. Lucas.
Plymouth			29.59	751.6	50.7	10.4		ENE			5		0					Blue sky	John Merrifield.
Roche's Point			29.65	753.1	42	5.6		ESE			6		8					¾ clouded	W. Kennedy.
Saint Ann's Head			29.64	752.8	49	9.4		ESE			4		4					Hazy	John C. Walker.
Saint Helier, (Jersey)			29.50	749.3	53.0	11.7		E			4		5					½ clouded	A. P. Amy.
Sandwick Manse (Orkneys)			29.92	760.0	39.9	4.4		SE	25	11.2			10					Misty	Rev. Dr. Clouston.
Scarborough			29.89	759.2	40.0	4.4		ENE			3		10					Overcast	F. Shaw.
Scutari Cemetery (Turkey)			29.94	760.5	49.4	9.7		SW			1		9					Foggy	Sergt. W. H. Lyne.
Sheffield			29.82	757.4	47.1	8.4		NE			4		6			0	0	Overcast	W. F. Cooper.
Silloth Rectory			29.85	758.4	45.5	7.5	70	SE			2		7			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			29.82	757.4	46.1	7.8		NE			3		5						S. J. Perry.
Stornoway, Lewis C. (Hebr.)			29.87	758.7	50	10.0		W			1		5					*D. clouds	John Smith.
Stratfield Turgiss			29.69	754.1	49.7	9.8		E			1–2		8					*D. clouds	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Satier.
Thurso			29.90	759.4	40	4.4		SE			3		8					Gloomy	John Proctor.
Truro, Royal Institution			29.56	750.8	53	11.7		E			7		3					*D. clouds	W. Newcombe.
Valencia Observatory			29.62	752.3	48.7	9.3		E	34	15.2			9					Hazy	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					44	6.7		E			4		5			0.10	2.5		The Staff, for E. J. Stone.
Cape Good Hope Obs.			29.92	760.0	72.3	22.4	63	S	33	14.8			7						Andrew Gloe.
Leith, Restalrig Park			29.93	760.2	43.0	6.1		E			2		7ck			0	0	Fine, cloudy	
Mauritius			29.99	761.7				E								0	0		J. Youngclause.
Monach Lt-house, Hebrides																			
North Unst, (Shetland Is.)			29.86	758.4	38	3.3		S			7		10			Blank	Blank		

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,490 feet, or 426.7 meters; Fort Napier, 2,206 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.97	761.1	32.2	0.1	65	SE			2		1						
Faröe			29.99	761.7	33.8	1.0	79	E			4		9						
Godthaab, (Greenland)			30.22	767.5	40.1	4.5	84	S			4		10						
Stykkisholm, (Iceland)			30.15	765.8	31.5	— 0.3	92	E			2		8						
Thorshavn, (Faröe)			29.92	760.0	41.5	5.3	80	NE			2		10					Raining	
Vestervig			30.00	762.1	33.8	1.0	79	E			4		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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.47	748.4	46.4	8	61	NE			1		5n		NE	0	0	Cloudy	Normal School.
Amiens			29.66	753.3	54.3	12.4	74	N			3		0			0	0	Clear	Normal School.
Avignon			29.42	747.3	50.4	10.2	82	NE			2		8		NE	0.701	17.8	Very cloudy	Normal School.
Bar-sur-Seine			29.41	747.0	55.9	13.3	53	NE			2		8			0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)			29.39	746.6	54.5	12.5	54	E	9.8	4.4					E	0	0		Beaumette Observatory
Beauvais			29.52	749.9	51.6	10.9	56	NE			3		5			0	0	Cloudy	Normal School.
Besançon			29.41	746.9	51.6	10.9	70	ESE			2		10		SW	0	0	Covered	Normal School.
Bourg en Bresse			29.45	748.0	49.5	9.7	64	S			1		10n		S			Covered	Normal School.
Bourges			29.63	752.5	51.1	10.6	80	NE			2		2		NE	0	0	Slightly cl'dy	Normal School.
Brest			29.41	746.9	54.1	12.3	67	E			2		6		E	0	0	Stormy	Naval Observatory.
Caen																			Normal School.
Chartres			29.37	746.0	54.0	12.2		E			2		1		NNE	0	0		Normal School.
Chaumont																			Normal School.
Clermont			29.40	746.8	45.9	7.7	71	W			1		5			0.091	2.3		Puy de Dome Obs.
Commercy			29.54	750.3	47.5	8.6	85	E			2		10kn		E	0	0	Covered	Normal School.
Commune de Gréasque*			29.42	747.2	43.7	6.5	91	NE			2		10		NE	0.177	4.5		
Grenoble			29.69	754.0	44.2	6.8	78	ENE			1		10			0	0	Sprinkling	Normal School.
Le Mans			29.47	748.5	57.0	13.9	40	E			4		5		S	0	0	Cloudy	Normal School.
Loches			29.13	739.8	49.1	9.5	62	NNE			2		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			29.41	747.1	46.6	8.1	62	N			2		10			0	0	Covered	Normal School.
Mâcon			29.46	748.3	48.4	9.1	92	Calm			0		10			0	0	Covered	Normal School.
Mirecourt																			Normal School.
Metz			29.55	750.5	46.6	8.1	48	NE			4		9		NE	0	0		M. Schuster.
Nismes			29.40	746.7	49.8	9.9	82	NE			2		10		E	0.08	2.	Covered	Normal School.
Orleans			29.43	747.4	53.6	12	54	E			4		2		E	0	0	Slightly cl'dy	Normal School.
Paris Observatory			29.47	748.6	53.4	11.9	46	NE			3		5			0	0	Cloudy	National Observatory.
Parthenay			29.41	747.0	56.3	13.5	42	NE			2		0			0.08	2.	Clear	Normal School.
Privas			29.42	747.3	47.7	8.7		SE			2		8		SE	0.126	3.2	Very cloudy	Normal School.
La Roche-sur-Yon			29.39	746.6	48.9	9.4	97	NE			2		2		SE	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			29.41	747.1	56.7	13.7	70	E			2		8		NW	0	0	¾ Covered	Naval Observatory.
Rouen			29.52	749.9	57.0	13.9	40	E			2		0			0	0	Clear	Normal School.
Saint Lo			29.54	750.2	52.0	11.1	76	NE			3		3		E	0	0		Normal School.
Tarbes			29.30	744.1	57.2	14	47	S			2		5		SE	0.228	5.8	Cloudy	Normal School.
Toulouse																			Normal School
Villefranche			29.90	759.5	49.1	9.5	67	NNW			1		10			0	0	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.85	758.2	75.9	24.4	82	NE			2		5kn						L'Abbé Marchésl.
Gorée																			
Marseilles	24.20	614.7	29.51	749.5	35.2	1.8	78	WNW	5.6	2.50			5		WSW	0.193	4.90	Raining	Marseilles Observatory.
Mont-Louis			29.47	748.4	54.9	12.7	60	NE			3		7			0.358	9.1		—. Falguère.
Montsouris, Paris			29.41	747.1	51.8	11.0	50	NW	16.8	7.50			3		W	0	0		Montsouris Observ'tory.
Perpignan																0.756	19.2		Dr. Fines.
Pic du Midi, (Summit) H.P†																			M. Baylac.
Pic du Midi, (Plantade)	21.86	555.2			22.1	- 5.5		NW			1		10			Blank	Blank		General de Nansouty.
Saint Maur, (near Paris)			29.47	748.4	55.6	13.1	47	NE			3		6			0	0	Partly cloudy	E. Renou.
Toulouse			29.18	748.8	42.3	5.7	88	W			2		10			0.429	10.9		Toulouse Observatory.
Tours			29.43	747.5	54.9	12.7	61	ENE			3		3		ENE	0	0		C. Marquet.
Versailles, (near Paris)			29.47	748.6	54.7	12.6	48	E			3		4			0	0	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7., 8. or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,089.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Near Marseilles. † Summit inaccessible.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.49	749.0	44.4	6.9	72	NE			5		8			0	0		Prof. T. Hoh.
Berlin			29.75	755.7	40.6	4.8	50	E			2		0			0	0		Prof. Arndt.
Breslau			29.83	757.7	43.9	6.6	52	ENE			4		10			0	0		Dr. P. Neugebauer.
Carlsruhe			29.45	748.1	47.5	8.6	58	SW			5		10			0	0		A. Senz.
Cassel			29.60	751.8	46.6	8.1	55	ENE			6		8			Inap.	Inap.	Snowing	Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main			29.60	751.8	52.3	11.3	29	NE			4		8			0	0		Physical Society.
Friedrichshafen	27.99	711.0	29.42	747.3	46.4	8.0	60	NE			2		8			0.339	8.6	Raining	M. Wilhelm.
Hamburg			29.89	759.1	39.6	4.2	57	ENE			5		9k,ks	ENE		Inap.	Inap.	Lt. smoke-haze.	Deutsche Seewarte.
Kiel			29.97	761.1	35.4	1.9	73	NE			3		10			0	0		Prof. G. Karsten.
Königsberg			29.93	760.3	37.4	3.0	70	W			2		5			Inap.	Inap.		Prof. E. Luther.
Köslin			29.94	760.4	37.2	2.9		E			1		10			0.051	1.3		H. Müller.
Leipsic			29.75	755.6	44.8	7.1	84	NE			5		9	E		0	0		Prof. Bruhns.
Memel			29.80	756.8	34.9	1.6	76	NW			3		7			0.004	0.1		Reinbrecht & Skalweit.
Münster			29.73	755.1	45.5	7.5	77	NE			2		10			0	0		Prof. E. Heis.
Neufahrwasser			29.90	759.4	34.5	1.4	82	NNW			1		10			0	0		A. Lothes.
Posen			29.92	760.0	37.4	3.0	70	S			5		1			0	0	Graupelnd	Dr. Magener.
Strassburg, (in Alsace)			29.45	747.9	46.2	7.9	59	NNE			2		10			0.122	3.1		Dr. Schur.
Stuttgart			29.45	747.9	45.7	7.6	64	E			2		8			0.075	1.9		Prof. Schoder.
Thorn			29.89	759.3	39.2	4.0	76	E			4		3			0	0		Dr. Hasenbalg
Treves, (Trier)			29.46	748.3	48.0	8.9	49	NE			5		10			0	0		Prof. Flesch.
Wisrow, Naval School			29.89	759.3	34.5	1.4	75	NE			3		8			0.012	0.3		E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Athens																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Udine			29.58	751.4	49.6	9.8	64	NE	2.5	1.1			10			0.016	0.4	Raining	
Padua			29.50	749.2	49.3	9.6	87	E	21.0	9.4			10	E		0.616	15.5		
Vicenza			29.51	749.6	48.6	9.2	89	NE	8.7	3.9			10	E		0.516	13.1		
Verona			29.42	747.2	53.6	12.0	84	NE			6		10			0.528	13.4	Light rain	
Bergamo	28.05	712.5	29.39	746.5	45.5	7.5	94	SW			2		10			0.669	17.0	Raining	
Domodossola	28.45	722.9	29.50	749.3	39.9	4.0	82	Calm			0		10			1.114	28.3	Raining	
Milan			29.37	746.1	42.3	5.7	98	NNW			1		10	NW		2.315	58.8	Raining	
Pavia			29.47	748.4	38.3	3.5	90	SW			6		10			2.028	51.5	Raining	
Moncalieri			29.51	749.5	39.7	4.3	87	W	0	0			10	NE		1.654	42.0	Raining	
Mondovi	27.57	700.2	29.51	749.5	36.3	2.4	88	NW			2		10			0.118	3.0	Snowing	
Porto Maurizio			29.39	746.4	53.6	12.0		WSW			2		10			0.039	1.0		
Genoa			29.34	745.2	44.4	6.9	71	N	7.4	3.3			10	SE		1.322	33.6	Raining	
Piacenza			29.43	747.4	47.5	8.6	92	SE	40.9	18.3			10			0.870	22.1	Heavy rain	
Parma			29.41	746.9	49.1	9.5	96	SE			6		10			0.031	0.8	Light rain	
Bologna			29.56	750.8	49.2	9.5	60	ESE			6		10			0.236	6.0	Raining	
Florence			29.36	745.7	62.6	17.0	60	E			2		10	SE		0	0		
Leghorn			29.29	743.9	53.8	12.1	90	S	6.9	3.1			10			0	0		
Siena	28.14	714.7	29.35	745.4	56.8	13.8	75	SE	8.1	3.6			10	S		0.736	18.7		
Urbino	27.93	709.5	29.50	749.4	47.3	8.5	96	SW			2		10			0.197	5.0	Raining	
Pesaro																			
Ancona			29.47	748.5	53.2	11.8	85	ENE			4		10			0	0		
Grosseto			29.34	745.2	60.4	15.8	79	SSE			6		10	S		0.028	0.7		
Rome			29.37	746.0	65.3	18.5	54	SSW	19.9	8.9			10	S		0	0		
Naples, O. U.			29.43	747.4	68.5	20.3	50	SSW			4		10	SW		0	0		
Lecce			29.70	754.3	64.0	17.8	53	S	39.1	17.5			10			0	0		
Cosenza			29.58	751.3	61.2	16.2	71	N	1.3	0.6			10			0	0		
Riposto, (Sicily)			29.80	757.0	63.3	17.4	84	SE			2		10			0	0		
Palermo			29.35	745.4	63.7	17.6	71	Calm	0	0			10			0	0		
Caltanissetta	27.56	700.1	29.51	749.6	55.4	13.0	47	E			6		10	W		0	0		
Sub-Series.																			
Naples, S. R.			29.43	747.5	66.6	19.2	52	SW	3.8	1.7			..k	SW		0	0	Foggy	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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Tokio																			

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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Flushing			29.68	753.9	47.1	8.4		NE			5								
Groningen			29.76	755.9	41.4	5.2		NE			5								
Helder			29.79	756.6	41.5	5.3		NE			4								
Utrecht			29.68	753.9	46.4	8.0	67	ENE			5		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Bergen			30.00	762.1	31.6	— 0.2	96	S	10.3	4.6			10			0.283	7.2		
Brönø			29.91	759.6	30.4	— 0.8	79	SSW	20	9			10			0	0	Snowing	
Christiania			30.07	763.7	30.6	— 0.8	54	WSW	0	0			0			0	0		
Tromsö			29.67	753.7	27.5	— 2.5	81	SW	9	4			10			0.110	2.8		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			29.74	755.3	55.9	13.3	82	NNW	13.9	6.22			3			0.039	1.0		Dr. J. A. N. Sampaio.
Campo Major			29.59	751.5	53.6	12.0	62	SSW	15.5	6.92			9	SSW		0.035	0.9		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			29.74	755.3	58.6	14.8	68	Calm	0	0			10			0	0		Capt. D. A. da Cunha.
Lisbon			29.57	751.0	55.4	13.0	66	SW	28.6	12.8			7	W		0.165	4.2		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.89	759.2	39.7	4.3	57	NNE	2	1			2						Astronomical Obs.
Wilna			29.89	759.3	37.2	2.9	57	W	4	2			10						Astronomical Obs.
Dorpat			29.89	759.1	37.2	2.9	73	NE	4	2			8						Physical Cabinet.
St. Petersburg			29.91	759.6	30.7	— 0.7	70	NE	9	4			7						Central Physical Obs.
Kuopio			29.95	760.8	28.4	— 2.0	100	Calm	0	0			10					Snowing	Ch. Forsten.
Kieff			29.86	758.4	53.6	12.0	60	S	4	2			5						Physical Cabinet.
Nikolaiev			30.26	768.5	63.7	17.6	45	S	4	2			0						Kurdakof.
Kertch																			Lagorio.
Moscow			29.84	758.0	39.6	4.2	79	SSW	4	2			10						Meteorological Obs.
Lugan			29.91	759.8	57.2	14.0	46	ESE	18	8			9						Meteorological Obs.
Archangel			30.03	762.8	20.8	— 6.2	74	Calm	0	0			10						Ogorodnikof.
Tiflis	28.60	726.3	29.96	761.0	68.0	20.0	36	E	9	4			0						Physical Observatory.
Astrakhan			30.24	768.0	57.6	14.2	50	ESE	18	8			0						Sebastianof.
Kasan			30.12	765.1	37.8	3.2	78	S	4	2			6						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	29.15	740.3	30.17	766.3	42.3	5.7	55	W	18	8			5						Meteorological Obs.
Nukuss			30.02	762.5	59.2	15.1	44	N	4	2			6						
Kasaly																			Bobrof.
Tashkend	28.42	721.8	30.10	764.5	62.2	16.8	42	N	9	4			0						Michelson.
Barnaul			30.35	770.9	29.3	— 1.5	66	Calm	0	0			8						Meteorological Obs.
Yeniseisk			30.07	763.6	28.8	— 1.8	78	S	2	1			10					Snowing	Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.83	757.6	53.1	11.7	41	Calm	0	0			9						Physical Observatory.
Nertchinsk	27.80	706.0	29.95	760.7	23.7	— 4.6	90	N	9	4			10			Blank	Blank		Meteorological Obs.
Vladivostock			30.25	768.4	34.7	1.5	59	SE	16	7			1						
Nikolaievsk, on the Amoor					20.5	— 6.4	95	E	4	2			9						

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 305.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.57	751.0	49.1	9.5	56	W	20.1	9.00		2	3	W		0	0	Cloudy	Royal Observatory.
San Fernando			29.74	755.4	57.6	14.2	69	WSW	9.6	4.3			0		WSW	0.173	4.4		The Naval Observatory.

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.02	762.4	12.9	—10.6	59	S			2		0			0	0		
Umea			30.00	762.1	20.1	— 6.6	73	S			2		3			0	0		
Hernosand			29.99	761.8	30.2	— 1.0	96	SW			2		1			0	0		
Stockholm			29.99	761.8	27.7	— 2.4	44	N			2		0			0	0		
Wisby			30.07	763.6	27.7	— 2.4	96	NE			4		5			0	0		
Sub-Series.																			
Upsala			30.04	762.9	29.1	— 1.6	58	NW	8.5	3.8			0			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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Geneva	28.02	711.7	29.48	748.7	43.5	6.4	80	ENE			1		10			0	0	Covered	The Observatory.
Zurich	27.80	706.0	29.52	749.8	40.5	4.7	84	NW			1		10			0	0	Raining	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —12.7 mm.; Thermometer, —2.6 cent.; Relative Humidity, +21 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Constantinople			29.98	761.6	57.9	14.4	73	S	2	1.0			0			0	0		
Fao, (Persian Gulf)			30.10	764.6	73.4	23.0		SE			3		5						
Salonica			29.97	761.3	68.9	20.5		N			1		0						
Valona			29.65	753.2	77.4	25.2		S			3		10						
Varna			29.96	761.0	59.0	15.0		N			1		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.86	758.4	73.0	22.8	80	SW			3		3cs			0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Bathurst, N. B.			30.28	769.1	23.7	— 4.6	67	NW								0	0		Hon. J. Ferguson.
Brockville, Ontario			30.06	763.5	25	— 3.9		NE	8	3.6			10s		NE	0.10	2.5	Light snow	W. R. Bigg.
*Chatham, N. B.			30.37	771.4	14	—10.0	89	W	1	0.4		0	0			0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island			30.35	770.9	28	— 2.2	70	NW	5	2.2		0	0			0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			30.04	763.0	22.0	— 5.6	87	NE			1		10s			0	0	Threatening	James Smith, M. A.
Dalhousie, N. B.			30.33	770.4	9.0	—12.8	89	W			1					0	0		H. A. Johnson.
Esquimault, B. C.			29.61	752.1	37.1	2.8	91	SW	5	2.2		1cs	0			0	0	Clear	W. H. Bevis.
Fredericton, N. B.			30.37	771.4	11.6	—11.3	98	N	1	0.4						0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			30.06	763.5	18	— 7.8	100	N	9	4.0			10n			0	0	Cloudy	James Stewart.
Goderich, Ontario			29.50	749.3	35.2	1.8	91	E			4		10n			0	0	Threatening	H. J. Strang, M. A.
Granton, Ontario			29.54	750.3	33.0	0.6		E			1		10n			0.80	20.3	Snowing	James Grant.
*Halifax, N. S.			30.33	770.4	33	0.6	94	NW	4	1.8		0	2ks		S	0	0	Fair	F. Allison, M. A.
*Kingston, Ontario			29.99	761.7	24	— 4.4	95	NE	15	6.7			10n		NE	0.13	3.3	Light snow	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			30.17	766.3	19	— 7.2	84	E	8	3.6			10n		E	0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.08	764.0	22	— 5.6	79	NE	18	8.0			10n		NE	Inap.	Inap.	Light snow	J. B. Haney.
*Parry Sound, Ontario			29.79	756.7	29	— 1.7	85	E	28	12.5		5k	5ks	E	E	0	0	Threatening	Rev. R. Mooley.
*Port Dover, Ontario			29.60	751.8	35	1.7	95	E	10	4.5			10n		E	0.44	11.2	Light rain	H. Morgan.
Port Hastings, N. S.			30.27	768.8	29.4	— 1.4		NW	3	1.3						0	0	Fine	Peter Grant.
*Port Stanley Ontario			29.53	750.0	36	2.2	90	E	16	7.2			10n		E	0.50	12.7	Heavy rain	M. Payne.
*Quebec, Quebec			30.30	769.6	18	— 7.8	84	N	3	1.3			10n			0	0	Cloudy	Capt. Ash, R. N.
St. John, N. B.			30.35	770.9	25.0	— 3.9	87	Calm	0	0						0	0		G. Murdoch, C. E.
*Saugeen, Ontario			29.61	752.1	29	— 1.7	89	E	14	6.3			10s			0.02	0.5	Heavy snow	K. Stewart.
Stayner, Ontario			29.70	754.4	29	— 1.7	94	SE	6	2.7			10n		SE	0.19	4.8	Light snow	R. J. Cole.
Stratford, Ontario			29.58	751.3	32.7	0.4	89	SE	15	6.7			10s			0.23	5.8	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			30.36	771.7	31	— 0.6	84	SW	8	3.6		Haze	5ks		SW	0	0	Fair	T. C. Hill.
*Toronto, Ontario			29.70	754.4	33	0.6	95	E	28	12.5			10n		E	0.50	12.7	Cloudy	Magnetic Observatory
Woodstock, Ontario			29.57	751.1	32.9	0.5	97	Calm			0		10s			0.38	9.7	Raining	J. Montgomery

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	31	— 0.6	100	Calm	0	0			10n			0.15	3.8	Heavy snow	
Alpena, Mich.			29.62	752.3	28	— 2.2	100	NE	28	12.5			10n			0.01	0.3	Heavy snow	
Atlantic City, N. J.			29.87	758.7	42	5.6	100	SE	30	13.4			10n			0.23	5.8	Light rain	
Augusta, Ga.			29.66	753.4	61	16.1	97	SW	7	3.1			10n		SW	0.56	14.2	Light rain	
Baltimore, Md.			29.75	755.6	44	6.7	92	NE	7	3.1			10n		E	1.33	33.8	Light rain	
Barnegat, N. J.			29.90	759.4	40	4.4	100	SE	40	17.9			10n		SE	0.36	9.1	Light rain	
Benton, Montana	27.06	687.3	29.86	758.4	20	— 6.7	100	SW	1	0.4		0	0			0	0	Clear	
Bismarck, Dakota	28.18	715.8	29.90	759.4	24	— 4.4	61	NE	6	2.7			10ks			0.03	0.8	Cloudy	
Boston, Mass.			30.26	768.6	33	0.6	89	E	10	4.5		10s	Fog	E		0	0	Threatening	
Breckenridge, Minn.			29.88	758.9	28	— 2.2	94	N	16	7.2			10s			Inap.	Inap.	Cloudy	
Buffalo, N. Y.			29.60	751.8	39	3.9	72	E	4	1.8			10s			0.43	10.9	Cloudy	
Burlington, Vt.			30.17	766.3	27	— 2.8	100	S	1	0.4			10n			0.05	1.3	Light snow	
Cairo, Ill.			29.68	753.9	40	4.4	73	W	12	5.4			10s		W	0.77	19.6	Cloudy	
Cape Hatteras, N. C.			29.76	755.9	64	17.8	78	SE	36	16.1			10ks		SW	0.43	10.9	Cloudy	
Cape Henry, Va.			29.78	756.4	51	10.6	97	SE	18	8.0			10n		SE	0.61	15.5	Light rain	
Cape May, N. J.			29.84	757.9	45	7.2	100	SE	24	10.7			10n			0.56	14.2	Light rain	
Charleston, S. C.			29.76	755.9	63	17.2	88	S	14	6.3			10s		S	0.06	1.5	Cloudy	
Cheyenne, Wyoming	23.72	602.5	29.66	753.4	25	— 3.9	88	NW	28	12.5			10s		NW	0.01	0.3	Cloudy	
Chicago, Ill.			29.33	745.0	34	1.1	90	N	10	4.5			10n			0.69	17.5	Light snow	
Cincinnati, Ohio			29.43	747.5	43	6.1	66	SW	15	6.7			10s			0.83	21.1	Cloudy	
Cleveland, Ohio			29.41	747.0	40.3	4.6	85	SE	19	8.5			10ks		SW	0.47	11.9	Cloudy	
Colorado Springs, Col.	23.79	604.3	29.66	753.4	31	— 0.6	29	NW	28	12.5		0	0			0.01	0.3	Clear	
Corsicana, Tex.			29.80	756.9	44	6.7	83	Calm	0	0		5k	0	SW		0	0	Fair	
Davenport, Iowa			29.58	751.3	32	0.0	89	NW	12	5.4		2ck	5s	NW	NW	0.83	21.1	Fair	
Denison, Tex.			29.75	755.6	45	7.2	84	NE	1	0.4		0	2s			0.03	0.8	Fair	
Denver, Col.	24.55	623.6	29.77	756.1	32	0.0	40	W	8	3.6		0	0			0.03	0.8	Clear	
Detroit, Mich.			29.46	745.7	38	3.3	100	E	10	4.5			10n		E	1.11	28.2	Light rain	
Dodge City, Kan.	27.16	689.8	29.48	748.8	33	0.6	100	N	16	7.2			Fog			0.01	0.3	Foggy	
Dubuque, Iowa			29.60	751.8	33	0.6	69	NW	12	5.4			10s			0.60	15.2	Cloudy	
Duluth, Minn.			29.87	758.7	29	— 1.7	67	Calm	0	0		5k	2s			0.08	2.0	Fair	
Eastport, Me.			30.32	770.1	29	— 1.7	78	N	4	1.8		Haze	Haze			0.01	0.3	Clear	
Erie, Pa.			29.46	748.3	40	4.4	73	SE	36	16.1		2k	8ks	SW	S	0.54	13.7	Threatening	
Escanaba, Mich.			29.72	754.9	32	0.0	79	N	24	10.7			10s			0	0	Cloudy	
Fort Gibson, Indian Terr.			29.81	757.2	39	3.9	72	N	8	3.6			10s			Inap.	Inap.	Cloudy	
Ft. St. Michaels, Alaska			30.50	774.7	—11	—23.9		Calm	0	0		0	10s			0	0	Fair	
Fort Sill, Indian T.	28.58	725.9	29.70	754.4	39	3.9	80	N	8	3.6		0	8ks		N	0	0	Cloudy	
Fort Sully, Dakota	28.18	715.8	29.89	759.2	31	— 0.6	89	N	12	5.4			10n			Inap.	Inap.	Light snow	
Galveston, Tex.			29.91	759.7	58	14.4	76	E	4	1.8		0	0			0	0	Clear	
Grand Haven, Mich.			29.40	746.7	32	0.0	100	NE	15	6.7			10n		NE	0.14	3.6	Light snow	
Indianapolis, Ind.			29.42	747.3	39	3.9	91	SW	11	4.9			10s		SW	1.28	32.5	Threatening	
Indianola, Tex.			29.81	757.2	62	16.7	88	Calm	0	0		0	0			0	0	Clear	
Jacksonville, Fla.			29.77	756.1	65	18.3	90	S	14	6.3			10n		S	0.10	2.5	Light rain	
Keokuk, Iowa			29.50	751.8	33	0.6	89	NW	12	5.4			10s		NW	1.18	30.0	Threatening	
Key West, Fla.			29.92	760.0	74.8	23.8	76	S	12	5.4		1k	Haze	S	S	0	0	Hazy	
Kittyhawk, N. C.			29.78	756.4	58	14.4	88	S	34	15.2			10s		S	0.50	12.7	Cloudy	
Knoxville, Tenn.			29.53	750.0	53	11.7	93	SW	12	5.4			10n		SW	0.62	15.7	Light rain	
La Crosse, Wis.			29.72	754.9	31	— 0.6	89	NW	11	4.9			10n		NW	0.27	6.9	Light snow	
Leavenworth, Kan.			29.77	756.1	35	1.7	80	N	9	4.0			10s			0.44	11.2	Cloudy	
Lexington, Ky.	28.45	722.6	29.54	750.3	43	6.1	75	SW	20	8.9			10s			1.16	29.5	Cloudy	
Long Branch, N. J.			29.94	760.5	39	3.9	100	SE	45	20.1			10n			0.45	11.4	Heavy rain	
Louisville, Ky.			29.51	749.5	41	5.0	74	SW	13	5.8			10s		SW	0.84	21.3	Cloudy	
Lynchburg, Va.			29.62	752.3	43	6.1	95	NE	1	0.4			10n			1.33	33.8	Heavy rain	
Malone, N. Y.			30.02	762.5	30	— 1.1	78	S	1	0.4			10s			0	0	Cloudy	
Manhattan, Kan.	28.63	727.2	29.79	756.7	34	1.1	90	NE	2	0.9			10s			0.10	2.5	Cloudy	
Marquette, Mich.			29.81	757.2	33	0.6	80	N	4	1.8			10s			0	0	Cloudy	
Memphis, Tenn.			29.73	755.1	45	7.2	76	W	4	1.8			10ks			0.45	11.4	Cloudy	
Milwaukee, Wis.			29.50	749.3	30	— 1.1	100	N	24	10.7			10n			1.06	26.9	Light snow	
Mobile, Ala.			29.7[illegible]	755.6	56	13.3	93	Calm	0	0		5c	Sm'e	NW		0.82	20.8	Fair	
Montgomery, Ala.			29.71	754.6	57.5	14.2	95	SW	6	2.7			10ks		W	0.78	19.8	Cloudy	
Morgantown, W. Va.			29.49	749.0	47	8.3	69	SE	6	2.7		5c	5s	SW	SW	0.35	8.9	Cloudy	
Mt. Washington, N. H.	23.68	601.5	30.04	763.0	12	—11.1	100	SW	24	10.7			10n		SW	0.06	1.5	Light snow	
Nashville, Tenn.			29.51	752.1	46	7.8	69	[illegible]	8	3.6			10s		W	0.74	18.8	Cloudy	
New Haven, Conn.			30.10	764.5	33	0.6	90	E	18	8.0			10n			Inap.	Inap.	Heavy snow	
New London, Conn.			30.17	766.3	33.5	0.8	95	E	16	7.2			10n			Inap.	Inap.	Light snow	
New Orleans, La.			29.78	756.4	54.5	12.5	80	W	4	1.8		0	0			1.07	27.2	Clear	
Newport, R. I.			30.20	767.1	35	1.7	90	E	12	5.4			10n		E	0.04	1.0	Light snow	
New York, N. Y.			30.[illegible]	762.0	35	1.7	100	NE	24	10.7			10n		E	0.28	7.1	Light rain	
Norfolk, Va.			29.75	755.6	58	14.4	88	S	18	8.0			10s		S	0.46	11.7	Threatening	
North Platte, Neb.	26.88	682.7	29.50	749.3	30	— 1.1	100	NE	4	1.8			10n			0.03	0.8	Light snow	
Omaha, Neb.	28.72	729.5	29.80	756.9	34	1.1	84	N	10	4.5		8ck	0	N		0	0	Cloudy	
Oswego, N. Y.			29.86	758.4	32	0.0	89	SE	16	7.2			10n			Inap.	Inap.	Light snow	
Pembina, Dakota			30.03	762.7	18	— 7.8	100	NW	20	8.9			10s			0.04	1.0	Cloudy	
Philadelphia, Penn.			29.86	758.4	40	4.4	100	E	14	6.3			10n		E	0.65	16.5	Light rain	
Pike's Peak, Colorado	17.25	438.1	29.46	748.3	—10	—23.3	78	NW	40	17.9		0	8s			0.08	2.0	Fair	
Pittsburgh, Penn.			29.53	750.0	40	4.4	80	E	6	2.7		5k	0			0.62	15.7	Fair	
Port Huron, Mich.			29.40	746.7	35	1.7	90	SE	9	4.0			10n			0.46	11.7	Light rain	
Portland, Me.			30.31	769.9	30	— 1.1	78	NE	4	1.8			10s			0	0	Cloudy	
Portland, Oregon			29.82	757.4	40	4.4	82	NW	8	3.6			10n			0.20	5.1	Light rain	
Punta Rassa, Fla.			29.90	759.4	71.6	22.0	85	SE	18	8.0		Haze	5ks	NW	SE	0	0	Threatening	
Rochester, N. Y.			29.73	755.1	32	0.0	100	SE	16	7.2			10s			0.15	3.8	Cloudy	
Salt Lake City, Utah																			
Sandy Hook, N. J.			29.95	760.7	39	3.9	100	E	34	15.2			10n		SE	0.35	8.9	Light rain	
San Diego, Cal.			29.98	761.5	57	13.9	76	E	4	1.8			10s			0	0	Cloudy	
San Francisco, Cal.			29.98	761.5	49	9.4	78	W	12	5.4		0	0			0	0	Clear	
Santa Fe, N. M.	23.05	585.5	29.59	751.6	29	— 1.7	78	NW	4	1.8		2k	2s	NW		0.03	0.8	Clearing	
Savannah, Ga.			29.74	755.4	64	17.8	83	SW	16	7.2			10s		SW	0.17	4.3	Cloudy	
Shreveport, La.			29.84	757.9	43	6.1	92	Calm	0	0		0	0			0	0	Clear	
Smithville, N. C.			29.75	755.6	61	16.1	94	SW	18	8.0			10n		SW	0.36	9.1	Heavy rain	
Springfield, Mass.			30.16	766.1	33	0.6	79	NE	4	1.8			10n			0.10	2.5	Light snow	
St. Louis, Mo.			29.64	752.8	36	2.2	79	NW	16	7.2			10s			1.02	25.9	Cloudy	
St. Marks, Fla.			29.74	755.4	64	17.8	94	SW	15	6.7			10s		SW	1.88	47.8	Cloudy	
St. Paul, Minn.			29.76	755.9	32	0.0	99	S	8	3.6		8ck	2s	NW		0.01	0.3	Cloudy	
St. Paul's Island, Alaska			30.79	782.1	9	—12.8	78	NNW	16	7.2		0	1k			0.01	0.3		
Thatcher's Island, Mass.			29.27	768.8	37	2.8	62	SE	9	4.0			10s		SE	0	0	Cloudy	
Toledo, Ohio			29.34	745.2	41	5.0	91	S	3	1.3			10s		S	0.50	12.7	Cloudy	
Tucson, Arizona	27.45	697.2	30.01	763.0	46	7.8		SE				0	0			0	0	Clear	
Tybee Island, Ga.			29.71	754.6	60	15.6	88	S	14	6.3			10ks		SW	0.24	6.1	Threatening	
Vicksburg, Miss.			29.82	757.4	48.5	9.2	80	NW	4	1.8		0	0			0.75	19.1	Clear	
Virginia City	23.94	608.1	29.42	747.3	21	— 6.1	71	Calm	0	0		8ck	0	W		Inap.	Inap.	Cloudy	
Washington, D. C.			29.68	753.9	41	10.6	100	SE	8	3.6			10n		SE	1.20	30.5	Heavy rain	

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Wilmington, N. C			29.76	755.9	61	16.1	100	S	20	8.9			10n		S	0.38	9.7	Light rain	
Wood's Holl, Mass			30.23	767.8	37	2.8	71	SE	6	2.7			10s		SE	0	0	Cloudy	
Wytheville, Va	27.25	692.1	29.34	745.2	46	7.8	92	Calm	0	0			10s			0.54	13.7	Cloudy	
Yankton, Dakota	28.59	726.2	29.92	760.0	31	− 0.6	84	NW	7	3.1			10s			0	0	Cloudy	
Yuma, Arizona			29.92	760.0	56	13.3		Calm				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I			29.98	761.5	80	26.7	78	NE	6	2.7		5c	8s	NE	SE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.93	760.2	71	21.7	71	NE				10k	0			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.18	766.6	76	24.4	72	NNE	6	2.7		4c	8kn	NE		0	0	Cloudy	W. S. Cameron.
Kingston, Jamaica, W. I			30.13	765.3	75	23.9	76	SE	3	1.3		2k	2s	SE	SE	0	0		James Gall.
Santiago de Cuba, W. I			29.76	755.9	75	23.9	69	Calm	0	0		8ck	4s	S	S	0	0	Fair	Robert Mason.
Havana, Cuba, W. I			29.93	760.2	74	23.3	85	SE	3.6	1.6		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			30.24	768.1	61.5	16.4	66	NE	12.0	5.4			10k		NE	0	0	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Navassa, W. I																			
Clifton, Jamaica, W. I	27.15	689.6	29.98	761.5	58	14.4	87	S	3.0	1.3		0	0			0.27	6.9	Fine, clear	C. Partridge.
Paramaribo, D. Guiana, S. A			29.94	760.5	82	27.8	71	E			2		5k			0	0	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.00	761.9	77.0	25										0	0		Dr. H. Groot.
Medellin, Colombia, S. A	25.16	639.1			63.0	17.2	79		0	0		5ck	4s			0.10	2.5	Cloudy	Thomas Herran.
St. Johns, Newfoundland			30.32	770.1	32.0	0.0		N				5k	10n			0	0	Cloudy	John Delaney.
York Factory, B. A			29.40	772.1	−20	−28.9		N	21	9.4		6c	3s	N		0.07	1.8		J. Fortescue.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, also 2,892 ft., or 881.5 m.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,263.8 ft., or 1,301.1 m.; Santa Fé, 6,862.3 (?) ft., or 2,091.6 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used incorrecting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 26, 1876,

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.66	753.3	63.7	17.6	49	Calm			0		3			0	0	Fair	Charnot.
Algiers			29.68	753.9	61.5	16.4	66	NNE			1		5			0	0	Fair	Peter.
La Calle																			Kuntz.
Tunis			29.82	757.4	70.9	21.6	27	W			3		2			0	0	Clear	Jacques.
Sfax			29.88	759.0	68.0	20.0	46	S			5		1			0	0	Clear	Chauvey.
Saida			29.79	756.6	57.4	14.1		S			4		2			0.079	2.0	Clear	Millot.
Tebessa			29.81	757.2	67.6	19.8		W			3		0			0	0	Clear	Colin.
Gerlville			29.89	759.2	59.5	15.3	39	S			4		3			0	0	Fair	Buard.
Laghouat			29.88	758.9	66.2	19.0	54	NW			3		0			0	0	Clear	Guyot.
Biskra			29.83	757.6	81.1	27.3	16	NW			1		2			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.43	747.6	54.9	12.7	51	SW			5		8			0.031	0.8		Prof. Ivan Stosir.
Buda-Peath																			I. R. Cen. M. I., Hungary
Cracow			29.36	745.8	54.7	12.6	70	W			1		10			0	0		I. R. Observatory.
Eperies			29.40	746.7	59.0	15.0	60	S			4		10		N	0	0		Julius Mikolik.
Gratz	28.14	714.8	29.32	744.7	53.2	11.8	65	NW			5		10			0.248	6.3		Andreas Rospini.
Hermannstadt	28.15	715.0	29.51	749.6	66.9	19.4	32	SSE			5		10			0	0		Prof. Reissenberger.
Kremsmünster	28.01	711.5	29.36	745.8	39.2	4.0	90	W			3		10			1.161	29.5		Prof. C. Wagner.
Lemberg			29.39	746.6	62.2	16.8	69	S			1		5			0.008	0.2		Dr. T. Stanecki.
Nyiregyhaza			29.47	748.4	62.6	17.0	70	SW			5		4			0.018	0.45		Habsauda Daniel.
Pola			29.48	748.9	53.2	11.8	81	S			4		10s			0.104	2.64		I. R. Hydrographic Office
Szegedin			29.47	748.4	65.5	18.6	34	S			3		5			0	0		Karl Stancel.
Trieste			29.49	749.0	48.9	9.4	91	SW			1		10			0.913	23.2	Raining	Prof. V. Farolfi.
Vienna			29.24	742.8	58.3	14.6	50	SSE			3		7			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.53	750.0	37.4	3.0	77	NNE			2		10			0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.61	752.1	38.0	3.3		S	19	8.5			10			0.070	1.78	Raining	William Boswell.
Ardrossan																			J. Mayes.
Armagh Observatory			29.63	752.6	41.7	5.4		S	8	3.6									S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			29.62	752.3	40.0	4.4		ESE	11	4.9			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.61	752.1	39.4	4.1		Calm			0		10					Overcast	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			29.96	761.0	80.0	26.7		NE			2		6					*D. coluds	Sergt. G. H. Hunt.
Cambridge Observatory			29.65	753.1	34.5	1.4		NE			2		10					Overcast	H. Todd.
Cardington			29.63	752.6	39.6	4.2		E			2		10					Overcast	John McLaren.
Carlisle			29.62	752.3	42	5.6		E			2		10			0	0	Overcast	. Bell, for J. Cartmell.
Chatham, School M. E.			29.79	756.7	45.2	7.3		NE			2		5					*D. clouds	Ca t. J. Fellowes, R. E.
Dartmoor	28.11	714.0	29.65	753.1	35.4	1.9		E			7		10					Threatening	R. E. Power.
Donaghadee			29.61	752.1	44	6.7		S			3		3					*D. clouds	J. Mac Gowan.
Dover			29.57	751.1	38	3.3		ENE			4		7					¾ clouded	J. Costello.
Eccles, (near Manchester)			29.63	752.6	38.8	3.8		E	3.8	1.7			10					Gloomy	Thomas Mackereth.
Falmouth Observatory			29.53	750.0	42.9	6.1		ENE	28	13.5			8					Overcast	The Staff.
Fort Napier, (Natal)	27.71	703.8	29.95	760.7	77.6	25.3		E			1		8					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone			29.83	757.7	87.0	30.6		N			0		5					*D. clouds	[tis.
Galway, Queen's College			29.70	754.4	48	8.9		E			1		2					*D. clouds	B. G. Clare, for Prof. Cur.
Gibraltar, (Mediterranean)			29.58	751.3	62.0	16.7		E			4		10					Gloomy	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.61	752.1	40.4	4.7		S			1		10					Gloomy	Lewis Stuart.
Great Yarmouth			29.64	752.8	37	2.8		E			4		6					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			29.60	751.8	39.3	4.1		ENE			1		10					Overcast	The Staff for G. B. Airy.
Guernsey			29.51	749.5	42.5	5.8		NE			2		7					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.68	753.9	36.7	2.6		ESE			2		10					Threatening	L. J. Cr-sley.
Helston			29.51	749.5	49	9.4		E			6		6k			0	0	Fine	M. P. Moyle.
Holyhead			29.59	751.6	44	6.7		SSE			2		4					Gloomy	John Tilston.
Kew Observatory			29.61	752.1	38.5	3.6		ENE	17	7.6			10					*D. clouds	The Staff.
Kingstown			29.63	752.6	42	5.6		E			3		7					*D. clouds	George Mitchell
Leicester Museum			29.63	752.6	39.5	4.2		E			1		6					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.88	758.9	63.2	17.3		NW			2		2k						Fred Travis, Pvt A.H.C.
Nairn			29.55	750.6	37	2.8		Calm			0		10					Drizzling	W. D. Penny.
Nassau, (Bahamas)			30.03	762.7	69.6	20.9		SE			4		10					Raining	Surg.-Maj. Henry.
Nottingham			29.64	752.8	39.6	4.2		SE			3		10k		E	0	0	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.63	752.6	38.0	3.3		ENE			2-3		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.58	751.3	39	3.9		E			2		10					Overcast	J. Lucas.
Plymouth			29.55	750.6	42.3	5.7		ENE			4		10					Gloomy	John Merrifield.
Roche's Point			29.59	751.6	41	5.0		ESE			5		10					Overcast	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			29.48	748.8	44.0	6.7		E			4		10					Overcast	A. P. Amy.
Sandwick Manse (Orkneys			29.53	750.0	37.3	2.9		NW	10	4.5			2					*D. clouds	Rev. Dr. Clouston.
Scarborough																			F. Shaw.
Scutari Cemetery (Turkey			29.78	756.4	63.0	17.2		Calm			0		10					Gloomy	Sergt. W. H. Lyne.
Sheffield			29.63	752.6	40.0	4.4		E			1		10			0	0	Overcast	W. F. Cooper.
Silloth Rectory			29.62	752.3	44.5	6.9	69	E			1		7			0	0	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			29.63	752.6	37.7	3.2		E			1		10					Gloomy	S. J. Perry.
Stornoway, Lews C. (Hebr.			29.55	750.6	48	3.3		NNW			1		5					*D. clouds	John Smith.
Strathfield Turgiss			29.59	751.6	49.0	9.4		E			1		10					Overcast	Rev Charles H. Griffith.
Streatley Vicarage																			Rev. John Slater.
Thurso			29.53	750.0	41	5.0		NNW			2		7					*D. clouds	John Trott r.
Truro, Royal Institution			29.55	750.6	46	7.8		E			6		8					Gloomy	W. Newcome.
Valencia Observatory			29.57	751.1	45.2	7.3		E	9	4.0			9					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					42	5.6		E			3		5			0	0		The Staff, for E. J. Stone.
Cape Good Hope Obs.			29.94	760.5	80.0	26.7	50	S	17	7.6			10						Andrew Gibb.
Leith, Restalrig Park			29.63	752.6	39.5	4.2		SW			2		10s			0	0	Overcast	
Mauritius			29.98	761.5				E								0.07	1.8		J. Youngclause.
Monach Lt-house, Hebrides																			
North Unst, (Shetland Is.)			29.46	748.3	39	3.9		S			4		10			Blank	Blank		

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.73	755.1	32.7	0.4	82	ENE			6		10						
Fanöe			29.76	755.8	31.8	— 0.1	87	ENE			6		10						
Godthaab, (Greenland)			30.09	764.3	39.6	4.2	84	S			4		8						
Stykkisholm, (Iceland)			30.28	769.1	22.5	— 5.3	100	E			6		0						
Thorshavn, (Faröe)			29.47	748.4	34.0	1.1	92	NNE			6		10					Snowing	
Vestervig			29.76	756.0	33.4	0.8	68	E			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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.54	750.3	46.4	8	89	NE			1		8ck		NE	0.197	5.0	Véry cloudy	Normal School.
Amiens			29.65	753.2	45.7	7.6	77	NW			1		10			0	0	Covered	Normal School.
Avignon			29.54	750.3	59.7	15.4	56	NW			2		2		W	0	0	Fine	Normal School.
Bar-sur-Seine			29.47	748.5	46.4	8.0	71	ENE			2		10			0	0	Covered	C. Saillard.
Beaumette, (near Angers)			29.45	747.9	55.2	12.9	70	SSW	2.7	1.2					S	0	0		Beaumette Observatory
Beauvais			29.56	750.8	41.0	5	70	NE			2		8		NE	0	0	Very cloudy	Normal School.
Besançon			29.52	749.8	46.4	8	86	SSW			2		8		SW	0	0	Very cloudy	Normal School.
Bourg en Bresse			29.60	751.7	48.0	8.9	81	SE			2		..n		N				Normal School.
Bourges			29.64	752.9	47.7	8.7	86	W			2		2		W	0	0	Slightly cl'dy	Normal School.
Brest			29.39	746.5	49.5	9.7	69	E			2		9		S	0.010	0.25	Misty.	Naval Observatory.
Caen																			Normal School.
Chartres			29.50	749.4	46.0	7.8		NNE			2		1		E	0	0		Normal School.
Chaumont																			Normal School.
Clermont			29.51	749.5	52.9	11.6	68	W			2		8			0.114	2.9		Puy de Dome Obs.
Commiercy			29.95	760.6	39.9	4.4	86	E			2		10n		E	0	0	Covered	Normal School.
Commune de Gréasque*			29.57	751.0	56.7	13.7	57	NW			2		2		W	0.579	14.7		
Grenoble			29.56	750.8	50.5	10.3	74	NW			1		10kn		NE	0.197	5.0	Covered	Normal School.
Le Mans			29.51	749.6	46.4	8	72	E			3		2		S	0	0	Slightly cl'dy	Normal School.
Loches			29.28	743.7	46.4	8	76	E			2		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			29.88	759.0	47.3	8.5	84	SSW			Var.		8		SW	0	0	Very cloudy	Normal School.
Mâcon			29.51	749.5	46.8	8.2	86	Calm			0		10			0	0	Covered	Normal School.
Mirecourt																			Normal School.
Metz			29.58	751.3	40.1	4.5	74	NNW			3		10			0	0		M. Schuster.
Nismes			29.76	755.9	61.5	16.4	47	W			2		10		S	0	0	Covered	Normal School.
Orleans			29.48	748.7	49.6	9.8	69	N			3		2		N	0	0	Slightly cl'dy	Normal School.
Paris Observatory			29.52	749.9	44.4	6.9	61	NE			1		8			0	0	Almost cov'd	National Observatory.
Parthenay			29.41	747.1	54.5	12.5	49	SE			2		0			0	0	Clear	Normal School.
Privas			29.51	749.6	53.2	11.8		S			2		5		S	0	0	Cloudy	Normal School.
La Roche-sur-Yon			29.47	748.5	55.8	13.2	64	..			2		5		W	0	0	Cloudy	Normal School.
Rochefort, Observatory			29.47	748.5	58.3	14.6	70	SE			3		2		NW	0	0	¼ covered	Naval Observatory.
Rouen			29.53	750.1	43.2	6.2	70	NNE			2		10		E	0	0	Covered	Normal School.
Saint Lo			29.50	749.4	38.3	3.5	90	E			1		9		E	0	0		Normal School.
Tarbes			29.40	748.2	57.2	14	22	S			1		0			0	0	Clear	Normal School.
Toulouse																			Normal School.
Villefranche			29.60	751.7	51.8	11	81	SE			2		10			0	0	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.89	759.1	77.4	25.2	74	NE			2		2k						L'Abbé Marchési.
Gorée																			
Marseilles			29.54	750.4	54.9	12.7	66	W-			2		0			0.394	10.00	Clear	Marseilles Observatory.
Mont-Louis	24.41	620.0	29.72	754.9	40.8	4.9	75	SSW	20.5	9.17			2		SW	0	0		—. Falguère.
Montsouris, Paris			29.52	749.7	44.8	7.1	59	N			2		10			0	0		Montsouris Observ'tory.
Perpignan			29.53	750.0	58.3	14.6	48	E	11.2	5.00			10			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P†																			M. Baylac.
Pic du Midi, (Plantade)	22.03	559.6			32.0	0.0		SW			3		2					Clear	General de Nansouty.
Saint Maur, (near Paris)			29.52	749.8	46.2	7.9	65	ENE			1		7			0	0	Very cloudy	E. Renou.
Toulouse			29.56	750.7	56.7	13.7	60	SSE			1		0			0	0		Toulouse Observatory.
Tours			29.50	749.2	52.3	11.3	56	SE			1		1		W	0	0		C. Marquet.
Versailles, (near Paris)			29.51	749.6	46.4	8.0	67	NE			2		10			0	0	Slightly cov.	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai																			H. Le Lec, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Near Marseilles. † Summit inaccessible.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.33	744.9	37.0	2.8	82	NE			5		10			0.012	0.3	Rain & snow	Prof. T. Hoh.
Berlin			29.48	748.7	33.4	0.8	42	NE			2		10			0.327	8.3	Snow & rain.	Prof. Arndt.
Breslau			29.37	746.1	45.7	7.6	91	SE			2		10			0	0	Raining	Dr. P. Neugebauer.
Carlsruhe			29.48	748.8	38.1	3.4	87	NW			1		10			0.146	3.7		A. Senz.
Cassel			29.42	747.2	37.0	2.8	70	NE			4		10			0.012	0.3	Snowing	Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main			29.54	750.3	39.9	4.4	56	NE			4		10			0.004	0.1		Physical Society
Friedrichshafen	28.04	712.3	29.50	749.3	37.9	3.3	78	W					10			0.303	7.7	Rain & snow	M. Wilhelm.
Hamburg			29.61	752.0	34.9	1.6	76	NE			3		10			0	0	Light fog	Deutsche Seewarte.
Kiel			29.72	754.9	34.3	1.3	76	NE			5		10			0	0		Prof. G. Karsten.
Königsberg			29.61	752.0	33.6	0.9	88	E			2		9			0.161	4.1	Snowing	Prof. E. Luther.
Köslin			29.56	750.7	33.6	0.9		NE			5		10			0	0		H. Müller.
Leipsic			29.47	748.4	32.0	0.0	96	NNE			4		10	NE		0.193	4.9	Graupelnd	Prof. Bruhns.
Memel			29.64	752.8	34.0	1.1	83	ENE			5		10			0.055	1.4	Snowing	Reinbrecht & Skalweit.
Münster			29.57	751.0	37.0	3.1	85	NE			3		10			0.051	1.3	Snowing	Prof. E. Heis.
Neufahrwasser			29.59	751.5	32.7	0.4	94	NE			4		10			0.331	8.4		A. Lothes.
Posen			29.45	748.0	34.7	1.5	100	ENE			8		10			0.717	18.2		Dr. Magener.
Strasburg, (in Alsace)			29.51	749.5	39.2	4.0	97	Calm			0		10			0.035	0.9		Dr. Schur.
Stuttgart			29.46	748.3	37.9	3.3	78	W			2		10			0.118	3.0	Rain & snow	Prof. Schoder.
Thorn			29.46	748.3	36.5	2.5	98	ENE			5		10			0.556	14.1		Dr. Hasenbalg
Treves, (Trier)			29.45	747.9	39.7	4.3	72	ENE			3		10			0	0		Prof. Flesch.
Wustrow, Naval School			29.60	751.8	35.8	2.1	91	E E			6		5			0.035	0.9		E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Athens																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Udine			29.39	746.6	48.0	8.9	90	SSW	6.3	2.8			10			0.227	5.7	Raining	
Padua			29.41	747.0	49.8	9.9	87	SSW	12.5	5.6			10	WSW		0	0		
Vicenza			29.40	746.8	50.5	10.3	91	SSW	8.1	3.6			9	W		0.039	1.0		
Verona			29.49	749.0	50.0	10.0	87	E			2		10			0.287	7.3	Light rain	
Bergamo	28.06	712.7	29.39	746.5	50.0	10.0	87	S			2		9			0	0		
Domodossola	28.33	719.6	29.37	746.0	55.4	13.0	72	Calm			0		1			0	0		
Milan			29.42	747.2	51.3	10.7	84	W			1		10	NW		0	0		
Pavia			29.40	746.8	53.1	11.7	77	W			6		8	SW		0.650	16.5		
Moncalieri			29.43	747.6	48.4	9.1	71	ESE	4.9	2.2			4	E		0.118	3.0		
Mondovi	27.52	698.9	29.46	748.2	47.5	8.6	70	NNW			2		0			0	0		
Porto Maurizio			29.44	747.7	54.3	12.4		SSW			2		0			0	0		
Genoa			29.44	747.8	55.8	13.2	59	SE	2.5	1.1			4	SE		0.020	0.5		
Piacenza			29.42	747.2	49.6	9.8	79	E	0.7	0.3			10			0	0		
Parma			29.41	747.1	54.1	12.3	62	SSW			2		8			0	0		
Bologna			29.43	747.6	56.1	13.4	41	S			1		5	SE		0.472	12.0		
Florence			29.54	750.4	54.5	12.5	54	SW			6		10	SW		0	0		
Leghorn			29.52	749.8	56.5	13.6	65	WSW	17.4	7.8			9			0	0		
Siena	28.34	719.8	29.55	750.5	54.3	12.4	65	SSW	5.9	2.5			7	W		0	0		
Urbino	27.93	709.5	29.50	749.4	51.6	10.9	72	SW			6		10			0.374	9.5	Raining	
Pesaro																			
Ancona			29.56	750.7	57.2	14.0	55	S			6		4			0.083	2.1		
Grosseto			29.56	750.9	59.7	15.4	73	SSE			8		6	S		0.370	9.4		
Rome			29.68	753.9	57.2	14.0	62	SSW	16.8	7.5			10	SW		0	0		
Naples, O. U.			29.76	755.9	59.2	15.1	63	SW			8		10	WSW		0.165	4.2	Raining	
Lecce			29.76	755.8	60.4	15.8	40	NW	26.2	11.7			1			0	0		
Cosenza			29.85	758.2	60.8	16.0	77	NW	1.8	0.8			10			0.016	0.4		
Riposto, (Sicily)			29.84	757.8	61.2	16.2	63	SE			2		1			0	0		
Palermo			29.75	755.6	63.1	17.3	45	WSW	8.1	3.6			9			0	0		
Caltanissetta	27.86	707.7	29.81	757.2	54.1	12.3	50	W			6		4	E		0	0		
Sub-Series.																			
Naples, S. R.			29.77	756.2	54.0	12.2	76	SW	6.9	3.1			..ks	SW		0.110	2.8		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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Tokio																			

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Flushing			29.60	751.8	38.1	3.4		E			4								
Groningen			29.58	751.4	35.6	2.0		NE			4								
Helder			29.62	752.4	36.9	2.7		NE			4								
Utrecht			29.54	750.2	40.1	4.5	65	NE			4		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Bergen			29.81	757.2	37.4	3.0	50	S	12.1	5.4			0			0	0		
Brönö			29.74	755.3	35.6	2.0	51	S	18	8			3			0	0		
Christiania			29.90	759.5	31.6	— 0.2	52	SW	0	0			1			0	0		
Tromsö			29.59	751.5	29.3	— 1.5	72	NE	13	6			9			0.094	2.4		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.56	750.8	56.8	13.8	74	NNW	17.2	7.69			3			0.118	3.0		Dr. J. A. N. Sampaio.
Campo Major			29.52	749.9	58.6	14.8	50	SSW	14.0	6.25			9	SSW		0.036	0.9		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			29.56	750.7	60.8	16.0	86	W	8.0	3.58			9	W		0.193	4.9	Raining	Capt. D. A. da Cunha.
Lisbon			29.46	748.3	58.1	14.5	72	SSW	26.2	11.7			9	SSW		0.197	5.0		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.39	746.5	47.8	8.8	73	NE	9	4			10						Astronomical Obs.
Wilna			29.65	753.1	39.0	3.9	77	E	9	4			8						Astronomical Obs.
Dorpat			29.97	761.2	34.9	1.6	69	ESE	4	2			0						Physical Cabinet.
St. Petersburg			30.04	763.1	30.4	— 0.9	63	SE	7	3			7						Central Physical Obs
Kuopio			30.00	761.9	23.5	— 4.7	98	S	9	4			0						Ch. Forsten.
Kieff			29.68	753.9	58.8	14.9	52	SSE	20	9			10						Physical Cabinet.
Nikolaiev			29.92	760.0	59.0	15.0	53	SE	18	8			10						Kurdakof.
Kertch																			Lagorio.
Moscow			30.05	763.3	37.6	3.1	64	W	9	4			6						Meteorological Obs.
Lugan			29.88	758.9	63.3	17.4	47	ENE	9	4			4						Meteorological Obs.
Archangel			30.00	761.9	20.8	— 6.2	74	W	13	6			2						Ogorodnikof.
Tiflis	28.50	724.0	29.85	758.3	73.6	23.1	19	NW	4	2			1						Physical Observatory.
Astrakhan			30.21	767.3	58.6	14.8	38	SSE	7	3			9						Sebastianof.
Kasan			29.91	759.7	38.1	3.4	83	W	2	1			10						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.95	735.2	29.94	760.5	49.5	9.7	33	SSW	13	6			10						Meteorological Obs.
Nukuss			30.02	762.6	58.6	14.8	45	E	4	2			9						
Kassalv																			Bobrof.
Tashkend	28.50	724.0	30.23	767.7	51.8	11.0	66	NW	9	4			9						Michelson.
Barnaul			30.24	768.0	34.5	1.4	67	Calm	0	0			0						Meteorological Obs.
Yeniseisk			29.89	759.3	35.1	1.7	90	SW	9	4			6					Snow & rain.	Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.00	762.0	43.5	6.4	16	NNW	18	8			2						Physical Observatory.
Nertchinsk	27.63	701.9	29.77	756.2	24.1	— 4.4	62	NNE	25	11			10						Meteorological Obs.
Vladivostock			29.47	748.6	36.0	2.2	62	SE	25	11			10			Blank	Blank		
Nikolaievsk, on the Amoor					15.6	— 9.1	91	E	13	6			8						

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 305.4? m., or 1,095.2? ft.; Tashkend, m. 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.57	751.0	53.4	11.9	63	S	20.9	9.34			10			0.008	0.2	Covered	Royal Observatory.
San Fernando			29.58	751.3	58.6	14.8	75	SE	7.8	3.5			10		SE	0.307	7.8	Light rain	The Naval Observatory.

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	758.6	18.3	— 7.6	95	SW			2		5			0	0		
Umea			29.91	759.7	27.1	— 2.7	72	SW			2		7			0	0		
Hernosand			29.88	759.0	32.0	0.0	98	S			2		2			0	0		
Stockholm			29.90	759.5	27.7	— 2.4	55	E			2		0			0	0		
Visby			29.93	760.2	31.6	— 0.2	100	ENE			4		7			0	0		
Sub-Series.																			
Upsala			29.94	760.4	33.1	0.6	73	ESE	5.6	2.5			0			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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.12	714.1	29.56	750.9	46.0	7.8	73	SSW			2		6			0.228	5.8	Vapors	The Observatory.
Zurich	27.88	708.0	29.57	751.1	37.8	3.2	90	NW			1		10			0.748	19.0	Raining	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —10.2 mm.; Thermometer, —1.3 cent.; Relative Humidity, +14 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.85	758.3	70.2	21.2	37	ESE	6	2.5			10		SW	0	0		
Fao, (Persian Gulf)			30.14	765.5	73.8	23.2		SE			4		10						
Salonica			29.78	756.4	66.7	19.3		S			1		0						
Valona			29.67	753.7	63.0	17.2		SW			2		10						
Varna			29.80	757.0	50.0	10.0		NE			3		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.88	758.9	70.7	21.5	73	NW			1		0			0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.																			Hon. J. Ferguson.
Brockville, Ontario			29.61	752.1	29	— 1.7		Calm	0	0			10s			0.15	3.8	Light rain	W. R. Bigg.
*Chatham, N. B.			30.22	767.6	29	— 1.7	99	NE	9	4.0			10s		NE	0.24	6.1	Light snow	G. A. Blair.
Charlottetown, P. E. Island			30.26	768.6	22	— 5.6	80	SE	14	6.3			10s			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.57	751.1	30.7	— 0.7	92	E			1		10n			0.25	6.3	Snowing	James Smith, M. A.
Dalhousie, N. B.								E			6					0.10	2.5		H. A. Johnso.
Esquimault, B. C.			29.97	761.2	36.6	2.6	91	SW	5	2.2		2k				0.03	0.8	Rain & sleet	W. H. Bevis.
Fredericton, N. B.			30.04	763.0	30.0	— 1.1	93	SE	18	8.0			10n			0.55	14.0	Snowing	Prof. Harrison.
*Fort Garry, Manitoba			30.19	766.8	8	—13.3	96	NE	4	1.8			10n			0	0	Cloudy	James Stewart.
Goderich, Ontario			29.59	751.6	31.3	— 0.4	89	NW			2		10n			0.433	11.00	Threatening	H. J. Strang, M. A.
Granton, Ontario			29.54	750.3	30.1	— 1.1		SW			1		10n			Inap.	Inap.	Cloudy	James Grant.
*Halifax, N. S.			30.18	766.6	33	0.6	85	SE	20	8.9			10n			0	0	Cloudy	F. Allison, M. A.
*Kingston, Ontario			29.66	753.4	31	— 0.6	91	Calm	0	0			10s			0.12	3.0	Cloudy	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			29.51	749.5	30	— 1.1	95	E	12	5.4			10n			0.35	8.9	Light snow	C. H. McLeod, C. E.
*Ottawa, Ontario			29.53	750.0	30	— 1.1	78	E	2	0.9			10n			0.40	10.2	Light snow	J. B. Haney.
*Parry Sound, Ontario			29.56	750.8	28	— 2.2	96	N	8	3.6			10n		N	0.48	12.2	Light snow	Rev. R. Mooley.
*Port Dover, Ontario			29.57	751.1	33	0.6	94	S	6	2.7			10n		SW	0.42	10.7	Threatening	H. Morgan.
Port Hastings, N. S.																			Peter Grant.
*Port Stanley, Ontario			29.59	751.6	32	0.0	88	W	20	8.9			10n		W	0.35	8.9	Cloudy	M. Payne.
*Quebec, Quebec			29.66	753.1	28	— 2.2	100	NE	35	15.6			10n		NE	0.60	15.2	Heavy snow	Capt. Ash, R. N.
St. John, N. B.			30.04	763.0	31.0	— 0.3	89	E	14	6.3			10n			1.795	45.60		G. Murdoch, C. E.
*Saugeen, Ontario			29.51	749.5	30	— 1.1	89	Calm	0	0			10s			0.14	3.6	Heavy snow	K. Stewart.
Stayner, Ontario																0.16	4.1		R. J. Cole.
Stratford, Ontario			29.56	750.8	31.7	— 0.2	91	W	7	3.1			10s			0.096	2.44	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			30.43	772.9	31	— 0.6	85	SE	3	1.3			10s		SE	0	0	Cloudy	T. C. Hill.
*Toronto, Ontario			29.54	750.3	32	0.0	97	S	4	1.8			10n			0.54	13.7	Light snow	Magnetic Observatory
Woodstock, Ontario			29.53	750.0	31.6	— 0.2	99	W			1		10s			0	0	Fine	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.53	750.0	38	3.3	100	Calm	0	0			Fog			0.47	11.9	Foggy	
Alpena, Mich.			29.61	752.1	28	− 2.2	100	NW	8	3.6			10n			0.42	10.7	Light snow	
Atlantic City, N. J.			29.66	753.4	43	6.1	83	W	4	1.8		5c	5s	SW	SW	1.98	50.3	Cloudy	
Augusta, Ga.			29.86	758.4	52	11.1	66	NW	5	2.2		2k	5ks	W	W	0.01	0.3	Cloudy	
Baltimore, Md.			29.70	754.4	44	6.7	76	NW	3	1.3		2k	2s	W		1.08	27.4	Fair	
Barnegat, N. J.			29.63	752.6	44	6.7	75	W	11	4.9		8k	0	SW		4.39	111.5	Fair	
Benton, Montana	27.06	687.3	29.86	758.4	19	− 7.2	100	NW	16	7.2			10n		NW	0.27	6.9	Snowing	
Bismarck, Dakota	28.14	714.7	29.87	758.7	22	− 5.6	59	E	12	5.4			10s			0.01	0.3	Cloudy	
Boston, Mass.			29.51	749.5	46	7.8	100	S	8	3.6			Fog			2.91	73.9	Foggy	
Breckenridge, Minn.			30.08	764.0	15	− 9.4	91	N	8	3.6			10s			0	0	Cloudy	
Buffalo, N. Y.			29.54	750.0	33	0.6	89	SW	18	8.0			10s		SW	0.36	9.1	Cloudy	
Burlington, Vt.			29.51	749.5	36	2.2	100	Calm	0	0			10n			0.35	8.9	Light snow	
Cairo, Ill.			30.05	763.3	39	3.9	63	NW	4	1.8		5k	0	W		0	0	Fair	
Cape Hatteras, N. C.			29.64	752.8	55	12.8	87	N	15	6.7			8s		N	0.92	23.4	Cloudy	
Cape Henry, Va.			29.72	754.9	50	10.0	86	NW	4	1.8		2k	8s	NW	NW	0.79	20.1	Cloudy	
Cape May, N. J.			29.67	753.6	44	6.7	84	NW	4	1.8		0	8ks		W	2.47	62.7	Cloudy	
Charleston, S. C.			29.80	758.4	55	12.8	55	W	6	2.7		5c	0	W		Inap.	Inap.	Fair	
Cheyenne, Wyoming	23.97	601.2	29.61	752.1	24	− 4.4	88	W	8	3.6		0	8s			Inap.	Inap.	Cloudy	
Chicago, Ill.			29.88	758.9	30	− 1.1	68	NW	5	2.2		0	0			0.03	0.8	Clear	
Cincinnati, Ohio			29.83	757.7	36	2.2	70	W	8	3.6		8k	0	NW		0.01	0.3	Cloudy	
Cleveland, Ohio			29.64	752.8	31.4	− 0.3	89	W	20	8.9			10n		W	0.08	2.0	Light snow	
Colorado Springs, Col.	23.85	605.8	29.72	754.9	24	− 4.4	100	SE	4	1.8			10s			Inap.	Inap.	Cloudy	
Corsicana, Tex.			30.04	762.7	43	6.1	84	N	1	0.4		5c	0	W		0	0	Fair	
Davenport, Iowa			29.99	761.7	26	− 3.3	76	NW	12	5.4		0	0			0	0	Clear	
Denison, Tex.			30.06	763.5	42	5.6	83	N	4	1.8		0	0			0	0	Clear	
Denver, Col.	24.45	621.0	29.67	753.6	35	1.7	36	S	9	4.0		0	0			0	0	Clear	
Detroit, Mich.			29.63	752.6	31	− 0.6	79	NW	16	7.2			10n		NW	0.05	1.3	Light snow	
Dodge City, Kan.	27.44	696.0	29.76	755.9	33	0.6	89	SE	4	1.8			10s			0.13	3.3	Cloudy	
Dubuque, Iowa			29.96	761.0	30	− 1.1	68	NW	2	0.9		0	0			0	0	Clear	
Duluth, Minn.			30.00	762.0	20	− 6.7	53	Calm	0	0		0	0			0	0	Clear	
Eastport, Me.			29.87	758.7	34	1.1	100	E	16	7.2			10n		SE	0.51	13.0	Light rain	
Erie, Pa.			29.77	756.1	34	1.1	90	SW	20	8.9			10ks		SW	0.32	8.1	Threatening	
Escanaba, Mich.			29.80	756.9	29	− 1.7	89	N	12	5.4			10n			0.01	0.3	Light snow	
Fort Gibson, Indian Terr.			30.06	763.5	38	3.3	71	NE	2	0.9		0	0			0	0	Clear	
Ft. St. Michaels, Alaska			30.37	771.4	− 7	−21.7		SW	3	1.3			10s			0	0	Cloudy	
Fort Sill, Indian T.	28.81	731.8	29.96	761.0	35	1.7	69	S	12	5.4			10s		S	0.07	1.8	Cloudy	
Fort Sully, Dakota	28.14	714.7	29.85	758.2	30	− 1.1	89	SE	20	8.9			10s			Inap.	Inap.	Cloudy	
Galveston, Tex.			30.00	762.0	61	16.1	77	NE	11	4.9		5c	0	N		0	0	Fair	
Grand Haven, Mich.			29.76	755.9	33	0.6	79	NW	23	10.3			10s		NW	0.03	0.8	Cloudy	
Indianapolis, Ind.			29.87	758.7	34	1.1	79	NW	8	3.6			10s		W	0.04	1.0	Cloudy	
Indianola, Tex.			29.99	761.7	62	16.7	77	NE	17	7.6		5c	0	SW		0	0	Fair	
Jacksonville, Fla.			29.92	760.0	60	15.6	81	SW	2	0.9		0	5s		W	0.03	0.8	Fair	
Keokuk, Iowa			29.97	761.2	29	− 1.7	77	N	6	2.7		8k	0	N		0	0	Fair	
Key West, Fla.			29.97	761.2	75.2	24.0	90	W	7	3.1		1c	Sm'e	W	W	0	0	Smoky	
Kittyhawk, N. C.			29.70	754.4	48	8.9	85	N	11	4.9		2k	0	NW		2.25	57.1	Fair	
Knoxville, Tenn.			29.96	761.0	39	3.9	63	W	6	2.7			10s		W	0.07	1.8	Cloudy	
La Crosse, Wis.			29.95	760.7	29	− 1.7	67	N	1	0.4		haze	0			0.01	0.3	Hazy	
Leavenworth, Kan.			30.08	764.0	30	− 1.1	89	Calm	0	0		0	Fog			0	0	Clear	
Lexington, Ky.	28.80	731.5	29.93	760.2	35	1.7	80	W	12	5.4		0	0			0	0	Clear	
Long Branch, N. J.			29.61	752.1	45	7.2	76	W	16	7.2		0	5ks		W	3.08	78.2	Fair	
Louisville, Ky.			29.94	760.5	36	2.2	70	SW	7	3.1		0	Fog			0.01	0.3	Clear	
Lynchburg, Va.			29.73	755.1	45	7.2	60	W	3	1.3		2k	0	W		0.35	8.9	Clear	
Malone, N. Y.			29.43	747.5	34	1.1	80	Calm	0	0			10n			0.32	8.1	Light snow	
Manhattan, Kan.	28.86	733.0	30.05	763.3	35	1.7	90	S	2	0.9		2c	0			0	0	Clear	
Marquette, Mich.			29.88	758.9	27	− 2.8	88	NW	16	7.2			10n		NW	0.01	0.3	Light snow	
Memphis, Tenn.			30.07	763.8	41	5.0	74	N	1	0.4		0	0			0	0	Clear	
Milwaukee, Wis.			29.87	758.7	25	− 3.9	75	NW	11	4.9		0	0			0.04	1.0	Clear	
Mobile, Ala.			29.97	761.2	55	12.8	80	N	8	3.6		2ck	0	W		0	0	Fair	
Montgomery, Ala.			30.00	762.0	50	10.0	68	N	8	3.6		2k	0	W		0	0	Clear	
Morgantown, W. Va.			29.71	754.6	37	2.8	80	SW	13	5.8			10n		SW	0.26	6.6	Light snow	
Mt. Washington, N. H.	23.28	591.3	29.64	752.8	25	− 3.9	100	SE	24	10.7			10n		SE	0.60	15.2	Light snow	
Nashville, Tenn.			29.99	761.7	41	5.0	57	NW	3	1.3		0	0			0	0	Clear	
New Haven, Conn.			29.58	751.3	46	7.8	92	NW	4	1.8		8k	Fog	NW		4.78	121.4	Fair	
New London, Conn.			29.66	753.8	43	6.1	91	SW	5	2.2			10s		SW	3.03	77.0	Cloudy	
New Orleans, La.			29.96	761.0	60.5	15.8	85	W	4	1.8		5c	0			0	0	Fair	
Newport, R. I.			29.56	750.8	42	5.6	100	S	4	1.8			Fog			3.53	89.7	Foggy	
New York, N. Y.			29.62	752.3	39	3.9	80	SW	12	5.4		0	0			3.42	86.9	Clear	
Norfolk, Va.			29.73	755.1	50	10.0	68	N	4	1.8		5k	2s			0.27	6.9	Fair	
North Platte, Neb.	26.92	683.8	29.55	750.6	29	− 1.7	89	S	19	8.5			10n			0.20	5.1	Light snow	
Omaha, Neb.	28.92	734.6	30.02	762.5	33	0.6	90	W	3	1.3			10s			0	0	Cloudy	
Oswego, N. Y.			29.55	750.6	36	2.2	90	SW	4	1.8			Fog			0.13	3.3	Foggy	
Pembina, Dakota			30.11	764.8	10	12.2	100	NW	14	6.3		8c	0			0	0	Cloudy	
Philadelphia, Penn.			29.67	753.6	41	5.0	83	SW	11	4.9		2ck	Sm'e	W		2.11	53.6	Fair	
Pike's Peak, Colorado	17.36	440.9	29.57	751.1	0	−17.8	70	SW	50	22.4		0	5s		SW	0	0	Fair	
Pittsburgh, Penn.			29.66	753.4	35	1.7	80	W	5	2.2			10n			Inap.	Inap.	Light snow	
Port Huron, Mich.			29.56	750.8	31	− 0.6	89	W	16	7.2			10s		W	0.01	0.3	Cloudy	
Portland, Me.			29.54	750.3	42	5.6	100	SE	24	10.7			10s			1.85	47.0	Cloudy	
Portland, Oregon			30.21	767.3	39	3.9	81	S	7	3.1			10s			0.46	11.7	Cloudy	
Punta Rassa, Fla.			30.02	762.5	65.5	18.6	73	NE	12	5.4		Haze	Sm'e	SW		0.69	17.5	Hazy	
Rochester, N. Y.			29.52	749.8	37	2.8	80	W	8	3.6			10s		W	0.49	12.4	Cloudy	
Salt Lake City, Utah	25.53	648.4	29.86	758.4	31	− 0.6	79	S	2	0.9			10s			0.05	1.3	Cloudy	
Sandy Hook, N. J.			29.60	751.8	42	5.6	82	W	17	7.6		0	1ks			3.79	96.3	Clear	
San Diego, Cal.			30.00	762.0	57	13.9	87	Calm	0	0		6	5s			0	0	Fair	
San Francisco, Cal.			30.14	765.5	46	7.8	62	NW	4	1.8		0	0			0	0	Clear	
Santa Fe, N. M.	23.11	587.0	29.65	753.1	38	3.3	71	SE	5	2.2			10s			0	0	Cloudy	
Savannah, Ga.			29.89	759.2	58	14.4	53	Calm	0	0			10ks		W	0	0	Cloudy	
Shreveport, La.			30.07	763.8	46	7.8	77	NNE	8	3.6		5c	0	W		0	0	Fair	
Smithville, N. C.			30.80	756.9	55	12.8	58	W	6	2.7		8ck	0	W		0.39	9.9	Fair	
Springfield, Mass.			29.54	750.3	40	4.4	81	W	4	1.8			Fog			3.34	84.8	Foggy	
St. Louis, Mo.			30.09	764.3	35	1.7	79	W	8	3.6		2c	0	SW		0	0	Clear	
St. Marks, Fla.			29.94	760.5	55	12.8	93	Calm	0	0			Fog			0	0	Foggy	
St. Paul, Minn.			29.94	760.5	28.5	− 1.9	83	W	4	1.8			10s			0	0	Cloudy	
St. Paul's Island, Alaska			30.71	780.0	12	−11.1	80	NW	16	7.2		5	0			Inap.	Inap.		
Thatcher's Island, Mass.			29.52	749.8	40	4.4	100	S	26	11.6						2.59	65.8	Dense fog	
Toledo, Ohio			29.66	753.4	35	1.7	70	W	12	5.4			10ks			0.01	0.3	Cloudy	
Tucson, Arizona	27.46	697.5	30.05	763.3	45	7.2		Calm				0	0			0	0	Clear	
Tybee Island, Ga.			29.86	758.4	56	13.3	62	W	1	0.4		5k	5s	W	W	0	0	Cloudy	
Vicksburg, Miss.			30.08	764.0	48.5	9.2	68	NE	4	1.8		2cs	0	W		0	0	Clear	
Virginia City	23.97	608.8	29.76	755.9	18	7.8	60	W	8	3.6			10ks		W	0.04	1.0	Cloudy	
Washington, D. C.			29.70	754.4	40	4.4	87	Calm	0	0			10s		W	0.58	14.7	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			29.78	756.4	53	11.7	66	W	5	2.2		0	8ks		SW	0.21	5.3	Cloudy	
Wood's Holl, Mass			29.57	751.1	41	5.0	100	SW	10	4.5			Fog			1.42	36.1	Dense fog	
Wytheville, Va	27.40	696.0	29.58	751.3	34	1.1	79	W	12	5.4			10k		W	Inap.	Inap.	Cloudy	
Yankton, Dakota	28.70	729.0	30.04	763.0	31	— 0.6	89	Calm	0	0			10s			Inap.	Inap.	Cloudy	
Yuma, Arizona			29.89	759.2	58	14.4		NW				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I			30.01	762.2	79	26.1	90	N	5	2.2		5c	5s	E	SE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.96	761.0	74	23.3	72	E				5k	0			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.19	766.8	76	24.4	67	NNE	12	5.4		2ck	4k	NE		0.13	3.3	Fair	W. S. Cameron.
Kingston, Jamaica, W. I			30.18	766.6	74	23.3	72	Calm	0	0		2k	2s	SE	SE	0	0		James Gall.
Santiago de Cuba, W. I			29.80	756.9	74	23.3	72	Calm	0	0		0	2k			0	0	Fair	Robert Mason.
Havana, Cuba, W. I																			Charles Hasselbrink.
St. Georges, Bermudas			30.11	764.8	67.5	19.7	65	S	12.0	5.4		0	2k		S	0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Navassa, W. I																			
Clifton, Jamaica, W. I	27.20	690.9	30.02	762.5	61	16.1	83	S	1.0	0.4		8c	0	SE		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A			29.95	760.7	79	26.1	82	E			3		7ks			1.016	25.85	Rainy	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.04	763.1	80.6	27										0.965	24.51		Dr. H. Groot.
Medellin, Colombia, S. A	25.21	640.2			64.5	18.1	81		0	0		4c	6ks			0	0	Cloudy	Thomas Herrap.
St. Johns, Newfoundland			30.51	774.9	29.0	— 1.7		W				0	5s			0	0	Fair, hoar frost.	John Delaney.
York Factory, B. A			30.67	779.0	—20	—28.9	30	NE	6	2.7		0	0			0	0		J. Fortescue.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	Weather.	Observer.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,264.8 ft., or 1,300.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used incorrecting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 27, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.67	754.6	65.8	18.8	63	N			1		3			0.728	18.5	Fair	Charnot.
Algiers			29.68	753.8	68.0	20.0	57	SW			2		9			Inap.	Inap.	Hidden	Peter.
La Calle																			Kuntz.
Tunis			29.77	756.2	77.7	25.4	21	SE			5		2			0	0	Clear	Jacques.
Sfax			29.[illegible]2	757.5	68.4	20.2	61	E			3		3			0	0	Fair	Chauvey.
Saida			29.77	756.2	63.0	17.2		W			2		7			0.079	2.0	Cloudy	Millot.
Tebessa			29.80	756.8	68.2	20.1		S			2		7			0	0	Cloudy	Colin.
Geriville			29.87	758.7	66.7	19.3	46	SSW			0		2			0	0	Clear	Buard.
Laghouat			29.88	759.0	66.2	19.0	56	N			3		0			0	0	Clear	Guyot.
Biskra			29.83	757.6	78.1	25.6	14	NE			2		5			0	0	Fair	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall. Inches	Rain-fall. Millimeters.	Weather.	Observer.
Agram			29.75	755.0	62.2	16.8	41	SW			4		5			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.69	754.1	41.7	5.4	69	W			4		10			0	0		I. R. Observatory.
Eperies			29.61	752.2	54.7	12.6	68	S			2		5		NE	0	0		Julius Mikolik.
Gratz	28.49	723.7	29.67	753.5	59.0	15.0	65	SW			2		0			0	0		Andreas Rospini.
Hermannstadt	28.33	719.5	29.72	755.0	57.2	14.0	44	NNW			5		7			0	0		Prof. Reissenberger.
Kremsmünster	28.34	719.9	29.67	753.7	49.3	9.6	74	NE			2		1			0	0		Prof. C. Wagner.
Lemberg			29.55	750.5	46.6	8.1	79	NW			3		8			0.098	2.5		Dr. T. Stanecki.
Nyiregyhaza			29.71	754.7	54.7	12.6	61	W			5		1			Inap.	Inap.		Habzsuda Daniel.
Pola			29.85	758.1	56.7	13.7	80	SW			1		3c s			0	0		I. R. Hydrographic Office
Szegedin			29.75	755.6	62.6	17.0	53	W			3		8			0	0		Karl Stancel.
Triesto			29.84	758.0	54.9	12.7	82	Calm			0		0			0	0		Prof. V. Farolfi.
Vienna			29.67	753.6	58.6	14.8	48	W			2		2			0.134	3.4		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall. Inches	Rain-fall. Millimeters.	Weather.	Observer.
Brussels			29.48	748.9	47.1	8.4	86	E			0		10			0.075	1.90		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.60	751.8	34.4	1.3		SE	21	9.4			9			0.060	1.52	Rain & snow	William Boswell.
Ardrossan			29.52	749.8	38	3.3		ESE			2		8			Blank	Blank	Foggy	J. Mayes.
Armagh Observatory			29.47	748.5	38.6	3.7		SE	11	4.9			9					Overcast	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			29.45	748.0	37.1	2.8		E	14	6.3			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.39	746.5	43.0	6.1		ESE			1–2		10					Overcast	J. Dreyer.
Bradford			29.48	748.8	35.4	1.9		NE			0		10			0.27	6.9	Drizzling	J. McLandsborough.
Bridgetown, (Barbados)			29.91	759.7	83.0	26.3		NE			2		5					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			29.46	748.3	41.0	5.0		ESE			1		10					Overcast	H. Todd.
Cardington			29.47	748.5	40.0	4.4		E			1		10					Overcast	John McLaren.
Carlisle			29.49	749.0	47.5	8.6		E			2		3			0	0	*D. clouds	J. Bell, for J. Cartmell.
Chatham, School M. E.			29.47	748.5	40.7	4.8		NE			1		8					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	27.87	707.9	29.39	746.5	37.6	3.1		E			3		10					Foggy	R. E. Power.
Donaghadee			29.47	748.5	43	6.1		S			1		5					*D. clouds	J. Mac Gowan.
Dover			29.42	747.3	45	7.2		E			3		8					Overcast	J. Costello.
Eccles, (near Manchester)			29.47	748.5	37.8	3.2		E	3.2	1.4			10					Gloomy	Thomas Mackereth.
Falmouth Observatory			29.31	744.5	44.3	6.8		E	25	11.2			10					Foggy	The Staff.
Fort Napier, (Natal)	27.81	706.4	30.05	763.3	72.8	22.7		E			1		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.85	758.2	86.0	30.0		NE			1		7					*D. clouds	(Lis-
Galway, Queen's College			29.34	758.2	46	7.8		SE			1		10					Gloomy	B. G. Clare, for Prof. Chr.
Gibraltar, (Mediterranean)			29.64	752.8	65.4	18.6		W			5		7					Showery	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.50	749.3	37.7	3.2		SSE			1		10					Overcast	Lewis Stuart.
Great Yarmouth			29.50	749.3	39	3.9		SE			4		8					Gloomy	G. T. Watson.
Greenwich Royal Obs.			29.42	747.3	43.2	6.2		E			1		10					Overcast	The Staff for G. B. Airy.
Guernsey			29.32	744.7	45	7.2		ENE			1		10					Rain & mist.	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.52	749.8	35.0	1.7		ENE			2		10					Rain and fog	L. J. Cresley.
Helston			29.28	743.7	48	8.9		E			4		8n			0.19	4.8	Gloomy	M. P. Moyle.
Holyhead			29.40	746.7	42	5.6		E			3		6					Gloomy	John Tilston.
Kew Observatory			29.42	747.3	41.7	5.4		E	17	7.6			10					Rain & mist.	The Staff.
Kingstown			29.44	747.8	42	5.6		E			3		6					*D. clouds	George Mitchell
Leicester Museum			29.49	749.0	37.3	2.9		E			1		10					Drizzling	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.90	759.4	64.6	18.1		SE			2		4k						Fred Travis, Pvt A.H.C.
Nairn			29.50	749.3	42	5.6		E			1		5					½ clouded	W. D. Penny.
Nassau, (Bahamas)			29.09	739.3	75.2	24.0		NE			5		0					Blue sky	Surg.-Maj. Henry.
Nottingham			29.49	749.0	39.2	4.0		ESE			1		10k,d		ESE	0.01	0.3	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.45	748.0	37.4	3.0		ENE			2		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.43	747.5	39	3.9		ENE			1		10					Misty	J. Lucas.
Plymouth			29.34	745.2	43	6.1		E			4		10					Overcast	John Merrifield.
Roche's Point			29.36	745.7	40	4.4		ESE			5		10					Overcast	W. Kennedy.
Saint Ann's Head			29.36	745.7	41	5.0		ESE			3		10					Misty	John C. Walker.
Saint Helier, (Jersey)			29.30	744.2	49.0	9.4		E			1		10					Raining	A. P. Amy.
Sandwick Manse (Orkneys)			29.60	751.8	36.6	2.6		SE	30	13.4			10					Showery	Rev. Dr. Clouston.
Scarborough			29.54	750.3	37.1	2.8		ESE			2		10					Overcast	F. Shaw.
Scutari Cemetery (Turkey)			29.77	756.1	69.8	21.0		S			1		0					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.48	748.8	40.5	4.9		E			1		10			0	0	Overcast	W. F. Cooper.
Silloth Rectory			29.48	748.8	45.0	7.2	57	SE			3		5			0	0	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			29.47	748.5	36.8	2.7		E			2		10					Gloomy	S. J. Perry.
Stornoway, Lews C. (Hebr.)			29.46	748.3	39	3.9		SE			4		5					*D. clouds	John Smith.
Strathfield Turgiss			29.43	747.5	41.6	5.3		NE			1		10					*D. clouds	Rev Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.54	750.3	41	5.0		S			5		5					*D. clouds	John Trotter.
Truro, Royal Institution			29.32	744.7	46	7.8		E			6		10					Gloomy	W. Newcombe.
Valencia Observatory			29.33	745.0	45.2	7.3		E	12	5.4			7					Hazy	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					41	5.0		E			4		10			0	0		
Cape Good Hope Obs.			29.90	759.4	84.0	28.9	55	SE	7	3.1			1						The Staff, for E. J. Stone.
Leith, Restalrig Park			29.50	749.3	40.5	4.7		SE			1		10s			0	0	Overcast	Andrew Gibb.
Mauritius			29.98	761.5				SE								0	0		
Monach Lt-house, Hebrides																			J. Youngclause.
North Unst, (Shetland Is.)			29.71	754.6	37	2.8		SE			6		10			Blank	Blank		

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.71	754.7	32.9	0.5	83	NNE			2		10						
Fanöe			29.74	755.5	34.2	1.2	78	E			2		10						
Godthaab, (Greenland)			30.17	766.3	26.2	-- 3.2	89	WSW			6		10					Snowing	
Stykkisholm, (Iceland)			30.16	766.0	23.5	-- 4.7	90	Calm			0		0						
Thorshavn, (Faröe)			29.66	753.4	38.8	3.8	87	E			4		10						
Vestervig			29.73	755.2	32.0	0.0	74	NE			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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Alengon			29.34	745.3	51.8	11	87	SW			1		5sk		SW	0.322	8.2	Cloudy	Normal School.
Amiens			29.57	751.0	50.4	10.2	84	E			3		10			0.193	4.9	Covered	Normal School.
Avignon			29.63	752.5	60.8	16	52	SE			2		8		SE	0	0	Very cloudy	Normal School.
Bar-sur-Seine			29.47	748.4	57.6	14.2	50	S			2		8			0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)			29.30	744.3	61.2	16.2	55	S	3.6	1.6					S	0.098	2.5		Beaumette Observatory
Beauvais			29.43	747.6	53.1	11.7	73	ENE			1		8		SW	0.108	2.75	Very cloudy	Normal School.
Besançon			29.57	751.1	56.1	13.4	53	S			2		10		SW	0	0	Covered	Normal School.
Bourg en Bresse			29.64	752.8	52.3	11.3	61	E			2		..n		N				Normal School.
Bourges			29.41	747.0	57.9	14.4	67	SE			2		5		W	0	0	Cloudy	Normal School.
Brest			29.19	741.4	48.4	9.1	89	E			2		10		SE	0.177	4.50	Raining	Naval Observatory.
Caen																			Normal School.
Chartres			29.32	744.8	65.8	18.8		SW			3		6		NE	0.110	2.8		Normal School.
Chaumont																			Normal School.
Clermont			29.46	748.2	58.3	14.6	42	S			6		8		S	0	0		Puy de Dome Obs.
Commercy			29.56	750.7	54.1	12.3	66	SE			4		8kn		SE	0	0	Very cloudy	Normal School.
Commune de Gréasque*			29.67	753.5	55.6	13.1	50	SE			4		10		SE	0	0		
Grenoble			29.58	751.4	49.6	9.8	62	E			1		10k,n		N	0	0	Covered	Normal School.
Le Mans			29.33	745.0	60.8	16	53	S			3		5		S	0	0	Cloudy	Normal School.
Loches			29.10	739.0	53.6	12	75				2		1		S	0	0	Clear	Normal School.
Lons-Le-Saulnier			29.54	750.3	51.6	10.9	75	SW			Var.		10			0	0	Light rain	Normal School.
Mâcon			29.11	739.3	50.9	10.5	80	SSE			6		10			0	0	Covered	Normal School.
Mirecourt																			Normal School.
Metz			29.61	752.2	50.0	10.0	72	ESE			3		8		ESE	0	0		M. Schuster.
Nismes			29.62	752.3	55.9	13.3	68	S			2		10		SE	0	0	Covered	Normal School.
Orleans			29.35	745.6	63.3	17.4	40	SSE			4		5		SSE	0	0	Cloudy	Normal School.
Paris Observatory			29.38	746.2	62.4	16.9	41	ESE			2		5		SW	0.016	0.40	Cloudy	National Observatory.
Parthenay			29.28	743.8	62.6	17	61	S			2		5		SE	0	0	Cloudy	Normal School.
Privas			29.65	753.2	57.7	14.3		NW			4		8		NW	0	0	Very cloudy	Normal School.
La Roche-sur-Yon			29.29	744.0	59.7	15.4	56	SE			6		5		NW	0.071	1.8	Cloudy	Normal School.
Rochefort, Observatory			29.34	745.2	63.9	17.7	68	SSE			3		5		N	0.118	3.0	½ covered	Naval Observatory.
Rouen			29.40	746.8	54.3	12.4	76	SE			2		10		S	0.248	6.3	Covered	Normal School.
Saint Lo			29.32	744.6	50.7	10.4	88	E			1		7		W	0.098	2.5		Normal School.
Tarbes			29.30	744.1	57.2	14	46	S			2		5		SE	0	0	Cloudy	Normal School.
Toulouse																			Normal School.
Villefranche			29.52	749.8	51.8	11	81	SW			1		5			0.12	3.	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.86	758.5	75.6	24.2	82	NE			2		2k						L'Abbé Marchési.
Gorée																			
Marseilles			29.58	751.2	60.3	15.7	59	SE			5		10			0	0	Raining	Marseilles Observatory.
Mont-Louis	24.37	618.9	29.66	753.3	42.8	6.0	73	SSW	29.8	13.33			8		SSW	0	0		—. Falguère.
Montsouris, Paris			29.39	746.5	63.1	17.3	50	ESE			0	8c		SSW		0.004	0.1		Montsouris Observ'tory.
Perpignan			29.49	749.0	59.5	15.3	64	SE	20.5	9.17			8			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P†																			M. Baylac.
Pic du Midi, (Plantade)	21.99	558.5			37.8	- 3.2	58	SSW			3		7					Snowy	General de Nansouty.
Saint Maur, (near Paris)			29.39	746.6	64.0	17.8	41	SE			2		8			0	0	Cloudy	E. Renou.
Toulouse			29.42	747.3	57.7	14.3	67	SSE			6		4			0	0		Toulouse Observatory.
Tours			29.35	745.5	63.5	17.5	49	SSW			2		4		W	0.004	0.1		C. Marquet.
Versailles, (near Paris)			29.39	746.5	63.7	17.6	53	S			3		8			0.031	0.78	Almost cov'd	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7., 8. or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Near Marseilles. † Summit inaccessible.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. 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.
Bamberg			29.55	750.6	43.3	6.3	78	NE			3		4			0.094	2.4		Prof. T. Roh.
Berlin			29.70	754.3	38.8	3.8	75	N			1		8			0.244	6.2		Prof. Arndt.
Breslau			29.71	754.5	39.0	3.9	72	WNW			7		7			0.039	1.0		Dr. P. Nauge-auer.
Carlsruhe			29.56	750.9	56.5	13.6	63	NE			1		5			0	0		A. Senz.
Cassel			29.55	750.5	47.3	8.5	64	ESE			2		0			Inap.	Inap.		Dr. H. Möll.
Cologne																			Dr. Gartle
Emden																			Prof. Prestel.
Frankfort on the Main			29.67	753.7	53.2	11.8	43	S			1		3			0.008	0.2		Physical Society
Friedrichshafen	28.19	716.0	29.62	752.4	47.7	8.7	63	SW			2		0			0	0	Föhn	M. Wilhelm.
Hamburg			29.71	754.6	36.9	2.7	82	ESE			2		10			0.059	1.5		Deutsche Seewarte.
Kiel			29.70	756.0	36.1	2.3	75	ENE			2		10			0	0		Prof. G. Karsten.
Königsberg			29.48	748.8	38.5	3.6	83	NW			2		9			0.248	6.3		Prof. E. Luther.
Köslin			29.60	751.8	35.6	2.0		N			4		10			0	0		H. Müller.
Leipsic			29.74	755.3	34.5	2.5	91	W			1		10	W		0.256	6.5		Prof. Brahms.
Memel			29.40	746.8	34.9	1.6	85	NE			2		10			0.213	5.4	Rain & fog	Reinbrecht & Skalweit.
Münster			29.60	751.9	44.8	7.1	84	NE			2		10			0	0		Prof. E. Heis.
Neufahrwasser			29.49	749.1	33.8	1.0	96	NNW			2		10			0.150	3.8	Rainy	A. Lothes.
Posen			29.63	752.6	37.6	3.1	96	W			2		10			0.008	0.2		Dr. Magener.
Strassburg, (in Alsace)			29.58	751.3	57.0	13.9	81	Calm			0		9			0.024	0.6		Dr. Schur.
Stuttgart			29.58	751.3	57.2	14.0	55	S			1		5			0.008	0.2	Light rain	Prof. Schoder.
Thorn			29.54	750.2	37.2	2.9	94	W			1		10			0.106	2.7		Dr. Hasenbalg
Treves, (Trier)			29.59	749.4	55.4	13.0	59	SE			3		10			0	0		Prof. Flesch.
Wustrow, Naval School			29.68	753.8	34.0	1.1	86	ENE			3		10			0.075	1.9	Snowing	E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.83	757.6	54.3	12.4	71	E	1.3	0.6			6			0.681	17.3		
Padua			29.81	757.1	56.7	13.7	72	S	2.5	1.1			6	SW		0	0		
Vicenza			29.81	757.1	56.5	13.6	69	NW	1.3	0.6			4	W		0	0		
Verona			29.78	756.3	61.0	16.1	65	E	0.7	0.3			0			0	0		
Bergamo	28.47	723.2	29.80	757.0	55.4	13.0	59	S			2		5			0	0		
Domodossola	28.77	730.7	29.81	757.1	52.2	11.2	82	Calm			0		10			0	0		
Milan			29.80	756.9	57.0	13.9	72	ESE			2		10	ESE		0.079	2.0		
Pavia			29.79	756.7	58.1	14.5	61	E			1		8	SW		0	0		
Moncalieri			29.81	757.1	49.1	9.5	66	ESE	13.7	6.1			9	W		0.681	17.3		
Mondovi	27.86	707.6	29.80	756.9	52.2	11.2	70	ESE			2		7	SW		0	0		
Porto Maurizio			29.82	757.3	59.9	15.5		SSE			4		7			0	0		
Genoa			29.80	756.9	57.2	14.0	66	SE	4.3	1.9			6	SE		0	0		
Piacenza			29.79	756.6	60.4	15.8	50	NE	3.1	1.4			7	W		0	0		
Parma			29.78	756.5	62.4	16.9	69	SE			4		2			0	0		
Bologna			29.82	757.5	60.4	15.8	35	ESE			6		3	N		0	0		
Florence			29.84	758.0	64.4	18.0	53	E			2		8	SW		0	0		
Leghorn			29.80	757.0	59.7	15.4	59	S	7.4	3.3			4			0	0		
Siena	28.61	726.8	29.82	757.5	60.6	15.9	47	SSW	2.5	1.1			6	W		0	0		
Urbino	28.24	717.3	29.81	757.2	57.9	14.4	53	SSW			2		7			0	0		
Pesaro																			
Ancona			29.85	758.1	60.8	16.0	52	SE			4		2			0	0		
Grosseto			29.84	758.0	62.2	16.8	50	SSE			4		4			0	0		
Rome			29.86	758.4	64.0	17.8	52	SSE	13.0	5.8			1			0	0		
Naples, O. U			29.93	760.1	62.4	16.9	54	WSW			4		1	NW		0	0		
Lecce			29.95	760.8	61.5	16.4	50	W	4.3	1.9			0			0	0		
Cosenza			29.93	760.1	65.8	18.8	70	SW	0	0			2	SW		0	0		
Riposto, (Sicily)			29.93	760.2	64.0	17.8	58	S			2		0			0	0		
Palermo			29.82	757.5	62.8	17.1	60	NE	2.5	1.1			0			0	0		
Caltanissetta	27.96	710.1	29.91	759.6	59.0	15.0	36	SSE			4		0			0	0		
Sub-Series.																			
Naples, S. R			29.93	760.2	61.2	16.2	67	SW	1.3	0.6						0.012	0.3		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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.52	749.7	42.8	6.0		SE			4								
Groningen			29.57	751.0	40.1	4.5		E			4								
Helder			29.56	750.7	39.2	4.0		E			4								
Utrecht			29.51	749.5	44.1	6.7	66	ESE			3		10					Overcast	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.82	757.3	35.6	2.0	61	NNW	2.7	1.2			0			0	0		
Bröno			29.82	757.5	36.7	2.6	80	Calm	0	0			3			0	0		
Christiania			29.85	758.2	34.2	1.2	59	E	6.3	2.8			0			0	0		
Tromsö			29.71	754.7	25.2	— 3.8	91	ENE	2	1			2			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			29.76	755.8	57.6	14.2	78	NNE	4.9	2.19			3			0.094	2.4		Dr. J. A. N. Sampaio.
Campo Major			29.48	748.8	48.2	9.0	81	SW	19.6	8.75			10	SW		0.224	5.7	Thunder-storm	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			29.68	753.8	62.6	17.0	67	W	10.6	4.73			10	W		0	0	Misty	Capt. D. A. da Cunha.
Lisbon			29.38	746.3	57.0	13.9	62	SSW	34.9	15.6			3			0.740	1.88		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.56	750.7	37.2	2.9	88	WSW	27	12			10					Light rain	Astronomical Obs.
Wilna			29.39	746.4	45.3	7.4	88	Calm	0	0			10						Astronomical Obs.
Dorpat			29.60	751.9	30.4	— 0.9	91	NNE	9	4			10						Physical Cabinet.
St. Petersburg			29.70	754.4	25.5	— 3.6	84	ENE	11	5			10						Central Physical Obs
Kuopio			29.82	757.3	22.3	— 5.4	98	E	9	4			0						Ch. Forsten.
Kief			29.54	750.2	53.4	11.9	79	SSW	7	3			3						Physical Cabinet.
Nikolaiev			30.77	756.1	56.8	13.8	68	S	13	6			0						Kurdakof.
Kertch																			Lagorio.
Moscow			29.74	755.3	36.1	2.3	91	S	9	4			10					Raining	Meteorological Obs.
Lugan			29.78	756.5	64.6	18.1	43	S	22	10			8						Meteorological Obs.
Archangel			29.91	759.8	29.8	— 1.2	42	S	13	6			7						Ogorodnikof.
Tiflis	28.63	727.2	29.99	761.8	69.8	21.0	31	S	9	4			0						Physical Observatory.
Astrakhan			30.24	768.2	57.0	14.0	29	SSE	7	3			3						Sebastianof.
Kasan			30.10	764.5	34.2	1.2	72	S	7	3			6						Physical Cabinet.
Orenburg			30.12	765.0	37.2	2.9	78												Tschernischef.
Ekaterinburg	29.17	740.9	30.23	767.7	28.0	— 2.2	59	W	11	5			5						Meteorological Obs.
Nukuss			30.06	763.5	62.1	16.7	37	NW	9	4			5						
Kasaly																			Bobrof.
Tashkend	28.53	724.6	30.21	767.4	61.3	16.3	36	Calm	0	0			1						Michelson.
Barnaul			29.97	761.1	36.1	2.3	66	Calm	0	0			1						Meteorological Obs.
Yeniseisk			29.92	760.0	31.5	— 0.3	43	ESE	2	1			0						Marks.
Irkutsk																			Usolzof.
Ourga																			Mossin.
Pekina, (China)			30.00	762.1	45.3	7.4	22	Calm	0	0			0						Physical Observatory.
Nertchinsk	27.55	699.7	29.69	754.2	21.2	— 6.0	50	N	7	3			1						Meteorological Obs.
Vladivostock			29.58	751.2	32.7	0.4	85	E	9	4			5						
Nikolaievsk, on the Amoor					24.6	— 4.1	94	ENE	22	10			10					Snowing	

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 403. meters, or 1,411.8 feet; Ekaterinburg, 305.4? m., or 1,055.2? ft.; Tashkend, m. 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.45	747.9	53.8	12.1	76	S	16.0	7.16		0	7			0.213	5.4	Cloudy	Royal Observatory.
San Fernando			29.63	752.6	61.9	16.6	77	SSW	17.0	7.6		0	8		SSW	0.224	5.7		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.80	756.8	18.3	— 7.6	89	S			2		0			0	0		
Umea			29.76	755.9	24.4	— 4.2	86	SW			2		0			0	0		
Hernosand			29.77	756.1	36.7	2.6	58	SW			2		1			0	0		
Stockholm			29.76	755.8	31.6	— 0.2	47	ENE			4		3			0	0		
Wisby			29.71	754.5	34.2	1.2	82	ENE			6		5			0	0		
Sub-Series.																			
Upsala			29.80	756.9	33.6	0.9	91	ENE	7.8	3.5			1		NE	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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Geneva	28.20	716.3	29.65	753.2	45.3	7.4	75	NE			1		9			0	0	Covered	The Observatory.
Zurich	28.00	711.1	29.64	752.9	52.2	11.2	75	Var.			1		6			0.307	7.8	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —8.0 mm.; Thermometer, —1.8 cent.; Relative Humidity, +16 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Constantinople			29.53	757.7	76.1	24.5	32	SW	2	1.0			0			0	0		
Fao, (Persian Gulf)			30.12	765.0	71.6	22.0		SE			3		0						
Salonica			29.85	758.2	68.7	20.4		SE			1		0						
Valona			29.86	758.5	60.8	16.0		W			1		0						
Varna			29.76	756.0	71.6	22.0		N			1		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.86	758.5	73.8	23.2	74	NE			1		3c			0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Bathurst, N. B.			29.71	754.6	30.7	— 0.7	97	NE	16	7.2						0	0		Hon. J. Ferguson.
Brockville, Ontario			29.81	757.2	34	1.1		SW	5	2.2			10s		SW	0.08	2.0	Light snow	W. R. Bigg.
*Chatham, N. B.			29.70	754.4	32	0.0	97	NE	15	6.7			10s		NE	2.24	56.9	Light rain	G. A. Blair.
Charlottetown, P. E. Island			29.74	755.4	32	0.0	96	SE	26	11.6			10n			0.200	5.08	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.71	754.6	36.7	2.6	80	W			1		10s			0.05	1.3	Clearing	James Smith, M. A.
Dalhousie, N. B.			29.29	744.0				E			6					0.50	12.7		H. A. Johnson.
Esquimault, B. C.			30.14	765.5	40.6	4.8	83	E	3	1.3		0	10			0.37	9.4	Cloudy	W. H. Bevis.
Fredericton, N. B.			29.51	749.5	35.3	1.8	97	NE	10	4.5			10n			2.50	63.5	Raining	Prof. Harrison.
*Fort Garry, Manitoba			30.47	773.9	4	—15.6	97	Calm	0	0		0	2s			0	0	Fair	James Stewart.
Goderich, Ontario			30.04	763.0	25.6	— 3.6	86	NW			2		10n			0	0	Dull	H. J. Strang, M. A.
Granton, Ontario			29.99	761.7	24.2	— 4.3		NW			1		10n			Inap.	Inap.	Cloudy	James Grant.
*Halifax, N. S.			29.58	751.3	35	— 1.7	94	E	30	13.4			10n			2.11	53.6	Heavy rain	F. Allison, M. A.
*Kingston, Ontario																			S. Woods, M. A.
Little Current, Ontario			29.82	757.4	31	— 0.6	94	W	4	1.8			10s			0.03	0.8	Cloudy	G. B. Abrey, C. E.
*Montreal, Quebec			29.69	754.1	35	1.7	92	W	8	3.6			10n			0.10	2.5	Light snow	C. H. McLeod, C. E.
*Ottawa, Ontario			29.69	754.1	33	0.6	75	N	7	3.1			10n		W	Inap.	Inap.	Threatening	J. B. Haney.
*Parry Sound, Ontario			29.93	760.2	23	— 5.0	86	W	7	3.1			10n		NW	0.07	1.8	Light snow.	Rev. R. Mooley.
*Port Dover, Ontario			29.97	761.2	28	— 2.2	77	W	8	3.6		10k	0	W		0	0	Fair	H. Morgan.
Port Hastings, N. S.			29.93	760.2	32.6	0.3		SE	20	8.9						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.01	762.2	27	— 2.8	87	NW	10	4.5			10n		W	0.02	0.5	Light snow	M. Payne.
*Quebec, Quebec			29.66	753.4	30	— 1.1	100	NE	12	5.4			10n		NE	0.44	11.2	Light snow	Capt. Ash, R. N.
St. John, N. B.			29.48	748.8	39	3.9	91	SE	9	4.0			10n			0.965	24.51		G. Murdoch, C. E.
*Saugeen, Ontario			29.96	761.0	25	— 3.9	85	N	8	3.6			10n		W	0.18	4.6	Light snow	K. Stewart.
Stayner, Ontario			29.93	760.2	24	— 4.4	75	NW	10	4.5			10n		NW	0.50	12.7	Light snow	R. J. Cole.
Stratford, Ontario			29.98	761.5	25.0	— 3.9	85	NW	13	5.8			10s			0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			30.07	763.8	31	— 0.6	77	SE	20	8.9		8cs	2s	SW	SE	0	0	Cloudy	T. C. Hill.
*Toronto, Ontario			29.91	759.7	30	— 1.1	89	NW	8	3.6			10ks		NW	0.03	0.8	Cloudy	Magnetic Observatory
Woodstock, Ontario			29.99	761.7	26.5	— 3.1	87	Calm			0		10s			Inap.	Inap.	Gloomy	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.75	755.6	35	1.7	79	NW	4	1.8			10s		W	0.18	4.6	Cloudy	
Alpena, Mich.			30.03	762.7	22	— 5.6	86	NW	12	5.4			10n		NW	0.10	2.5	Light snow	
Atlantic City, N. J.			29.93	760.2	38	3.3	63	W	12	5.4			10s		W	0	0	Cloudy	
Augusta, Ga.			30.08	764.0	46	7.8	62	NW	3	1.3		0	0			0	0	Clear	
Baltimore, Md.			30.00	762.0	40	4.4	56	W	4	1.8		8k	Sm'e	NW		Inap.	Inap.	Cloudy	
Barnegat, N. J.			29.90	759.4	43	6.1	65	NW	22	9.8		5k	0	NW		0	0	Fair	
Benton, Montana	27.50	698.5	30.30	769.6	— 3	—19.4	100	Calm	0	0		0	0			Inap.	Inap.	Clear	
Bismarck, Dakota	28.44	722.4	30.23	767.8	16	— 8.9	66	N	9	4.0			10s			0	0	Cloudy	
Boston, Mass.			29.63	752.6	39	3.9	72	W	11	4.9			10s		W	0	0	Cloudy	
Breckenridge, Minn.			30.30	769.6	14	—10.0	82	N	10	4.5			10s			0	0	Cloudy	
Buffalo, N. Y.			29.90	759.4	29	— 1.7	89	W	16	7.2			10s		W	0.02	0.5	Cloudy	
Burlington, Vt.			29.69	754.1	37	2.8	81	Calm	0	0			10s			0.02	0.5	Cloudy	
Cairo, Ill.			29.98	761.5	45	7.2	68	SE	8	3.6			10s		W	0	0	Cloudy	
Cape Hatteras, N. C.			30.02	762.5	50	10.0	44	NE	6	2.7		0	0			0	0	Clear	
Cape Henry, Va.			30.01	762.2	51	10.6	46	SW	12	5.4		0	0			0	0	Clear	
Cape May, N. J.			29.97	761.2	39	3.9	63	W	14	6.3			10s		W	0	0	Cloudy	
Charleston, S. C.			30.08	764.0	52	11.1	66	N	8	3.6		0	0			0	0	Clear	
Cheyenne, Wyoming	23.97	608.8	29.91	759.7	16	— 8.9	83	NW	32	14.3			10s		W	0	0	Cloudy	
Chicago, Ill.			30.10	764.5	33	0.6	69	N	8	3.6		Haze	0			0	0	Clear	
Cincinnati, Ohio			30.06	763.5	36	2.2	70	SE	4	1.8		0	Sm'e			0	0	Clear	
Cleveland, Ohio			30.05	763.3	29.3	— 1.5	79	W	11	4.9			10ks		W	Inap.	Inap.	Cloudy	
Colorado Springs, Col.	23.98	609.1	29.85	758.2	22	— 5.6	72	NW	24	10.7		2k	0			Inap.	Inap.	Fair	
Corsicana, Tex.			29.64	752.8	63	17.2	88	S	16	7.2		8k	0	S		0	0	Cloudy	
Davenport, Iowa			30.08	764.0	31	— 0.6	79	E	14	6.3		10cs	0			0	0	Cloudy	
Denison, Tex.			29.54	750.3	61	16.1	77	SW	18	8.0		0	0			0	0	Clear	
Denver, Col.	24.80	629.9	30.02	762.5	25	— 3.9	75	NW	12	5.4			8s			0	0	Cloudy	
Detroit, Mich.			30.04	763.0	29	— 1.7	89	NW	8	3.6			10s		NW	Inap.	Inap.	Cloudy	
Dodge City, Kan.	27.09	688.1	29.40	746.7	32	0.0	89	W	27	12.1			10s			0.07	1.8	Cloudy	
Dubuque, Iowa			30.13	765.3	29	— 1.7	78	E	10	4.5			10s			0	0	Cloudy	
Duluth, Minn.			30.31	769.9	15	— 9.4	65	NW	4	1.8		0	0			0	0	Clear	
Eastport, Me.			29.40	746.7	34	1.1	100	NE	12	5.4			10n			2.63	66.8	Light rain	
Erie, Pa.			29.96	761.0	20	— 1.7	89	NW	16	7.2			10n			0.03	0.8	Sleeting	
Escanaba, Mich.			30.13	765.3	20	— 6.7	63	N	12	5.4		1c	0	N		0.01	0.3	Clear	
Fort Gibson, Indian Terr.			29.56	750.8	50	10.0	78	SE	18	8.0			10ks		SW	0.13	3.3	Cloudy	
Ft. St. Michaels, Alaska			30.16	766.1	—11	—23.9		N	1	0.4		0	0			Blank	Blank	Clear, Aurora	
Fort Sill, Indian T.	28.41	721.6	29.50	749.3	44	6.7	83	NW	24	10.7		0	8ks		NW	0.02	0.5	Cloudy	
Fort Sully, Dakota	28.47	723.1	30.25	768.3	21	— 6.1	85	N	24	10.7			10n			0.37	9.4	Light snow	
Galveston, Tex.			29.76	755.9	65	18.3	94	SE	2	0.9			10s		SE	0	0	Cloudy	
Grand Haven, Mich.			30.11	764.8	29	— 1.7	73	NW	9	4.0			10s		NW	Inap.	Inap.	Cloudy	
Indianapolis, Ind.			30.07	763.8	34	1.1	69	Calm	0	0		0	Sm'e			0	0	Clear	
Indianola, Tex.			29.74	755.4	68	20.0	94	S	12	5.4			10s		S	0	0	Threatening	
Jacksonville, Fla.			30.04	763.0	59	15.0	70	NE	4	1.8		8ck	0	SW		0	0	Fair	
Keokuk, Iowa			29.98	761.5	33	0.6	80	E	12	5.4			10s		E	0	0	Cloudy	
Key West, Fla.			30.01	762.2	75.0	23.9	85	E	5	2.2		1k	Sm'e		E	0	0	Smoky	
Kittyhawk, N. C.			30.07	763.8	45	7.2	76	SW	6	2.7		0	0			0	0	Clear	
Knoxville, Tenn.			30.13	765.3	37	2.8	71	Calm	0	0		10cs	Haze	SW		0	0	Cloudy	
La Crosse, Wis.			30.18	766.6	27	— 2.8	66	NE	6	2.7		Haze	Haze			0	0	Hazy	
Leavenworth, Kan.			29.72	751.9	40	4.4	83	SE	12	5.4			10n			0.41	10.4	Light rain	
Lexington, Ky.	28.97	735.8	30.11	764.8	38	3.3	54	E	4	1.8		5c	0			0	0	Fair	
Long Branch, N. J.			29.85	758.2	40	4.4	63	W	20	8.9		2ck	0	NW		0	0	Clear	
Louisville, Ky.			30.07	764.0	37	2.8	81	Calm	0	0		Haze	8ck		W	0	0	Cloudy	
Lynchburg, Va.			30.03	762.7	46	7.8	51	S	4	1.8		0	0			0	0	Clear	
Malone, N. Y.			29.66	753.4	34	1.1	80	W	6	2.7			10n			0.11	2.8	Light snow	
Manhattan, Kan.	28.63	727.2	29.79	756.7	39	3.9	91	SE	10	4.5			10n			1.00	25.4	Heavy rain	
Marquette, Mich.			30.23	767.8	21	— 6.1	85	NW	12	5.4		2c	5s	W	N	0.03	0.8	Fair	
Memphis, Tenn.			29.96	761.0	47	8.3	77	N	6	2.7			10n			0	0	Light rain	
Milwaukee, Wis.			30.18	766.6	24	— 4.4	74	NW	3	1.3		2cs	Sm'e	NE		0	0	Clear	
Mobile, Ala.			29.95	760.7	56	13.3	73	SE	8	3.6		5ck	0	NW		0	0	Fair	
Montgomery, Ala.			30.04	763.0	48	8.9	62	NE	5	2.2		5c	Haze	W		0	0	Fair	
Morgantown, W. Va.			30.05	763.3	39	3.9	46	SW	10	4.5		0	0			Inap.	Inap.	Clear	
Mt. Washington, N. H.	23.23	590.0	29.59	751.6	16	— 8.9	100	NW	28	12.5			Fog			0.05	1.3	Foggy	
Nashville, Tenn.			30.00	762.0	42	5.6	74	NE	3	1.3			10s			0	0	Cloudy	
New Haven, Conn.			29.7	755.6	41	5.7	67	W	8	3.6		5k	0	NW		0.04	1.0	Fair	
New London, Conn.			29.74	755.4	41	5.6	63	W	8	3.6		2ck	0	W		0	0	Fair	
New Orleans, La.			29.87	758.7	58	14.4	88	SE	9	4.0		10k	0	W		0	0	Cloudy	
Newport, R. I.			29.70	754.4	39	3.9	73	W	16	7.2		8cs	0			0	0	Cloudy	
New York, N. Y.			29.84	757.9	36	2.2	70	NW	20	8.9		2c	0	W		0	0	Clear	
Norfolk, Va.			30.04	763.0	48.5	6.4	59	SW	9	4.0		0	0			0	0	Clear	
North Platte, Neb.	26.89	683.0	29.51	749.3	32	0.0	90	NE	10	4.5			10n			0.01	0.3	Cloudy	
Omaha, Neb.	28.79	731.3	29.88	758.9	33	0.6	90	NE	15	6.7			10n			0.11	2.8	Light snow	
Oswego, N. Y.			29.83	757.7	32.5	0.3	79	W	16	7.2			10s		W	Inap.	Inap.	Threatening	
Pembina, Dakota			30.41	772.4	4	—15.6	100	NW	4	1.8		0	0			0	0	Clear	
Philadelphia, Penn.			29.93	760.2	39	3.9	63	W	10	4.5		10k	0	W		0	0	Cloudy	
Pike's Peak, Colorado	17.29	439.2	29.50	749.3	17.5	—27.5	68	NW	46	20.6		0	5s			Inap.	Inap.	Fair	
Pittsburgh, Penn.			30.02	762.5	34	1.1	69	W	10	4.5		10k	0			0.02	0.5	Cloudy	
Port Huron, Mich.			30.02	762.5	27	— 2.8	77	NW	10	4.5			10s		NW	0.03	0.8	Cloudy	
Portland, Me.			29.57	751.1	42	5.6	83	W	5	2.2			10s		W	0	0	Cloudy	
Portland, Oregon			30.39	771.9	38	3.3	90	S	1	0.4		0	1s			0.03	0.8	Clear	
Punta Rassa, Fla.			30.02	762.5	65.5	18.6	73	NE	12	5.4		Haze	Sm'e	SW		0	0	Hazy	
Rochester, N. Y.			29.85	758.2	31	— 0.6	79	W	12	5.4			10s		W	0.05	1.3	Cloudy	
Salt Lake City, Utah	25.92	658.4	30.25	768.3	27	— 2.8	77	N	2	0.9		0	0			0.03	0.8	Clear	
Sandy Hook, N. J.			29.82	757.4	38	3.3	71	W	30	13.4		2c	1s	SW		0	0	Fair	
San Diego, Cal.			30.03	762.7	51	10.6	93	Calm	0	0		0	0			0	0	Clear	
San Francisco, Cal.			30.22	767.6	48	7.8	85	Calm	0	0		0	0			0	0	Clear	
Santa Fe, N. M.	23.14	587.8	29.68	753.9	20	— 6.7	70	NW	18	8.0		0	1s		NW	0	0	Clear	
Savannah, Ga.			30.08	764.0	55	12.8	62	Calm	0	0		0	0			0	0	Clear	
Shreveport, La.			29.77	756.1	57	13.9	72	SE	12	5.4			10ks		SE	0	0	Cloudy	
Smithville, N. C.			30.11	764.8	52	11.1	59	NE	8	3.6		0	0			0	0	Clear	
Springfield, Mass.			29.73	755.1	39	3.9	63	NW	8	3.6		2ck	8ks		NW	0.01	0.3	Cloudy	
St. Louis, Mo.			29.98	761.5	40	4.4	63	E	8	3.6			10s			0	0	Cloudy	
St. Marks, Fla.			30.01	762.2	54	12.2	79	E	7	3.1		8ck	0	W		0	0	Fair	
St. Paul, Minn.			30.18	766.6	26.5	— 3.1	47	N	6	2.7		10cs	0			Inap.	Inap.	Cloudy	
St. Paul's Island, Alaska			30.33	770.4	18	— 7.8	84	NNW	8	3.6		1c	0			0.05	1.3		
Thatcher's Island, Mass.			29.60	751.8	39	3.9	71	W	19	8.5		2k	8s	NW	NW	0	0	Cloudy	
Toledo, Ohio			30.07	763.8	31	0.6	68	W	8	3.6		2k	0	W		0	0	Clear	
Tucson, Arizona	27.61	701.3	30.20	767.1	47	8.3		Calm				0	0			0	0	Clear	
Tybee Island, Ga.			30.05	763.3	53	11.7	68	Calm	0	0		0	1s			0	0	Clear	
Vicksburg, Miss.			29.86	758.4	52	11.1	65	SE	16	7.2		10cs	Haze	W		0	0	Cloudy	
Virginia City	24.44	620.8	29.92	760.0	11	—11.7	79	Calm	0	0		0	0			0	0	Clear	
Washington, D. C.			30.01	762.2	40	4.4	56	W	12	5.4		0	1s		W	0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From 1	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.11	764.8	50	10.0	52	E	4	1.8		0	0			0	0	Clear	
Wood's Holl, Mass			29.69	754.1	41	5.0	65	W	10	4.5			10s		W	0	0	Cloudy	
Wytheville, Va	27.66	702.6	29.89	759.2	35	1.7	70	W	4	1.8		2c	0			0	0	Fair, halo	
Yankton, Dakota	28.75	730.2	30.09	764.3	30	— 1.1	89	NE	9	4.0			10n			0.10	2.5	Light snow	
Yuma, Arizona			30.09	764.3	65	18.3		NW				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I			30.00	762.0	80	26.7	82	NE	6	2.7		5k	2ks	NE	N	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.94	760.5	74	23.3	81	E				5k	5ks			0.12	3.0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.20	767.1	73	22.8	59	ESE				2c	2k	SE		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I			30.18	766.6	76	24.4	76	Calm	0	0		2k	2s	SE	SE	0	0		James Gall.
Santiago de Cuba, W. I			29.89	759.2	77	25.0	72	NE	1.0	0.4		0	2k			0	0	Fair	Robert Mason.
Havana, Cuba, W. I																			Charles Hasselbrink.
St. Georges, Bermudas			29.98	761.5	65.0	18.3	94	SW	12.0	5.4			8pk		SW	0.29	7.4	Clearing	C. F. Allen.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Navassa, W. I																			
Clifton, Jamaica, W. I	27.17	690.1	29.99	761.7	62	16.7	88	Calm	0	0		0	0			0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A			29.96	761.0	79	26.1	86	E			3		10n			1.300	33.02	Rainy	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.05	763.2	75.2	24										1.850	47.00		Dr. H. Groot.
Medellin, Colombia, S. A	25.24	641.0			63.0	17.2	85		0	0		5c	5s			0.52	13.2	Cloudy	Thomas Herran.
St. Johns, Newfoundland			30.48	774.2	29.0	— 1.7		NE				Haze	Haze			0.12	3.0	Fair	John Delaney.
York Factory, B. A			30.83	783.1	--10.5	—23.6	55	NE	3	1.3			10s			0	0		J. Fortescue.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,263.8 ft., or 1,301.1 m.; Santa Fé, 6,862.3 (?) ft., or 2,091.6 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used incorrecting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 28, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.85	758.2	67.3	19.6	54	Calm			0		4			0	0	Fair	Charnot.
Algiers			29.84	757.8	61.9	16.6	87	SSE			1		7			0.579	14.7	Cloudy	Peter.
La Calle																			Kuntz.
Tunis			29.80	756.8	72.9	22.7	52	SE			3		7			0	0	Cloudy	Jacques.
Sfax			29.80	757.0	69.8	21.0	49	E			4		5			0	0	Fair	Chauvey.
Saida			29.91	759.8	59.0	15.0		NNW			2		3			0	0	Fair	Millot.
Tebessa			29.82	757.5	71.4	21.9		S			3		10			0.118	3.0	Hidden	Colin.
Geriville			30.00	761.9	57.2	14.0	58	NNW			3		6			0.055	1.4	Fair	Buard.
Laghouat			30.01	762.2	69.8	21.0	41	NE			2		2			0	0	Clear	Guyot.
Biskra			29.89	759.3	82.4	28.0	24	NE			2		9			0	0	Hidden	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.82	757.5	68.9	20.5	26	SW			5		4			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.77	756.2	54.0	12.2	70	NE			1		1			0	0		I. R. Observatory.
Eperies			29.77	756.1	58.6	14.8	56	S			3		10		N	0	0		Julius Mikolik.
Gratz	28.46	722.8	29.61	752.1	66.9	19.4	36	SW			5		5			0	0		Andreas Rospini.
Hermannstadt	28.43	722.2	29.81	757.1	65.5	18.6	32	ESE			1		3			0	0		Prof. Reissenberger.
Kremsmünster	28.27	718.1	29.60	751.7	53.6	12.0	74	ENE			2		6			0	0		Prof. C. Wagner.
Lemberg			29.75	755.6	59.2	15.1	57	SE			1		5			0	0		Dr. T. Stanecki.
Nyiregyhaza			29.82	757.5	66.6	19.2	48	S			3		1			0	0		Habsuda Daniel.
Pola			29.84	757.8	57.7	14.3	79	SE			3		9cs			0	0		I. R. Hydrographic Office
Szegedin			29.78	756.5	67.8	19.9	40	S			1		3			0	0		Karl Stancel.
Trieste			29.85	758.2	60.8	16.0	82	WNW			1		6k			0	0		Prof. V. Farolfi.
Vienna			29.64	752.8	58.8	14.9	60	SE			2		1			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.32	744.8	60.8	16.0	64	S			1		5			0.002	0.05		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.43	747.5	35.5	1.9		ENE	30	13.4			10			0.170	4.32	Raining	William Boswell.
Ardrossan			29.27	743.4	43	6.1		ENE			6		7					*D. clouds	J. Mayes.
Armagh Observatory			29.25	742.9	41.5	5.3		NE	17	7.6			10					Gloomy	S. Call. for Dr. Robinson.
Bidston, Liverpool Obs.			29.18	741.1	43.7	6.5		E	7	3.1			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.19	741.4	41.2	5.1		NNE			1		10					Raining	J. Dreyer.
Bradford			29.21	741.9	39.8	4.3		Calm			0		10			0.04	1.0	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			29.97	761.2	80.0	26.7		NE			2		10					Gloomy	Sergt. G. H. Hunt.
Cambridge Observatory			29.22	742.2	54.0	12.2		S			1		10			Blank	Blank	Overcast	H. Todd.
Cardington			29.22	742.2	56.0	13.3		S			1		8					Overcast	John McLaren.
Carlisle			29.23	742.4	39	3.9		NE			1		10			0	0	Overcast	. Bell, for J. Cartmell.
Chatham, School M. E.			29.26	743.2	53.2	11.8		SW			2							*D. clouds	Ca t. J. Fellowes, R. E.
Dartmoor	27.76	705.1	29.25	742.9	44.4	6.9		E			4		10					Foggy	R. E. Power.
Donaghadee			29.23	742.4	43	6.1		E			3		8					*D. clouds	J. Mac Gowan.
Dover			29.21	741.9	52	11.1		Calm			0		3					¼ clouded	J. Costello.
Eccles, (near Manchester			29.19	741.4	45.0	7.2		NE	1.0	0.4			10					Misty	Thomas Mackereth
Falmouth Observatory			29.13	739.9	51.2	10.7		S	17	7.6			8					Overcast	The Staff.
Fort Napier, (Natal)	27.82	706.6	30.06	763.5	71.7	22.1		NE			1		9					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone			29.93	760.2	90.0	32.2		N			1		5					*D. clouds	
Galway, Queen's College			29.19	741.4	43	6.1		NE			1		10					Gloomy	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			29.78	756.4	65.5	18.6		W			6		6					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.30	744.2	40.5	4.7		E			2		10					Gloomy	Lewis Stuart.
Great Yarmouth			29.24	742.7	46	7.8		SSE			4		4					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			29.24	742.7	55.8	13.2		S			1		10			Blank	Blank	Overcast	The Staff for G. B. Airy.
Guernsey			29.19	741.4	48	8.9		SSE			2		10					Rain & mist	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.26	743.2	38.6	3.7		ENE			1		10			Blank	Blank	Foggy	E. J. Crossley.
Helston			29.08	738.6	54	12.2		S			4		6k			0.43	10.9	Fine	M. P. Moyle.
Holyhead			29.16	740.7	48	8.9		ENE			2		0					Gloomy	John Tilston.
Kew Observatory			29.23	742.4	54.7	12.6		S	10	4.5			9					Misty	The Staff.
Kingstown			29.20	741.7	42	5.6		ENE			4		10					Drizzling	George Mitchell
Leicester Museum			29.22	742.2	49.4	9.7		SW			1		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.86	758.4	64.2	17.8		SE			2		4k						Fred Travis, Pvt A.H.C.
Nairn			29.44	747.8	39	3.9		NE			1		5					½ clouded	W. D. Penny.
Nassau, (Bahamas)			30.03	762.7	76.4	24.7		SE			6		7					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.22	742.2	44.9	7.2		ENE			1		10cs			0.42	10.7	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.20	741.7	44.2	6.8		SSE			0–1		10					Misty	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.20	741.7	53	11.7		SSE			1		10					Hazy	J. Lucas.
Plymouth			29.14	740.1	50.5	10.3		SE			2		10					Overcast	John Merrifield.
Roche's Point			29.14	740.1	43	6.1		NE			4		8					¾ clouded	W. Kennedy.
Saint Ann's Head			29.10	739.1	47	8.3		ESE			4		8					Misty	John C. Walker.
Saint Helier, (Jersey)			29.19	741.4	48.0	8.9		S			2		10					Raining	A. P. Amy.
Sandwick Manse (Orkneys			29.54	750.3	36.8	2.7		E	26	11.6			10					Misty	Rev. Dr. Clouston.
Scarborough			29.20	741.7	42.0	5.6		SE			1		10					Foggy	F. Shaw.
Scutari Cemetery (Turkey			29.85	758.2	71.8	22.1		NNE			2		9					Hazy	Sergt. W. H. Lyne.
Sheffield			29.22	742.2	41.2	5.1		W			1		10			0.419	10.64	Misty	W. F. Cooper.
Silloth Rectory			29.22	742.2	41.7	5.4	82	E			5		10			0	0	Overcast	Rev. Francis Redford.
Stonyhurst Observatory			29.19	741.4	40.9	4.9		NE			1		10			Blank	Blank	Gloomy	S. J. Perry.
Stornoway, Lews C. (Heb.)			29.46	748.3	41	5.0		E			5		10					Overcast	John Smith.
Strathfield Turgiss			29.20	741.7	54.2	12.3		S			0–1		10					*D. clouds	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Sutter.
Thurso																			John Proctor.
Truro, Royal Institution			29.11	739.4	53	11.7		S			4		6					*D. clouds	W. Newcombe
Valencia Observatory			29.17	740.9	44.8	7.1		NNE	18	8.0			8					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					44	6.7		NE			3		5			0	0		
Cape Good Hope Obs.			29.92	760.0	71.8	22.1	67	NNW	18	8.0			7						The Staff, for E. J. Stone.
Leith, Restairig Park			29.34	745.2	37.0	2.8		E			5		10s			0	0	Showery	Andrew Gibb.
Mauritius			29.97	761.2				SW								0	0		
Monach Lt-house, Hebrides																			J. Youngclause.
North Unst, (Shetland Is.)			29.68	753.9	38	3.3		NE			4	4	3	E					

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.76	755.8	33.4	0.8	82	ESE			6		10						
Fanöe			29.58	751.4	35.2	1.8	91	SE			6		10					Raining	
Godthaab, (Greenland)			30.25	768.4	19.0	— 7.2	93	NW			6		10					Snowing	
Stykkisholm, (Iceland)			29.96	760.9	23.3	— 5.9	95	E			4		0						
Thorshavn, (Faröe)			29.72	754.8	40.1	4.5	76	ENE			4		5						
Vestervig			29.59	751.5	34.5	1.4	85	ESE			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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.25	742.9	51.8	11°	83	SW			1		5nk		SW	0.101	5.0	Cloudy	Normal School.
Amiens			29.34	745.3	53.2	11.8	78	E			1		10			0	0	Covered	Normal School.
Avignon			29.59	751.6	61.9	16.6	67	SE			6		8		S	0	0	Very cloudy	Normal School.
Bar-sur-Seine			29.33	744.9	64.0	17.8	49	SSW			8		8		SW	0.091	2.3	Very cloudy	C. Saillard.
Beaumette, (near Angers)			29.24	742.7	54.1	12.3	71	SW	21.5	9.6					SW	0.035	0.9		Beaumette Observatory.
Beauvais			29.33	745.0	60.6	15.9	53	SW			4		8		SSW	0	0	Very cloudy	Normal School.
Besançon			29.47	748.4	66.6	19.2	30	SSE			4		2		SW	0.012	0.3	Slightly cl'dy	Normal School.
Bourg en Bresse			29.51	749.6	65.5	18.6	46	S			6		..k		N				Normal School.
Bourges			29.42	747.2	58.1	14.5	81	S			2		2		W	0	0	Slightly cl'dy	Normal School.
Brest			29.10	739.0	52.0	11.1	80	SSW			3		9n		SSW	0.138	3.50		Naval Observatory.
Caen																			Normal School
Chartres			29.27	743.5	54.3	12.4		SSW			3		9		N	0	0		Normal School.
Chaumont																			Normal School.
Clermont			29.39	746.4	61.9	16.6	33	S			6		5		S	0	0		Puy de Dome Obs.
Commercy			29.46	748.2	57.7	14.3	67	SE			4		5kn		SE	0	0	Cloudy	Normal School.
Commune de Gréasque*			29.70	754.4	57.4	14.1	67	SE			4		10		SE	0.217	5.5		
Grenoble			29.35	745.4	55.0	12.8	88	S			6		5kn		N	0.039	1.0	Partly cloudy	Normal School.
Le Mans			29.25	742.9	58.8	14.9	56	SSW			4		2		SSW	0.295	7.5	Slightly cl'dy	Normal School.
Loches			29.07	737.7	55.4	13	78	S			4		5			0.051	1.3	Cloudy	Normal School.
Lons-Le-Saulnier			29.44	747.7	65.3	18.5	46	SW			6		5		SW	0	0	Cloudy	Normal School.
Mâcon			29.42	747.2	61.0	16.1	62	S			4		5		N	0.08	2.	Cloudy	Normal School.
Mirecourt																			Normal School.
Metz			29.51	750.4	51.1	10.6	86	SE			2		10			0	0		M. Schuster.
Nismes			29.59	751.5	57.7	14.3	78	SE			2		5		S	0.04	1.	Cloudy	Normal School.
Orleans			29.30	744.2	57.2	14	78	SSE			3		5		ESE	0	0	Cloudy	Normal School.
Paris Observatory			29.33	744.9	58.1	14.5	52	WSW			3		10		SW	0	0	Covered	National Observatory.
Parthenay			29.23	742.5	55.4	13	66	S			6		5		SE	0.28	7.	Cloudy	Normal School.
Privas			29.58	751.3	57.9	14.4		NW			6		8		NW	0.04	1.	Very cloudy	Normal School.
La Roche-sur-Yon			29.26	743.2	55.0	12.8	77	SSW			6		8		N	0.091	2.3	Very cloudy	Normal School.
Rochefort, Observatory			29.33	745.0	60.4	15.8	63	SW			7		5		NE	0.079	2.0	Half covered	Naval Observatory.
Rouen			29.27	743.4	54.3	12.4	72	SSE			3		5		S	0.024	0.6	Cloudy	Normal School.
Saint Lo			29.11	739.5	49.5	9.7	92	S			1		8		S	0.098	2.5		Normal School.
Tarbes			29.40	746.7	58.1	14.5	30	SSW			6		2		SE	0	0	Slightly cl'dy	Normal School.
Toulouse																			Normal School.
Villefranche			29.45	747.9	64.8	18.2	94	SE			6		5		S	0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.85	758.2	77.0	25	76	NE			2		2ck						L'Abbé Marchési.
Gorée																			
Marseilles			29.61	752.2	60.4	15.8	59	ESE			4		10			0.114	2.90	Covered	Marseilles Observatory.
Mont-Louis	24.43	620.4	29.70	754.4	46.2	7.9	58	SSW	22.4	10.00			6		SSW	0.283	7.2		—. Falguère.
Montsouris, Paris			29.34	744.9	54.9	12.7	66	SSW			3		10		SSW	0.039	1.0	Raining	Montsouris Observ'tory.
Perpignan			29.47	748.6	66.7	19.3	33	SW	22.4	10.00			7		S	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.†																			M. Baylac.
Pic du Midi, (Plantade)	22.00	558.7			29.7	— 1.3		SW			3–4		8					Fair	General de Nansouty.
Saint Maur, (near Paris)			29.34	745.1	57.2	14.0	57	SW			3		10			0	0	Very cloudy	E. Renou.
Toulouse			29.45	748.1	67.6	19.8	29	SW			2		2			0	0		Toulouse Observatory.
Tours			29.30	744.3	56.8	13.8	67	SW			4		6		SW	0.606	15.4		C. Marquet.
Versailles, (near Paris)			29.34	745.1	58.3	14.6	68	SW			4		10			0	0	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai																			H. Le Lec, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are requently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,089.9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Near Marseilles. † Summit inaccessible.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.55	750.0	50.4	10.2	74	NE			2		4			0	0		Prof. T. Hoh.
Berlin			29.07	753.5	47.3	8.5	69	SE			1		7			0	0		Prof. Arndt.
Breslau			29.77	756.2	52.0	11.1	67	SE			3		10			0.016	0.4		Dr. P. Naegebauer.
Carlsruhe			29.48	748.8	65.1	18.4	49	NE			1		8			0	0		A. Senz.
Cassel			29.41	747.0	64.0	17.8	51	S			4		8			0.091	2.3		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main			29.56	750.9	63.5	17.5	40	E			1		3			0.020	0.5		Physical Society.
Friedrichshafen	28.13	714.5	29.54	750.2	55.4	13.0	52	S			6		5			0.059	1.5	Föhn-storm	M. Wilhelm.
Hamburg			29.57	751.0	42.6	5.9	81	SE			6		9k			0	0	Smoke-haze	Deutsche Seewarte.
Kiel			29.07	753.5	38.3	3.5	79	ESE			4		10			0	0		Prof. G. Karsten.
Königsberg			29.89	759.2	35.2	1.8	75	NE			2		5			0.004	0.1	Snowing	Prof. E. Luther.
Köslin			29.81	757.2	36.3	2.4		E			4		10			0	0		H. Müller.
Leipsic			29.60	751.9	56.5	13.6	79	E			2		7			0	0		Prof. Bruhns.
Memel			29.76	756.0	35.4	1.9	69	ENE			2		10	E		0.102	2.6		Reinbrecht & Skalweit.
Münster			29.46	748.3	61.3	16.3	90	SW			2		6			0.165	4.2	Raining	Prof. E. Heis.
Neufahrwasser			29.83	757.7	34.3	1.3	82	ENE			1		10			0.004	0.1		A. Lothes.
Posen			29.84	757.8	38.5	3.6	85	E			5		10			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.50	749.3	62.2	16.8	53	Calm			0		7			0.150	3.8		Dr. Schur.
Stuttgart			29.48	748.7	64.4	18.0	42	SE			1		2			0.008	0.2	Raining	Prof. Schoder.
Thorn			29.81	757.9	39.0	3.9	79	E			4		9			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.41	746.9	54.5	12.5	83	S			2		10			0.173	4.4		Prof. Flesch.
Wustrow, Naval School			29.72	754.8	37.2	2.9	79	E			2		10			0.039	1.0		E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force.	Clouds. Amount. Up'er —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.
Athens																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force.	Clouds. Amount. Up'er —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.
Udine			29.82	757.5	57.6	14.2	63	Calm	0	0			9			0	0		
Padua			29.82	757.5	56.5	13.6	80	NE	9.8	4.4			10			0	0		
Vicenza			29.83	757.7	57.2	14.0	73	NE	5.6	2.5			6	E		0	0		
Verona			29.83	757.7	64.2	17.9	52	E			2		10			0	0		
Bergamo	28.45	722.6	29.78	756.4	52.2	11.2	77	SE			2		10			0	0		
Domodossola	28.80	731.4	29.84	757.8	46.4	8.0	92	Calm			0		10			0.157	4.0	Raining	
Milan			29.83	757.7	55.6	13.1	80	SE			2		10	ESE		0.539	13.7	Raining	
Pavia			29.82	757.4	53.6	12.0	82	SW			1		10			0.028	0.7		
Moncalieri			29.85	758.1	47.8	8.8	96	ESE	0.7	0.3			10	E		0.315	8.0		
Mondovi	27.90	708.6	29.84	757.9	47.7	8.7	81	ENE			2		10			0.039	1.0		
Porto Maurizio			29.81	757.1	60.1	15.6		NNE			2		10			0	0		
Genoa			29.79	756.7	54.7	12.6	71	NE	1.3	0.6			10	S		0.031	0.8		
Piacenza			29.80	757.0	55.0	12.8	73	ESE	34.2	15.3			10	ESE		0	0		
Parma			29.81	757.1	57.7	14.3	67	ENE			2		9			0	0		
Bologna			29.84	757.8	61.3	16.3	35	W			1		6	E		0	0		
Florence			29.82	757.4	69.8	21.0	35	S			2		5	S		0	0		
Leghorn																			
Siena	28.60	726.4	29.81	757.1	61.5	16.4	45	SSE	5.6	2.5			10	W		0	0		
Urbino	28.28	718.4	29.85	758.3	59.0	15.0	49	SSW			2		10			0	0		
Pesaro																			
Ancona			29.83	757.7	58.6	14.8	61	SE			4		10			0	0		
Grosseto			29.80	756.8	64.4	18.0	51	SSE			6		6			0	0		
Rome			29.83	757.7	69.8	21.0	37	S	9.8	4.4			9	SW		0	0		
Naples, O. U.			29.86	758.4	68.0	20.0	46	SW			2		3	S		0	0		
Lecce			29.92	760.0	59.2	15.1	44	SE	12.5	5.6			1			0	0		
Cosenza			29.85	758.2	65.7	18.7	65	NE	0.7	0.3			2			0	0		
Riposto, (Sicily)			29.88	759.0	62.1	16.7	76	SSE			2		1			0	0		
Palermo			29.74	755.4	64.2	17.9	53	NE	4.3	1.9			6			0	0		
Caltanissetta	27.89	708.5	29.84	758.0	58.6	14.8	50	ESE			2		1	NW		0	0		
Sub-Series.																			
Naples, S. R.			29.86	758.5	69.1	20.6	51	SW	1.8	0.8						0	0	Foggy	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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force.	Clouds. Amount. Up'er —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.
Tokio																			

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force.	Clouds. Amount. Up'er —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.
Flushing			29.34	745.2	55.4	13.0		S			4								
Groningen			29.36	745.8	51.4	10.8		S			2								
Helder			29.35	745.4	57.0	13.9		SSW			3								
Utrecht			29.32	744.6	57.7	14.3	64	SSE			4		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force.	Clouds. Amount. Up'er —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.
Bergen			29.69	754.1	38.5	3.6	41	W	2.0	0.9			10			0.276	7.0		
Brönö			29.68	753.8	29.5	— 1.4	92	NNE	13	6			10			0.051	1.3		
Christiania			29.82	757.3	36.0	2.2	51	SSW	1.1	0.5			1			0	0		
Tromsö			29.72	754.8	23.5	— 4.7	56	E	2	1			1			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			29.86	758.4	55.9	13.3	75	W	5.7	2.56			4			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.68	753.9	45.5	7.5	83	SW	20.0	8.92			10	SW		0.315	8.0	Raining	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			29.87	758.6	64.4	18.0	57	W	10.4	4.65			1			0.916	0.4		Capt. D. A. da Cunha.
Lisbon			29.66	753.4	54.1	12.3	66	W	15.0	6.7			9	WNW		0.476	12.1		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.85	758.3	38.5	3.6	75	N	4	2			10						Astronomical Obs.
Wilna			29.83	757.7	35.4	1.9	88	W	4	2			10						Astronomical Obs.
Dorpat			29.89	759.1	30.0	— 1.1	69	WSW	9	4			9						Physical Cabinet.
St. Petersburg			29.79	756.7	31.6	— 0.2	59	NNW	11	5			5						Central Physical Obs.
Kuopio			29.80	756.8	27.0	— 2.8	84	ENE	9	4			0						Ch. Forsten.
Kiew			29.82	757.5	60.0	10.0	69	NW	11	5			7						Physical Cabinet.
Nikolaiev			29.97	761.3	66.2	19.0	39	W	11	5			0						Kurdakof.
Kertch																			Lagorio.
Moscow			29.57	751.1	35.1	1.7	90	SW	9	4			10						Meteorological Obs.
Lugan			29.72	755.0	62.6	17.0	43	WNW	40	18			2						Meteorological Obs.
Archangel			29.61	752.1	24.1	— 4.4	77	NW	18	8			0						Ogorodnikof.
Tiflis	28.56	725.5	29.92	759.9	71.8	22.1	28	S	9	4			3						Physical Observatory.
Astrakhan			30.11	764.7	56.1	13.4	44	SSE	22	10			8						Sebastianof.
Kasan			29.68	753.9	38.7	3.7	80	S	9	4			10						Physical Cabinet.
Orenburg			30.24	768.1	36.3	2.4	80	Calm	0	0			9						Tschernischef.
Ekaterinburg	28.98	736.0	30.00	762.0	37.0	2.8	82	SSE	13	6			10						Meteorological Obs.
Nukuss			30.14	765.5	63.1	17.3	31	NE	9	4			0						
Kasaly																			Bobrof.
Tashkend	28.57	725.7	30.25	768.4	62.2	16.8	28	N	18	8			2						Michelson.
Barnaul			30.25	768.3	27.1	— 2.7	79	NNW	18	8			10						Meteorological Obs.
Yeniseisk			29.74	755.5	31.8	— 0.1	79	WNW	22	10			10						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Pekin, (China)			29.95	760.7	48.2	9.0	22	WNW	9	4			2						Physical Observatory.
Nertchinsk	27.63	701.9	29.80	756.8	20.1	— 6.6	70	N	9	4			2						Meteorological Obs.
Vladivostock			29.85	758.1	31.8	— 0.1	83	Calm	0	0			1			Blank	Blank		
Nikolaievsk, on the Amoor					32.2	0.1	96	E	13	6			10						

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 405. meters, or 1,311.8 feet; Ekaterinburg, 315.4? m., or 1,035.2? ft.; Tashkend, in 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.58	751.4	52.7	11.5	60	SW	23.0	10.67		0	8			0.059	1.5	Cloudy	Royal Observatory.
San Fernando			29.78	756.5	61.0	16.1	72	WSW	13.7	6.1		0	6		W	0.350	8.9		The Naval Observatory.

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	757.5	17.2	— 8.2	94	S			2		10			0	0		
Umea			29.82	757.4	27.7	— 2.4	87	SW			2		1			0	0		
Hernosand			29.83	757.6	32.4	0.2	89	SSW			2		8			0	0		
Stockholm			29.86	758.4	34.9	1.6	68	SW			2		0			0	0		
Wisby			29.97	761.1	36.7	2.6	96	SE			4		0			0	0		
SUB-SERIES.																			
Upsala			29.87	758.7	37.4	3.0	65	SSW	7.8	3.5			0			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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Geneva	28.13	714.5	29.55	750.6	55.8	13.2	60	N			2		7			0.051	1.3	Cloudy	The Observatory.
Zurich	27.92	709.1	29.52	749.8	64.2	17.9	45	SE			2		5			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, −9.8 mm.; Thermometer, +3.8 cent.; Relative Humidity, +1 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Constantinople			29.92	759.9	67.6	19.8	43	NNE	12	5.5			7		SW	0	0		
Fao, (Persian Gulf)			30.07	763.6	76.6	24.8		SE			3		5						
Salonica			29.94	760.4	70.7	21.5		W			2		0						
Valona			29.83	757.7	61.5	16.4		W			1		0						
Varna			29.92	760.0	66.2	19.0		N			3		2						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.78	756.5	84.0	28.9	33 ?	ENE			2		2c			0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Bathurst, N. B.			29.74	755.4	34.7	1.5	87	W	6	2.7						1.20	30.6		Hon. J. Ferguson.
Brockville, Ontario			30.04	763.0	27	— 2.8		Calm	0	0			10s			0	0	Cloudy	W. R. Bigg.
*Chatham, N. B.			29.82	757.4	34	1.1	80	S	8	3.6		8k	2ks	SW	SW	0.46	11.7	Fair	G. A. Blair.
Charlottetown, P. E. Island			29.86	758.4	35	1.7	92	S	4	1.8			8s			0.220	5.59		H. J. Cundall, C. E.
Cornwall, Ontario			29.94	760.5	29.7	— 1.3	74	NW			2		10s			0	0	Unsettled	James Smith, M. A.
Dalhousie, N. B.			29.82	757.4	32.0	0.0	98	W			1					0.60	15.2	Cloudy	H. A. Johnson.
Esquimault, B. C.			29.84	757.9	44.3	6.8	88	N	1	0.4			10			0.23	5.8	Light rain	W. H. Bevis.
Fredericton, N. B.			29.86	758.4	37.0	2.8	81	SW	3	1.3			10ks			0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			30.40	772.1	— 4	—20.0	96	Calm	0	0		2cs	2s			0	0	Fair	James Stewart.
Goderich, Ontario			29.96	761.0	24.8	— 4.0	83	Calm			0		10n			0	0	Unsettled	H. J. Strang, M. A.
Granton, Ontario			29.92	760.0	23.3	— 4.8		E			1		10n			0	0	Cloudy	James Grant.
*Halifax, N. S.			29.87	758.7	36	2.2	95	Calm	0	0			Fog			0.20	5.1	Foggy	F. Allison, M. A.
*Kingston, Ontario			30.00	762.0	27	— 2.8	83	Calm	0	0		10cs	0			0	0	Cloudy	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			29.91	759.7	29	— 1.7	77	W	20	8.9		2k	8ks	W	W	0.01	0.3	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.95	760.7	25	— 3.9	75	W	7	3.1		10k	0	W		0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario			30.00	762.0	17	— 8.3	84	NE	10	4.5		2k	5ks	N	N	0.01	0.3	Fair	Rev. R. Mooley.
*Port Dover, Ontario			29.95	760.7	24	— 4.4	87	E	4	1.8			10ks		E	0	0	Cloudy	H. Morgan.
Port Hastings, N. S.			29.89	759.2	30.1	— 1.1		Calm	0	0						0	0	Foggy	Peter Grant.
*Port Stanley, Ontario			29.93	760.2	24	— 4.4	81	E	18	8.0			10n		E	0	0	Cloudy	M. Payne.
*Quebec, Quebec			29.82	757.4	32	0.0	95	SW	3	1.3			10n		SW	0.25	6.3	Light snow	Capt. Ash, R. N.
St. John, N. B.			29.90	759.4	33.0	0.6	89	Calm	0	0			10ks			0	0		G. Murdoch, C. E.
*Saugeen, Ontario			29.93	760.2	20	— 6.7	85	E	6	2.7			10n			0	0	Cloudy	K. Stewart.
Stayner, Ontario			29.95	760.7	24	— 4.4	88	Calm	0	0			10n			Inap.	Inap.	Cloudy	R. J. Cole.
Stratford, Ontario			29.92	760.0	23.5	— 4.7	82	NE	10	4.5			10s			0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			29.90	759.4	33	0.6	96	W	2	0.9			10n			0.28	7.1	Foggy	T. C. Hill.
*Toronto, Ontario			29.97	761.2	27	— 2.8	68	N	5	2.2			10s			0	0	Cloudy	Magnetic Observatory
Woodstock, Ontario			29.92	760.0	24.4	— 4.2	100	Calm			0		10s			0	0	Cloudy	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.98	761.5	32	0.0	79	NW	2	0.9			10s		W	0	0	Cloudy	
Alpena, Mich.			29.91	759.7	19	— 7.2	84	NE	12	5.4			10n		NE	Inap.	Inap.	Light snow	
Atlantic City, N. J.			29.99	761.7	38	3.3	71	E	15	6.7		10cs	0	SW		0	0	Cloudy	
Augusta, Ga.			29.62	752.3	59	15.0	88	SE	6	2.7			10s		SE	0.11	2.8	Threatening	
Baltimore, Md.			29.98	761.5	38	3.3	81	NE	4	1.8			10n			Inap.	Inap.	Light rain	
Barnegat, N. J.			30.00	762.0	37	2.8	70	E	13	5.8			10s			0	0	Cloudy	
Benton, Montana	27.20	691.9	30.00	762.0	35	1.7	80	SW	13	5.8		0	0			0	0	Clear	
Bismarck, Dakota	28.44	722.4	30.24	768.1	12	—11.1	41	E	6	2.7		2ck	Haze	SE		0	0	Fair	
Boston, Mass.			29.96	761.0	34	1.1	79	W	12	5.4		Haze	1s			0	0	Hazy	
Breckenridge, Minn.			30.33	770.4	0	—17.8	69	N	6	2.7		0	0			0	0	Clear	
Buffalo, N. Y.			29.91	759.7	26	— 3.3	88	E	8	3.6			10s			0	0	Cloudy	
Burlington, Vt.			29.92	760.0	34	1.1	71	W	3	1.3			10s			0	0	Cloudy	
Cairo, Ill.			29.46	748.3	39	3.9	100	W	12	5.4			10n		W	0.96	24.4	Light rain	
Cape Hatteras, N. C.			29.84	757.9	61	16.1	94	SE	20	8.9			10ks		S	0	0	Cloudy	
Cape Henry, Va.			29.88	758.9	49	9.4	85	SE	9	4.0			10s		SE	0	0	Cloudy	
Cape May, N. J.			29.97	761.2	41	5.0	65	NE	14	6.3			10s			0	0	Cloudy	
Charleston, S. C.			29.75	755.6	61	16.1	100	SE	18	8.0			10n			0.61	15.5	Heavy rain	
Cheyenne, Wyoming	24.06	611.1	30.00	762.0	22	— 5.6	60	W	8	3.6		2cs	0	W		0	0	Fair	
Chicago, Ill.			29.72	754.9	28	— 2.2	100	NE	20	8.9			10n			0.08	2.0	Heavy snow	
Cincinnati, Ohio			29.38	746.2	39	3.9	81	E	5	2.2			10n			0.44	11.2	Light rain	
Cleveland, Ohio			29.76	755.9	23.4	— 4.8	78	NE	14	6.3			10n			0.08	2.0	Heavy snow	
Colorado Springs, Col.	24.20	614.7	30.07	763.8	10	—12.2	68	Calm	0	0		0	0			0	0	Clear	
Corsicana, Tex.			30.16	766.1	39	3.9	63	NW	15	6.7		5k	0	NW		0	0	Fair	
Davenport, Iowa			29.85	758.2	25	— 3.9	88	N	24	10.7			10n			0.05	1.3	Light snow	
Denison, Tex.			30.15	765.8	35	1.7	61	NW	20	8.9		0	0			0	0	Clear	
Denver, Col.	24.90	632.4	30.12	765.0	21	— 6.1	57	S	5	2.2		0	0			0	0	Clear	
Detroit, Mich.			29.79	756.7	25	— 3.9	87	E	17	7.6			10n			0.01	0.3	Light snow	
Dodge City, Kan.	27.56	700.0	30.00	762.0	25	— 3.9	88	W	13	5.8		0	0			0.04	1.0	Clear	
Dubuque, Iowa			29.94	760.5	27	— 2.8	54	N	16	7.2			10s		N	0	0	Cloudy	
Duluth, Minn.			30.21	767.3	21	— 6.1	57	NW	12	5.4		0	0			0	0	Clear	
Eastport, Me.			29.85	758.2	36	2.2	90	SW	4	1.8		10k	0	W		0.55	14.0	Cloudy	
Erie, Pa.			29.86	758.4	27	— 2.8	88	E	10	4.5			10s			0.02	0.5	Cloudy	
Escanaba, Mich.			30.44	763.0	15	— 9.4	82	N	24	10.7			10s		N	0	0	Cloudy	
Fort Gibson, Indian Terr.			30.00	762.0	34	1.1	70	N	28	12.5			10ks		N	0.10	2.5	Cloudy	
Ft. St. Michaels, Alaska			30.11	764.8	—16	—26.7		Calm	0	0		0	0			0	0	Clear	
Fort Sill, Indian T.	28.98	735.1	30.16	766.1	31	— 0.6	79	NW	20	8.9		0	0			0	0	Clear	
Fort Sully, Dakota	28.53	724.6	30.37	771.4	10	—12.2	99	Calm	0	0			Fog			Inap.	Inap.	Dense fog	
Galveston, Tex.			30.10	764.5	46	7.8	54	NW	32	14.3		0	0			0.23	5.8	Clear	
Grand Haven, Mich.			29.85	758.2	26	— 3.3	76	NE	15	6.7			10s		NE	Inap.	Inap.	Cloudy	
Indianapolis, Ind.			29.38	746.2	32	0.0	100	NE	12	5.4			10n			0.38	9.7	Light snow	
Indianola, Tex.			30.21	767.3	48	8.9	49	N	38	17.0		1c	0	W		0.05	1.3	Clear	
Jacksonville, Fla.			29.81	757.2	67	19.4	90	SW	32	14.3			10n		SW	1.46	37.1	Light rain	
Keokuk, Iowa			29.75	755.6	25	— 3.9	100	N	20	8.9			10n		N	0.20	5.1	Light snow	
Key West, Fla.			29.90	759.4	76.7	24.8	77	S	13	5.8		2k	Haze	S	S	0	0	Fair	
Kittyhawk, N. C.			29.91	759.7	51	10.6	93	S	6	2.7		10k	0	SW		0	0	Cloudy	
Knoxville, Tenn.			29.37	746.0	47	8.3	85	NW	3	1.3			10n		S	0.18	4.6	Misting	
La Crosse, Wis.			30.05	763.3	24	— 4.4	74	N	12	5.4		10cs	0	NW		0	0	Cloudy	
Leavenworth, Kan.			30.01	762.2	36	2.2	88	NW	16	7.2		0	2s		NW	1.79	45.5	Clear	
Lexington, Ky.	28.35	720.1	29.44	747.8	40	4.4	91	SE	8	3.6			10n			0.23	5.8	Light rain	
Long Branch, N. J.			30.01	762.2	35	1.7	70	NW	4	1.8			10s			0	0	Cloudy	
Louisville, Ky.			29.39	746.5	44	6.7	84	SE	6	2.7			10s		SW	0.53	13.5	Cloudy	
Lynchburg, Va.			29.78	756.4	43	6.1	67	NE	8	3.6			10s		S	Inap.	Inap.	Cloudy	
Malone, N. Y.			29.92	760.0	28	— 2.2	78	W	7	3.1			10s		W	0.08	2.0	Cloudy	
Manhattan, Kan.	28.95	735.3	30.18	766.6	20	— 6.7	85	NE	24	10.7		0	0			1.18	30.0	Clear	
Marquette, Mich.			30.12	765.0	17	8.3	83	N	12	5.4			10s		N	0	0	Cloudy	
Memphis, Tenn.			29.59	751.6	44	6.7	59	W	12	5.4			10s		SW	0	0	Cloudy	
Milwaukee, Wis.			29.83	758.9	27	— 2.8	88	NE	30	13.4			10ks		NE	0	0	Cloudy	
Mobile, Ala.			29.75	755.6	53	11.7	51	W	8	3.6		0	0			2.61	66.3	Clear	
Montgomery, Ala.			29.65	753.1	54.5	12.5	79	W	16	7.2		5k	0	SW		0.50	12.7	Fair	
Morgantown, W. Va.			29.64	752.8	38	3.3	75	NW	3	1.3			10s		SW	0	0	Threatening	
Mt. Washington, N. H.	23.44	595.4	29.8[illegible]	756.9	17	— 8.3	67	Calm	0	0		0	10s			0	0	Fair	
Nashville, Tenn.			29.44	747.8	49	9.4	77	SW	4	1.8		2k	0	SW		0.59	15.0	Fair	
New Haven, Conn.			30.01	762.2	38	3.3	63	Calm	0	0		0	8s		W	0	0	Fair	
New London, Conn.			30.01	763.0	38	3.3	50	NW	5	2.2		2c	Haze	W		0	0	Fair	
New Orleans, La.			29.82	757.4	54	12.2	43	W	12	5.4		0	0			3.73	94.7	Clear	
Newport, R. I.			30.01	762.2	55	12.8	70	W	8	3.6		0	0			0	0	Clear	
New York, N. Y.			30.03	762.7	35	1.7	70	NW	3	1.3			10s, fog			0	0	Cloudy	
Norfolk, Va.			29.87	758.7	53	11.7	61	SE	8	3.6			10s		SE	0	0	Threatening	
North Platte, Neb.	27.26	692.4	30.01	762.2	22	— 5.6	86	W	3	1.3		0	0			0.01	0.3	Clear	
Omaha, Neb.	28.99	736.3	30.12	765.0	27	— 2.8	82	N	13	5.8		2c	0			0.02	0.5	Fair	
Oswego, N. Y.			29.98	761.5	32.5	0.3	79	SW	3	1.3			10s		W	0	0	Cloudy	
Pembina, Dakota			30.34	771.0	— 5	—20.6	100	NW	4	1.8		0	0			0	0	Clear	
Philadelphia, Penn.			30.00	762.0	34	1.1	79	E	9	4.0			10s			0	0	Cloudy	
Pike's Peak, Colorado	17.53	445.2	29.74	755.4	0	—17.8	70	NE				0	1s			0.06	1.5	Clear	
Pittsburgh, Penn.			29.84	755.4	30	— 1.1	67	E	10	4.5			10s			0	0	Cloudy	
Port Huron, Mich.			29.87	758.7	25	— 3.9	87	NE	10	4.5			10s		NE	0	0	Cloudy	
Portland, Me.			29.91	759.7	37	2.8	71	W	7	3.1		8k	0	NW		0	0	Cloudy	
Portland, Oregon			30.05	763.3	40	7.8	92	Calm	0	0			10s			0.05	1.3	Cloudy	
Punta Rassa, Fla.			29.88	758.9	74	23.3	90	S	20	8.9			10ks		S	0	0	Threatening	
Rochester, N. Y.			29.96	761.0	28	— 2.2	88	S	2	0.9			10s			Inap.	Inap.	Cloudy	
Salt Lake City, Utah	25.94	658.9	30.27	768.8	30	— 1.1	78	Calm	0	0		0	0			0	0	Clear	
Sandy Hook, N. J.			30.00	762.0	35	1.7	61	NE	10	4.5			10s			0	0	Cloudy	
San Diego, Cal.			30.06	763.5	53	11.7	48	E	4	1.8		0	0			0	0	Clear	
San Francisco, Cal.			30.14	765.5	50	10.0	79	Calm	0	0		0	0			0	0	Clear	
Santa Fe, N. M.	23.34	592.8	29.88	758.9	14	—10.0	63	Calm	0				10s			0	0	Cloudy	
Savannah, Ga.			29.69	754.1	63	17.2	88	SE	12	5.4			10s		SE	0.36	9.1	Threatening	
Shreveport, La.			29.99	761.7	42	5.6	66	W	17	7.6			10ks		W	0	0	Cloudy	
Smithville, N. C.			29.83	757.7	63	17.2	83	S	20	8.9			10ks		S	0	0	Threatening	
Springfield, Mass.			30.01	762.2	36	2.2	61	W	4	1.8			10s			0	0	Cloudy	
St. Louis, Mo.			29.52	749.8	31	— 0.6	100	N	20	8.9			10n			0.75	19.1	Heavy snow	
St. Marks, Fla.			29.67	753.6	66	18.9	94	SW	19	8.5			10s		SW	2.88	73.2	Cloudy	
St. Paul, Minn.			30.14	765.5	21	— 6.1	71	NW	6	2.7		0	0			0	0	Clear	
St. Paul's Island, Alaska			30.20	767.1	20	— 6.7	85	E	3	1.3		10	k			0.01	0.3		
Thatcher's Island, Mass.			29.96	761.0	34	1.1	61	W	16	7.2		0	0			0	0	Clear	
Toledo, Ohio			29.71	754.6	26	— 3.3	100	NE	32	14.3			10n		NE	0.15	3.8	Heavy snow	
Tucson, Arizona	27.61	701.3	30.20	767.1	39	3.9		S				0	0			0	0	Clear	
Tybee Island, Ga.			29.67	753.6	61	16.1	94	SE	8	3.6			10ks			0.45	11.4	Cloudy	
Vicksburg, Miss.			29.82	757.4	46	7.8	54	W	19	8.5		10k	0	NW		0.56	14.2	Cloudy	
Virginia City	24.35	618.5	29.83	757.7	29	— 1.7	78	NW	2	0.9			10ks		NW	0	0	Cloudy	
Washington, D. C.			29.94	760.0	38	3.3	67	NE	8	3.6			10s		S	0	0	Threatening	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			29.81	757.2	65	18.3	83	SE	16	7.2			10n		S	Inap.	Inap.	Light rain	
Wood's Holl, Mass			30.02	762.5	38	3.3	62	W	12	5.4		5k	0			0	0	Fair	
Wytheville, Va	27.28	692.9	29.37	746.0	47	8.3	92	SE	14	6.3			10ks		S	0.07	1.8	Threatening	
Yankton, Dakota	28.94	735.1	30.36	771.1	14	—10.0	63	W	5	2.2		0	0			0.02	0.5	Clear	
Yuma, Arizona			30.16	766.1	62	16.7		NW				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			29.99	761.7	77	25.0	95	NE	5	2.2		2k	10ks	N		0.95	24.1	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.96	761.0	77	25.0	72	E				0	5ks			0.1	2.5	Fair	L. V. Bigard.
St. Thomas, St. T., W. I.			30.20	767.1	76	24.4	63	ESE	6	2.7		2c	8kn	SE		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I.			30.16	766.1	77	25.0	72	Ca'm	0	0		2k	2s			0	0		James Gall.
Santiago de Cuba, W. I.			29.79	756.7	75	23.9	69	Calm	0	0		0	2k		S	0	0	Fair	Robert Mason.
Havana, Cuba, W. I.			29.95	760.7	79	26.1	70	S	3.6	1.6		5k	0	S		0	0	Fair	Charles Hasselbrink.
St. Georges, Bermudas			30.15	765.8	65.5	18.6	64	NE	13.0	5.8		0	2k		NE	0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.17	690.1	29.98	761.5	60	15.6	88	N	1.0	0.4		0	0			0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.			29.96	761.0	80	26.7	87	E			2		5ks			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A.			30.08	764.0	81.5	27.5										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.23	640.8			63.0	17.2	79		0	0		1c	2s			0.12	3.0	Fair	Thomas Herran.
St. Johns, Newfoundland			30.11	764.8	32.5	0.3	100	E					10n			0.50	12.7	Rain and fog	John Delaney.
York Factory, B. A.			30.70	779.8	—14.5	—25.8	72	Calm	0	0		4c	0	NE		0	0		J. Fortescue.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,533? feet, or 772.1? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used incorrecting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 29, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From -	Clouds. Direction. Lower. From -	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			29.81	757.2	65.3	18.5	50	Calm			0		3			0	0	Fair	Charnot.
Algiers			29.92	760.0	61.5	16.4	77	N			2		2			0	0	Clear	Peter.
La Calle																			Kuntz.
Tunis			29.92	759.9	68.4	20.2	46	NW			4		6			0.118	3.0	Fair	Jacques
Sfax			29.92	760.0	70.5	21.4	46	N			5		4			0		Fair	Chauvey.
Saïda			29.93	760.2	61.2	16.2		NNW			2		2			0	0	Clear	Millot.
Tebessa			29.92	759.9	62.2	16.8		N			1		4			0.197	5.0	Fair	Colin.
Geriville			30.04	763.0	54.7	12.6	54	NW			2		2			0.028	0.7	Clear	Buard.
Laghouat			30.04	762.9	73.4	23.0	37	NW			3		3			0	0	Fair	Guyot.
Biskra			29.99	761.7	74.7	23.7	30	NNW			3		7			0	0	Cloudy	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From -	Clouds. Direction. Lower. From -	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			29.65	753.2	69.3	20.7	24	SW			4		5			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.69	754.1	70.9	21.6	24	NE			1		2			0	0		I. R. Observatory.
Eperies			29.71	754.7	64.6	18.1	51	S			3		5			0	0		Julius Mikolik.
Gratz	28.45	722.6	29.60	751.9	66.7	19.3	33	SW			2		2			0	0		Andreas Rospini.
Hermannstadt	28.35	720.2	29.72	754.8	69.8	21.0	29	SE			3		0			0	0		Prof. Reissenberger.
Kremsmünster	28.21	716.5	29.52	749.7	57.2	14.0	68	ENE			1		8			0	0		Prof. C. Wagner.
Lemberg			29.72	754.8	67.3	19.6	40	S			1		3			0	0		Dr. T. Stanecki.
Nyiregyhaza			29.74	755.5	72.0	22.2	41	SE			2		0			0	0		Habsuda Daniel.
Pola			29.73	755.1	59.2	15.1	73	SSE			2		10ks			0	0		I. R. Hydrographic Office
Szegedin			29.68	754.9	72.3	22.4	30	S			4		0			0	0		Karl Stancel.
Trieste			29.75	755.6	60.3	15.7	78	Calm			0		7			0	0	Foggy	Prof. V. Farolfi.
Vienna			29.56	750.9	71.2	21.8	33	S			3		5			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From -	Clouds. Direction. Lower. From -	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.46	748.3	52.2	11.2	72	WSW			4		10			0.106	2.70		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.28	743.7	46.0	7.8		W	5	2.2			4			0.390	1.91	Blue sky	William Boswell.
Ardrossan			29.28	743.7	44	6.7		NE			1		8					Rain and fog	J. Mayes.
Armagh Observatory			29.30	744.2	41.0	5.0		NNE	2	0.9			10					Drizzling	S. Call, for Dr. Robinson
Bidston, Liverpool Obs			29.26	743.2	50.2	10.1		SSW	7	3.1			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.30	744.2	42.6	5.9		Calm			0		10					Overcast	J. Dreyer.
Bradford			29.28	743.7	46.1	7.8		NE			1		10			0.62	15.7	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.00	762.0	80.0	26.7		NE			4		2					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			29.34	745.2	46.2	7.9		SSW			2		10			†0.780	†19.81	Raining	H. Todd.
Cardington			29.35	745.5	48.0	8.9		SW			1		10					Overcast	John McLaren.
Carlisle			29.20	741.7	43.1	6.2		NW			1		10			0	0	Threatening	Bell, for J. Cartmell.
Chatham, School M. E.			29.39	746.5	49.2	9.6		SW			2		7					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	27.92	709.2	29.44	747.8	37.0	2.8		NW			1		10					Hailing	R. E. Power.
Donaghadee			29.27	743.4	42	5.6		SE			2		10					Raining	J. Mac Gowan.
Dover			29.40	746.7	47	8.3		SSW			3		4					½ clouded	J. Costello.
Eccles, (near Manchester)			29.26	743.2	48.2	9.0		SE	1.2	0.5			10					Misty	Thomas Mackereth
Falmouth Observatory			29.34	745.2	45.4	7.4		WNW	13	5.8			10					Raining	The Staff.
Fort Napier, (Natal)	27.70	703.6	29.94	760.5	78.0	25.6		NE			2		1					*D. clouds	Pvt. G. Salmon, A. H. C. (Tis.
Free Town, (Sierra Leone)			29.92	760.0	91.0	32.8		E			3		8					Overcast	
Galway, Queen's College			29.26	743.2	45	7.2		N			1		3					*D. clouds	B. G. Clare, for Prof. Curr.
Gibraltar, (Mediterranean)			29.98	761.5	61.8	16.6		E			2		8					Showery	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.37	743.4	44.0	6.7		NE			1		10					Gloomy	Lewis Stuart.
Great Yarmouth			29.36	745.7	45	7.2		SSE			4		6					Overcast	G. T. Watson.
Greenwich Royal Obs			29.36	745.7	51.9	11.1		SSW			2		9			Blank	Blank	Nearly cov'd	The Staff for G. B. Airy.
Guernsey			29.34	745.2	50	10.0		SSW			2		5					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs			29.31	744.5	47.0	8.3		Calm			0		10			Blank	Blank	Foggy	L. J. Crossley.
Helston			29.30	744.2	48	8.9		NW			2		10n			0.30	7.6	Gloomy	M. P. Moyle.
Holyhead			29.26	743.2	48	8.9		SSW			3		10					Hazy	John Tilston.
Kew Observatory			29.35	745.5	49.5	9.7		SSW	20	8.9			6					*D. clouds	The Staff.
Kingstown			29.26	743.2	44	6.7		WNW			4		10					Foggy	George Mitchell
Leicester Museum			29.34	745.2	45.8	7.7		SW			1		10					Raining	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.80	756.9	63.0	17.2		NE			2		4k						Fred Travis, Pvt A.H.C.
Nairn			29.30	744.2	41	5.0		NE			1		10					Raining	W. D. Penny.
Nassau, (Bahamas)			29.98	761.5	77.6	25.3		S			6		8					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.30	744.2	48.3	9.1		S			2		10n,d		S	0.20	5.1	Raining	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.30	744.2	43.9	6.6		S			2		10					Raining	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.21	741.9	51	10.6		Calm			0		10					Raining	J. Lucas.
Plymouth			29.29	744.0	52	11.1		S			2		5					*D. clouds	John Merrifield.
Roche's Point			29.30	744.2	48	8.9		NNW			3		5					½ clouded	W. Kennedy.
Saint Ann's Head			29.28	743.7	47	8.3		SW			1		10					Showery	John C. Walker.
Saint Helier, (Jersey)			29.36	745.7	49.2	9.6		SSW			4		8					¾ clouded	A. P. Amy.
Sandwick Manse (Orkneys)			29.39	746.5	38	3.3		ENE	30	13.4			10					Raining	Rev. Dr. Clouston.
Scarborough			29.32	744.7	43.1	6.2		SSE			2		10					Foggy	F. Shaw.
Scutari Cemetery (Turkey)			29.76	755.9	55.6	13.1		N			2		10					Raining	Sergt. W. H. Lyne.
Sheffield			29.28	743.7	50.0	10.0		SW			1		10			0.199	5.06	Overcast	W. F. Cooper.
Silloth Rectory			29.26	743.2	46.9	8.3	92	Calm			0		10			0.410	10.41	Overcast	Rev. Francis Redford.
Stonyhurst Observatory			29.36	745.7	48.7	9.3		SE			1		10			Blank	Blank	Gloomy	S. J. Perry.
Stornoway, Lewis C. (Hebr.)			29.36	745.7	39	3.9		NE			5		10					Rain, snow	John Smith.
Stratfield Turgiss			29.32	744.7	51.8	11.0		S			1		5					*D. clouds	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Satter.
Thurso			29.33	745.0	39	3.9		NE			5		10					Raining	John Trotter.
Truro, Royal Institution			29.36	745.7	47	8.3		W			6		8					Gloomy	W. Newcombe.
Valencia Observatory			29.34	745.2	47.6	8.7		W	8	3.6			10					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					44	6.7		E			3		10			0	0		
Cape Good Hope Obs.			30.02	762.5	77.4	25.2	57	SE	13	5.8			2						The Staff, for E. J. Stone.
Leith, Restalrig Park			29.32	744.7	42.0	5.6		E			1		10s			0.08	2.0	Overcast	Andrew Gibb.
Mauritius			29.99	761.7				NW	5.4	2.4						0	0		
Monach Lt-house, Hebrides																			J. Youngclause.
North Unst, (Shetland Is.)			29.48	748.8	37	2.8		NE			7		10			Blank	Blank		

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds. † Rain-fall for the evening of the 28th.

DANISH SERIES.

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

Copenhagen			29.58	751.2	39.2	4.0	93	SSE			2		10					Foggy	
Fanöe			29.50	749.4	45.9	7.7	89	SW			4		5						
Godthaab, (Greenland)			30.14	765.5	12.7	—10.7	80	NNE			6		0						
Stykkisholm, (Iceland)			29.97	761.2	23.2	— 4.9	95	E			2		0						
Thorshavn, (Faröe)			29.71	754.5	36.9	2.7	55	ENE			6		10						
Vestervig			29.45	748.0	48.6	9.2	92	SE			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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.28	743.6	48.2	9	71	SW			3		5ck		SW	0.118	3.0	Cloudy	Normal School.
Amiens			29.48	748.8	52.9	11.6	78	SSW			3		0			0	0	Clear	Normal School.
Avignon			29.74	755.3	61.3	16.3	47	NNW			2		0			0.24	6.	Clear	Normal School.
Bar-sur-Seine			29.62	752.3	53.1	11.7	57	S			3		8		SW	0.067	1.7	Very cloudy	C. Saillard.
Beaumette, (near Angers)			29.50	749.2	51.8	11.0	62	SW	31.3	14.0					SW	0.075	1.9		Beaumette Observatory
Beauvais			29.50	749.4	54.9	12.7	57	SW			4		8		SW	0.061	1.55	Very cloudy	Normal School.
Besançon			29.74	755.5	48.6	9.2	76	SSW			4		5		SW	0.071	1.8	Cloudy	Normal School.
Bourg en Bresse			29.81	757.2	53.1	11.7	60	SE			1		..k		NW				Normal School.
Bourges			29.68	753.9	52.3	11.3	73	SW			2		5		S	0.20	5.	Cloudy	Normal School.
Brest			29.35	745.5	51.6	10.9	70	W			3		9n		W	0.108	2.75		Naval Observatory.
Caen																			Normal School.
Chartres			29.49	749.1	53.1	11.7		SW			3		8		N	0.051	1.3		Normal School.
Chaumont																			Normal School.
Clermont			29.67	753.6	51.1	10.6	48	W			4		5		W	0.197	5.0		Puy de Dome Obs.
Commercy			29.67	753.7	45.3	7.4	85	WSW			4		10n		WSW	0.283	7.2	Covered	Normal School.
Commune de Gréasque*			29.76	755.[illegible]	54.9	12.7	64	NW			2		8		NW	0.091	2.3		
Grenoble			29.80	757.0	49.6	9.8	62	NW			2		5kn		S	0	0	Partly cl'dy.	Normal School.
Le Mans			29.53	750.0	47.5	8.6	76	W			4		8		W	0.071	1.8	Very cloudy	Normal School.
Loches			29.34	745.3	51.8	11	76	W			4		10			0.173	4.4	Covered	Normal School.
Lons-Le-Saulnier			29.74	755.4	49.1	9.5	79	S			Var.		5		SW	0	0	Cloudy	Normal School.
Mâcon			29.71	754.6	50.7	10.4	84	SE			2		10			0.366	9.3	Covered	Normal School.
Mirecourt																			Normal School.
Metz			29.67	753.5	49.5	9.7	86	S[illegible]			4		10			0.161	4.1		M. Schuster.
Nismes			29.73	755.1	63.1	17.3	43	N			2		0			0	0	Clear	Normal School.
Orleans			29.54	750.2	52.2	11.2	61	SW			4		5		SW	0.189	4.8	Cloudy	Normal School.
Paris Observatory			29.53	750.0	53.4	11.9	57	S			4		5		SW	0.215	5.45	Cloudy	National Observatory.
Parthenay			29.53	750.0	50.0	10	85	SW			2		2		SW	0.12	3.	Slightly cl'dy	Normal School.
Privas			29.78	756.5	55.9	13.3		NE			2		8		NE	0.031	0.8	Very cloudy	Normal School.
La Roche-sur-Yon			29.61	752.0	51.6	10.9	71	S			6		8		N	0.146	3.7	Very cloudy	Normal School.
Rochefort, Observatory			29.68	753.9	53.1	11.7	66	SW			6		5		ENE	0	0	½ covered	Naval Observatory.
Rouen			29.46	748.2	55.8	13.2	50	SSE			2		5		SW	0.197	5.0	Cloudy	Normal School.
Saint Lo			29.41	747.1	50.9	10.5	78	SW			2		1		SW	0.181	4.6		Normal School.
Tarbes			29.71	754.6	55.4	13	37	SW			4		2		E	0	0	Slightly cl'dy	Normal School.
Toulouse																			Normal School.
Villefranche			29.48	748.7	65.3	18.5	85	SE			1		8			0	0	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.6	77.0	25	76	NE			2		5k						L'Abbé Marchési.
Gorée																			
Marseilles																			
Mont-Louis			29.72	755.0	57.9	14.4	60	W			3		2?			0.008	0.2	Cloudy	Marseilles Observatory.
Montsouris, Paris	24.58	624.2	29.92	759.9	41.0	5.0	71	SSW	14.9	6.66			4		SSW	0.24	6.		—. Falguère.
Perpignan			29.52	749.8	55.4	13.0	55	SSW			3		9		SSW	0.122	3.1		Montsouris Observ'tory.
Pic du Midi, (Summit) H.P†			29.76	756.0	60.8	16.0	42	S	7.4	3.33			4		WSW	0	0		Dr. Fines.
Pic du Midi, (Plantade)																			M. Baylac.
Saint Maur, (near Paris)	22.19	563.5			26.6	- 3.0		W			2		3					Fair	General de Nansouty.
Toulouse			29.54	750.3	54.3	12.4	54	SW			4		6			0.248	6.3	Cloudy	E. Renou.
Tours			29.81	757.1	56.5	13.6	40	WNW			2		6			0.126	3.2		Toulouse Observatory.
Versailles, (near Paris)			29.58	751.2	52.2	11.2	63	SSW			6		8		WSW	0.358	9.1		C. Marquet.
Zi-Ka Wei, (near Shanghai			29.53	750.0	53.6	12.0	50	SW			2		8			0.107	2.73	Fine	Dr. A. Bérigny.
																			H. Le Lee, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Near Marseilles. † Summit inaccessible.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.49	749.1	55.0	12.8	71	WNW			4		9			0	0		Prof. T. Hoh.
Berlin			29.56	750.8	59.0	15.0	73	SE			1		3			0	0		Prof. Arndt.
Breslau			29.64	752.0	63.3	17.4	58	SSE			4		8			0	0		Dr. P. Neugebauer.
Carlsruhe			29.55	750.6	57.2	14.0	67	SE			3		2			0.154	3.9		A. Senz.
Cassel			29.47	748.4	53.4	11.9	88	SSW			2		10			0.197	5.0		Dr. H. Möhl.
Cologne																			Dr. Garthe
Emden																			Prof. Prestel.
Frankfort on the Main			29.61	752.2	57.7	14.3	57	SSW			1		9			0.181	4.6		Physical Society.
Friedrichshafen	28.22	716.8	29.64	752.9	52.3	11.3	66	W					7			0.150	3.8	Rain and graupel	M. Wilhelm.
Hamburg			29.56	750.8	56.1	13.4	76	S			1		10			0.098	2.5	Rain, smoke-haze	Deutsche Seewarte.
Kiel			29.55	750.6	52.7	11.5	79	S			2		10			0.020	0.5		Prof. G. Karsten.
Königsberg			29.72	754.9	47.3	8.5	76	SE			5		2			0	0		Prof. E. Luther.
Köslin			29.63	752.7	44.8	7.1		SE			4		5			0.154	3.9		H. Müller.
Leipsic			29.56	750.7	60.4	15.8	56	N			1		9			0	0		Prof. Bruhns.
Memel			29.68	753.8	45.9	7.7	67	SE			4		1			0	0		Reinbrecht & Skalweit.
Münster			29.56	750.8	56.8	13.8	76	E			2		0			0.039	1.0		Prof. E. Reis.
Neufahrwasser			29.64	752.9	42.3	5.7	88	ESE			1		10			0	0		A. Lothes.
Posen			29.64	752.9	55.0	12.8	77	E			4		6			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.57	751.0	57.9	14.4	66	SW			2		6			0.024	0.6		Dr. Schur.
Stuttgart			29.61	752.1	53.2	11.8	73	W			1		6			0.244	6.2	Raining	Prof. Schoder.
Thorn			29.66	753.4	52.9	11.6	73	SE			5		5			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.48	748.8	53.6	12.0	75	SW			4		10			0.063	1.6		Prof. Flesch.
Wustrow, Naval School			29.48	748.8	54.3	12.4	83	SE			2		7			0.016	0.4		E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Athens																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Udine			29.74	755.3	57.7	14.3	62	SW	3.1	1.4			9			0	0		
Padua			29.73	755.2	54.5	12.5	77	NE	8.7	3.9			10			0.043	1.1		
Vicenza			29.75	755.6	52.5	11.4	85	N	3.1	1.4			10	S		0.039	1.0		
Verona			29.79	756.7	57.2	14.0	68	E			2		10			0.102	2.6		
Bergamo	28.38	720.8	29.71	754.6	48.2	9.0	79	N			4		10			0.079	2.0		
Domodossola	28.73	729.8	29.77	756.2	42.8	6.0	88	Calm			0		10			0.185	4.7	Raining	
Milan			29.73	755.1	52.2	11.2	85	S			2		10	S		1.016	25.8	Raining	
Pavia			29.73	755.2	53.2	11.8	84	SW			4		9	SW		0.472	12.0		
Moncalieri			29.77	756.1	46.2	7.9	89	WNW	3.1	1.4			10	SE		0.555	14.1		
Mondovi	27.82	706.7	29.76	756.0	47.8	8.8	81	NW			2		9			0	0		
Porto Maurizio			29.77	756.1	59.0	15.0		WSW			2		7	ENE		0	0		
Genoa			29.74	755.4	55.2	12.9	79	SE	3.8	1.7			6	SE		0.008	0.2		
Piacenza			29.73	755.1	54.5	12.5	83	SE	33.6	15.0			10	WSW		0	0		
Parma			29.72	755.0	55.6	13.1	79	E			2		9			0.016	0.4		
Bologna			29.76	756.0	56.1	13.4	46	ESE			6		5	W		0	0		
Florence			29.78	756.3	59.0	15.0	75	SE			1		10	SW		0.012	0.3		
Leghorn			29.74	755.4	62.4	16.9	71	W	1.8	0.8			7			0	0		
Siena	28.55	725.2	29.76	755.9	54.7	12.6	77	W	0	0			10	W		0.142	3.6		
Urbino	28.20	716.2	29.77	756.1	53.1	11.7	68	SSW			2		10			0	0		
Pesaro																			
Ancona			29.73	755.1	58.3	14.6	72	SE			2		10			0	0		
Grosseto			29.75	755.7	63.0	17.2	60	NNW			4		7	NW		0.154	3.9		
Rome			29.78	756.4	57.6	14.2	82	SSE	15.0	6.7			10			0	0		
Naples, O. U.			29.82	757.5	66.7	19.3	52	WSW			2		10	SW		0	0		
Lecce			29.80	756.9	65.3	18.5	39	NW	3.8	1.7			4			0	0		
Cosenza			29.80	757.0	63.1	17.3	77	SE	0.7	0.3			10			0	0		
Riposto, (Sicily)			29.83	757.6	64.4	18.0	85	SE			2		7			0	0		
Palermo			29.78	756.4	61.0	16.1	75	NE	1.3	0.6			10			0	0		
Caltanissetta	27.83	706.9	29.78	756.4	59.0	15.0	57	NW			2		10	SE		0.024	0.6		
Sub-Series.																			
Naples, S. R.			29.83	757.7	64.6	18.1	60	WSW	1.8	0.8			..k	SW		0	0	Foggy	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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Tokio																			

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Flushing			29.47	748.6	49.5	9.7		SSW			4								
Groningen			29.43	747.5	53.4	11.9		S			2								
Helder			29.47	748.5	51.6	10.9		SSW			2								
Utrecht			29.43	747.4	57.0	13.9	61	SSW			2		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Bergen			29.41	747.1	34.9	1.6	93	NE	3.6	1.6			10			0.236	0	Snowing	
Brönø			29.77	756.2	32.0	0.0	85	NE	18	8			0			0	6.0		
Christiania			29.59	751.6	33.1	0.6	89	NNE	1.1	0.5			10			0.028	0		
Tromsö			29.98	761.5	21.6	— 5.8	64	SW	2	1			0			0	0.7		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			29.87	758.6	56.1	13.4	74	W	6.5	2.92			3			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.90	759.5	55.4	13.0	64	SW	4.5	2.00			8	SW		0.051	1.3	Raining	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			29.90	759.5	63.0	17.2	65	Calm ?	3.2?	1.44?			10			0	0		Capt. D. A. da Cunha.
Lisbon			29.91	759.6	56.7	13.7	67	SSW	17.4	7.8			7	SW		0.098	2.5		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.66	753.3	63.3	17.4	57	SE	16	7			8						Astronomical Obs.
Wilna			29.86	758.4	48.6	9.2	74	E	4	2			5						Astronomical Obs.
Dorpat			29.96	761.0	38.8	3.8	63	SE	7	3			8						Physical Cabinet.
St. Petersburg			30.02	762.5	34.7	1.5	60	S	13	6			10						Central Physical Obs.
Kuopio			29.87	758.8	30.4	— 0.9	98	SW	18	8			10						Ch. Forsten.
Kieff			29.92	760.0	60.6	15.9	57	SE	11	5			4						Physical Cabinet.
Nikolaiev			30.03	762.8	67.6	19.8	37	SSE	11	5			4						Kurdakof.
Kertch																			Lagorio.
Moscow			30.18	766.5	34.9	1.6	61	W	9	4			1						Meteorological Obs.
Lugan			29.98	761.6	53.6	12.0	53	N	18	8			5						Meteorological Obs.
Archangel			30.05	763.3	19.8	— 6.8	73	WNW	9	4			10						Ogorodnikof.
Tiflis	28.48	724.3	29.81	757.1	80.2	—26.8	14	N	9	4			0						Physical Observatory.
Astrakhan			30.07	763.8	67.3	19.6	38	N	4	2			3						Sebastianof.
Kasan			29.86	758.4	32.7	0.4	85	N	4	2			10						Physical Cabinet.
Orenburg			30.23	767.9	40.8	4.9	78	SE	2	1			0						Tschernischef.
Ekaterinburg	28.72	729.5	29.73	755.1	40.3	4.6	71	SSW	13	6			10						Meteorological Obs.
Nukuss			30.02	762.6	65.7	18.7	27	NNE	11	5			1						
Kasaly																			Bobrof.
Tashkend	28.37	720.6	30.04	762.9	66.9	19.4	27	N	9	4			2						Michelson.
Barnaul			30.37	771.4	23.9	— 4.5	54	N	13	6			10						Meteorological Obs.
Yeniseisk			30.12	765.0	25.7	— 3.5	54	S	7	3			8						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.99	761.7	50.0	10.0	33	Calm	0	0			0						Physical Observatory.
Nertchinsk	27.75	704.9	29.93	760.1	18.3	— 7.6	67	NW	4	2			0			Blank	Blank		Meteorological Obs.
Vladivostock			29.92	759.9	32.2	0.1	69	Calm	0	0			1						
Nikolaievsk, on the Amoor					30.0	— 1.1	94	Calm	0	0			10					Snowing	

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 395.4? m., or 1,295.2? ft.; Tashkend, m. 494.2?, 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 4,202.0? 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.90	759.5	51.8	11.0	71	SW	23.6	10.67		0	7			0	0	Cloudy	Royal Observatory.
San Fernando			30.00	761.9	62.4	16.9	73	SW	3.6	1.6		0	6		SW	0.012	0.3		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Hsparanda			29.84	757.8	22.3	— 5.4	96	NE			4		10			0	0	Snowing	
Umea			29.81	757.2	24.1	— 4.4	100	E			2		10			0	0	Snowing	
Hernosand			29.74	755.3	30.2	— 1.0	100	Calm			0		10			0	0		
Stockholm			29.67	753.5	33.1	0.6	82	ESE			4		10			0.024	0.6	Light rain	
Wisby			29.74	755.5	37.8	3.2	90	S			6		5			0	0		
Sub-Series.																			
Upsala			29.68	753.8	32.0	0.0	93	SW	9.2	4.1			10		SSE	0.057	1.44		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Geneva	28.31	719.0	29.76	755.9	46.6	8.1	70	SSW			4		9			0.134	3.4	Cloudy	The Observatory.
Zurich	28.01	711.5	29.65	753.2	54.5	12.5	68	W			1		5			0.138	3.5	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —5.2 mm.; Thermometer, —1.4 cent.; Relative Humidity, +12 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Constantinople			29.87	758.6	57.9	14.4	68	N	9	4.0			10		SW	0	0		
Fao, (Persian Gulf)			30.11	764.8	76.5	24.7		SE			3		0						
Salonica			29.85	758.2	68.5	20.3		SE			1		0						
Valona			29.73	755.2	61.3	16.3		W			2		0						
Varna			29.88	759.0	66.2	19.0		N			2		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.75	755.6	75.0	23.9	63	NW			2		10cs			0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Bathurst, N. B.			29.85	758.2	29.7	— 1.3	90	NW	2	0.9						0	0		Hon. J. Ferguson.
Brockville, Ontario			29.22	742.2	34	1.1		SW	5	2.2			10s		SW	1.25	31.7	Light rain	W. R. Bigg.
*Chatham, N. B.			29.88	758.9	37	2.8	75	NE	1	0.4		2k	8ks	NE	NE	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			29.93	760.2	37	2.8	81	S	3	1.3		0	8ks			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.15	740.4	35.5	1.9	95	NE			1		10n			0.66	16.8	Rainy	James Smith, M. A.
Dalhousie, N. B.			29.90	759.4	27.3	— 2.6	82	Calm			0					0	0	Foggy	H. A. Johnson.
Esquimault, B. C.			29.41	747.0	46.3	7.9	77	SW	6	2.7		10cs				0.06	1.5	Threatening	W. H. Bevis.
Fredericton, N. B.			29.80	756.9	35.0	1.7	80	E	9	4.0			10s			0	0	Raining	Prof. Harrison.
*Fort Garry, Manitoba			30.22	767.6	— 4	—18.9	97	N	10	4.5		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			29.28	743.7	21.5	— 5.8	93	NW			3		10n			0	0	Snowing	H. J. Strang, M. A.
Granton, Ontario			29.26	743.2	20.3	— 6.5		NW			2		10n			0.50	12.7	Snowing	James Grant.
*Halifax, N. S.			29.90	759.4	33	0.6	89	SE	6	2.7			10n			0	0	Cloudy	S. Woods, M. A.
*Kingston, Ontario			29.18	741.1	32	0.0	94	SW	28	12.5			10s		SW	0.46	11.4	Cloudy	F. Allison, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			30.20	767.1	34	1.1	95	E	19	8.5			10n			0.36	9.1	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.19	741.4	35	1.7	85	E	15	6.7			10n			0.50	12.7	Light snow	J. B. Haney.
*Parry Sound, Ontario			29.06	738.1	28	— 2.2	88	N	11	4.9			10n		N	0.55	14.0	Light snow	Rev. R. Mooley.
*Port Dover, Ontario			29.26	743.2	23	— 5.0	93	SW	18	8.0			10n		SW	1.30	33.0	Light snow	H. Morgan.
Port Hastings, N. S.			29.96	761.0	36.8	2.7		Calm	0	0						0	0	Fine	Peter Grant.
*Port Stanley Ontario			29.34	745.2	22	— 5.6	85	W	20	8.9			10n		W	0.70	17.8	Light snow	M. Payne.
*Quebec, Quebec			29.45	748.0	33	0.6	94	NE	48	21.5			10n		NE	0.05	1.3	Sleeting	Capt. Ash, R. N.
St. John, N. B.			29.81	757.2	34.0	1.1	89	E	4	1.8			10ks			0.405	10.29		G. Murdoch, C. E.
*Saugeen, Ontario			29.15	740.4	25	— 3.9	87	NW	14	6.3			10s			0.67	17.0	Light snow	K. Stewart.
Stayner, Ontario			29.08	738.6	28	— 2.2	78	W	8	3.6			10n		W	0.77	19.6	Cloudy	R. J. Cole.
Stratford, Ontario			29.23	742.4	22.1	— 5.5	84	W	16	7.2			10s			0.400	10.16	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			29.98	761.5	34	1.1	80	NW	1	0.4		10cs	0	W		0	0	Cloudy	T. C. Hill.
*Toronto, Ontario			29.16	740.7	27	— 2.8	93	SW	13	5.8			10n			0.160	40.6	Light snow	Magnetic Observatory
Woodstock, Ontario			29.24	742.7	22.8	— 5.1	99	W			2		10s			0	0	Snowing	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.19	741.4	43	6.1	83	S	2	0.9			10s		S	1.17	29.7	Cloudy	
Alpena, Mich			29.29	744.0	17	— 8.3	100	NW	18	8.0			10n			0.28	7.1	Light snow	
Atlantic City, N. J			29.39	746.0	42	5.6	91	SW	2	0.9			10s		SW	0.21	5.3	Cloudy	
Augusta, Ga.			29.92	760.0	40	4.4	56	NW	12	5.4		2k	0	NW		0.04	1.0	Fair	
Baltimore, Md			29.42	747.3	42	5.6	58	NW	16	7.2		5k	Sm'e	W		0.96	24.4	Fair	
Barnegat, N. J			29.35	745.5	43	6.1	83	SW	11	4.9		8k	0	W		1.05	26.7	Fair	
Benton, Montana	26.95	684.5	29.75	755.6	36	2.2	80	S	1	0.4			10s			0	0	Cloudy	
Bismarck, Dakota	28.27	718.0	30.05	763.3	12	—11.1	42	E	6	2.7		5k	Haze	E		0	0	Fair	
Boston, Mass			29.24	742.7	49	9.4	100	S	16	7.2		10s	Fog		S	1.11	28.2	Cloudy	
Breckenridge, Minn			30.11	764.8	0	—17.8	69	N	8	3.6		0	0			0	0	Clear	
Buffalo, N. Y			29.18	741.1	25	— 3.9	88	SW	18	8.0			10n		SW	0.62	15.7	Heavy snow	
Burlington, Vt			29.15	740.4	43	6.1	92	S	12	5.4			10s			0.41	10.4	Cloudy	
Cairo, Ill			30.00	762.0	32	0.0	69	W	4	1.8		5ck	0	W		0.07	1.8	Fair	
Cape Hatteras, N. C			29.55	750.6	51	10.6	52	W	20	8.9		0	5s		W	0.12	3.0	Fair	
Cape Henry, Va			29.52	749.8	46	7.8	54	W	26	11.6		5k	0	W		0.63	16.0	Fair	
Cape May, N. J			29.40	746.7	43	6.1	92	S	12	5.4			10s		S	0.34	8.6	Cloudy	
Charleston, S. C			29.87	758.7	44	6.7	37	W	20	8.9		5c	0	W		0.15	3.8	Fair	
Cheyenne, Wyoming	23.90	607.0	29.81	757.9	37	2.8	45	NW	12	5.4		2ck	0	NW		0	0	Fair	
Chicago, Ill			29.68	753.9	21	— 6.1	71	W	10	4.5		2k	2s	NW		0.37	9.4	Fair	
Cincinnati, Ohio			29.70	754.4	29	— 1.7	78	W	13	5.8		2k	0	NW		0.60	15.2	Clear	
Cleveland, Ohio			29.46	748.3	19.3	— 7.1	10[illegible]	SW	18	8.0			10n			0.62	15.7	Heavy snow	
Colorado Springs, Col	23.99	609.3	29.86	758.4	29	— 1.7	48	N	4	1.8		0	2s			0	0	Fair	
Corsicana, Tex			30.19	766.8	36	2.2	70	W	4	1.8		0	0			0	0	Clear	
Davenport, Iowa			29.83	757.7	24	— 4.4	74	NW	12	5.4		0	0			Inap.	Inap.	Clear	
Denison, Tex			30.07	763.8	52	11.1	47	S	2	0.9		0	0			0	0	Clear	
Denver, Col.	24.69	627.1	29.91	759.7	33	0.6	51	S	4	1.8		0	0			0	0	Clear	
Detroit, Mich			29.45	748.7	21	—6.1	85	W	10	4.5			10n		W	0.78	19.8	Light snow	
Dodge City, Kan	27.32	693.9	29.66	753.4	34	1.1	94	SSW	6	2.7		0	0			0	0	Clear	
Dubuque, Iowa			29.80	756.9	24	— 4.4	74	NW	8	3.6		0	0			0	0	Clear	
Duluth, Minn			29.9[illegible]	759.4	19	— 7.2	69	Calm	0	0		0	0			0	0	Clear	
Eastport, Me			29.69	754.1	34	1.1	79	E	25	11.2			10s		SE	0	0	Threatening	
Erie, Pa			29.31	744.5	23	— 5.0	100	W	20	8.9			10n			0.96	24.4	Heavy snow	
Escanaba, Mich			29.61	752.1	13	—10.6	81	N	20	8.9			10n			0.01	0.3	Light snow	
Fort Gibson, Indian Terr			30.07	763.8	34	1.1	70	N	2	0.9		0	0			0	0	Clear	
Ft. St. Michaels, Alaska			30.11	764.8	—17	—27.2		Calm	0	0		0	0			0	0	Clear, Aurora	
Fort Sill, Indian T	28.83	732.3	29.99	761.7	33	0.6	69	S	8	3.6		0	0			0	0	Clear	
Fort Sully, Dakota	28.40	721.3	30.20	767.1	17	— 8.3	76	E	7	3.1		5ck	0	S		0	0	Fair	
Galveston, Tex			30.25	768.3	49	9.4	60	NE	5	2.2		0	0			0	0	Clear	
Grand Haven, Mich			29.55	750.6	22	— 5.6	86	N	16	7.2			10n			0.20	5.1	Light snow	
Indianapolis, Ind			29.76	755.9	23	— 5.0	73	W	3	1.3		0	0			0.15	3.8	Clear	
Indianola, Tex			30.27	768.8	51	10.6	46	N	8	3.6		0	0			0	0	Clear	
Jacksonville, Fla			29.95	760.7	49	9.4	48	SW	8	3.6		8ck	0	SW		0.75	19.1	Fair	
Keokuk, Iowa			29.86	758.4	28	— 2.2	77	Calm	0	0		0	0			0	0	Clear	
Key West, Fla			29.99	761.7	70.2	21.2	70	NW	19	8.5		2k	Haze	NW	NW	0.31	7.9	Hazy	
Kittyhawk, N. C			29.56	751.8	48	8.9	85	W	20	8.9		8k	0	W		0.20	5.1	Fair	
Knoxville, Tenn			29.93	760.2	30	— 1.1	79	W	16	7.2			10ks		W	0.71	18.0	Cloudy	
La Crosse, Wis			29.82	757.4	24	— 4.4	61	N	2	0.9		0	0			0	0	Clear	
Leavenworth, Kan			29.99	761.7	31	— 0.6	79	Calm	0	0			10s		W	0	0	Cloudy	
Lexington, Ky	28.79	720.0	29.84	757.9	28	— 2.2	78	SW	24	10.7		2k	0	SW		0.05	1.3	Clear	
Long Branch, N. J			29.33	745.0	44	6.7	84	SW	12	5.4		0	8ks		SW	1.40	35.6	Cloudy	
Louisville, Ky			29.83	757.7	29	— 1.7	77	SW	13	5.8		5k	0	W		0.10	2.5	Fair	
Lynchburg, Va			29.56	750.8	39	3.9	43	W	12	5.4		2k	0	W		2.12	53.8	Clear	
Malone, N. Y			29.05	737.9	44	6.7	75	S	4	1.8			10s		S	0.16	4.1	Threatening	
Manhattan, Kan	28.83	732.3	30.04	763.0	25	— 3.9	88	NW	4	1.8			10s			0	0	Cloudy	
Marquette, Mich			29.71	754.6	12	—11.1	80	NW	20	8.9			10n		NW	0.02	0.5	Light snow	
Memphis, Tenn			30.08	764.0	36	2.2	70	W	8	3.6		0	0			0	0	Clear	
Milwaukee, Wis			29.68	753.9	19	— 7.2	84	NW	16	7.2		2c	2s		NW	Inap.	Inap.	Fair	
Mobile, Ala			29.75	755.6	53	11.7	54	W	8	3.6		0	0			2.61	66.3	Clear	
Montgomery, Ala			30.11	764.8	36	2.2	54	NW	10	4.5		0	0			0	0	Clear	
Morgantown, W. Va			29.54	750.3	37.5	3.1	71	SW	21	9.4			10n		SW	0.79	20.1	Light snow	
Mt. Washington, N. H	23.01	584.2	29.40	746.7	26	— 3.3	100	SE	30	13.4			10n		SE	0.30	7.6	Light snow	
Nashville, Tenn			29.96	761.0	35	1.7	61	W	7	3.1		0	0			0.02	0.5	Clear	
New Haven, Conn			29.30	744.2	51	10.6	79	W	12	5.4		0	0			0.16	4.1	Clear	
New London, Conn			29.28	743.7	46.5	8.1	76	SW	13	5.8		0	Haze			0.58	14.7	Clear	
New Orleans, La			30.17	766.3	49	9.4	57	W	1	0.4		0	0			0	0	Clear	
Newport, R. I			29.29	744.0	43	6.1	100	SW	8	3.6			Fog			0.78	19.8	Foggy	
New York, N. Y			30.32	770.1	42	5.6	73	SW	12	5.4		0	2ck		W	0.55	14.0	Clear	
Norfolk, Va			29.54	750.3	46	7.8	47	W	18	8.0		2k	0	W		0.61	15.5	Fair	
North Platte, Neb	26.96	684.8	29.59	751.6	31	— 0.6	89	Calm	0	0		2c	0	W		0	0	Clear	
Omaha, Neb	28.87	733.3	29.99	761.7	26	— 3.3	88	NW	6	2.7		0	0			0	0	Clear	
Oswego, N. Y			29.18	741.1	35.5	1.9	57	SW	20	8.9			10ks		W	1.16	29.5	Cloudy	
Pembina, Dakota			30.24	768.1	— 7	—21.7	100	Calm	0	0		0	0			0	0	Clear	
Philadelphia, Penn			29.37	746.0	41	5.0	91	W	12	5.4		8k	2s	SW	W	1.15	29.2	Cloudy	
Pike's Peak, Colorado	17.63	447.8	29.84	757.9	12	—11.1	61	N	28	12.5		0	1s			0	0	Clear	
Pittsburgh, Penn			29.50	749.3	24	— 4.4	75	W	12	5.4			10n			0.41	10.4	Light snow	
Port Huron, Mich			29.33	745.0	20	— 6.7	85	W	20	8.9			10n			1.14	29.0	Light snow	
Portland, Me			29.30	744.2	40	4.4	91	SE	22	9.8			10n			0.74	18.8	Light rain	
Portland, Oregon			29.75	755.6	45	7.2	84	SW	5	2.2			10s			1.16	29.5	Cloudy	
Punta Rassa, Fla			30.02	762.5	63.2	17.3	66	NW	26	11.6			10ks		NW	0.52	13.2	Cloudy	
Rochester, N. Y			29.15	740.4	30	— 1.1	78	W	16	7.2			10s		W	0.93	23.6	Cloudy	
Salt Lake City, Utah	25.55	649.0	29.88	758.9	39	3.9	56	Calm	0	0		0	0			0	0	Clear	
Sandy Hook, N. J			29.31	744.5	45	7.2	75	SW	20	8.9			10ks		SW	0.71	18.0	Cloudy	
San Diego, Cal			29.95	760.7	54	12.2	62	NE	4	1.8		0	0			0	0	Clear	
San Francisco, Cal			30.02	762.5	51	10.6	86	S	4	1.8			10s			0.03	0.8	Threatening	
Santa Fe, N. M	23.28	591.3	29.82	757.4	23	— 5.0		E	5	2.2		0	2s			0	0	Fair	
Savannah, Ga.			29.92	760.0	44	6.7	60	NW	9	4.0		2c	0	W		0	0	Clear	
Shreveport, La			30.21	767.3	38	3.3	81	W	2	0.9		0	0			0	0	Clear	
Smithville, N. C			29.76	755.9	44	6.7	54	NW	11	4.0		1k	0	W		0.25	6.3	Fair	
Springfield, Mass			29.23	742.4	46	7.8	84	W	3	1.3			10ks, fr.			1.15	29.2	Cloudy	
St. Louis, Mo			29.96	761.0	28	— 2.2	77	W	8	3.6		0	0			0.55	14.0	Clear	
St. Marks, Fla			30.04	763.0	43	6.1	58	NW	12	5.4		2c	0	W		0	0	Fair	
St. Paul, Minn			29.87	758.7	20	— 6.7	46	NW	12	5.4		0	0			0	0	Clear	
St. Paul's Island, Alaska			30.22	767.6	4	—15.6	100	N	13	5.8		0	2k			0.02	0.5		
Thatcher's Island, Mass			29.25	742.9	42	5.6	60	SE	33	14.8						1.29	32.8	Raining	
Toledo, Ohio			29.48	748.8	26	— 3.3	88	W	17	7.6			10s		W	0.85	21.6	Threatening	
Tucson, Arizona	27.55	699.8	30.14	765.5	53	11.7		SE				0	0			0	0	Clear	
Tybee Island, Ga			29.91	759.7	45	7.2	35	W	18	8.0		2c	0	W		0	0	Fair	
Vicksburg, Miss			30.20	767.1	41	5.0	73	NW	3	1.3		0	0			0	0	Clear	
Virginia City	24.05	610.9	29.53	750.0	28	— 2.2	67	SE	9	4.0		2c	0	W		0	0	Fair	
Washington, D. C.			29.44	747.8	41.5	5.3	60	NW	8	3.6		0	5s		SW	1.00	25.4	Fair	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			29.73	755.1	43	6.1	43	W	26	11.6		1cs	0	W		0.33	8.4	Clear	
Wood's Holl, Mass			29.30	744.2	44	6.7	92	S	20	8.9			10s			0.75	19.1	Cloudy	
Wytheville, Va	27.28	692.9	29.48	748.8	25	— 3.9	88	NW	14	6.3			10n		NW	0.32	8.1	Light snow	
Yankton, Dakota	28.74	730.0	30.12	765.0	16	— 8.9	66	W	1	0.4		0	0			0	0	Clear	
Yuma, Arizona			29.96	761.0	54	12.2		E				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.05	763.3	77	25.0	95	E	5	2.2						1.00	25.4	Cloudy	E. Hacker.
Pointe-a-Pitre, G'd'loupe, do			29.99	761.7	76	24.4	81	E				0	5k			0.04	1.0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I.			30.23	767.8	77	25.0	59	ESE	2	0.9		2c.cs	2k	SE		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I.			30.18	766.6	76	24.4	76	Calm	0	0		2c	2s	SE	SE	0	0		James Gall.
Santiago de Cuba, W. I.			29.77	756.1	77	25.0	72	Calm	0	0		8cs	8ks	E	SW	0	0	Fair	Robert Mason
Havana, Cuba, W. I.			30.02	762.5	74	23.3	69	NE	2.4	1.1		8ck	2n	NW		0.17	4.3	Cloudy	Charles Hasselbrink.
St. Georges, Bermudas			29.98	761.5	66.0	18.9	87	S	8.0	3.6		10ck	2d	SW	S	0	0	Cloudy	C. E. Allen.
St. John's, Porto Rico, W.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.19	690.6	29.99	761.7	64	17.8	83	E	2.0	0.9		5c	0	ESE		0	0	Fine, clear	C. Partridge.
Paramaribo, D. Guiana, S. A			29.98	761.5	79	26.1	86	E			2		5k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.07	763.8	81.5	27.5										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.23	640.9			64.5	18.1	78		4	1.8		2c	2s			0.14	3.6	Fair	Thomas Herran.
St. Johns, Newfoundland.			29.94	760.5	35.0	1.7	100	W					10n			0.01	0.3	Cloudy	John Delaney.
York Factory, B. A.			30.42	772.7	—12.5	—24.7	50	Calm	0	0		2c	2s	NE		0	0		J. Fortescue.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft, or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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. 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,294.8 ft., or 699.4 m; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p 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 MARCH 30, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From -	Clouds. Direction. Lower. From -	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			29.71	754.5	61.9	16.6	50	NW			1		10			0	0	Hidden	Charnot.
Algiers			29.75	755.6	65.5	18.6	55	N			1		2			0	0	Clear	Peter.
La Calle																			Kuntz.
Tunis			29.79	756.7	65.8	18.8	47	NW			4		0			0	0	Clear	Jacques
Sfax			29.81	757.2	68.0	20.0	49	ESE			2		1			0	0	Clear	Chauvey.
Saida			29.83	757.7	59.2	15.1		NNE			5		7			0.669	17.0	Cloudy	Millot.
Tebessa			29.73	755.1	66.9	19.4		S			2		6			0	0	Fair	Colin.
Gerlville			29.94	760.5	59.5	15.3	48	SSE			4		2			0	0	Clear	Buard.
Laghouat			29.92	759.9	69.8	21.0	65	NW			3		2			0	0	Clear	Guyot.
Biskra			29.84	758.0	71.2	21.8	38	NE			4		8			0	0	Cloudy	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From -	Clouds. Direction. Lower. From -	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			29.82	757.4	59.5	15.3	55	NE			2		10			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.82	757.5	60.4	15.8	61	ENE			2		2			0	0		I. R. Observatory.
Eperies			29.73	755.2	68.7	20.4	45	Calm			0		1		N	0	0		Julius Mikolik.
Gratz	28.68	728.4	29.88	758.9	52.0	11.1	64	NW			5		10			0	0		Andreas Rospini.
Hermannstadt	28.34	719.8	29.70	754.3	70.9	21.6	29	SE			1		0			0	0		Prof. Reissenberger.
Kremsmünster	28.57	725.7	29.91	759.7	52.2	11.2	60	NNW			1		8			0.276	7.0		Prof. C. Wagner.
Lemberg			29.72	754.9	66.9	19.4	43	S			1		0			0	0		Dr. T. Stanecki.
Nyiregyhaza			29.74	755.5	71.6	22.0	44	E			1		1			0	0		Habasuda Daniel.
Pola			29.84	757.8	55.6	13.1	86	WNW			2		1k			0.011	0.27		I. R. Hydrographic Office
Szegedin			29.74	755.5	71.8	22.1	35	S			1		0			0	0		Karl Stancel.
Trieste			29.84	758.0	58.3	14.6	86	Calm			0		4k			0	0		Prof. V. Farolfi.
Vienna			29.88	759.0	54.5	12.5	60	NW			2		9			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From -	Clouds. Direction. Lower. From -	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.75	755.6	53.1	11.7	69	SW			1		4			0.043	1.10		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.39	746.5	43.2	6.2		E	7	3.1			7			0.180	4.57	*D. clouds	William Boswell.
Ardrossan			29.45	748.0	40	4.4		NW			1		9					Raining	J. Mayes.
Armagh Observatory			29.49	749.0	47.0	8.3		SW	10	4.5			8					*D. clouds	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.53	750.0	48.0	8.9		W	9	4.0			3					Blue sky	John Hartnup.
Birr Castle, (Parsonstown)			29.48	748.8	51.2	10.7		SW			1		6					*D. clouds	J. Dreyer.
Bradford			29.51	749.5	51.9	11.1		SW			1		2			0.20	5.1	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.03	762.7	80.0	26.7		NE			4		2					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			29.62	752.3	56.5	13.6		SSW			2		7					*D. clouds	H. Todd.
Cardington			29.64	752.8	55.0	12.8		S			1		4			Blank	Blank	*D. clouds	John McLaren.
Carlisle			29.48	748.8	48.5	9.2		W			4		5			1.00	25.4	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.69	754.1	56.2	13.4		SW			2		10					Showery	Capt. J. Fellowes, R. E.
Dartmoor	28.15	715.0	29.66	753.4	42.6	5.9		SE			2		10					Raining	R. E. Power.
Donaghadee			29.48	748.8	48	8.9		W			3		10					Overcast	J. Mac Gowan.
Dover			29.60	754.1	49	9.4		Calm			0		5					½ clouded	J. Costello.
Eccles, (near Manchester)			29.52	749.8	49.9	9.9		SSW	3.0	1.3			10					Hazy	Thomas Mackereth
Falmouth Observatory			29.51	749.5	47.0	8.3		ESE	17	7.6			10					Raining	The Staff.
Fort Napier, (Natal)	27.73	703.6	29.94	760.5	79.6	26.4		E			1		8					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.93	760.2	89.0	31.7		N			2		4					*D. clouds	[illegible]
Galway, Queen's College			29.43	747.5	49	9.4		SW			1		2					*D. clouds	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			29.71	755.4	60.5	15.8		E			1		9			Blank	Blank	Overcast	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.43	747.5	39.4	4.1		SW			1		10					Raining	Lewis Stuart.
Great Yarmouth			29.63	752.6	52	11.1		SW			3		3					Blue sky	G. T. Watson.
Greenwich Royal Obs			29.65	753.1	52.1	11.2		SSW			2		8					*D. clouds	The Staff for G. B. Airy.
Guernsey			29.56	750.8	50	10.0		ESE			2		7					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs			29.55	750.6	50.5	10.3		WSW			2		5			Blank	Blank	*D. clouds	L. J. Crossley.
Helston			29.46	748.3	50	10.0		SE			2		10n			0	0	Raining	M. P. Moyle.
Holyhead			29.54	750.3	50	10.0		SSW			3		3					Blue sky	John Tilston.
Kew Observatory			29.64	752.8	52.1	11.2		S	18	8.0			8						The Staff.
Kingstown			29.51	749.5	47	8.3		SSE			3		5					*D. clouds	George Mitchell
Leicester Museum			29.61	752.1	52.2	11.2		SW			1		4					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.81	757.2	63.0	17.2		NW			3		4k						Fred Travis, Pvt A.H.C.
Nairn			29.44	747.8	42	5.6		NE			2		10					Raining	W. D. Penny.
Nassau, (Bahamas)			30.08	764.0	69.2	20.7		NW			6		7					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.57	751.1	54.3	12.4		S			4		5ks,k,d		SSW	0.07	1.8	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.58	751.3	50.0	10.0		SSW			3		5					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.60	751.8	53	11.7		SSW			1		7			Blank	Blank	*D. clouds	J. Lucas.
Plymouth			29.53	750.0	48.8	9.3		SE			2		10					Showery	John Merrifield.
Roche's Point			29.48	748.8	46	7.8		SE			3		5					½ clouded	W. Kennedy.
Saint Ann's Head			29.52	749.8	49	9.4		SE			1		5					Misty	John C. Walker.
Saint Helier, (Jersey)			29.54	750.3	58.0	14.4		SSE			3		5					½ clouded	A. P. Amy.
Sandwick Manse (Orkneys)			29.45	748.0	42.2	5.7		ESE	11	4.9			10					Drizzling	Rev. Dr. Clouston.
Scarborough			29.52	749.8	49.4	9.7		WSW			3		7					*D. clouds	F. Shaw.
Scutari Cemetery (Turkey)			29.74	755.4	63.0	17.2		NE			2		1					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.53	750.0	52.8	11.6		SW			2		4			0.300	7.62	Blue sky	W. F. Cooper.
Silloth Rectory			29.48	748.8	49.6	9.8	78	W			3		2			0.190	4.83	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			29.51	749.5	48.9	9.4		SW			3		7			Blank	Blank		S. J. Perry.
Stornoway, Lewis C. (Hebr.			29.43	747.5	44	6.7		ENE			2		8					*D. clouds	John Smith.
Strathfield Turgiss			29.62	752.3	53.5	11.9		S			1		4					*D. clouds	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.41	747.0	43	6.1		ENE			2		9					Raining	John Trotter.
Truro, Royal Institution			29.49	749.0	50	10.0		SE			2		10					Raining	W. Newcombe.
Valencia Observatory			29.68	753.9	48.4	9.1		WSW	11	4.9			10					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					42	5.6		SW			4		5			0	0		
Cape Good Hope Obs.			30.02	762.5	86.4	30.2	41	SE	11	4.9			1						The Staff, for E. J. Stone.
Leith, Restalrig Park			29.45	748.0	40.2	4.6		W			2		10s			0.43	10.9	Overcast	Andrew Gibb.
Mauritius			29.98	761.5				ESE	18.1	8.1						0	0		
Monach Lt-house, Hebrides																			J. Youngclause.
North Unst, (Shetland Is.)			29.52	749.8	38	3.3		NE			7		10			Blank	Blank		

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,490 feet, or 426.7 meters; Fort Napier, 2,206 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.73	755.2	48.4	9.1	79	SSW			2		10						
Fanöe			29.72	754.9	45.3	7.4	89	SW			4		8						
Godthaab, (Greenland)			29.75	755.6	25.5	— 3.6	60	ENE			4		2						
Stykkisholm, (Iceland)			29.95	760.7	33.3	0.7	92	E			6		0						
Thorshavn, (Faröe)			29.71	754.7	38.1	3.4	76	ENE			6		10						
Vestervig			29.67	753.7	42.1	5.6	97	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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.25	743.0	50.0	10	77	SW			4		5nk		SW	0.094	2.4	Cloudy	Normal School.
Amiens			29.76	755.8	55.8	13.2	73	SSW			3		0			0	0	Clear	Normal School.
Avignon			29.87	758.6	63.9	17.7	32	NE			2		0			0	0	Clear	Normal School.
Bar-sur-Seine			29.77	756.1	61.0	16.1	36	S			2		2			0	0	Slightly cl'dy	C. Saillard.
Beaumette, (near Angers)			29.58	751.4	60.1	15.6	50	SSW	16.1	7.2					S	0	0		Beaumette Observatory
Beauvais			29.77	756.2	57.4	14.1	57	SSE			2		8		SSW	0.049	1.25	Very cloudy	Normal School.
Besançon			29.84	757.8	57.2	14	48	E			2		0			0.189	4.8	Clear	Normal School.
Bourg en Bresse			29.85	758.3	62.1	16.7	40	S			1								Normal School.
Bourges			29.79	756.6	53.6	12	74	SE			2		2		S	0.12	3.	Slightly cl'dy	Normal School.
Brest			29.44	747.8	48.4	9.1	86	SSW			3		10		SSW	0.069	1.75	Raining	Naval Observatory.
Caen																			Normal School.
Chartres			29.66	753.3	58.3	14.6		SE			2		5		N	0.165	4.2		Normal School.
Chaumont																			Normal School.
Clermont			29.07	753.7	61.7	16.[illegible]	27	S			2		2		S	0.016	0.4		Puy de Dome Obs.
Commercy			29.80	758.4	54.1	12.5	65	W			4	[illegible]	5k		W	0.067	1.7	Cloudy	Normal School.
Commune de Gréasque*			29.87	758.8	62.6	17.0	37	SW			2		5		SW	0	0		
Grenoble			29.84	757.9	55.1	13.[illegible]	45	NE			1		0			0	0	Clear	Normal School.
Le Mans			29.60	755.0	57.1	14.[illegible]	57	SSW			4		5		SSW	0.059	1.5	Cloudy	Normal School.
Loches			29.44	747.7	49.[illegible]	9.5	74	S			2		5		SW	0.244	6.2	Cloudy	Normal School.
Lons-Le-Saulnier			29.81	757.1	55.[illegible]	13.[illegible]	79	NW			2		0			0.378	9.6	Clear	Normal School.
Mâcon			29.78	756.4	54.5	12.7	74	S			2		0			0.146	3.7	Clear	Normal School.
Mirecourt																			Normal School.
Metz			29.94	759.6	51.3	10.7	50	SSW			2		5		SSW	0.110	2.8		M. Schuster.
Nismes			29.81	757.1	66.9	19.4	55	S			2		0			0	0	Clear	Normal School.
Orleans			29.61	753.5	60.8	16	50	SSE			4		5		SW	0.047	1.2	Cloudy	Normal School.
Paris Observatory			29.72	754.8	58.5	14.7	42	S			3		5		N	0.015	0.37	Cloudy	National Observatory.
Parthenay			29.62	752.3	61.2	16.2	45	S			2		2		S	0.04	1.	Slightly cl'dy	Normal School.
Privas			29.76	755.9	63.5	17.5		S			2		2		S	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			29.62	752.3	59.7	15.4	58	SE			6		2		N	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			29.66	753.1	63.9	17.7	47	SE			3		5		N	0.118	3.0	Half covered	Naval Observatory.
Rouen			29.68	753.8	60.4	15.8	52	SSE			2		2		W	0.020	0.5	Slightly cl'dy	Normal School.
Saint Lo			29.62	752.4	52.5	11.4	73	SW			2		4		W	0.173	4.4		Normal School.
Tarbes			29.58	751.4	58.1	14.5	96	E			2		2		E	0	0	Slightly cl'dy	Normal School.
Toulouse																			Normal School.
Villefranche			29.89	759.1	65.8	18.8	66	S			1		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.97	761.1	77.2	25.1	77	NE			3		2k						L'Abbé Marchési.
Gorée																			
Marseilles			29.83	757.7	62.8	17.1	34	WSW			1–2		4			0	0	Fair	Marseilles Observatory.
Mont-Louis	24.57	624.0	29.88	758.9	44.1	6.7	59	SSW	29.8	13.33			8		SW	0	0		—. Faiguère.
Montsouris, Paris			29.71	754.7	59.3	15.3	80	S			0	7c		SW		0.008	0.2		Montsouris Observ'tory.
Perpignan			29.74	755.3	58.8	14.9	69	E	22.4	10.00			4		W	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P†																			M. Baylac.
Pic du Midi, (Plantade)	22.15	562.7			30.2	— 1.0		S			1		10					Cloudy	General de Nansouty.
Saint Maur, (near Paris)			29.72	755.0	59.0	15.0	47	SSE			1		3			0.016	0.4	Cloudy	E. Renou.
Toulouse			29.69	754.	57.9	14.4	52	SSE			4		7			0	0		Toulouse Observatory.
Tours			29.68	753.8	61.2	16.2	49	SSW			2		7		SW	0.016	0.4		C. Marquet.
Versailles, (near Paris)			29.71	754.5	60.8	16.0	42	SW			2		7			0	0	Fine	Dr. A. Bérigny.
Zi-Ka Wei, (near Shanghai)																			H. Le Lec, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7, 8. or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are requently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 ft.; lermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Near Marseilles. † Summit inaccessible.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.77	756.1	54.5	12.5	54	SW			4		6			0.012	0.3		Prof. T. Hoh.
Berlin			29.87	758.6	57.7	14.3	50	S			1		4			0.035	0.9		Prof. Arndt.
Breslau			29.96	760.9	50.4	10.2	76	WNW			1		10			0	0		Dr. P. Saugebauer.
Carlsruhe			29.85	758.3	56.8	13.8	44	NW			3		1			0.295	7.5		A. Senz.
Cassel			29.77	756.2	57.2	14.0	45	S			4		3			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main			29.93	760.1	56.1	13.4	40	SW			1		4			0.079	2.0		Physical Society.
Friedrichshafen	28.46	722.9	29.90	759.4	51.4	10.8	48	W					2			0	0		M. Wilhelm.
Hamburg			29.82	757.3	50.4	10.2	71	WSW			3		9sk			0.268	6.8	Good	Deutsche Seewarte.
Kiel			29.81	757.2	50.0	10.0	73	SW			3		8			0.343	8.7		Prof. G. Karsten.
Königsberg			29.81	757.2	44.2	6.8	87	W			2		10			0	0		Prof. E. Luther.
Köslin			29.82	757.4	52.5	11.4		Calm			0		7			0	0		H. Müller.
Leipsic			29.89	759.1	56.5	13.6	44	SW			4		7	SW		0	0		Prof. Bruhns.
Memel			29.63	752.6	39.7	4.3	87	SW			2		10	SW		0	0		Reinbrecht & Skalweit.
Münster			29.80	756.9	52.9	11.6	80	SE			3		0			0	0		Prof. E. Heis.
Neufahrwasser			29.78	756.5	46.6	8.1	86	W			1		10	W		0	0		A. Lothes.
Posen			29.91	759.8	55.0	12.8	61	NW			4		9			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.86	758.4	56.8	13.8	47	SE			1		1			0	0		Dr. Schur.
Stuttgart			29.85	758.1	56.8	13.8	44	W			1		2			0	0		Prof. Schoder.
Thorn			29.85	758.1	48.9	9.4	92	NW			3		10			0.016	0.4		Dr. Hasenbalg.
Treves, (Trier)			29.79	756.6	56.3	13.5	52	W			5		2			0	0		Prof. Fiesch.
Wustrow, Naval School			29.72	754.8	46.0	7.8	81	SW			3		5			0.106	2.7		E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force.	Clouds. Amount. Up'er —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.
Athens																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force.	Clouds. Amount. Up'er —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.
Udine			29.82	757.4	59.9	15.5	59	SW	1.3	0.6			1			0	0		
Padua			29.82	757.4	58.6	14.8	66	SW	3.1	1.4			3			0	0		
Vicenza			29.82	757.3	59.2	15.1	57	NW	1.3	0.6			1	S		0	0		
Verona			29.84	757.9	57.4	14.1	61	E			1		0			0	0		
Bergamo	28.47	723.1	29.80	756.9	56.8	13.8	67	S			2		3			0	0		
Domodossola	28.80	731.6	29.84	758.0	59.0	15.0	38	Calm			0		0			0	0		
Milan			29.85	758.1	57.7	14.3	68	W			1		8	NW		0	0		
Pavia			29.85	758.3	57.9	14.4	66	S			4		3	SW		0	0		
Moncalieri			29.88	759.0	47.8	8.8	59	SSW	3.8	1.7			1			0	0		
Mondovi	27.94	709.7	29.88	759.0	52.5	11.4	56	NNW			2		0			0	0		
Porto Maurizio			29.89	759.3	58.8	14.9		ESE			2		1			0	0		
Genoa			29.86	758.4	57.7	14.3	63	SW	3.1	1.4			2	S		0	0		
Piacenza			29.85	758.3	56.1	13.4	64	NW	21.0	9.4			4	W		0	0		
Parma			29.85	758.2	58.3	14.6	64	NW			2		5			0	0		
Bologna			29.89	759.3	56.8	13.8	44	SW			1		3	E		0	0		
Florence			29.87	758.7	63.5	17.5	48	SW			2		4	SW		0	0		
Leghorn			29.88	759.0	60.8	16.0	61	WSW	8.0	3.6			5			0	0		
Siena	28.65	727.6	29.85	758.3	56.5	13.6	53	NNW	3.1	1.4			4	W		0	0		
Urbino	28.31	719.0	29.88	758.9	54.7	12.6	60	SW			4		6			0	0		
Pesaro																			
Ancona			29.87	758.7	58.3	14.6	69	NE			4		1			0	0		
Grosseto			29.86	758.4	62.0	17.2	57	NNW			4		4	NW		0	0		
Rome			29.84	758.0	64.6	18.1	51	WNW	2.5	1.1			3	NE		0	0		
Naples, O. U.			29.84	757.8	65.7	18.7	50	WNW			4		2	ENE		0	0		
Lecce			29.83	757.7	60.8	16.0	66	E	18.6	8.3			3			0	0		
Cosenza			29.85	758.2	61.3	16.3	67	ESE	0	0			10			0.354	9.0	Raining	
Riposto, (Sicily)			29.87	758.8	62.6	17.0	76	E			2		6	N		0	0		
Palermo			29.82	757.5	61.0	16.1	69	NE	2.5	1.1			1			0	0		
Caltanissetta	27.87	707.9	29.82	757.4	59.9	15.5	37	NW			2		4	SE		0	0		
Sub-Series.																			
Naples, S. R.			29.85	758.2	63.3	17.4	64	WNW	3.8	1.7			..c	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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force.	Clouds. Amount. Up'er —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.
Tokio																			

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force.	Clouds. Amount. Up'er —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.
Flushing			29.76	755.9	49.6	9.8		SSW			4								
Groningen			29.69	754.1	50.5	10.3		S			5								
Helder			29.71	754.7	47.8	8.8		SW			4								
Utrecht			29.72	755.0	49.1	9.5	74	SSW			3		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force.	Clouds. Amount. Up'er —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.
Bergen			29.59	751.5	42.4	5.8	85	SSE	2.7	1.2			10			0.118	3.0	Raining	
Brönø			29.90	759.4	31.6	− 0.2	76	ENE	13	6			3			0	0		
Christiania			29.78	756.4	34.5	1.4	82	NE	8.9	4.0			10			0.220	5.6	Light snow	
Tromsö			29.97	761.1	25.7	− 3.5	63	SSW	18	8			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			29.96	761.0	56.1	13.4	69	N	4.9	2.19			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.69	754.0	50.9	10.5	82	SSW	10.8	4.83			10	SSW		0.039	1.0	Light rain	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			29.93	760.2	64.9	18.3	51	WSW	14.0	6.27			1			0	0		Capt. D. A. da Cunha.
Lisbon			29.66	753.4	51.8	11.0	84	SW	16.1	7.2			9			0.803	20.4		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.78	756.5	54.5	13.6	80	SW	22	10			9						Astronomical Obs.
Wilna			29.74	755.3	65.3	18.5	54	S	4	2			1						Astronomical Obs.
Dorpat			29.77	756.2	40.5	4.7	77	E	7	3			5						Physical Cabinet.
St. Petersburg			29.86	758.5	33.8	1.0	88	ENE	11	5			10						Central Physical Obs.
Kuopio			29.96	761.0	27.3	— 2.6	96	Calm	0	0			3					Snowing	Ch. Forsten.
Kieff			29.94	760.5	59.2	15.1	55	SE	9	4			3						Physical Cabinet.
Nikolaiev			29.98	761.5	60.8	16.0	53	NE	4	2			6						Kurdakof.
Kertch																			Lagorio.
Moscow			30.08	763.9	41.4	5.2	66	SSW	9	4			6						Meteorological Obs.
Lugan			30.07	763.6	46.9	8.3	56	ENE	34	15			1						Meteorological Obs.
Archangel			29.97	761.1	15.1	— 9.4	87	N	22	10			0						Ogorodnikof.
Tiflis	28.54	724.9	29.89	759.1	75.6	24.2	26	Calm	0	0			7						Physical Observatory.
Astrakhan			30.22	767.6	55.4	13.0	46	NE	18	8			5						Sebastianof.
Kasan			30.10	764.6	37.4	3.0	51	S	4	2			3						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	29.10	739.0	30.12	765.0	37.4	3.0	33	WSW	4	2			3						Meteorological Obs.
Nukuss			29.96	760.9	69.6	20.9	23	W	4	2			0						
Kasalv																			Bobrof.
Tashkend	28.47	723.1	29.16	760.1	58.3	14.6	62	SW	4	2			10						Michelson.
Barnaul			30.04	763.0	27.5	— 2.5	79	Calm	0	0			0						Meteorological Obs.
Yeniseisk			29.69	754.0	36.3	2.4	47	SSE	11	5			7						Marks.
Irkutsk																			Usolzof.
Oorga																			Mossin.
Peking, (China)			30.07	763.8	43.2	6.2	49	SSE	7	3			0						Physical Observatory.
Nertchinsk	27.74	704.7	29.9[illegible]	759.5	22.1	— 5.5	73	Calm	0	0			10						Meteorological Obs.
Vladivostock			30.02	762.5	30.4	— 0.9	90	Calm	0	0			1			Blank	Blank		
Nikolaievsk, on the Amoor					25.9	— 3.4	95	ESE	11	5			0						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 40[illegible] meters, or 1,41[illegible].8 feet; Ekaterinburg, 30[illegible].4? m., or 1,0[illegible].2? ft.; Tasinkend, in 494.2?, 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[illegible] 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.66	753.4	55.9	13.3	59	SE	5.2	2.33			10			0	0	Covered	Royal Observatory.
San Fernando			29.73	755.1	60.8	16.0	76	S	7.2	3.2		2	8	SW	S	0.051	1.3		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.15	765.7	20.1	— 6.6	84	N			2		0			0.118	3.0		
Umea			30.07	763.7	22.6	— 5.2	85	NE			2		1			0.224	5.7		
Hernosand			30.02	762.6	21.6	— 5.8	100	ENE			4		10			0.157	4.0		
Stockholm			29.76	755.9	32.7	0.4	89	NE			4		10			0.055	1.4		
Wisby			29.78	756.3	42.1	5.6	88	SE			4		10			0.020	0.5		
Sub-Series.																			
Upsala			29.82	757.4	28.0	— 2.2	86	NNE	12.5	5.6			10			0.079	2.00		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.43	722.2	29.87	758.8	49.3	9.6	52	NNE			1		0			0	0	Clear	The Observatory.
Zurich	28.24	717.4	29.88	758.9	54.9	12.7	56	NW			1		1			0.303	7.7	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —2.0 mm.; Thermometer, 0 cent.; Relative Humidity, —6 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.80	757.0	60.1	15.6	50	N	13	6.0			0			0	0		
Fao, (Persian Gulf)			30.12	765.0	77.5	25.3		SE			3		0						
Salonica			29.81	757.1	82.8	28.2		SE			1		0						
Valona			29.73	755.2	67.6	19.8		SW			2		8						
Varna			29.84	758.0	60.8	16.0		N			2		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			29.85	758.2	70.0	21.1	80	NW			1		10s		SW	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.39	746.5	36.3	2.4	98	Calm	0	0						0	0		Hon. J. Ferguson.
Brockville, Ontario			29.54	750.3	26	— 3.3		SW	5	2.2			10s		SW	0.35	8.9	Light snow	W. R. Bigg.
*Chatham, N. B.			29.41	747.0	35	1.7	97	S	2	0.9			10ks		SE	0.48	12.2	Cloudy	G. A. Blair.
Charlottetown, P. E. Island.			29.48	748.8	37	2.8	92	S	8	3.6		0	5s			0.275	6.99	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			29.44	747.8	31.7	— 0.2	84	S			1	10k				0	0	Unsettled	James Smith, M. A.
Dalhousie, N. B.			29.40	746.7	34.1	1.2	89	E			1					0.20	5.1	Foggy	H. A. Johnson.
Esquimault, B. C.			30.11	764.8	34.1	1.2	80	NE	1	0.4		0				0	0	Clear	W. H. Bevis.
Fredericton, N. B.			29.41	747.0	36.0	2.2	90	SW	5	2.2			Fog			0.565	14.35	Foggy	Prof. Harrison.
*Fort Garry, Manitoba			30.13	765.3	4	—15.6	94	NE	7	3.1		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			29.49	749.0	25.5	— 3.9	90	NW			2		10n			0.800	20.32	Snowing	H. J. Strang, M. A.
Granton, Ontario			29.48	748.8	21.3	— 5.9		W			2		10n			0.30	7.6	Snowing	James Grant.
*Halifax, N. S.			29.54	750.3	34	1.1	94	SW	12	5.4			10n		SW	1.89	48.0	Cloudy	F. Allison, M. A.
*Kingston, Ontario			29.49	749.0	25	— 3.9	90	SW	15	6.7			10s		SW	0.08	2.0	Cloudy	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			29.48	748.8	29	— 1.7	66	SW	12	5.4		5cs	5ks	SW	SW	0.01	0.3	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.47	748.5	23	— 5.0	73	Calm	0	0		10k	0	SW		0.02	0.5	Cloudy	J. B. Haney.
*Parry Sound, Ontario			29.37	746.0	22	— 5.6	93	E	9	4.0		2cs	8n	E	E	0.25	6.3	Fair	Rev. R. Mooley.
*Port Dover, Ontario			29.48	748.8	23	— 5.0	93	W	12	5.4			10n		W	0.05	1.3	Threatening	H. Morgan.
Port Hastings, N. S.			29.52	749.8	36.1	2.3		S	3	1.3						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			29.52	749.8	24	— 4.4	86	W	20	8.9			10n		W	0.25	6.3	Light snow	M. Payne.
*Quebec, Quebec			29.47	748.5	28	— 2.2	94	SW	9	4.0			10n		SW	0.15	3.8	Cloudy	Capt. Ash, R. N.
St. John, N. B.			29.53	750.0	35.0	1.7	80	S	13	5.8						0	0		G. Murdoch, C. E.
*Saugeen, Ontario			29.34	745.2	28	— 2.2	88	NW	17	7.6			10s			0.50	12.7	Light snow	K. Stewart.
Stayner, Ontario			29.33	745.0	25	— 3.9	88	Calm	0	0			10n			0.11	2.8	Light snow	R. J. Cole.
Stratford, Ontario			29.45	748.0	22.8	— 5.1	86	W	15	6.7			10s			0.350	8.89	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			29.54	750.3	37	2.8	96	SW	6	2.7			10n			0.56	14.2	Foggy	T. C. Hill.
*Toronto, Ontario			29.41	747.0	24	— 4.4	90	SW	8	3.6			10n			0.04	1.0	Light snow	Magnetic Observatory
Woodstock, Ontario			29.49	749.0	22.8	— 5.1	92	Calm			0		10s			0.15	3.8	Snowing	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.52	749.8	35	1.7	70	SE	6	2.7		5k	0	S		Inap.	Inap.	Fair	
Alpena, Mich			29.44	747.8	23	− 5.0	86	NW	20	8.9			10s		NW	0.35	8.9	Cloudy	
Atlantic City, N. J			29.65	753.1	41	5.0	65	SW	12	5.4		0	0			0	0	Clear	
Augusta, Ga.			30.00	762.0	42	5.6	58	S	1	0.4		0	Sm'e			0	0	Clear	
Baltimore, Md			29.67	753.6	36	2.2	80	NW	4	1.8			10s		W	Inap.	Inap.	Threatening	
Barnegat, N. J			29.68	752.8	44	6.7	67	SW	18	8.0		2k	0			0	0	Fair	
Benton, Montana	26.89	683.0	29.69	754.1	32	0.0	69	S	4	1.8			10s			0	0	Cloudy	
Bismarck, Dakota	28.15	715.0	29.92	760.0	10	−12.2	58	E	5	2.2		5k	0	SE		0	0	Fair	
Boston, Mass			29.59	751.6	38	3.3	46	SW	16	7.2		1s	Sm'e			0	0	Smoky	
Breckenridge, Minn			30.02	762.5	0	−17.8	69	N	6	2.7		0	0			0	0	Clear, mirage	
Buffalo, N. Y.			29.43	747.5	24	− 4.4	87	W	16	7.2			10n		W	0.16	4.1	Heavy sndw	
Burlington, Vt			29.18	748.8	32	0.0	79	S	5	2.2			10s			0.08	2.0	Cloudy	
Cairo, Ill			29.93	760.2	36	2.2	62	NW	6	2.7		0	0			0	0	Clear	
Cape Hatteras, N. C			29.82	757.4	47	8.3	48	W	10	4.5		0	0			0	0	Clear	
Cape Henry, Va			29.76	755.9	50	10.0	41	W	16	7.2		0	0			0	0	Clear	
Cape May, N. J			29.67	753.6	39	3.9	72	S	16	7.2		2cs	0	W		0	0	Fair	
Charleston, S. C			30.03	762.7	46	7.8	61	SW	6	2.7		0	0			0	0	Clear	
Cheyenne, Wyoming	23.54	597.9	29.48	748.8	31	− 0.6	69	S	2	0.9		2ck	8s	W		0	0	Cloudy	
Chicago, Ill			29.75	755.6	26	− 3.3	76	W	7	3.1		0	0			0.01	0.3	Clear	
Cincinnati, Ohio			29.73	755.1	33	0.6	69	NW	10	4.5		10k	0	NW		0	0	Cloudy	
Cleveland, Ohio			29.99	761.8	24.3	− 4.3	87	SW	20	8.9			10n		W	0.09	2.3	Light snow	
Colorado Springs, Col	23.66	601.0	29.53	750.0	29	− 1.7	67	Calm	0	0		5cs	0			0	0	Fair	
Corsicana, Tex			29.91	759.4	50	10.0	64	S	13	5.8		0	0			0	0	Clear	
Davenport, Iowa			29.85	758.2	35	1.7	80	NW	8	3.6		2ck	0	W		0	0	Clear	
Denison, Tex			29.76	755.9	53	11.7	54	SE	10	4.5		0	0			0	0	Clear	
Denver, Col	24.12	617.7	29.54	750.3	37	2.8	48	Calm	0	0			8s			0	0	Cloudy	
Detroit, Mich			29.56	750.8	24	− 4.4	74	W	8	3.6			10s			0.11	2.8	Cloudy	
Dodge City, Kan	27.16	689.6	29.46	748.3	34	1.1	79	E	13	5.8		2c	0	W		0	0	Clear	
Dubuque, Iowa			29.83	757.7	27	− 2.8	88	NW	8	3.6		0	0			0	0	Clear	
Duluth, Minn			29.88	758.9	19	− 7.2	69	NW	2	0.9		2c	0	NW		0	0	Clear	
Eastport, Me			29.45	748.0	36	2.2	70	SW	17	7.6		5c	Haze	SW		0.66	16.8	Fair	
Erie, Pa			29.50	749.3	25	− 3.9	100	W	24	10.7			10n			0.07	1.8	Light snow	
Escanaba, Mich			29.68	753.9	20	− 6.7	85	N	20	8.9			10s		N	0.03	0.8	Cloudy	
Fort Gibson, Indian Terr			29.78	756.4	47	8.3	55	E	6	2.7		0	0			0	0	Clear	
Ft. St. Michaels, Alaska			29.94	760.5	−13	−25.0		Calm	0	0		0	0			0	0	Clear	
Fort Sill, Indian T	28.51	724.1	29.62	752.3	41	5.6	63	Calm	0	0		2cs	0	S		0	0	Clear	
Fort Sully, Dakota	28.17	715.5	29.93	760.2	10	− 8.9	83	E	8	3.6		0	1s		E	0	0	Clear	
Galveston, Tex			30.03	762.7	56	13.3	62	S	6	2.7		0	0			0	0	Clear	
Grand Haven, Mich			29.66	753.4	27	− 2.8	82	NW	23	10.3			10s		NW	0.10	2.5	Cloudy	
Indianapolis, Ind			29.77	756.1	30	− 1.1	78	W	6	2.7		2cs	0	W		0	0	Clear	
Indianola, Tex			30.00	762.0	57	13.9	87	S	8	3.6		0	0			0	0	Clear	
Jacksonville, Fla			30.10	764.5	51	10.6	64	Calm	0	0		0	0			0	0	Clear	
Keokuk, Iowa			29.87	758.7	29	− 1.7	77	N	6	2.7		0	0			0	0	Clear	
Key West, Fla			30.14	765.3	65.2	18.4	63	N	12	5.4		5k	0	N		0	0	Fair	
Kittyhawk, N. C			29.83	757.7	45	7.2	39	W	16	7.2		0	0			0	0	Clear	
Knoxville, Tenn			29.88	758.9	35	1.7	61	W	1	0.4		1ck	0	SW		0	0	Clear	
La Crosse, Wis			29.8	758.2	24	− 4.4	61	N	6	2.7		Haze	0			0	0	Clear	
Leavenworth, Kan			29.94	760.5	28	− 2.8	77	NW	2	0.9		0	0			0	0	Clear	
Lexington, Ky	28.69	728.7	29.82	757.4	33	0.6	69	W	15	6.7		0	5s			0	0	Fair	
Long Branch, N. J			29.63	752.6	45	7.2	60	SW	15	6.7			10ks		SW	0	0	Cloudy	
Louisville, Ky			29.84	757.9	34	1.1	62	W	6	2.7		0	5k			0	0	Fair	
Lynchburg, Va			29.72	754.9	40	4.4	87	W	6	2.7		10k	0	W		0	0	Cloudy	
Malone, N. Y			29.43	747.5	30	− 1.1	68	SW	8	3.6			10s		SW	0.15	3.8	Cloudy	
Manhattan, Kan	28.78	731.0	29.98	761.5	25	− 3.9	88	NW	10	4.5		0	0			0	0	Clear	
Marquette, Mich			29.74	755.4	18	− 7.8	84	NW	20	8.9			10n		NW	0.09	2.3	Light snow	
Memphis, Tenn			29.94	760.5	42.5	5.8	78	NW	1	0.4		0	0			0	0	Clear	
Milwaukee, Wis			29.75	755.6	23	− 5.0	86	NW	11	4.9		0	5ks			0.01	0.3	Fair	
Mobile, Ala			30.09	764.3	47	8.3	77	W	2	0.9		0	Sm'e			0	0	Clear	
Montgomery, Ala			30.04	763.0	45.5	7.5	64	SW	8	3.6		0	Sm'e			0	0	Clear	
Morgantown, W. Va			29.66	753.4	31	− 0.6	79	SW	14	6.3			10n		SW	0.05	1.3	Light snow	
Mt. Washington, N. H	23.05	585.5	29.41	747.0	11	−11.7	100	NW	24	10.7			Fog			0.30	7.6	Foggy	
Nashville, Tenn			29.99	759.4	37	2.8	71	NW	2	0.9		0	0			0	0	Clear	
New Haven, Conn			29.61	752.1	39	3.9	71	SW	8	3.6			10s			0	0	Cloudy	
New London, Conn			29.65	753.1	39.5	4.2	63	S	11	4.9		5ck	0			0	0	Fair	
New Orleans, La			30.07	763.8	49	9.4	78	Calm	0	0		0	Sm'e		S	0	0	Clear	
Newport, R. I			29.65	753.1	38	3.3	63	SW	12	5.4		0	0			0	0	Clear	
New York, N. Y			29.64	752.8	34	1.1	61	SW	14	6.3		5ck	0	W		0	0	Fair	
Norfolk, Va			29.79	756.7	44	6.7	37	SW	14	6.3		0	0			0	0	Clear	
North Platte, Neb	26.84	681.7	29.46	748.3	29	− 1.7	77	SE	1	0.4			10s			0	0	Cloudy	
Omaha, Neb	28.82	732.0	29.93	760.2	26	− 3.3	88	N	4	1.8		0	0		S	0	0	Clear	
Oswego, N. Y			29.49	749.0	31.5	− 0.3	68	SW	11	4.9			10n			Inap.	Inap.	Light snow	
Pembina, Dakota			30.07	763.8	− 5	−20.6	100	NW	7	3.1		0	0			0	0	Clear	
Philadelphia, Penn			29.66	753.4	35	1.7	70	NW	13	5.8			10ks		W	0	0	Cloudy	
Pike's Peak, Colorado	17.36	440.9	29.57	751.1	12	−11.1	42	SW	38	17.0		0	1s			0	0	Clear	
Pittsburgh, Penn			29.64	752.8	27	− 2.8	88	W	12	5.4			10n			0.03	0.8	Light snow	
Port Huron, Mich			29.49	749.0	24	− 4.4	87	W	13	5.8			10n			0.24	6.1	Light snow	
Portland, Me			29.57	751.1	32	0.0	69	W	14	6.3		8c	0	W		0.16	4.1	Cloudy	
Portland, Oregon			30.24	768.1	37	2.8	90	Calm	0	0		0	1s			0.29	7.4	Clear	
Punta Rassa, Fla			30.16	766.1	56.5	18.0	68	NE	4	1.8		0	2ks			0	0	Clear	
Rochester, N. Y			29.43	747.5	24	− 4.4	86	SW	12	5.4			10h			Inap.	Inap.	Light snow	
Salt Lake City, Utah	25.04	636.0	29.37	746.0	40	4.4	63	NW	4	1.8			10s			0	0	Cloudy	
Sandy Hook, N. J			29.61	752.1	38	3.3	71	SW	20	8.9			8ks	SW	SW	0	0	Cloudy	
San Diego, Cal			29.99	761.7	52	11.1	53	NW	24	10.7		2c	0	NW		0	0	Fair	
San Francisco, Cal			30.18	766.6	43	6.1	43	NW	20	8.9		0	0			0.19	4.8	Clear	
Santa Fe, N. M	22.87	580.9	29.41	747.0	40	4.4	64	SE	8	3.6		0	Fog		SW	0	0	Clear	
Savannah, Ga			30.07	763.8	52	11.1	64	SW	8	3.6		0	Sm'e			0	0	Clear	
Shreveport, La			29.99	761.7	47	8.3	77	S	4	1.8		0	0			0	0	Clear	
Smithville, N. C			29.95	760.7	48	8.9	48	W	14	6.3		0	0			0	0	Clear	
Springfield, Mass			29.59	751.6	35	1.7	69	SW	8	3.6		5ck	5s	W		0	0	Cloudy	
St. Louis, Mo			29.91	759.7	31	− 0.6	68	NW	12	5.4		0	0			0	0	Clear	
St. Marks, Fla			30.11	764.8	43	6.1	83	Calm	0	0		0	0			0	0	Clear	
St. Paul, Minn			29.86	758.4	21	− 6.1	71	NW	8	3.6		0	0			0	0	Clear	
St. Paul's Island, Alaska			30.04	763.0	9	−12.8	78	NNE	4	1.8		1c	1k			0	0		
Thatcher's Island, Mass			29.61	752.1	34	1.1	61	SW	20	8.9		0	0	SW		0	0	Clear	
Toledo, Ohio			29.60	751.8	30	− 1.1	89	SW	14	6.3			10s		SW	0.14	3.6	Cloudy	
Tucson, Arizona	27.25	692.1	29.84	757.0	56	13.3		S				0	0			0	0	Clear	
Tybee Island, Ga			30.03	762.7	48	8.9	64	SW	2	0.9		0	0			0	0	Clear	
Vicksburg, Miss			30.03	762.7	48	8.9	74	SW	7	3.1		0	0			0	0	Clear	
Virginia City	23.79	604.3	29.27	743.4	30	− 1.1	68	Calm	0	0		10cs	0			0	0	Cloudy	
Washington, D. C			29.68	753.9	37	2.8	63	S	8	3.6			10s		SW	0	0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			29.94	760.5	46	7.8	40	W	13	5.8		0	0			0	0	Clear	
Wood's Holl, Mass			29.65	753.1	43	6.1	50	SW	9	4.0		2c	0	SW		0	0	Clear	
Wytheville, Va	27.35	694.7	29.53	750.0	32	0.0	79	W	12	5.4			10ks		W	Inap.	Inap.	Cloudy	
Yankton, Dakota	28.66	728.0	30.04	763.0	17	— 8.3	67	N	1	0.4		0	0			0	0	Clear	
Yuma, Arizona			29.86	758.4	53	11.7		NW				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I			30.11	764.8	78	25.6	90	NE	7	3.1		2k	8ks	N	NE	0.10	2.5	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.05	763.3	72	22.2	85	E				10k	2ks			0	0	Cloudy	L. V. Bigard.
St. Thomas, St. T., W. I			30.28	769.1	77	25.0	69	SSE	2	0.9		2c,cs	2k	SE		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I			30.21	767.3	76	24.4	76	Calm	0	0		2c	2s			0	0		James Gall.
Santiago de Cuba, W. I			29.83	757.7	78	25.6	69	N	1.2	0.5		0	2ks			0	0	Fair	Robert Mason.
Havana, Cuba, W. I			30.10	764.5	72	22.2	67	NE	4.8	2.1		5k	2n	N		0	0	Cloudy	Charles Hasselbrink.
St. Georges, Bermudas			29.97	761.2	60.0	15.6	97	SSW	14.0	6.3		10n	5d	SSW	SSW	1.20	30.5	Raining	C. F. Allen.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Navassa, W. I																			
Clifton, Jamaica, W. I	27.19	690.6	30.00	762.0	64	17.8	83	SE	4.0	1.8		2c	0	SE		0	0	Fine, clear	C. Partridge.
Paramaribo, D. Guiana, S. A			30.01	762.2	81	27.2	78	E			2		4k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.08	763.9	82.8	28.2										0	0		Dr. H. Groot.
Medellin, Colombia, S. A	25.25	641.3			62.0	16.7	76		0	0		4c	4s			0	0	Fair	Thomas Herran.
St. Johns, Newfoundland			29.95	760.7	33.0	0.6	100	E					10n			0.53	13.5	Sleet and fog	John Delaney.
York Factory, B. A			30.33	770.4	— 6	—21.1	100	N	1	0.4		3c	2s	S		0	0		J. Fortescue.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	Weather.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,294.8 ft., or 699.4 m; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio and smoke, as indicated, respectively, by the letters c, k, s. n, d, f, p 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

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MARCH 31, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.80	756.9	62.8	17.1	58	NNW			3		2			0.665	16.9	Clear	Charnot.
Algiers			29.66	753.4	55.4	13.0	93	W			2		8			0.579	14.7	Cloudy	Peter.
La Calle																			Kunts.
Tunis			29.69	754.2	59.7	15.4	77	SE			2		10			0.311	7.9	Hidden.	Jacques.
Sfax			29.74	755.4	62.6	17.0	73	E			6		6			0	0	Fair	Chauvey.
Saida			29.85	758.3				NW			5		7			0	0	Cloudy	Millot.
Tebessa			29.67	753.7	46.6	8.1	...	N			3		10			0	0	Hidden	Colin.
Geriville			29.95	760.8	47.5	8.6	78	NW			3		7			0.638	16.2	Cloudy	Buard.
Laghouat			29.94	760.5	66.2	19.0	63	NW			3		2			0	0	Fair	Guyot.
Biskra			29.78	756.5	66.7	19.3	53	NW			3		4			1.138	28.9	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.79	756.6	59.7	15.4	60	NE			4		8			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.91	759.7	48.9	9.4	92	NE			1		10			0.024	0.6		I. R. Observatory.
Eperies			29.75	755.7	62.8	17.1	62	N			2		5			0	0		Julius Mikolik.
Gratz	28.58	726.0	29.76	755.9	59.2	15.1	47	S			2		5			0	0		Andreas Rospini.
Hermannstadt	28.31	719.1	29.67	753.7	69.1	20.6	39	SSE			1		2			0	0		Prof. Reissenberger.
Kremsmünster	28.40	721.4	29.74	755.3	51.4	10.8	77	E			5		1			0	0		Prof. C. Wagner.
Lemberg			29.76	756.0	62.6	17.0	50	S			2		1			0	0		Dr. T. Stanecki.
Nyiregyhaza			29.76	755.8	67.6	19.8	57	NE			2		0			0	0		Habsuda Daniel.
Pola			29.73	755.1	64.3	15.7	69	WNW			1		3s			0	0		I. R. Hydrographic Office
Szegedin			29.74	755.3	68.4	20.2	43	Calm			0		0			0	0		Karl Stancel.
Trieste			29.72	754.8	63.3	17.4	85	SW			1		1k			0	0		Prof. V. Farolfi.
Vienna			29.79	756.7	56.1	13.4	70	N			1		3			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.64	752.9	61.2	16.2	39	SSE			3	4		WSW		0	0		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.56	750.8	41.5	5.3		E	10	4.5			10			0.030	0.76	Raining	William Boswell.
Ardrossan			29.49	749.0															J. Mayes.
Armagh Observatory			29.54	750.3	44.2	6.8		NW	7	3.1			8					Overcast	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			29.51	749.5	50.3	10.2		S	12	5.4			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.55	750.6	48.4	9.1		Calm			0		7					*D. clouds	J. Dreyer.
Bradford			29.51	749.5	54.9	12.7		E			2		5			0.06	1.5	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.03	762.7	79.0	26.1		NE			2		6					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			29.56	750.8	63.0	17.2		SE			1		4					*D. clouds	H. Todd.
Cardington			29.56	750.8	61.0	16.1		S			2		8					Overcast	John McLaren.
Carlisle			29.52	749.8	50.2	10.1		S			1		10			0.04	1.0	Showery	Bell, for J. Cartmell.
Chatham, School M. E.			29.57	751.1	64.2	17.9		SW			2		6					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	28.15	715.0	29.07	753.0	41.0	5.0		NW			1		10					Gloomy	R. E. Power.
Donaghadee			29.48	748.8	41	5.0		NNE			3		10					Raining	J. Mac Gowan.
Dover			29.59	751.6	53	11.7		ENE			1		2					¼ clouded	J. Costello.
Eccles, (near Manchester)			29.51	749.5	55.0	12.8		SSW	3.2	1.4			8					*D. clouds	Thomas Mackereth
Falmouth Observatory			29.60	751.8	47.6	8.7		NNW	14	6.3			10					Overcast	The Staff.
Fort Napier, (Natal)	27.75	704.8	29.99	761.7	73.0	22.8		SE			1		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.93	760.2	81.0	27.2		W			1		4					*D. clouds	Clue
Galway, Queen's College			29.50	749.3	52	11.1		W			1		5					*D. clouds	B. G. Clare, for Prof. Chr.
Gibraltar, (Mediterranean)			29.85	758.2	60.8	16.0		W			4		5					Showery	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.49	749.0	41.1	5.1		E			1		10					Wet	Lewis Stuart.
Great Yarmouth			29.64	752.6	47	8.3		SE			3		4					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			29.57	751.1	63.0	17.2		S			2		7					*D. clouds	The Staff for G. B. Airy.
Guernsey			29.54	750.3	50	10.0		NNW			1		5					Gloomy	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.53	750.0	56.0	13.3		SW			2		9			Blank	Blank	Hazy	L. J. Crossley.
Helston			29.55	750.6	51	10.6		N			2		6k			0.33	8.4	Fine	M. P. Moyle.
Holyhead			29.54	750.3	45	7.2		W			3		10					Hazy	John Tilston.
Kew Observatory			29.56	750.8	60.0	15.6		S	15	6.7			7					Solar halo	The Staff.
Kingstown			29.54	750.3	45	7.2		NW			3		6					*D. clouds	George Mitchell
Leicester Museum			29.54	750.3	59.4	15.2		S			2		8			†2.82	†71.6	Hazy	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.68	753.9	62.2	16.8		SE			3		10k						Fred Travis, Pvt A.H.C.
Nairn			29.54	750.3	45	7.2		Calm			0		10					Drizzling	W. D. Penny.
Nassau, (Bahamas)			30.16	766.1	72.4	22.4		NE			4		6					*D. clouds	Surg.-Maj. Henry.
Nottingham			30.52	749.8	60.7	15.9		SSE			3		dc,ck,k		SSE	0.14	3.6	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.54	750.3	53.1	11.7		SW			1		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			30.51	749.5	58	14.4		S			1		5					*D. clouds	J. Lucas.
Plymouth			30.55	750.8	47.5	8.6		NW			2		10					Overcast	John Merrifield.
Roche's Point			29.56	750.8	51	10.6		SSW			3		5					½ clouded	W. Kennedy.
Saint Ann's Head			29.56	750.8	46	7.8		NW			1		3					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.52	749.8	55.0	12.8		NNW			1		10					Overcast	A. P. Amy.
Sandwick Manse (Orkneys)			29.57	751.1	44.5	6.9		SSE	17	7.6			10					Misty	Rev. Dr. Clouston.
Scarborough			29.55	750.6	46.2	7.9		SSE			3		3					Blue sky	F. Shaw.
Scutari Cemetery (Turkey)			29.74	755.4	58.0	14.4		NE			2		2			Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.51	749.5	57.3	14.1		S			1		4			0.439	11.15	Blue sky	W. F. Cooper.
Silloth Rectory			29.49	749.0	47.5	8.6	95	W			1		10			0.115	2.92	Raining	Rev. Francis Redford.
Stonyhurst Observatory			29.50	749.3	52.8	11.6		S			3		10			Blank	Blank	Threatening	S. J. Perry.
Stornoway, Lewis C. (Hebr.)			29.50	749.3	45	7.2		SE			1		10					Overcast	John Smith.
Stratfield Turgiss			29.54	750.3	57.5	14.2		S			1		0					Blue sky	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slater.
Thurso			29.55	750.6	47	8.3		SSE			2		10					Overcast	John Trotter.
Truro, Royal Institution			29.60	751.8	50	10.0		N			4		8					Gloomy	W. Newcombe
Valencia Observatory			29.55	750.6	48.5	9.2		W	11	4.9			6					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					45	7.2		SE			4	5	5			0.20	5.1		
Cape Good Hope Obs.			29.99	761.7	87.2	30.7	39	SSE	13	5.8			1						The Staff, for E. J. Stone.
Leith, Restalrig Park			29.54	750.3	42.7	5.9		E			1		10s			0.16	4.1	Rain and fog	Andrew Gibb.
Mauritius			29.94	760.5				E	17.1	7.6						0	0		
Monach Lt-house, Hebrides																			J. Youngclause.
North Unst, (Shetland Is.)			29.62	752.3	44	6.7		SW			3		10			Blank	Blank		

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds. † Rain-fall for the month of March.

DANISH SERIES.

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

Copenhagen			29.96	761.0	48.4	9.1	75	SE			2		2						
Fanöe			29.89	759.1	56.3	13.5	56	SSE			4		1						
Godthaab, (Greenland)			29.82	757.5	28.6	— 1.9	78	ENE			2		0						
Stykkisholm, (Iceland)			29.82	758.2	27.5	— 2.5	96	E			6		0						
Thorshavn, (Faröe)			29.62	752.3	39.6	4.2	92	NE			4		10					Raining	
Vestervig			29.86	758.5	54.3	12.4	68	SE			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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.44	747.8	53.6	12	67	SW			1		10			0.039	1.0	Covered	Normal School.
Amiens			29.66	753.4	56.1	13.4	59	NW			1		5		NW	0	0	Cloudy	Normal School.
Avignon			29.61	752.2	61.7	16.5	53	NNE			2		10			0	0	Covered	Normal School.
Bar-sur-Seine			29.64	752.8	61.7	16.5	33	S			2		8			0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)			29.57	751.0	60.4	15.8	53	S	2.2	1.0					S	0.079	2.0		Beaumette Observatory
Beauvais			29.63	752.6	59.5	15.3	48	SSE			2		10			0.030	0.75	Covered	Normal School.
Besançon			29.67	753.6	58.6	14.8	45	SW			2		0			0	0	Clear	Normal School.
Bourg en Bresse			29.75	755.6	58.8	14.9	53	SW			1		..n						Normal School.
Bourges			29.61	752.0	53.4	11.9	74	SE			2		2		S	0	0	Slightly cl'dy	Normal School.
Brest			29.54	750.2	47.3	8.5	77	N			3		10n		N	0.856	21.75		Naval Observatory.
Caen																			Normal School.
Chartres			29.56	750.9	59.2	15.1		S			3		10			0.024	0.6	Covered	Normal School.
Chaumont																			Normal School.
Clermont			29.57	751.1	58.6	14.8		S			2		10		S	0	0		Puy de Dome Obs.
Commercy			29.69	754.2	55.6	13.1	60	ESE			2		8kn		ESE	0	0	Very cloudy	Normal School.
Commune de Gréasque*			29.62	752.3	61.0	16.1	30	E			6		8		E	0	0		
Grenoble			29.70	754.3	57.6	14.2	73	ENE			2		0			0	0	Clear	Normal School.
Le Mans			29.57	751.1	56.8	13.8	57	S			2		8		S	0.04	1.	Very cloudy	Normal School.
Loches			29.26	743.1	53.6	12	62	S			2		10			0	0	Covered	Normal School.
Lons-Le-Saulnier			29.63	752.6	57.4	14.1	57	W			2		2		W	0	0	Slightly cl'dy	Normal School.
Mâcon			29.68	753.9	55.4	13	69	Calm			0		0			0	0	Clear	Normal School.
Mirecourt																			Normal School.
Metz			29.74	755.4	54.3	12.4	48	NE			2		7		NE	0	0		M. Schuster.
Nîmes			29.61	752.1	62.2	16.8	70	E			1		10		E	0	0	Covered	Normal School.
Orleans			29.58	751.2	58.3	14.6	41	SSW			3		8		SW	0	0	Very cloudy	Normal School.
Paris Observatory			29.61	752.1	60.6	15.9	39	S			2		10			0.006	0.15	Covered	National Observatory.
Parthenay			29.52	749.8	58.1	14.5	88	SE			2		2		S	0	0	Slightly cl'dy	Normal School.
Privas			29.59	751.6	60.4	15.8		S			2		10		S	0	0	Covered	Normal School.
La Roche-sur-Yon			29.71	754.5	59.2	15.1	61	SE			2		10			0	0	Covered	Normal School.
Rochefort, Observatory			29.56	750.8	57.4	14.1	62	S			3		10			0.551	14.0	Covered	Naval Observatory.
Rouen			29.58	751.2	50.0	10.0	47	SSE			2		0			0.063	1.6	Clear	Normal School.
Saint Lo			29.59	751.5	59.2	15.1	77	SW			1		2		SW	0	0		Normal School.
Tarbes			29.51	749.6	55.4	13	47	NW			1		10		E	0.571	14.5	Covered	Normal School.
Toulouse																			Normal School.
Villefranche			29.73	755.2	61.7	16.5	87	SSE			1		8			0	0	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.93	760.2	77.4	25.2	91	NE			2		5k						L'Abbé Marchési.
Gorée																			
Marseilles			29.56	750.8	64.0	17.8	20	ESE			6		9			0	0	Covered	Marseilles Observatory.
Mont-Louis	24.35	618.4	29.68	753.8	35.6	2.0	94	E	5.6	2.50			10			0.228	5.8		—. Falguère.
Montsouris, Paris			29.61	752.1	59.9	15.5	43	SSW			1		10			Inap.	Inap.	Lightly cov'd	Montsouris Observ'tory.
Perpignan			29.59	751.6	49.1	9.5	82	NW	3.7	1.67			10		E	1.421	36.1		Dr. Fines.
Pic du Midi, (Summit) H.Pt†																			M. Baylac.
Pic du Midi, (Plantade)	21.09	558.6			34.8	1.0		N			1		10					Snowy	General de Nansouty.
Saint Maur, (near Paris)			29.66	753.3	60.8	16.0	45	S			1		10			0.114	2.9	Very cloudy	E. Renou.
Toulouse			29.59	751.6	50.4	10.2	84	SE			2		10			0.220	5.6	Raining	Toulouse Observatory.
Tours			29.60	751.7	57.4	14.1	56	S			1		10		SSW	0	0		C. Marquet.
Versailles, (near Paris)			29.62	752.3	61.2	16.2	42	S			2		10			0.053	1.34	Covered	Dr. A. Bérigny.
Zi-Ka Wei, (near Shanghai)																			H. Le Lee, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7., 8. or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,886.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 ft.; lermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Near Marseilles. † Summit inaccessible.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.72	755.0	59.0	15.0	43	E			5		8			0	0		Prof. T. Hoh.
Berlin			29.93	760.1	58.6	14.8	37	SE			1		0			0	0		Prof. Arndt.
Breslau			29.98	761.5	52.5	11.4	64	E			5		10			0.016	0.4		Dr. P. Naugebauer.
Carlsruhe			29.66	753.3	62.2	16.8	43	E			3		3			0	0		A. Senz.
Cassel			29.73	755.2	61.7	16.5	36	ESE			7		1			0	0		Dr. H. Möll.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main			29.80	757.0	62.8	17.1	26	E			4		3			0	0		Physical Society.
Friedrichshafen	28.24	717.4	29.66	753.4	54.7	12.6	58	W					3			0	0		M. Wilhelm.
Hamburg			29.90	759.5	56.8	13.8	45	ESE			5		2cs			0	0	Clear	Deutsche Seewarte.
Kiel			29.95	760.7	52.7	11.5	62	ESE			3		2			0.130	3.3		Prof. G. Karsten.
Königsberg			30.02	762.5	46.6	8.1	76	NE			2		6			0.012	0.3		Prof. E. Luther.
Köslin			29.97	761.1	55.2	12.9		N			1		2			0	0		H. Müller.
Leipsic			29.88	758.9	58.3	14.6	42	E			6		2			0	0		Prof. Bruhns.
Memel			29.93	760.1	35.6	2.0	94	NW			1		10			0.004	0.1		Reinbrecht & Skalweit.
Münster			29.84	757.8	60.4	15.8	79	NE			2		0			0	0		Prof. E. Hois.
Neufahrwasser			29.98	761.4	38.8	3.8	90	Calm			0		4			0	0		A. Lothes.
Posen			30.00	761.9	55.0	12.8	61	E			5		7			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.65	753.2	62.1	16.7	44	Calm			0		10			0	0		Dr. Schur.
Stuttgart			29.68	753.8	60.3	15.7	46	SE			2		2			0	0		Prof. Schoder.
Thorn			29.98	761.4	56.1	13.4	59	E			5		0			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.64	752.9	60.8	16.0	45	SE			5		10			0	0		Prof. Flesch.
Wustrow, Naval School			29.86	758.5	54.3	12.4	55	SE			2		2			0	0		E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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																			

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.74	755.3	62.8	17.1	41	SE	4.3	1.9			0			0	0		
Padua			29.73	755.1	62.1	16.7	50	E	7.4	3.3			3			0	0		
Vicenza			29.74	755.4	61.7	16.5	51	E	2.5	1.1			1	E		0	0		
Verona			29.72	755.0	68.0	20.0	43	E			2		0			0	0		
Bergamo	28.40	722.3	29.73	755.1	57.9	14.4	69	SW			2		5			0	0		
Domodossola																0	0		
Milan			29.73	755.1	65.5	18.6	46	E			1		6	ESE		0	0		
Pavia			29.75	755.7	59.7	15.4	57	NE			6		3	E		0	0		
Moncalieri			29.80	757.0	50.5	10.3	71	NNE	0	0			9	S		0	0		
Mondovi	27.85	707.3	29.77	756.1	52.5	11.4	61	NW			4		9			0	0		
Porto Maurizio			29.72	754.8	52.6	17.0		ENE			4		7	*W		0	0		
Genoa			29.72	754.8	61.2	16.2	50	NE	1.8	0.8			4	E		0	0		
Piacenza			29.76	755.8	59.2	15.1	58	E	11.9	5.3			7	W		0	0		
Parma			29.75	755.7	61.2	16.2	55	E			2		9			0	0		
Bologna			29.80	756.8	61.3	16.3	39	SW			1		3	N		0	0		
Florence			29.71	754.6	68.0	20.0	36	NE			2		5	NE		0	0		
Leghorn			29.70	754.3	65.3	18.5	32	ENE	9.8	4.4			5			0	0		
Siena	28.49	723.7	29.70	754.4	62.2	16.8	40	SSE	0.7	0.3			3	E		0	0		
Urbino	28.22	716.9	29.80	756.8	54.7	12.6	61	NE			2		2			0	0		
Pesaro																			
Ancona			29.78	756.4	56.1	13.4	75	NW			4		2			0	0		
Grosseto			29.69	754.0	63.7	17.6	61	SW			2		6	S		0	0		
Rome			29.68	753.9	66.9	19.4	46	SW	3.8	1.7			5	SSE		0	0		
Naples, O. U.			29.68	754.1	68.0	20.0	56	SW			2		8	NE		0	0		
Lecce			29.76	755.9	62.6	17.0	70	SSW	6.9	3.1			5			0	0		
Cosenza			29.72	754.9	62.1	16.6	67	N	1.3	0.6			10			0	0		
Riposto, (Sicily)			29.71	754.6	63.3	17.4	72	SE			2		4			0	0		
Palermo			29.58	751.2	60.1	15.6	77	NE	6.9	3.1			2			0	0		
Caltanissetta	27.66	702.5	29.61	752.0	57.9	14.4	54	E			6		6	W		0	0		
Sub-Series.																			
Naples, S. R.			29.70	754.3	64.6	18.1	63	SW	2.5	1.1			..k,c	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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.69	754.0	55.4	13.0		SE			4								
Groningen			29.74	755.5	57.2	14.0		S			4								
Helder			29.73	755.2	52.7	11.4		ESE			4								
Utrecht			29.69	754.0	60.6	15.9	41	ESE			4		2					Light cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.79	756.7	43.5	6.4	76	S	11.6	5.2			10			0.118	3.0		
Brönø			29.79	756.6	39.2	4.0	64	Calm	0	0			8			0	0		
Christiania			29.92	760.0	35.6	2.0	77	SW	2.7	1.2			9			0.189	4.8		
Tromsö			29.85	758.3	28.8	— 1.8	80	E	2	1			1			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	763.6	56.7	13.7	76	Calm	0	0			2			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.76	755.8	52.0	11.1	65	SW	14.3	6.39			7	WNW		0.354	9.0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			29.99	761.7	64.0	17.2	68	SW	5.9	2.64			5			0	0		Capt. D. A. da Cunha.
Lisbon			29.82	757.4	54.9	12.7	58	W	16.1	7.2			6	WNW		0.059	1.5		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Warsaw			29.93	760.1	50.2	10.1	66	NNE	11	5			10						Astronomical Obs.
Wilna			29.95	760.6	43.7	6.5	93	W	9	4			10					Raining	Astronomical Obs.
Dorpat			29.98	761.4	33.3	0.7	94	WNW	7	3			10						Physical Cabinet.
St. Petersburg			29.82	757.4	36.1	2.3	96	S	2	1			10					Foggy	Central Physical Obs.
Knoplo			29.83	757.6	26.6	— 3.0	100	E	13	6			10						Ch. Forsten.
Kieff			29.91	759.8	50.4	10.2	73	SE	7	3			4						Physical Cabinet.
Nikolaiev			29.89	759.1	59.4	15.2	65	NE	9	4			5						Kurdakof.
Kertch																			Lagorio.
Moscow			30.04	762.9	41.9	5.5	85	S	4	2			5						Meteorological Obs.
Lugan			29.92	759.9	56.5	13.6	52	E	40	18			6						Meteorological Obs.
Archangel			30.02	762.5	25.5	— 3.6	52	Calm	0	0			1						Ogorodnikof.
Tiflis	28.54	724.9	29.89	759.3	72.0	22.2	28	SE	11	5			4						Physical Observatory.
Astrakhan			30.30	769.6	44.1	6.7	67	ESE	4	2			3						Sebastianof.
Kasan			30.08	764.1	36.0	2.2	82	S	2	1			10					Light rain	Physical Cabinet.
Orenburg			30.18	766.5	36.1	2.3	79	NW	2	1			4						Tschernischef.
Ekaterinburg	28.94	735.0	29.97	761.1	35.6	2.0	45	W	18	8			4						Meteorological Obs.
Nukuss			30.06	763.4	54.0	12.2	45	N	9	4			0						
Kasaly																			Bobrof.
Tashkend	28.47	723.1	30.16	766.1	59.7	15.4	48	SW	9	4			6						Michelson.
Barnaul			29.88	759.0	32.5	0.3	71	Calm	0	0			10						Meteorological Obs.
Yeniseisk			29.86	758.4	29.5	— 1.4	45	Calm	0	0			2						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.02	762.4	49.3	9.6	42	Calm	0	0			9						Physical Observatory.
Nertchinsk	27.93	709.5	30.08	764.1	38.8	— 3.8	60	NW	4	2			10						Meteorological Obs.
Vladivostock			30.09	764.3	32.4	0.2	71	SE	2	1			1						
Nikolalevsk, on the Amoor					28.6	1.9	96	NE	11	5			10					Snowing	

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 405. meters, or 1,411.8 feet; Ekaterinburg, 303.4? m., or 1,005.2? ft.; Tashkend, m 494.2?, 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			29.63	752.5	40.1	9.5	65	SW	20.9	9.34		0	7			0.165	4.2	Cloudy	Royal Observatory.
San Fernando			29.87	758.7	57.9	14.4	63	W	18.3	8.2		0	6		W	0.012	0.3		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Haparanda			29.93	760.2	25.9	— 3.4	52	NE			2		7			0	0		
Umea			29.85	758.2	29.5	— 1.4	92	NE			2		10			0	0		
Hernosand			29.86	758.4	24.4	— 4.2	100	NE			2		10			0.059	1.5		
Stockholm			29.87	758.6	38.1	3.4	90	WSW			2		10			0	0		
Wisby			30.02	762.6	38.8	3.8	93	WSW			4		10			0.004	0.1		
Sub-Series.																			
Upsala			29.89	759.2	32.7	0.4	85	SW	7.8	3.5			10			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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.24	717.4	29.68	753.8	52.0	11.1	49	NNW			0		7			0	0	Cloudy, vapor.	The Observatory.
Zurich	28.05	712.5	29.68	753.9	57.6	14.2	56	NW			1		2			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —6.8 mm.; Thermometer, +1.3 cent.; Relative Humidity, —9 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.80	756.8	54.9	12.7	71	NW	9	4.0			4	NNE		0	0		
Fao, (Persian Gulf)			30.11	764.8	76.5	24.7		SE			3		10						
Salonica			29.78	756.4	61.3	16.3		SE			2		8						
Valona			29.65	753.2	56.3	13.5		SW			2		10					Raining	
Varna			29.80	757.0	59.0	15.0		N			2		8						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.88	758.9	70.7	21.5	71	W			1		10n		SW	0	0	Threatening	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.41	747.0	30.7	— 0.7	97	Calm	0	0						0	0		Hon. J. Ferguson.
Brockville, Ontario			29.91	759.7	32	0.0		W	5	2.2			10s		W	0.15	3.8	Cloudy	W. R. Bigg.
*Chatham, N. B.			29.48	748.8	28	— 2.2	88	SW	3	1.3		5ck	0	SW		0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island			29.51	749.5	32	0.0	97	S	15	6.7			10s			0.50	12.7	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.75	755.6	32.5	0.3	79	S			1		10s			Inap.	Inap.	Dull	James Smith, M. A.
Dalhousie, N. B.			29.48	748.8	29.5	— 1.4	77	W			1					0.20	5.1	Cloudy	H. A. Johnson.
Esquimault, B. C.			30.34	770.6	37.1	2.8	91	N	3	1.3		10k				0	0	Cloudy	W. H. Bevis.
Fredericton, N. B.			29.54	750.3	29.0	— 1.7	66	NW	9	4.0						0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			30.49	774.4	2	—16.7	97	Calm	0	0		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.09	764.3	27.3	— 2.6	87	Calm			0		10n			0	0	Cloudy	H. J. Strang, M. A.
Granton, Ontario			30.05	763.3	25.2	— 3.8		NW			1		10n			0.30	7.6	Cloudy	James Grant.
*Halifax, N. S.			29.52	749.8	36	2.2	82	SW	10	4.5			8n		SW	0.01	0.3	Cloudy	F. Allison, M. A.
*Kingston, Ontario			29.91	759.7	30	— 1.1	88	W	5	2.2		10cs	0	W		0	0	Cloudy	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			29.71	754.6	29	— 1.7	83	W	22	9.8			10n			0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.79	756.7	32	0.0	74	W	8	3.6			10ks		W	0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario			29.99	761.7	29	— 1.7	78	N	9	4.0		5k	2ks	N	N	0.02	0.5	Fair	Rev. R. Mooley.
*Port Dover, Ontario			30.03	762.7	29	— 1.7	89	NW	8	3.6		10k	0	NW		0.03	0.8	Cloudy	H. Morgan.
Port Hastings, N. S.			29.60	751.8	31.2	— 0.4		S	1	0.4						0	0	Fine	Peter Grant.
*Port Stanley Ontario			30.05	763.3	28	— 2.2	87	W	14	6.3			10n		W	0.05	1.3	Cloudy	M. Payne.
*Quebec, Quebec			29.62	752.3	29	— 1.7	89	S	21	9.4			10n		NE	0	0	Cloudy	Capt. Ash, R. N.
St. John, N. B.			29.56	750.8	30.0	— 1.1	78	NW	4	1.8		1k	0			0.200	5.08		G. Murdoch, C. E.
*Saugeen, Ontario			29.99	761.7	30	— 1.1	98	N	1	0.4			10n			0.13	3.3	Cloudy	K. Stewart.
Stayner, Ontario			29.96	761.0	29	— 1.7	95	NW	8	3.6			10n		NW	0.20	5.1	Cloudy	R. J. Cole.
Stratford, Ontario			30.03	762.7	25.8	— 3.4	87	NW	9	4.0			10s			0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			29.60	751.8	35	1.7	69	SW	8	3.6		10cs	0			0	0	Fair	T. C. Hill.
*Toronto, Ontario			30.00	762.0	31	— 0.6	91	W	9	4.0			10n		W	0.05	1.3	Cloudy	Magnetic Observatory
Woodstock, Ontario			30.05	763.3	27.3	— 2.6	88	Calm			0		10s			0	0	Cloudy	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,[illegible]15 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	36	2.2	80	NW	8	3.6		5k	5ks	W	W	Inap.	Inap.	Cloudy	
Alpena, Mich.			30.04	763.0	26	− 3.3	88	NW	8	3.6			10s		NW	0	0	Cloudy	
Atlantic City, N. J.			29.98	761.5	36	2.2	62	W	12	5.4		0	0			0	0	Clear	
Augusta, Ga.			30.09	764.3	52	11.1	73	SE	2	0.9		0	Haze			0	0	Clear	
Baltimore, Md.			30.02	762.5	37	2.8	62	NW	8	3.6		Haze	Sm'e			Inap.	Inap.	Smoky	
Barnegat, N. J.			29.95	760.7	40	4.4	60	W	13	5.8		0	0			0	0	Clear	
Benton, Montana	27.47	697.7	30.27	768.8	30	− 1.1	68	NW	3	1.3		5c	0			0.08	2.0	Fair	
Bismarck, Dakota	28.49	723.6	30.27	768.8	19	− 7.2	54	E	6	2.7		8k	0	E		0	0	Fair	
Boston, Mass.			29.75	755.6	34	1.1	61	W	15	6.7		8k	Sm'e		W	Inap.	Inap.	Smoky	
Breckenridge, Minn.			30.34	771.1	3	−16.1	73	N	9	4.0		0	0			0	0	Clear, mirage	
Buffalo, N. Y.			29.98	761.5	29	− 1.7	89	W	8	3.6			10n		W	0.02	0.5	Light snow	
Burlington, Vt.			29.75	755.6	32	0.0	100	S	5	2.2			10n			0.09	2.3	Light snow	
Cairo, Ill.			30.08	764.0	41	5.0	57	E	8	3.6		0	0			0	0	Clear	
Cape Hatteras, N. C.			30.01	762.2	48	8.9	49	NE	12	5.4		0	0			0	0	Clear	
Cape Henry, Va.			30.07	763.8	52	11.1	54	N	4	1.8		0	0			0	0	Clear	
Cape May, N. J.			30.00	762.0	37	2.8	62	W	20	8.9		0	0			Inap.	Inap.	Clear	
Charleston, S. C.			30.09	764.3	57	13.9	69	W	8	3.6		0	Sm'e			0	0	Clear	
Cheyenne, Wyoming	23.85	605.8	29.70	756.7	20	− 6.7	100	NE	12	5.4			10n			0.01	0.3	Light snow	
Chicago, Ill.			30.12	765.0	30	− 1.1	78	W	3	1.3		0	0			0	0	Clear	
Cincinnati, Ohio			30.09	764.3	33	0.6	69	NE	5	2.2		0	Sm'e			0	0	Clear, frost	
Cleveland, Ohio			30.09	764.3	28	− 2.2	88	SW	7	3.1			10s		SW	0.01	0.3	Cloudy	
Colorado Springs, Col.	23.78	604.0	29.45	753.1	22	− 5.6	100	N	20	8.9			10n			0.09	2.3	Heavy snow	
Corsicana, Tex.			29.92	752.3	62	16.7	88	SE	10	4.5			10s		S	0.02	0.5	Cloudy	
Davenport, Iowa			30.14	765.5	32	0.0	69	N	4	1.8		0	Sm'e			0	0	Clear	
Denison, Tex.			29.58	751.3	56	13.3	93	E	4	1.8			10n			0.05	1.3	Light rain	
Denver, Col.	24.61	625.1	29.83	757.7	22	− 5.6	100	N	12	5.4			10n			0.15	3.8	Light snow	
Detroit, Mich.			30.05	763.3	30	− 1.1	78	NW	6	2.7		0	9s			0.02	0.5	Cloudy	
Dodge City, Kan.	27.02	686.3	29.28	743.7	39	3.9	100	N	32	14.3			10n			0.02	0.5	Light rain	
Dubuque, Iowa			30.17	766.3	25	− 3.9	75	NW	1	0.4		0	0			0	0	Clear	
Duluth, Minn.			30.30	769.6	26	− 3.3	62	NW	8	3.6		0	0			0	0	Clear	
Eastport, Me.			29.54	750.3	30	− 1.1	78	W	5	2.2		2c	Haze			0.15	3.8	Fair	
Erie, Pa.			30.02	762.5	31	− 0.6	89	W	8	3.6			10s			0.03	0.8	Cloudy	
Escanaba, Mich.			30.17	766.3	25	− 3.9	75	N	12	5.4			10s		N	0	0	Cloudy	
Fort Gibson, Indian Terr.			29.74	755.4	55	12.8	55	E	15	6.7		2ck	5ks	SW	SW	0	0	Fair	
Ft. St. Michaels, Alaska			29.85	758.2	−15	−26.1		Calm	0	0		0	0			0	0	Clear	
Fort Sill, Indian T.	28.32	719.4	29.40	746.7	54	12.2	93	SE	20	8.9			10n		SE	0.27	6.9	Heavy rain	
Fort Sully, Dakota	28.18	723.4	30.28	769.1	18	− 7.8	84	N	5	2.2		0	2s		N	0	0	Fair	
Galveston, Tex.			29.75	755.6	66	18.9	88	SE	9	4.0		5k	0	SW		0	0	Fair	
Grand Haven, Mich.			30.13	765.3	29	− 1.7	78	NW	4	1.8			10s		NW	0	0	Cloudy	
Indianapolis, Ind.			30.14	765.5	31	− 0.6	68	N	2	0.9		2c	0			0	0	Clear	
Indianola, Tex.			29.63	753.4	69	20.6	90	SE	24	10.7			10s		S	0	0	Cloudy	
Jacksonville, Fla.			30.13	765.3	56	13.3	73	SW	4	1.8		0	0			0	0	Clear	
Keokuk, Iowa			30.11	764.8	34	1.1	71	NE	6	2.7		8c	0	N		0	0	Fair	
Key West, Fla.			30.10	764.5	67.9	19.9	74	E	9	4.0		2k	0	E		0	0	Clear	
Kittyhawk, N. C.			30.07	763.8	45	7.2	61	NE	4	1.8		0	0			0	0	Clear	
Knoxville, Tenn.			30.08	764.0	36	2.2	80	NE	4	1.8		0	Fog			0	0	Fair	
La Crosse, Wis.			30.24	767.8	27	− 2.8	66	NW	3	1.3		0	0			0	0	Clear	
Leavenworth, Kan.			30.01	762.0	34	1.1	69	NE	6	2.7		10c	0			0	0	Cloudy	
Lexington, Ky.	28.98	736.1	30.14	765.5	32	0.0	79	NE	4	1.8		0	0			0	0	Clear	
Long Branch, N. J.			29.94	760.5	39	3.9	63	W	16	7.2		0	1s		W	Inap.	Inap.	Clear	
Louisville, Ky.			30.13	765.3	33	0.6	80	N	4	1.8		0	0			0	0	Clear	
Lynchburg, Va.			30.08	764.0	41	5.0	57	Calm	0	0		0	Sm'e			0	0	Clear	
Malone, N. Y.			29.74	755.4	31	− 0.6	89	W	8	3.6			10n		W	0.14	3.6	Heavy snow	
Manhattan, Kan.	28.72	729.5	29.92	760.0	26	− 3.3	77	NE	16	7.2		5cs	0			0	0	Fair	
Marquette, Mich.			30.22	767.6	26	− 3.3	88	NW	8	3.6			10s		NW	0.01	0.3	Cloudy	
Memphis, Tenn.			29.99	761.7	49	9.4	57	E	6	2.7		0	Sm'e			0	0	Clear	
Milwaukee, Wis.			30.19	766.8	27	− 2.8	88	NE	12	5.4			10s			0	0	Cloudy	
Mobile, Ala.			30.06	763.5	53	11.7	86	NE	3	1.3		Sm'e	10s		S	0	0	Cloudy	
Montgomery, Ala.			30.10	764.5	50	10.0	82	S	1	0.4		0	Sm'e			0	0	Clear	
Morgantown, W. Va.			30.06	763.5	33	0.6	79	N	2	0.9		8c	0	SW		0.02	0.5	Fair	
Mt. Washington, N. H.	23.16	588.2	29.52	749.8	7	−13.9	100	NW	60	26.8			10n		NW	0.89	22.6	Light snow	
Nashville, Tenn.			30.05	763.3	46	7.8	47	Calm	0	0		Haze	0			0	0	Clear	
New Haven, Conn.			29.87	758.7	38	3.3	45	W	5	2.2			10s		NW	Inap.	Inap.	Cloudy	
New London, Conn.			29.85	758.2	38	3.3	41	NW	17	7.6		2k	0	W		0.07	1.8	Clear	
New Orleans, La.			29.95	760.7	58.5	14.7	73	SE	8	3.6		2ck	0	W		0	0	Clear	
Newport, R. I.			29.81	757.2	35	1.7	70	W	5	2.2		0	0			0.06	1.5	Clear	
New York, N. Y.			29.93	760.2	34	1.1	50	W	16	7.2		2ck	0	W		0.01	0.3	Clear	
Norfolk, Va.			30.08	764.0	44	6.7	60	Calm	0	0		0	Sm'e			0	0	Clear	
North Platte, Neb.	26.99	685.5	29.44	747.8	29	− 1.7	89	NE	16	7.2			10s		NE	0	0	Cloudy	
Omaha, Neb.	28.98	736.1	30.10	764.5	32	0.0	79	NE	8	3.6		8c	0	W		0	0	Fair	
Oswego, N. Y.			29.92	760.0	32.1	0.1	89	W	15	6.7			10s		W	0.09	2.3	Cloudy	
Pembina, Dakota			30.42	772.7	− 4	−20.0	82	NW	4	1.8		0	0			0	0	Clear	
Philadelphia, Penn.			29.99	761.7	36	2.2	62	NW	21	9.4		2k	0	W		Inap.	Inap.	Fair	
Pike's Peak, Colorado	17.28	438.9	29.49	749.0	4	−15.6	100	NE	12	5.4			10n			0.17	4.3	Light snow	
Pittsburgh, Penn.			30.04	763.0	31	− 0.6	89	NW	6	2.7			10s		NW	0.01	0.3	Cloudy	
Port Huron, Mich.			30.06	763.5	27	− 2.8	77	NW	9	4.0			10s			0.07	1.8	Cloudy	
Portland, Me.			29.71	754.6	33	0.6	80	W	10	4.5		8k	0	W		0	0	Cloudy	
Portland, Oregon			30.43	772.9	36	2.2	90	Calm	0	0			Fog			0.02	0.5	Foggy	
Punta Rassa, Fla.			30.15	765.8	57.5	14.2	76	NE	10	4.5		Haze	Sm'e		NE	0	0	Hazy	
Rochester, N. Y.			29.93	760.2	30	− 1.1	89	W	18	8.0			10s			Inap.	Inap.	Cloudy	
Salt Lake City, Utah	25.49	647.4	29.82	757.4	34	1.1	69	N	12	5.4			10s			0.50	12.7	Cloudy	
Sandy Hook, N. J.			29.92	760.0	36	2.2	61	NW	32	14.3		2ks	0	NW		Inap.	Inap.	Fair	
San Diego, Cal.			30.01	762.2	44	6.7	75	NE	4	1.8		0	0			0	0	Clear	
San Francisco, Cal.			30.21	767.3	45	7.2	68	NW	12	5.4		0	0			0	0	Clear	
Santa Fe, N. M.	22.76	578.1	29.30	744.2	20	− 6.7	70	Calm	0	0		0	5s			0.03	0.8	Fair	
Savannah, Ga.			30.10	764.5	59	15.0	66	SW	8	3.6		Haze	0			0	0	Clear	
Shreveport, La.			29.84	757.9	58	14.4	85	SE	9	4.0			10s		SE	0	0	Cloudy	
Smithville, N. C.			30.08	764.0	59	10.0	59	NW	3	1.3		0	0			0	0	Clear	
Springfield, Mass.			29.92	757.4	38.5	3.9	46	W	8	3.6		2k	1s	NW		0.05	1.4	Fair	
St. Louis, Mo.			30.13	765.3	35	1.7	70	E	4	1.8		5cs	0			0	0	Fair	
St. Marks, Fla.			30.12	765.0	49	9.4	85	Calm	0	0		2c	0			0	0	Fair	
St. Paul, Minn.			30.23	767.8	26.5	− 3.1	65	N	5	2.2		0	0			0	0	Clear	
St. Paul's Island, Alaska			29.94	760.5	10	−12.2	79	N	17	7.6			10k			0	0		
Thatcher's Island, Mass.			29.75	755.6	32	0.0	69	NW	14	6.3		2c	0	NW		0.08	2.0	Clearing	
Toledo, Ohio			30.06	763.5	32	0.0	61	W	2	0.9		0	0			Inap.	Inap.	Clear	
Tucson, Arizona	27.33	695.4	29.97	761.2	43	6.1		W				8ck	Haze	NW		0	0	Fair	
Tybee Island, Ga.			30.08	764.0	60	15.6	70	Calm	0	0		0	0			0	0	Clear	
Vicksburg, Miss.			29.97	761.2	54	12.2	83	SE	8	3.6		8k	0	S		0	0	Cloudy	
Virginia City	24.27	616.4	29.83	757.7	21	− 6.1	85	E	12	5.4			10ks		NW	0.04	1.0	Cloudy	
Washington, D. C.			30.06	763.5	37	2.8	59	W	4	1.8		0	0			0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.03	764.0	47	8.3	55	NE	7	3.1		0	0			0	0	Clear	
Wood's Holl, Mass			29.78	756.4	38	3.3	40	NW	18	8.0		0	0			0.15	3.8	Clear	
Wytheville, Va	27.64	702.0	29.85	758.2	35	1.7	61	W	2	0.9		Haze	0			0	0	Clear	
Yankton, Dakota	28.87	733.3	30.24	768.1	25	— 3.9	75	NE	3	1.3		5c	0	SW		0	0	Fair	
Yuma, Arizona			29.96	761.0	54	12.2		NW				0	0			0	0	Clear	
Sub Series.																			
Bridgetown, B'b'dos, W. I.			30.06	763.5	80	26.7	91	E	5	2.2		2c	5s	N	NE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.01	762.2	76	24.4	72	E				0	5k			0.08	2.0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I.			30.27	768.8	77	25.0	65	E	4	1.8		2c	4k	SE		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I.			30.32	770.1	77	25.0	72	Calm	0	0		2c	2s			0	0		James Gall.
Santiago de Cuba, W. I.			29.85	758.2	78	25.6	72	N	7.2	3.2		0	2s		N	0	0	Fair	Robert Mason.
Havana, Cuba, W. I.			30.09	764.3	68	20.0	71	NE	6.0	2.7		5k	0	S		0	0	Fair	Charles Hasselbrink.
St. Georges, Bermudas			30.06	763.5	66.0	18.9	61	SW	22.0	9.8						0.10	2.5	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I	27.20	690.9	30.00	762.0	64	17.8	83	NE	1.5	0.7		0	0			0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.03	762.7	82	27.8	75	E			2		5k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.08	763.9	82.4	28										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.24	641.0			60.0	15.6	80		0	0		1c	2s			0	0	Fair	Thomas Herran.
St. John's, Newfoundland			29.60	751.8	31.5	— 0.3		W				10k	10s			0	0	Cloudy	John Delaney.
York Factory, B. A.			30.58	776.7	—11	—23.9	76	S	5	2.2		4c	3s	S		0	0		J. Fortescue.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,294.8 ft., or 699.4 m; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types* of clouds, 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 APRIL 1, 1876.

7:35 A. M. WASHINGTON 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.

ALGERIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.89	759.1	61.9	16.6	59	WNW			2		6			0	0	Fair	Charnot.
Algiers			29.83	757.6	62.6	17.0	67	NW			2		7			0	0	Cloudy	Peter.
La Calle																			Kuntz.
Tunis			29.85	758.3	67.5	19.7	50	N			2		5			0.173	4.4	Fair	Jacques.
Sfax			29.84	757.9	68.7	20.4	47	Calm			0		2			0.386	9.8	Clear	Chauvey.
Saida			29.91	759.8	54.5	12.5	44	WNW			3		4			0	0	Fair	Millot.
Tebessa			29.88	758.9	61.2	16.2		W			2		1			0.354	9.0	Clear	Colin.
Geriville			29.97	761.1	45.1	7.3	91	NW			2		6			0.067	1.7	Fair	Buard.
Laghouat			29.95	760.7	59.0	15.0	39	SW			2		3			0.276	7.0	Fair	Guyot.
Biskra			29.93	760.1	67.1	19.5	37	NW			1		4			0	0	Fair	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.70	754.3	67.6	19.8	54	SW			3		7			0.50	12.7		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.87	758.8	54.3	12.4	82	NE			3		10			0	0		I. R. Observatory.
Eperies			29.81	757.2	64.4	18.0	58	N			1		0			0	0		Julius Mikolik.
Gratz	28.56	725.4	29.72	755.0	63.5	17.5	43	SW			2		5			0	0		Andreas Rospini.
Hermannstadt	28.28	718.4	29.66	753.3	65.5	18.6	44	NE			1		5			0	0		Prof. Reissenberger.
Kremsmünster	28.32	719.2	29.61	752.2	62.6	17.0	46	ESE			3		2			0	0		Prof. C. Wagner.
Lemberg			29.80	756.9	59.0	15.0	56	NE			2		5			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			29.72	754.8	62.1	16.7	71	S			1		9ks			0	0	Low fog	I. R. Hydrographic Office
Szegedin			29.70	754.4	69.1	20.6	47	S			1		0			0	0		Karl Stancel.
Trieste			29.72	755.0	58.1	14.5	95	Calm			0		10			0.524	13.3	Light rain	Prof. V. Farolfi.
Vienna			29.72	754.9	64.8	18.2	60	SE			1		3			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.65	753.0	60.4	15.8	55	N			0	9		S		0	0		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	49.6	9.8		SSE	14	6.3			2			0.370	9.40	Blue sky	William Boswell.
Ardrossan			29.73	755.1	46	7.8		SW			2		6					*D. clouds	J. Mayes.
Armagh Observatory			29.78	756.4	48.1	8.9		WSW	6	2.7			3					*D. clouds	F. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			29.76	755.9	45.0	7.2		WNW	7	3.1			7					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			29.79	756.7	53.3	11.8		SE			1		3					*D. clouds	J. Dreyer.
Bradford			29.72	754.9	49.9	9.9		SW			1		8			0.06	1.5	Drizzling	J. McLandsborough.
Bridgetown, (Barbados)			30.00	762.0	82	27.8		NE			2		4					Gloomy	Sergt. J. F. Halanen.
Cambridge Observatory			29.72	754.9	50.0	10.0		N			1		10					Overcast	H. Todd.
Cardington			29.75	755.6	49.4	9.7		N			1		10					Overcast	John McLaren.
Carlisle			29.75	755.6	54.7	12.1		W			2		3			0.05	1.3	*D. clouds	Bell, for J. Cartmell.
Chatham, School M. E.			29.67	755.6	49.7	9.8		SW			1		8					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	28.33	719.6	29.84	757.9	48.6	9.2		N			1		5					*D. clouds	R. E. Power.
Donaghadee			29.75	755.6	48	8.9		WNW			2		5					*D. clouds	J. MacGowan.
Dover			29.69	754.1	50	10.0		WSW			3		3					¼ clouded	J. Costello.
Eccles, (near Manchester)			29.74	755.4	50.9	10.5		W	6.8	3.0			6					*D. clouds	Thomas Mackereth
Falmouth Observatory			29.80	756.9	49.5	9.7		SSE	6	2.7			7					Overcast	The Staff.
Fort Napier, (Natal)	27.83	706.9	30.07	763.8	68.9	20.5		E			2		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	86.0	30.0		N			1		9					Overcast	[illegible]
Galway, Queen's College			29.73	755.1	52	11.1		W			2		3					*D. clouds	B. G. Clare, for Prof. Cor.
Gibraltar, (Mediterranean)			29.86	758.4	61.7	16.5		NW			3		5					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.70	754.4	48.6	9.2		W			1		9					*D. clouds	Lewis Stuart.
Great Yarmouth			29.68	753.9	49	9.4		S			1		4					Misty	G. T. Watson.
Greenwich Royal Obs.			29.73	755.1	51.1	10.6		N			1		10			Blank	Blank	Overcast	The Staff for G. B. Airy.
Guernsey			29.77	756.1	50	10.0		NW			2		0					Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.76	755.9	50.0	10.0		NW			1		9			Blank	Blank	Hazy	L. J. Crossley.
Helston			29.75	755.6	52	11.1		SW			2		2k			0	0	Fine	M. P. Moyle.
Holyhead			29.78	756.4	49	9.4		WSW			2		3					Blue sky	John Tilston.
Kew Observatory			29.74	755.1	49.8	9.9		NW	9	4.0			9					Misty	The Staff.
Kingstown			29.78	756.4	47	8.3		WNW			3		5					*D. clouds	George Mitchell
Leicester Museum			29.77	756.1	45.0	7.2		N			1		10					Threatening	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.74	755.1	63.6	17.6		NW			3		8k						Fred Travis, Pvt A.H.C.
Nairn			29.64	752.8	52	11.1		Calm			0		2					¼ clouded	W. D. Penny.
Nassau, (Bahamas)			30.49	766.8	75.0	23.9		E			5		7					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.76	755.9	46.8	8.2		NE			2		10k, cs			0.063	1.6	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.74	755.4	50.0	10.0		N			1		6					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.73	755.1	46	7.8		N			1		10					Misty	J. Lucas.
Plymouth			29.77	756.1	52.8	11.6		WNW			1		3					*D. clouds	John Merrifield.
Roche's Point			29.78	756.4	50	10.0		W			2		2					Fine	W. Kennedy.
Saint Ann's Head			29.78	756.4	48	8.9		N			1		2					Foggy	John C. Walker.
Saint Helier, (Jersey)			29.76	755.9	53.8	12.1		N			3		0					Clear	A. P. Amy.
Sandwick Manse (Orkneys)			29.65	753.1	47	8.3		SW	10	4.5			1					Blue sky	Rev. Chas. Austin, LL. D.
Scarborough			29.73	755.1	46.0	7.8		N			2		9					Overcast	F. Shaw.
Scutari Cemetery (Turkey)			29.71	754.6	52.6	11.4		NE			2		10					Gloomy	Sergt. W. H. Lyne.
Sheffield			29.72	754.9	49.8	9.9		NE			1		5			0.389	9.88	Blue sky	W. F. Cooper.
Silloth Rectory			29.74	755.4	54.8	12.7	71	W			1		1			0	0	*D. clouds	Rev. Francis Redford
Stonyhurst Observatory			29.73	755.1	49.8	9.9		W			2		5			Blank	Blank	*D. clouds	S. J. Perry.
Stornoway, Lewis C. (Hebr.			29.58	751.3	48	8.9		WSW			5		10					Overcast	John Smith.
Strathfield Turgiss			29.75	755.5	44.8	7.1		N			0-1		10					Raining	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slater.
Thurso			29.60	751.8	52	11.1		SW			2		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.77	756.1	55	12.8		NW			6		5					*D. clouds	W. Newcombe.
Valencia Observatory			29.81	757.2	51.1	10.6		SW	13	5.8			5					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Cape Good Hope Obs.			29.89	759.2	90.3	32.4	38	S	7	3.1			2						The Staff, for E. J. Stone.
Leith, Restalrig Park			29.72	754.9	51.0	10.6		W			2		7k			0.11	2.8	Fine, cloudy	Andrew Gibb.
Mauritius			29.88	758.9				NNE	8.2	3.7						0	0		
Monach Lt-house, Hebrides			29.62	752.3	47	8.3		SW			3	5	5	8		0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.59	751.6	44	6.7		S			4	0	1			Blank	Blank		

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 270.6 m. *Detached clouds.

DANISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.97	761.3	48.0	8.9	63	ESE			2		2						
Fanöe			29.82	757.5	51.3	10.7	65	ESE			6		6						
Godthaab, (Greenland)			29.83	757.6	14.4	— 9.8	84	NW			4		10						
Stykkisholm, (Iceland)			29.60	751.7	22.1	— 5.5	87	NE			4		0						
Thorshavn, (Faröe)			29.67	753.7	45.0	7.2	86	W			2		7						
Vestervig			29.84	757.8	51.8	11.0	59	ESE			4		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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.74	755.4	51.8	11	86	NE			1		5ok		NE	0	0	Cloudy	Normal School.
Amiens			29.67	753.7	66.6	19.2	81	SSW			1		0			0	0	Clear	Normal School.
Avignon			29.65	753.1	61.5	16.4	41	SE			3		8nk			0.169	4.3	Raining	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			29.70	754.3	60.1	15.6	42	N			1		5		S	0	0	Cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			29.67	753.7	56.5	13.6	80	N			2		10		N	0	0	Covered	Normal School.
Brest			29.74	755.5	55.2	12.9	54	NNW			2		5k		NNW	0.039	1.00		Naval Observatory.
Caen																			Normal School
Chartres																			Normal School.
Chaumont			29.63	752.7	45.7	7.6	74	S			2		10		S	0	0	Covered	Puy de Dome Obs.
Clermont			29.65	753.2	57.7	14.3	48	NE			2		5k		NE	0	0	Cloudy	Normal School.
Commercy			29.69	754.2	55.9	13.3	50	SE			4		8		SE	0.349	8.7		
Commune de Gréasque*			29.68	754.9	57.6	14.2	73	ENE			4		10			0	0	Raining	Normal School.
Grenoble			29.72	755.0	55.4	13	68	NNE			3		8		NNE	0.020	0.5	Very cloudy	Normal School.
Le Mans																			Normal School.
Loches			29.63	752.7	58.1	14.5	61	W			Var.		5		W	0	0	Cloudy	Normal School.
Lons-Le-Saulnier			29.63	752.6	58.5	14.7	63	S			2		10			0	0	Covered	Normal School.
Mâcon																			Normal School.
Mirecourt																			M. Schuster.
Metz			29.65	753.0	52.2	11.2	90	S			2		10		SE	0.256	6.5	Covered	Normal School.
Nismes																			Normal School.
Orleans			29.68	753.8	60.8	16.0	39	NW			2		5		SW	0	0	Cloudy	National Observatory.
Paris Observatory																			Normal School.
Parthenay			29.67	753.5	57.6	14.2		SW			2		10		SW	0.08	2.	Good	Normal School.
Privas			29.75	755.7	48.7	9.3	89	N			2		10			0	0	Covered	Normal School.
La Roche-sur-Yon			29.73	755.2	53.1	11.7	86	NNW			3		10			0.433	11.0	Rainy	Naval Observatory.
Rochefort, Observatory			29.73	755.1	55.6	13.1	62	WNW			2		2		W	0	0	Slightly cl'dy	Normal School.
Rouen			29.71	754.6	61.0	16.1	77	SW			2		10		SW	0	0		Normal School.
Saint Lo	28.53	724.6			55.4	13		SW			4		8		E	0.24	6.	Very cloudy	Normal School.
Tarbes																			Normal School
Toulouse			29.67	753.6	55.8	13.2	65	SW			1		10			0	0	Covered	Normal School.
Villefranche																			
Sub-Series.																			
Fort de France, Martinique			29.93	760.1	77.0	25	87	NE			3		5kn			Blank	Blank		L'Abbé Marchési.
Gorée																			
Marseilles			29.61	752.2	60.8	16.0	48	ESE			7		8			0.244	6.20	Rainy	Marseilles Observatory.
Mont-Louis	24.35	618.6	29.67	753.6	36.7	2.6	91	ESE	18.6	8.33			10			0.720	18.3		—. Faiguère.
Montsouris, Paris			29.68	753.9	61.5	16.4	44	NNW			2		8		SSE	0	0		Montsouris Observ'tory.
Perpignan			29.59	751.5	47.1	8.4	79	NW	7.4	3.33			10		NE	1.472	37.4		Dr. Fines.
Pic du Midi, (Summit) H.P†																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			29.67	753.6	63.1	17.3	44	N			1		3			0	0	Cloudy	E. Renou.
Toulouse			29.67	753.7	51.4	10.8	93	WSW			1		10			0.811	20.6		Toulouse Observatory.
Tours			29.71	754.5	59.5	15.3	61	NNW			1		10		N	0.008	0.2		C. Marquet.
Versailles, (near Paris)			29.70	754.3	61.9	16.6	43	N			2		8			0	0	Fair	Dr. A. Bérigny.
Zi-Ka Wei, (near Shanghai)																			H. Le Lee, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

* Near Marseilles. † Summit inaccessible.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.60	751.9	60.8	16.0	49	SE			5		2	SE		0	0		Prof. T. Hoh.
Berlin			29.82	757.5	55.9	12.8	69	SE			4		6			0	0		Prof. Arndt.
Breslau			29.92	760.0	52.5	11.4	78	ESE			4		10			0	0		Dr. P. Neugebauer.
Carlsruhe			29.60	751.9	61.2	16.2	56	NE			3		0			0	0		A. Senz.
Cassel			29.63	752.5	60.1	15.6	56	ENE			6		1	SW		0	0		Dr. H. Mohl.
Cologne																			Dr. Garthe
Emden			29.70	754.5	63.1	17.3	37	E			1		1			0	0		Prof. Prestel.
Frankfort on the Main	28.21	716.5	29.63	752.6	52.5	11.4	60	W			2		3			0	0		Physical Society.
Friedrichshafen			29.81	757.1	50.4	10.2	73	SE			4		9sk	SE		0	0	Cloudy	M. Wilhelm.
Hamburg			29.87	758.8	51.3	10.7	69	ESE			3		10			0	0		Deutsche Seewarte.
Kiel			30.08	764.1	48.0	8.9	75	E			2		2			Inap.	Inap.		Prof. G. Karsten.
Königsberg			29.77	761.2	53.4	11.9		E			0		0			0	0		Prof. E. Luther.
Köslin			29.76	755.9	55.8	13.2	67	ESE			2		8	ESE		0	0		H. Müller.
Leipsic			30.16	766.0	40.8	4.8	82	E			3		5			0.008	0.2		Prof. Bruhns.
Memel			29.69	754.1	62.2	16.8	76	NE			1		0			0	0		Reinbrecht & Skalweit.
Münster			30.04	763.0	35.8	2.1	98	NE			1		10			0.016	0.4	Light fog	Prof. E. Heis.
Neufahrwasser			29.97	761.2	50.5	10.3	81	E			5		10			0	0		A. Lothes.
Posen			29.62	752.4	58.6	14.8	59	Calm			0		1			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.60	751.9	62.1	16.7	43	NE			6		0			0	0		Dr. Schur.
Stuttgart			29.97	761.3	54.5	12.5	66	E			4		9			0	0		Prof. Schoder.
Thorn			29.58	751.3	62.8	17.1	47	NE			3		1			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.81	757.2	52.5	11.4	56	E			5		3			0	0		Prof. Flesch.
Wustrow, Naval School																			E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Athens			29.67	753.7	66.4	19.1		SW										Cloudy	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Udine			29.71	754.5	65.5	18.6	47	SW	1.3	0.6			4			0	0		
Padua			29.71	754.5	63.7	17.6	57	ESE	6.3	2.8			10	ENE		0	0		
Vicenza			29.72	754.9	62.6	17.0	57	N	3.1	1.4			5	S		0	0		
Verona			29.71	754.5	61.2	16.2	62	E			2		0			0	0		
Bergamo	28.37	720.7	29.68	753.8	59.0	15.0	62	SSE			4		7			0	0		
Domodossola	28.71	729.1	29.72	754.8	55.4	13.0	68	Calm					10			0	0		
Milan			29.69	754.0	63.7	17.6	61	E			2		10			0	0		
Pavia			29.72	754.9	58.1	14.5	73	SE			4		9	E		0	0		
Moncalieri			29.75	755.7	65.1	18.4	88	ESE			2		10	SE		0.654	16.6		
Mondovi	27.83	706.8	29.73	755.1	46.9	8.3	92	NW			2		10			0.126	3.2		
Porto Maurizio			29.79	756.7	55.6	13.1		W			2		10			0.268	6.8		
Genoa			29.73	755.1	57.7	14.3	66	SW	1.3	0.6			10	SE		0	0		
Piacenza			29.74	755.3	57.2	14.0	73	SE	20.6	9.2			10			0.055	1.4	Raining	
Parma			29.72	754.9	60.4	15.8	67	NNE			4		9			0.028	0.7		
Bologna			29.76	755.8	63.0	17.2	39	SW			1		5	NE		0	0		
Florence			29.74	755.5	61.7	16.5	68	SW			2		10	SSE		0.008	0.2		
Leghorn			29.72	754.9	60.8	16.0	66	S	3.1	1.4			10			0	0		
Siena	28.51	724.2	29.72	754.8	60.4	15.8	58	SE	0.7	0.3			9	S		0.374	9.5		
Urbino	28.18	715.8	29.76	755.8	58.1	14.5	53	NE			2		1			0	0		
Pesaro																			
Ancona			29.74	755.6	57.9	14.4	66	ENE			2		0			0	0		
Grosseto			29.73	755.2	61.9	16.6	65	WSW			2		7	SE		0	0		
Rome			29.73	755.1	65.1	18.4	58	W	6.3	2.8			6	SW		0	0		
Naples, O. U			29.73	755.2	68.4	20.2	53	W			4		5	S		0	0		
Lecce			29.74	755.5	62.2	16.8	70	N	12.5	5.6			5			0	0		
Cosenza			29.73	755.2	64.6	18.1	79	N	0.7	0.3			9			0	0		
Riposto, (Sicily)			29.72	754.8	63.7	17.6	72	SE			2		8	NW		0	0		
Palermo			29.69	754.2	61.2	16.2	62	NNE	21.7	9.7			10			0	0		
Caltanissetta	27.74	704.5	29.69	754.2	55.8	13.2	56	NW			4		10	SE		0	0		
Sub-Series.																			
Naples, S. R			29.73	755.1	66.7	19.3	55	WSW					..c	SW		0.024	.06		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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Tokio																			

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Flushing			29.72	754.8	52.9	11.6		NW			2								
Groningen			29.67	753.6	55.2	12.9		E			3								
Helder			29.69	754.1	54.3	12.4		ESE			1								
Utrecht			29.64	752.8	61.5	16.4		ESE			2		2					Light cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Bergen			29.81	757.1	51.8	11.0	50	S	25.5	11.4			10			0.098	2.5		
Brönö			30.04	762.9	42.4	5.8	79	ESE	0	0			3			0.004	0.1		
Christiania			29.99	761.7	29.1	− 1.6	70	SW	7	3			9			0	0		
Tromsö			29.89	759.3	35.6	2.0	64	E	7	3			8			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.05	763.2	58.8	14.9	85	W	7.3	3.28			7			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.86	758.4	57.9	14.4	36	NNW	8.9	4.00			3	NNW		0.020	0.5		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			29.96	761.0	61.0	16.1	59	S	4.8	2.13			8	S		0	0		Capt. D. A. da Cunha.
Lisbon			29.95	760.8	45.2	12.9	50	N	17.9	7.8			3			0	0		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.95	760.8	53.4	11.9	75	ENE	11	5			10						Astronomical Obs.
Wilna			30.11	764.9	37.9	3.3	85	NW	4	2			10						Astronomical Obs.
Dorpat			30.12	765.0	38.8	3.8	63	NW					0						Physical Cabinet.
St. Petersburg			29.98	761.5	32.9	0.5	84	NNW	16	7			6						Central Physical Obs.
Knoplo			29.96	761.0	27.1	— 2.7	100	NW	13	6			10						Ch. Forsten.
Kieff			29.89	759.2	45.5	7.5	85	N	9	4			10						Physical Cabinet.
Nikolaiev			29.78	756.5	68.4	20.2	57	E	4	2			5						Kurdakof.
Kertch			29.72	755.0	70.0	21.1	61	ENE	2	1			8						Lagorio.
Moscow			29.97	761.2	40.3	4.6	82	NNW	18	8			8						Meteorological Obs.
Lugan			29.78	756.5	54.3	12.4	61	ESE	13	6			3						Meteorological Obs.
Archangel			29.78	756.5	25.2	— 3.8	73	NNW	18	8			9						Ogorodnikof.
Tiflis	28.50	723.8	29.86	758.5	68.0	20.0	37	E	11	5			8						Physical Observatory.
Astrakhan			30.16	766.0	53.8	12.1	49	SE	18	8			0					Foggy	Sebastianof.
Kasan			29.91	759.7	37.0	2.8	74	W	7	3			10						Physical Cabinet.
Orenburg			30.29	769.4	34.4	1.3	89	SE	9	4			4						Tschernischef.
Ekaterinburg	29.03	737.3	30.06	763.5	33.8	1.0	79	SSE	4	2			10					Snowing	Meteorological Obs.
Nukuss			30.19	766.8	59.2	15.1	37	NNE	7	3			0						
Kasaly																			Bobrof.
Tashkend	28.60	726.4	30.31	769.9	54.0	12.2	44	Calm	0	0			1						Michelson.
Barnaul			30.15	765.7	24.8	— 4.0	80	WSW	9	4			10						Meteorological Obs.
Yeniseisk			29.32	744.8	35.8	2.1	88	SW.	11	5			10					Snow & rain	Marks.
Irkutsk																			Usolzef.
Gorga																			Mossin.
Peking, (China)			30.32	770.0	47.1	8.4	48	SSW	7	3			5					Lunar coronæ	Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			30.20	767.1	32.5	0.2	87	N	4	2			0						
Nikolaievsk, on the Amoor					27.7	— 2.4	96	Calm	0	0			0						

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 406 meters, or 1,411.8 feet; Ekaterinburg, 305.4? m., or 1,005.2? ft.; Tashkend, in 494.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.9? m., or 1,942.2? ft.; Gorga, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.82	757.4	53.2	11.8	45	W	22.4	10.0		0	3			0	0	Cloudy	Royal Observatory.
San Fernando			29.89	759.2	55.6	13.1	65	W	11.6	5.2		4	4	E	E	0	0		The Naval Observatory.

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.06	763.4	23.0	— 5.0	90	N			2		0			0	0		
Umea			30.13	765.2	30.6	— 0.8	96	SW			2		10			Inap.	Inap.		
Hernosand			30.10	764.5	28.0	— 2.2	98	ENE			2		10			0	0		
Stockholm			30.04	762.9	43.5	6.4	76	SW			2		5			0	0		
Wisby			30.17	766.2	41.0	5.0	87	SW			4		0			0	0		
SUB-SERIES.																			
Upsala			30.06	763.5	37.9	3.3	87	SW	6.3	2.8			9	W	SW	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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.21	716.6	29.62	752.3	61.5	16.4	41	WNW			1		7			0	0	Cloudy	The Observatory.
Zurich	28.01	711.4	29.62	752.4	61.3	16.3	53	NW			1		1			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —7.6 mm.; Thermometer, +6.5 cent.; Relative Humidity, —17 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.76	755.8	51.1	10.6	82	NNE	9	4.0			10		NNE	0	0	Light rain	
Fao, (Persian Gulf)			30.04	763.0	77.0	25.0		SE			3		10						
Salonica			29.72	754.8	72.1	22.3		NE			2		0						
Valona			29.64	752.9	65.1	18.4		W			2		2						
Varna			29.76	756.0	64.4	18.0		NE			1		8						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.72	754.8	84.9	29.4	48	SW			2		10c			0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.95	760.7	27.7	— 2.4	82	N	14	6.3									Hon. J. Ferguson.
Brockville, Ontario			30.28	769.1	27	— 2.8		NW	8	3.6		2c	0	NW		0	0	Fair	W. R. Bigg.
*Chatham, N. B.			29.97	760.5	29	— 1.7	88	N	7	3.1		2k	8ks	N	N	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island.			29.82	757.4	30	— 1.1	98	N	15	6.7			10s			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.17	766.3	30.7	— 0.7	82	NE			1	6c				0	0	Clearing	James Smith, M. A.
Dalhousie, N. B.			30.00	762.0	27.3	— 2.6	64	W			1	8cs				0	0		H. A. Johnson.
Esquimault, B. C.			29.90	759.4	42.1	5.6	92	N	2	0.9						0.13	3.3	Raining	W. H. Bevis.
Fredericton, N. B.			29.95	760.7	30.0	— 1.1	89	NE	6	2.7			10ks			0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			30.48	774.7	6	—14.4	98	Calm	0	0		2cs	0	W		0	0	Fair	James Stewart.
Goderich, Ontario			30.48	774.7	23.7	— 4.6	80	Calm			0					0	0	Clear	H. J. Strang, M. A.
Granton, Ontario			30.43	772.9	18.4	— 7.6		N			1					0	0	Clear	James Grant.
*Halifax, N. S.			29.79	756.7	34	1.1	87	N	15	6.7			8ks		N	0.03	0.8	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.29	769.4	27	— 2.8	82	N	9	4.0		0	0			0	0	Clear	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			30.12	765.0	28	— 2.2	77	NW	13	5.8			10n			0.06	1.5	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.21	767.3	27	— 2.8	76	NW	10	4.5		8ck	0	N		0	0	Fair	J. B. Haney.
*Parry Sound, Ontario			30.42	772.7	18	— 7.8	83	N	14	6.3		0	0			0	0	Clear	Rev. R. Mooley.
*Port Dover, Ontario			30.37	771.4	27	— 2.8	76	NW	8	3.6		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.			29.76	755.9	32.3	0.2		NW	12	5.4						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.39	771.9	23	— 5.0	87	NW	4	1.8		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			30.07	763.8	28	— 2.2	89	N	18	8.0			10n		N	0	0	Cloudy	Capt. Ash, R. N.
St. John, N. B.			29.92	760.0	32.0	0.0	79	N	7	3.1		..k				0	0		G. Murdoch, C. E.
*Saugeen, Ontario			30.42	772.7	21	— 6.1	85	NE	6	2.7		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.44	773.2	20	— 6.7	69	NW	5	2.2		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario			30.40	772.1	20.1	— 6.6	84	NE	5	2.2						0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.72	754.9	31	— 0.6	85	NW	5	2.2			10s		NW	0.02	0.5	Cloudy	T. C. Hill.
*Toronto, Ontario			30.39	771.9	24	— 4.4	79	NW	10	4.5		0	0			0	0	Clear	Magnetic Observatory
Woodstock, Ontario			30.40	772.1	22.4	— 5.3	98	Calm			0	0	0			0	0	Fine	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			30.10	764.5	34	1.1	69	NW	10	4.5		2k	2ks	W	W	0	0	Fair	
Alpena, Mich.			30.49	774.4	19	-- 7.2	69	NW	6	2.7		0	0			0	0	Clear	
Atlantic City, N. J.			30.18	766.6	37	2.8	62	NW	13	5.8			10s		NW	0	0	Cloudy	
Augusta, Ga.			30.16	766.1	54	12.2	80	W	1	0.4			10s		W	0	0	Cloudy	
Baltimore, Md.			30.27	768.8	38	3.3	63	NW	4	1.8		5k	Sm'e	W		0	0	Fair	
Barnegat, N. J.			30.17	766.3	38	3.3	63	W	14	6.3		2k	5ks	NW	NW	0	0	Fair	
Benton, Montana	27.32	693.9	30.12	765.0	27	— 2.8	77	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.56	725.4	30.36	771.1	16	-- 8.9	45	E	4	1.8		Haze	Haze			0	0	Hazy	
Boston, Mass.			29.98	761.5	37	2.8	71	NW	6	2.7			10ks		NW	0	0	Cloudy	
Breckenridge, Minn.			30.52	775.2	80	26.7	78	SE	8	3.6		0	0			0	0	Clear	
Buffalo, N. Y.			30.33	770.4	28.5	— 1.9	88	NW	11	4.9			10s		NW	Inap.	Inap.	Cloudy	
Burlington, Vt.			30.09	764.3	28	— 2.2	100	N	9	4.0			10n			0.12	3.0	Light snow	
Cairo, Ill.			30.05	763.3	44	6.7	75	E	12	5.4		5k	5s	E	E	0.28	7.1	Cloudy	
Cape Hatteras, N. C.			30.10	764.5	49	9.4	77	NE	29	13.0		2c	Haze	W		0	0	Fair	
Cape Henry, Va.			30.25	768.3	41	5.0	65	N	18	5.8		10cs	0			0	0	Cloudy	
Cape May, N. J.			30.21	767.3	38	3.3	63	W	18	8.0		0	0			0	0	Clear	
Charleston, S. C.			30.17	766.3	59	15.0	87	W	6	2.7		5c	0	W		0	0	Fair	
Cheyenne, Wyoming	24.04	610.6	29.98	761.5	16	— 8.9	100	N	12	5.4			10s			0.29	7.4	Cloudy	
Chicago, Ill.			30.37	771.4	33	0.6	78	NE	12	5.4		0	0			0	0	Clear	
Cincinnati, Ohio			30.28	769.1	35	1.7	70	E	8	3.6		10ck		NW		0	0	Cloudy	
Cleveland, Ohio			30.41	772.4	29.1	— 1.6	84	N	5	2.2			10ks		N	0	0	Cloudy	
Colorado Springs, Col.	24.09	611.9	29.96	761.0	20	-- 6.7	100	N	8	3.6			10n			0.13	3.3	Light snow	
Corsicana, Tex.			29.85	758.2	55	12.8	73	N	9	4.0		2cs	8s		S	0.65	16.5	Cloudy	
Davenport, Iowa			30.40	772.1	34	1.1	69	E	20	8.9			10s			0	0	Cloudy	
Denison, Tex.			29.84	757.4	54	12.2	86	SE	2	0.9			10n			0.59	15.0	Light rain	
Denver, Col.	24.85	631.2	30.07	763.8	22	— 5.6	93	N	12	5.4			10n			1.00	25.4	Light snow	
Detroit, Mich.			30.41	772.4	25	— 3.9	75	N	7	3.1		0	0			0	0	Clear	
Dodge City, Kan.	27.34	694.4	29.99	761.1	32	0.0	100	N	15	6.7			10n			1.11	28.2	Light rain	
Dubuque, Iowa			30.44	773.2	30	— 1.1	78	E	16	7.2			10s			0	0	Cloudy	
Duluth, Minn.			30.60	777.2	13	—10.6	62	Calm	0	0		0	0			0	0	Clear	
Eastport, Me.			29.88	758.9	32	0.0	79	N	12	5.4		5c	8s			0	0	Cloudy	
Erie, Pa.			30.33	770.4	31	— 1.1	89	N	6	2.7		8k	0	NE		0	0	Fair	
Escanaba, Mich.			30.56	776.2	14	—10.0	70	N	8	3.6		0	0			0	0	Clear	
Fort Gibson, Indian Terr.			29.81	757.9	53	11.7	93	NE	3	1.3			10n		E	1.58	40.1	Light rain	
Ft. St. Michaels, Alaska			29.66	753.4	- 4	—20.0		SW	8	3.6		6	10s						
Fort Sill, Indian T.	28.72	729.5	29.84	757.9	39	3.9	56	Calm	0	0		0	0			0	0	Clear	
Fort Sully, Dakota																			
Galveston, Tex.			29.78	756.4	66	18.9	94	SE	4	1.8		2k	Fog	SW		0.11	2.8	Fair	
Grand Haven, Mich.			30.46	773.7	27	— 2.8	77	E	5	2.2		0	0			0	0	Clear	
Indianapolis, Ind.			30.40	769.6	33	0.6	69	E	12	5.4		2cs	0			0	0	Clear	
Indianola, Tex.			29.78	756.4	62	16.7	61	N	39	17.4			10s		N	0	0	Cloudy	
Jacksonville, Fla.			30.12	765.0	61	16.1	83	Calm	0	0		0	0			0	0	Clear	
Keokuk, Iowa			30.28	769.1	31	— 0.6	79	NE	18	8.0			10s		NE	0	0	Cloudy	
Key West, Fla.			30.07	763.8	76.6	24.8	82	SE	12	5.4		2k	Haze	SE	SE	0	0	Fair	
Kittyhawk, N. C.			30.23	767.8	43	6.1	75	NE	32	14.3		8k	0	NE		0	0	Fair	
Knoxville, Tenn.			30.15	765.8	45	7.2	85	NE	8	3.6			10s		S	0.14	3.6	Cloudy	
La Crosse, Wis.			30.49	774.4	30	— 1.1	68	E	9	4.0		5c	5s		E	0	0	Cloudy	
Leavenworth, Kan.			30.08	764.0	34	1.1	90	E	15	6.7			10n		E	0.10	2.5	Light rain	
Lexington, Ky.	29.13	739.9	30.29	769.4	35	1.7	70	NE	12	5.4		8c	0	SW		0	0	Cloudy	
Long Branch, N. J.			30.16	766.1	40	4.4	56	NW	24	10.7			10s		NW	0	0	Cloudy	
Louisville, Ky.			30.25	768.3	36	2.2	70	NE	16	7.2		2k	8ks		NE	0	0	Cloudy	
Lynchburg, Va.			30.29	769.4	38	3.3	67	NE	2	0.9			10s			0	0	Cloudy	
Malone, N. Y.			30.14	765.5	26	— 3.3	95	NW	8	3.6			10n		NW	0.15	3.8	Light snow	
Manhattan, Kan.	28.86	733.0	30.04	763.0	33	0.6	100	NW	16	7.2			10s			0.28	7.1	Cloudy	
Marquette, Mich.			30.62	777.7	20	— 6.7	70	W	8	3.6		0	0			0	0	Clear	
Memphis, Tenn.			29.97	761.2	51	10.6	93	NE	6	2.7			10n			0.13	28.7	Light rain	
Milwaukee, Wis.			30.40	774.4	31	— 0.6	79	NE	12	5.4		5k	0	NE		0	0	Fair	
Mobile, Ala.			29.96	761.0	63	17.2	74	SE	8	3.6			10s		S	0	0	Cloudy	
Montgomery, Ala.			30.00	762.0	59	15.0	81	NE	8	3.6			10s		E	0	0	Threatening	
Morgantown, W. Va.			30.35	770.9	31	— 0.6	74	N	2	0.9			10s		N	0	0	Cloudy	
Mt. Washington, N. H.	23.46	595.9	29.82	757.4	8	—13.3	100	NW	18	8.0			Fog			0.48	12.2	Foggy	
Nashville, Tenn.			30.04	763.5	46	7.8	85	NE	6	2.7			10s		NE	0.44	11.2	Cloudy	
New Haven, Conn.			30.10	764.5	37	2.8	54	N	16	7.2		5ck	0	N		0	0	Fair	
New London, Conn.			30.04	763.5	38	3.3	54	NW	19	8.5		2ck	2ks	W	NW	0	0	Fair	
New Orleans, La.			29.84	757.9	67	19.4	92	SE	12	5.4			10s		SE	0.02	0.5	Threatening	
Newport, R. I.			30.00	762.0	39	3.9	64	W	16	7.2		5k	0	W		0	0	Fair	
New York, N. Y.			30.15	765.8	37	2.8	53	NW	16	7.2		2k	0		W	0	0	Clear	
Norfolk, Va.			30.26	768.6	40.5	4.7	60	NE	15	6.7		8ck	Haze	NE		0	0	Fair	
North Platte, Neb.	27.18	690.4	29.89	759.4	27	— 2.8	88	NE	20	8.9			10s		NE	Inap.	Inap.	Cloudy	
Omaha, Neb.	29.11	739.4	30.24	768.1	31	— 0.6	79	E	17	7.6			10s		E	0	0	Threatening	
Oswego, N. Y.			30.26	768.6	30.5	— 0.8	84	NW	14	6.3		Haze	2ks		NW	Inap.	Inap.	Fair	
Pembina, Dakota			30.31	774.9	5	—15.0	87	Calm	0	0		0	0			0	0	Clear	
Philadelphia, Penn.			30.21	767.3	36	2.2	62	NW	23	10.3		5k	0	NW		0	0	Fair	
Pike's Peak, Colorado	17.42	442.5	29.64	752.8	- 8	—22.2	79	N	24	10.7			10n			0.27	6.9	Heavy snow	
Pittsburgh, Penn.			30.36	771.1	30	- 1.1	89	N	5	2.2			10s			0	0	Cloudy	
Port Huron, Mich.			30.43	772.9	22	- 5.6	86	N	10	4.5		0	1s			0	0	Clear	
Portland, Me.			29.96	761.0	37	2.8	71	N	8	3.6		5k	2s	SW		0	0	Fair	
Portland, Oregon			30.10	764.5	44	6.7	92	Calm	0	0			10n			0.15	3.8	Light rain	
Punta Rassa, Fla.			30.12	765.0	68.0	20.0	90	E	8	3.6		Haze	Sm'e			0	0	Hazy	
Rochester, N. Y.			30.26	768.6	32	0.0	69	NW	14	6.3		2cs	8s	N	NW	Inap.	Inap.	Cloudy	
Salt Lake City, Utah	25.59	650.0	29.92	760.0	35	1.7	52	NE	4	1.8		5cs	0			0	0	Fair	
Sandy Hook, N. J.			30.15	765.8	37	2.8	52	NW	29	13.0			8ks		NW	0	0	Cloudy	
San Diego, Cal.			29.97	761.7	46	7.8	67	NE	4	1.8		0	0			0	0	Clear	
San Francisco, Cal.			30.07	763.8	53	11.7	86	W	4	1.8		0	0			0	0	Clear	
Santa Fe, N. M.	23.09	586.5	29.68	752.6	14	10.0	81	N	4	1.8		0	8s			0.13	3.3	Fair	
Savannah, Ga.			30.16	766.1	60	15.6	61	SW	3	1.3		2cs	0			0	0	Clear	
Shreveport, La.			29.79	756.7	59	15.0	100	N	5	2.2			10ks		S	1.10	27.9	Cloudy	
Smithville, N. C.			30.16	766.1	57	13.9	76	NW	6	2.7		8c	0	W		0	0	Cloudy	
Springfield, Mass.			30.06	763.5	36	2.2	70	NW	12	5.4			8ks		NW	Inap.	Inap.	Cloudy	
St. Louis, Mo.			30.19	766.8	35	1.7	70	NE	12	5.4			10s			0	0	Cloudy	
St. Marks, Fla.			30.07	763.8	54	12.2	86	E	4	1.8		2c	0			0	0	Fair	
St. Paul, Minn.			30.48	774.2	27	— 2.8	66	NE	6	2.7		0	0			0	0	Clear	
St. Paul's Island, Alaska			29.87	758.7	10	—12.2	79	W	10	4.5		10ck	k	NW		0	0		
Thatcher's Island, Mass.			29.98	761.5	36	2.2	70	NW	11	4.9			10s		NW	0	0	Cloudy	
Toledo, Ohio			30.41	772.4	32	0.0	69	N	5	2.2		0	0			0	0	Clear	
Tucson, Arizona	27.45	697.2	30.04	763.0	43	6.1		S				8ck	Haze		W	0	0	Fair	
Tybee Island, Ga.			30.14	765.5	59	15.0	76	Calm	0	0		0	Sm'e			0	0	Clear	
Vicksburg, Miss.			29.88	758.9	63	17.2	94	SE	10	4.5		10s	Sm'e	S		0.27	6.9	Cloudy	
Virginia City	24.27	616.4	29.75	755.6	10	-- 7.2	69	SE	4	1.8		0	0			0	0	Clear	
Washington, D. C.			30.28	769.1	35	1.7	65	NW	8	3.6		3cs	Sm'e	W		0	0	Fair	

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Wilmington, N. C			30.16	766.1	53	11.7	79	Calm	0	0		8cs	Haze	W		0	0	Cloudy	
Wood's Holl, Mass			30.0	762.0	40	4.4	56	NW	16	7.2			10s		NW	0	0	Cloudy	
Wytheville, Va	27.80	706.1	30.02	762.5	39	3.9	71	Calm	0	0			10ks			0	0	Threatening	
Yankton, Dakota	29.06	738.1	30.44	773.2	28	− 2.2	77	NE	16	7.2		5cs	0	E		0	0	Fair	
Yuma, Arizona			29.97	761.2	50	10.0		Calm				8c	0	N		0	0	Fair	
Sub Series.																			
Bridgetown, B'b'dos, W. I.			30.01	762.2	79	26.1	78	N	6	2.7		2ck	8s	N	NE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.02	762.5	77	25.0	78	E				10c	0			0.09	2.3	Fair	L. V. Bigard.
St. Thomas, St. T., W. I.			30.27	768.8	79	26.1	69	SSE	4	1.8		2c	4k, ks	SE		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I.			30.21	767.3	77	25.0	72	Calm	0	0		5c	5s	SE		0	0		James Gall.
Santiago de Cuba, W. I.			29.84	757.9	75	23.9	72	NE	6.0	2.7		0	0			0.14	3.6	Clear	Robert Mason.
Havana, Cuba, W. I.			30.06	763.5	73	22.8	81	NE	2.4	1.1		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			30.13	765.3	64.5	18.1	58	WNW	25.0	11.2		0	0			0	0	Clear	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica W. I.	27.20	690.9	30.00	762.0	65	18.3	83	N	2.0	0.9		2c	0			0	0	Fine & clear	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.01	762.3	82	27.8	82	E			2		7ks			0.692	17.58	Rainy	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.07	763.7	84.2	29										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1			64.0	17.8	83		0	0		3c	5ks			0.11	2.8	Cloudy	Thomas Herran.
St. John's, Newfoundland			29.57	751.1	33.0	0.6	89	W								0	0	Cloudy	John Delaney.
York Factory, B. A.			30.23	767.8	18	− 7.8	61	S	5	2.2		3c	0	SW		0	0		J. Fortescue.
Honolulu, Oahu, H. I.			30.11	764.8	75	23.9	99	NE			3					0	0		E. P. Church.
Makawao, Maui, H. I.	27.77	705.4	29.94	760.5	55	12.8	87	Calm	0	0		0	2ks			0	0		F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

Note.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below −40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,294.8 ft., or 699.4 m; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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 APRIL 2, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.07	763.8	62.4	16.9	59	NW			3		2			0.197	5.0	Clear	Charnot.
Algiers			29.99	761.7	61.5	16.4	22	NW			1		8			0	0	Cloudy	Peter.
La Calle																			Kunts.
Tunis			29.95	760.8	66.4	19.1	46	E			4		5			0	0	Fair	Jacques
Sfax			29.90	759.5	66.2	19.0	63	E			2		4			0	0	Fair	Chauvey.
Salda			30.03	762.7	47.3	8.5	81	NNW			2		7			0.079	2.0	Cloudy	Millot.
Tebessa			29.94	760.5	59.7	15.4		E			1		10			0	0	Hidden	Colin.
Geriville			29.99	761.8	34.9	1.6	96	N			2		7			0.295	7.5	Cloudy	Buard.
Laghouat			29.95	760.8	48.2	9.0	25	SW			2		7			1.063	27.0	Cloudy	Guyot.
Biskra			29.95	760.7	68.5	20.3	67	NW			1		10			Inap.	Inap.	Hidden	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.84	756.8	65.7	18.7	70	SW			2		5			0.106	2.7	Raining	Prof. Ivan Stosir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.00	762.1	52.6	11.4	81	NE			4		10			0	0		I. R. Observatory.
Eperies			29.88	759.0	63.0	17.2	46	NE			2		1			0	0		Julius Mikolik.
Gratz	28.66	728.0	29.83	757.7	63.5	17.5	57	SW			2		5			0.161	4.1		Andreas Rospini.
Hermannstadt	28.43	722.0	29.79	756.7	67.1	19.5	42	E			1		5			0.031	0.80		Prof. Reissenberger.
Kremsmünster	28.46	722.9	29.76	756.0	64.0	17.8	58	ESE			3		3			0	0		Prof. C. Wagner.
Lemberg			30.02	762.6	50.5	10.3	72	SE			2		10			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.83	757.7	59.4	15.2	83	WNW			3		9cks			0	0	Low fog	I. R. Hydrographic Office
Szegedin			29.82	757.5	68.2	20.1	42	SE			1		0			0.006	0.15		Karl Stancel.
Trieste			29.83	757.6	60.6	15.9	90	Calm			0		8			0.252	6.4	Rainy	Prof. V. Farolfi.
Vienna			29.82	757.4	66.9	19.4	50	ESE			2		1			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.93	760.2	51.8	11.0	85	NW			1	7		NW		0	0		Royal Observatory.

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. and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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.
Aberdeen			29.92	760.0	50.7	10.4		SSE	18	8.0			1			0	0	Blue sky	William Boswell.
Ardrossan																			J. Mayes.
Armagh Observatory			29.90	759.4	53.9	12.2		S	21	9.4									S. Call for Dr. Robinson.
Bidston, Liverpool Obs			29.98	761.5	53.6	12.0		ESE	12	5.4			2					Blue sky	John Hartnup.
Birr Castle, (Parsonstown)			29.89	759.2	53.6	12.0		SSE			1		9					*D. clouds	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			29.99	761.7	81.4	27.4		NE			4		5					*D. clouds	Sergt. J. F. Halanen.
Cambridge Observatory			30.00	762.0	58.0	14.4		NW			1		1					*D. clouds	H. Todd.
Cardington			30.02	762.5	54.4	12.4		E			1		2					Blue sky	John McLaren.
Carlisle			29.98	761.5	53	11.7		NW			1		1			0	0	Blue sky	Bell, for J. Cartmell.
Chatham, School M. E.			29.91	759.7	56.2	13.4		SW			1							*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	28.55	725.2	30.07	763.8	52.8	11.6		SW			1		5					*D. clouds	R. F. Power.
Donaghadee			29.91	759.7	47	8.3		S			5		3					*D. clouds	J. Mac Gowan.
Dover			29.98	761.5	51	10.6		NE			3		3					¼ clouded	J. Costello.
Eccles, (near Manchester)			29.99	761.7	56.5	13.6		SSW	2.4	1.1			2					*D. clouds	Thomas Mackereth
Falmouth Observatory			30.05	763.3	49.5	9.7		SSE	10	4.5			2					*D. clouds	The Staff.
Fort Napier, (Natal)	27.73	704.3	29.97	761.2	78.3	25.7		E			2		1					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	83.0	28.3		N			2		7					*D. clouds	(th.
Galway, Queen's College			29.75	755.6	51	10.6		S			5		7					*D. clouds	B. G. Clare, for Prof. Ow.
Gibraltar, (Mediterranean)			30.00	762.0	63.0	17.2		W			3		3					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.95	760.7	51.5	10.8		W			2		1					Fine	Lewis Stuart.
Great Yarmouth			30.00	762.0	50	10.0		N			2		3					Blue sky	G. T. Watson.
Greenwich Royal Obs			30.00	762.0	58.5	14.7		ENE			1		2					*D. clouds	The Staff for G. B. Airy.
Guernsey			30.02	762.5	51	10.6		NE			1		0					Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs																			L. J. Crossley.
Helston			30.00	762.0	53	11.7		SW			0		1k			0	0	Fine	M. P. Moyle.
Holyhead			30.00	762.0	50	10.0		SSW			3		0					Blue sky	John Tilston.
Kew Observatory			30.01	762.2	54.8	12.7		NNE	11	4.9								Hazy	The Staff.
Kingstown			29.94	760.5	48	8.9		SSE			4		1					Blue sky	George Mitchell
Leicester Museum			30.03	762.7	54.8	12.7		E			1		2					Hazy	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.87	758.7	64.2	17.9		NW			2		4k						Fred Travis, Pvt A.H.C.
Nairn			29.83	757.7	53	11.7		SW			2		5					½ clouded	W. D. Penny.
Nassau, (Bahamas)			30.17	766.3	77.6	25.3		NE			4		7					*D. clouds	Surg.-Maj. Henry.
Nottingham			30.02	762.5	59.6	15.3		S			1		3ck	WSW	ENE	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.00	762.0	55.2	12.9		S			1		9s					Fine	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.01	762.2	53	11.7		N			1		3					Blue sky	J. Lucas.
Plymouth			30.02	762.5	52	11.1		NW			1		0					Blue sky	John Merrifield.
Roche's Point			29.92	760.0	50	10.0		S			5		5					Cloudy	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			29.97	761.2	50.4	10.2		NE			4		0					Clear	A. P. Amy.
Sandwick Manse (Orkneys)			29.85	758.2	50.1	10.1		SW	12	5.4			1					Blue sky	Rev Chas. Austin, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery (Turkey)																			Sergt. W. H. Lyne.
Sheffield			29.98	761.5	54.8	12.7		S			1		2			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			29.99	761.7	50.0	10.0	77	WNW			1		0			0	0	Hazy	Rev Francis Redford
Stonyhurst Observatory			29.99	761.7	52.6	11.4		S			1							Blue sky	S. J. Perry.
Stornoway, Lews C. (Hebr.			29.77	756.1	49	9.4		SSW			6		0					Blue sky	John Smith.
Stratfield Turgiss			30.01	762.2	57.2	14.0		NE			0–1		0					Blue sky	Rev Charles H. Griffith.
Streatley Vicarage																			Rev. John Slater.
Thurso			29.82	757.4	53	11.7		SSW			2		5					*D. clouds	John Trotter.
Truro, Royal Institution			30.01	762.2	50	10.0		SE			4		3					*D. clouds	W. Newcombe.
Valencia Observatory			29.82	757.4	52.5	11.4		S	36	16.1			10					Threatening	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Cape Good Hope Obs.			29.91	759.7	76.0	24.4	63	S	11	4.9			4						The Staff, for E. J. Stone.
Leith, Restalrig Park			29.96	761.0	55.9	13.3		W			2	2ck				0	0	Fine	Andrew Gibb.
Mauritius			29.92	760.0				NW	7.8	3.5						0	0		
Monach Lt-house, Hebrides			29.64	752.8	46	7.8		S			6		10			0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.86	758.4	45	7.2		SW			4	1	1	SSW					

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			29.96	760.9	44.1	6.7	98	SSE			2		10					Misty	
Fanöe			29.97	761.1	52.5	11.4	78	W			2		5						
Godthaab, (Greenland)			29.81	757.2	14.9	−9.5	77	NNE			2		10						
Stykkisholm, (Iceland)			29.61	752.2	26.4	−3.1	87	E			2		0						
Thorshavn, (Faröe)			29.67	753.5	47.8	8.8	76	WSW			4		7					Raining	
Vestervig			29.93	760.1	50.4	10.2	78	Calm			0		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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	758.0	50.0	10	81	NE			1		10			0.047	1.2	Covered	Normal School.
Amiens			29.88	759.0	58.3	14.6	78	SW			1		0			0	0	Clear	Normal School.
Avignon			29.92	760.0	52.0	11.1	86	W			1		8		SE	0.109	4.3	Raining	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			29.98	761.4	53.8	12.1	71	NNE			2		8			0	0	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			29.91	759.8	54.3	12.4	81	NNE			2		5		S	0.126	3.2	Cloudy	Normal School.
Brest			29.96	761.0	57.0	13.9	60	N			1		5k		W	0	0		Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			29.85	758.1	57.7	14.3	47	S			2		8		SE	0	0	Very cloudy	Puy de Dome Obs.
Commercy			29.92	760.0	52.3	11.3	76	WNW			2		10n		WNW	0	0	Covered	Normal School.
Commune de Gréasque*			29.93	760.2	55.6	13.1	68	E			2		8		E	0.220	5.6		
Grenoble			29.84	758.0	60.3	15.7	79	NW			4	2c		S		0	0	Slightly cl'dy	Normal School.
Le Mans			29.96	761.0	46.9	8.3	92	NE			2		10			0.343	8.7	Covered	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			29.86	758.5	56.7	13.7	62	NW			2		0			0	0	Clear	Normal School.
Mâcon			29.93	760.1	57.0	13.9	80	Calm			0		0			0	0	Clear	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			29.88	759.0	54.3	12.4	76	E			2		10		SE	0.610	15.5	Covered	Normal School.
Orleans																			Normal School.
Paris Observatory			29.94	760.4	52.0	11.1	73	NW			2		10			0	0	Misty	National Observatory.
Parthenay																			Normal School.
Privas			29.88	758.9	57.7	14.3		W			2		10		W	0	0	Covered	Normal School.
La Roche-sur-Yon			29.78	756.5	46.9	8.3	97	N			2		10			0.071	1.80	Covered	Normal School.
Rochefort, Observatory			29.98	761.5	50.9	10.5	84	WNW			1		10		SE	0.079	2.0	Covered	Naval Observatory.
Rouen			29.98	761.5	53.1	11.7	74	NNW			2		5		E	0	0	Cloudy	Normal School.
Saint Lo			30.07	763.6	49.5	9.7	92	NE			1		4		E	0	0		Normal School.
Tarbes	28.84	732.5			55.4	13		W			4		8		E	0.20	5.	Very cloudy	Normal School.
Toulouse																			Normal School.
Villefranche			29.90	759.4	63.5	17.5	71	E			1		2			0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.93	760.1	77.4	25.2	82	NE			2		5k			Blank	Blank		L'Abbé Marchési.
Gorée																			
Marseilles			29.87	758.6	55.9	15.3	58	ESE			1		8			0.079	2.00	Cloudy	Marseilles Observatory.
Mont-Louis	24.65	626.2	29.97	761.2	40.1	4.5	81	E	3.7	1.67			8		W	0.059	1.5		—. Faiguère.
Montsouris, Paris			29.93	760.1	51.8	11.0	82	NNW			2		10			0.102	2.6	Raining	Montsouris Observ'tory.
Perpignan			29.92	759.9	50.9	10.5	63	N	16.8	7.50			9		WNW	0.169	4.3		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			29.93	760.3	53.1	11.7	76	N			1		10			0	0	Cloudy	E. Renou.
Toulouse			30.00	761.9	48.2	9.0	67	W			3		10			0.702	18.0	Raining	Toulouse Observatory.
Tours			29.94	760.5	51.3	10.7	82	NNW			1		10		E	0.756	19.2		C. Marquet.
Versailles, (near Paris)			29.94	760.4	51.4	10.8	86	N			1		10			0.152	3.85	Covered	Dr. A. Bérigny.
Zi-Ka Wei, (near Shanghai)																			H. Le Lee, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

* Near Marseilles.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Berlin			29.70	754.3	63.1	17.3	52	E			2		2	SE		0	0		Prof. T. Hoh.
Breslau			29.80	759.4	65.5	18.6	57	SE			1		0			0	0		Prof. Arndt.
Carlsruhe			30.01	762.3	58.6	14.8	61	ESE			7		6			0	0		Dr. P. Neugebauer.
Cassel			29.82	757.4	61.5	16.4	59	SW			1		10			0	0		A. Senz.
Cologne			29.80	756.8	66.9	19.4	52	NNW			5		1	N		0	0		Dr. H. Möhl.
Emden																			Dr. Garthe
Frankfort on the Main																			Prof. Prestel.
Friedrichshafen			29.85	758.3	70.3	21.3	41	NE			1		2			1.158	29.4		Physical Society.
Hamburg	28.43	722.2	29.85	758.3	57.2	14.0	54	S					4			0.031	0.8		M. Wilhelm.
Kiel			29.96	760.9	56.7	13.7	70	WSW			1		3k			0	0	Fine	Deutsche Seewarte.
Königsberg			29.96	760.9	51.3	10.7	81	N			2		2			0	0		Prof. G. Karsten.
Köslin			30.16	766.1	50.9	10.5	69	SE			5		2			Inap.	Inap.		Prof. E. Luther.
Leipsic			30.00	761.9	56.3	13.5		ESE			4		1			0	0		H. Müller.
Memel			29.89	759.3	55.0	12.8	81	N			1		5			0	0		Prof. Bruhns.
Münster			30.21	767.4	48.2	9.0	63	SE			4		0			0	0		Reinbrecht & Skalweit.
Neufahrwasser			29.94	760.5	59.4	15.2	68	NE			1		0			0	0		Prof. E. Heis.
Posen			30.08	764.1	47.8	8.8	80	SSE			3		10			0	0		A. Lothes.
Strasburg, (in Alsace)			30.04	763.1	60.8	16.0	67	SE			6		8			0	0		Dr. Magener.
Stuttgart			29.87	758.6	59.4	15.2	58	Calm			0		10			0	0		Dr. Schur.
Thorn			29.84	757.9	61.3	16.3	55	N			1		0			0	0		Prof. Schoder.
Treves, (Trier)			30.09	764.3	54.3	12.4	75	SE			6		7			0	0		Dr. Hasenbalg
Wustrow, Naval School			29.81	757.1	61.9	16.6	57	E			1		7			0	0		Prof. Flesch.
			29.87	758.8	54.3	12.4	81	SE			2		10			0	0		E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.82	757.3	60.8	16.0		NE										Covered	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.81	757.2	65.1	18.4	55	NE	0.7	0.3			10			0	0		
Padua			29.82	757.5	63.3	17.4	63	ENE	3.8	1.7			8	ENE		0	0		
Vicenza			29.83	757.6	64.0	17.8	59	S	3.8	1.7			5	E		0	0		
Verona			29.82	757.4	61.9	16.6	63	E			2		10			0	0		
Bergamo	28.50	724.0	29.81	757.1	57.2	14.0	63	SW			1		8			0	0		
Domodossola	28.86	733.0	29.87	758.7	56.8	13.8	67	Calm					9			0	0		
Milan			29.88	758.9	59.9	15.5	75	NNE			1		8	NE		0	0		
Pavia			29.87	758.7	59.5	15.3	64	SE			4		8	SE		0	0		
Moncalieri			29.88	759.0	57.6	14.2	67	ESE			2		4	SE		0	0		
Mondovi	27.97	710.4	29.87	758.7	52.9	11.6	53	WNW			2		3			0	0		
Porto Maurizio			29.93	760.3	58.5	14.7		SW			4		4	NNW		0	0		
Genoa			29.89	759.1	60.4	15.8	60	SW	5.6	2.5			2	SW		0	0		
Piacenza			29.89	759.3	59.0	15.0	67	NW	16.1	7.2			10	N		0	0		
Parma			29.87	758.8	60.1	15.6	71	NW			4		6			0.394	10.0		
Bologna			29.91	759.6	60.4	15.8	44	WNW			6		5	W		0	0		
Florence			29.88	758.9	67.1	19.5	48	W			2		9	SW		0	0		
Leghorn			29.83	757.7	60.3	15.7	40	W	4.2	1.9			8			0	0		
Siena	28.64	727.4	29.84	758.0	60.3	15.7	53	SW	0	0			9	S		0	0		
Urbino	28.30	718.8	29.86	758.5	57.2	14.0	57	NE			2		7			0	0		
Pesaro																			
Ancona			29.86	758.5	58.8	14.9	75	NE			4		6			0	0		
Grosseto			29.88	758.9	62.6	17.0	68	SW			4		7	S		0	0		
Rome			29.87	758.8	66.7	19.3	42	WNW	5.6	2.5			6	SE		0	0		
Naples, O. U.			29.86	758.4	68.9	20.5	51	SW			4		5	SW		0	0		
Lecce			29.85	758.1	63.3	17.4	54	ENE	10.5	4.7			6			0	0		
Cosenza			29.89	759.1	60.4	15.8	68	SE	0	0			10			0.205	5.2		
Riposto, (Sicily)			29.87	758.8	63.5	17.5	74	ENE			2		9	E		0	0		
Palermo			29.83	757.6	61.2	16.2	53	NE	8.1	3.6			1			0	0		
Caltanissetta	27.89	708.5	29.85	758.2	57.4	14.1	45	NW			2		4	SE		0	0		
Sub-Series.																			
Naples, S. R.			29.87	758.6	66.7	19.3	57	SW					..c	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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.00	761.9	47.8	8.8		N			2								
Groningen			29.90	759.5	55.2	12.9		N			1								
Helder			29.98	761.4	44.1	6.7		NNW			1								
Utrecht			29.91	759.6	59.7	15.4	64	NNW			3		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.92	759.9	41.4	5.2	90	SSW	9.6	4.3			10			0.087	2.2		
Brönø			29.98	761.6	41.0	5.0	81	ESE	0	0			10			0.012	0.3		
Christiania			29.59	751.6	33.1	0.6	75	SW	7	3			10			0.248	6.3	Light snow	
Tromsö			29.81	757.2	40.6	4.8	87	S	13	6			10			0	0	Light rain	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.03	762.7	61.5	16.4	80	SSW	4.1	1.84			6			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.01	762.3	59.0	15.0	86	WSW	3.4	1.53			7	NW		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.13	765.4	64.0	17.8	48	SW	6.4	2.86			7	SW		0	0		Capt. D. A. da Cunha.
Lisbon			30.12	765.1	55.4	13.0	48	N	12.5	5.6			7			0	0		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			30.11	764.9	51.1	10.6	77	E	25	11			10						Astronomical Obs.
Wilna			30.26	768.6	47.7	8.7	60	E	4	2			0						Astronomical Obs.
Dorpat			30.37	771.4	45.3	7.4	58	ESE					0						Physical Cabinet.
St. Petersburg			30.35	771.0	37.0	2.8	59	SSW	4	2			5						Central Physical Obs.
Kuopio			30.15	765.8	35.2	1.8	80	SSE	18	8			10					Snowing	Ch. Forsten.
Kieff			30.15	765.8	45.3	7.4	64	NE	9	4			9						Physical Cabinet.
Nikolaiev			29.93	760.3	57.6	14.2	79	NE	31	14			10						Kurdakof.
Kertch			29.81	757.2	64.9	18.3	68	NE	9	4			6						Lagorio.
Moscow			30.41	772.3	32.5	0.3	64	N	9	4			10						Meteorological Obs.
Lugan			29.88	759.0	47.1	8.4	84	NNE	34	15			10					Raining	Meteorological Obs.
Archangel			30.13	765.3	26.6	− 3.0	66	W	22	10			5						Ogorodnikof.
Tiflis	28.36	720.4	29.70	754.3	78.6	25.9	32	Calm	0	0			3						Physical Observatory.
Astrakhan			29.96	760.9	58.1	14.5	43	ESE	13	6			8						Sebastianof.
Kasan			30.09	764.2	35.1	1.7	80	N	4	2			10						Physical Cabinet.
Orenburg			29.87	758.6	46.6	8.1	67	E	5	2			2						Tschernischef.
Ekaterinburg	28.83	732.2	29.85	758.2	38.1	3.4	73	SSW	18	8			7						Meteorological Obs.
Nukuss			30.03	762.8	69.6	20.9	79	ESE	18	8			0						
Kasaly																			Bobrof.
Tashkend	28.63	727.2	30.34	770.4	57.6	14.2	37	Calm	0	0			0						Michelson.
Barnaul			30.31	769.9	23.9	− 5.5	82	Calm	0	0			2						Meteorological Obs.
Yeniseisk			30.11	764.8	26.2	− 3.2	58	SW	4	2			4						Marks.
Irkutsk																			Usolsef.
Oorga																			Mossin.
Peking, (China)			30.30	769.6	47.7	8.7	43	SW	4	2			2						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			30.30	769.6	33.4	0.8	80	Calm	0	0			0						
Nikolaievsk, on the Amoor					21.9	− 5.6	93	Calm	0	0			0						

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 409. m ters, or 1,341.8 feet; Ekaterinburg, 391.4? m., or 1,005.2? ft.; Tashkend, m. 434.2?, 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.

Stations	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.97	761.2	56.5	13.6	40	E	22.4	10.0		0	4			0	0	Cloudy	Royal Observatory.
San Fernando			30.06	763.4	57.7	14.3	67	NW	9.2	4.1		0	3		E	0	0		The Naval Observatory.

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	29.1	− 1.7	96	SW			2		10			0	0		
Umea			30.02	762.4	33.3	0.7	87	SW			6		10			0	0		
Hernosand			29.99	761.8	33.1	0.6	96	S			4		10			0	0		
Stockholm			30.05	763.3	41.9	5.5	68	SE			2		6			0	0		
Wisby			30.01	762.2	35.2	1.8	75	SSW			4		3			0	0		
SUB-SERIES.																			
Upsala			30.04	763.1	45.3	7.4	64	SSE	13.7	6.1			8		SW	0.008	0.20		Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —12.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.45	722.7	29.87	758.8	55.9	13.3	47	N			1		6			0	0	Vapory	The Observatory.
Zurich	28.24	717.2	29.85	758.2	60.8	16.0	59	NW			1		2			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —1.6 mm.; Thermometer, +3.2 cent.; Relative Humidity, —11 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —12.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.81	757.2	71.1	21.7	76	NNE	8	3.5			8		NNE	0	0		
Fao, (Persian Gulf)			30.03	762.7	77.7	25.4		SE			3		10						
Salonica			29.84	757.9	83.1	28.4		SE			1		0						
Vatona			29.76	755.8	64.6	18.1		W			1		2						
Varna			29.84	758.8	57.2	14.0		N			2		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			29.63	752.5	73.9	23.3	71	NE			1		2ks		SW	0.031	7.9	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —12.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.																			Hon. J. Ferguson.
Brockville, Ontario			30.56	776.2	31	— 0.6		Calm	0	0		0	0			0	0	Clear	W. R. Bigg.
*Chatham, N. B.			30.29	769.4	29	— 1.7	85	NW	6	2.7		10ck	0	NW		0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island.			30.19	766.8	29	— 1.7	84	N	10	4.5		2c	0			0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			30.46	773.7	32.7	0.4	63	S			1					0	0	Bright	James Smith, M. A.
Dalhousie, N. B.																			H. A. Johnson.
Esquimault, B. C.			30.15	765.8	35.1	1.7	91	N	2	0.9						0	0	Clear	W. H. Bevis.
Fredericton, N. B.			30.32	770.1	27.6	— 2.4	68	NW	11	4.9						0	0		Prof. Harrison.
*Fort Garry, Manitoba			30.17	766.3	12	—11.1	92	S	2	0.9		2c	2ks	W	W	0	0	Fair	James Stewart.
Goderich, Ontario			30.45	773.4	30.3	— 0.9	82	SW			1	5k	3s	W		0	0	Cloudy	H. J. Strang, M. A.
Granton, Ontario			30.45	773.4	24.2	— 4.3		E			1					0	0	Clear	James Grant.
*Halifax, N. S.			30.16	766.1	34	1.1	81	N	15	6.7		2ks	0	N		0	0	Fair	F. Allison, M. A.
*Kingston, Ontario			30.56	776.2	28	— 2.2	94	Calm	0	0		0	0			0	0	Clear	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			30.48	774.2	31	— 0.6	48	N	6	2.7		0	0			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.51	774.9	20	— 6.7	72	Calm	0	0		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.55	776.0	14	—10.0	91	SE	3	1.3		0	0			0	0	Clear	Rev. R. Mooley.
*Port Dover, Ontario			30.50	774.7	19	— 7.2	84	N	5	2.2		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.			30.09	764.3	27.4	— 2.6		NW	22	9.8						0	0	Fair	Peter Grant.
*Port Stanley, Ontario			30.43	772.9	26	— 3.3	74	NE	10	4.5		5ck	0	NW		0	0	Fine	M. Payne.
*Quebec, Quebec			30.41	772.4	26	— 3.3	88	Calm	0	0		0	0			0	0	Clear	Capt. Ash, R. N.
St. John, N. B.			30.30	769.6	31	— 0.6	58	NW	7	3.1						Inap.	Inap.		G. Murdoch, C. E.
*Saugeen, Ontario			30.48	774.2	22	— 5.6	72	SE	4	1.8		2cs	0			0	0	Clear	K. Stewart.
Stayner, Ontario																			R. J. Cole.
Stratford, Ontario			30.46	773.7	28.7	— 1.8	77	SE	5	2.2		3cs		W		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			30.03	762.7	30	— 1.1	75	N	12	5.4		2c	2ks		N	0	0	Clear	T. C. Hill.
*Toronto, Ontario			30.52	775.2	26	— 3.3	75	N	3	1.3		2c	0	W		0	0	Clear	Magnetic Observatory
Woodstock, Ontario			30.56	776.2	19.1	— 7.2	100	Calm			0		10s			0.10	2.5	Fine	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,[illegible]15 feet, or 3[illegible]9.4 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			30.48	774.2	33	0.6	69	Calm	0	0		0	0			0	0	Clear	
Alpena, Mich			30.43	772.9	18	−7.8	84	E	2	0.9		5c	Haze			0	0	Fair	
Atlantic City, N. J			30.49	774.4	34	1.1	69	N	12	5.4		5k	0	N		0	0	Fair	
Augusta, Ga.			30.28	769.1	48	8.9	92	NE	5	2.2			10n		NE	2.26	57.4	Light rain	
Baltimore, Md			30.53	775.4	35	1.7	63	NE	5	2.2		2ck	2s		NE	0	0	Fair	
Barnegat, N. J			30.47	773.9	35	1.7	61	N	10	4.5		0	0			0	0	Clear	
Benton, Montana	27.99	688.1	29.89	759.2	34	1.1	69	W	2	0.9		0	0			0	0	Clear	
Bismarck, Dakota	28.18	715.8	29.89	759.2	29	−1.7	59	S	4	1.8			10s			0	0	Cloudy	
Boston, Mass			30.38	771.6	36	2.2	53	N	9	4.0		Haze	Haze			0	0	Hazy	
Breckenridge, Minn			30.07	763.8	23	−5.0	86	NE	8	3.6			10s			0	0	Cloudy	
Buffalo, N. Y			30.51	774.9	23	−5.0	86	E	4	1.8		1c	Sm'e			0	0	Clear, frost	
Burlington, Vt			30.5[illegible]	774.7	28	−2.2	65	NE	3	1.3		0	0			0.03	0.8	Clear	
Cairo, Ill			29.9[illegible]	759.4	48	8.9	100	NE	3	1.3			10n			0.27	6.9	Light rain	
Cape Hatteras, N. C			30.32	770.1	46	7.8	60	NE	28	12.5		5cs	2s	W	NE	0	0	Cloudy	
Cape Henry, Va			30.45	773.4	43	6.1	59	NE	20	8.9		2k.hz.	0	NE		0	0	Fair	
Cape May, N. J			30.49	774.4	35	1.7	62	N	10	4.5		2c	0	W		0	0	Fair	
Charleston, S. C			30.29	769.4	50	10.0	93	NE	16	7.2			10s		NE	1.15	29.2	Threatening	
Cheyenne, Wyoming	23.78	604.0	29.72	754.9	25	−3.9	60	W	20	8.9		5c	0	N		0.04	1.0	Fair	
Chicago, Ill			30.11	764.8	32	0.0	79	E	16	7.2			10s			0	0	Cloudy	
Cincinnati, Ohio			30.[illegible]5	763.8	38	3.3	63	SE	7	3.1		8cs	2s	SW		0	0	Cloudy	
Cleveland, Ohio			30.33	770.4	3[illegible].7	−[illegible].7	71	E	5	2.2		5c	2s	SW		0	0	Fair	
Colorado Springs, Col	23.87	606.3	29.74	755.4	13	−10.6	44	Calm	0	0		5cs	0			0.01	0.3	Fair	
Corsicana, Tex			30.04	763.0	44	6.7	84	NW	6	2.7		0	0			0	0	Clear	
Davenport, Iowa			30.[illegible]0	762.0	33	0.6	89	E					10n			0.35	8.9	Sleeting	
Denison, Tex			30.02	762.5	45	7.2	76	NW	3	1.3		1c	0	W		0.12	3.0	Clear	
Denver, Col.	24.61	625.1	29.83	757.7	11	−11.7	80	SW	4	1.8		5c	0	NW		0.25	6.3	Fair	
Detroit, Mich			30.32	770.1	28	−2.2	88	E	14	6.3		1c,ck	0	W		0	0	Fair	
Dodge City, Kan	27.31	693.7	29.70	754.4	26	−3.3	88	W	14	6.3		0	0			0.05	1.3	Clear	
Dubuque, Iowa			30.[illegible]2	762.5	32	0.0	79	E	10	4.5			10n			0.25	6.3	Light snow	
Duluth, Minn			30.22	767.6	27	−2.8	77	NE	6	2.7		2k	5s			0	0	Fair	
Eastport, Me			30.29	769.4	30	−1.1	70	NW	11	4.9		2c	Haze	SW		0	0	Clear	
Erie, Pa			30.41	772.1	27	−2.8	89	E	4	1.8		2c	0			0	0	Fair	
Escanaba, Mich			30.37	771.4	22	−5.6	70	E	4	1.8		5c	0	NW		0	0	Fair	
Fort Gibson, Indian Terr			29.96	761.0	46	7.8	84	W	7	3.1			10s		W	0.59	15.0	Cloudy	
Ft. St. Michaels, Alaska			29.70	754.4	−4	−20.0		SW	10	4.5			10s					Cloudy	
Fort Sill, Indian T	28.80	731.5	29.94	760.5	37	2.8	52	N[illegible]	4	1.8		2cs	0	NW		0	0	Clear	
Fort Sully, Dakota																			
Galveston, Tex			29.99	761.7	62	16.7	66	N	19	8.5		0	0			0.08	2.0	Clear	
Grand Haven, Mich			30.25	768.3	27	−2.8	77	E	12	5.4		2c	4s	SW	SW	Inap.	Inap.	Fair	
Indianapolis, Ind			30.08	764.0	36	2.2	70	SE	7	3.1			10s		S	0	0	Cloudy	
Indianola, Tex			29.59	761.7	59	15.0	64	N	26	11.6		0	0			0	0	Clear	
Jacksonville, Fla			30.10	764.5	64	17.8	88	N	4	1.8			10s			0.06	1.5	Cloudy	
Keokuk, Iowa			29.94	76[illegible].5	34	1.1	79	E	13	5.8			10n		E	0.50	12.7	Light rain	
Key West, Fla			30.08	764.0	76.7	24.8	77	SE	10	4.5		1k	Haze	SE	SE	Inap.	Inap.	Clear	
Kittyhawk, N. C			30.4[illegible]	773.7	42	5.6	74	NE	22	9.8		5k	0	NE		0	0	Fair	
Knoxville, Tenn			30.09	764.3	49	9.4	77	NE	8	3.6			10n		SW	0.13	3.3	Misting	
La Crosse, Wis			30.[illegible]7	763.8	36	2.2	53	SE	8	3.6			10s		SE	0	0	Cloudy	
Leavenworth, Kan			29.84	757.9	36	2.2	90	N	2	0.9			Fog			0.65	16.5	Foggy	
Lexington, Ky	28.9[illegible]	734.0	30.0[illegible]	762.7	40	4.4	64	E	8	3.6			10s			0	0	Cloudy	
Long Branch, N. J			30.48	774.2	42	5.6	49	NW	8	3.6		0	Haze			0	0	Clear	
Louisville, Ky			30.03	762.7	41	5.0	57	NE	8	3.6			10s		SW	0	0	Threatening	
Lynchburg, Va			30.51	774.9	38	3.3	58	NE	6	2.7			10s			0	0	Cloudy	
Malone, N. Y			30.41	772.4	29	−1.7	67	S	5	2.2		0	0			0.05	1.3	Clear	
Manhattan, Kan	28.74	730.0	29.92	760.0	31	−0.6	89	NW	3	1.3			10n			0.27	6.9	Light snow	
Marquette, Mich			30.47	771.4	22	−5.6	86	SE	4	1.8		5cs	0			0	0	Fair	
Memphis, Tenn			29.89	759.4	55	12.8	100	SW	2	0.9			Fog			0.68	17.3	Foggy	
Milwaukee, Wis			30.23	767.8	30	−1.1	78	E	26	11.6			10s			0	0	Cloudy	
Mobile, Ala			29.92	760.0	66	18.9	94	S	8	3.6			Fog		S	0.58	14.7	Foggy	
Montgomery, Ala			30.09	764.3	58	14.4	100	NE	12	5.4			10n		E	6.71	170.4	Heavy rain	
Morgantown, W. Va			30.31	769.9	38	3.3	46	NE	7	3.1		10c	0	W		0	0	Cloudy	
Mt. Washington, N. H	23.82	605.0	30.18	766.6	13	−10.6	62	N	36	16.1		0	0			0.33	8.4	Clear	
Nashville, Tenn			29.92	760.0	54	12.2	86	Calm	0	0			10s		SE	0.01	0.3	Cloudy	
New Haven, Conn			30.49	774.4	39	3.9	48	N	5	2.2		0	0			0	0	Clear	
New Orleans, La			30.45	773.7	40	4.4	47	N	4	1.8		0	0			0.41	10.4	Clear	
Newport, R. I			29.90	759.4	70	21.1	95	W	4	1.8			Fog			0.01	0.3	Foggy	
New York, N. Y			30.42	772.7	35	1.7	63	NW	4	1.8		0	0			0	0	Clear	
Norfolk, Va			30.50	774.7	33	0.6	60	NW	3	1.3		0	Haze			0	0	Clear	
North Platte, Neb			30.45	773.4	40	4.4	56	NE	14	6.3		Haze	0			0	0	Clear	
Omaha, Neb	26.92	683.8	29.68	753.9	25	−3.9	100	NE	1	0.4			10n			0.08	2.0	Light snow	
Oswego, N. Y	28.77	730.7	29.99	758.4	34	1.1	90	E	3	1.3			10s			0.05	1.3	Cloudy	
Pembina, Dakota			30.52	775.2	34.1	1.2	79	NE	1	0.4			Haze			0	0	Clear	
Philadelphia, Penn			30.10	764.5	12	−11.1	80	Calm	0	0		0	Haze			0	0	Clear	
Pike's Peak, Colorado			30.52	775.2	33	0.6	79	N	12	5.4		2c	0	W		0	0	Clear	
Pittsburgh, Penn	17.40	442.0	29.60	751.8	0	−17.8	100	N	43	19.2		2c	0	NW		0.19	4.8	Fair	
Port Huron, Mich			30.27	768.8	32	0.0	60	E	4	1.8		0	0			0	0	Clear	
Portland, Me			30.12	765.7	17	−8.3	83	NE	8	3.6		8c	1s	W		0	0	Cloudy	
Portland, Oregon			30.40	772.1	35	1.7	70	N	10	4.5		0	0			0	0	Clear	
Punta Rassa, Fla			30.22	767.6	35	1.7	90	Calm	0	0			10s			0.09	2.3	Cloudy	
Rochester, N. Y			30.10	764.5	72.2	22.2	90	E	10	4.5		Haze	0	SW		0	0	Hazy	
Salt Lake City, Utah			30.52	775.2	26	−3.3	76	W	4	1.8		0	0			0	0	Clear	
Sandy Hook, N. J	25.61	650.5	29.94	760.5	37	2.8	62	Calm	0	0		5k	0	NW		0	0	Fair	
San Diego, Cal			30.48	774.2	35	1.7	61	N	7	3.1		1c	0			0	0	Clear	
San Francisco, Cal			30.05	763.3	48	8.9	77	NE	4	1.8		0	0			0	0	Clear	
Santa Fe, N. M			30.02	762.5	47	8.3	92	SW	16	7.2		0	Fog		SW	0	0	Fair	
Savannah, Ga	23.12	587.2	29.66	753.4	27	−2.8	66	N	3	1.3		0	1s		NW	0	0	Clear	
Shreveport, La			30.23	767.8	54	12.2	93	NE	18	8.0			10n			1.15	29.2	Light rain	
Smithville, N. C			30.00	762.0	53.5	11.9	83	W	1	0.4		8c	0	SW		0	0	Fair	
Springfield, Mass			30.33	770.4	48	8.9	71	NE	13	5.8			10s		NE	0	0	Cloudy	
St. Louis, Mo			30.45	773.4	37	2.8	62	NW	4	1.8		0	0			0	0	Clear	
St. Marks, Fla			29.93	760.2	43	6.1	83	E	4	1.8			10n			0.28	7.1	Light rain	
St. Paul, Minn			30.06	763.5	67	19.4	94	S	6	2.7			Fog			0	0	Foggy	
St. Paul's Island, Alaska			30.03	762.7	35	1.7	52	E	11	4.9			10s			0	0	Cloudy	
Thatcher's Island, Mass			29.75	755.6	9	−12.8	78	ENE	13	5.8			10s			0	0	Light snow	
Toledo, Ohio			30.39	771.9	34	1.1	69	N	16	7.2		0	0			0	0	Clear	
Tucson, Arizona	27.61	701.3	30.25	768.3	32	0.0	89	E	13	5.8		5c	0			0	0	Fair	
Tybee Island, Ga			30.20	767.1	55	12.8	100	NE	36	16.1			10n		NE	0.95	24.1	Heavy rain	
Vicksburg, Miss			29.98	761.5	6[illegible]	15.6	91	Calm	0	0		10c	Fog	N		0.07	1.8	Cloudy	
Virginia City, M. T	24.13	612.9	29.61	752.1	30	−1.1	68	Calm	0	0		10ck	0	NW		Inap.	Inap.	Cloudy	
Washington, D. C			30.51	774.9	33.5	0.8	61	NE	8	3.6		2cs	8s			0	0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.35	770.9	45	7.2	60	NE	11	4.9			10s		W	Inap.	Inap.	Cloudy	
Wood's Holl, Mass			30.03	762.7	44	6.7	92	SW	15	6.7			10s		SW	0	0	Cloudy	
Wytheville, Va	27.94	709.7	30.20	767.1	36	2.2	61	SE	8	3.6			10s		SE	0	0	Threatening	
Yankton, Dakota	28.63	727.2	29.97	761.2	28	−2.2	88	E	6	2.7			10s			0.25	6.3	Cloudy	
Yuma, Arizona			30.04	763.0	54	12.2		NE				2c	0			0	0	Fair	
Sub Series.																			
Bridgetown, B'b'dos, W. I.			30.02	762.5	81	27.2	78	NE	5	2.2		2c	5s	E	NE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.02	762.5	75	23.9	86	E				5k	5n			0.50	12.7	Hazy	L. V. Bigard.
St. Thomas, St. T., W. I			30.27	768.8	76	24.4	69	E	4	1.8		8ck	4kn	E		0	0	Cloudy	W. S. Cameron.
Kingston, Jamaica, W. I.			30.20	767.1	75	23.9	76	Calm	0	0		2ck	2s	SE		0	0		James Gall.
Santiago de Cuba, W. I			29.82	757.4	75	23.9	65	Calm	0	0		0	0			0	0	Clear	Robert Mason.
Havana, Cuba, W. I.			30.06	763.3	76	24.4	76	Calm	0	0		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			30.11	764.8	59.0	15.0	62	N	23.0	10.3		8k	5k	W		0.20	5.1	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa W. I.																			
Clifton, Jamaica W. I	27.20	690.9	29.99	761.7	64	17.8	83	N	1.0	0.4		0	0			0	0	Clear	C. Partridge.
Paramaribo, D. Guiana, S. A.			29.99	761.7	78	25.6	86	E			2		8n, ks			1.018	25.86	Heavy rain	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.04	763.0	81.5	27.5										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.21	640.3			66.0	18.9	77		0	0		6ck	4s			0	0	Fair	Thomas Herran.
St. John's, Newfoundland			29.74	755.4	33.0	0.6	87	NE					10n			0	0	Cloudy	John Delaney.
York Factory, B. A.			30.34	770.6	2	−16.7	59	NE	8	3.6			9s			0	0		J. Fortescue.
Honolulu, Oahu, H. I			30.14	765.5	72	22.2	90	NE			3					0.0	0.5		E. P. Church.
Makawao, Maui, H. I.	27.72	704.1	29.88	758.9	56	13.3	82	Calm	0	0		2cs	0	SW		0	0		F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from —

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below −40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,294.8 ft., or 699.4 m; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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 APRIL 3, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.25	768.3	62.1	17.7	47	W			2		4			0.579	14.7	Fair	Charnot.
Algiers			30.17	766.4	53.2	11.8	95	NNE			1		10			0.618	15.7	Hidden.	Peter.
La Calle																			Kunts.
Tunis			30.02	762.6	64.0	17.8	56	NE			4		6			0	0	Fair	Jacques.
Sfax			29.95	760.8	66.2	19.0	46	N			5		4			0	0	Fair	Chauvey.
Saida			30.20	767.0	41.9	5.5	85	E			3		7			0.315	8.0	Cloudy.	Millot.
Tebessa			30.04	763.0	46.8	8.2		N			2		10			0.118	3.0	Hidden	Colin.
Geriville			30.14	765.6	42.8	6.0	63	N			3		2			0.319	8.1	Clear	Buard.
Laghouat			30.05	763.3	53.6	12.0	43	N			3		5			1.496	38.0	Fair	Guyot.
Biskra			30.06	763.4	58.5	14.7	86	NW			1		4			0	0	Fair	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.96	760.9	67.6	19.8	57	NE			3		8			0.169	4.3		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.08	764.1	62.2	16.8	63	NE			2		2			0	0		I. R. Observatory.
Eperies			30.04	762.9	65.1	18.4	55	NE			1		2		NW	0	0		Julius Mikolik.
Gratz	28.82	732.1	30.01	762.2	61.9	16.6	62	ENE			2		5			0	0		Andreas Rospini.
Hermannstadt	28.64	727.4	30.05	763.3	54.7	12.6	54	ESE			4		7			0	0		Prof. Reissenberger.
Kremsmünster	28.67	728.3	29.99	761.8	60.4	15.8	66	ESE			3		3			0	0		Prof. C. Wagner.
Lemberg			30.20	767.1	45.8	7.6	73	SE			3		9			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habasuda Daniel.
Pola			29.96	760.9	62.2	16.8	76	WNW			1		9cks			0	0	Low fog	I. R. Hydrographic Of'ce
Szegedin			29.78	756.4	66.7	19.3	40	S			1		8			0.059	1.50		Karl Stancel.
Trieste			29.95	760.8	65.1	18.4	59	NW			1		10			0	0		Prof. V. Farolfi.
Vienna			30.03	762.8	60.1	15.6	73	SE			1		5			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.22	767.6	51.8	11.0	79	NNE			0		10			0.008	0.20		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.99	761.7	49.9	9.9		S	21	9.4			4			0	0	Blue sky	William Boswell.
Ardrossan			29.96	761.0	50	10.0		SSW			5		7					*D. clouds	J. Mayes.
Armagh Observatory			29.97	761.2	57.2	14.0		S	30	13.4			10					Squally	S. Call. for Dr. Robinson.
Bidston, Liverpool Obs.			30.15	765.8	56.3	13.5		WSW	15	6.7			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.99	761.7	55.2	12.9		S			1–2		10					*D. clouds	J. Dreyer.
Bradford			30.15	765.8	57.0	13.9		SW			1		5			0.01	0.3	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	81.0	27.2		NE			3		4					*D. clouds	Sergt. J. F. Halanen.
Cambridge Observatory			30.25	768.3	64.5	18.1		SSW			1		0					Blue sky	H. Todd.
Cardington			30.26	768.6	61.0	16.1		W			1		1					Blue sky	John McLaren.
Carlisle			30.10	764.5	56.3	13.5		S			3		9			0	0	*D. clouds	Bell, for J. Cartmell.
Chatham, School M. E.			30.28	769.1	48.2	9.0		SW			1		4					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	28.80	731.5	30.35	770.4	50.0	10.0		SW			4		6					*D. clouds	R. E. Power.
Donaghadee			29.98	761.5	52	11.1		SSW			5		8					*D. clouds	J. MacGowan.
Dover			30.18	766.6	44	6.7		NE			3		4					½ cl uded	J. Costello.
Eccles, (near Manchester)			30.17	766.3	59.5	15.3		SW	5.4	2.4			4					*D. clouds	Thomas Mackereth
Falmouth Observatory			30.27	768.8	54 0	12.2		S	17	7.6			6					Overcast	The Staff.
Fort Napier, (Natal)	27.65	702.3	29.89	759 2	82.6	28.1		NW			3		8					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.93	760.2	88.0	31.1		N			1		8					Overcast	
Galway, Queen's College			29.90	759.4	53	11.7		SW			4		9					Gloom y	B. G. Clare, for Prof. Cur.
Gibraltar, (Mediterranean)			30.25	768.5	65.8	18.8		W			4		1					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.99	761.7	52.4	11.3		S			3		10					Overcast	Lewis Stuart.
Great Yarmouth			30.28	769.1	41	5.0		SE			2		6					Foggy	G. T. Watson.
Greenwich Royal Obs.			30.27	768.8	60.4	15.8		E			1		4					*D. clouds	The Staff for G. B. Airy.
Guernsey			30.00	760.6	54	12.2		NW			1		0					Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.18	766.6	57.4	14.1		WSW			2		5					*D. clouds	L. J. Crossley.
Helston			30.20	767.1	57	13.9		S			4		3k			0	0	Fine	M. P. Moyle.
Holyhead			30.14	765.5	51	10.6		SSW			5		10					Misty	John Tilston.
Kew Observatory			30.06	768.6	57.5	14.2		SSW	4	1.8			0					Hazy	The Staff.
Kingstown			30.06	763.5	53	11.7		SSE			4		7					*D. clouds	George Mitchell
Leicester Museum			30.24	768.1	59.8	15.4		SW			1		0					Hazy	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.84	757.9	61.4	16.3		NE			3		8k						Fred Travis, Pvt A.H.C.
Nairn			29.88	758.9	54	12.2		SW			1		5					½ clouded	W. D. Penny.
Nassau, (Bahamas)			30.14	765.5	79.2	26.2		SE			5		7					*D. clouds	Surg.-Maj. Henry.
Nottingham			30.23	767.8	61.1	16.2		SSW			3		0			0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.20	767.1	59.5	15.3		S			1		98					Fine	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			30.24	768.1	59	15.0		Calm			0		2					Blue sky	J. Lucas.
Plymouth			30.27	768.8	53.5	11.9		SSE			3		1					*D. clouds	John Merrifield.
Roche's Point			30.05	763.3	51	10.6		SSW			5		10					Raining	W. Kennedy.
Saint Ann's Head			30.20	767.1	50	10.0		S			5		10					Misty	John C. Walker.
Saint Helier, (Jersey)			30.28	769.1	59.0	15.0		E			1		1					Clear	A. P. Amy.
Sandwick Manse (Orkneys)			29.86	758.4	49	9.4		SSE	22	9.8			10					Overcast	Rev Chas. Austin, LL. D.
Scarborough			30.16	766.1	58.1	14.4		SSW			2		0					Blue sky	F. Shaw.
Scutari Cemetery (Turkey)			29.84	757 9	51.0	10.6		NNW			1		10					Drizzling	Sergt. W. H. Lyne.
Sheffield			30.22	767.6	59.0	15.0		SSW			2		2			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			30.08	764.0	55.3	12.9	79	SW			4		7			0.098	2.49	*D. clouds	Rev Francis Redford
Stonyhurst Observatory			30.15	765.8	56.6	13.7		SW			2		7						S. J. Perry.
Stornoway, Lewis C. (Hebr.)			29.77	756.1	49	9.4		S			6		10					Overcast	John Smith.
Strathfield Turgiss			30.25	768.3	57.6	14.2		NW			0.1		0					Blue sky	Rev Charles H. Griffith.
Streatley Vicarage																			Rev. John Slater.
Thurso			29.82	757.4	54	12.2		SSW			5		8					Gloomy	John Trott r.
Truro, Royal Institution			30.25	768.3	58	14.4		S			6		6					*D. clouds	W Newco be.
Valencia Observatory			29.98	761.5	51.9	11.1		SSW	35	15.6			10					Raining	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Cape Good Hope Obs.			29.96	761.0	69.4	20.8	60	SE	7	3.1			10						The Staff, for E. J. Stone.
Leith, Restalrig Park			30.01	763.0	54.6	12.6		SW			3		8k			0	0	Fine, cloudy	Andrew Gibb.
Mauritius			30.02	762.5				ENE	11.7	5.2						0.03	0.8		
Monach Lt-house, Hebrides			29.72	754.9	47	8.3		S			6		10			0.3	7.6		J. Youngclause.
North Unst, (Shetland Is.)			29.87	758.7	48	8.9		S			6		10			Blank	Blank		

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 270.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			30.18	766.5	44.1	6.7	87	NNW			2		10						
Faröe			30.25	768.3	52.5	11.4	64	NW			4		4						
Godthaab, (Greenland)			29.67	753.5	16.7	− 8.5		W			6		10					Snowing	
Stykkisholm, (Iceland)			29.28	743.8	32.5	0.3	92	NE			6		5						
Thorshavn, (Faröe)			29.57	751.1	48.7	9.3	86	SSW			6		10						
Vestervig			30.24	768.1	41.2	5.1	90	W			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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	764.6	53.6	12	61	NE			1		0			0	0	Clear	Normal School.
Amiens			30.25	768.3	56.1	13.4	84	W			1		0			0	0	Clear	Normal School.
Avignon			30.10	764.4	62.1	16.7	64	N			3		2n		N	0.220	5.6	Partly cl'dy.	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.24	768.2	57.7	14.3	54	N			2		0			0	0	Clear	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			30.20	767.0	52.9	11.6	85	W			4		8		N	0	0	Very cloudy	Normal School.
Brest			30.24	768.1	60.6	15.9	62	SSW			1		1s			0	0		Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			30.12	765.1	49.6	9.8	92	W			2		10			0	0	Covered	Puy de Dome Obs.
Commercy			30.14	765.5	57.7	14.3	72	\			2		8nk		N	0.020	0.5	Very cloudy	Normal School.
Commune de Gréasque*			29.68	753.8	59.9	15.5	50	NW			2		2		NW	0.047	1.2		
Grenoble			30.06	763.5	58.5	14.7	78	NW			4		2		S	0	0	Slightly cl'dy	Normal School.
Le Mans			30.24	768.2	57.2	14	69	NE			3		2		NE	0.051	1.3	Slightly cl'dy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			30.07	763.7	56.3	13.5	73	N			2		5		N	0.20	5.	Raining	Normal School.
Mâcon			30.10	764.5	55.6	13.1	79	NW			2		10			0.04	1.	Covered	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			30.04	763.1	62.6	17	55	N			4		5		N	0	0	Cloudy	Normal School.
Orleans																			Normal School.
Paris Observatory			30.22	767.5	58.5	14.7	51	NNW			1		5		NE	0.061	1.56	Hazy	National Observatory.
Parthenay																			Normal School.
Privas			30.10	764.4	56.3	13.5		N			2		10		N	0	0	Covered	Normal School.
La Roche-sur-Yon			30.32	770.0	52.2	11.2	85	N			2		0			0.24	6.	Clear	Normal School.
Rochefort, Observatory			30.31	769.8	54.7	12.6	78	N			1		10		SE	0	0	Covered	Naval Observatory.
Rouen			30.26	768.7	63.1	17.3	46	NW			2		0			0	0	Clear	Normal School.
Saint Lo			30.31	769.8	59.1	15	48	NE			1		0			0	0		Normal School.
Tarbes	29.14	740.1			53.6	12		W			2		8		E	0	0	Very cloudy	Normal School.
Toulouse																			Normal School.
Villefranche			30.13	765.4	55.0	12.8	92	NW			1		10			0.063	1.60	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.92	760.0	79.2	26.2	82	NE			2		2k						L'Abbé Marchési.
Gorée																			
Marseilles			30.04	763.0	59.4	15.2	67	WNW			2		2			0	0	Partly cloudy	Marseilles Observatory.
Mont-Louis																			—. Falguère.
Montsouris, Paris			30.20	767.1	56.8	13.8	66	N			2		8			0.004	0.1		Montsouris Observatory.
Perpignan			30.18	766.6	54.3	12.4	58	NW	24.2	10.83			3		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.21	767.4	59.0	15.0	64	N			1		8			0.134	3.4	Cloudy	L. Renou.
Toulouse			30.33	770.3	51.8	11.0	83	WNW			2		10			0.839	21.3		Toulouse Observatory.
Tours			30.24	768.1	54.1	12.3	81	SSW			1		5		NNW	0.063	1.6		C. Marquet.
Versailles, (near Paris)			30.21	767.4	60.8	16.0	56	NW			1		5			0.015	0.39	Fair	Dr. A. Berigny.
Zi-Ka Wei, (near Shanghai)																			H. Le Lee, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,089.9 ft.; lermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

* Near Marseilles.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.93	760.2	62.1	16.7	74	NE			2		2	NE		0.63?	16.7?		Prof. T. Roh.
Berlin			30.15	765.7	54.7	12.6	70	NE			1		9			0	0		Prof. Arndt.
Breslau			30.13	765.3	57.6	14.1	74	NE			3		6			0	0		Dr. P. Neugebauer.
Karlsruhe			30.08	764.0	58.6	14.8	76	N			1		10			0	0		A. Senz.
Cassel			30.10	764.6	59.0	15.0	74	N			2		9	N		0	0		Dr. H. Möll.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main			30.14	765.6	60.8	16.0	57	N			2		3			0	0		Physical Society.
Friedrichshafen	28.63	727.1	30.05	763.3	58.5	14.7	84	W					7			Inap.	Inap.		M. Wilhelm.
Hamburg			30.21	767.4	52.7	11.5	70	NE			3		8ks	NE		0	0		Deutsche Seewarte.
Kiel			30.26	768.5	44.1	6.7	87	NNE			2		10			0.012	0.3		Prof. G. Karsten.
Königsberg			30.21	767.2	58.6	14.8	55	SE			2		2			0	0		Prof. E. Luthor.
Köslin			30.15	765.9	53.2	11.8		ESE			2		4			0	0		H. Müller.
Leipsic			30.13	765.4	56.1	13.4	76	NNW			1		8	N		0	0		Prof. Bruhns.
Memel			30.25	768.4	54.0	12.2	56	SSE			2		0			0	0		Reinbrecht & Skalweit.
Münster			30.23	767.7	56.8	13.8	71	NE			2		3			0	0		Prof. E. Heis.
Neufahrwasser			30.16	766.0	49.3	9.6	78	ESE			2		10			0	0		A. Lothes.
Posen			30.15	765.9	52.5	11.4	80	NE			5		10			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.10	764.5	57.7	14.3	75	NNE			2		10	N		0	0		Dr. Schur.
Stuttgart			30.07	763.7	55.0	12.8	77	N			1		10			0.024	0.6		Prof. Schoder.
Thorn			30.16	766.0	51.1	10.6	77	SE			6		10			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.07	763.6	61.3	16.3	66	N			6		10			0	0		Prof. Flesch.
Wustrow, Naval School			30.13	765.4	43.9	6.6	89	NW			2		10			0	0		E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.89	759.2	64.4	18.0		NE										Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.97	761.3	62.8	17.1	60	E	6.9	3.1			10			0	0		
Padua			29.97	761.2	63.9	17.7	53	N	8.7	3.9			6	N		0	0		
Vicenza			29.99	761.7	63.9	17.7	52	NW	3.1	1.4			4	E		0	0		
Verona			30.02	762.4	61.7	16.5	70	E			2		10			0.130	3.3		
Bergamo	28.63	727.2	29.93	760.3	60.8	16.0	65	W			2		6			0	0		
Domodossola	28.93	734.7	29.91	760.4	64.4	18.0	61	Calm					9			0	0		
Milan			29.98	761.4	67.8	19.9	55	SW			1		2	SW		0	0		
Pavia			29.99	761.8	63.0	17.2	52	N			1		1	NW		0	0		
Moncalieri			30.01	762.2	62.4	16.9	50	WSW			2		4	E		0	0		
Mondovi	28.11	713.9	30.01	762.2	57.6	14.2	45	NW			2		0			0	0		
Porto Maurizio			30.07	763.7	58.6	14.8		SW			2		1			0	0		
Genoa			30.02	762.5	61.0	16.1	64	SW	3.8	1.7			4	SE		0	0		
Piacenza			30.00	762.0	64.2	17.9	55	N	8.7	3.9			5	S		0	0		
Parma			29.99	761.8	64.8	18.2	52	NNE			2		2			0	0		
Bologna			30.02	762.6	63.9	17.7	42	SW			1		3	E		0	0		
Florence			30.03	762.7	67.1	19.5	56	W			2		3	W		0	0		
Leghorn			30.00	762.1	60.4	15.8	65	W	5.6	2.5			5			0	0		
Siena	28.78	731.0	29.98	761.6	58.8	14.9	61	W	3.8	1.7			3	E		0	0		
Urbino	28.45	722.5	30.01	762.2	58.8	14.9	64	N			2		10			0	0		
Pesaro																			
Ancona			30.02	762.5	59.0	15.0	73	WNW			4		2			0	0		
Grosseto			29.99	761.7	66.2	19.0	51	NNW			4		5	NE		0	0		
Rome			29.96	761.0	68.0	20.0	53	WNW	6.3	2.8			4	W		0	0		
Naples, O. U.			29.95	760.7	68.7	20.4	56	SW			2		7	NW		0	0		
Lecce			29.95	760.7	60.8	16.0	75	ENE	18.6	8.3			6	E		0	0		
Cosenza			29.96	760.9	65.5	18.6	71	N	2.5	1.1			10			0.024	0.6	Light rain	
Riposto, (Sicily)			29.91	759.8	61.0	16.1	73	ENE			4		3	W		0	0		
Palermo			29.91	759.6	60.1	15.6	66	NE	7.4	3.3			4			0	0		
Caltanissetta	27.93	709.3	29.89	759.2	59.4	15.2	53	E			2		6	W.		0	0		
Sub-Series.																			
Naples, S. R.			29.96	761.0	61.2	16.2	75	NE	1.3	0.6			..c,k	N		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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Tokio																			

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.29	769.4	45.7	7.6		NNE			2								
Groningen			30.20	767.0	52.9	11.6		Calm			0								
Helder			30.25	768.4	45.0	7.2		N			1								
Utrecht			30.21	767.4	51.3	10.7	78	NNE			2		10					Overcast	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.08	764.1	49.3	9.6	64	S	19.0	8.5			3			0.307	7.8		
Brönö			30.22	767.6	36.9	2.7	87	W	0.4	0.2			10			0	0		
Christiania			29.71	754.7	35.6	2.0	87	SW	29	13			10			0.110	2.8	Raining	
Tromsö			30.04	762.9	41.0	5.0	84	SSW	20	9			10			0.008	0.2		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	763.9	63.3	17.4	88	SSW	5.7	2.56			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.25	768.3	62.2	16.8	26	NNW	9.1	4.08			1			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.23	767.7	64.4	18.0	62	SW	5.4	2.41			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.34	770.7	59.7	15.4	53	SSE	4.9	2.2			1			0.236	6.0		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			30.17	766.4	52.0	11.1	73	SE	25	11			10						Astronomical Obs.
Wilna			30.32	770.0	52.2	11.2	57	E	4	2			0						Astronomical Obs.
Dorpat			30.28	769.1	50.9	10.5	63	WNW					0						Physical Cabinet.
St. Petersburg			30.19	766.7	37.2	2.9	91	W	9	4			10						Central Physical Obs.
Kuopio			30.03	762.7	39.9	4.4	84	E	13	6			0						Gh. Forsten.
Kieff			30.38	771.7	41.0	5.0	63	E	7	3			3						Physical Cabinet.
Nikolaiev			30.19	766.7	56.8	13.8	64	NE	31	14			3						Kurdakof.
Kertch			29.96	761.0	56.1	13.4	67	E	31	14			4						Lagorio.
Moscow			30.89	774.4	36.5	2.5	61	SSW	18	8			2						Meteorological Obs.
Lugan			30.26	768.6	44.6	7.0	57	ENE	41	18			4						Meteorological Obs.
Archangel			29.76	756.0	34.5	1.4	85	W	29	13			10						Ogorodnikof.
Tiflis	28.41	721.6	29.76	756.0	71.2	21.8	42	S	4	2			8						Physical Observatory.
Astrakhan			30.13	765.4	47.7	8.7	78	NNE	27	12			10						Sebastianof.
Kasan			30.39	772.0	35.4	1.9	57	W	4	2			0						Physical Cabinet.
Orenburg			30.40	772.2	38.5	3.6	69	SE	4	2			0						Tschernischef.
Ekaterinburg	29.25	742.9	30.30	769.7	27.7	— 2.4	42	SW	20	9			2						Meteorological Obs.
Nukuss			29.80	757.0	79.3	26.3	22	ESE	11	5			0						
Kasaly																			Bobrof.
Tashkend	28.50	724.0	30.17	766.2	69.6	20.9	19	Calm	0	0			0						Michelson.
Barnaul			29.97	761.2	35.2	1.8	77	SW	4	2			10						Meteorological Obs.
Yeniseisk			29.42	747.2	38.7	3.7	37	SW	11	5			4						Marks.
Irkutsk																			Usolsef.
Oorga																			Mossin.
Peking, (China)			30.12	765.0	55.4	13.0	42	SW	4	2			2						Physical Observatory.
Nertchinsk	27.79	705.8	29.93	760.2	20.8	— 2.9	64	NW	9	4			5			Blank	Blank		Meteorological Obs.
Vladivostock			30.29	769.5	32.2	0.1	92	Calm	0	0			0						
Nikolaievsk, on the Amoor					26.4	— 3.1	89	Calm	0	0			0						

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis 18 40[illegible] m ters, or 1,411.8 feet; Ekaterinburg, 40[illegible].4? m., or 1,90[illegible].2? ft.; Tashkend, m 1[illegible].2?, 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 4,20[illegible] 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.

Stations	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.24	768.0	55.2	12.9	35	N	7.5	3.33			2			0	0		Royal Observatory.
San Fernando			30.2[illegible]	769.4	58.3	14.6	65	WNW	6.5	2.9		0	2		WNW	0	0		The Naval Observatory.

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.89	759.2	42.1	5.6	67	W			2		10			0	0		
Umea			30.07	763.8	45.7	— 7.6	68	Calm			0		4			0	0		
Hernosand			30.13	765.3	58.6	14.8	37	Calm			0		1			0	0		
Stockholm			30.16	766.1	41.2	5.1	89	WNW			2		10			0.024	0.6	Foggy	
Wisby			30.26	768.7	42.4	5.8	94	W			4		3			0	0		
SUB-SERIES.																			
Upsala			30.19	766.9	37.0	2.8	89	WSW	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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	30.08	764.0	54.0	12.2	70	N			1		9			0.008	0.2	Covered	The Observatory.
Zurich	28.44	722.3	30.07	763.6	57.4	14.1	84	W			1		8			0	0	Lightly cov'd	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +3.5 mm.; Thermometer, +2.0 cent.; Relative Humidity, +12 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.9[illegible]	759.5	50.4	10.2	95	NNW	3	1.5			10		NW	0	0	Light rain	
Fao, (Persian Gulf)			30.0[illegible]	762.0	73.4	23.0		SE			4		10			Blank	Blank		
Salonica			29.93	760.1	75.7	24.3		S			1		10					Raining	
Valona			29.84	757.8	59.5	15.3		W			1		10					Raining	
Varna			29.76	760.0	48.2	9.0		N			4		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.87	758.8	73.4	23.0	68	SW			2		2ks		SW	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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 Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			30.08	764.0	29.7	— 1.3	57	N	6	2.7			10s		SW			Cloudy	Hon. J. Ferguson.
Brockville, Ontario			30.14	765.5	32	0.0		Calm	0	0						0	0	Clear	W. R. Bigg.
*Chatham, N. B.			30.12	765.0	31	— 0.6	78	NW	14	6.3		0	0			0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island			30.05	763.3	29	— 1.7	66	N	18	8.0		2k	0			0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			30.11	764.8	34.9	1.6	69	E			1	10k		W		0	0	Fair	James Smith, M. A.
Dalhousie, N. B.			30.13	765.3				W			1					0	0		H. A. Johnson.
Esquimault, B. C.			30.17	766.3	37.1	2.8	86	N	1	0.4		2ck				0	0	Clear	W. H. Bevis.
Fredericton, N. B.			30.15	765.8	33.0	0.6	51	NW	8	3.6		2c				0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.75	755.6	24	— 4.4	98	SW	7	3.1		2ck	2ks	SW	SW	0	0	Fair	James Stewart.
Goderich, Ontario			29.89	759.2	36.6	0.9	91	S			2		10n			0	0	Threatening	H. J. Strang, M. A.
Granton, Ontario			29.90	759.4	35.0	1.7		S			1		10n			0.83	21.1	Cloudy	James Grant.
*Halifax, N. S.			30.02	762.5	39	3.9	46	NW	10	4.5		0	0			0	0	Clear	F. Allison, M. A.
*Kingston, Ontario			30.08	764.0	34	1.1	75	SE	4	1.8			10n		SE	0.02	0.5	Sleeting	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			30.16	766.1	27	— 2.8	71	S	9	4.0			10n			0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.11	764.8	25	— 3.9	72	NE	8	3.6		10cs	0			0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario			29.95	760.7	33	0.6	81	SE	14	6.3			10p		S	0	0	Threatening	Rev. R. Mooley.
*Port Dover, Ontario			29.94	760.5	36	2.2	90	E	6	2.7			10n		E	0.16	4.1	Threatening	H. Morgan.
Port Hastings, N. S.			29.96	761.0	29.7	— 1.3		NW	20	8.9						0	0	Fine	Peter Grant.
*Port Stanley Ontario			29.91	759.7	36	2.2	89	E	13	0.8			10n		SW	0.30	7.6	Cloudy	M. Payne.
*Quebec, Quebec			30.20	767.1	30	— 1.1	89	Calm	0	0		0	0			0	0	Clear	Capt. Ash, R. N.
St. John, N. B.			30.14	765.5	36	2.2	80	NW	5	2.2		5c				0	0		G. Murdoch, C. E.
*Saugeen, Ontario			29.85	758.2	36	2.2	90	SE	5	2.2			10n			0.01	0.3	Cloudy	K. Stewart.
Stayner, Ontario			29.88	758.9	24	— 4.4	56	SE	5	2.2			10n		SE	0.10	2.5	Cloudy	R. J. Cole.
Stratford, Ontario			29.91	759.7	33.6	0.9	89	SE	5	2.2			10s			0.146	3.71	Threatening	C. J. MacGregor, M. A.
*Sydney, C. B.			29.92	760.0	32	0.0	59	NW	10	4.5		2k	2ks	N	N	0	0	Fair	T. C. Hill.
*Toronto, Ontario			29.97	761.2	34	1.1	98	E	8	3.6			10n			0.28	7.1	Light rain	Magnetic Observatory
Woodstock, Ontario			29.94	760.5	34.0	1.1	100	E			1	0?	0?			0.70	17.8	Cloudy?	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,[illegible]15 feet, or 359.4 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	766.1	34	1.1	90	Calm	0	0			10n			Inap.	Inap.	Light snow	
Alpena, Mich			29.80	756.9	31	− 0.6	100	SE	4	1.8			Fog			0.06	1.5	Foggy	
Atlantic City, N. J			30.21	767.3	40	4.4	91	S	7	3.1			10n		S	Inap.	Inap.	Light rain	
Augusta, Ga.			29.98	761.5	46	7.8	96	NE	4	1.8			10s		NE	0.71	18.0	Cloudy	
Baltimore, Md			30.18	766.6	40	4.4	91	SE	5	2.2			10n		SE	0.05	1.3	Light rain	
Barnegat, N. J			30.23	767.8	39	3.9	91	SW	10	4.5			Fog			Inap.	Inap.	Light rain	
Benton, Montana	27.00	685.8	29.80	756.9	35	1.7	90	NE	4	1.8			10s		NE	0	0	Cloudy	
Bismarck, Dakota	28.11	714.0	29.82	757.4	24	− 4.4	48	NW	8	3.6		5k	0	NW		0	0	Fair	
Boston, Mass			30.19	766.8	37	2.8	71	W	8	3.6		10s	Fog	SW		0	0	Cloudy	
Breckenridge, Minn			29.82	757.4	27	− 2.8	94	W	8	3.6			10s		W	0.14	3.6	Cloudy	
Buffalo, N. Y			29.92	760.0	39	3.9	95	SE	4	1.8			10s			0.10	2.5	Cloudy	
Burlington, Vt			30.14	765.5	34	1.1	71	SE	3	1.3			10s			0	0	Cloudy	
Cairo, Ill			29.99	761.7	47	8.3	77	Calm	0	0		0	0			0.05	1.3	Clear	
Cape Hatteras, N. C			30.10	764.5	56	13.3	87	SE	12	5.4			10ks		SE	0	0	Cloudy	
Cape Henry, Va			30.12	765.0	51	10.6	79	SE	12	5.4			10s			0	0	Cloudy	
Cape May, N. J			30.20	767.1	41	5.0	81	E	6	2.7			10n			0.03	0.8	Light rain	
Charleston, S. C			29.93	760.2	63	17.2	97	S	8	3.6			10s		S	1.48	37.6	Cloudy	
Cheyenne, Wyoming	23.89	606.8	29.83	757.7	30	− 1.1	67	SW	4	1.8		8ck	0	W		0	0	Fair	
Chicago, Ill			29.79	756.7	40	4.4	73	SW	8	3.6		0	5s		SW	0.31	7.9	Fair	
Cincinnati, Ohio			29.82	757.4	51	10.6	86	SW	2	0.9			10ks			0.46	11.7	Cloudy	
Cleveland, Ohio			29.87	758.7	43.8	6.6	73	SE	6	2.7			10ks		SW	0.24	6.1	Cloudy	
Colorado Springs, Col	24.04	610.6	29.91	759.7	23	− 5.0	60	NW	12	5.4		2cs	5s			0	0	Fair	
Corsicana, Tex			30.03	762.7	51	10.6	72	NE	4	1.8		0	0			0	0	Clear	
Davenport, Iowa			29.86	758.4	34	2.2	90	W	8	3.6			10s			0.17	4.3	Cloudy	
Denison, Tex			30.02	762.5	49	9.4	71	N	2	0.9		0	0			0	0	Clear	
Denver, Col.	24.71	627.6	29.93	760.2	28	− 2.2	65	S	6	2.7		5c	0	NW		0	0	Fair	
Detroit, Mich			29.84	757.9	37	2.8	96	SE	1	0.4			Fog			0.12	3.0	Foggy	
Dodge City, Kan	27.43	693.7	29.78	756.4	36	2.2	80	W	8	3.6		0	0			0	0	Clear	
Dubuque, Iowa			29.79	756.7	35	1.7	80	SW	8	3.6			10s			0.05	1.3	Cloudy	
Duluth, Minn			29.74	755.4	32	0.0	79	S	4	1.8			10s			0.13	3.3	Cloudy	
Eastport, Me			30.11	764.8	36	2.2	45	NW	11	4.9		8c	Haze	NW		0	0	Fair	
Erie, Pa			29.88	758.9	43	6.1	75	SE	16	7.2		Haze	8s			0.26	6.6	Fair	
Escanaba, Mich			29.72	754.9	34	1.1	90	SE	4	1.8			10n			0.10	2.5	Light snow	
Fort Gibson, Indian Terr			30.04	763.0	43	6.1	75	N	4	1.8		0	0			0	0	Clear	
Ft. St. Michaels, Alaska			29.58	751.8	− 5	−20.6		NE	10	8.5		8c	0	S				Fair	
Fort Sill, Indian T	28.84	732.5	29.98	761.5	40	4.4	56	N	8	3.6		0	0			0	0	Clear	
Fort Sully, Dakota																			
Galveston, Tex			30.05	763.3	61	16.1	83	NW	2	0.9		0	0			0	0	Clear	
Grand Haven, Mich			29.76	755.9	38	3.3	95	S	13	5.8			Fog			0.36	9.1	Foggy	
Indianapolis, Ind			29.88	758.9	44	6.7	75	W	4	1.8			10s		W	0.27	6.9	Cloudy	
Indianola, Tex			30.05	763.5	59	15.0	87	SE	4	1.8		0	0			0	0	Clear	
Jacksonville, Fla			29.97	761.2	66	18.9	91	W	4	1.8			10s			5.12	130.0	Cloudy	
Keokuk, Iowa			29.81	757.9	38	3.3	81	W	10	4.5			10s		W	0.05	1.3	Cloudy	
Key West, Fla			30.04	763.0	76.6	24.8	72	SE	13	5.8		1cs	0			0	0	Clear	
Kittyhawk, N. C			30.16	766.1	51	10.6	86	S	8	3.6			10s			0	0	Cloudy	
Knoxville, Tenn			30.00	762.0	47	8.3	92	Calm	0	0			10n			0.14	3.6	Misting	
La Crosse, Wis			29.78	756.4	35	1.7	90	S	3	1.3			10n			0.33	8.4	Heavy snow	
Leavenworth, Kan			30.00	762.0	34	1.1	79	W	5	2.2		0	0			0	0	Clear	
Lexington, Ky	28.84	732.5	29.94	760.5	50	10.0	100	S	11	4.9			10s			0.01	0.3	Cloudy	
Long Branch, N. J			30.21	768.1	37	2.8	90	W	4	1.8			10n			0.03	0.8	Heavy rain	
Louisville, Ky			29.91	759.7	49	9.4	85	W	16	7.2			10s		W	0.20	5.1	Cloudy	
Lynchburg, Va			30.09	764.3	43	6.1	83	SE	3	1.3			10n		SE	0.05	1.3	Light rain	
Malone, N. Y			30.05	763.3	35	1.7	44	S	4	1.8		8cs	0	NW		0	0	Cloudy	
Manhattan, Kan	28.83	732.3	30.03	762.7	27	− 2.8	88	SW	4	1.8		0	0			0.09	2.3	Clear	
Marquette, Mich			29.71	755.4	33	0.6	89	E	4	1.8			10s			0	0	Cloudy	
Memphis, Tenn			30.02	762.5	49	9.4	85	NW	1	0.4		0	0			0	0	Clear	
Milwaukee, Wis			29.76	755.9	35	1.7	100	W	10	4.5			10n		W	0.38	9.7	Light rain	
Mobile, Ala			29.91	755.4	41	5.0	94	N	8	3.6			10s		N	0.57	14.5	Cloudy	
Montgomery, Ala			29.95	760.7	49	9.4	89	N	12	5.4			10s		NE	1.66	42.2	Cloudy	
Morgantown, W. Va			29.92	760.0	53	11.7	79	S	4	1.8			10n		S	0.04	1.0	Light rain	
Mt. Washington, N. H	23.75	603.2	30.11	764.8	25	− 3.9	87	NW	15	6.7		8s	0	NW		0	0	Fair	
Nashville, Tenn			29.95	760.7	52	11.1	86	SE	4	1.8			10s		SE	0	0	Cloudy	
New Haven, Conn			30.23	767.8	37	2.8	90	SW	4	1.8			10n		SW	Inap.	Inap.	Light rain	
New London, Conn			30.26	768.6	37	2.8	70	W	8	3.6			10s		W	0	0	Threatening	
New Orleans, La			29.91	760.5	64	17.8	75	N	5	2.2		0	0			Inap.	Inap.	Clear	
Newport, R. I			30.24	768.1	37	2.8	81	SW	12	5.4			10ks			0	0	Cloudy	
New York, N. Y			30.24	768.1	35	1.7	79	SW	1	0.4			10s			Inap.	Inap.	Cloudy	
Norfolk, Va			30.13	765.3	49	9.4	85	SE	5	2.2			10s			0	0	Threatening	
North Platte, Neb	26.99	685.5	29.64	752.8	30	− 1.1	89	Calm	0	0		2c	0			0.13	3.3	Clear	
Omaha, Neb.	28.82	732.0	29.91	759.7	36	2.2	90	W	3	1.3		2c	0			0.01	0.3	Fair	
Oswego, N. Y			30.04	763.0	38.5	3.6	75	SE	12	5.4			10s		NW	Inap.	Inap.	Cloudy	
Pembina, Dakota			29.74	755.4	24	− 4.4	86	SW	4	1.8			10s			0	0	Cloudy	
Philadelphia, Penn			30.22	767.6	37	2.8	90	SW	3	1.3			10n			0.03	0.8	Light rain	
Pike's Peak, Colorado	17.50	441.5	29.71	754.6	9	−12.8	67	NW	40	17.9		8c	0			0	0	Fair	
Pittsburgh, Penn			29.92	760.0	48	8.9	71	SE	3	1.3			10s			Inap.	Inap.	Cloudy	
Port Huron, Mich			29.85	758.	36	2.2	90	S	4	1.8			10s			0.03	0.8	Cloudy	
Portland, Me			30.18	766.6	37	2.8	71	Calm	0	0			10s			0	0	Cloudy	
Portland, Oregon			30.25	768.3	39	3.9	81	S	2	0.9			10ks		NW	0.03	0.8	Cloudy	
Punta Rassa, Fla			30.03	762.7	72.7	22.6	90	SE	12	5.4		Haze	Sm'e	SW		0	0	Hazy	
Rochester, N. Y			29.97	761.2	38	3.3	80	SE	8	3.6			10s			0.09	2.3	Cloudy	
Salt Lake City, Utah	25.52	648.2	29.85	758.2	47	8.3	48	Calm	0	0			10s			0	0	Cloudy	
Sandy Hook, N. J			30.22	767.6	38	3.3	90	SW	7	3.1			10n		SW	0.01	0.3	Light rain	
San Diego, Cal.			30.10	764.5	53	11.7	86	E	4	1.8			5s		W	0	0	Fair	
San Francisco, Cal			30.06	763.5	52	11.1	88	SW	4	1.8			10s		SW	0	0	Cloudy	
Santa Fe, N. M	23.27	591.0	29.81	757.2	29	− 1.7	67	NE	6	2.7		0	0			0	0	Clear	
Savannah, Ga.			29.91	760.5	63	17.2	88	Calm	0	0			10s			2.26	57.4	Cloudy	
Shreveport, La			30.07	763.8	52.5	11.4	86	Calm	0	0		2k	0	W		0	0	Fair	
Smithville, N. C			30.06	763.5	60	15.6	85	SE	20	8.9			10s			0	0	Cloudy	
Springfield, Mass			30.20	767.1	35	1.7	79	S	4	1.8			10s,hs			0	0	Cloudy	
St. Louis, Mo			29.97	761.2	40	4.4	72	NW	4	1.8		0	0			0	0	Clear	
St. Marks, Fla			29.91	759.7	63	17.2	94	SE	15	6.7			10n			2.65	67.3	Light rain	
St. Paul, Minn			29.75	755.6	31	− 0.6	89	Calm	0	0			10n			0.43	10.9	Light snow	
St. Paul's Island, Alaska			29.52	749.8	7	−13.9	76	NNW	18	8.0			10k			0.02	0.5		
Thatcher's Island, Mass			30.21	767.3	37	2.8	71	SW	10	4.5			10s		W	0	0	Cloudy	
Toledo, Ohio			29.84	757.9	39	3.9	91	Calm	0	0			Fog			0.12	3.0	Foggy	
Tucson, Arizona	27.63	701.8	30.22	767.6	45	7.2		SE				0	0			0	0	Clear	
Tybee Island, Ga			29.88	758.9	62	16.7	94	S	8	3.6			10s		SW	2.70	68.6	Threatening	
Vicksburg, Miss			30.04	763.0	55	12.8	83	Calm	0	0		2k	Sm'e			0	0	Fair	
Virginia City, M. T	23.96	608.6	29.44	747.8	33	0.6	69	Calm	0	0			10ks			0	0	Cloudy	
Washington, D. C			30.15	765.8	40	4.4	91	SE	6	2.7			10n			0.01	0.3	Light rain	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.06	763.5	62	16.7	83	SE	14	6.3			10s		SW	0.01	0.3	Cloudy	
Wood's Holl, Mass			30.00	762.0	4[illegible]	4.4	73	W	7	3.1		0	5s		W	0	0	Fair	
Wytheville, Va	27.65	702.3	29.85	758.2	38	3.3	90	E	2	0.9			10n		E	0.14	3.6	Light rain	
Yankton, Dakota	28.63	727.2	29.98	761.5	23	− 5.0	80	Calm	0	0		0	0			0.02	0.5	Clear	
Yuma, Arizona			30.03	762.7	56	13.3		NE				0	0			0	0	Clear	
Sub Series.																			
Bridgetown, B'b'dos, W. I.			30.00	762.0	80	26.7	82	NE	4	1.8		2c	5s	N	SE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.98	761.5	77	25.0	78	E				8k	2k			0.15	3.8	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.25	768.3	77	25.0	63	NNE	14	6.3		2c	8ks	NE	N	0	0	Cloudy	W. S. Cameron.
Kingston, Jamaica, W. I.			30.22	767.6	78	25.6	78	Calm	0	0		2k	2s	SE		0	0		James Gall.
Santiago de Cuba, W. I.			29.83	757.7	78	25.6	69	SW	1.2	0.5		2k	4s		SW	0	0	Fair	Robert Mason.
Havana, Cuba, W. I.			30.04	763.0	78	25.6	69	NE	6.0	2.7		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			30.28	769.1	58.5	14.7	62	NNE	9.5	4.2			10pk			0	0	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.20	690.9	29.99	761.7	65	18.3	83	NE	2.0	0.9		5c	0	NE		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.			29.97	761.2	78	25.6	91	E			2		10n			0.840	21.34	Rainy	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.03	762.8	83.3	28.5										0.669	17.00		Dr. H. Groot.
Medellin, Colombia, S. A.	25.30	642.6			64.0	17.8	81		0	0		1c	2s			0	0	Fair	Thomas Herran.
St. John's, Newfoundland			29.67	753.6	27.0	− 2.8	88	W					10n			0.03	0.8	Cloudy	John Delaney.
York Factory, B. A.			29.73	755.1	19.5	− 6.9	92	Calm	0	0		6k	0	NE		0	0		J. Fortescue.
Honolulu, Oahu, H. I.			30.13	765.3	72	22.2	90	NE			3					0	0		E. P. Church.
Makawao, Maui, H. I.	27.74	704.6	29.90	759.4	57	13.9	81	Calm	0	0		2c	2n		NE	0	0	Raining	F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below −40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6.032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,294.8 ft., or 699.4 m; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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 APRIL 4, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.22	768.7	64.4	18.0	66	NW			1		3			0	0	Fair	Charnot.
Algiers			30.24	768.2	59.0	15.0	78	NNW			2		9			0	0	Hidden	Peter.
La Calle																			Kuntz.
Tunis			30.01	762.2	64.4	18.0	48	NNW			5		7			0	0	Cloudy	Jacques
Sfax			29.97	761.2	67.5	19.7	37	N			5		4			0	0	Fair	Chauvey.
Saida			30.26	768.6	53.6	12.0	54	N			4		4			0	0	Fair	Millot.
Tebessa			30.08	764.1	49.6	9.8		N			3		10			0	0	Hidden	Colin.
Geriville			30.24	768.4	42.6	5.9	75	N			2		6			0.112	3.0	Fair	Buard.
Laghouat			30.15	765.3	55.4	13.0	66	NW			3		5			0	0	Fair	Guyot.
Biskra			30.09	764.2	68.9	20.5	20	NNW			5		8			0	0	Cloudy	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	765.0	63.3	17.4	59	NE			1		7			0.449	11.4		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.28	769.1	53.1	12.0	76	NE			1		10			0.016	0.4		I. R. Observatory.
Eperies			30.16	766.1	63.3	17.4	54	NE			2		9		S	0	0		Julius Mikolik.
Gratz	28.99	736.3	30.18	766.5	62.6	17.0	53	SW			5		8			0.331	8.4		Andreas Rospini.
Hermannstadt	28.69	728.7	30.11	764.9	55.8	13.2	42	ESE			3		10			0	0		Prof. Reissenberger.
Kremsmünster	28.93	734.8	30.28	769.0	55.9	13.3	78	WSW			1		10			0	0		Prof. C. Wagner.
Lemberg			30.19	766.8	52.9	11.6	56	SE			2		3			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.05	763.2	66.6	19.2	52	ENE			5		9ks			0	0		I. R. Hydrographic Office
Szegedin			30.16	766.1	56.2	13.5	73	Calm			0		10			0.057	1.45		Karl Stancel.
Trieste			30.09	764.2	69.1	20.6	43				2		6			0	0		Prof. V. Farolfi.
Vienna			30.21	767.7	57.0	13.9	70	NNW			2		10			0.024	0.6		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.46	773.7	50.4	10.2	87	NW			1		10			0.004	0.10		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	52.5	11.4		SSE	14	6.3			6			0	0	*D. clouds	William Boswell.
Ardrossan			30.29	769.4	53	11.7		S			2		7					*D. clouds	J. Mayes.
Armagh Observatory			30.31	769.9	56.4	13.6		SSW	15	6.7			9					Gloomy	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			30.36	771.1	61.0	16.1		WSW	10	4.5			7					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			30.33	770.4	60.9	16.1		SW			1–3		10					*D. clouds	J. Dreyer.
Bradford			30.34	770.6	58.8	14.9		SW			1		9			0	0	Gloomy	J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	81.2	27.3		NE			2		2					*D. clouds	Sergt. J. F. Halanen.
Cambridge Observatory			30.42	772.7	63.8	17.7		SW			1		10ks					Hazy	H. Todd.
Cardington			30.42	772.7	65.0	18.3		W			1		4					Blue sky	John McLaren.
Carlisle			30.33	770.4	56.9	13.8		W			3		10			0	0	Overcast	[illegible] Bell, for J. Cartmell.
Chatham, School M. E.			29.61?	752.1?	67.2	19.6		Calm			0		4					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	29.11	739.4	30.64	778.2	51.0	10.6		SW			1		10					Gloomy	R. E. Power.
Donaghadee			30.30	769.6	59	15.0		WNW			3		8					*D. clouds	J. Mac Gowan.
Dover			30.46	773.7	51	10.6		SSW			2		2					¼ clouded	J. Costello.
Eccles, (near Manchester)			30.36	771.1	60.5	15.8		SSW	3.8	1.7			10					Overcast	Thomas Mackereth.
Falmouth Observatory			30.48	774.2	56.0	13.3		S	9	4.0			10					Overcast	The Staff.
Fort Napier, (Natal)	27.45	697.2	29.79	756.7	83.8	28.8		Calm			0		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.95	760.7	80.0	26.7		Calm			0		9					Thunder-storm	[illegible]
Galway, Queen's College			30.26	768.6	51	10.6		W			1		10					Gloomy	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.27	768.8	66.0	18.0		SSW			2		1					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			30.25	768.3	55.5	13.1		SW			2		10					Overcast	Lewis Stuart.
Great Yarmouth			30.41	772.4	51	10.6		S			4		3					Blue sky	G. T. Watson.
Greenwich Royal Obs			30.44	772.3	65.5	18.6		WSW			1		5					*D. clouds	The Staff for G. B. Airy.
Guernsey			30.48	774.2	58.5	14.7		SSW			1		3					Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs			30.38	771.6	58.0	14.4		WSW			2		10					Hazy	L. J. Crossley.
Helston			30.42	772.7	57	13.9		SW			2		8k			0.7	17.8	Foggy	M. P. Moyle.
Holyhead			30.37	771.4	50	10.0		SSW			4		10					Foggy, hazy	John Tilston.
Kew Observatory			30.44	773.2	60.0	15.6		SW	13	5.8			5					Hazy	The Staff.
Kingstown			30.35	770.9	54	12.2		ESE			1		5					*D. clouds	George Mitchell
Leicester Museum			30.43	772.9	59.0	15.0		SW			1		6					Hazy	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.85	758.2	61.2	16.2		NE			2		9k						Fred Travis, Pvt A.H.C.
Nairn			30.15	765.8	58	14.4		WSW			1		0					Clear	W. D. Penny.
Nassau, (Bahamas)			30.07	763.8	77.6	25.3		S			6		7					*D. clouds	Surg.-Maj. Henry.
Nottingham			30.39	771.9	63.1	17.3		SW			1		7k		WNW	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.39	771.9	61.0	16.1		SW			2		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.41	772.4	61	16.1		SW			1		8					Overcast	J. Lucas.
Plymouth			30.46	773.7	53	11.7		Calm			0		10					Misty	John Merrifield.
Roche's Point			30.37	771.4	52	11.1		SSW			4		10					Foggy	W. Kennedy.
Saint Ann's Head			30.45	773.4	52	11.1		S			1		10					Foggy	John C. Walker.
Saint Helier, (Jersey)			30.49	774.4	58.0	14.4		SE			1		2					¼ clouded	A. P. Amy.
Sandwick Manse (Orkneys)			30.09	764.3	51.1	10.6		SSW	20	8.9			10					Overcast	Rev Chas. Austin, LL. D.
Scarborough			30.35	770.9	61.0	16.1		WSW			2		7					*D. clouds	F. Shaw.
Scutari Cemetery (Turkey)			29.96	761.0	50.2	10.0		N			2		10			Blank	Blank	Misty	Sergt. W. H. Lyne.
Sheffield			30.36	771.1	62.4	16.9		WSW			2		9			0	0	Overcast	W. F. Cooper.
Silloth Rectory			30.33	770.4	51.2	10.7	92	SW			2		10			0	0	Overcast	Rev Francis Redford
Stonyhurst Observatory			30.37	771.4	55.3	12.9		W			2		10			Blank	Blank	Gloomy	S. J. Perry.
Stornoway, Lewis C. (Hebr.			30.5	763.3	52	11.1		SSW			6		10					Drizzling	John Smith.
Strathfield Turgiss			30.44	773.2	61.0	16.1		W			1–2		5					Blue sky	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			30.09	764.3	52	11.1		S			3		10					Overcast	John Trotter.
Truro, Royal Institution			30.46	773.7	59	15.9		W			4		8					Gloomy	W. Newcombe.
Valencia Observatory			30.39	771.9	54.5	12.5		S	23	10.3			10					Misty	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Cape Good Hope Obs.			30.16	766.1	64.8	18.2	59	SSE	12	5.4			6						The Staff, for E. J. Stone.
Leith, Restalrig Park			30.28	769.1	58.0	14.4		SW			3		10k			0	0	Fine, cloudy	Andrew Gibb.
Mauritius			30.00	762.0				E	18.1	8.1						0.03	0.8		
Monach Lt-house, Hebrides			30.02	762.5	49	9.4		S			6		10			0.2	5.1		J. Youngclause.
North Unst, (Shetland Is.)			29.93	760.2	48	8.9		W			6	4	7	SSW		Blank	Blank		

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. *Detached clouds.

DANISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.39	772.0	46.6	8.1	89	NE			2		1						
Fanöe			30.43	773.0	43.0	6.1	93	SW			4		10					Misty	
Godthaab, (Greenland)			29.98	761.6	22.6	−10.8	79	N			4		10						
Stykkisholm, (Iceland)			29.47	748.5	28.4	−2.1	94	E			6		8						
Thorshavn, (Faröe)			29.81	757.1	48.4	9.1	80	SW			6		10						
Vestervig			30.33	770.4	41.7	5.4	91	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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	57.2	14	81	NE			1		28		NE	0	0	Slightly cl'dy	Normal School.
Amiens			30.47	773.8	57.6	14.2	74	W			3		0			0	0	Clear	Normal School.
Avignon			30.19	766.8	62.6	17	68	N			3					0	0	Lightly clouded.	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.48	774.2	58.5	14.7	50	N			2		0			0	0	Clear	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			30.41	772.3	52.2	11.2	86	N			4		10		NE	0	0	Covered	Normal School.
Brest			30.44	773.1	60.6	15.9	78	SW			2		8		SW	0	0	Misty.	Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			30.36	771.2	48.2	9.0	89	N			2		10			0.043	1.1	Covered	Puy de Dome Obs.
Commercy			30.43	773.0	52.0	11.1	75	N			2		10		N	0	0	Cloudy	Normal School.
Commune de Grèasque*			29.99	761.8	62.4	16.9	52	NW			2		5		NW	Inap.	Inap.		
Grenoble			30.25	768.4	56.7	13.7	73	NW			6		10k,n		S	0	0	Covered	Normal School.
Le Mans			30.47	774.0	58.1	14.5	55	ENE			2		0			0	0	Clear	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			30.26	768.6	59.0	15	72	NNE			6		2		NNE	0	0	Slightly cl'dy	Normal School.
Mâcon			30.30	769.6	58.3	14.6	74	N			6		5		SW	0.453	11.5	Cloudy	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			30.17	766.4	57.6	14.2	93	N			4		2		N	0	0	Slightly cl'dy	Normal School.
Orleans																			Normal School.
Paris Observatory			30.46	773.7	58.5	14.7	36	NE			2		0			0	0	Vapory	National Observatory.
Parthenay																			Normal School.
Privas			30.24	768.1	57.2	14		N			6		10		N	0	0	Covered	Normal School.
La Roche-sur-Yon			30.49	774.4	63.3	17.4	43	N			2		0			0	0	Clear.	Normal School.
Rochefort, Observatory			30.46	773.7	65.3	18.5	96	NE			3		0			0	0	Blue sky	Naval Observatory.
Rouen			30.48	774.3	66.2	19.0	30	NE			2		0			0	0	Clear	Normal School.
Saint Lo			30.52	775.1	63.5	17.5	57	NW			1		2		N	0	0		Normal School.
Tarbes	29.32	744.6			53.6	12		WSW			2		8		E	0.12	3.	Very cloudy	Normal School.
Toulouse																			Normal School.
Villefranche			30.31	769.9	59.4	15.2	90	NNW			6		10		N	0.91	23.	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.96	761.0	79.8	26.2	76	NE			3		2k						L'Abbé Marchési.
Gorée																			
Marseilles			30.12	765.1	67.6	19.8	64	W.			2		3			0	0	Cloudy	Marseilles Observatory.
Mont-Louis																			—. Faiguère.
Montsouris, Paris			30.45	773.4	58.3	14.6	48	N			2		0			0	0		Montsouris Observ'tory.
Perpignan			30.28	769.2	57.7	14.3	54	NW	26.1	11.67			3		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.46	773.6	59.7	15.4	59	N			1		2			0	0	Slightly cl'dy	S. Renou.
Toulouse			30.48	774.2	48.9	9.4	89	W			3		10			0.264	6.7	Raining	Toulouse Observatory.
Tours			30.42	772.6	58.3	14.6	49	NE			2		0			0.051	1.3	Clear	C. Marquet.
Versailles, (near Paris)			30.47	773.6	60.8	16.0	41	N			3		0			0	0	Very clear	Dr. A. Bérigny.
Zi-Ka Wei, (near Shanghai)																			H. Le Lec, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Grèasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,580.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,089.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Grèasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet: Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

* Near Marseilles.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.23	767.9	57.7	14.3	59	NE			3		5	N		0	0		Prof. T. Hoh.
Berlin			30.41	772.3	47.5	8.6	68	NW			1		10			0	0		Prof. Arndt.
Breslau			30.37	771.4	50.9	10.5	78	NNW			7		10			0.224	5.7		Dr. P. Neugebauer.
Carlsruhe			30.36	771.2	58.6	14.8	68	N			3		10			0.012	0.3		A. Senz.
Cassel			30.37	771.4	55.0	12.8	70	NW			4		1	N		0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe
Emden																			Prof. Prestel.
Frankfort on the Main			30.40	772.1	59.9	15.5	46	N			2		1			0	0		Physical Society.
Friedrichshafen	28.87	733.4	30.32	770.1	56.3	13.5	69	NE			4		4			0	0		M. Wilhelm.
Hamburg			30.43	772.9	48.4	9.1	68	WSW			2	0	Fog			0	0	Very fine	Deutsche Seewarte.
Kiel			30.45	773.4	40.6	9.8	66	NW			1		2			0	0		Prof. G. Karsten.
Königsberg			30.30	769.6	50.4	10.2	78	N			2		9			0	0		Prof. E. Luther.
Köslin			30.36	771.1	41.9	5.5		NW			2		4			0	0		H. Müller.
Leipsic			30.44	773.2	46.0	8.1	74	NNW			2		10	N		0	0		Prof. Bruhns.
Memel			30.32	770.1	44.4	6.9	80	WNW			2		9			0	0		Reinbrecht & Skalweit.
Münster			30.40	772.1	57.2	14.0	67	N			2		0			0	0		Prof. E. Heis.
Neufahrwasser			30.25	768.4	45.7	7.6	88	NNW			1		10			0	0		A. Lothes.
Posen			30.35	771.0	47.8	8.8	100	NW			5		10			Inap.	Inap.		Dr. Magener.
Strassburg, (in Alsace)			30.38	771.7	58.6	14.8	61	NE			2		5	NE		0	0		Dr. Schur.
Stuttgart			30.35	770.9	58.1	14.5	68	NE			2		8			0	0		Prof. Schoder.
Thorn			30.28	769.0	53.8	12.1	75	E			3		10			0	0		Dr. Hasenbalg
Treves, (Trier)			30.33	770.3	61.2	16.2	56	SE			2		0			0	0		Prof. Flesch.
Wilstrow, Naval School			30.37	771.3	42.6	5.9	73	NW			2		10			0.028	0.7		E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Athens			29.93	760.3	60.8	16.0		NE										Cloudy	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Udine			30.90	764.2	70.2	21.2	30	E	4.3	1.9			8			0	0		
Padua			30.10	764.5	67.8	19.9	48	ESE	9.8	4.4			7	NE		0	0		
Vicenza			30.09	764.3	69.1	20.6	43	NE	1.8	0.8			3	E		0	0		
Verona			30.09	764.2	59.0	15.0	58	E			1		10			0	0		
Bergamo	28.76	730.4	30.06	763.5	66.2	19.0	56	S			2		4			0	0		
Domodossola	29.08	738.7	30.10	764.4	70.9	21.6	39	Calm					5			0	0		
Milan			30.13	765.3	69.1	20.6	54	SW			1		3	SW		0	0		
Pavia			30.12	765.1	68.0	20.0	45	NW			1		1	SW		0	0		
Moncalieri			30.14	765.5	67.5	19.7	49	ESE			2		3	NE		0	0		
Mondovi	28.24	717.3	30.14	765.6	62.8	17.1	47	NW			2		1	N		0	0		
Porto Maurizio			30.12	765.1	66.4	19.1		SE			2		7	SW		0	0		
Genoa			30.09	764.3	67.8	19.9	47	NW	3.8	1.7			4	E		0	0		
Piacenza			30.13	765.4	67.5	19.7	45	NE	4.3	1.9			7	NE		0	0		
Parma			30.13	765.4	65.7	18.7	65	ENE			2		10			0	0		
Bologna			30.14	765.5	66.6	19.2	42	WSW			1		5	W		0	0		
Florence			30.08	764.1	69.8	21.0	42	NE			4		5	NE		0	0		
Leghorn			30.07	763.6	65.3	18.5	66	N	2.5	1.9			9			0	0		
Siena	28.83	732.2	30.03	762.8	62.4	16.9	52	NE	5.8	3.6			9	NE		0	0		
Urbino	28.53	724.6	30.09	764.3	57.4	14.1	62	NE			6		10			0	0		
Pesaro																			
Ancona			30.08	763.9	59.0	15.0	77	NW			4		3			0	0		
Grosseto			30.01	762.3	69.4	20.8	52	NNE			4		6	E		0	0		
Rome			29.94	760.4	71.2	21.8	38	N	9.8	4.4			7	ENE		0	0		
Naples, O. U			29.96	761.0	67.6	19.8	54	N			2		9	N		0	0		
Lecce			29.93	760.2	62.6	17.0	63	E	11.2	5.0			3			0	0		
Cosenza			29.91	759.7	64.8	18.2	78	NW	6.9	3.1			9			0.197	5.0		
Riposto, (Sicily)			29.83	757.6	61.9	16.6	76	ENE			4		3	W		0	0		
Palermo			29.90	759.4	64.2	17.9	56	N	12.5	5.6			10			0	0		
Caltanissetta	27.93	709.5	29.89	759.2	57.6	14.2	53	NE			2		10	SW		0	0		
Sub-Series.																			
Naples, S. R			29.96	760.9	65.7	18.7	64	NE	3.1	1.4			k,c	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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters., or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Tokio																			

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Flushing			30.50	774.7	47.1	8.4		ESE			2								
Groningen			30.40	772.1	52.5	11.4		SW			1								
Helder			30.44	773.1	45.5	7.5		NNW			1								
Utrecht			30.43	773.0	50.5	10.3	86	NNE			2		10					Overcast	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Bergen			30.18	766.6	44.6	7.0	91	S	16.3	7.3			10			0.220	5.6		
Brönö			30.22	767.5	36.9	2.7	84	SW	0.4	0.2			10			0	0		
Christiania			29.69	754.1	39.6	4.2	89	SSW	22	10			10			0.280	7.1	Raining	
Tromsö			29.90	759.5	42.3	5.7	88	SSW	20	9			10			0	0		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	765.0	62.1	16.7	90	SSW	6.2	2.78			6			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.29	769.4	67.1	19.5	20	NNE	12.3	5.50			1			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.23	767.7	66.2	19.0	64	E	8.2	3.67			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.39	771.8	64.2	17.9	49	NE	7.4	3.3			1			0	0		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			30.28	769.0	46.2	7.9	81	E	4	2			10						Astronomical Obs.
Wilna			30.29	769.3	54.1	12.3	49	SE	4	2			4						Astronomical Obs.
Dorpat			30.25	768.4	54.5	12.5	65	SW					1						Physical Cabinet.
St. Petersburg			30.23	767.9	38.8	3.8	91	WSW	2	1			10						Central Physical Obs
Kuopio			30.10	764.4	40.5	4.7	92	Calm	0	0			5					Snowy	Ch. Forsten.
Kieff			30.32	770.1	49.3	9.6	50	ENE	4	2			1						Physical Cabinet.
Nikolaiev			30.21	767.2	56.5	13.6	39	NE	25	11			0						Kurdakof.
Kertch			30.05	763.2	52.7	11.5	71	ENE	25	11			4						Lagorio.
Moscow			30.32	770.0	46.0	7.8	60	S	9	4			0						Meteorological Obs.
Lugan			30.22	767.6	54.9	12.7	34	ENE	22	10			0						Meteorological Obs.
Archangel			29.96	761.0	34.2	1.2	75	NW	22	10			9						Ogorodnikof.
Tiflis	28.59	726.2	29.99	761.7	57.0	13.9	83	SSE	9	4			10					Raining	Physical Observatory.
Astrakhan			30.30	769.6	55.9	13.3	41	NNE	18	8			0						Sebastianof.
Kasan			30.05	763.2	37.8	3.2	83	W	4	2			10						Physical Cabinet.
Orenburg			30.21	767.2	35.4	1.9	62	E	9	4			0						Tschernischef.
Ekaterinburg	28.83	732.3	29.87	758.7	30.2	— 1.0	88	SW	25	11			10					Snowing	Meteorological Obs.
Nukuss			30.06	763.5	63.5	17.5	52	W	18	8			10						
Kasaly																			Bobrof.
Tashkend	28.26	717.9	29.91	759.8	72.1	22.3	35	Calm	0	0			10						Michelson.
Barnaul			30.34	770.6	11.7	—12.3	51	NW	13	6			2						Meteorological Obs.
Yeniseisk			30.10	764.6	7.3	—13.7	51	WNW	2	1			0						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.11	764.9	51.8	11.0	51	SSE	7	3			0						Physical Observatory.
Nertchinsk	27.89	708.4	30.02	762.6	29.3	— 1.5	58	Calm	0	0			0						Meteorological Obs.
Vladivostock			30.08	763.9	37.0	2.8	82	E	9	4			8						
Nikolaievsk, on the Amoor					21.9	— 5.6	87	NE	9	4			0						

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 396.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.29	769.3	61.5	16.4	36	N	12.0	5.34		1	1	NE		0	0		Royal Observatory.
San Fernando			30.31	769.9	63.1	17.3	71	WNW	8.1	3.6		3	2	SSW	WNW	0	0		The Naval Observatory.

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.02	762.6	32.4	0.2	100	SSW			2		10			0	0		
Umea			30.08	764.1	33.6	0.9	94	SW			2		10			0	0	Foggy	
Hernosand			30.05	763.2	35.8	2.1	84	Calm			0		10			0	0		
Stockholm			30.17	766.4	40.5	4.7	76	S			2		2			0	0		
Wisby			30.34	770.7	38.8	3.8	90	W			4		10			0	0	Foggy	
SUB-SERIES.																			
Upsala			30.17	766.4	37.0	2.8	83	SW	15.7	7.0			4		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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	732.6	30.25	768.4	58.5	14.7	61	NNE			6		3			0.012	0.3	Cloudy	The Observatory.
Zurich	28.66	727.9	30.27	768.9	61.7	16.5	68	NE			1		3			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +8.8 mm.; Thermometer, +4.4 cent.; Relative Humidity, +3 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.00	762.1	49.1	9.5	91	NNE	13	6.0			10		N	0	0		
Fao, (Persian Gulf)			30.00	762.0	79.2	26.2		SE			3		10						
Salonica			30.01	762.3	61.5	16.4		NE			1		10					Raining	
Valona			29.82	757.4	63.1	17.3		SW			1		10					Raining	
Varna			30.02	762.5	46.4	8.0		NW			4		10					Raining	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.95	760.6	69.8	21.0	78	NW			1		1ks		NW	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			30.29	769.4	19.6	— 6.9	76	SE	4	1.8									Hon. J. Ferguson.
Brockville, Ontario			29.82	757.4	34	1.1		SE	1	0.4			10s						W. R. Bigg.
*Chatham, N. B.			30.35	770.9	20	— 6.7	92	N	3	1.3		10ck	0	N		0.24	6.1	Cloudy	W. R. Bigg.
Charlottetown, P. E. Island.			30.32	770.1	27	— 2.8	77	NE	8	3.6		2c	0			0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			29.76	755.9	34.7	1.5	93	E			1		10n			0	0	Fair	H. J. Cundall, C. E.
Dalhousie, N. B.			30.34	770.6	20.0	— 6.7	92	SE								0.439	11.15	Rainy	James Smith, M. A.
Esquimault, B. C.			30.47	773.9	34.6	1.4	96	N	2	0.9						0	0		H. A. Johnson.
Fredericton, N. B.			30.28	769.1	24.0	— 4.4	76	NE	13	5.8		10cs				0	0	Clear	W. H. Bevis.
*Fort Garry, Manitoba			29.93	760.2	26	— 3.3	88	NW	7	3.1			10n			0	0	Cloudy	Prof. Harrison.
Goderich, Ontario			29.85	758.2	33.6	0.9	88	Calm			0		10n			0	0	Cloudy	James Stewart.
Granton, Ontario			29.83	757.7	33.0	0.6		W			1		10n			0.051	1.30	Cloudy	H. J. Strang, M. A.
*Halifax, N. S.			30.26	768.6	30	— 1.1	84	SE	8	3.6		2k	0	SE		0	0	Cloudy	James Grant.
*Kingston, Ontario			29.76	755.9	36	2.2	95	Calm	0	0			Sm'e			0	0	Fair	F. Allison, M. A.
Little Current, Ontario																0.20	5.1	Smoky	S. Woods, M. A.
*Montreal, Quebec			29.83	757.7	33	0.6	100	SE	14	6.3			10n						G. B. Abrey, C. E.
*Ottawa, Ontario			29.77	756.1	32	0.0	81	NE	8	3.6			10n		NE	0.10	2.5	Heavy snow	C. H. McLeod, C. E.
*Parry Sound, Ontario			29.79	756.7	34	1.1	95	S	5	2.2			10n		S	0.02	0.5	Threatening	J. B. Haney.
*Port Dover, Ontario			29.82	757.4	36	2.2	90	W	4	1.8			10n		W	0.08	2.0	Foggy	Rev. R. Mooley.
Port Hastings, N. S.			30.30	769.6	26.7	— 2.9		NW	3	1.3						0.05	1.3	Threatening	H. Morgan.
*Port Stanley, Ontario			29.85	758.2	35	1.7	88	W	10	4.5			10n			0	0	Fine	Peter Grant.
*Quebec, Quebec			30.03	762.7	26	— 2.2	94	N	29	13.0			10n		W	0.01	0.3	Cloudy	M. Payne.
St. John, N. B.			30.27	768.8	29	— 1.7	55	NE	9	4.0		2c			N	0.10	2.5	Light snow	Capt. Ash, R. N.
*Saugeen, Ontario			29.79	756.7	34	1.1	89	SW	6	2.7			10ks			0	0		G. Murdoch, C. E.
Stayner, Ontario			29.77	756.1	36	2.2	81	Calm	0	0			Haze		W	0.05	1.3	Cloudy	K. Stewart.
Stratford, Ontario			29.82	757.4	33.6	0.9	87	W	10	4.5			10s			0	0	Hazy	R. J. Cole.
*Sydney, C. B.			30.32	770.1	27	— 2.8	73	NW	7	3.1		2k	2ks	N		0	0	Cloudy	C. J. MacGregor, M. A.
*Toronto, Ontario			29.82	757.4	34	1.1	96	W	2	0.9			10ks		N	0	0	Clear	T. C. Hill.
Woodstock, Ontario			29.81	757.2	34.7	1.5	89	NW			1		10s		NW	0.18	2.0	Cloudy	Magnetic Observatory
																0	0	Cloudy	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.70	754.4	36	2.2	100	Calm	0	0			10n			0.78	19.8	Light rain	
Alpena, Mich.			29.77	756.1	34	1.1	90	NW	12	5.4			10s		NW	0.04	1.0	Cloudy	
Atlantic City, N. J.			29.54	750.3	41	5.0	100	NW	17	7.6			10s			0.84	21.3	Cloudy	
Augusta, Ga.			29.94	760.5	51	10.6	86	NW	4	1.8		0	0			0.75	19.1	Clear	
Baltimore, Md.			29.71	754.6	45	7.2	84	NW	10	4.5		2k	2ks	W	W	1.35	34.3	Fair	
Barnegat, N. J.			29.50	749.3	42	5.6	100	N	21	9.4			10s			1.90	48.3	Cloudy	
Benton, Montana	27.41	696.2	30.21	767.3	15	− 9.4	100	SW	1	0.4		0	0			0.15	3.8	Clear	
Bismarck, Dakota	28.12	714.2	29.83	757.7	25	− 3.9	88	N	19	8.5			10n		N	0.31	7.9	Light snow	
Boston, Mass.			29.82	757.4	36	2.2	100	E	29	13.0		10n	Fog			1.34	34.0	Light rain	
Breckenridge, Minn.			29.76	755.9	29	− 1.7	100	N	15	6.7			10n			0.12	3.0	Light snow	
Buffalo, N. Y.			29.79	756.7	34	1.1	90	SW	6	2.7			10s		W	0.07	1.8	Cloudy	
Burlington, Vt.			29.82	757.4	37	2.8	100	Calm	0	0			10n			0.29	7.4	Light snow	
Cairo, Ill.			30.05	763.3	45	7.2	76	Calm	0	0		2c	0			0	0	Clear	
Cape Hatteras, N. C.			29.67	753.6	52	11.1	86	W	16	7.2		0	2s		NW	1.83	46.5	Fair	
Cape Henry, Va.			29.72	754.9	50	10.0	82	W	22	9.8		5ck	0	NW		1.32	33.5	Fair	
Cape May, N. J.			29.60	751.8	43	6.1	92	NW	20	8.9			10s		NW	1.72	43.7	Clearing	
Charleston, S. C.			29.94	760.5	53	11.7	86	W	6	2.7		0	0			0.82	20.8	Clear	
Cheyenne, Wyoming	23.79	604.3	29.74	755.4	27	− 2.8	67	N	40	17.9			10s			0	0	Cloudy	
Chicago, Ill.			29.91	759.7	38	3.3	63	SW	4	1.8		1c	0	W		0	0	Clear	
Cincinnati, Ohio			29.94	760.5	40	4.4	64	N	9	4.0		8k	0	W		0	0	Cloudy	
Cleveland, Ohio			29.89	759.2	34.5	1.4	82	W	12	5.4			10ks		W	0.06	1.5	Cloudy	
Colorado Springs, Col.	23.75	603.2	29.62	752.3	51	10.6	22	W	24	10.7		1k	0			0	0	Clear	
Corsicana, Tex.			29.92	760.0	56	13.3	80	S	9	4.0		0	0			0	0	Clear	
Davenport, Iowa			29.94	76 .5	35	1.7	80	SW	4	1.8		5cs	0	NW		0	0	Fair	
Denison, Tex.			29.81	757.2	56	13.3	68	SE	6	2.7		1c	0			0	0	Clear	
Denver, Col.	24.52	622.8	29.74	755.4	33	0.6	61	NE	12	5.4		0	5s		W	Inap.	Inap.	Fair	
Detroit, Mich.			29.87	758.7	35	1.7	80	W	4	1.8			10s		W	0.01	0.3	Cloudy	
Dodge City, Kan.	27.05	687.1	29.29	744.0	44	6.7	84	SE	5	2.2		2c	0	W		0	0	Fair	
Dubuque, Iowa			29.91	759.7	32	0.0	79	SW	4	1.8		5c	2s			0	0	Fair	
Duluth, Minn.			29.80	756.9	35	1.7	79	Calm	0	0			10s			Inap.	Inap.	Cloudy	
Eastport, Me.			30.15	765.8	31	− 0.6	60	E	14	6.3		Haze	5s		W	0	0	Cloudy	
Erie, Pa.			29.83	757.7	35	1.7	90	W	15	6.7			10s		W	0.22	5.6	Cloudy	
Escanaba, Mich.			29.83	757.7	35	1.7	80	N	8	3.6			10s			0.11	2.8	Cloudy	
Fort Gibson, Indian Terr.			29.80	756.9	56	13.3	39	SE	12	5.4		1c	0	N		0	0	Clear	
Ft. St. Michaels, Alaska			29.45	748.0	11	−11.7		NE	21	9.4			10s					Cloudy	
Fort Sill, Indian T.	28.57	725.7	29.67	753.6	49	9.4	71	S	4	1.8		0	0			0	0	Clear	
Fort Sully, Dakota																			
Galveston, Tex.			30.04	763.0	64	17.8	88	S	4	1.8		0	0			0	0	Clear	
Grand Haven, Mich.			29.88	758.9	38	3.3	81	W	4	1.8			10s		NW	0.03	0.8	Cloudy	
Indianapolis, Ind.			30.00	762.0	37	2.8	62	NW	2	0.9		2c	0			0	0	Clear	
Indianola, Tex.			30.03	762.7	65	18.3	94	S	12	5.4		6	0			0	0	Clear	
Jacksonville, Fla.			30.03	762.7	61	16.1	83	W	4	1.8		0	0			1.10	27.9	Clear	
Keokuk, Iowa			29.91	759.7	38	3.3	72	S	6	2.7		8c	0	SW		0	0	Fair	
Key West, Fla.			30.01	763.0	76.4	24.7	81	W	9	4.0		Haze	Haze	W		0	0	Hazy	
Kittyhawk, N. C.			29.73	755.1	49	9.4	85	NW	24	10.7		0	0			0.66	16.8	Clear	
Knoxville, Tenn.			30.02	762.5	44	6.7	59	Calm	0	0		0	Fog			0.04	1.0	Fair	
La Crosse, Wis.			30.87	758.7	33	0.6	69	Calm	0	0		5c	0			0.04	1.0	Fair	
Leavenworth, Kan.			29.76	755.9	44	6.7	67	S	6	2.7		2c	0			0	0	Clear	
Lexington, Ky.	28.89	733.8	30.02	762.5	39	3.9	81	W	8	3.6		2k	0	W		0	0	Clear	
Long Branch, N. J.			29.51	749.5	44	6.7	100	NW	20	8.9			10n			2.36	59.9	Light rain	
Louisville, Ky.			30.00	762.0	41	5.0	65	W	3	1.3		0	Sm'e			0	0	Clear	
Lynchburg, Va.			29.79	756.7	52	11.1	59	NW	5	2.2		10k	0	W		0.38	9.7	Cloudy	
Malone, N. Y.			29.71	754.6	39	3.9	90	Calm	0	0			10n			0.30	7.6	Light rain	
Manhattan, Kan.	28.48	723.4	29.60	751.8	46	7.8	85	SW	20	8.9		0	0			0	0	Clear	
Marquette, Mich.			29.81	757.2	37	2.8	71	W	8	3.6			10s		W	0	0	Cloudy	
Memphis, Tenn.			30.06	763.5	49	9.4	71	NW	1	0.4		0	Sm'e		SE	0	0	Clear	
Milwaukee, Wis.			29.92	760.0	34	1.1	69	W	8	3.6		5ks	Sm'e	NW		Inap.	Inap.	Fair	
Mobile, Ala.			30.07	763.8	56	13.3	80	NW	2	0.9		0	Sm'e			0	0	Clear	
Montgomery, Ala.			30.07	763.8	53.5	11.9	76	SW	2	0.9		0	Haze			0.01	0.3	Clear	
Morgantown, W. Va.			29.84	757.9	42	5.6	74	NW	4	1.8			10s		W	0.34	8.6	Threatening	
Mt. Washington, N. H.	23.46	595.9	29.82	757.4	15	− 9.4	100	SE	30	13.4			Fog			0.06	1.5	Foggy	
Nashville, Tenn.			30.04	763.0	44	6.7	75	NW	2	0.9		5c	Fog			0	0	Fair	
New Haven, Conn.			29.57	751.1	46	7.8	100	E	24	10.7			10n		S	3.55	90.2	Heavy rain	
New London, Conn.			29.62	752.3	43	6.1	100	E	30	13.4			10n		E	2.18	55.4	Light rain	
New Orleans, La.			30.07	763.8	63	17.2	75	W	2	0.9		0	Sm'e			0	0	Clear	
Newport, R. I.			29.66	753.4	42	5.6	100	E	20	8.9			10n		E	2.02	51.3	Heavy rain	
New York, N. Y.			29.56	750.8	42	5.6	100	NE	10	4.5			10n			2.39	60.7	Light rain	
Norfolk, Va.			29.76	755.9	47	8.3	85	NW	10	4.5		5k	Haze	NW		1.08	27.4	Fair	
North Platte, Neb.	26.74	679.2	29.31	744.5	31	1.1	79	NW	4	1.8		0	8s		NW	0	0	Cloudy	
Omaha, Neb.	28.59	726.2	29.64	752.8	44	6.7	75	S	12	5.4		10cs	0	SW		0	0	Cloudy	
Oswego, N. Y.			29.76	755.9	37	2.8	90	W	8	3.6			10n			0.30	7.6	Misty, foggy	
Pembina, Dakota			29.88	758.9	25	− 3.9	86	NW	10	4.5			10s			0	0	Cloudy	
Philadelphia, Penn.			29.62	752.3	42	5.6	83	N	21	9.4		8k	2s	N	N	1.66	42.2	Cloudy	
Pike's Peak, Colorado	17.44	443.0	29.05	733.1	10	−12.2	100	SW	50	22.4						0	0	Fair	
Pittsburgh, Penn.			29.85	758.2	39	3.9	81	NW	4	1.8			10s			0.13	3.3	Cloudy	
Port Huron, Mich.			29.83	757.7	35	1.7	90	W	6	2.7			10s		W	Inap.	Inap.	Cloudy	
Portland, Me.			30.00	762.0	34	1.1	89	E	18	8.0			10n			0.12	3.0	Light snow	
Portland, Oregon			30.58	776.7	33	0.6	89	Calm	0	0		0	0			0	0	Clear	
Punta Rassa, Fla.			30.09	764.3	67.5	19.7	64	N	10	4.5		Haze	5s	NW	SE	0.02	0.5	Cloudy	
Rochester, N. Y.			29.74	755.4	39	3.9	81	W	10	4.5			10s			Inap.	Inap.	Cloudy	
Salt Lake City, Utah	25.81	655.6	30.14	765.5	29	− 1.7	78	N	14	6.3			10s		N	0.25	6.3	Cloudy	
Sandy Hook, N. J.			29.50	749.3	42	5.6	100	N	15	6.7			10n			2.27	57.7	Light rain	
San Diego, Cal.			30.00	762.0	56	13.3	80	N	4	1.8		5k	0	NW		0	0	Cloudy	
San Francisco, Cal.			30.06	763.5	51	10.6	55	NW	8	3.6		0	0			0.23	5.8	Clear	
Santa Fe, N. M.	23.14	587.8	29.68	753.9	38	3.3	46	W	4	1.8		1ck	Fog	W	W	0	0	Clear	
Savannah, Ga.			29.98	761.5	59	15.0	70	NW	7	3.1		0	0			1.08	27.4	Clear	
Shreveport, La.			30.02	762.5	58	14.4	53	SE	4	1.8		0	0			0	0	Clear	
Smithville, N. C.			29.85	758.2	53	11.7	86	NW	10	4.5		0	0			1.83	46.5	Clear	
Springfield, Mass.			29.72	754.9	35	1.7	90	NE	8	3.6			10n			1.58	40.1	Light rain	
St. Louis, Mo.			30.00	762.0	42	5.6	74	Calm	0	0		0	0			0	0	Clear	
St. Marks, Fla.			30.05	763.3	54	12.2	86	Calm	0	0		0	0			1.32	33.5	Clear	
St. Paul, Minn.			29.79	756.7	30	− 1.1	68	NE	2	0.9		10cs	0			0.02	0.5	Cloudy	
St. Paul's Island, Alaska			29.88	758.9	10	−12.2	79	WNW	20	8.9			10k			0.01	0.3		
Thatcher's Island, Mass.			29.84	757.9	37	2.8	100	SE	39	17.4			10n		SE	1.20	30.5	Heavy rain	
Toledo, Ohio			29.87	758.7	39	3.9	72	SW	12	5.4			10ks		SW	Inap.	Inap.	Cloudy	
Tucson, Arizona	27.50	698.5	30.09	764.3	52	11.1		Calm	0	0		0	0			0	0	Clear	
Tybee Island, Ga.			29.96	761.0	55	12.8	79	NW	6	2.7		0	0			1.25	31.7	Clear	
Vicksburg, Miss.			30.08	764.0	55.5	13.1	53	SE	3	1.3		0	0			0	0	Clear	
Virginia City, M. T.	24.34	618.2	29.82	757.4	16	− 8.9	66	W	5	2.2		8ck	0	NW		0.10	2.5	Cloudy	
Washington, D. C.			29.74	755.4	43.5	6.4	83	NW	8	3.6		2ck	5s	W	W	1.56	39.6	Clearing	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			29.85	758.2	52	11.1	86	NW	13	5.8		0	2ks		NW	1.46	37.1	Fair	
Wood's Holl, Mass			30.17	766.3	29	− 1.7	59	NW	26	11.6		0	0			0	0	Clear	
Wytheville, Va	27.50	698.9	29.66	753.4	41	5.0	64	NW	20	8.9		2k	5ks	NW	NW	0.21	5.3	Fair	
Yankton, Dakota	28.33	719.6	29.61	752.1	38	3.3	86	S	7	3.1		8cs	5s	W	W	0	0	Cloudy	
Yuma, Arizona			29.90	759.4	58	14.4		S				0	0			0	0	Clear	
Sub Series.																			
Bridgetown, B'b'dos, W. I.			30.08	764.0	79	26.1	78	NE	7	3.1		2k	5ks	W	NE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.02	762.5	76	24.4	76	E				0	5ks			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.28	769.1	78	25.6	65	E	1	0.4		2c	2ks	E		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I			30.24	768.1	77	25.0	69	Calm	0	0		2c	2s			0	0		James Gall.
Santiago de Cuba, W. I			29.85	758.2	78	25.6	80	SW	1.2	0.5		4k	0	SW		4.80	121.9	Fair	Robert Mason.
Havana, Cuba, W. I			30.04	763.0	78	25.6	82	Calm	0	0		2ck	0			0.18	4.6	Fair	Charles Hasselbrink.
St. Georges, Bermudas			30.07	763.8	61.5	16.4	80	SSW	14.0	6.3		10pk	2k	SW		Inap	Inap.	Sprinkling	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I																			
Clifton, Jamaica, W. I	27.20	690.9	29.99	761.7	64	17.8	83	N	1.0	0.4		5c	0	N		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.00	762.0	82	27.8	83	E			2		10n			0.88	22.35	Rainy	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.07	763.8	80.6	27.0										1.476	37.50		Dr. H. Groot.
Medellin, Colombia, S. A	25.22	64.6			63.0	17.2	79		5	2.2		2c	2s			0	0	Fair	Thomas Herran.
St. John's, Newfoundland			30.13	765.3	29.0	− 1.7	78	NE					10n			0.14	3.6	Cloudy	John Delaney.
York Factory, B. A			29.72	754.9	16.5	− 8.6	51	N	12	5.4		2c	3s	W		0	0		J. Fortescue.
Honolulu, Oahu, H. I			30.13	765.3	73	22.8	90	NE			5					0	0		E. P. Church.
Makawao, Maui, H. I	27.87	707.9	30.04	763.0	55	12.8	87	NE	3.6	1.6		2cs	8n	NW	NE	0.55	14.0	Raining	F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	Weather.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below −40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 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.; Wytheville, 2,294.8 ft., or 699.4 m; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON APRIL 5, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	766.2	65.1	18.4	70	NNE			1		2			0	0	Clear	Charnot.
Algiers			30.17	765.3	57.2	14.0	84	W			1		10			0.098	2.5	Hidden	Peter.
La Calle																			Kunts.
Tunis			29.96	761.0	67.1	19.5	59	NW			4		5			0	0	Fair	Jacques
Sfax			29.97	761.2	68.0	20.0	45	N			4		4			0.213	5.4	Fair	Chauvey.
Saïda			30.21	767.2	52.7	11.5	47	NE			3		4			0	0	Fair	Millot.
Tebessa			30.04	763.0	46.9	8.3		W			2		10			0.866	22.0	Hidden	Colin.
Geriville			30.22	767.5	46.0	7.8	57	N			2		2			0	0	Clear	Buard.
Laghouat			30.17	766.2	53.6	12.0	65	NW			3		2			0	0	Clear	Guyot.
Biskra			30.06	763.5	70.9	21.6	34	NW			3		8			0	0	Cloudy	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.19	766.9	57.4	14.1	58	NE			4		3			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary.
Cracow			30.38	771.7	51.1	10.6	74	NE			1		9			0	0		I. R. Observatory.
Eperies			30.28	769.1	52.9	11.6	68	N			4		8		8	0	0		Julius Mikolik.
Gratz	29.04	737.6	30.24	768.1	57.7	14.3	42	NE			5		5			0	0		Andreas Rospini.
Hermannstadt	28.63	727.3	30.01	762.9	59.4	15.2	26	E			3		2			0	0		Prof. Reissenberger.
Kremsmünster	29.02	737.2	30.38	771.7	52.5	11.4	59	ENE			2		8			0	0		Prof. C. Wagner.
Lemberg			30.21	767.4	53.8	12.1	57	NE			1		4			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.07	763.7	58.8	14.9	48	ENE			4		10s			0	0		I. R. Hydrographic Office
Szegedin					63.1	17.3	24	E			3		4			0	0		Karl Stancel.
Trieste			30.15	765.8	59.5	15.3	46	ENE			2		7			0	0		Prof. V. Farolfi.
Vienna			30.32	770.2	51.8	11.0	70	NW			2		8			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.47	773.8	57.0	13.9	68	E			0	5		NE		0	0		Royal Observatory.

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. and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount, Up'er 0—10.	Clouds. Amount, Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	54.2	12.3		SW	18	8.0			7			0.005	0.13	*D. clouds	William Boswell.
Ardrossan			30.36	771.1	50	10.0		SSW			3		8					Overcast	J. Mayes.
Armagh Observatory			30.42	772.7	56.0	13.3		SW	16	7.2			10					Gloomy	S. Call for Dr. Robinson.
Bidston, Liverpool Obs.			30.45	773.4	52.0	11.1		WNW	10	4.5			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			30.44	773.2	57.9	14.4		SW			1		10					*D. clouds	J. Dreyer.
Bradford			30.36	771.1	57.2	14.0		W			1		7			0	0		J. McLandsborough.
Bridgetown, (Barbados)			30.02	762.5	82.5	28.1		NE			2		5					*D. clouds	Sergt. J. F. Halanen.
Cambridge Observatory			30.16	773.7	59.9	15.5		WSW			1		10					*D. clouds	H. Todd.
Cardington			30.50	774.7	61.0	16.1		W			1		9					Overcast	John McLaren.
Carlisle			30.41	772.4	53.4	11.9		W			4		10			0.06	1.5	Threatening	Bell, for J. Cartmell.
Chatham, School M. E.			30.49	774.4	62.2	16.8		SW			1							Gloomy	Capt. J. Fellowes, R. E.
Dartmoor	29.06	738.1	30.59	777.0	52.0	11.1		NW			1		10					Foggy	R. E. Power.
Donaghadee			30.39	771.9	56	13.3		SW			3		10					Overcast	J. Mac Gowan.
Dover			30.48	774.2	50	10.0		Calm			0		3					¼ clouded	J. Costello.
Eccles, (near Manchester)			30.45	773.4	55.6	13.1		NW	3.6	1.6			10					Gloomy	Thomas Mackereth.
Falmouth Observatory			30.54	775.7	54.3	12.4		ESE	6	2.7			9					Overcast	The Staff.
Fort Napier, (Natal)	27.79	705.8	30.03	762.7	61.2	16.2		E			1		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.93	760.2	89.0	31.7		N			2		3					Blue sky	(Ist.
Galway, Queen's College			30.39	771.9	53	11.7		WSW			2		7					Gloomy	B. G. Clare, for Prof. Cur.
Gibraltar, (Mediterranean)			30.16	766.1	61.0	16.1		E			4		5					Levanter	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			30.32	770.1	54.2	12.3		S			3		9					*D. clouds	Lewis Stuart.
Great Yarmouth			30.46	773.7	57	13.9		WNW			2		4					Hazy	G. T. Watson.
Greenwich Royal Obs.			29.48	774.2	59.0	15.0		WNW			1		10					Overcast	The Staff for G. B. Airy.
Guernsey			30.53	775.4	52	11.1		WNW			1		10					Gloomy	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			30.45	773.4	55.7	13.2		WNW			2		10					Hazy	L. J. Crossley.
Helston			30.49	774.4	47	8.3		SW			2		8k			0.5	12.7	Gloomy	M. P. Moyle.
Holyhead			30.46	773.7	49	9.4		SSW			3		10					Foggy, hazy.	John Tilston.
Kew Observatory			29.50	774.7	57.8	14.3		WSW	4	1.8			10					Hazy	The Staff.
Kingstown			29.46	773.7	59	15.0		W			3		7					*D. clouds	George Mitchell
Leicester Museum			30.48	774.2	59.0	15.0		SW			1		5					Hazy	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.79	756.7	61.2	16.2		NE			1		8k						Fred Travis, Pvt A.H.C.
Nairn			30.21	767.3	58	14.4		WSW			1		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.17	766.3	74.6	23.7		N			5		0					Blue sky	Surg.-Maj. Henry.
Nottingham			30.45	773.4	64.3	17.9		SW			3		6k			0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.45	773.4	62.9	17.2		SW			1-2		9					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			30.47	773.9	57	13.9		W			1		10					Gloomy	J. Lucas.
Plymouth			30.52	775.2	54.5	11.9		WNW			1		10					Misty	John Merrifield.
Roche's Point			30.48	774.2	54	12.2		SSW			4		10					Overcast	W. Kennedy.
Saint Ann's Head			30.52	775.2	53	11.7		SW			1		10					Foggy	John C. Walker.
Saint Helier, (Jersey)			30.50	774.7	59.0	15.0		NE			2		10					Overcast	A. P. Amy.
Sandwick Manse (Orkneys)			30.13	765.3	47.7	8.7		W	28	12.5			10					Drizzling	Rev Chas. Austin, LL. D.
Scarborough			30.40	772.1	58.7	14.8		WSW			2		4					*D. clouds	F. Shaw.
Scutari Cemetery (Turkey)			29.98	761.5	49.0	9.4		NNE			1		10					Misty	Sergt. W. H. Lyne.
Sheffield			30.43	772.9	62.8	17.1		W			2		2			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			30.39	771.9	53.0	11.7	86	SW			4		8			0.015	0.38	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			30.45	773.4	51.4	10.8		W			2		10			Blank	Blank	Gloomy	S. J. Perry.
Stornoway, Lews C. (Hebr.			30.10	764.5	55	12.8		WSW			5		10					Overcast	John Smith.
Stratfield Turgiss			30.51	774.9	54.6	13.2		W			1		10					*D. clouds	Rev Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			30.14	765.0	55	12.8		WSW			3		9					Raining	John Trotter.
Truro, Royal Institution			30.53	775.4	60	15.6		N			4		8					Gloomy	W. Newcombe.
Valencia Observatory			30.46	773.7	53.3	11.8		SW	21	9.4			10					Misty	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Cape Good Hope Obs.			30.03	762.7	70.0	21.1	49	S	17	7.6			1						The Staff, for E. J. Stone.
Leith, Restalrig Park			30.34	770.6	55.8	13.2		W			4		10k			0	0	Fine, cloudy	Andrew Gibb.
Mauritius			30.02	762.5				E	17.1	7.6						0	0		
Monach Lt-house, Hebrides			30.11	764.8	50	10.0		SW			3		10			0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.96	761.0	47	8.3		W			6		10			Blank	Blank		

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.5 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			30.33	770.3	53.1	11.7	79	W			2		5						
Fanöe			30.36	771.2	47.5	8.6	86	WSW			4		10						
Godthaab, (Greenland)			30.26	768.5	14.2	— 9.9	67	NNE			4		5						
Stykkisholm, (Iceland)			29.76	756.0	17.8	— 7.9	94	E			7		8						
Thorshavn, (Faröe)			29.83	757.6	48.0	8.9	76	W			6		8						
Vestervig			30.26	768.5	45.7	7.6	91	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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	772.7	59.0	15	59	NE			1		28		NE	0	0	Slightly cl'dy	Normal School.
Amiens			30.44	773.1	66.2	19.0	63	W			3		0			0	0	Clear	Normal School.
Avignon			30.11	764.9	65.8	18.8	50	N			4		0			0	0	Clear	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.47	773.8	61.3	16.8	40	NE			3		0			0	0	Clear	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			30.33	770.3	63.0	17.2	59	NE			2		0			0	0	Clear	Normal School.
Brest			30.45	773.4	55.6	13.1	79	NE			2		10		NE	0	0	Misty	Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			30.28	769.1	61.2	16.2	50	N			2		5			0	0	Cloudy	Puy de Dome Obs.
Commercy			30.42	772.6	57.6	14.2	39	NNE			2		2k		NNE	0	0	Slightly cl'dy	Normal School.
Commune de Gréasque*			30.15	765.7	67.5	19.7	49	NW			2		2		NW	Inap.	Inap.		
Grenoble			30.16	766.0	61.2	16.2	84	N			2		2ck		S	0	0	Slightly cl'dy	Normal School.
Le Mans			30.45	773.3	61.3	16.3	50	NE			4		2		NE	0	0	Slightly cl'dy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			30.31	769.8	61.3	16.3	50	NE			8		0			0	0	Clear	Normal School.
Mâcon			30.26	768.7	61.2	16.2	83	N			6		0			0	0	Clear	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			30.13	765.4	68.0	20	46	N			2		0			0	0	Clear	Normal School.
Orleans																			Normal School.
Paris Observatory			30.44	773.1	61.5	16.4	23	NE			2	2c				0	0	Clear	National Observatory.
Parthenaÿ																			Normal School.
Privas			30.18	766.6	58.5	14.7		N			4		2		N	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.44	773.1	63.7	17.6	46	NE			6		0			0	0	Clear	Normal School.
Rochefort, Observatory			30.38	771.7	66.2	19.0	46	NE			3		1		SW	0	0	Blue sky	Normal School.
Rouen			30.47	773.8	66.9	19.4	61	NNW			2		0			0	0	Clear	Naval Observatory.
Saint Lo			30.51	775.1	59.0	15	68	NE			1		7		NE	0	0		Normal School.
Tarbes	29.21	741.8			54.5	12.5		W			1		2		E	0	0	Slightly cl'dy	Normal School.
Toulouse																			Normal School.
Villefranche			30.24	768.1	64.0	17.8	72	NE			6		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.95	760.7	79.5	26.4	75	NE			3		2k						L'Abbé Marchési.
Gorée																			
Marseilles			30.08	764.0	67.6	19.8	54	W			2		2			0	0	Cloudy	Marseilles Observatory.
Mont-Louis																			—Falguère.
Montsouris, Paris			30.43	773.0	62.6	17.0	40	NE			3		2			0	0		Montsouris Observatory.
Perpignan			30.19	766.8	63.1	17.3	53	NW	20.5	9.17			1			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.44	773.0	62.8	17.1	26	NNE			2		0			0	0	Clear	E. Renou.
Toulouse			30.39	771.8	57.7	14.3	70	NW			2		9			0	0		Toulouse Observatory.
Tours			30.40	772.1	61.2	16.2	34	NE			2		0			0	0	Clear	C. Marquet.
Versailles, (near Paris)			30.43	772.9	64.4	18.0	23	E			3		1			0	0	Clear	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 342 m., or 1,060.0 ft.; Clermont 388 m., or 1,272.0 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

* Near Marseilles.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.34	770.5	54.0	12.7	44	NE			4		1			0	0		Prof. T. Hoh.
Berlin			30.45	773.5	56.8	13.8	49	NW			1		0			0	0		Prof. Arndt.
Breslau			30.48	774.2	48.2	9.0	69	NNW			4		10			0	0		Dr. P. Neugebauer.
Carlsruhe			30.41	772.3	56.5	13.6	44	NE			4		0			0	0		A. Senz.
Cassel			30.38	771.6	62.6	17.0	40	NW			1		0			0	0		Dr. H. Möll.
Cologne																			Dr. Gartke
Emden																			Prof. Prestel.
Frankfort on the Main			30.50	774.7	56.5	13.6	34	NNE			1		0			0	0		Physical Society.
Friedrichshafen	28.93	734.8	30.40	772.1	49.1	9.5	63	NE			6		5			0	0		M. Wilhelm.
Hamburg			30.43	772.8	59.7	15.4	54	WSW			3		2cs			0	0	Very fine	Deutsche Seewarte.
Kiel			29.44	773.1	56.3	13.5	69	WSW			4		5			0	0		Prof. G. Karsten.
Königsberg			30.31	769.9	48.9	9.4	67	SW			2		2			0	0		Prof. E. Luther.
Koslin			30.38	771.7	54.1	12.3		SW			1		0			0	0		H. Müller.
Leipsic			30.48	774.3	54.1	12.3	53	N			1		2			0	0		Prof. Bruhns.
Memel			30.30	769.7	40.5	4.7	84	W			4		2			0	0		Reinbrecht & Skalweit.
Münster			30.50	774.6	60.8	16.0	49	NE			2		0			0	0		Prof. E. Heis.
Neufahrwasser			30.32	770.1	55.6	13.1	58	WNW			4		3			0.020	0.5		A. Lothes.
Posen			30.48	774.3	49.1	9.7	67	NW			2		1			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.40	772.1	56.3	13.5	43	NE			3		1			0	0		Dr. Schur.
Stuttgart			30.41	772.4	54.3	12.4	52	NE			2		0			0	0		Prof. Schoder.
Thorn			30.41	772.1	53.6	12.0	62	NW			4		2			0.020	0.5		Dr. Hasenbalg
Treves, (Trier)			30.37	771.3	59.9	15.5	38	E			4		0			0	0		Prof. Flesch.
Wustrow, Naval School			30.34	770.7	46.2	7.9	83	W			3		4			0	0		E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Athens			29.90	759.4	59.4	15.2		NE			Strong							Covered	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Udine			30.14	765.6	66.2	19.0	36	E	1.8	0.8			4			0	0		
Padua			30.14	765.6	61.0	16.1	49	ESE	18.6	8.3			5	E		0	0		
Vicenza			30.13	765.4	63.9	17.7	52	S	1.4	0.6			3	S		0	0		
Verona			30.13	765.3	64.2	17.9	80	NE			1		0			0	0		
Bergamo	28.76	730.5	30.07	763.6	66.2	19.0	49	SE			4		5			0	0		
Domodossola	29.09	738.9	30.10	764.6	73.4	23.0	27	NNE			4		0			0	0		
Milan			30.11	764.9	68.2	20.1	56	SSE			6		3	SSE		0	0		
Pavia			30.11	764.8	67.3	19.6	41	SE			4		1			0	0		
Moncalieri			30.10	764.6	68.0	20.0	42	SSW			2		1			0	0		
Mondovi	28.20	716.3	30.10	764.6	62.6	17.0	38	NNE			2		0			0	0		
Porto Maurizio			30.08	764.1	68.7	20.4		ENE			2		8	SSE		0	0		
Genoa			30.07	763.8	68.7	20.4	40	SE	3.1	1.4			4	NE		0	0		
Piacenza			30.13	765.3	65.1	18.4	47	SE	28.0	12.5			7	E		0	0		
Parma			30.15	765.8	64.2	17.9	52	NE			4		7			0	0		
Bologna			30.19	766.9	61.3	16.3	43	NE			4		6	S		0	0		
Florence			30.12	765.0	61.3	16.3	42	NE			6		10	NE		0	0		
Leghorn			30.11	764.7	63.0	17.2	38	NE	14.3	6.4			10			0	0		
Siena	28.84	732.4	30.04	763.0	56.1	13.4	53	NE	13.0	5.8			9	NE		0	0		
Urbino	28.55	725.1	29.11	764.3	50.4	10.2	81	NNE			6		10			0.110	2.8		
Pesaro																			
Ancona			30.10	764.5	59.7	15.4	64	N			6		7			0	0		
Grosseto			30.01	762.3	62.6	17.0	46	ENE			6		7	NE		0	0		
Rome			29.92	760.0	68.0	20.0	34	E	8.1	3.6			7	E		0	0		
Naples, O. U			29.93	760.2	64.4	18.0	50	NNE			6		9	E		0	0		
Lecce			29.91	759.6	63.0	17.2	52	NE	18.6	8.3			6	E		0	0		
Cosenza			29.91	759.8	63.0	17.2	78	NW	9.8	4.4			7			0.118	3.0		
Riposto, (Sicily)			29.84	758.8	63.5	17.5	78	ENE			2		9	W		0.008	0.2		
Palermo			29.81	757.2	63.1	17.3	68	NE	3.8	1.7			4			0	0		
Caltanissetta	27.86	707.5	29.81	757.2	60.3	15.7	63	ESE			4		10	W		0.244	31.6		
Sub-Series.																			
Naples, S. R			29.93	760.3	61.9	16.6	53	ENE	3.1	1.4			..k,c	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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Tokio																			

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Flushing			30.52	775.1	55.8	13.2		SSE			1								
Groningen			30.41	772.3	55.9	13.3		SW			2								
Helder			30.45	773.4	50.0	10.0		SW			4								
Utrecht			30.59	776.9	59.5	15.3	64	SSE			2		2					Light cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —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.
Bergen			30.09	764.3	45.7	7.6	98	S	17.9	8.0			10			0.819	20.8	Raining	
Brönö			30.03	762.7	40.3	4.6	89	Calm	0	0			10			0	0		
Christiania			29.22	742.3	38.1	3.4	87	SSW	7	3			10			0.327	8.3	Raining	
Tromsö			29.54	750.3	44.2	6.8	88	SW	29	13			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.01	762.2	61.9	16.6	85	SW	8.2	3.67			3			0.693	17.6		Dr. J. A. N. Sampaio.
Campo Major			30.17	766.3	66.0	18.9	32	ENE	14.2	6.33			1			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.10	764.6	65.7	18.6	60	SW	4.2	1.89			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.22	767.5	64.2	17.9	40	NE	17.4	7.8			0			0	0		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			30.36	771.2	49.5	9.7	73	N	16	7			10						Astronomical Obs.
Wilna			30.26	768.6	50.2	10.1	67	WSW	9	4			10						Astronomical Obs.
Dorpat			30.06	763.5	39.9	4.4	87	WSW					10						Physical Cabinet.
St. Petersburg			29.94	760.5	32.7	0.4	93	W	13	6			10						Central Physical Obs.
Kuopio			29.70	754.4	43.2	6.2	76	W	7	3			10			0	0		Ch. Forsten.
Kieff			30.21	767.4	54.7	12.6	47	E	4	2			6						Physical Cabinet.
Nikolaiev			30.17	766.2	62.4	16.9	31	E	20	9			0						Kurdakof.
Kertch			29.99	761.8	59.7	15.4	56	ENE	13	6			7						Lagorio.
Moscow			30.15	765.7	48.7	9.3	52	W	9	4			4						Meteorological Obs.
Lugan			30.11	764.7	57.9	14.4	41	ESE	13	6			0						Meteorological Obs.
Archangel			29.52	749.8	35.2	1.8	90	SW	22	10			10					Raining	Ogorodnikof.
Tiflis	28.74	730.1	30.16	766.1	56.7	13.7	61	SSE	11	5			9						Physical Observatory.
Astrakhan			30.26	768.6	59.9	15.5	33	Calm	0	0			1						Sebastianof.
Kasan			30.06	763.5	46.6	8.1	44	W	7	3			1						Physical Cabinet.
Orenburg			30.09	764.2	42.8	6.0	53	NE	4	2			0						Tschernischef.
Ekaterinburg	28.88	733.6	29.91	759.7	35.6	2.0	45	W	13	6			5						Meteorological Obs.
Nukuss			30.07	763.8	56.5	13.6	27	NNE	11	5			8						
Kasaly																			Bobrof.
Tashkend	28.20	718.7	29.97	761.1	63.0	17.2	65	N	13	6			10						Michelson.
Barnaul			29.38	746.2	30.6	— 0.8	73	Calm	0	0			10						Meteorological Obs.
Yeniseisk			29.56	750.7	21.4	— 5.9	53	ESE	4	2			10						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.07	763.7	57.6	14.2	37	SSW	4	2			2						Physical Observatory.
Nertchinsk	27.71	703.8	29.83	757.6	29.3	— 1.5	68	Calm	0	0			5						Meteorological Obs.
Vladivostock			30.17	766.4	37.2	2.9	66	Calm	0	0			0						
Nikolaievsk, on the Amoor					24.1	— 4.4	95	ENE	4	2			0						

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 409. meters, or 1,411.8 feet; Ekaterinburg, 393.4? m., or 1,905.2? ft.; Tashkend, m. 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.21	767.3	63.1	17.3	34	NE	9.7	4.34		0	2			0	0		Royal Observatory.
San Fernando			30.18	766.6	69.6	20.9	28	ESE	14.1	6.3		1	2	ESE	ESE	0	0		The Naval Observatory.

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.48	748.9	37.0	2.8	93	SW			2		10			0.354	9.0		
Umea			30.00	751.7	44.1	6.7	70	SW			4		8			0	0		
Hernosand			29.72	754.8	41.0	7.0	70	Calm			0		10			0	0		
Stockholm			29.93	760.3	52.0	11.0	64	WSW			4		7			0	0		
Wisby			30.18	766.5	46.8	8.2	78	W			6		3			0	0		
Sub-Series.																			
Upsala			29.94	760.4	47.1	8.4	75	SW	11.6	5.2			9	NW		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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	30.19	766.9	57.0	13.9	41	NNE			8		0			0	0	Clear	The Observatory.
Zurich	28.70	728.9	30.35	770.5	54.1	12.3	62	E			2		1			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +6.7 mm.; Thermometer, +3.4 cent.; Relative Humidity, —17 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.02	762.6	49.1	9.5	84	N	7	3.0			10		N	0	0		
Fao, (Persian Gulf)			30.01	763.0	81.0	27.2		NW			4		5						
Salonica			30.00	762.0	62.2	16.8		NW			2		10						
Valona			29.80	756.8	62.8	17.1		W			1		8					Raining	
Varna			29.96	761.0	46.4	8.0		E			3		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.79	756.6	74.8	23.8	70	NE			1		3k		W	0.04	1.0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			30.25	768.3	23.7	— 4.6	93	NE	8	3.6									Hon. J. Ferguson.
Brockville, Ontario			30.00	762.0	33	0.6		SE	1	0.4		Haze	Fog			0.05	1.3	Foggy	W. R. Bigg.
*Chatham, N. B.			30.24	768.1	26	— 3.3	93	N	9	4.0			10ks		N	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			30.19	766.8	31	— 0.6	80	E	18	8.0			8s			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.94	760.5	31.8	— 0.1	86	E			1		10n			0.136	3.45	Unsettled	James Smith, M. A.
Dalhousie, N. B.			30.30	769.6	24.5	— 4.2	74	SE			1					0	0		H. A. Johnson.
Esquimault, B. C.			30.23	767.8	33.1	0.6	91	Calm			0					0	0	Clear	W. H. Bevis.
Fredericton, N. B.			30.12	765.0	31.0	— 0.6	73	NE	14	6.3			10s			0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			29.92	760.0	10	-12.2	96	W	7	3.1		0	2s		W	0	0	Fair	James Stewart.
Goderich, Ontario			29.65	753.1	37.9	3.3	75	SE			4		10n			0.038	0.97	Threatening	H. J. Strang, M. A.
Granton, Ontario			29.72	754.9	33.0	0.6		SE			2		10n			Inap.	Inap.	Cloudy	James Grant.
*Halifax, N. S.			29.98	761.5	33	0.6	94	SE	28	12.5			10n		SE	0	0	Threatening	F. Allison, M. A.
*Kingston, Ontario			29.96	761.0	37	2.8	96	Calm	0	0		5c	Sm'e		E	0	0	Fair	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			29.99	761.5	32	0.0	84	E	8	3.6			10s			0.43	10.9	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.98	761.5	32	0.0	81	E	11	4.9			10n		E	0.03	0.8	Cloudy	J. B. Haney.
*Parry Sound, Ontario			29.80	756.9	32	0.0	88	S	16	7.2		2cs	2ks	W	W	0	0	Fair	Rev. R. Mooley.
*Port Dover, Ontario			29.84	757.9	35	1.7	90	S	8	3.6		8ck	0	SW		0	0	Fair	H. Morgan.
Port Hastings, N. S.			30.23	767.8	30.6	— 0.8		SE	20	8.9						0	0	Fine	Peter Grant.
*Port Stanley Ontario			29.77	756.1	35	1.7	83	SE	20	8.9		8ck	0	NW		0	0	Cloudy	M. Payne.
*Quebec, Quebec			30.09	764.3	27	— 2.8	94	NW	34	15.2			10n		NW	0.25	6.3	Light snow	Capt. Ash, R. N.
St. John, N. B.			30.08	764.0	30	— 1.1	78	NE	12	5.4			10n			0.140	3.56		G. Murdoch, C. E.
*Saugeen, Ontario			29.62	752.3	36	2.2	80	SE	17	7.6			10n			0	0	Cloudy	K. Stewart.
Stayner, Ontario			29.74	755.4	35	1.7	81	SE	11	4.9		5c	0	W		0	0	Fair	R. J. Cole.
Stratford, Ontario			29.77	756.1	33.6	0.9	80	SE	15	6.7			10s			0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			30.28	769.1	31	— 0.6	73	E	13	5.8		8cs	5ks	W	E	0	0	Fair	T. C. Hill.
*Toronto, Ontario			29.85	758.2	34	1.1	88	SE	9	4.0		5ck	2s	W		0	0	Cloudy	Magnetic Observatory
Woodstock, Ontario			29.84	757.9	35.4	1.9	99	S			1		10s			0.22	5.6	Cloudy	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.95	760.7	36	2.2	90	NW	6	2.7			10ks		NW	1.22	31.0	Cloudy	
Alpena, Mich.			29.42	747.3	32	0.0	89	SE	24	10.7			10s		SE	0.01	0.3	Cloudy	
Atlantic City, N. J.			29.94	760.5	42	5.6	74	N	10	4.5		1k	0	N		0.02	0.5	Clear	
Augusta, Ga.			30.09	764.3	49	9.4	85	Calm	0	0		0	Haze			0	0	Clear	
Baltimore, Md.			30.04	762.7	43	6.1	67	NW	4	1.8		2c	Sm'e	NW		0	0	Clear	
Barnegat, N. J.			29.93	760.2	40	4.4	81	NW	14	6.3		2k	0	NW		0.14	3.6	Fair	
Benton, Montana	27.24	691.9	30.04	763.0	30	−1.1	89	SW	12	5.4		0	0			0	0	Clear	
Bismarck, Dakota	28.24	717.3	30.00	762.0	18	−7.8	37	NW	8	3.6		0	0			0.09	2.3	Clear	
Boston, Mass.			29.85	758.2	32	0.0	89	N	26	11.6			10s		N	1.58	40.1	Light snow	
Breckenridge, Minn.			30.03	762.7	13	−10.6	81	W	19	8.5		0	0			0.31	7.9	Clear	
Buffalo, N. Y.			29.86	758.4	35	1.7	79	SE	5	2.2		2cs	5s	SW		0	0	Fair	
Burlington, Vt.			29.97	761.2	34	1.1	71	N	2	0.9		2ck	0	E		0.42	10.7	Fair	
Cairo, Ill.			30.15	765.8	44	6.7	51	W	25	11.2		5k	0	W		0	0	Fair	
Cape Hatteras, N. C.			30.01	762.2	47	8.3	62	N	12	5.4		0	0			0	0	Clear	
Cape Henry, Va.			30.05	763.3	54	12.2	72	NW	17	7.6		0	0			0	0	Clear	
Cape May, N. J.			29.97	761.2	42	5.6	74	W	15	6.7		0	0			0	0	Clear	
Charleston, S. C.			30.09	764.3	55	12.8	55	NW	8	3.6		0	Sm'e			0	0	Clear	
Cheyenne, Wyoming	24.12	612.6	30.06	763.5	14	−10.0	100	SW	8	3.6		8c	0	W		0	0	Fair, frost	
Chicago, Ill.			29.78	756.4	38	3.3	63	SW	16	7.2		8k	0	SW		0	0	Fair	
Cincinnati, Ohio			29.74	755.4	49	9.4	57	SW	5	2.2		2c	0	W		Inap.	Inap.	Fair	
Cleveland, Ohio			29.72	754.9	38	3.3	68	SE	26	11.6			10ks		W	0	0	Threatening	
Colorado Springs, Col.	24.26	616.2	30.13	765.3	24.5	−4.2	43	S	3	1.3			10s			0	0	Cloudy	
Corsicana, Tex.			30.19	766.8	47	8.3	55	N	18	8.0		2c	0	W		0	0	Clear	
Davenport, Iowa			30.00	762.0	35	1.7	52	W	24	10.7		0	0			Inap.	Inap.	Clear	
Denison, Tex.			29.73	755.1	44	6.7	52	N	20	8.9		2c	0	W		0	0	Fair	
Denver, Col.	24.96	634.0	30.18	766.6	19	−7.2	69	S	5	2.2		8c	2s			Inap.	Inap.	Cloudy	
Detroit, Mich.			29.95	760.7	38	3.3	81	S	12	5.4			10n		S	0.02	0.5	Light rain	
Dodge City, Kan.	27.75	704.8	30.18	766.6	30	−1.1	78	W	5	2.2			10s			0	0	Cloudy	
Dubuque, Iowa			29.89	759.2	34	1.1	44	W	16	7.2		0	0			0	0	Clear	
Duluth, Minn.			29.67	753.6	31	−0.6	68	NW	22	9.8			10s			0.35	8.9	Cloudy	
Eastport, Me.			29.96	761.0	30	−1.1	100	NE	40	17.9			10n			0.50	12.7	Heavy snow	
Erie, Pa.			29.78	756.4	39	3.9	71	S	20	8.9		2ck	Haze	W		0	0	Fair	
Escanaba, Mich.			29.13	739.9	35	1.7	89	SW	28	12.5			10n			0.24	6.1	Light snow	
Fort Gibson, Indian Terr.			30.33	770.4	39	3.9	63	N	16	7.2		8c	0	W		0	0	Fair	
Ft. St. Michaels, Alaska			29.84	757.7	6	−14.4		SW	24	10.7			10s					Cloudy	
Fort Sill, Indian T.	29.11	739.4	30.28	769.1	38	3.3	56	N	24	10.7		2k	0	N		0	0	Clear	
Fort Sully, Dakota																			
Galveston, Tex.			30.08	764.0	66	18.9	95	NE	7	3.1		2c	0	NW		0	0	Fair	
Grand Haven, Mich.			29.64	752.8	40	4.4	73	SW	32	14.3			10s		W	0	0	Cloudy	
Indianapolis, Ind.			29.92	760.0	41	5.0	56	NW	18	8.0		5k	0	NW		0	0	Fair	
Indianola, Tex.			29.99	761.7	68	20.0	94	E	10	4.5			10s		SW	0	0	Cloudy	
Jacksonville, Fla.			30.06	763.5	64	16.7	78	W	4	1.8		0	0			0	0	Clear	
Keokuk, Iowa			30.10	764.5	36	1.7	63	NW	14	6.3		0	0			0	0	Clear	
Key West, Fla.			30.12	765.0	72.3	22.4	71	NE	9	4.0		0	0			0.02	0.5	Clear	
Kittyhawk, N. C.			30.08	764.0	43	6.1	75	N	16	7.2		0	0			0	0	Clear	
Knoxville, Tenn.			30.03	762.7	43	6.1	75	Calm	0	0		0	0			0	0	Clear	
La Crosse, Wis.			29.84	757.9	32	0.0	60	NW	14	6.3		0	0			0.07	1.8	Clear	
Leavenworth, Kan.			30.32	770.1	32	0.0	69	NW	10	4.5		5c	0	W		0	0	Fair	
Lexington, Ky.	28.77	730.7	29.85	758.2	55	12.8	50	SW	16	7.2		5ck	0	SW		0	0	Fair	
Long Branch, N. J.			29.95	760.7	44	6.7	75	NW	17	7.6			10ks		NW	0.75	19.1	Cloudy	
Louisville, Ky.			30.01	762.2	46	7.8	54	NW	24	10.7		2k	0			0	0	Clear	
Lynchburg, Va.			30.06	763.5	43	6.1	63	Calm	0	0		0	0			0	0	Clear	
Malone, N. Y.			29.91	759.7	35	2.2	80	NE	2	0.9			10s			0.45	11.4	Cloudy	
Manhattan, Kan.	29.17	741.0	30.38	771.6	33	0.6	79	NW	12	5.4		0	0			0	0	Clear	
Marquette, Mich.			29.14	737.6	38	3.3	81	S	4	1.8			10n			0.14	3.6	Light snow	
Memphis, Tenn.			30.09	764.3	54	12.2	61	NW	14	6.3		2c	2s	W	NW	0	0	Fair	
Milwaukee, Wis.			29.98	761.9	35	1.7	70	W	36	16.1			10ks		W	0	0	Cloudy	
Mobile, Ala.			30.12	765.0	60	15.6	94	Calm	0	0		0	Sm'e			0	0	Smoky	
Montgomery, Ala.			30.12	765.0	56	13.3	87	Calm	0	0		0	Fog			0	0	Clear	
Morgantown, W. Va.			29.92	760.0	38	3.3	76	SW	1	0.4		0	Haze			Inap.	Inap.	Clear	
Mt. Washington, N. H.	23.54	597.9	29.94	759.5	26	−3.3	100	NE	28	12.5			Fog			0.18	4.6	Foggy	
Nashville, Tenn.			29.90	759.4	63	17.2	51	W	5	2.2		0	Haze			0	0	Clear	
New Haven, Conn.			29.89	759.2	38	3.3	71	N	20	8.9		5k	0	N		3.15	80.0	Fair	
New London, Conn.			29.85	758.2	38	3.3	71	N	17	7.6		0	5s		NE	2.70	68.6	Clearing	
New Orleans, La.			30.09	764.3	59	15.0	82	S	2	0.9		5cs	Fog	W		0	0	Fair	
Newport, R. I.			29.81	757.2	34	1.1	89	N	16	7.2			10n		N	2.86	72.6	Light snow	
New York, N. Y.			29.94	760.5	40	4.4	82	NW	8	3.6		2k	2s	W	W	0.41	10.4	Fair	
Norfolk, Va.			30.07	763.8	44	6.7	52	N	13	5.8		0	Haze			0	0	Clear	
North Platte, Neb.	27.34	694.4	30.09	764.3	23	−5.0	79	Calm	0	0		0	0			0	0	Clear	
Omaha, Neb.	29.14	740.1	30.27	768.8	31	−0.6	79	W	8	3.6		0	0			0	0	Clear	
Oswego, N. Y.			29.93	760.2	41.5	5.3	75	SW	3	1.3		8c	Haze	W		0.02	0.5	Fair	
Pembina, Dakota			29.92	760.0	15	−9.4	82	W	8	3.6		0	0			0	0	Clear	
Philadelphia, Penn.			30.04	763.5	42	5.6	66	N	13	5.8		0	0			0	0	Clear	
Pike's Peak, Colorado	17.63	447.8	29.84	757.9	2	−16.7	16	NW	17	7.6		2c	0			0.27	6.9	Fair	
Pittsburgh, Penn.			29.92	760.0	37	2.8	70	S	4	1.8		5ck	0			0	0	Fair	
Port Huron, Mich.			29.14	752.8	38	3.3	71	S	15	6.7			10n		S	Inap.	Inap.	Light rain	
Portland, Me.			29.91	759.7	32	0.0	79	NE	30	13.4			8s		N	0.98	24.9	Clearing	
Portland, Oregon			30.26	768.6	38	3.3	90	Calm	0	0		0	0			0	0	Clear	
Punta Rassa, Fla.			30.14	765.5	63.0	17.2	88	NE	5	2.2		Haze	Sm'e		NE	0	0	Hazy	
Rochester, N. Y.			29.90	759.4	38	3.3	71	SE	6	2.7		Haze	2s		NE	0	0	Fair	
Salt Lake City, Utah	25.79	655.0	30.12	765.0	27	−2.8	77	NE	3	1.3		0	0			0	0	Clear	
Sandy Hook, N. J.			29.93	760.2	42	5.6	76	NW	16	7.2			8s		NW	0.62	15.7	Cloudy	
San Diego, Cal.			30.01	762.2	55	12.8	79	SE	4	1.8			10s			0	0	Cloudy	
San Francisco, Cal.			30.00	762.0	49	9.4	89	Calm	0	0		0	0			0	0	Clear	
Santa Fe, N. M.	23.32	592.3	29.86	758.4	25	−3.9	75	SW	4	1.8			10s			0	0	Cloudy	
Savannah, Ga.			30.11	764.8	61	16.1	61	W	1	0.4		0	0			0	0	Clear	
Shreveport, La.			30.14	765.5	59.9	15.5	60	NW	8	3.6		2c	0	SW		0	0	Fair	
Smithville, N. C.			30.09	764.3	53	11.7	73	NE	8	3.6		0	0			0	0	Clear	
Springfield, Mass.			29.90	759.4	39	3.9	71	N	12	5.4		5k	0	NE		1.16	29.5	Fair	
St. Louis, Mo.			30.17	766.3	37	2.8	62	NW	16	7.2		0	0			Inap.	Inap.	Clear	
St. Marks, Fla.			30.12	765.0	55	12.8	87	Calm	0	0		0	0			0	0	Clear	
St. Paul, Minn.			29.85	758.2	20	−6.6	76	W	12	5.4		0	0			0.41	10.4	Clear	
St. Paul's Island, Alaska			30.20	767.1	10	−12.2	79	Calm	0	0		10ck	0	WNW		Inap.	Inap.		
Thatcher's Island, Mass.			29.85	758.2	32	0.0	100	NE	36	16.1			10n		NE	2.39	60.7	Light snow	
Toledo, Ohio			29.65	753.1	43	6.1	75	S	13	5.8		8k	2s	S	S	0.01	0.3	Clearing	
Tucson, Arizona	27.51	698.7	30.10	764.5	51	10.6		S				0	0			0	0	Clear	
Tybee Island, Ga.			30.09	764.3	58	14.4	70	NW	4	1.8		0	Sm'e			0	0	Clear	
Vicksburg, Miss.			30.14	765.5	59.5	15.3	70	SW	6	2.7		0	0			0	0	Clear	
Virginia City, M. T.	24.36	618.7	29.84	757.9	17	−8.3	67	Calm	0	0		1c	0	NW		0	0	Clear	
Washington, D. C.			30.05	763.3	40	4.4	71	W	3	1.3		0	0			0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.10	764.5	51	10.6	59	NE	6	2.7		0	0			0	0	Clear	
Wood's Holl, Mass			30.61	777.5	18	— 7.8	68	NE	5	2.2		2c	0	E		0	0	Clear	
Wytheville, Va	27.64	702.0	29.80	756.9	46	7.3	48	W	4	1.8		5k	0	W		0	0	Fair	
Yankton, Dakota	28.90	734.0	30.26	768.6	27	— 2.8	76	SW	10	4.5		0	0			0.03	0.8	Clear	
Yuma, Arizona			29.96	761.0	68	20.0		NW				0	0			0	0	Clear	
Sub Series.																			
Bridgetown, B'b'dos, W. I.			30.08	764.0	80	26.7	78	NE	6	2.7		5ck	10s	NE		0	0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.99	761.7	79	26.1	78	E				5k	5ks			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.24	768.1	77	25.0	69	S	7	3.1		4c	4ks	S		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I.			30.24	768.1	77	25.0	82	Calm	0	0		2ck	2s	SE		0	0		James Gall.
Santiago de Cuba, W. I			29.87	758.7	76	24.4	69	NE	9.6	4.3		0	0			Inap.	Inap.	Clear	Robert Mason.
Havana, Cuba, W. I.			30.11	764.8	77	25.0	78	NE	3.6	1.6		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			29.85	758.2	65.5	18.6	61	WNW	24.0	10.7		5ck	0	WNW		0.80	20.3	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa W. I.																			
Clifton, Jamaica W. I	27.20	690.9	29.99	761.7	65	18.3	88	N	2.0	0.9		5c	0	N		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.			29.97	761.2	81	27.2	78	E			2		10n			1.820	46.23	Heavy rain	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.08	763.9	78.8	26										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1			61.5	16.4	73		0	0		2c	2s			0	0	Fair	Thomas Herran.
St. John's, Newfoundland			30.39	771.9	29.0	— 1.7		N								Inap.	Inap.	Fair	John Delaney.
York Factory, B. A.			29.75	755.6	4	—15.6	87	S	7	3.1			9s			0.03	0.8		J. Fortescue.
Honolulu, Oahu, H. I			30.16	766.1	72	22.2	90	NE			3					0.37	9.4		E. P. Church.
Makawao, Maui, H. I.	27.89	708.4	30.06	763.5	60	15.6	82	NE	10.8	4.8		5c	5ks	NE	NE	0	0		F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 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.; Wytheville, 2,294.8 ft., or 699.4 m; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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. Assist.) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON APRIL 6, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	765.3	66.2	19.0	62	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.14	766.6	64.4	18.0	71	WNW			2		0			Inap.	Inap.	Hidden.	Peter.
La Calle																			Kuntz.
Tunis			30.02	762.5	66.0	18.9	67	NNW			3		7			0.071	1.8	Cloudy	Jacques
Stax			30.01	762.3	63.7	17.6	71	Calm			0		5			0.382	9.7	Fair	Chauvey.
Saida			30.17	766.4	64.4	18.0	40	ESE			1		1			0	0	Clear	Millot.
Tebessa			30.05	763.2	52.7	11.5		W			1		9			0.118	3.0	Cloudy	Colin.
Geriville			30.19	766.7	56.5	13.6	57	NNW			2		2			0	0	Clear	Buard.
Laghouat			30.16	766.0	64.4	18.0	36	NE			3		2			0	0	Clear	Guyot.
Biskra			30.07	763.7	71.1	21.7	34	NW			2		5			0	0	Fair	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	59.4	15.2	43	NE			2		2			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30. 0	767.1	55.8	13.2	64	NE			1		6			0	0		I. R. Observatory.
Eperies			30.10	764.6	59.2	15.1	53	N			4		3			0	0		Julius Mikolik.
Gratz	28.95	735.4	30.14	765.6	61.5	16.4	46	S			2		2			0	0		Andreas Rospini.
Hermannstadt	28.62	727.0	30.02	762.4	61.3	16.3	31	ENE			1		5			0	0		Prof. Reissenberger.
Kremsmünster	28.89	733.7	30.21	768.0	52.9	11.6	57	NE			2		1			0	0		Prof. C. Wagner.
Lemberg			30.08	764.1	52.5	11.4	57	N			2		3			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.07	763.6	61.5	16.4	42	E			4		10s			0	0		I. R. Hydrographic Office
Szegedin			30.07	763.7	63.6	17.5	33	NE			3		3			0	0		Karl Stancel.
Trieste			30.08	764.0	65.3	18.5	20	ENE			3		0			0	0		Prof. V. Farolfi.
Vienna			30.20	767.1	58.5	14.7	41	N			2		0			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.36	771.1	57.0	13.9	81	N			1		10			0.006	0.15		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.42	772.7	51.0	10.6		SSE	14	6.3			2			0	0	Blue sky	William Boswell.
Ardrossan			30.44	773.2	50	10.0		SW			1		4					Foggy	J. Mayes.
Armagh Observatory			30.47	773.9	54.7	12.6		SE	5	2.2			10					Gloomy	S. Call for Dr. Robinson.
Bidston, Liverpool Obs			30.45	773.4	50.0	10.0		WNW	7	3.1			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			30.43	772.9	59.2	15.1		NNE			1		10					*D. clouds	J. Dreyer.
Bradford			30.42	772.7	60.0	15.6		W			1		10			0	0	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.00	762.0	82.0	27.8		NE			2		4					*D. clouds	Sergt. J. F. Halanen.
Cambridge Observatory			30.43	772.9	59.9	15.5		NNE			1		10					Overcast	H. Todd.
Cardington			30.44	773.2	58.0	14.4		NE			1		10					Overcast	John McLaren.
Carlisle			30.42	772.7	62	16.7		Calm			0		10			0	0	Overcast	Bell, for J. Cartmell.
Chatham, School M. E			30.43	772.9	59.2	15.1		SW			1		4					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	28.94	735.1	30.46	773.7	52.5	11.4		E			1		10					Gloomy	R. E. Power.
Donaghadee			30.44	773.2	58	14.4		S			1		5					*D. clouds	J. Mac Gowan.
Dover			30.39	771.9	57	13.7		NE			3		6					¾ covered	J. Costello.
Eccles, (near Manchester.)			30.42	772.7	59.2	15.1		WNW	1.0	0.4			10					Misty	Thomas Mackereth.
Falmouth Observatory			30.41	772.4	55.4	13.0		E	12	5.4			10					Foggy	The Staff.
Fort Napier, (Natal)	27.56	700.0	29.80	756.9	72.8	22.7		NE			2		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.93	760.2	86.0	30.0		NE			2		7					*D. clouds	(tis.
Galway, Queen's College			30.46	773.7	52	11.1		SW			1		10					Gloomy	B. G. Clare, for Prof. Cur.
Gibraltar, (Mediterranean			30.09	764.3	65.5	18.6		E			1		1					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			30.43	772.9	56.2	13.4		W			1		10					Overcast	Lewis Stuart.
Great Yarmouth			30.44	773.2	52	11.1		N			1		8					*D. clouds	G. T. Watson.
Greenwich Royal Obs			30.42	772.7	60.0	15.6		NE			1		10					Overcast	The Staff for G. B. Airy.
Guernsey			30.39	771.9	54	12.2		ENE			1		5					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs			30.44	773.2	60.0	15.6		ENE			1		10					Overcast	L. J. Crossley.
Helston			30.36	771.1	60	15.6		NE			0		8k			0	0	Fair	M. P. Moyle.
Holyhead			30.45	773.4	52	11.1		WNW			1		10					Foggy	John Tilston.
Kew Observatory			30.42	772.7	58.7	14.8		NE	9	4.0			10					Hazy	The Staff.
Kingstown			30.46	773.7	54	12.2		SE			1		10					Foggy	George Mitchell.
Leicester Museum			30.45	773.4	59.1	15.1		Calm			0		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.92	760.0	64.0	17.8		NE			1		6k						Fred Travis, Pvt A.H.C.
Nairn			30.37	771.4	59	15.0		Calm			0		2					¼ clouded	W. D. Penny.
Nassau, (Bahamas)			29.19	766.8	74.0	23.3		N			4		6					*D. clouds	Surg.-Maj. Henry.
Nottingham			30.44	773.2	61.3	16.3		SE			1		10k			0	0	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.43	772.9	57.7	14.3		ENE			2		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.40	772.1	58	14.4		Calm			0		10					Overcast	J. Lucas.
Plymouth			30.40	772.1	56.5	13.6		ENE			2		10					Overcast	John Merrifield.
Roche's Point			30.43	772.9	54	12.2		ESE			3		10					Foggy	W. Kennedy.
Saint Ann's Head			30.43	772.9	55	12.8		ESE			2		10					Misty	John C. Walker.
Saint Helier, (Jersey)			30.33	770.4	62.4	16.9		NE			5		0					Clear	A. P. Amy.
Sandwick Manse (Orkneys			30.39	771.9	48.8	8.9		W	8	3.6			10					Overcast	Rev. Chas. Austin, LL. D.
Scarborough			30.44	773.2	52.4	11.3		NE			1		10					Foggy	F. Shaw.
Scutari Cemetery (Turkey			29.82	757.4	50	10.0		NE			2		10					Raining	Sergt. W. H. Lyne.
Sheffield			30.43	772.9	62.6	17.0		ESE			2		9			0	0	Overcast	W. F. Cooper.
Stilloth Rectory			30.44	773.2	57.0	13.9	82	SW			1		7			0	0	*D. clouds	Rev Francis Redford
Stonyhurst Observatory			30.43	772.9	59.9	15.5		SW			0		10			Blank	Blank	Hazy	S. J. Perry.
Stornoway, Lews C. (Heb.)			30.33	770.4	52	11.1		SW			3		10					Overcast	John Smith.
Strathfield Turgiss			30.43	772.9	57.3	14.1		N			1		10					*D. clouds	Rev Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			30.35	770.9	51	10.6		Calm			0		10					Overcast	John Trotter.
Truro, Royal Institution			30.39	771.9	60	15.6		E			4		10					Gloomy	W Newcombe.
Valencia Observatory			30.41	772.4	57.3	14.1		S	7	3.1			10					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Cape Good Hope Obs.			30.02	762.5	67.7	19.8	54	S	23	10.3			10						The Staff, for E. J. Stone.
Leith, Restalrig Park			30.44	773.2	58.8	14.9		W			2		8k			0	0	Fine, cloudy	Andrew Gibb.
Mauritius			30.00	762.0				SE	17.1	7.6						0.08	2.0		
Monach Lt-house, Hebrides			30.32	770.1	47	8.3		SW			3		10			0.2	5.1		J. Youngclause.
North Unst, (Shetland Is.)			30.33	770.4	45	7.2		W			6		10						

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 270.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			30.15	765.9	54.1	12.3	55	NW			6		0						
Faröe			30.32	770.1	48.2	9.0	81	NW			4		3						
Godthaab, (Greenland)			30.20	769.3	23.5	-- 4.7	72	Calm			0		2						
Reykkisholm, (Iceland)			29.89	759.3	31.1	-- 0.5	96	W			2		10						
Thorshavn, (Faröe)			29.29	769.3	46.0	7.8	65	W			2		8						
Vestervig			29.24	768.1	46.6	8.1	88	W			4		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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds: Direction. From—	Winds: Velocity. Miles per hour.	Winds: Velocity. Meters per second.	Winds: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	768.2	62.6	17	43	NE			1		0			0	0	Clear	Normal School.
Amiens			30.31	769.9	67.6	19.8	55	NW			3		0			0	0	Clear	Normal School.
Avignon			30.11	764.8	68.7	20.4	40	WNW			1		0			0	0	Very clear	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.32	770.0	65.5	17.5	42	NE			3		0			0	0	Clear	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			30.15	765.9	63.3	17.4	55	NNE			3		0			0	0	Clear	Normal School.
Brest			30.26	768.5	61.3	16.3	71	NE			3		3		NE	0	0	Light fog	Naval Observatory.
Caen																			Normal School
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			30.15	765.9	56.5	13.6	47	N			1		0			0	0	Clear	Puy de Dome Obs.
Commercy			30.28	769.1	61.2	16.2	38	E			4	2c		E		0	0	Slightly cl'dy	Normal School.
Commune de Gréasque*			30.17	766.3	64.6	18.1	43	NW			2		5		NW	0.100	2.7		
Grenoble			30.07	763.7	60.3	15.7	79	NW			2		0			0	0	Clear	Normal School.
Le Mans			30.26	768.6	63.0	17.2	33	E			4		2		E	0	0	Slightly cl'dy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			30.14	765.6	63.1	17.3	43	NE			6		0			0	0	Clear	Normal School.
Mâcon			30.10	766.0	57.7	14.3	57	N			2		0			0	0	Clear	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			30.11	764.7	70.9	21.6	63	NE			1		0			0	0	Clear	Normal School.
Orleans																			Normal School.
Paris Observatory			30.27	768.9	65.1	18.4	20	NE			2	.c				0	0	Clear	National Observatory.
Parthenay																			Normal School.
Privas			30.11	764.8	60.8	16		NE			2		2		NE	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.23	767.7	64.4	18.0	37	ENE			6		2		SW	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.36	771.1	65.3	18.5	42	ENE			4		2		SW	0	0	½ covered	Naval Observatory.
Rouen			30.31	769.9	69.4	20.8	45	NE			2		0			0	0	Clear	Normal School.
Saint Lo			30.37	771.3	59.9	15.5	73	E			4		3		NE	0	0		Normal School.
Tarbes	29.02	737.2			59.0	15		W			2		2		E	0	0	Slightly cl'dy	Normal School.
Toulouse																			Normal School
Villefranche			30.28	769.0	62.8	17.1	67	NE			3		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.92	760.0	79.5	26.4	75	NE			2		2k						L'Abbé Marchési.
Gorée																			
Marseilles			30.11	764.8	64.2	17.9	52	SW			2		1?			0	0	½ cloudey ?	Marseilles Observatory.
Mont-Louis																			—. Falguère.
Montsouris, Paris			30.27	768.8	66.4	19.1	26	NE			3		2			0	0		Montsouris Observ'tory.
Perpignan			30.13	765.2	63.3	17.4	54	S	11.2	5.00			0			0	0		Dr. Flues.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.27	768.8	67.3	19.6	27	ENE			3		0			0	0	Clear	E. Renou.
Toulouse			30.27	768.9	56.1	13.4	73	NW			1		8			0	0		Toulouse Observatory.
Tours			30.21	767.2	64.9	18.3	31	ENE			4		2		E	0	0		C. Marquet.
Versailles, (near Paris)			30.26	768.6	66.9	19.4	21	E			4		3			0	0	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

* Near Marseilles.

GERMAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds: Direction. From—	Winds: Velocity. Miles per hour.	Winds: Velocity. Meters per second.	Winds: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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			30.26	768.7	59.5	15.3	48	NE			3		2	SE		0	0		Prof. T. Hoh.
Berlin			30.27	768.8	56.8	13.8	75	W			1		10			0	0		Prof. Arndt.
Breslau			30.26	768.5	57.9	14.4	69	NW			7		10			0	0		Dr. P. Naugebauer.
Karlsruhe			30.24	768.1	63.0	17.2	43	E			4		0			0	0		A. Senz.
Cassel			30.27	768.8	60.4	15.8	68	NNW			3		8	NW		0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe
Emden																			Prof. Prestel.
Frankfort on the Main			30.32	770.2	63.5	17.5	30	NE			1		1			0	0		Physical Society.
Friedrichshafen	28.76	730.6	30.20	767.0	57.9	14.4	41	NE			0		0			0	0		M. Wilhelm.
Hamburg			30.35	770.8	54.0	12.2	84	NW			2		6k			0	0	Foggy	Deutsche Seewarte.
Kiel			30.32	770.2	58.5	14.7	53	NW			3		3	NW		0	0		Prof. G. Karsten.
Königsberg			30.02	761.4	42.8	6.0	89	NW			5		5			0	0		Prof. E. Luther.
Köslin			30.14	765.6	47.3	8.5		W			5		2			0	0		H. Müller.
Leipsic			30.31	769.9	50.8	13.8	72	WNW			1		0			0	0		Prof. Brühns.
Memel			29.93	760.2	39.7	4.3	93	WNW			7		8			0	0	Dense fog	Reinbrecht & Skalweit.
Münster			30.41	772.4	55.8	13.2	87	NE			2		3			0	0		Prof. E. Heis.
Neufahrwasser			29.99	761.8	56.1	13.4	60	WNW			6		1			0	0		A. Lothes.
Posen			30.24	768.1	55.0	12.8	77	NW			4		10			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.24	768.0	62.6	17.0	39	NE			4		0			0	0		Dr. Schur.
Stuttgart			30.23	767.9	61.2	16.2	44	NE			2		0			0	0		Prof. Schoder.
Thorn			30.11	764.9	54.1	12.3	79	WNW			5		10			0	0		Dr. Hasenbalg
Treves, (Trier)			30.22	767.6	64.4	18.0	35	NE			4		2			0	0		Prof. Flesch.
Wustrow, Naval School			30.16	766.1	45.3	7.4	80	W			5		3			0	0		E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Athens			29.84	758.0	56.8	13.8		SW										Cloudy	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Udine			30.08	764.0	66.0	18.9	18	E	3.1	1.4			0			0	0		
Padua			30.10	764.5	64.8	18.2	29	NE	11.9	5.3			3	NE		0	0		
Vicenza			30.11	764.8	64.4	18.0	27	NE	2.5	1.1			1	E		0	0		
Verona			30.13	765.3	60.8	16.0	70	E			1		0			0	0		
Bergamo	28.76	730.6	30.07	763.7	61.7	16.5	47	SE			4		6			0	0		
Domodossola	29.10	739.2	30.11	764.9	65.3	18.5	46	Calm					1			0	0		
Milan			30.15	765.9	63.7	17.6	56	NNW			2		2	NW		0	0		
Pavia			30.15	765.8	62.2	16.8	42	E			4		0			0	0		
Moncalieri			30.18	766.6	62.1	16.7	50	NNW			2		9	W		0	0		
Mondovi	28.24	717.3	30.14	765.6	57.0	13.9	46	NW			4		8			0	0		
Porto Maurizio			30.10	764.5	64.4	18.0		E			4		1	S		0	0		
Genoa			30.10	764.5	66.6	19.2	25	E	3.1	1.4			4	NE		0	0		
Piacenza			30.16	766.0	62.8	17.1	44	N	5.6	2.5			2	E		0	0		
Parma			30.15	765.7	62.6	17.0	42	NNE			4		3			0	0		
Bologna			30.14	765.5	60.4	15.8	39	SE			6		3	E		0	0		
Florence			30.12	765.0	60.8	16.0	37	NE			6		1	NE		0	0		
Leghorn			30.08	764.0	63.9	17.7	35	E	17.4	7.8			3			0	0		
Siena	28.85	732.7	30.05	763.3	57.7	14.3	38	NE	10.5	4.7			5	NE		0	0		
Urbino	28.55	725.2	30.11	764.9	53.2	11.8	58	NNE			4		3			0	0		
Pesaro																			
Ancona			30.08	764.0	60.1	15.6	66	NE			6		2			0	0		
Grosseto			30.03	762.7	56.1	13.4	55	NNE			6		5	NE		0	0		
Rome			30.97	761.3	67.5	19.7	30	NE	8.1	3.6			4	W		0	0		
Naples, O. U			29.98	761.6	63.7	17.6	42	NE			4		10	NE		0	0		
Lecce			29.91	759.6	61.3	16.3	46	ENE	13.7	6.1			1			0	0		
Cosenza			29.94	760.4	62.1	16.7	63	NW	6.9	3.1			10			0	0		
Riposto, (Sicily)			29.92	759.9	63.0	17.2	76	SE			2		9	S		0.051	1.3		
Palermo			29.89	759.1	54.3	12.4	73	NE	3.8	1.7			10			0	0		
Caltanissetta	27.97	710.4	29.93	760.1	63.3	17.4	74	W			2		10	E		0.110	2.8		
Sub-Series.																			
Naples, S. R			29.98	761.6	51.4	10.8	60	NE	1.3	0.6			..k,s	ESE		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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.5 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Tokio																			

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Flushing			30.43	772.8	54.3	12.4		NE			2								
Groningen			30.33	770.3	54.1	12.3		NNW			2								
Helder			30.39	772.0	48.6	9.2		NW			1								
Utrecht			30.36	771.2	53.6	12.0	86	NNW			2		10					Overcast	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Bergen			30.21	767.3	43.2	6.2	71	NNW	16.1	7.2			8			0	0		
Brönö			29.94	760.4	50.4	10.2	26	NW	26.6	11.9			0			0	0		
Christiania			29.41	747.1	37.0	2.8	91	NE	0	0			10			0.110	2.8	Foggy	
Tromsö			29.58	751.2	38.1	3.4	93	SW	27	12			10			0.724	18.4		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	764.1	58.1	14.5	72	WSW	8.2	3.67			3			0.118	3.0		Dr. J. A. N. Sampaio.
Campo Major			30.07	763.9	72.5	22.5	24	SSW	5.4	2.41			4	SSW		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.03	762.7	68.0	20.0	51	E	5.6	2.50			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.14	765.6	67.5	19.7	35	SSW	6.3	2.8			3			0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			30.08	764.0	52.7	11.5	82	W	16	7			10						Astronomical Obs.
Wilna			29.84	757.8	47.5	8.6	89	W	13	6			10						Astronomical Obs.
Dorpat			29.57	751.0	43.9	6.7	82	W	7	3			3						Physical Cabinet.
St. Petersburg			29.36	745.8	40.8	4.9	78	WNW	18	8			3						Central Physical Obs.
Kuopio			29.21	741.9	42.1	5.6	80	WSW	13	6			10					Snowing	Ch. Forsten.
Kieff			29.90	759.5	59.2	15.1	47	W	13	6			4						Physical Cabinet.
Nikolaiev			30.05	763.2	64.0	17.8	31	N	13	6			0						Kurdakof.
Kertch			29.91	759.7	60.3	15.7	53	NE	13	6			2						Lagorio.
Moscow			29.56	750.9	42.8	6.0	88	SSW	9	4			10						Meteorological Obs.
Lugan			29.84	757.8	63.9	17.7	23	WSW	18	8			0						Meteorological Obs.
Archangel			29.07	738.3	31.6	0.2	92	NE	22	10			10					Snowing	Ogorodnikof.
Tiflis	28.50	725.3	29.95	760.8	57.6	14.2	66	Calm	0	0			9						Physical Observatory.
Astrakhan			30.13	765.3	53.1	11.7	44	SE	13	6			7						Sebastianof.
Kasan			29.48	748.8	44.8	7.1	78	SW	5	2			10						Physical Cabinet.
Orenburg			29.88	759.0	40.1	4.5	60	Calm	0	0			3						Tschernischef.
Ekaterinburg	28.56	725.3	29.58	751.4	35.6	2.0	66	SW	31	14			10						Meteorological Obs.
Nukuss			30.03	762.7	56.8	13.8	39	NE	7	3			0						
Kasaly																			Bobrof.
Tashkend	28.41	721.6	30.15	765.8	46.4	8.0	89	W	9	4			10					Raining	Michelson.
Barnaul			30.23	767.7	9.9	12.3	66	WSW	5	2			4						Meteorological Obs.
Yenisseisk			29.54	750.3	21.2	— 6.0	69	W	11	5			9					Snowing	Marks.
Irkutsk																			Usolsef.
Oorga																			Mossin.
Peking, (China)			30.02	762.4	55.4	13.0	54	Calm	0	0			3						Physical Observatory.
Nertchinsk	27.46	697.4	25.53	750.0	37.8	3.2	61	Calm	0	0			10						Meteorological Obs.
Vladivostock			30.18	766.6	39.2	4.0	70	E	3	2			0						
Nikolaievsk, on the Amoor					28.2	— 2.1	90	E	2	1			5						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.07	763.8	63.7	17.6	39	S	4.5	2.00		0	3			0	0		Royal Observatory.
San Fernando			30.10	764.6	71.1	21.7	35	SE	12.3	5.5		0	0			0	0		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.26	743.2	38.5	3.6	83	NNW			4		10			0	0	Raining	
Umea			29.38	746.3	43.5	6.4	59	NNW			7		8			0	0		
Hernosand			30.54	750.3	45.0	7.2	35	WNW			6		5			0	0		
Stockholm			29.66	753.3	51.1	10.6	45	W			6		5			0	0		
Wisby			29.88	758.9	41.0	5.0	72	WNW			6		5			0	0		
Sub-Series.																			
Upsala			29.66	753.4	52.2	11.2	42	W	16.3	7.3			8		NW	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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28.72	729.6	30.05	765.7	55.8	13.2	52	NNW			3		1			0	0	Clear	The Observatory.
Zurich	28.56	725.3	30.18	766.5	58.8	14.9	54	E			2		1			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +5.3 mm.; Thermometer, +2.6 cent.; Relative Humidity, —6 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Corrected for instrumental errors. Inches.	Corrected for instrumental errors. Millimeters.	Reduced to sea-level. Inches.	Reduced to sea-level. 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.	Mill meters.	Weather.	Observer.
Constantinople			29.87	758.7	48.9	9.4	89	NNE	17	7.5		10				0.354	9.0		
Fao, (Persian Gulf)			30.04	763.0	80.6	27.0		NW			4		10						
Salonica			29.88	758.9	67.6	19.8		N			1		10						
Valona			29.79	756.6	62.2	16.8		W			3		2					Raining	
Varna			29.92	760.0	50.0	10.0		N			2		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.84	758.0	75.0	23.9	64	SW			3		10n		SW	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Corrected for instrumental errors. Inches.	Corrected for instrumental errors. Millimeters.	Reduced to sea-level. Inches.	Reduced to sea-level. 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.	Mill meters.	Weather.	Observer.
Bathurst, N. B.			29.87	758.7	30.9	— 0.6	97	S	6	2.7									Hon. J. Ferguson.
Brockville, Ontario			29.84	757.9	36	2.2		SW	18	8.0		0	8s		SW	0.13	3.3	Fair	W. R. Bigg.
*Chatham, N. B.			29.95	760.7	30	— 1.1	96	NE	3	1.3			10s		NE	0.24	6.1	Light snow	G. A. Blair.
Charlottetown, P. E. Island			29.94	760.5	33	0.6	90	SE	18	8.0			10n			0.27	6.9	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.72	754.9	37.7	3.2	75	S			5		10s			0	0	Unsettled	James Smith, M. A.
Dalhousie, N. B.			29.87	758.7	28.0	— 2.2	87	E			1					0	0	Snowing	H. A. Johnson.
Esquimault, B. C.			29.70	754.4	44.3	6.8	84	NW	1	0.4		5cs				0	0	Cloudy	W. H. Bevis.
Fredericton, N. B.			29.92	760.0	30.5	— 0.8	84	Sr.	5	2.2			10n			0.130	3.3	Snowing	Prof. Harrison.
*Fort Garry, Manitoba			29.81	757.2	26	— 3.3	94	W	9	4.0		2c	2ks	W	W	0	0	Fair	James Stewart.
Goderich, Ontario			30.03	762.7	32.0	0.0	85	SW			2					0	0	Fine	H. J. Strang, M. A.
Granton, Ontario			30.01	762.2	33.0	0.6		W			2					0	0	Clear	James Grant.
*Halifax, N. S.			29.86	758.4	32	0.0	98	S	15	6.7			10n			0.68	17.28	Light rain	F. Allison, M. A.
*Kingston, Ontario			29.85	758.2	35	1.7	70	SW	23	10.7		2c	0			0.12	3.0	Clear	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			29.73	755.1	37	2.8	62	SW	16	7.2		Haze	Haze			0.08	2.0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.68	753.9	35	1.7	77	S	13	5.8		10k	0	SW		0.02	0.05	Cloudy	J. B. Haney.
*Parry Sound, Ontario			29.79	756.7	33	0.6	75	W	34	15.2		2cs	2ks	W	W	0.13	3.3	Fair	Rev. R. Mooley.
*Port Dover, Ontario			30.02	762.5	35	1.7	90	SW	15	6.7		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.			30.03	762.7	31.2	— 0.4		SE	18	8.0						0.20	5.1	Fine	Peter Grant.
*Port Stanley Ontario			30.06	763.5	35	1.7	63	W	20	8.9		0	0			0.05	0.3	Clear	M. Payne.
*Quebec, Quebec			29.94	760.5	31	— 0.6	89	Calm	0	0			10n			0.35	8.9	Cloudy	Capt. Ash, R. N.
St. John, N. B.			29.83	760.2	30	— 1.1	89	Calm	0	0			10n			0.100	2.54		G. Murdoch, C. E.
*Saugeen, Ontario			29.88	758.9	33	0.6	82	SW	25	11.2		2cs	0			0.01	0.3	Clear	K. Stewart.
Stayner, Ontario			29.85	758.2	36	2.2	75	NW	19	8.5		5c	0	NW		Inap.	Inap.	Fair	R. J. Cole.
Stratford, Ontario			30.00	762.0	32.1	0.1	65	W	19	8.5						0.127	3.23	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			30.09	764.3	32	0.0	90	SE	14	6.3			10n			0.01	0.3	Light snow	T. C. Hill.
*Toronto, Ontario			29.93	760.2	37	2.8	51	W	25	11.2		0	0			0.07	1.8	Clear	Magnetic Observatory
Woodstock, Ontario			30.00	762.0	33.5	0.8	94	W	2	0.9		0	0			0	0	Fine	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	44	6.7	52	SW	10	4.5		1k	0	S		0.04	1.0	Clear	
Alpena, Mich.			29.86	758.4	35	1.7	79	W	18	8.0		0	0			0	0	Clear	
Atlantic City, N. J.			30.11	764.8	43	6.1	43	NW	12	5.4		0	0			Inap.	Inap.	Clear	
Augusta, Ga.			30.18	766.6	59	15.0	81	NE	6	2.7			10s			0	0	Cloudy	
Baltimore, Md.			30.16	766.1	45	7.2	46	W	4	1.8		Haze	Sm'e			0	0	Smoky	
Barnegat, N. J.			30.09	764.3	45	7.2	38	NW	18	8.0		0	0			0	0	Clear	
Benton, Montana	27.14	689.3	29.94	760.5	36	2.2	62	SW	6	2.7		0	0			0	0	Clear	
Bismarck, Dakota	28.16	715.3	29.86	758.4	29	— 1.7	59	N	4	1.8			10s		N	0	0	Cloudy	
Boston, Mass.			29.96	761.0	38	3.3	81	SW	7	3.1		2s	Fog	SW		0.04	1.0	Fair	
Breckenridge, Minn.			29.96	761.0	19	— 7.2	84	W	5	2.2		0	0			0	0	Clear	
Buffalo, N. Y.			29.97	761.2	33	0.6	79	SW	20	8.9		0	0			0.01	0.3	Clear	
Burlington, Vt.			29.98	761.5	30	3.9	73	S	8	3.6		2k	5s	W		0.03	0.8	Cloudy	
Cairo, Ill.			30.37	771.4	45	7.2	60	Calm	0	0		0	0			0	0	Clear	
Cape Hatteras, N. C.			30.09	764.3	52	11.1	53	NE	29	13.0		5cs	Haze	W		0	0	Fair	
Cape Henry, Va.			30.16	766.1	51	10.6	59	NW	16	7.2		0	8s		NW	0	0	Fair	
Cape May, N. J.			30.14	765.5	44	6.7	52	W	20	8.9		0	0			0	0	Clear	
Charleston, S. C.			30.18	766.6	60	15.6	70	N	10	4.5		5c	Sm'e			0	0	Fair	
Cheyenne, Wyoming	24.06	611.1	30.00	762.0	22	— 5.6	72	NW	12	5.4		0	0			0	0	Clear	
Chicago, Ill.			30.18	766.6	38	3.3	63	SW	10	4.5		0	0			0	0	Clear	
Cincinnati, Ohio			30.25	768.3	40	4.4	64	SW	7	3.1		0	0			0	0	Clear	
Cleveland, Ohio			30.17	766.3	34.3	1.3	54	SW	16	7.2		0	0			Inap.	Inap.	Clear	
Colorado Springs, Col.	24.14	613.1	30.01	762.2	27	— 2.8	66	Calm	0	0		0	0			0	0	Clear	
Corsicana, Tex.			30.29	769.4	43	6.1	58	N	8	3.6		10k	0	NE		0.06	1.5	Cloudy	
Davenport, Iowa			30.21	767.3	37	2.8	62	SW	8	3.6		0	0			0	0	Clear	
Denison, Tex.			30.28	769.1	43	6.1	58	N	6	2.7		0	0			0	0	Clear	
Denver, Col.	24.87	631.7	30.09	764.3	24	- 4.4	74	S	6	2.7		0	0			0	0	Clear	
Detroit, Mich.			30.16	764.5	35	1.7	52	W	10	4.5		0	0			Inap.	Inap.	Clear	
Dodge City, Kan.	27.91	701.3	29.99	761.7	36	2.2	70	SE	5	2.2		0	0			0	0	Clear	
Dubuque, Iowa			30.15	765.8	36	2.2	62	SW	8	3.6		0	0			0	0	Clear	
Duluth, Minn.			29.89	759.2	31	— 0.6	68	SW	12	5.4		2c	2s			0	0	Fair	
Eastport, Me.			29.87	758.7	31	— 0.6	89	E	6	2.7			10s		E	0.50	12.7	Cloudy	
Erie, Pa.			30.06	763.5	36	2.2	62	SW	26	11.6		2c	0			0.05	1.3	Clear	
Escanaba, Mich.			29.94	760.5	32	0.0	79	SW	10	4.5		1c	0	W		0.02	0.5	Clear	
Fort Gibson, Indian Terr.			30.03	762.7	39	3.9	81	Calm	0	0		0	0			0	0	Clear	
Ft. St. Michaels, Alaska			30.08	764.0	4	—15.6		SW	3	1.3			10s					Cloudy	
Fort Sill, Indian T.	29.07	738.4	30.25	768.3	33	0.6	69	N	4	1.8		0	0			0	0	Clear	
Fort Sully, Dakota																			
Galveston, Tex.			30.14	765.5	56	13.3	87	NE	20	8.9			10s		NE	0.54	13.7	Cloudy	
Grand Haven, Mich.			30.11	764.8	43	6.1	63	W	17	7.6		0	0			0	0	Clear	
Indianapolis, Ind.			30.32	770.1	39	3.9	47	W	1	0.4		0	0			0	0	Clear	
Indianola, Tex.			30.18	766.6	52	11.1	86	N	22	9.8			10s		N	0.30	7.6	Cloudy	
Jacksonville, Fla.			30.16	766.1	65	18.3	64	SW	2	0.9		5k	0	SW		0	0	Fair	
Keokuk, Iowa			30.24	768.1	41	5.0	49	W	7	3.1		8c	0	W		0	0	Fair	
Key West, Fla.			30.15	765.8	73.5	23.1	76	NE	8	3.6		5k	0	E		0	0	Fair	
Kittyhawk, N. C.			30.18	766.8	48	8.9	63	N	32	14.3			10ks		W	0	0	Cloudy	
Knoxville, Tenn.			30.32	770.1	42	5.6	34	NE	12	5.4		0	0			0	0	Clear	
La Crosse, Wis.			30.08	764.0	38	3.3	63	S	10	4.5		0	0			0	0	Clear	
Leavenworth, Kan.			30.32	770.1	34	1.1	69	S	4	1.8		2c	0	W		0	0	Clear	
Lexington, Ky.	29.27	741.7	30.35	770.9	38	3.3	54	SW	10	4.5		0	0			0	0	Clear	
Long Branch, N. J.			30.07	763.8	45	7.2	53	NW	16	7.2		0	0			0	0	Clear	
Louisville, Ky.			30.31	769.9	39	3.9	64	SW	5	2.2		0	Fog		SW	0	0	Foggy	
Lynchburg, Va.			30.23	767.8	48	8.9	22	NW	8	3.6		0	0			0.01	0.3	Clear	
Malone, N. Y.			29.72	752.3	38	3.3	54	SW	16	7.2			10s		SW	0.02	0.5	Cloudy	
Manhattan, Kan.	29.12	739.6	30.35	770.9	27	— 2.8	77	NW	8	3.6		0	0			0	0	Clear	
Marquette, Mich.			29.91	759.7	29	— 1.7	77	W	16	7.2		0	2s		W	0.09	2.3	Fair	
Memphis, Tenn.			30.34	770.6	46	7.8	32	NE	10	4.5		2ck	0	W		0	0	Fair	
Milwaukee, Wis.			29.43	747.5	34	1.1	61	W	14	6.3		0	0			0	0	Clear	
Mobile, Ala.			30.20	767.1	60	15.6	59	N	8	3.6		10cs	0	W		0	0	Cloudy	
Montgomery, Ala.			30.20	767.1	55	12.8	50	NE	8	3.6			10s		W	0	0	Cloudy	
Morgantown, W. Va.			30.22	767.6	43	6.1	43	SW	10	4.5		0	0			Inap.	Inap.	Clear	
Mt. Washington, N. H.	23.38	593.8	29.74	755.4	19	— 7.2	100	NW	50	22.4		0	Fog			0	0	Foggy	
Nashville, Tenn.			30.31	770.1	46	7.8	33	NE	4	1.8		0	0			0	0	Clear	
New Haven, Conn.			30.01	762.2	47	8.3	48	NW	10	4.5		0	0			Inap.	Inap.	Clear	
New London, Conn.			30.03	762.7	40	4.4	82	SW	7	3.1			10s		SW	0	0	Cloudy	
New Orleans, La.			30.12	765.0	64	17.8	67	NE	14	6.3			10s		NE	0	0	Cloudy	
Newport, R. I.			30.01	762.2	38	3.3	81	SW	8	3.6		5ck	0	SW		0.01	0.3	Fair	
New York, N. Y.			30.00	762.5	40	4.4	63	W	15	6.7		0	0			0	0	Clear	
Norfolk, Va.			30.20	767.1	48.5	9.2	40	N	11	4.9			10s		N	0	0	Cloudy	
North Platte, Neb.	27.18	690.4	29.86	758.4	31	— 0.6	79	Calm	0	0		0	0			0	0	Clear	
Omaha, Neb.	29.09	738.9	30.20	767.1	36	2.2	70	SW	8	3.6		0	0			0	0	Clear	
Oswego, N. Y.			29.92	760.0	39.5	4.2	52	W	16	7.2		0	2s			0.03	0.8	Clear	
Pembina, Dakota			29.81	757.2	29	— 1.7	83	W	4	1.8		5k	5s	NW		0	0	Cloudy	
Philadelphia, Penn.			30.14	765.5	43	6.1	35	NW	13	5.8		0	0			Inap.	Inap.	Clear	
Pike's Peak, Colorado	17.64	448.0	29.85	758.2	4	—15.6	48	NW	16	7.2		0	1s			Inap.	Inap.	Clear	
Pittsburgh, Penn.			30.19	766.8	36	3.3	46	NW	12	5.4		0	0			0	0	Clear	
Port Huron, Mich.			30.15	766.3	38	3.3	71	S	15	6.7			10n		S	0	0	Light rain	
Portland, Me.			29.93	760.2	35	1.7	90	SW	6	2.7			10s			0.08	2.0	Cloudy	
Portland, Oregon			29.88	758.9	46	7.8	85	S	2	0.9			10s			0	0	Cloudy	
Punta Rassa, Fla.			30.10	766.1	65.3	18.5	78	N	4	1.8		Haze	Sm'e			0	0	Hazy	
Rochester, N. Y.			29.91	759.4	37	2.8	71	W	24	10.7		0	0			Inap.	Inap.	Clear	
Salt Lake City, Utah	25.74	653.8	30.07	763.8	30	— 1.1	68	N	4	1.8		0	0			0	0	Clear	
Sandy Hook, N. J.			30.04	763.0	42	5.6	48	W	28	12.5		0	0			0	0	Clear	
San Diego, Cal.			30.07	763.8	57	13.9	81	NW	12	5.4			10s		NW	0	0	Cloudy	
San Francisco, Cal.			30.05	763.3	48	8.9	81	W	8	3.6		0	0			0	0	Clear	
Santa Fe, N. M.	23.30	591.8	29.84	757.9	29	— 1.7	78	N	11	4.9		0	8s			0	0	Fair	
Savannah, Ga.			30.16	766.1	61	16.1	66	N	9	4.0		5cs	0	W		0	0	Fair	
Shreveport, La.			30.31	769.9	48	8.9	92	N	4	1.8			10s		N	0.47	11.9	Cloudy	
Smithville, N. C.			30.16	766.1	57	13.9	48	N	18	8.0		8c	0	W		0	0	Cloudy	
Springfield, Mass.			29.97	761.7	42	5.6	73	S	4	1.8		0	0			Inap.	Inap.	Clear	
St. Louis, Mo.			30.34	770.6	40	4.4	47	W	2	0.9		0	0			0	0	Clear	
St. Marks, Fla.			30.16	766.1	55	12.8	87	Calm	0	0		8ck	0	W		0	0	Fair	
St. Paul, Minn.			29.99	761.7	29.5	— 1.4	84	Calm	0	0		0	0			0	0	Clear	
St. Paul's Island, Alaska			29.79	756.7	17	— 8.3	83	ESE	26	11.6		10cs	8	SE		0	0		
Thatcher's Island, Mass.			29.96	761.0	35	1.7	90	SW	17	7.6		0	5s		SW	0.04	1.0	Clearing	
Toledo, Ohio			30.13	765.3	41	5.0	57	SW	10	4.5		0	0			0	0	Clear	
Tucson, Arizona	27.52	699.0	30.12	765.0	51	10.6		S				2c	0	S		0	0	Fair	
Tybee Island, Ga.			30.14	765.5	61	16.1	70	NE	8	3.6		5ck	Sm'e			0	0	Fair	
Vicksburg, Miss.			30.29	769.4	50	10.0	71	NE	6	2.7			10s		SW	0.17	4.3	Cloudy	
Virginia City, M. T.	24.24	615.7	29.72	754.9	22	— 5.6	72	Calm	0	0		1c	0	NW		0	0	Clear	
Washington, D. C.			30.20	767.1	44.5	6.9	35	W	7	3.1		0	0			0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.16	766.1	50	13.3	45	N	12	5.4		8cs	0	W		0	0	Cloudy	
Wood's Holl, Mass			29.88	758.9	44	6.7	84	W	10	4.5			10s		W	0	0	Cloudy	
Wytheville, Va	27.85	707.4	30.10	764.5	36	2.2	45	NW	6	2.7		2ck	0	NW		0.01	0.3	Clear	
Yankton, Dakota	28.78	731.0	30.11	764.8	36	2.2	71	S	12	5.4		0	0			0	0	Clear	
Yuma, Arizona			30.00	762.0	55	12.8		S				0	0			0	0	Clear	
Sub Series.																			
Bridgetown, B'b'dos, W. I.			30.08	764.0	80	26.7	82	NE	7	3.1		2k	5ks	E	NE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.00	762.0	78	25.6	74	E				5k	2k			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.25	768.3	79	26.1	69	E	3	1.3		4c	8ks	S	N	0	0	Cloudy	W. S. Cameron.
Kingston, Jamaica, W. I			30.25	768.3	78	25.6	78	Calm	0	0		0	0			0	0		James Gall.
Santiago de Cuba, W. I			29.88	758.9	74	23.3	76	NE	2.4	1.1		0	0			0	0	Clear	Robert Mason.
Havana, Cuba, W. I			30.13	765.3	74	23.3	72	NE	2.4	1.1		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			30.01	762.2	62.0	16.7	69	N	27.0	12.1		0	8k			0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I																			
Clifton, Jamaica, W. I	27.20	690.9	30.00	762.0	63	17.2	83	N	7.0	3.1		5c	2k	N		0		Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.			29.96	761.0	78	25.6	91	E			3		10n			0.310	7.87	Rainy	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.00	762.1	78.8	26										0.482	12.25		Dr. H. Groot.
Medellin, Colombia, S. A	25.21	64.3			66.0	18.9	80		2	0.9		5c	3s			0	0	Cloudy	Thomas Herran.
St. John's, Newfoundland			30.28	769.1	33.5	0.8	76	NE				Haze	Haze			0	0	Fair	John Delaney.
York Factory, B. A			29.95	760.7	4.5	—15.3	87	N	10	4.5			10n			0.02	0.5		J. Fortescue.
Honolulu, Oahu, H. I			30.17	766.3	73	22.8	90	NE			3					0	0		E. P. Church.
Makawao, Maui, H. I	27.91	708.9	30.08	764.0	59	15.0	100	NE	8.4	3.8			10n		NE	1.	25.4	Raining	F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,294.8 ft., or 699.4 m; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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 APRIL 7, 1876.

7:35 A. M. WASHINGTON 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.
1:13 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.

ALGERIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From –	Clouds. Direction. Lower. From –	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	67.1	19.5	66	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.15	765.9	62.6	17.0	80	N			1		0			0	0	Clear	Peter.
La Calle																			Kunts.
Tunis			30.08	764.1	62.2	16.8	93	NNW			3		10			0.339	8.6	Hidden	Jacques
Sfax			30.03	763.4	61.9	16.6	73	N			4		5			0.228	5.8	Fair	Chauvey.
Saïda			30.19	766.8	65.3	18.5	29	N			2		2			0	0	Clear	Millot.
Tebessa			30.09	764.2	47.1	8.4		W			1		10			0.157	4.0	Hidden	Colin.
Geriville			30.21	767.3	51.4	10.8	62	N			2		2			0	0	Clear	Buard.
Laghouat			30.18	766.5	64.4	18.0	36	NW			3		1			0	0	Clear	Guyot.
Biskra			30.11	764.8	69.8	21.0	29	NW			1		4			0	0	Fair	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From –	Clouds. Direction. Lower. From –	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			29.95	760.8	65.3	18.5	50	SW			2		6			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.99	761.8	49.6	9.8	42	WNW			4		8			0	0		I. R. Observatory.
Eperies			29.89	759.1	51.3	10.7	45	N			5		8		S	0	0		Julius Mikolik.
Gratz	28.70	731.3	29.97	761.3	61.7	16.5	34	NE			5		5			0	0		Andreas Rospini.
Hermannstadt	28.30	718.8	29.69	754.1	60.6	15.9	28	NW			3		4			0.189	4.80	Raining	Prof. Reissenberger.
Kremsmünster	28.76	730.6	30.10	764.5	57.0	14.2	59	W			3		6			0	0		Prof. C. Wagner.
Lemberg			29.75	755.6	47.1	8.4	87	NW			4		7			0.035	0.9		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.99	761.8	63.0	17.2	46	NW			2		5cs			0	0		I. R.Hydrographic Office
Szegedin			29.80	756.9	63.1	17.3	38	NW			4		8			0	0		Karl Stancel.
Trieste			30.06	761.9	64.4	18.0	55	W			1		1			0	0		Prof. V. Farolfi.
Vienna			30.00	762.0	60.4	15.8	33	NW			4		3			Inap.	Inap.		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From –	Clouds. Direction. Lower. From –	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.32	770.1	57.7	14.3	49	E			4		0			0	0	Clear	Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	59.6	15.3		SSW	21	9.4			5			0	0	Blue sky	William Boswell.
Ardrossan			30.30	769.6	57	13.9		Calm			0		8					Foggy	J. Mayes.
Armagh Observatory			30.31	769.6	57.0	13.9		S	15	6.7			10					Overcast	S. Call for Dr. Robinson.
Bidston, Liverpool Obs			30.31	769.9	58.7	14.8		ESE	15	6.7			3					Hazy	John Hartnup.
Birr Castle, (Parsonstown)			30.23	767.8	62.9	17.2		SSE			1		1					Blue sky	J. Dreyer.
Bradford			30.31	769.9	59.4	15.2		S			1		0			0	0	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	82.0	27.8		NE			3		2					*D. clouds	Sergt. J. F. Halanen.
Cambridge Observatory			30.35	770.9	65 0	18.3		SE			1		1					*D. clouds	H. Todd.
Cardington			30.38	771.6	63.0	17.2		N			1		5					*D. clouds	John McLaren.
Carlisle			30.31	769.9	62	16.7		S			1		7			0	0	*D. clouds	Bell, for J. Cartmell.
Chatham, School M. E			30.18	766.6	59.2	15.1		SW			1		4					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	28.81	731.8	30.32	770.1	54.0	12.2		E			6		5					*D. clouds	R. E. Power.
Donaghadee			30.29	769.4	58	14.4		SSE			2		2					Blue sky	J. Mac Gowan.
Dover			30.35	770 9	51	10.6		NE			3		0					Clear	J. Costello.
Eccles, (near Manchester.)			30.32	770.1	63.2	17.3		SE	3.8	1.7			5					*D. clouds	Thomas Mackereth.
Falmouth Observatory			30.28	769.1	51.6	10.9		E	19	8.5			10					Foggy	The Staff.
Fort Napier, (Natal)	27.68	703.1	29.91	759.7	72.4	22.4		SE			3		3					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.93	760.2	80.0	26.7		E			7		6					*D. clouds	
Galway, Queen's College			30.24	768.1	55	12.8		S			1		2					*D. clouds	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.16	766.1	69.0	20.6		SSE			2		1					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			30.27	768.8	55.5	13.1		S			1		10					Overcast	Lewis Stuart.
Great Yarmouth			30.42	772.7	48	8.9		E			1		0					Blue sky	G. T. Watson.
Greenwich Royal Obs.			30.36	771.1	60.0	15.6		ESE			1		0					Blue sky	The Staff for G. B. Airy.
Guernsey			30.23	767.8	55	12.8		NE			1		0					Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			30.33	770.4	62.2	16.8		ESE			2		0					Hazy	L. J. Crossley.
Helston			30.24	768.1	58	14.4		E			3		10k			0	0	Fair	M. P. Moyle.
Holyhead			30.32	770.1	58	15.0		SSW			2		3					Blue sky	John Tilston.
Kew Observatory			30.36	771.1	58.0	14.4		ENE	22	9.8			0					Hazy	The Staff.
Kingstown			30.30	769.0	55	12.8		SSE			4		6					*D. clouds	George Mitchell.
Leicester Museum			30.40	772.1	52.9	11.6		E			1		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.94	760.5	64.0	17.8		NW			1		6k						Fred Travis, Pvt A.H.C.
Nairn			30.23	767.8	59	15.0		Calm			0		2					¼ clouded	W. D. Penny.
Nassau, Bahamas			30.14	765.5	76.1	24.5		NE			2		6					*D. clouds	Surg.-Maj. Henry.
Nottingham			30.37	771.4	59.2	15.1		SE			1		7k		SSE	0.004	0.10	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.35	770.9	57.6	14.2		E			3		7					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.32	770.1	59	15.0		E			2		2					Blue sky	J. Lucas.
Plymouth			30.27	768.8	56.3	13.5		E			5		6					*D. clouds	John Merrifield.
Roche's Point			30.27	767.8	54	12.2		SE			4		8					Hazy	W. Kennedy.
Saint Ann's Head			30.28	769.1	54	12.2		ESE			3		10					Misty	John C. Walker.
Saint Helier, (Jersey)			30.22	767.6	62.2	16.8		E			5		0					Clear	A. P. Amy.
Sandwick Manse, (Orkneys)			30.21	767.3	52	11.1		SW	5	2.2			10					Misty	Rev Chas. Austin, LL. D.
Scarborough			30.33	770.4	59.5	15.3		SSW			2		5					*D clouds	F. Shaw.
Scutari Cemetery Turkey)			29.68	753.9	53.4	11.9		NE			1		10			Blank	Blank	Gloomy	Sergt. W. H. Lyne.
Sheffield			30.36	771.1	58.0	14.4		SSE			2		5			0	0	*D. clouds	W. F. Cooper.
Silloth Rectory			30.28	769.1	62.4	16.9	68	SW			2		3			0	0	*D. clouds	Rev Francis Redford
Stonyhurst Observatory			30.31	769.9	60.6	15.9		S			3		7					Hazy	S. J. Perry.
Stornoway, Lewis C. Hebr.)			30.18	766.6	52	11.1		SW			2		10					Gloomy	John Smith.
Stratfield Turgiss			30.36	771.1	60.3	15.7		E			1-2		0					Blue sky	Rev Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			30.18	766.6	56	13.3		SSW			2		9					Overcast	John Trotter.
Truro, Royal Institution			30.15	765.8	53	11.7		E			6		10					Gloomy	W Newcombe.
Valencia Observatory			30.21	767.3	59.5	15.3		SSE	27	12.1			7					*D. coluds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Cape Good Hope Obs.			30.03	762.7	71.0	21.7	53	S	21	9.4			5						The Staff, for E. J. Stone.
Leith, Restalrig Park			30.31	769.9	56.7	13.7		W			1		10s			0	0	Fine, cloudy	Andrew Gibb.
Mauritius			29.98	761.5				ESE	15.1	6.8						0	0		
Monach Lt-house, Hebrides			30.17	766.3	47	8.3		S			3		10			0	0		J. Youngclause.
North Unst, (Shetland Is.)			30.14	765.5	46.5	8.1		W			6		10			Blank	Blank		

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 270.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			30.21	767.2	48.7	9.3	37	NW			2		2						
Fanöe			30.29	769.3	48.4	9.1	60	NW			4		1						
Godthaab, Greenland			30.38	771.7	30.7	— 0.7	71	NE			2		2						
Stykkisholm, (Iceland)			29.91	759.8	18.5	— 7.5	92	NE			8		10					Snowing	
Thorshavn, (Faröe)			29.89	759.3	49.8	9.9	82	W			6		8						
Vestervig			30.27	768.8	45.7	7.6	77	NW			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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	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	62.6	17	61	NE			1		2s		NE	0	0	Slightly cl'dy	Normal School.
Amiens			30.31	769.8	66.6	19.2	54	W			3		0			0	0	Clear	Normal School.
Avignon			30.09	764.3	71.1	21.7	30	N			1		0			0	0	Very clear	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.27	768.8	62.4	16.9	43	E			3		0			0	0	Clear	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			30.13	765.4	63.3	17.4	55	NNE			3		0			0	0	Clear	Normal School.
Brest			30.10	764.6	64.6	18.1	65	NE			2		0			0	0	Light fog	Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			30.11	764.9	66.9	19.4	31	N			1		0			0	0	Clear	Puy de Dome Obs.
Commercy			30.25	768.3	59.9	15.5	42	NE			4		2k		NE	0	0	Slightly cl'dy	Normal School.
Commune de Gréasque*			30.13	765.3	60.4	19.1	38	NW			2		2		NW	0	0		
Grenoble			30.04	763.1	63.0	17.2	75	NE			1	2c		S		0	0	Slightly cl'dy	Normal School.
Le Mans			30.20	767.0	63.5	17.5	57	ESE			3		2		ESE	0	0	Slightly cl'dy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			30.12	765.0	63.0	17.2	59	N			2		0			0	0	Clear	Normal School.
Mâcon			30.17	766.4	59.4	15.2	70	NE			2		0			0	0	Clear	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			30. 6	763.5	76.3	24.6	37	NW			1		0			0	0	Clear	Normal School.
Orleans																			Normal School.
Paris Observatory			30.23	767.8	63.3	17.4	49	E			3		2k		E	0	0	Slightly cl'dy	National Observatory.
Parthenay																			Normal School.
Privas			30.13	765.4	65.1	18.4		N			2		0			0	0	Clear	Normal School.
La Roche-sur-Yon			30.17	766.3	68.4	20.2	40	E			6		0			0	0	Clear	Normal School.
Rochefort, Observatory			30.13	765.3	69.1	20.6	44	E			3		0			0	0	Blue sky	Naval Observatory.
Rouen			30.24	767.9	68.4	20.2	39	NE			2		0			0	0	Clear	Normal School.
Saint Lo			30.29	769.4	62.6	17	70	E			3		7		E	0	0		Normal School.
Tarbes	28.98	736.2			60.8	16		WNW			1		0			0	0	Clear	Normal School.
Toulouse																			Normal School.
Villefranche			30.14	765.6	65.8	18.8	62	SE			2		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.92	760.0	79.5	26.4	69	NE			2		5k			Blank	Blank		L'Abbé Marchési.
Gorée																			
Marseilles			30.07	763.6	68.4	20.2	40	WSW			1		0			0	0	Clear	Marseilles Observatory.
Mont-Louis																			—. Falguère.
Montsouris, Paris			30.22	767.6	65.1	18.4	53	E			3		3		E	0	0		Montsouris Observatory.
Perpignan			30.10	764.6	63.1	17.3	60	S	5.6	2.50			0			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.24	767.8	65.8	18.8	49	NE			3		0			0	0	Clear	E. Renou.
Toulouse			30.24	767.9	61.9	16.6	58	NNW			1		1			0	0		Toulouse Observatory.
Tours			30.16	766.1	66.2	19.0	41	ENE			3		0			0	0	Clear	C. Marquet.
Versailles, (near Paris)			30.23	767.7	64.8	18.2	52	E			2		5			0	0	Fair	Dr. A. Béringy.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are requently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft.; lermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 321 m., or 1,053.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

*Near Marseilles.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	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			30.19	766.9	59.1	15.0	16	NNE			4		1			0	0		Prof. T. Hoh.
Berlin			30.21	767.3	54.7	12.6	25	NW			1		1			0	0		Prof. Arndt.
Breslau			30.14	765.6	48.9	9.4	40	N			10		2			0	0		Dr. P. Saugebauer.
Carlsruhe			30.20	767.1	63.3	17.4	30	NE			3		0			0	0		A. Senz.
Cassel			30.23	767.8	60.8	16.0	38	NW			2		0			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe
Emden																			Prof. Prestel.
Frankfort on the Main			30.30	769.7	61.3	16.3	20	NNE			1		0			0	0		Physical Society.
Friedrichshafen	28.76	730.4	30.19	766.9	57.2	14.0	57	NE			4		3			0	0		M. Wilhelm.
Hamburg			30.29	769.4	53.1	11.7	44	NW			2		3c,0s			0	0	Very fine	Deutsche Seewarte.
Kiel			30.27	768.8	50.2	10.1	31	N			4		2			0	0		Prof. G. Karsten.
Königsberg			30.00	761.9	41.5	5.3	69	N			5		6			0	0		Prof. E. Luther.
Köslin			30.16	766.1	43.5	6.4		NW			6		1			0	0		H. Müller.
Leipsic			30.26	768.6	52.0	11.6	48	NNW			4		2			0	0		Prof. Bruhns.
Memel			29.97	761.2	39.7	4.3	74	N			7		9			0	0		Reinbrecht & Skalweit.
Münster			30.41	772.5	59.7	15.4	48	NE			1		0			0	0		Prof. E. Heis.
Neufahrwasser			30.04	762.9	41.7	5.3	71	NNW			5		10			0	0		A. Lothes.
Posen			30.16	765.7	50.5	10.3	41	NW			5		1			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.23	767.0	61.5	16.3	44	NE			2		0			0	0		Dr. Schur.
Stuttgart			30.22	767.5	61.2	16.2	38	NE			2		0			0	0		Prof. Schoder.
Thorn			30.03	762.8	49.8	9.9	43	NNW			4		8			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.21	767.2	62.8	17.1	24	NE			0		0			0	0		Prof. Flesch.
Wustrow, Naval School			30.19	766.7	43.5	6.4	73	WNW			2		4			0	0		F. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 423.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Athens			29.84	757.8	61.5	16.4		W										½ clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Udine			29.97	761.3	65.3	18.5	32	SW	3.1	1.4			4			0	0		
Padua			30.00	762.0	63.9	17.7	43	S	3.8	1.7			5	NE		0	0		
Vicenza			30.04	763.0	66.9	19.4	36	W	6.9	3.1			1			0	0		
Verona			30.03	762.8	66.9	19.4	81	E			2		10			0	0		
Bergamo	28.65	727.8	29.95	760.7	64.4	18.0	44	SW			1		0			0	0		
Domodossola	28.96	735.6	29.97	761.3	68.0	20.0	42	SSE			4		1			0	0		
Milan			30.03	762.8	65.8	18.8	51	WNW			1		2	WNW		0	0		
Pavia			30.03	762.8	66.4	19.1	36	SE			4		0			0	0		
Moncalieri			30.03	762.7	66.2	19.0	35	SE			2		1			0	0		
Mondovi	28.13	714.5	30.03	762.8	64.0	17.8	14	NE			4		1	N		0	0		
Porto Maurizio			30.07	763.7	62.8	17.1		SSW			2		0			0	0		
Genoa			30.03	762.8	65.5	18.6	39	SW	7.4	3.3			0			0	0		
Piacenza			30.03	762.7	66.6	19.2	43	SW	5.6	2.5			0			0	0		
Parma			30.02	762.6	66.4	19.1	45	NW			2		0			0	0		
Bologna			30.07	763.7	63.9	17.7	38	NW			1		0			0	0		
Florence			30.03	762.7	68.0	20.0	23	NE			4		1	NE		0	0		
Leghorn			30.03	762.7	62.1	16.7	56	NW	4.3	1.9			2			0	0		
Siena	28.79	731.2	29.99	761.8	64.4	18.0	24	ENE	0	0			1	NE		0	0		
Urbino	28.50	723.9	30.07	763.6	57.2	14.0	41	NNE			4		0			0	0		
Pesaro																			
Ancona			30.04	763.1	59.7	15.4	63	NW			6		1			0	0		
Grosseto			29.97	761.2	69.1	20.6	25	N			2		3	NE		0	0		
Rome			29.97	761.3	69.3	20.7	33	W	3.8	1.7			2			0	0		
Naples, O. U.			29.97	761.1	69.4	20.8	35	N			4		7	E		0	0		
Lecce			29.91	759.8	62.4	16.9	39	ENE	22.4	10.0			1			0	0		
Cosenza			29.94	760.5	64.8	18.2	77	NW	6.3	2.8			7			0	0		
Riposto, (Sicily)			29.95	760.8	64.8	18.2	63	S			2		9	SE		0.039	1.0		
Palermo			29.94	760.4	64.4	18.0	44	N	9.8	4.4			8			0	0		
Caltanissetta	27.98	710.7	29.94	760.4	55.2	12.9	55	NW			4		8	SE		0.012	0.3		
Sub-Series.																			
Naples, S. R.			29.97	761.3	68.7	20.4	42	ENE	0.7	0.3			..c,n	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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Tokio																			

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Flushing			30.39	772.0	55.9	13.3		ENE			3								
Groningen			30.34	770.5	52.9	11.6		N			3								
Helder			30.40	772.1	48.4	9.1		N			1								
Utrecht			30.34	770.6	57.0	13.9	47	NNE			3		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 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.
Bergen			30.22	767.6	41.0	5.0	75	S	13.4	6.0			10			0.224	5.7		
Brönö			30.00	762.1	38.8	3.8	87	W	12	5			10			0	0	Light rain	
Christiania			30.18	766.6	51.6	10.9	28	SSW	0.4	0.2			3			0	0		
Tromsö			29.92	760.0	28.4	— 2.0	52	SE	7	3			1			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.19	766.9	59.0	15.0	76	W	5.7	2.56			3			0.016	0.4		Dr. J. A. N. Sampaio.
Campo Major			30.12	765.1	71.6	22.0	26	WSW	6.5	2.90			3			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.14	765.5	65.7	18.7	65	SSE	5.8	2.61			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.19	766.9	66.6	19.2	47	SSE	4.9	2.2			2			0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.92	760.0	46.8	8.2	49	NNW	31	14			10						Astronomical Obs.
Wilna			29.74	755.5	42.3	5.7	67	NW	18	8			10						Astronomical Obs.
Dorpat			29.84	757.8	32.5	0.3	83	N	11	5			7						Physical Cabinet.
St. Petersburg			29.81	757.1	24.1	— 4.4	47	NNE	20	9			0						Central Physical Obs.
Kuopio			29.98	761.6	21.0	— 6.1	95	NE	7	3			3						Ch. Forsten.
Kieff			29.52	749.9	41.0	5.0	81	NNW	4	2			7						Physical Cabinet.
Nikolaiev			29.58	751.4	56.5	13.6	65	WNW	11	5			6						Kurdakof.
Kertch			29.50	749.4	63.7	17.6	38	N	7	3			2						Lagorio.
Moscow			29.44	747.7	40.5	4.7	74	N	9	4			7						Meteorological Obs.
Lugan			29.31	744.4	58.8	14.9	55	WNW	29	13			9			Blank	Blank		Meteorological Obs.
Archangel			29.83	757.6	11.1	—11.6	78	N	22	10			0						Ogorodnikof.
Tiflis	28.13	714.5	29.52	749.7	57.2	14.0	68	E	9	4			10						Physical Observatory.
Astrakhan			29.64	752.9	59.5	15.3	37	SE	18	8			4						Sebastianof.
Kasan			29.20	743.1	42.6	5.9	81	W	7	3			9						Physical Cabinet.
Orenburg			29.50	750.8	50.9	10.5	56	Calm	0	0			2						Tschernischef.
Ekaterinburg	28.16	715.2	29.15	740.4	41.2	5.1	72	SSW	9	4			9						Meteorological Obs.
Nukuss			29.78	756.5	67.5	19.7	17	SE	16	7			0						
Kasaly																			Bobrof.
Tashkend	28.41	721.7	30.10	764.5	60.1	15.6	58	Calm	0	0			7						Michelson.
Barnaul			30.04	763.0	30.7	— 0.7	53	Calm	0	0			1						Meteorological Obs.
Yenisseisk			29.68	753.8	30.7	— 0.7	52	SSW	18	8			10						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.67	753.7	67.3	19.6	42	SSW	4	2			3						Physical Observatory.
Nertchinsk	27.17	690.0	29.21	741.8	39.2	4.0	75	Calm	0	0			10			Blank	Blank		Meteorological Obs.
Vladivostock			30.08	764.0	39.6	3.9	88	SE	13	6			10						
Nikolaievsk, on the Amoor					27.7	— 2.4	96	E	7	3			2						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 403. in ters, or 1,311.8 feet; Ekaterinburg, 304.4? m., or 1,005.2? ft.; Tashkend, in 494.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.6 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.07	763.8	69.1	20.6	37	SW	4.5	2.00		0	0			0	0		Royal Observatory.
San Fernando			30.17	766.4	65.8	18.8	63	NW	10.3	4.6		0	3		NW	0	0		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.11	764.9	23.0	— 5.0	81	NE			2		0			0	0		
Umea			30.08	763.9	27.3	— 2.6	85	E			2		10			0	0		
Hernosand			30.04	763.0	32.7	0.4	89	E			2		10			0	0	Snowing	
Stockholm			30.00	762.1	46.8	8.2	52	NNW			4		7			0	0		
Wisby			30.09	764.3	38.8	3.8	77	NNW			4		0			0	0		
Sub-Series.																			
Upsala			30.03	762.8	47.7	8.7	53	NNW	11.6	5.2			7		NNW	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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.73	729.7	29.76	765.8	56.3	13.5	56	N			2		1			0	0	Clear	The Observatory.
Zurich	28.56	725.4	30.17	766.4	60.8	16.0	59	NE			2		2			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +5.5 mm.; Thermometer, +2.8 cent.; Relative Humidity, —2 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.73	755.2	53.1	11.7	71	N	7	3.0			10			0	0	Light rain	
Fao. (Persian Gulf)			30.00	762.0	79.8	26.2		SE			3		10						
Salonica			29.83	757.6	62.2	16.8		NE			1		5						
Valona			29.76	756.0	62.1	16.7		W			3		2						
Varna			29.65	753.0	66.2	19.0		N			2		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.65	753.1	71.4	21.9	69	SW			3		8n		SW	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.72	754.9	34.7	1.5	93	Calm	0	0									Hon. J. Ferguson.
Brockville, Ontario			29.79	756.7	34	1.1		SW	10	4.5			10s		SW	1.10	27.9	Light snow	W. R. Bigg.
*Chatham, N. B.			29.78	756.4	28	— 2.2	96	SW	1	0.4			10ks		SW	0.15	3.8	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			29.79	756.7	33	0.6	79	W	6	2.7		0	5ks			0.42	10.7	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			29.72	754.9	36.7	2.6	98	S			2		10n			0.149	3.79	Snowing	James Smith, M. A.
Dalhousie, N. B.			29.77	756.1	35.8	2.1	70	Calm			0	8k				0.40	10.2		H. A. Johnson.
Esquimault, B. C.			29.75	755.6	41.1	5.1	92	SW	4	1.8		4cs				0.01	0.3	Cloudy	W. H. Bevis.
Fredericton, N. B.			29.84	757.9	34.0	1.1	80	NW	1	0.4			1ks			0.030	0.76	Fair	Prof. Harrison.
*Fort Garry, Manitoba			30.28	769.1	9	—12.8	89	N	6	2.7		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			29.63	752.5	36.8	2.7	91	NW			2		10n			0	0	Light rain	H. J. Strang, M. A.
Granton, Ontario			29.63	752.6	40.0	4.4		SW			3	1cs		SE		0.11	2.8	Clear	James Grant.
*Halifax, N. S.			29.84	757.9	32	0.0	90	NW	6	2.7			8n			0.418	10.61	Cloudy	F. Allison, M. A.
*Kingston, Ontario			29.76	755.9	34	1.1	90	SW	2	0.9			10n		SW	0.07	1.8	Light rain	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			29.75	755.1	37	2.8	81	SW	16	7.2			10n			0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.72	754.9	35	1.7	74	S	5	2.2			10n		S	Inap.	Inap.	Threatening	J. B. Haney.
*Parry Sound, Ontario			29.70	754.4	32	0.0	95	N	12	5.4			10n		N	0.20	5.1	Light snow	Rev. R. Mooley.
*Port Dover, Ontario			29.72	754.9	41	5.0	82	SW	16	7.2			10n		SW	Inap.	Inap.	Light rain	H. Morgan.
Port Hastings, N. S.			29.74	755.4	33.6	0.9		NW	12	5.4						0	0	Fine	Peter Grant.
*Port Stanley Ontario			29.72	754.9	39	3.9	84	SW	20	8.9			10ks		W	0	0	Cloudy	M. Payne.
*Quebec, Quebec			29.77	756.1	38	3.3	91	Calm	0	0			10n			0	0	Cloudy	Capt. Ash, R. N.
St. John, N. B.			29.68	758.9	34	1.1	84	SW	2	0.9						0.010	0.25		G. Murdoch, C. E.
*Saugeen, Ontario			29.63	752.6	33	0.6	88	N	8	3.6			10s			0.20	5.1	Heavy snow	K. Stewart.
Stayner, Ontario			29.66	753.4	33	0.6	95	N	3	1.3			10n		N	0.38	9.7	Heavy snow	R. J. Cole.
Stratford, Ontario			29.61	752.1	38.6	3.7	83	SW	15	6.7		2c	5n	NE		0.108	2.74	Threatening	C. J. MacGregor, M. A.
*Sydney, C. B.			29.73	755.1	35	1.7	80	NW	6	2.7		5k	8ks	NW	NW	0.75	19.1	Clearing	T. C. Hill.
*Toronto, Ontario			29.66	753.4	38	3.3	92	SW	4	1.8		5ck	5ks	W	W	0.10	2.5	Clearing	Magnetic Observatory
Woodstock, Ontario			29.72	754.9	39.7	4.3	100	SW			1	1cs	2s			0.19	4.8	Fine	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the 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.			29.86	758.4	41	5.0	56	S	7	3.1		0	5k		S	0	0	Fair	
Alpena, Mich			29.84	757.9	29	— 1.7	78	NW	13	5.8		0	8s		NW	0.15	3.8	Fair	
Atlantic City, N. J			30.06	763.5	45	7.2	84	SW	4	1.8		5c	Haze	W		0	0	Fair	
Augusta, Ga.			30.16	766.1	50	10.0	79	NW	5	2.2		0	5k		W	0	0	Fair	
Baltimore, Md			30.07	763.8	44	6.7	60	SW	6	2.7		2ck	Sm'e	W		0	0	Fair	
Barnegat, N. J			30.04	763.0	49	9.4	64	SW	12	5.4		5cs	0	W		0	0	Fair	
Benton, Montana	26.93	684.0	29.73	755.1	32	0.0	60	SW	1	0.4			10s			0	0	Cloudy	
Bismarck, Dakota	28.34	719.8	30.07	763.8	28	— 2.2	67	E	10	4.5			10ks		E	0	0	Cloudy	
Boston, Mass			29.94	760.5	39	3.9	56	S	12	5.4		10s	Sm'e	S		0	0	Cloudy	
Breckenridge, Minn			30.19	766.8	17	— 8.3	83	N	10	4.5		0	0			0	0	Clear	
Buffalo, N. Y			29.78	756.4	42.5	5.8	66	SW	38	17.0			10n		SW	0.05	1.3	Light rain	
Burlington, Vt			29.77	756.1	42	5.6	70	S	11	4.9		2k	5s			0	0	Cloudy	
Cairo, Ill			30.16	766.1	45	7.2	76	SE	1	0.4		0	0			0	0	Clear	
Cape Hatteras, N. C			30.10	764.5	53	11.7	73	Calm	0	0		0	Haze			0	0	Clear	
Cape Henry, Va			30.11	764.8	59	15.0	43	SW	9	4.0		0	Haze			0	0	Clear	
Cape May, N. J			30.08	764.0	45	7.2	84	SE	10	4.5		0	0			0	0	Clear	
Charleston, S. C			30.14	765.5	58	14.4	81	NE	4	1.8			10s		W	Inap.	Inap.	Cloudy	
Cheyenne, Wyoming	24.00	609.6	29.94	760.5	26	— 3.3	67	W	12	5.4		0	0			0	0	Clear	
Chicago, Ill			30.03	762.7	41	5.0	48	N	12	5.4		2ck	5s	W		0	0	Fair	
Cincinnati, Ohio			30.06	762.0	46	7.8	47	SW	8	3.6		0	0			0	0	Clear	
Cleveland, Ohio			29.79	756.7	46.5	8.1	42	W	26	11.6		5ck	5ks	W	W	0	0	Cloudy	
Colorado Springs, Col	24.08	611.6	29.35	760.7	33	0.6	69	Calm	0	0		0	0			0	0	Clear	
Corsicana, Tex			30.02	762.5	53	11.7	86	NE	5	2.2			10s			0.37	9.4	Cloudy	
Davenport, Iowa			30.08	764.0	40	4.4	63	NW	1	0.4		5cs	0			0	0	Fair	
Denison, Tex			30.02	762.5	53	11.7	66	E	4	1.8			10s			0	0	Cloudy	
Denver, Col.	24.79	629.6	30.01	762.2	32	0.0	69	S	5	2.2		0	0			0	0	Clear	
Detroit, Mich			29.73	755.1	45	7.2	60	W	20	8.9		5k	0	NW		0.01	0.3	Fair	
Dodge City, Kan	27.44	697.0	29.78	756.4	40	4.4	73	Calm	0	0		0	0			0	0	Clear	
Dubuque, Iowa			30.07	763.8	40	4.4	56	NW	4	1.8			10s			0	0	Cloudy	
Duluth, Minn			30.06	763.5	33	0.6	69	NW	20	8.9		0	0			0	0	Clear	
Eastport, Me			29.84	757.9	39	3.9	63	SW	6	2.7		0	0			Inap.	Inap.	Clear	
Erie, Pa			29.70	754.4	46	7.8	54	SW	24	10.7			10ks		SW	0	0	Threatening	
Escanaba, Mich			29.98	761.5	30	— 1.1	73	NW	8	3.6		0	0			0.19	4.8	Clear	
Fort Gibson, Indian Terr			30.11	764.8	46	7.8	78	Calm	0	0		8cs	0			0	0	Cloudy	
Ft. St. Michaels, Alaska			29.70	754.4	—11	—23.9		NE	17	7.6		0	0					Clear	
Fort Sill, Indian T	28.83	732.3	29.96	761.0	46	7.8	67	N	4	1.8			10s		N	0	0	Cloudy	
Fort Sully, Dakota																			
Galveston, Tex			30.00	762.0	66	18.9	88	E	6	2.7			10s		E	0	0	Cloudy	
Grand Haven, Mich			29.97	761.2	39	3.9	72	NW	18	8.0		2k	0	NW		0	0	Clear	
Indianapolis, Ind			30.03	762.7	45	7.2	53	SW	5	2.2		0	Haze			0	0	Clear	
Indianola, Tex			30.00	762.0	61	16.1	54	NW	9	4.0			10s		SW	0	0	Cloudy	
Jacksonville, Fla			30.10	764.5	63	17.2	88	N	4	1.8			10s			0	0	Cloudy	
Keokuk, Iowa			30.06	763.5	44	6.7	52	W	4	1.8		0	0			0	0	Clear	
Key West, Fla			30.11	764.8	74.5	23.6	63	S	4	1.8		5k	0	SE		0	0	Fair	
Kittyhawk, N. C			30.18	766.6	50	10.0	72	SW	10	4.5		0	Haze			0	0	Clear	
Knoxville, Tenn			30.27	767.1	36	2.2	90	Calm	0	0		0	Fog			0	0	Fair	
La Crosse, Wis			30.11	764.8	35	1.7	70	N	2	0.9		5c	0			0	0	Fair	
Leavenworth, Kan			30.10	764.5	37	2.8	80	E	3	1.3		0	0			0	0	Clear	
Lexington, Ky	29.01	736.8	30.14	765.5	43	6.1	50	S	12	5.4		0	0			0	0	Clear	
Long Branch, N. J			30.02	762.5	48	8.9	56	SW	8	3.6		5c	Haze			0	0	Fair	
Louisville, Ky			30.12	765.0	43	6.1	51	S	6	2.7		0	Fog			0	0	Clear	
Lynchburg, Va			30.10	764.5	43	6.1	61	NW	2	0.9		0	0			0	0	Clear	
Malone, N. Y			29.70	754.4	38	3.3	80	S	6	2.7			10n		SW	0.05	1.3	Light rain	
Manhattan, Kan	28.92	734.6	30.10	764.5	40	4.4	72	SW	5	2.2		0	0			0	0	Clear	
Marquette, Mich			30.01	762.2	31	— 0.6	79	W	8	3.6		0	0			0.02	0.5	Clear	
Memphis, Tenn			30.16	766.1	47	8.3	62	NE	5	2.2		0	Haze			0	0	Clear	
Milwaukee, Wis			30.07	763.8	36	2.2	70	NW	13	5.8		5c	0	W		0	0	Fair	
Mobile, Ala			30.14	765.5	56	13.3	93	N	6	2.7			10s			0.03	0.8	Cloudy	
Montgomery, Ala			30.16	766.1	55	12.8	74	E	4	1.8			10s			0	0	Cloudy	
Morgantown, W. Va			29.99	761.7	48	8.9	39	SW	9	4.0		8c	0	NW		0	0	Fair	
Mt. Washington, N. H	23.40	594.4	29.76	755.9	17	— 8.3	101	SW	60	26.8			Fog			0	0	Foggy	
Nashville, Tenn			30.16	766.1	41	5.0	73	Calm	0	0		0	Fog			0	0	Clear	
New Haven, Conn			29.98	761.5	46	7.8	60	SW	4	1.8			10s		SW	0	0	Cloudy	
New London, Conn			30.01	762.2	44.5	6.9	69	SW	7	3.1		5c	0	W		0	0	Fair	
New Orleans, La			30.08	764.0	63	17.2	83	E	6	2.7			10s		E	0.04	1.0	Cloudy	
Newport, R. I			30.00	762.0	41	5.0	74	S	8	3.6		8cs	0	NW		0	0	Fair	
New York, N. Y			30.02	762.5	40	4.4	56	S	6	2.7		5c	Haze			0	0	Fair	
Norfolk, Va			30.13	765.3	50.5	10.3	62	SW	7	3.1		0	Sm'e			0	0	Clear	
North Platte, Neb	27.07	687.6	29.71	754.6	33	0.6	80	Calm	0	0		0	0			0	0	Clear	
Omaha, Neb	28.94	735.1	30.04	762.7	40	4.4	78	SW	2	0.9		0	Sm'e			0	0	Clear	
Oswego, N. Y			29.75	755.6	43.5	6.4	75	SW	5	2.2			10n		SW	0.14	3.6	Light rain	
Pembina, Dakota			30.23	767.8	7	—13.9	88	NW	8	3.6		0	0			0	0	Clear	
Philadelphia, Penn			30.05	763.3	42	5.6	58	W	14	6.3		Haze	Sm'e			0	0	Smoky	
Pike's Peak, Colorado	17.64	448.0	29.85	758.2	6	—14.4	52	W	8	3.6		0	0			0.06	1.5	Clear	
Pittsburgh, Penn			29.93	760.	43	6.1	51	W	13	5.8		8c	0			0	0	Fair	
Port Huron, Mich			29.91	752.1	44	6.7	92	W	30	13.4		8k	1s	W		0.03	0.8	Cloudy	
Portland, Me			29.92	760.0	38	3.3	54	SW	11	4.9			10s			0	0	Cloudy	
Portland, Oregon			29.95	760.7	44	6.7	81	SW	5	2.2		0	2s		S	0.18	4.6	Fair	
Punta Rassa, Fla			30.13	765.3	71.5	21.9	75	NW	4	1.8			8ks		SW	0	0	Cloudy	
Rochester, N. Y			29.98	753.9	41	5.0	83	SW	14	6.3			10n			0.07	1.8	Light rain	
Salt Lake City, Utah	25.54	648.7	29.87	758.7	34	2.2	51	S	4	1.8		5c	0			0	0	Fair	
Sandy Hook, N. J			30.00	762.0	48	8.9	54	SW	17	7.6		10cs	Haze	SW		0	0	Cloudy	
San Diego, Cal			30.10	764.5	54	12.2	73	NW	8	3.6			10s		NW	0	0	Cloudy	
San Francisco, Cal			29.95	760.7	50	10.0	86	S	4	1.8			10n			0.52	13.2	Light rain	
Santa Fe, N. M	23.25	590.5	29.79	756.7	30	— 1.1	78	NE	2	0.9		8s	Fog	N	N	Inap.	Inap.	Cloudy	
Savannah, Ga.			30.13	765.3	59	15.0	76	NE	4	1.8			10s		SW	0	0	Cloudy	
Shreveport, La			30.11	764.8	56	13.3	75	NE	8	3.6		10ck	2s	SW	NE	Inap.	Inap.	Cloudy	
Smithville, N. C			30.15	765.8	56	13.3	73	NE	6	2.7		0	2ks		SW	0	0	Fair	
Springfield, Mass			29.94	760.5	40	4.4	63	S	8	3.6		8ks	5s	W		0	0	Cloudy	
St. Louis, Mo			30.14	765.5	45	7.2	68	W	4	1.8		0	Sm'e			0	0	Clear	
St. Marks, Fla			30.12	765.0	58	14.4	100	N	3	1.3			Fog			0	0	Foggy	
St. Paul, Minn			30.11	764.8	30	— 1.1	73	NW	2	0.9		0	0			0	0	Clear	
St. Paul's Island, Alaska			29.14	740.1	15	— 9.4	82	NE	40	17.9		1c	1s			0.16	4.1		
Thatcher's Island, Mass			29.97	761.2	37	2.8	71	SW	9	4.0			10s		SW	0	0	Cloudy	
Toledo, Ohio			29.89	759.9	40	9.4	50	SW	20	8.9		5k	2ks	SW	SW	Inap.	Inap.	Fair	
Tucson, Arizona	27.59	700.8	30.18	766.6	45	7.2		S				0	0			0	0	Clear	
Tybee Island, Ga			30.11	764.8	61	16.1	83	E	8	3.6		5k	Sm'e	E		0.05	1.3	Fair	
Vicksburg, Miss			30.17	766.3	56	13.3	65	E	3	1.3		8ck	2s			0	0	Cloudy	
Virginia City, M. T.	24.08	611.6	29.56	750.8	31	— 0.6	60	SE	7	3.1		8ck	0	W		0	0	Cloudy	
Washington, D. C			30.07	763.8	43.5	6.4	83	SW	4	1.8		5c	Sm'e	W		0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.16	766.1	53	11.7	73	NE	4	1.8		2cs	0	W		0	0	Fair	
Wood's Holl, Mass			30.27	768.8	20	− 6.7	70	NW	17	7.6		0	0			0.12	3.0	Clear	
Wytheville, Va	27.72	704.1	29.95	760.7	36	2.2	61	W	2	0.9		0	Haze			0	0	Clear	
Yankton, Dakota	28.80	731.5	30.15	765.8	30	− 1.1	78	NE	6	2.7		0	0			0	0	Clear	
Yuma, Arizona			29.[illegible]	76[illegible].5	53	11.7		[illegible]				0	0			0	0	Clear	
Sub Series.																			
Bridgetown, B'b'dos, W. I.			30.08	764.0	79	26.1	82	E	4	1.8		2ck	10s	N		0	0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.01	762.2	76	24.4	72	E				0	5ks			0.94	23.9	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.25	768.3	79	26.1	65	ESE	2	0.9		2c	8ks	S		0	0	Cloudy	W. S. Cameron.
Kingston, Jamaica, W. I.			30.23	767.8	78	25.6	82	Calm	0	0		5c	0			0	0		James Gall.
Santiago de Cuba, W. I.			29.84	757.9	77	25.0	69	N	4.8	2.1		8ck	0	N		Inap	Inap.	Fair	Robert Mason.
Havana, Cuba, W. I.			30.10	764.5	70	21.1	67	NE	1.2	0.5		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			30.[illegible]8	764.0	68.0	20.0	76	NE	4.0	1.8		10c	0	WNW		0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa W. I.																			
Clifton, Jamaica, W. I.	27.19	690.6	29.99	761.7	63	17.2	83	E	2.0	0.9		5c	5k	E		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.00	762.0	82	27.8	82	E			2		7ks			0.780	19.81	Rainy	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.07	763.8	83.3	28.5										0.177	4.50		Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	64[illegible].1			63.5	17.5	80		0	0		3cs	1ks			0.02	0.5	Fair	Thomas Herran.
St. John's, Newfoundland.			30.08	764.0	33.0	0.6	89	E				Haze	Haze			0	0	Fair, dull	John Delaney.
York Factory, B. A.			30.25	768.3	−12.5	−10.8	75	NW	3	1.3		0	0			0.03	0.8		J. Fortescue.
Honolulu, Oahu, H. I.			30.16	766.1	73	22.8	90	NE			5					0.23	5.8	Showery	E. P. Church.
Makawao, Maui, H. I.	27.90	708.6	30.06	763.5	56	13.3	81	Calm	0	0		5cs	2ks	W, SW	NE	0.30	7.6	Fair	F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below −40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,291.8 ft., or 699.4 m; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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 APRIL 8, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	766.2	67.8	19.9	60	E			2		1			0	0	Clear	Charnot.
Algiers			30.17	766.4	66.2	19.0	66	NNW			1		0			0	0	Clear	Peter.
La Calle																			Kuntz.
Tunis			30.12	765.0	67.5	19.7	41	NW			4		0			0.016	0.4	Clear	Jacques
Sfax			30.10	764.6	65.8	18.8	47	N			2		4			0.031	0.8	Fair	Chauvey.
Saida			30.18	766.6	66.2	19.0	27	N			4		2			0	0	Clear	Millot.
Tebessa			30.13	765.4	50.4	10.2		W			1		7			0.118	3.0	Cloudy	Colin.
Geriville			30.17	766.3	57.2	14.0	37	NW			3		2			0.004	0.1	Clear	Buard.
Laghouat			30.19	766.7	66.2	19.0	38	SW			3		1			0	0	Clear	Guyot.
Biskra			30.16	766.0	72.5	22.5	36	NNE			1		4			0	0	Fair	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.19	766.8	53.2	11.8	40	NE			2		4			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.22	767.5	5[illegible].7	10.4	42	NNE			3		5			0	0		I. R. Observatory.
Eperies			30.14	765.5	50.0	10.0	47	N			4		3		S	0.157	4.00		Julius Mikolik.
Gratz	28.97	735.8	30.17	766.3	56.3	13.5	25	NE			5		0			0	0		Andreas Rospini.
Hermannstadt	28.55	725.1	29.98	761.6	47.8	8.8	42	NW			4		5			Inap.	Inap.		Prof. Reissenberger.
Kremsmünster	28.87	733.3	30.23	767.8	50.0	10.0	42	E			2		3			0	0		Prof. C. Wagner.
Lemberg			30.04	763.1	44.4	6.9	49	N			3		5			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.13	765.3	57.2	14.0	51	WNW			2		18			0	0		I. R. Hydrographic Office
Szegedin			30.12	765.0	57.4	14.1	37	N			3		7			0	0		Karl Stancel.
Trieste			30.13	765.2	62.6	17.0	23	E			2		1			0	0	Clear	Prof. V. Farolfi.
Vienna			30.22	767.6	54.1	12.3	36	N			2		0			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.09	764.3	60.4	15.8	51	SSE			2		0			0	0		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	59.2	15.1		S	18	8.0			4			0	0	Blue sky	William Boswell.
Ardrossan			29.80	759.2	55	12.8		SW			2		5					Hazy	J. Mayes.
Armagh Observatory			29.92	760.0	53.3	11.8		SW	8	3.6			10					Overcast	S. Call, for Dr. Robinson
Bidston, Liverpool Obs.			29.91	759.7	64.0	17.8		SE	20	8.9			5					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			29.90	759.4	50.2	10.1		Calm			0		10					Overcast	J. Dreyer.
Bradford			29.92	760.0	67.2	19.6		SE			1		0			0	0	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.00	762.0	82.0	27.8		NE			3		4					*D. clouds	Sergt. J. F. Halanen.
Cambridge Observatory			30.00	762.0	69.0	20.6		S			1		0					Blue sky	H. Todd.
Cardington			30.01	762.2	68.0	20.0		S			1		1					Blue sky	John McLaren.
Carlisle			29.87	758.7	61.8	16.6		NW			1		8			0	0	*D. clouds	T. Bel, for J. Carlmell.
Chatham, School M. E			30.18	766.6	63.2	17.3		W			1							Blue sky	Capt. J. Fellowes, R. E.
Dartmoor	28.55	725.2	30.08	764.0	46.4	8.0		S			5		10					Foggy	R. E. Power.
Donaghadee			29.89	759.2	54	12.2		SSE			2		3					*D. clouds	J. Mac Gowan.
Dover			30.05	763.3	56	13.3		N			1		0					Clear	J. Cos ello.
Eccles (near Manchester.)			29.92	760.0	68.3	20.2		SSW	8.4	3.8			2					*D. clouds	Thomas Mackereth.
Falmouth Observatory			30.00	762.0	53.0	11.7		SSE	15	6.7			6					Foggy	The Staff.
Fort Napier, (Natal)	27.68	703.1	29.91	759.7	67.6	19.8		E			2		6					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.95	760.7	89.0	31.7		N			4		7					*D. clouds	tis.
Galway, Queen's College			30.12	765.0	54	12.2		SW			2		3					*D. clouds	B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			30.16	766.1	71.3	21.8		W			1		1					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.86	758.4	59.6	15.3		SW			1		6					Fine	Lewis Stuart.
Great Yarmouth			30.00	764.3	49	9.4		SSE			1		2					Blue sky	G. T. Watson.
Greenwich Royal Obs.			30.03	762.7	69.3	20.7		S			1		0					Blue sky	The Staff, for G. B. Airy.
Guernsey			30.02	762.5	58.5	14.7		NW			3		3					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.95	760.7	68.4	20.2		SSW			2		0					Blue sky	J. Crossley
Helston			29.96	761.0	59	15.0		SW			2		1c			0	0	Fine	M. P. Moyle.
Holyhead			29.92	760.0	54	12.2		SSW			3		1					Blue sky	John Tilston.
Kew Observatory			30.02	762.5	66.5	19.2		SSE	15	6.7			0					Fine	The Staff.
Kingstown			29.90	759.4	54	12.2		SE			1		2					Blue sky	George Mitchell.
Leicester Museum			29.99	761.7	65.8	18.8		S			1		0					Blue sky	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.96	761.0	64.8	18.2		NW			2		4k						Fred. Travis, Pvt. A.H.C.
Nairn			29.80	756.9	62	16.7		Calm			0		2					¼ clouded	W. D. Penny.
Nassau, Bahamas			30.10	764.5	76.0	24.4		SE			1		5					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.96	761.0	69.1	20.6		SSE			2		0			0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.98	761.5	66.9	19.4		S			3		1s					Blue sky	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.97	761.2	65	18.6		SE			2		0					Blue sky	J. Lucas.
Plymouth			30.01	762.2	54.6	12.6		S			3		4					*D. clouds	John Merrifield.
Roche's Point			29.93	760.2	50	10.0		SSE			3		10					Hazy	W. Kennedy.
Saint Ann's Head			29.97	761.2	49	9.4		SW			2		7					Misty	John. C. Walker.
Saint Helier, Jersey)			30.03	762.7	58.6	14.8		WSW			4		0					Clear	A. P. Amy.
Sandwick Manse, (Orkneys			29.82	757.4	47.5	8.6		SW	7	3.1			10					Raining	Rev. Chas. Austin, LL.D.
Scarborough			29.97	761.2	54.6	12.6		SSE			4		0					Blue sky	F. Shaw.
Scutari Cemetery Turkey)			29.86	758.4	41.6	5.3		NNE			3		10					Raining	Sergt. W. H. Lyne.
Sheffield			29.97	761.2	64.8	18.2		S			3		1			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			29.87	758.7	62.0	16.7	58	SW			2		4			0	0	*D clouds	Rev. Francis Redford.
Stonyhurst Observatory			29.91	759.7	64.0	18.3		S			5		5					*D. clouds	S. J. Perry.
Stornoway, Lewis C. Hebr.			29.82	757.4	49	9.4		WSW			1		10					Raining	John Smith.
Stratfield Turgiss			30.01	762.2	66.5	19.2		SE			1		0					Blue sky	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.80	756.9	50	10.0		Calm			0		10					Raining	John Trotter.
Truro, Royal Institution			29.99	761.7	60	15.6		S			4		8					Gloomy	W. Newcombe.
Valencia Observatory			29.92	760.0	52.4	11.3		SSW	12	5.4			10					Misty	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Cape Good Hope Obs			29.90	759.4	69.6	20.9	62	WNW	14	6.3			3						The Staff, for E. J. Stone.
Leith, Restalrig Park			29.86	758.9	62.7	17.1		W			2		3k			0	0	Fine, cloudy	Andrew Gibb.
Mauritius			29.95	760.7				E	16.1	7.2						0	0		
Monach Lt-house, Hebrides			29.81	757.2	46	7.8		S			3					0.2	5.1	Dense fog	J. Youngclause.
North Unst, (Shetland Is.)			29.76	755.9	44	6.7		SW			4		10			Blank	Blank		

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 270.6 m. *Detached clouds.

DANISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.09	764.2	56.5	13.6	64	W			4		4						
Fanöe			30.13	765.4	45.0	7.2	91	WSW			4		10					Misty	
Godthaab, (Greenland)			30.46	773.6	28.2	-2.1	81	NE			4		0						
Stykkisholm, (Iceland)			30.28	769.1	16.7	-8.5	88	NE			4		0						
Thorshavn, (Faröe)			29.83	757.7	33.8	1.0	75	NW			4		8						
Vestervig			30.02	762.4	47.1	8.4	89	SW			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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	62.6	17	87	SW			1		0			0	0	Clear	Normal School.
Amiens			30.13	765.3	70.9	21.6	43	N			1		0			0	0	Clear	Normal School.
Avignon			30.02	762.6	73.4	23	36	NNW			2		0			0	0	Very clear	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.08	763.9	65.1	18.4	31	SSW			1		0			0	0	Clear	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			30.04	763.1	63.7	17.6	67	WSW			3		0			0	0	Clear	Normal School.
Brest			30.00	762.0	60.6	15.9	64	SW			3		4		SW	0	0	Foggy	Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			30.03	762.7	67.1	19.5	44	NE			1		0			0	0	Clear	Puy de Dome Obs.
Commercy			30.12	765.0	60.6	15.9	18	E			4		1		E	0	0	Clear	Normal School.
Commune de Gréasque*			30.07	763.8	70.0	21.1	27	NW			2		0			0	0		
Grenoble			29.99	761.7	65.1	18.4	39	NW			1		0			0	0	Clear	Normal School.
Le Mans			30.05	763.3	66.9	19.4	51	S			2		0			0	0	Clear	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			30.05	763.2	61.3	16.3	55	W			2		0			0	0	Clear	Normal School.
Mâcon			30.07	763.7	60.1	15.6	62	N			2		0			0	0	Clear	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			30.01	762.2	78.8	26	26	E			1		0			0	0	Clear	Normal School.
Orleans																			Normal School.
Paris Observatory			30.06	763.5	68.0	20.0	24	SW			1		0			0	0	Clear	National Observatory.
Parthenay																			Normal School.
Privas			30.04	763.1	66.2	19		NE			2		0			0	0	Clear	Normal School.
La Roche-sur-Yon			30.11	764.8	67.3	19.6	51	W			2		0			0	0	Clear	Normal School.
Rochefort, Observatory			30.14	765.6	67.3	19.6	45	W			4		0			0	0	Blue sky	Naval Observatory.
Rouen			30.04	763.0	72.7	22.6	34	SE			2		0			0	0	Clear	Normal School.
Saint Lo			30.04	763.0	71.1	21.7	49	E			1		1		E	0	0		Normal School.
Tarbes	29.07	738.4			58.1	14.5		W			1		0			0	0	Clear	Normal School.
Toulouse																			Normal School.
Villefranche			30.07	763.7	65.1	18.4	81	NE			2		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.93	760.1	77.7	25.4	76	NE			2		2k						L'Abbé Marchesi.
Gorée																			
Marseilles			30.0	761.9	70.5	21.4	48	WSW			1		0			0	0	Clear	Marseilles Observatory.
Mont-Louis																			—. Falguère.
Montsouris, Paris			30.05	763.4	70.9	21.6	26	E			1		0			0	0		Montsouris Observ'tory.
Perpignan			30.04	763.0	71.4	21.9	29	N	18.6	8.33			0			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.07	763.6	73.0	22.8	23	SE			1		0			0	0	Clear	E. Renou.
Toulouse			30.23	767.9	64.8	18.2	53	NW			2		3			0	0		Toulouse Observatory.
Tours			30.05	763.3	68.7	20.4	43	WSW			2		1		SW	0	0		C. Marquet.
Versailles, (near Paris)			30.07	763.7	69.8	21.0	27	SE			1		0			0	0	Very clear	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lee, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,089.9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

* Near Marseilles.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.21	767.1	55.9	13.3	37	NNE			3		2			0	0		Prof. T. Hoh.
Berlin			30.26	768.5	58.3	14.6	29	SE			1		5			0	0		Prof. Arndt.
Breslau			30.30	769.6	50.7	10.4	40	NNW			4		6			0	0		Dr. P. Neugebauer.
Carlsruhe			30.13	765.3	61.2	16.2	28	SE			3		0			0	0		A. Senz.
Cassel			30.11	764.9	62.2	16.8	24	SE			5		0			0	0		Dr. H. Möll.
Cologne																			Dr. Garthe
Emden																			Prof. Prestel.
Frankfort on the Main			30.23	767.9	59.9	15.5	12?	ESE			1		1			0	0		Physical Society.
Friedrichshafen	28.71	729.1	30.13	765.4	59.2	15.1	33	NE			4		0			0	0		M. Wilhelm.
Hamburg			30.21	767.2	54.1	12.3	69	WSW			3		0			0	0	Clear	Deutsche Seewarte.
Kiel			30.15	765.9	53.4	11.9	75	W			2		3			0	0		Prof. G. Karsten.
Königsberg			30.09	764.3	48.9	9.4	60	W			5		5			0	0		Prof. E. Luther.
Köslin			30.15	765.9	46.2	7.9		SW			6		4			0.020	0.5		H. Müller.
Leipsic			30.24	768.1	55.6	13.1	38	S			1		2			0	0		Prof. Bruhns.
Memel			30.08	764.1	40.5	4.7	82	SW			3		10			0	0		Reinbrecht & Skalweit.
Münster			30.16	766.1	59.2	15.1	48	NE			1		0			0	0		Prof. E. Heis.
Neufahrwasser			30.06	763.5	51.4	10.8	46	WNW			4		8			0	0		A. Lothes.
Posen			30.27	768.8	53.2	11.8	45	NW			2		10			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.12	765.0	62.6	17.0	20	NE			1		0			0	0		Dr. Schur.
Stuttgart			30.15	765.7	59.9	15.5	27	E			2		0			0	0		Prof. Schoder.
Thorn			30.18	766.5	52.7	11.5	49	W			4		9			0	0		Dr. Hasenbalg
Treves, (Trier)			30.07	763.8	63.5	17.5	23	NE			6		0			0	0		Prof. Flesch.
Wustrow, Naval School			30.14	765.6	41.7	5.4	92	WSW			3		10			0	0		E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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.	Clouds. Amount. Up'er —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.
Athens			29.76	755.9	63.5	17.5		S										Sprinkling	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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.	Clouds. Amount. Up'er —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.
Udine			30.11	764.8	61.5	16.4	34	SW	1.8	0.8			0			0	0		
Padua			30.13	765.2	59.5	15.3	37	SE	6.9	3.1			0			0	0		
Vicenza			30.12	765.0	61.2	16.2	45	SW	6.9	3.1			1			0	0		
Verona			30.13	765.3	61.3	16.3	51	E			1		0			0	0		
Bergamo	28.75	730.3	30.06	763.4	60.1	15.6	38	NE			4		0			0	0		
Domodossola	29.02	737.1	30.03	762.8	66.2	19.0	59	SSW			6		1			0	0		
Milan			30.11	764.9	64.9	18.3	51	E			2		0			0	0		
Pavia			30.10	764.4	62.8	17.1	47	E			6		0			0	0		
Moncalieri			30.09	764.3	66.9	19.4	47	SSE			4		1			0	0		
Mondovi	28.18	715.8	30.08	764.1	62.6	17.0	49	NNW			4		3			0	0		
Porto Maurizio			30.09	764.2	62.8	17.1		E			2		2			0	0		
Genoa			30.07	763.7	64.8	18.2	64	SW	3.1	1.4			0			0	0		
Piacenza			30.11	764.7	83.0	17.2	34	SE	41.6	18.6			0			0	0		
Parma			30.10	764.6	63.1	17.3	42	E			4		1			0	0		
Bologna			30.13	765.4	61.9	16.6	36	SE			7		0			0	0		
Florence			30.11	764.8	66.2	19.0	14	E			4					0	0		
Leghorn			30.04	762.9												0	0		
Siena	28.85	732.8	30.06	763.4	59.9	15.5	33	ENE	7.4	3.3			3	SE		0	0		
Urbino	28.59	725.7	30.13	765.4	50.2	10.1	39	NNE			4		0			0	0		
Pesaro																			
Ancona			30.15	765.9	57.9	14.4	48	E			6		1			0	0		
Grossetq			30.04	763.1	65.5	18.6	24	NNE			6		3	E		0	0		
Rome			30.00	761.9	67.6	19.8	26	N	8.7	3.9			2	NNE		0	0		
Naples, O. U.			29.99	761.7	64.0	17.8	21	NE			6		2	NE		0	0		
Lecce			29.87	758.7	59.0	15.0	43	ENE	28.6	12.8			1			0	0		
Cosenza			29.89	759.3	64.4	18.0	75	NE	4.9	2.2			9			0	0		
Riposto, (Sicily)			29.91	759.8	62.4	16.9	52	NE			2		10	S		0	0		
Palermo			29.91	759.7	63.3	17.4	57	WNW	13.7	6.1			7			0	0		
Caltanissetta	27.96	710.2	29.92	759.9	54.0	12.2	67	WNW			4		10	SE		0.276	7.0		
Sub-Series.																			
Naples, S. R.			29.98	761.5	61.5	16.4	23	NE						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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.0 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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.	Clouds. Amount. Up'er —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.
Tokio																			

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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.	Clouds. Amount. Up'er —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.
Flushing			30.13	765.4	58.6	14.8		ESE			2								
Groningen			30.10	764.4	57.9	14.4		S			2								
Helder			30.11	764.8	57.9	14.4		SSE			2								
Utrecht			30.11	764.7	61.9	16.6	45	SSE			3		5					Cloudy.	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	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.	Clouds. Amount. Up'er —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.
Bergen			29.88	759.0	43.2	6.2	100	SSW	16.7	8.8			10			1.047	26.6		
Brönø			29.40	746.8	42.1	5.6	96	SSW	27	12			10			0.693	17.6	Light rain	
Christiania			29.82	757.3	48.2	9.0	65	Calm	0	0			9			0	0		
Tromsö			29.53	750.1	25.5	−3.6	49	SE	36	16			5			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.13	765.2	60.8	16.0	83	SW	4.9	2.19			6			0.079	2.0		Dr. J. A. N. Sampaio.
Campo Major			30.16	766.0	68.7	20.4	25	SW	8.2	3.67			1			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.17	766.2	67.6	19.8	57	SE	1.9	0.86			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.24	768.2	60.1	15.6	63	NW	15.0	6.7			2			0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			30.17	766.4	46.4	8.0	59	N	9	4			7						Astronomical Obs.
Wilna			30.09	764.2	42.4	5.8	51	NNW	9	4			10						Astronomical Obs.
Dorpat			29.98	761.4	32.2	0.1	83	SSE	11	5			10						Physical Cabinet.
St. Petersburg			29.98	761.6	26.1	— 3.3	44	SSE	13	6			10						Central Physical Obs.
Kuopio			29.79	756.7	26.1	— 6.6	100	S	27	12			10						Ch. Forsten.
Kieff			29.95	760.8	30.7	— 0.7	83	NNW	11	5			10						Physical Cabinet.
Nikolaiev			29.87	758.7	45.3	7.4	68	N	9	4			8					Raining	Kurdakof.
Kertch			29.71	754.7	53.4	11.9	60	NNW	9	4			6						Lagorio.
Moscow			29.98	761.5	22.3	— 5.4	63	NW	18	8			0						Meteorological Obs.
Lugan			29.50	749.2	42.4	5.8	75	N	34	15			10						Meteorological Obs.
Archangel			29.92	759.9	17.6	— 8.0	71	W	9	4			9						Ogorodnikof.
Tiflis	28.13	714.6	29.51	749.5	60.4	15.8	44	N	11	5			2						Physical Observatory.
Astrakhan			29.45	748.1	62.4	16.9	35	WNW	18	8			6						Sebastianof.
Kasan			29.61	752.2	21.0	— 6.1	69	N	11	5			10						Physical Cabinet.
Orenburg			29.88	759.0	40.1	4.5	57	SE	4	2			2						Tschernischef.
Ekaterinburg	28.52	724.3	29.52	749.8	40.8	4.9	68	S	4	2			10						Meteorological Obs.
Nukuss			29.32	744.6	78.0	25.9	32	SSE	13	6			10						
Kasaly																			Bobrof.
Tashkend	28.24	717.2	25.89	759.1	71.2	21.8	44	Calm	0	0			2						Michelson.
Barnaul			29.90	761.8	39.6	4.2	65	S	2	1			3						Meteorological Obs.
Yeniseisk			29.62	752.4	37.0	2.8	88	SW	13	6			10						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.97	761.3	55.4	13.0	17	NW	4	2			1						Physical Observatory.
Nertchinsk	27.24	691.8	29.34	745.3	24.8	— 4.0	93	NW	20	9			10						Meteorological Obs.
Vladivostock			29.91	759.7	36.0	2.2	96	SE	10	7			10						
Nikolaievsk, on the Amoor					30.9	— 0.6	94	E	7	3			9						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 400. meters, or 1,311.8 feet; Ekaterinburg, 305.17 m., or 1,005.27 ft.; Tashkend, m. 494.27, or 1,621.37 ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.07 m., or 1,942.27 ft.; Oorga, 1,281.06 m., or 4,202.67 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.09	764.2	69.6	20.9	28	SW	7.4	3.33		0	0			0	0	Clear	Royal Observatory.
San Fernando			30.20	767.0	67.8	19.9	55	NW	10.3	4.6		0	3		NW	0	0		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.72	754.9	23.7	— 4.6	95	SE			4		10			0	0	Snowing	
Umea			29.57	751.1	41.5	5.3	82	Calm			0		7			0	0		
Hernosand			29.61	752.0	52.2	11.2	48	WNW			2		8			0.059	1.5		
Stockholm			29.75	755.7	53.6	12.0	58	SW			2		5			0	0		
Wisby			29.95	760.7	43.5	6.4	76	WSW			6		5			0	0		
Sub-Series.																			
Upsala			29.76	755.8	52.5	11.4	70	SW	10.3	4.6			8	NW		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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the 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. Mill meters.	Weather.	Observer.
Geneva	28.65	727.8	30.07	763 7	57.6	14.2	46	NNE			1		0			0	0	Clear	The Observatory.
Zurich	28.48	723.4	30.10	764.5	60.3	15.7	34	NE			2		0			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +3.5 mm.; Thermometer, +3.3 cent.; Relative Humidity, —12 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the 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. Mill meters.	Weather.	Observer.
Constantinople			29.88	759.0	42.3	5.7	91	NNE	27	12.0			10		NE	0.157	4.0		
Fao, (Persian Gulf)			30.00	762.0	85.8	29.9		SE			4		10						
Salonica			29.84	757.8	60.4	15.8		NW			6		10						
Valona			29.65	753.2	57.2	14.0		NE			6		8						
Varna			30.12	765.0	51.8	11.0		W			2		10			Blank	Blank		
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.80	757.0	64.0	17.8	72	SW			4		10n		SW	0.92	23.4	Rainy	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the 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. Mill meters.	Weather.	Observer.
Bathurst, N. B.			29.70	754.4	28.7	— 1.8	97	NE	19	8.5									Hon. J. Ferguson.
Brockville, Ontario			30.12	765.0	28	— 2.2		NW	3	1.3		0	2s			0.05	1.3	Fair	W. R. Bigg.
*Chatham, N. B.			29.70	754.4	32	0.0	89	NE	7	3.1			10s			0.01	0.3	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			29.59	751.6	35	1.7	79	SE	11	4.9			8s			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.00	762.0	27.2	— 2.7	83	N			3	0k				0.130	3.45	Fair	James Smith, M. A.
Dalhousie, N. B.			29.78	756.4	30.0	— 1.1	100	E			1					0.10	2.5	Snowing	H. A. Johnson.
Esquimault, B. C.			29.84	757.9	41.1	5.1	79	W	3	1.3		8cs				0.01	0.3	Cloudy	W. H. Bevis.
Fredericton, N. B.			29.56	750.8	33.0	0.6	94	E	10	4.5			10n			0.250	6.35	Snowing	Prof. Harrison.
*Fort Garry, Manitoba			29.99	761.7	24	— 4.4	80	SE	7	3.1		2ck	2ks	S	S	0	0	Fai	James Stewart.
Goderich, Ontario			30.19	766.8	29.8	— 1.2	85	NW			2					0.051	1.30	Fine	H. J. Strang, M. A.
Granton, Ontario			30.15	765.8	31.1	— 0.5		W			2	1cs		SE		0	0	Clear	James Grant.
*Halifax, N. S.			29.64	752.8	35	1.7	95	SE	20	8.9			10n		SE	0.133	3.38	Heavy rain	F. Allison, M. A.
*Kingston, Ontario			30.11	764.8	25	— 3.9	88	N	4	1.8		10cs	0			0.35	8.9	Cloudy	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			29.97	761.2	24	— 4.4	67	NW	14	6.3		2cs	2ks	NW	NW	0.32	8.1	Fair	C. H. McLeod, C. E.
*Ottawa, Ontario			29.96	761.0	24	— 4.4	74	NW	14	6.3		2cs	0			0.02	0.5	Clear	J. B. Haney.
*Parry Sound, Ontario			30.16	766.1	24	— 4.4	61	N	12	5.4		5ck	0	NW		0	0	Fair	Rev. R. Mooley.
*Port Dover, Ontario			30.11	764.8	33	0.6	80	W	5	2.2		5k	0	W		0.03	0.8	Fair	H. Morgan.
Port Hastings, N. S.			29.77	756.1	34.5	1.4		SE	10	4.5						0.10	2.5	Fine	Peter Grant.
*Port Stanley Ontario			30.15	765.8	35	1.7	68	NW	10	4.5		5k	0	NW		0	0	Fair	M. Payne.
*Quebec, Quebec			29.79	756.7	28	— 2.2	89	SW	4	1.8			10n		SW	0.10	2.5	Cloudy	Capt. Ash, R. N.
St. John, N. B.			29.59	749.3	34	1.1	89	E	4	1.8			10n			0.400	10.16		G. Murdoch, C. E.
*Saugeen, Ontario			30.12	765.0	28	- 2.2	83	N	8	3.6		2s	0			0.05	1.3	Clear	K. Stewart.
Stayner, Ontario			30.14	765.5	28	— 2.2	73	N	5	2.2			10n		NW	Inap.	Inap.	Cloudy	R. J. Cole.
Stratford, Ontario			30.15	765.8	30.7	— 0.7	83	NW	15	6.7		5ck		W		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.88	758.9	38	3.3	66	S	5	2.2		1cs	0			0	0	Cloudy	T. C. Hill.
*Toronto, Ontario			30.11	764.8	33	0.6	85	W	12	5.4		0	2s			0.08	2.0	Clear	Magnetic Observatory
Woodstock, Ontario			30.13	765.3	33.3	0.7	98	NW			2	0	3ks			0	0	Fine	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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	33	0.6	79	NW	10	4.5		1k	0	W		0.10	2.5	Clear	
Alpena, Mich			30.18	766.6	27	— 2.8	77	NW	6	2.7			10s		NW	Inap.	Inap.	Cloudy	
Atlantic City, N. J			30.01	762.2	39	3.9	55	W	12	5.4		0	0			0	0	Clear	
Augusta, Ga.			30.0 0	762.0	58	14.4	72	Calm	0	0			10s		SW	0	0	Cloudy	
Baltimore, Md			30.12	765.0	39	3.9	64	NW	4	1.8		0	Sm'e			0	0	Clear	
Barnegat, N. J			29.99	761.7	41	5.0	48	NW	20	8.9		0	0			0	0	Clear	
Benton, Montana	26.93	684.0	29.73	755.1	35	1.7	61	W	7	3.1		10c	0			0	0	Cloudy	
Bismarck, Dakota	27.87	707.9	29.83	757.7	31	— 5.6	68	S	14	6.3			10ks		S	0	0	Threatening	
Boston, Mass			29.74	755.4	35	1.7	61	W	20	8.9		Haze	2s		NW	0.02	0.5	Fair	
Breckenridge, Minn			29.96	761.0	25	— 3.9	87	SE	18	8.0		2c	2s	SE		Inap.	Inap.	Fair	
Buffalo, N. Y			30.10	764.5	30	— 1.1	89	W	6	2.7		2k	5s	NW	NW	0.07	1.8	Fair	
Burlington, Vt			29.95	760.7	26	— 3.3	69	N	11	4.9		8k	0	N		0.11	2.8	Cloudy	
Cairo, Ill			30.03	762.7	52	11.1	47	NE	12	5.4		8cs	0			0	0	Fair	
Cape Hatteras, N. C			30.02	762.5	49	9.4	57	NE	24	10.7		5c	Haze		W	0	0	Fair	
Cape Henry, Va			30.12	765.0	47	8.3	48	N	16	7.2		5c	0	NW		0	0	Fair	
Cape May, N. J			30.05	763.3	40	4.4	56	W	18	8.0		0	0			0	0	Clear	
Charleston, S. C			30.00	762.0	61	16.1	88	Calm	0	0			10s			0.03	0.8	Cloudy	
Cheyenne, Wyoming	23.72	602.7	29.66	753.4	31	— 0.6	69	W	4	1.8		5ck	5s			0	0	Cloudy	
Chicago, Ill			30.14	765.5	40	4.4	48	E	4	1.8		0	0			0	0	Clear	
Cincinnati, Ohio			30.09	764.3	43	6.1	51	NE	5	2.2		0	Fog			0	0	Clear	
Cleveland, Ohio			30.18	766.6	32.8	0.4	69	W	6	2.7		0	0			0	0	Clear	
Colorado Springs, Col	23.83	605.3	29.70	754.4	35	1.7	52	N	8	3.6		5c	0			0	0	Fair	
Corsicana, Tex			29.99	761.7	52	11.1	93	N.V	3	1.3		8k	0			2.53	64.3	Cloudy	
Davenport, Iowa			30.14	765.5	39	3.9	63	E	8	3.6		0	Sm'e			0	0	Clear	
Denison, Tex			29.96	761.0	51	10.6	78	NW	4	1.8		0	0			1.37	34.8	Clear	
Denver, Col.	24.52	622.8	29.74	755.4	38	3.3	54	SW	2	0.9		0	0			0	0	Clear	
Detroit, Mich			30.16	766.1	36	2.2	62	N	4	1.8		0	0			0	0	Clear	
Dodge City, Kan	27.34	694.2	29.61	752.1	47	8.3	77	S	4	1.8		0	0			0	0	Clear	
Dubuque, Iowa			30.16	766.1	35	1.7	80	Calm	0	0		0	Haze			0	0	Clear	
Duluth, Minn			30.22	767.6	28	— 2.2	77	NE	8	3.6		0	0			0	0	Clear	
Eastport, Me			29.45	748.0	34	1.1	100	N	14	6.3			10s		N	0.32	8.1	Cloudy	
Erie, Pa			30.13	765.3	34	1.1	79	W	14	6.3		2k	Sm'e	NW		0	0	Fair	
Escanaba, Mich			30.27	768.8	24	— 4.4	74	N	8	3.6		0	0			0.05	1.3	Clear	
Fort Gibson, Indian Terr			29.99	761.7	45	7.2	76	SW	1	0.4		0	Haze			0	0	Clear	
Ft. St. Michaels, Alaska			29.71	754.6	— 8	—22.2		Calm	0	0		0	0					Clear	
Fort Sill, Indian T	28.77	730.7	29.91	759.7	44	6.7	83	S	4	1.8		0	Fog			0	0	Clear	
Fort Sully, Dakota																			
Galveston, Tex			29.96	761.0	58	14.4	81	N	26	11.6		5k	0	N		0.42	10.7	Fair	
Grand Haven, Mich			30.16	766.1	37	2.8	76	E	4	1.8		0	Sm'e		E	0	0	Clear	
Indianapolis, Ind			30.14	765.5	37	2.8	54	NE	4	1.8		0	0			0	0	Clear	
Indianola, Tex			30.03	762.7	57	13.9	81	NW	8	3.6			10s		NW	0	0	Cloudy	
Jacksonville, Fla			29.97	761.2	66	18.9	90	NE	3	1.3		10k	0	SW		0	0	Cloudy	
Keokuk, Iowa			30.07	763.8	42	5.6	66	E	12	5.4		8c	0			0	0	Fair	
Key West, Fla			30.01	762.2	75.9	23.8	72	S	10	4.5		1c	Haze	W	S	0	0	Hazy	
Kittyhawk, N. C			30.11	764.8	45	7.2	68	NE	24	10.7		8cs	0	NW		0	0	Fair	
Knoxville, Tenn			30.05	763.3	45	7.2	75	Calm	0	0			10ks		SW	0	0	Cloudy	
La Crosse, Wis			30.14	765.5	32	0.0	69	Calm	0	0		0	0			0	0	Clear	
Leavenworth, Kan			30.03	762.7	40	4.4	73	Calm	0	0		0	0			0	0	Clear	
Lexington, Ky	29.0	736.6	30.12	765.0	44	6.7	50	NE	12	5.4		5c	0			0	0	Fair	
Long Branch, N. J			29.97	761.2	42	5.6	57	NW	14	6.3		0	0			Inap.	Inap.	Clear	
Louisville, Ky			30.12	765.0	42	5.6	50	N	3	1.3		0	0			0	0	Clear	
Lynchburg, Va			30.14	765.5	49	9.4	48	NW	2	0.9		10c	Sm'e	W		0	0	Cloudy	
Malone, N. Y			29.97	761.2	24	— 4.4	74	NW	10	4.5		8k	0	W		0.55	14.0	Cloudy	
Manhattan, Kan	28.81	731.8	29.97	761.2	43	6.1	91	SW	2	0.9		0	0			0	0	Clear	
Marquette, Mich			30.29	769.4	26	— 3.3	75	NW	4	1.8		0	0			0	0	Clear	
Memphis, Tenn			29.97	761.2	56	13.3	39	NE	6	2.7			10s			0	0	Cloudy	
Milwaukee, Wis			30.21	767.3	34	1.1	79	N	11	4.9		0	0			0	0	Clear	
Mobile, Ala			29.84	757.9	62	16.7	100	E	5	2.2			10n		SW	1.01	25.7	Light rain	
Montgomery, Ala			29.94	760.5	58	14.4	93	E	8	3.6			10s		E	0.75	19.1	Threatening	
Morgantown, W. Va			30.16	766.1	38	3.3	54	Calm	0	0		0	0			0	0	Clear	
Mt. Washington, N. H	23.20	589.3	29.36	750.8	8	—13.3	100	NE	40	17.9			10n		NE	0.24	6.1	Light snow	
Nashville, Tenn			30.02	762.5	54	10.0	64	Calm	0	0			10s			0	0	Cloudy	
New Haven, Conn			29.88	758.9	37	2.8	37	N	26	11.6		Haze	0			Inap.	Inap.	Clear	
New London, Conn			29.85	758.4	37	2.8	49	NW	20	8.9		0	0			0.01	0.3	Clear	
New Orleans, La			29.82	757.4	63	17.2	83	W	8	3.6		5k	0	W		5.51	140.0	Fair	
Newport, R. I			29.89	759.9	37	2.8	62	W	16	7.2		0	0			Inap.	Inap.	Clear	
New York, N. Y			29.96	761.0	39	3.9	47	NW	18	8.0		0	0			0	0	Clear	
Norfolk, Va			30.13	765.3	45	7.2	31	NE	14	6.3		8k	0	NE		0	0	Fair	
North Platte, Neb	26.86	682.2	29.40	746.7	43	6.1	67	NE	7	3.1		2ck	0	W		0	0	Clear	
Omaha, Neb.	28.86	733.0	29.95	760.7	41	5.0	69	SE	5	2.2		0	Sm'e			0	0	Clear	
Oswego, N. Y			30.08	764.0	32	0.0	62	N	8	3.6		0	8ks		NW	0.30	7.6	Fair, frost	
Pembina, Dakota			29.94	762.0	25	— 3.9	87	SE	16	7.2		5ck	0			0	0	Fair	
Philadelphia, Penn			30.05	763.3	39	3.9	46	N	20	8.9		0	0			0	0	Clear	
Pike's Peak, Colorado	17.49	441.2	29.70	754.4	10	—12.2	68	W				0	2s			0	0	Fair	
Pittsburgh, Penn			30.18	766.6	33	0.6	69	Calm	0	0		0	0			0	0	Clear	
Port Huron, Mich			30.15	765.8	35	1.7	61	N	9	4.0		1c	1s	W		0.01	0.3	Clear	
Portland, Me			29.86	758.4	37	2.8	53	NW	18	8.0		2k	0	NW		0.23	5.8	Fair	
Portland, Oregon			30.04	763.0	42	5.6	83	SW	10	4.5			10s			0.03	0.8	Cloudy	
Punta Rassa, Fla			30.02	762.5	70.5	21.4	79	E	6	2.7		5c	5ks	SW	SE	0	0	Cloudy	
Rochester, N. Y			30.06	763.5	35	1.7	70	W	12	5.4		10cs	0	W		0.35	8.9	Cloudy	
Salt Lake City, Utah	25.29	642.4	29.62	752.3	41	5.0	91	Calm	0	0			10n			0.42	10.7	Light rain	
Sandy Hook, N. J			29.95	760.7	40	4.4	48	NW	30	13.4		0	0			Inap.	Inap.	Clear	
San Diego, Cal.			30.04	763.0	50	10.0	86	N	8	3.6			10s		N	0	0	Fair	
San Francisco, Cal			30.09	764.3	45	7.2	71	W	8	3.6		0	0			0.08	2.0	Clear	
Santa Fe, N. M	23.09	586.5	29.63	752.6	37	2.8	46	SE	7	3.1		0	1s		SW	0	0	Clear	
Savannah, Ga.			29.96	761.0	62	16.7	88	NE	2	0.9			10s			0.01	0.3	Cloudy	
Shreveport, La			29.96	761.0	52	11.1	96	N	5	2.2			10s		N	2.34	59.4	Cloudy	
Smithville, N. C			30.05	763.3	55	12.8	62	NE	18	8.0		5ck	0	W		0	0	Fair	
Springfield, Mass.			29.86	758.4	36	2.2	61	NW	12	5.4		2k	0	N		0.08	2.0	Clear	
St. Louis, Mo			30.8	764.0	45	7.2	60	Calm	0	0		0	0			0	0	Clear	
St. Marks, Fla			29.93	760.2	63	17.2	94	Calm	0	0			10s			Inap.	Inap.	Cloudy	
St. Paul, Minn			30.07	763.8	34	1.1	61	Calm	0	0		0	0			0	0	Clear	
St. Paul's Island, Alaska			29.78	756.4	11	11.7	70	N	4	1.8		1c	1k			Inap.	Inap.		
Thatcher's Island, Mass			29.72	754.9	34	1.1	69	NW	34	15.2		0	8k		NW	0	0	Clearing	
Toledo, Ohio			30.13	765.3	42	5.6	58	W	10	4.5		0	Haze			0	0	Clear	
Tucson, Arizona	27.43	696.7	30.02	762.5	40	0.4		E				0	0			0	0	Clear	
Tybee Island, Ga			29.94	760.5	62	16.7	94	Calm	0	0			10s			0.01	0.3	Cloudy	
Vicksburg, Miss			29.88	758.9	56	13.3	93	NE	9	4.0			10n		NE	1.20	30.5	Light rain	
Virginia City, M. T.	23.92	607.6	29.40	746.7	28	— 2.2	88	N	7	3.1			10n		NW	0.01	0.3	Light snow	
Washington, D. C.			30.16	766.1	38.5	3.6	52	W	13	5.8		0	0			0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.06	763.5	52	11.1	72	NE	11	4.9		8ck	Haze			0	0	Cloudy	
Wood's Holl, Mass			30.24	768.1	37	2.8	80	SW	4	1.8		2c	2s		S	0	0	Fair	
Wytheville, Va	27.70	703.6	29.89	759.2	41	5.0	74	Calm	0	0			10s		W	0	0	Cloudy	
Yankton, Dakota	28.63	727.2	29.95	760.7	35	1.7	80	E	3	1.3		0	0			0	0	Clear	
Yuma, Arizona			29.93	760.2	53	11.7		W				0	0			0	0	Clear	
Sub Series.																			
Bridgetown, B'b'dos, W. I.			30.05	763.3	81	27.2	67	E	5	2.2		8c	2s	SE	W	0.10	2.5	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.99	761.7	78	25.6	69	E				5k	5ks			0	0	Fair	L. V. Bigard.
St. Thomas, S. T., W. I			30.23	767.8	78	25.6	72	SE	8	3.6		8ck	4ks	SE		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I.			30.22	767.6	78	25.6	69	Calm	0	0		2c	2s			0	0		James Gall.
Santiago de Cuba, W. I.			29.82	757.4	77	25.0	76	Calm	0	0		0	2ks			1.80	45.7	Fair	Robert Mason.
Havana, Cuba, W. I.			30.03	762.7	74	23.3	72	NE	1.2	0.5		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			30.02	762.5	60.0	15.6	94	SW	3.0	1.3		10pk	2k	W		0.41	10.4	Clearing	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I	27.20	690.9	29.99	761.7	64	17.8	83	E	2.0	0.9		5c	0	E		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.00	762.0	82	27.8	82	E			2		5k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.07	763.8	82.8	28.2										0.236	6.00		Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1			66.0	18.9	78		4	1.8			10n			0.17	4.3	Cloudy	Thomas Herran.
St. John's, Newfoundland			30.09	764.3	37.0	2.8	94	W				5k	5s			0.10	2.5	Fair	John Delaney.
York Factory, B. A.			30.27	768.8	−14.5	−25.8	18	Calm	0	0		2c	0	W		0	0		J. Fortescue.
Honolulu, Oahu, H. I.			30.16	766.1	73	22.8	90	NE			5					0	0		E. P. Church.
Makawao, Maui, H. I.	27.92	709.2	30.08	764.0	57	13.9	87	NE	3.6	1.6		0	5k		NE	0	0		F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below −40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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 APRIL 9, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	764.9	70.3	21.3	53	E			2		0			0	0	Clear	Charnot.
Algiers			30.19	766.8	68.7	20.4	55	N			1		2			0	0	Clear	Peter.
La Calle					63.0	17.2		WNW			2		5			0	0	Fair	Kuntz.
Tunis			30.19	766.9	66.0	18.9	45	NE			4		4			0	0	Fair	Jacques
Sfax			30.18	766.5	66.2	19.0	46	NE			4		4			0.028	0.7	Fair	Chauvey.
Saida			30.15	765.7	64.4	18.0	25	N			3		2			0	0	Clear	Millot.
Tebessa			30.20	767.1	61.0	16.1		N			2		3			0	0	Fair	Colin.
Geriville			30.15	765.8	58.6	14.8	53	N			2		2			0	0	Clear	Buard.
Laghouat			30.19	766.8	69.8	21.0	75	N			2		0			0	0	Clear	Guyot.
Biskra			30.19	766.9	77.0	25.0	25	NNE			1		3			0	0	Fair	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	765.0	60.6	15.9	31	NE			1		0			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.03	762.7	59.7	15.4	43	W			1		0			0	0		I. R. Observatory.
Eperies			30.04	763.1	59.0	15.0	43	S			3		0			0	0		Julius Mikolik.
Gratz	28.86	733.0	30.04	763.1	60.4	15.8	38	S			2		0			0	0		Andreas Rospini.
Hermannstadt	28.67	728.3	30.10	764.6	53.2	11.8	29	NE			3		0			0	0		Prof. Reissenberger.
Kremsmünster	28.68	728.4	30.09	761.9	60.8	16.0	47	NW			2		2			0	0		Prof. C. Wagner.
Lemberg			30.01	762.2	54.0	12.2	49	SW			2		2			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.07	763.3	56.1	13.4	58	NW			2		10			0	0		I. R. Hydrographic Office
Szegedin			30.10	764.5	58.1	14.5	31	Calm			0		0			0	0		Karl Stancel.
Trieste			30.17	766.3	55.6	13.1	68	Calm			0		0			0	0	Clear	Prof. V. Farolfi.
Vienna			30.00	761.9	65.1	18.4	27	SSE			3		1			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.97	761.3	56.1	13.4	65	W			4		10			0	0		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.45	748.0	43.0	6.1		NE	16	7.2			10			0	0	Raining	William Boswell.
Ardrossan																			J. Mayes.
Armagh Observatory			29.62	752.3	51.0	10.6		SW	19	8.5									S. Call, for Dr. Robinson
Bidston, Liverpool Obs			29.70	754.4	54.2	12.3		WSW	22	9.8			8					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.66	753.4	52.7	11.5		SSW			2		5					Showery	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			30.02	762.5	82.0	27.8		NE			4		4					*D. clouds	Sergt. J. F. Halanen.
Cambridge Observatory			29.82	757.4	58.5	14.7		SW			3		7					Showery	H. Todd.
Cardington			29.83	757.7	60.0	15.6		W			3		5					*D. clouds	John McLaren.
Carlisle			29.59	751.6	55.1	12.8		W			5		8			0	0	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E			29.94	760.5	59.2	15.1		W			2		3					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	23.49	723.6	30.01	762.2	47.6	8.7		SW			7		10					Squally	R. E. Power.
Donaghadee			29.59	751.6	51	10.6		W			4		10					Raining	J. Mac Gowan.
Dover			29.90	759.4	51	10.6		SW			4		5					½ clouded	J. Costello.
Eccles (near Manchester.)			29.70	754.4	51.9	11.1		WNW	5.8	2.6			10					Showery	Thomas Mackereth.
Falmouth Observatory			29.94	760.5	55.5	13.1		SW	31	13.9			9					Overcast	The Staff.
Fort Napier, (Natal)	27.46	697.5	29.70	754.4	81.6	27.6		NW			2		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.93	760.2	88.0	31.1		NE			0		6					*D. clouds	[tis.
Galway, Queen's College			29.94	760.5	55	12.8		W			3		5					*D. clouds	B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			30.15	765.8	73.0	22.8		E			1		1					*D. clouds	Pvt. C. Altken, A. H. C.
Glasgow Observatory			29.52	749.8	49.8	9.9		SW			2		8					*D. clouds	Lewis Stuart.
Great Yarmouth			29.79	756.7	58	14.4		WSW			5		4					*D. clouds	G. T. Watson.
Greenwich Royal Obs			29.89	759.2	55.7	13.2		WSW			2		6					Showery	The Staff. for G. B. Airy.
Guernsey			30.01	762.2	55.5	13.1		SW			4		3					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.68	753.9	53.5	11.9		WSW			4		5					*D. clouds	L. J. Crossley
Helston			29.91	759.7	58	14.4		SW			6		4k			0	0	Fine	M. P. Moyle.
Holyhead			29.70	754.4	52	11.1		SW			5		3					*D. clouds	John Tilston.
Kew Observatory			29.79	759.2	57.3	14.1		SW	22	9.8			6					*D. clouds	The Staff.
Kingstown			29.68	753.9	56	13.3		WSW			4		9			Blank	Blank	Overcast	George Mitchell.
Leicester Museum			29.8[illegible]	756.9	54.8	12.7		W			2		10					Raining	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.10	764.5	62.6	17.0		NW			2		4k						Fred. Travis, Pvt. A.H.C.
Nairn			29.51	749.5	37	2.8		ENE			2		10					Raining	W. D. Penny.
Nassau, Bahamas			30.05	763.3	77.4	25.2		S			6		6					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.78	756.4	51.1	10.6		SW			5		10n,ks		W	0.049	1.24	Raining	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.78	756.4	52.1	11.2		SW			5		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.84	757.9	56	13.3		WSW			3		7					*D. clouds	J. Lucas.
Plymouth			29.95	760.7	55.2	12.9		WSW			4		4?					Overcast?	John Merrifield.
Roche's Point			29.77	756.1	54	12.2		WSW			6		8					Cloudy	W. Kennedy.
Saint Ann's Head																			John. C. Walker.
Saint Helier, Jersey)			30.03	762.7	56.2	13.4		WSW			3		5					½ clouded	A. P. Amy.
Sandwick Manse (Orkneys			29.56	750.8	36.2	2.3		NNE	18	8.0			10					Drizzling	Rev. Chas. Austin, LL.D.
Scarborough																			F. Shaw.
Scutari Cemetery (Turkey)			30.13	765.8	49.0	9.4		NE			2		8					Showery	Sergt. W. H. Lyne.
Sheffield			29.71	754.6	51.0	10.6		WSW			5		9			0.046	1.17	Showery	W. F. Cooper.
Silloth Rectory			29.59	751.6	53.3	11.8	87	WSW			5		6			0.354	8.99	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			29.62	752.3	52.0	11.1		SW			5		6			Blank	Blank		S. J. Perry.
Stornoway, Lewis C. Hebr.)			29.59	751.6	38	3.3		NNE			4		10					Gloomy	John Smith.
Stratfield Turgiss			29.90	759.4	57.2	14.0		W			1-2		5					*D. clouds	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.52	749.8	37	2.8		NE			5		10					Raining	John Trotter.
Truro, Royal Institution			29.45	748.0	55	12.8		SW			7		10					Raining	W. Newcombe.
Valencia Observatory			29.72	754.9	53.5	11.9		SW	30	13.4			5					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Cape Good Hope Obs			30.08	764.0	68.3	20.2	54	S	17	7.6			5						The Staff, for E. J. Stone.
Leith, Restalrig Park			29.49	749.0	52.8	11.6		W			5		8k			0	0	Fine, cloudy	Andrew Gibb.
Mauritius			29.98	761.5				E	13.6	6.1						0.02	0.5		
Monach Lt-house, Hebrides			29.52	749.8	38	3.3		N			6	5	0	NW		0.8	20.3		J. Youngclause.
North Unst, (Shetland Is.)			29.49	749.0	37	2.8		NW			4		10						

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier 2,200 ft., or 270.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			29.56	750.9	56.5	13.6	58	WSW			6		9						
Fanöe			29.55	750.6	46.0	7.8	88	SW			6		10						
Godthaab, (Greenland)			30.45	773.4	29.8	− 1.2	84	Calm			0		0						
Stykkisholm, (Iceland)			30.19	766.9	15.3	− 9.3	91	E			4		8						
Thorshavn, (Faröe)			29.61	752.1	32.9	0.5	85	NNW			4		10					Snowing	
Vestervig			29.41	747.0	45.7	7.6	98	SSW			7		10					Misty	

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	764.4	59.0	15	56	SW			4		8nk		SW	0	0	Very cloudy	Normal School.
Amiens			30.03	762.7	60.1	15.6	68	N			3		0			0	0	Clear	Normal School.
Avignon			30.17	766.4	71.6	22	42	NNW			1		0			0	0	Very clear	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.08	764.1	61.2	16.2	48	W			3		8		W	0	0	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			30.17	766.2	59.0	15	68	WSW			2		10		WSW	0	0	Covered	Normal School.
Brest			30.01	762.2	60.3	15.7	66	SW			4		10		SW	0	0	Misty.	Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			30.13	765.3	62.1	16.7	44	NE			3		8		NE	0	0	Very cloudy	Puy de Dome Obs.
Commercy			30.16	766.0	54.5	12.5	70	W			4		8kn		W	0	0	Very cloudy	Normal School.
Commune de Gréasque*			30.20	767.1	68.2	20.1	40	SW			2		2		SW	0	0		
Grenoble			30.13	765.2	62.2	16.8	78	NNW			4		5k		S	0	0	Partly cl'dy.	Normal School.
Le Mans			30.14	765.5	57.9	14.4	57	W			4		2		W	0	0	Slightly cl'dy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			30.19	766.9	58.1	14.5	67	W			2		0			0.016	0.4	Clear	Normal School.
Mâcon			30.18	766.6	60.4	15.8	62	Calm			0		0			0.020	0.5	Clear	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			30.13	765.4	74.1	23.4	43	S			4		2		S	0	0	Slightly cl'dy	Normal School.
Orleans																			Normal School.
Paris Observatory			30.10	764.4	60.3	15.7	48	SW			3		8k		W	0	0	Very cloudy	National Observatory.
Parthenay																			Normal School.
Privas			30.14	765.6	64.4	18		NE			2		10		NE	0	0	Covered	Normal School.
La Roche-sur-Yon			30.18	766.6	57.4	14.1	74	NW			2		5		E	0	0	Cloudy	Normal School.
Rochefort, Observatory			30.23	767.7	61.3	16.3	60	W			4		8			0	0	¾ covered	Naval Observatory.
Rouen			30.07	763.6	63.3	17.4	46	SW			2		5		SW	0	0	Cloudy	Normal School.
Saint Lo			30.08	763.9	59.5	15.3	55	W			1		7		SW	0	0		Normal School.
Tarbes	29.11	739.4			57.2	14		NNW			2		2		E	0	0	Slightly cl'dy	Normal School.
Toulouse																			Normal School.
Villefranche			30.17	766.4	64.9	18.3	77	SE			3		5			0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.92	759.9	78.8	26	76	Calm			0		5k			Blank	Blank		L'Abbé Marchési.
Gorée																			
Marseilles			30.13	765.4	67.3	19.6	49	SW			1		3?			0	0	½ Covered?	Marseilles Observatory.
Mont-Louis																			—. Falguère.
Montsouris, Paris			30.09	764.3	60.4	15.8	67	SW			3		10		WSW	0	0		Montsouris Observ'tory.
Perpignan			30.16	766.1	69.8	21.0	25	N	9.3	4.17			0			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.10	764.5	63.3	17.4	49	SW			3		8			0	0	Cloudy	E. Renou.
Toulouse			30.34	770.5	57.0	13.9	62	NW			1		0			0	0		Toulouse Observatory.
Tours			30.13	765.4	63.0	17.2	50	W			3		5		W	0	0		C. Marquet.
Versailles, (near Paris)			30.10	764.4	60.1	15.6	55	W			4		9			0	0	Very cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

* Near Marseilles.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.93	760.2	62.6	17.0	30	W			6		3	W		0	0		Prof. T. Hoh.
Berlin			29.78	756.5	66.4	19.1	26	SW			4		4			0	0		Prof. Arndt.
Breslau			29.97	761.2	63.7	17.6	34	S			6		0			0	0		Dr. P. Neugebauer.
Carlsruhe			30.04	762.9	64.0	17.8	44	SW			6		1			0	0		A. Senz.
Cassel			29.84	757.9	66.6	19.2	36	WSW			4		2	W		0	0		Dr. H. Möll.
Cologne																			Dr. Gartle
Emden																			Prof. Prestel.
Frankfort on the Main			30.01	762.3	64.4	18.0	27	WSW			2		3			0	0		Physical Society.
Friedrichshafen	28.68	728.5	30.12	765.0	55.4	13.0	51	SW					4			0	0		M. Wilhelm.
Hamburg			29.80	756.9	53.8	12.1	61	WSW			7		10			0	0	Cloudy	Deutsche Seewarte.
Kiel			29.73	755.1	52.3	11.3	61	SW			6		8			0	0		Prof. G. Karsten.
Königsberg			29.75	755.7	63.7	17.6	41	SW			7		2			0.020	0.5		Prof. E. Lather.
Köslin			29.71	754.7	63.5	17.5		SSW			6		0			0	0		H. Müller.
Leipsic			29.86	758.5	66.6	19.2	31	SW			4		0			0	0		Prof. Bruhns.
Memel			29.77	756.2	47.5	8.6	65	SSW			4		7			0	0	Light rain	Reinbrecht & Skalweit.
Münster			29.93	760.3	56.1	13.4	59	S			2		10			0	0		Prof. E. Heis.
Neufahrwasser			29.71	751.5	66.2	19.0	40	SW			5		0			Blank	Blank		A. Lothes.
Posen			29.88	759.0	64.6	18.1	42	SW			7		0			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.08	763.9	65.3	18.5	38	W			2		3	W		0	0		Dr. Schur.
Stuttgart			30.00	762.1	65.8	18.8	33	SW			2		2			0	0		Prof. Schoder.
Thorn			29.85	758.3	62.2	16.8	39	W			6		0			0	0		Dr. Hasenbalg
Treves, (Trier)			30.00	762.0	59.7	15.4	48	W			8		9			0	0		Prof. Flesch.
Wustrow, Naval School			29.60	751.9	49.8	9.9	68	SW			5		5			0	0		E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	764.2	55.4	13.0		NE			Strong							Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.13	765.3	60.4	15.8	37	S	1.3	0.6			0			0	0		
Padua			30.13	765.4	59.5	15.3	43	S	2.5	1.1			1	SW		0	0		
Vicenza			30.13	765.3	59.9	15.5	41	SE	1.3	0.6			0			0	0		
Verona			30.13	765.3	61.7	16.5	65	E			1		0			0	0		
Bergamo	28.78	731.0	30.08	764.1	60.4	15.8		SW			2		0			0	0		
Domodossola	29.06	738.2	30.08	763.9	66.6	19.2	53	SSW			4		1			0	0		
Milan			30.12	765.1	67.8	19.9	43	SE			2		7	SW		0	0		
Pavia			30.13	765.4	62.1	16.7	32	NE			4		0			0	0		
Moncalieri			30.13	765.4	64.8	18.2	38	S			2		0			0	0		
Mondovi	28.22	716.7	30.12	765.0	57.9	14.4	45	NW			4		0			0	0		
Porto Maurizio			30.21	767.3	63.0	17.2		E			2		0			0	0		
Genoa			30.17	766.3	63.3	17.4	36	SW	4.9	2.2			0			0	0		
Piacenza			30.14	766.5	63.1	17.3	30	SE	13.7	6.1			0			0	0		
Parma			30.14	765.6	63.5	17.5	46	SE			4		0			0	0		
Bologna			30.21	767.3	60.4	15.8	42	ESE			6		0			0	0		
Florence			30.15	765.7	66.2	19.0	20	SW			2		0			0	0		
Leghorn			30.17	766.2	62.2	16.8	43	WSW	6.3	2.8			2			0	0		
Siena			30.12	765.0	61.3	16.3	22	SSE	0.7	0.3			2	E		0	0		
Urbino	28.62	726.9	30.18	766.6	54.3	12.4	41	SW			2		0			0	0		
Pesaro																			
Ancona			30.18	766.6	57.9	14.4	52	ESE			6		2			0	0		
Grosseto			30.15	765.8	62.2	17.0	46	ENE			4		3	E		0	0		
Rome			30.14	765.6	63.1	17.3	38	WNW	6.9	3.1			0			0	0		
Naples, O. U.			30.14	765.6	62.2	16.8	26	SSE			6		3	NE		0	0		
Lecce			30.08	763.9	58.8	14.9	38	ENE	15.0	6.7			1			0	0		
Cosenza			30.09	764.3	57.6	14.2	72	NW	1.3	0.6			9			0	0		
Riposto, (Sicily)			30.04	763.0	60.8	16.0	55	N			6		8	S		0	0		
Palermo			30.05	763.2	57.9	14.4	39	NE	11.9	5.3			5			0	0		
Caltanissetta	28.07	712.9	30.02	762.6	49.8	9.9	64	NW			4		4	SE		0	0		
Sub-Series.																			
Naples, S. R.			30.13	765.4	60.6	15.9	36	NE	5.6	2.5			..c	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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.0 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Tokio

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.97	761.3	52.5	11.4		W			5								
Groningen			29.74	755.4	53.6	12.0		SW			7								
Helder			29.80	756.9	50.9	10.5		SSW			5								
Utrecht			29.85	758.3	57.4	14.1	60	WSW			6		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.36	745.7	41.0	5.0	69	NNW	19.9	8.9			5			0.039	1.0		
Brönö			29.05	737.9	39.2	4.0	84	WNW	25	11			8			0	0		
Christiania			29.33	744.9	40.5	4.7	89	SSW	1.3	0.6			10			0	0		
Tromsö			29.28	743.7	22.1	— 5.5	56	SE	45	20			0			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2 h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			29.96	761.0	63.3	17.4	90	WSW	5.6	2.57			4			0.417	10.6		Dr. J. A. N. Sampaio.
Campo Major			30.15	765.9	69.6	20.9	30	SW	2.4	1.08			9	SW		0	0	Solar halo	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.15	765.7	63.9	17.7	66	SE	12.0	5.36			1			0	0		Capt. D. A. da Cunha.
Lisbon			30.23	767.7	62.1	16.7	59	SSE	7.4	3.3			9			0	0	Solar halo	The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.92	760.0	59.9	15.5	45	SSW	22	10			0						Astronomical Obs.
Wilna			29.81	757.2	54.3	12.4	69	W	5	2			9						Astronomical Obs.
Dorpat			29.48	748.8	51.4	10.8	69	WSW	16	7			4						Physical Cabinet.
St. Petersburg			29.34	745.3	57.4	3.0	92	WSW	11	5			10						Central Physical Obs.
Kuopio			30.17	740.8	41.7	5.4	82	NW	13	6			5						Ch. Forsten.
Kieff			30.01	762.3	48.4	9.1	60	WSW	7	3			10						Physical Cabinet.
Nikolaiev			30.22	767.5	48.2	9.0	33	N	9	4			0						Kurdakof.
Kertch			30.15	765.9	40.8	4.9	58	NNE	7	3			8						Lagorio.
Moscow			29.79	756.7	36.5	2.5	58	SSW	13	6			7						Meteorological Obs.
Lugan			30.00	761.9	39.9	4.4	35	NNW	13	6			0						Meteorological Obs.
Archangel			29.34	745.1	15.1	− 9.4	94	SE	40	18			10						Ogorodnikof.
Tiflis	28.48	723.2	29.88	759.0	54.5	12.5	48	NW	20	9			7						Physical Observatory.
Astrakhan			30.00	762.1	42.1	5.6	35	WNW	22	10			4						Sebastianof.
Kasan			29.66	753.8	21.2	− 6.0	77	NNW	7	3			0						Physical Cabinet.
Orenburg			29.87	758.8	50.9	10.5	68	SE	4	2			2						Tschernischef.
Ekaterinburg	28.28	718.2	29.34	745.1	9.7	− 12.4	82	NNW	13	6			10						Meteorological Obs.
Nukuss			29.68	753.9	70.2	21.2	27	NW	9	4			0						
Kasaly																			Borof.
Tashkend	28.26	717.8	29.93	760.2	58.3	14.6	91	Calm	0	0			10					Raining	Michelson.
Barnaul			29.73	755.3	40.5	4.7	67	Calm	0	0			7						Meteorological Obs.
Yeniseisk			29.64	752.9	42.3	5.7	68	SE	2	1			3						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.96	761.0	57.7	14.3	18	Calm	0	0			0						Physical Observatory.
Nertchinsk	27.55	699.7	29.67	753.5	28.9	− 1.7	80	NW	9	4			10						Meteorological Obs.
Vladivostock			29.79	756.6	37.2	2.9	91	Calm	0	0			10						
Nikolaievsk, on the Amoor					29.5	− 1.4	90	SE	13	6			7						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 305.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.12	765.1	69.6	20.9	25	SW	9.7	4.34		2	0	SW		0	0	Light clouds	Royal Observatory.
San Fernando			30.21	767.0	70.9	21.6	32	SW	4.0	1.8		1	5	WSW	SW	0	0		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.24	742.8	23.1	− 4.8	71	NE			4		10			0.154	3.9		
Umea			29.20	741.6	46.0	7.8	59	NW			2		7			0	0		
Hernosand			29.22	742.2	47.1	8.4	50	SW			2		5			0	0		
Stockholm			29.18	741.1	57.9	14.4	55	SW			4		8			0	0		
Wisby			29.56	750.7	52.9	11.6	59	SSW			7		5			0	0		
Sub-Series.																			
Upsala			29.32	744.6	49.6	9.8	65	WSW	11.2	5.0			10		WSW	0.161	4.10	Rainy	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	30.19	766.9	54.0	12.2	70	NNE			1		10			0	0	Covered	The Observatory.
Zurich	28.50	724.0	30.13	765.2	58.1	14.5	61	W			2		1			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +6.4 mm.; Thermometer, +1.2 cent.; Relative Humidity, +12 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.17	766.2	47.8	8.8	66	N	20	9.0			3		ENE	0	0		
Fao, (Persian Gulf)			30.03	762.7	77.9	25.5		SE			4		5			Blank	Blank		
Salonica			30.18	766.5	65.1	18.4		E			2		5						
Valona			29.95	760.6	64.2	17.9		SW			2		5						
Varna			30.02	765.0	53.6	12.0		E			4		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.97	761.2	59.9	15.5	82	SW			3		10n		SW	0.36	9.1	Rainy	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.																			Hon. J. Ferguson.
Brockville, Ontario			30.26	768.6	23	— 5.0		N	3	1.3		0	0					Clear	W. R. Bigg.
*Chatham, N. B.			29.39	746.5	33	0.6	84	NW	20	8.9			10s		NW	0.40	10.2	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			29.34	745.2	33	0.6	98	NW	5	2.2			10n			0.19	4.8	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.10	764.5	27.0	— 2.8	51	NE			3	6c				0	0	Fair	James Smith, M. A.
Dalhousie, N. B.																			H. A. Johnson.
Esquimault, B. C.			29.67	753.6	37.1	2.8	91	NE	1	0.4		8cs				0.15	3.8	Cloudy	W. H. Bevis.
Fredericton, N. B.			29.49	749.0	34.9	1.6	73	NW	14	6.3			10ks			0.280	7.11	Light rain	Prof. Harrison.
*Fort Garry, Manitoba			29.56	750.8	37	2.8	95	S	4	1.8		5k	5n	S	S	0.01	0.3	Light rain	James Stewart.
Goderich, Ontario			30.32	770.1	24.3	— 4.3	84	Calm			0					0	0	Fine	H. J. Strang, M. A.
Granton, Ontario			30.26	768.6	27.2	— 2.7		W			1					0	0	Clear	James Grant.
*Halifax, N. S.			29.39	746.5	33	0.6	91	SW	10	4.5			10n		NW	0.057	1.45	Light snow	F. Allison, M. A.
*Kingston, Ontario			30.23	767.8	24	— 4.4	85	N	4	1.8		0	0			0	0	Clear	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			30.08	764.0	19	— 7.2	69	W	12	5.4			10s			0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.17	766.3	18	— 7.8	76	W	14	6.3		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.30	769.5	21	— 6.1	65	N	7	3.1		0	0			0	0	Clear	Rev. R. Mooley.
*Port Dover, Ontario			30.25	768.3	27	— 2.8	64	NE	5	2.2		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.																			Peter Grant.
*Port Stanley, Ontario			30.24	768.1	28	— 2.2	70	E	4	1.8		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			29.90	759.4	26	— 3.3	88	SW	33	14.8			10n		SW	0	0	Cloudy	Capt. Ash, R. N.
St. John, N. B.			29.50	749.3	33	0.6	84	NW	11	4.9			10n			0.030	0.76		G. Murdoch, C. E.
*Saugeen, Ontario			30.26	768.6	24	— 4.4	74	Calm	0	0		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario																			R. J. Cole.
Stratford, Ontario			30.27	768.8	28.3	— 2.1	66	Calm	0	0						0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.42	747.3	35	1.7	90	SE	10	4.5			10s		S	0.66	16.8	Clearing	T. C. Hill.
*Toronto, Ontario			30.28	769.1	27	— 2.8	69	N	6	2.7		0	0			0	0	Clear	Magnetic Observatory
Woodstock, Ontario			30.22	767.6	24.9	— 3.9	100	NE			1	0	0			0	0	Fine	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	30	− 1.1	68	NW	8	3.6		0	0			0	0	Clear	
Alpena, Mich			30.23	767.8	26	− 3.3	76	Calm	0	0		0	0			0	0	Clear	
Atlantic City, N. J			30.11	764.8	35	1.7	52	N	17	7.6		0	0			0	0	Clear	
Augusta, Ga.			30.05	763.3	51	10.6	79	NE	3	1.3		5k	5ks	NE	NE	0.15	3.8	Cloudy	
Baltimore, Md			30.18	766.6	39	3.9	55	NW	5	2.2		0	Sm'e			0	0	Clear	
Barnegat, N. J			30.11	764.8	34	1.1	51	N	15	6.7		0	0			0	0	Clear	
Benton, Montana	26.90	683.2	29.70	754.4	36	2.2	52	NE	1	0.4		0	5s			0	0	Fair	
Bismarck, Dakota	27.61	701.3	29.24	742.7	34	1.1	90	N	44	19.7			10n		N	0.05	1.3	Light rain	
Boston, Mass			29.90	759.4	27	− 2.8	67	NW	19	8.5		1s	Haze			0	0	Clear	
Breckenridge, Minn			29.44	747.8	39	3.9	82	SE	32	14.3			10s			0.03	0.8	Cloudy	
Buffalo, N. Y			30.22	767.6	27	− 2.8	88	N	5	2.2		0	0			0	0	Clear, frost	
Burlington, Vt			30.10	764.5	22	− 5.6	65	N	8	3.6		2ck	5s	N		0	0	Cloudy	
Cairo, Ill			30.03	762.7	53	11.7	42	E	8	3.6		0	0			0	0	Clear	
Cape Hatteras, N. C			30.03	762.7	50	10.0	51	NE	9	4.0		0	0			0	0	Clear	
Cape Henry, Va			30.14	765.5	46	7.8	69	NE	20	8.9		0	0			0	0	Clear	
Cape May, N. J			30.14	765.5	36	2.2	53	NW	18	8.0		0	0			0	0	Clear	
Charleston, S. C			30.01	762.2	54	12.2	79	N	12	5.4			10s		E	0.97	24.6	Cloudy	
Cheyenne, Wyoming	23.71	602.2	29.65	753.1	28	− 2.2	59	NW	8	3.6		0	0			Inap.	Inap.	Clear	
Chicago, Ill			30.08	764.0	39	3.9	63	E	6	2.7		0	0			0	0	Clear	
Cincinnati, Ohio			30.08	764 0	43	6.1	51	E	4	1.8		0	0			0	0	Clear	
Cleveland, Ohio			30.23	767.8	31.3	− 0.4	63	E	4	1.8		0	0			0	0	Clear	
Colorado Springs, Col	23.76	603.5	29.64	752.8	32	0.0	60	NW	3	1.3		5c	0			0	0	Fair	
Corsicana, Tex			29.86	758.4	55	12.8	80	SE	8	3.6		0	0			0	0	Clear	
Davenport, Iowa			30.02	762.5	41	5.0	56	E	12	5.4		0	Sm'e			0	0	Clear	
Denison, Tex			29.81	757.2	58	14.4	81	S	6	2.7		0	0			0	0	Clear	
Denver, Col.	24.47	621.5	29.69	754.1	37	2.8	39	Calm	0	0		8c	0			0	0	Fair	
Detroit, Mich			30.23	767.8	32	0.0	60	E	6	2.7		0	0			0	0	Clear	
Dodge City, Kan	27.07	687.6	29.31	744.5	46	7.8	61	W	8	3.6		2c	0			0	0	Clear	
Dubuque, Iowa			30 02	762.5	41	5.0	57	SE	6	2.7		0	0			0	0	Clear	
Duluth, Minn			29.94	760 5	30	− 1.1	78	NE	18	8.0		5ck	Haze			0	0	Fair	
Eastport, Me			29.52	749.8	32	0.0	79	NW	20	8.9		5c	8s	N	NW	0.06	1.5	Cloudy	
Erie, Pa			29.62	752.3	55	12.8	73	SW	18	8.0			10n		W	Inap.	Inap.	Light rain	
Escanaba, Mich			30.28	769.1	26	− 3.3	76	N	4	1.8		0	0			0	0	Clear	
Fort Gibson, Indian Terr			29.81	757.2	59	15.0	42	SE	8	3.6		5c	0	W		0	0	Fair	
Ft. St. Michaels, Alaska			30.16	766.1	− 7	−21.7		Calm	0	0		0	0					Clear	
Fort Sill, Indian T	28 54	724.9	29.64	752.8	52	11.1	73	SE	8	3.6		0	Fog			0	0	Clear	
Fort Sully, Dakota																			
Galveston, Tex			29.92	760.0	63	17.2	78	SE	4	1.8		5c	0	W		0	0	Fair	
Grand Haven, Mich			30.16	766.1	35	1.7	80	E	7	3.1		0	Haze			0	0	Clear	
Indianapolis, Ind			30.11	764.8	43	6.1	50	SE	6	2.7		0	0			0	0	Clear	
Indianola, Tex			29.90	759.4	62	16.7	94	SE	8	3.6		5cs	5s	W	W	0	0	Cloudy	
Jacksonville, Fla			29.93	760.2	62	16.7	83	N	8	3.6			10s		NE	0.72	18.3	Cloudy	
Keokuk, Iowa			30.02	762.5	45	7.2	53	SE	12	5.4		0	0			0	0	Clear	
Key West, Fla			29.97	761.2	76.5	24.7	81	SW	8	3.6		2k	Haze	SW	SW	0	0	Hazy	
Kittyhawk, N. C			30.11	764.8	46	7.8	77	S	2	0.9		0	Haze			0	0	Clear	
Knoxville, Tenn			30.07	763.8	42	5.6	75	Calm	0	0		0	Fog			0	0	Fair	
La Crosse, Wis			29.87	761.2	41	5.0	54	SE	12	5.4		5c	0			0	0	Fair	
Leavenworth, Kan			29.74	755.4	55	12.8	56	S	12	5.4			10s		SW	0	0	Threatening	
Lexington, Ky	29 00	736.6	30.13	765.3	43	6.1	50	NE	8	3.6		0	0			0	0	Clear	
Long Branch, N. J			30.09	764.3	36	2.2	52	NW	20	8.9		0	0			0	0	Clear	
Louisville, Ky			30.08	764.0	41	5.0	74	NE	3	1.3		0	Haze			0	0	Clear	
Lynchburg, Va			30.14	765.5	45	7.2	54	Calm	0	0		0	0			0	0	Clear	
Malone, N. Y			30.13	765.3	18	− 7.8	75	NW	12	5.4		2k	0	NW		0	0	Fair	
Manhattan, Kan	28.63	727.2	29.76	755.9	52	11.1	73	SE	24	10.7		5cs	5s			0	0	Cloudy	
Marquette, Mich			30.19	766.8	26	− 3.3	75	E	4	1.8		0	0			0	0	Clear	
Memphis, Tenn			30.00	762.0	53	11.7	66	SE	5	2.2		0	Haze			0	0	Clear	
Milwaukee, Wis			30.15	765.8	35	1.7	69	E	5	2.2		0	0			0	0	Clear	
Mobile, Ala			29.96	761.0	59	15.0	87	N	5	2.2			10s		SE	0	0	Cloudy	
Montgomery, Ala			30.01	762.2	55	12.8	83	E	6	2.7			10s		E	0.64	16.3	Cloudy	
Morgantown, W. Va			30.16	766.1	39	3.9	46	Calm	0	0		0	0			0.08	2.0	Clear	
Mt. Washington, N. H	23.31	592.1	29.67	753.6	6	−14.4	100	N	50	22.4			Fog			0	0	Foggy	
Nashville, Tenn			30.03	762.7	40	9.4	71	Calm	0	0		0	0			0	0	Clear	
New Haven, Conn			30.03	762.7	31	− 0.6	69	N	20	8.9		0	0			Inap.	Inap.	Clear	
New London, Conn			29.97	761.2	31.5	− 0.3	60	NW	20	8.9		0	0			0	0	Clear	
New Orleans, La			29.93	760.2	62	16.7	77	NE	4	1.8		10k	0	SW		0	0	Cloudy	
Newport, R. I			29.94	760.5	30	− 1.1	67	W	16	7.2		0	0			0	0	Clear	
New York, N. Y			30.11	764.8	31	− 0.6	49	NW	12	5.4		0	0			0	0	Clear	
Norfolk, Va			30.13	765.3	45.5	7.5	57	N	6	2.7		0	0			0	0	Clear	
North Platte, Neb	26.66	677.2	29.18	741.1	42	5.6	66	W	14	6.3		0	2s		W	0	0	Clear	
Omaha, Neb	28.55	725.2	29.58	751.3	51	10.6	59	S	17	7.6			10s		S	0.03	0.8	Cloudy	
Oswego, N. Y			30.21	767.3	28	− 2.2	77	NW	8	3.6		0	Haze			0	0	Clear	
Pembina, Dakota			29.46	748.3	39	3.9	100	SE	20	8.9			10n			0.08	2.0	Light rain	
Philadelphia, Penn			30.15	765.8	33	0.6	51	N	13	5.8		0	0			0	0	Clear	
Pike's Peak, Colorado	17.35	440.7	29.56	750.8	0	−17.8	70	SW	22	9.8		0	2s			Inap.	Inap.	Fair	
Pittsburgh, Penn			30.22	767.6	30	− 1.1	67		2	0.9		0	0			0	0	Clear	
Port Huron, Mich			30.26	768.6	27	− 2.8	66	NE	5	2.2		1c	0			0	0	Clear	
Portland, Me			29.82	757.4	29	− 1.7	66	NW	20	8.9		5c	0			0	0	Fair	
Portland, Oregon			29.84	7 7.9	41	5.0	82	S	10	4.5			10s	N		0.18	4.6	Cloudy	
Punta Rassa, Fla			29.95	760.7	73.2	22.9	85	NW	12	5.4			8ks		NW	0.10	2.5	Cloudy	
Rochester, N. Y			30.20	767.1	30	− 1.1	89	NW	8	3.6		0	0			0	0	Clear	
Salt Lake City, Utah	25.41	645.4	29.74	755.4	36	2.2	62	S	1	0.4		5k	0			0.18	4.6	Fair	
Sandy Hook, N. J			30.09	764.3	32	0.0	61	NW	20	8.9		0	0			0	0	Clear	
San Diego, Cal.			30.04	763.0	45	7.2	75	NE	8	3.6		0	0			0	0	Clear	
San Francisco, Cal			30.03	762.7	50	10.0	75	NW	6	2.7			10k			0.04	1.0	Cloudy	
Santa Fe, N. M	23.00	584.2	29.54	750.3	20	− 1.7	67	N	2	0.9			10s			0	0	Cloudy	
Savannah, Ga.			29.99	761.7	53	11.7	79	NE	9	4.0			10s		NE	0.35	8.9	Cloudy	
Shreveport, La			29.96	761.0	56	13.3	63	Calm	0	0		0	0			0	0	Clear	
Smithville, N. C			30.05	764.3	54	12.2	62	N	14	6.3		10ck	0	W		0.05	1.3	Cloudy	
Springfield, Mass.			30.01	762.2	32	0.0	60	NW	8	3.6		1c	0			0	0	Clear	
St. Louis, Mo			30.00	762.0	49	9.4	43	SE	1	0.4		0	0			0	0	Clear	
St. Marks, Fla			29.96	761.0	58	14.4	93	N	10	4.5			10s			0.54	13.7	Cloudy	
St. Paul, Minn			29.77	756.1	41	5.0	61	SE	32	14.3		10cs,hs	0	W		0	0	Cloudy	
St. Paul's Island, Alaska			30.11	764.8	18	− 7.8	84	SE	3	1.3		1c	0	SW		0	0		
Thatcher's Island, Mass			29.87	758.7	28	− 2.2	56	NW	24	10.7		2c	0	NW		0	0	Clearing	
Toledo, Ohio			30.18	766.6	42	5.6	49	E	3	1.3		0	0			0	0	Clear	
Tucson, Arizona	27.48	680.0	30.06	763.5	44	6.7		S				0	0			0	0	Clear	
Tybee Island, Ga			29.96	761.0	56	14.4	87	N	14	6.3			10ks		NE	0.62	15.7	Cloudy	
Vicksburg, Miss			30.00	762.0	55	12.8	90	SE	1	0.4		2s	Sm'e	SE		Inap.	Inap.	Cloudy	
Virginia City, M. T.	23.93	607.8	29.41	747.1	16	− 8.9	83	Calm	0	0		8cs	0	SW		0.28	7.1	Cloudy	
Washington, D. C.			30.19	766.8	37.5	3.1	63	N	2	0.9		0	Haze			0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.05	763.3	52	11.1	41	NE	10	4.5		2cs	2s	NW		0	0	Fair	
Wood's Holl, Mass			29.72	754.9	42	5.6	83	SW	6	2.7			10s			0.51	13.0	Cloudy	
Wytheville, Va	27.70	703.6	29.93	760.2	34	1.1	69	Calm	0	0		0	0			0	0	Clear, frost	
Yankton, Dakota	28.20	716.3	29.44	747.8	48	8.9	70	SE	22	9.8		5cs	0	SW		0	0	Fair	
Yuma, Arizona			29.92	760.0	47	8.3		Calm				0	0			0	0	Clear	
Sub Series.																			
Bridgetown, B'b'dos, W. I.			30.07	763.8	78	25.6	78	E	3	1.3		2c	8ks	N	NE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.00	762.0	81	27.2	70	E				2k	2ks			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.24	768.1	77	25.0	69	SE	10	4.5		2c	2k, ks	SE		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I.			30.18	766.6	76	24.4	69	Calm	0	0		2c	2s			0	0		James Gall.
Santiago de Cuba, W. I.			29.81	757.2	78	25.6	74	Calm	0	0		0	2ks			0	0	Fair	Robert Mason.
Havana, Cuba, W. I.			29.99	761.7	77	25.0	69	Calm	0	0		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			30.03	762.7	60.0	15.6	77	Calm	0	0		10pk	0			0.05	1.3	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.20	690.9	30.00	762.0	61	16.1	88	Calm	0	0		0	0			0.02	0.5	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.01	762.2	82	27.8	79	E			3		5k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.06	763.4	86.0	30										0.226	5.75		Dr. H. Groot.
Medellin, Colombia, S. A.	25.21	640.3			62.5	16.9	85		0	0		3k	1s			0.45	11.4	Fair	Thomas Herran.
St. John's, Newfoundland			29.96	761.0	31.0	— 0.6		E					10n			0.01	0.3	Foggy	John Delaney.
York Factory, B. A.			30.12	765.0	— 8	—13.3	43	SE	4	1.8		3c	0	E		0	0		J. Fortescue.
Honolulu, Oahu, H. I.			30.14	765.5	75	23.9	99	Calm			0					0.08	2.0	Cloudy	E. P. Church.
Makawao, Maui, H. I.	27.80	708.4	30.06	763.5	60	15.6	76	Calm	0	0		0	0			0	0		F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft, or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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. Assgt.) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON APRIL 10, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	763.5	69.8	21.0	53	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.10	764.5	67.3	19.6	76	N			1		1			0	0	Clear	Peter.
La Calle					61.9	16.6		S			2		0			0	0	Clear	Kuntz.
Tunis			30.19	766.9	67.1	19.5	49	E			3		0			0	0	Clear	Jacques
Sfax			30.24	768.1	66.6	19.2	56	SSE			3		2			0	0	Clear	Chauvey.
Saida			30.10	764.4	77.9	25.5	23	WSW			4		1			0	0	Clear	Millot.
Tebessa			30.21	767.3	64.8	18.2		W			1		1			0	0	Clear	Colin.
Geriville			30.14	765.5	65.7	18.7	35	SSE			2		2			0	0	Clear	Buard.
Laghouat			30.16	766.1	63.4	23.0	25	NE			1		0			0	0	Clear	Guyot.
Biskra			30.18	766.5	74.8	23.8	31	N			1		0			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	68.0	20.0	37	NE			1		1			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.93	760.1	62.6	17.0	57	SW			3		1			0	0		I. R. Observatory.
Eperies			29.93	760.3	64.8	18.2	40	S			4		5			0	0		Julius Mikolik.
Gratz	28.79	731.2	29.96	761.0	63.7	17.6	46	SW			2		5			0	0		Andreas Rospini.
Hermannstadt	28.62	727.0	30.02	762.6	59.7	15.4	33	NE			1		0			0	0		Prof. Reissenberger.
Kremsmünster	28.59	726.2	29.91	759.6	61.5	16.4	51	E			2		1			0	0		Prof. C. Wagner.
Lemberg			29.88	759.0	59.7	15.4	52	W			3		3			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.10	764.5	59.0	15.0	53	S			1		18			0	0		I. R. Hydrographic Office
Szegedin			30.04	763.1	63.9	17.7	28	SE			2		0			0	0		Karl Stancel.
Trieste			30.00	764.2	59.0	15.0	61	W			1		0			0	0		Prof. V. Farolfi.
Vienna			29.93	760.1	67.8	19.9	40	SSE			2		2			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.61	752.0	61.2	16.2	52	SW			3	7	1	W		0	0	Halo	Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	40.6	4.8		NE	14	6.3			5			0.180	4.57	Blue sky	William Boswell.
Ardrossan			29.35	745.5	43.5	6.4		NE			2		7					*D. clouds	J. Mayes.
Armagh Observatory			29.42	747.3	41.4	5.2		N	14	6.3			10					Overcast	S. Call, for Dr. Robinson
Bidston, Liverpool Obs			29.22	742.2	39.0	3.9		NW	15	6.7			10					Raining	John Hartnup.
Birr Castle, (Parsonstown)			29.46	748.3	40.4	4.7		NNW			1		10					*D. clouds	J. Dreyer.
Bradford			29.16	740.7	44.1	6.7		NW			1		10			0.60	15.2	Raining	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	82.5	28.1		NE			2		3					*D. clouds	Sergt. J. F. Halanen.
Cambridge Observatory			29.32	744.7	50.0	10.0		SW			4		10					Showery	H. Todd.
Cardington			29.30	744.2	52.6	11.4		S			7		10					Overcast	John McLaren.
Carlisle			29.26	743.2	35.4	1.9		N			1		10			0.41	10.4	Snowing	T. Bel, for J. Cartmell.
Chatham, School M. E			29.02	752.3	58.7	14.8		SW			2							Raining	Capt. J. Fellowes, R. E.
Dartmoor	27.92	709.2	29.41	747.0	46.4	8.0		W			7		10					Raining	R. E. Power.
Donaghadee			29.38	746.2	44	6.7		NNE			4		5					*D. clouds	J. Mac Gowan.
Dover			29.57	751.1	49	9.4		SW			5		7					Raining	J. Costello.
Eccles, (near Manchester.)			29.19	741.4	43.7	6.5		NNW	4.8	2.1			10					Raining	Thomas Mackereth.
Falmouth Observatory			29.37	746.0	50.4	10.2		WNW	26	11.6			10					Raining	The Staff.
Fort Napier, (Natal)	27.82	706.6	30.06	763.5	60.1	15.6		Calm			0		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	87.0	30.6		N			1		7					*D. clouds	
Galway, Queen's College			29.47	748.5	42	5.6		N			5		10					Snowing	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.08	764.0	73.0	22.8		E			1		1					*D. clouds	Pvt. C. Altken, A. H. C.
Glasgow Observatory			29.34	745.2	40.0	4.4		E			1		10					Gloomy	Lewis Stuart.
Great Yarmouth			29.40	746.7	51	10.6		SW			6		7					Raining	G. T. Watson.
Greenwich Royal Obs			29.42	747.3	49.6	9.8		SSW			5		10					Raining	The Staff, for G. B. Airy.
Guernsey			29.51	749.5	51	10.6		SSW			6		10					Rain, squally	Dr. S. E. Hoskins.
Halifax, Moorside Obs			29.19	741.4	44.4	6.9		NNW			1		10					Raining	L. J. Crossley
Helston			29.35	745.5	53	11.7		NW			6		10n			0.35	8.9	Raining	M. P. Moyle.
Holyhead			29.29	744.0	42	5.6		NNW			5		10					Overcast	John Tilston.
Kew Observatory			29.40	746.7	51.1	10.6		SSW	39	17.4			10					Raining	The Staff.
Kingstown			29.39	746.5	42	5.6		NNW			5		9			Blank	Blank	Overcast	George Mitchell.
Leicester Museum			29.22	742.2	51.0	10.6		SW			6		10					Drizzling	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.19	766.8	64.0	17.8		NW			2		4k						Fred. Travis, Pvt. A.H.C.
Nairn			29.40	746.7	40	4.4		NW			2		2					½ clouded	W. D. Penny.
Nassau, Bahamas			30.03	762.7	76.2	24.6		SW			4		7					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.16	740.7	52.2	11.2		SSW			5		10d		SSW	0.217	5.51	Raining	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.16	740.7	50.1	10.1		SSW			6		10			Blank	Blank	Threatening	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.20	744.2	52	11.1		SW			6		10					Raining	J. Lucas.
Plymouth			29.35	745.5	51.3	10.7		S			5		10					Raining	John Merrifield.
Roche's Point			29.43	747.5	43	6.1		N			5		10					Raining	W. Kennedy.
Saint Ann's Head			29.32	744.7	44	6.7		N			3		10					Showery	John. C. Walker.
Saint Helier, (Jersey)			29.58	751.3	51.8	11.0		SSW			6		10					Raining	A. P. Amy.
Sandwick Manse (Orkneys			29.36	745.7	38	3.3		NW	20	8.9			10					Snowing	Rev. Chas. Austin, LL.D.
Scarborough			29.20	741.7	42.8	6.0		N			1		10					Rain and fog	F. Shaw.
Scutari Cemetery, (Turkey)			30.10	764.5	54.8	12.7		NE			2		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.16	740.7	50.8	10.4		SW			2		10			0.056	1.42	Raining	W. F. Cooper.
Silloth Rectory			29.28	743.7	36.0	2.2	95	N			3		10			0.310	7.87	Snowing	Rev. Francis Redford.
Stonyhurst Observatory			29.20	741.7	41.9	5.5		N			1		10			Blank	Blank	Threatening	S. J. Perry.
Stornoway, Lewis C. Hebr.			29.42	747.3	38	3.3		NNE			1		5					*D. clouds	John Smith.
Stratfield Turgiss			29.41	747.0	50.2	10.1		SW			2-3		10			Blank	Blank	Squally	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.36	745.7	43	6.1		NNW			2		3					*D. clouds	John Trotter.
Truro, Royal Institution			29.40	746.7	53	11.7		NW			4		10					Raining	W. Newcombe.
Valencia Observatory			29.55	750.6	43.4	6.3		N	28	12.5			5					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man			30.17	766.3	65.7	18.7	53	S	25	11.2			0						The Staff, for E. J. Stone.
Cape Good Hope Obs			29.37	746.0	38.0	3.3		NE			2		10ks			0.55	14.0	Overcast	Andrew Gibb.
Leith, Restalrig Park			30.03	762.7				E	17.6	7.9						0.01	0.3		
Mauritius			29.42	747.3	38	3.3		N			4	5	0	N		0	0		J. Youngclause.
Monach Lt-house, Hebrides			29.32	744.7	40	4.4		NE			7	6	3	NE		Blank	Blank		
North Unst, (Shetland Is.)																			

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			29.50	749.3	51.6	10.9	72	SSW			2		10						
Fanöe			29.40	746.7	43.2	6.2	97	SSW			4		10					Raining	
Godthaab, (Greenland)			30.41	772.5	27.1	— 2.7	87	N			2		10						
Stykkisholm, (Iceland)			30.39	772.0	13.8	—10.1	90	NE			7		5						
Thorshavn, (Faröe)			29.67	753.5	29.7	— 1.3	67	N			2		8						
Vestervig			29.37	745.9	43.2	6.2	97	SW			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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.71	754.5	59.0	15	57	S			8		8nk		S	0	0	Very cloudy	Normal School.
Amiens			29.68	753.8	59.4	15.2	78	SSW			8		10			0	0	Covered	Normal School.
Avignon			30.06	763.4	68.5	20.3	43	SE			2		0			0	0	Very clear	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			29.71	754.7	62.2	16.8	46	SW			4		8		WSW	0	0	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			29.85	758.1	65.1	18.4	53	SW			6		2		SW	0	0	Slightly cl'dy	Normal School.
Brest			29.50	749.4	52.3	11.3	95	SW			6		10		SW	0	0	Raining	Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			29.85	758.3	71.1	21.7	20	SW			3		5		SW	0	0	Cloudy	Puy de Dome Obs.
Commercy			29.82	757.4	62.6	17	43	SW			4		5k		SW	0	0	Cloudy	Normal School.
Commune de Gréasque*			30.13	765.2	66.0	18.9	38	SE			4		2		SE	0	0		M. Kina.
Grenoble			29.95	760.6	63.7	17.6	62	SSE			6		..k		E	0	0		Normal School.
Le Mans			29.77	756.1	60.6	15.9	55	SW			4		5		SW	0	0	Cloudy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			29.88	759.0	67.1	19.5	36	SW			6		5		SW	0	0	Cloudy	Normal School.
Mâcon			29.61	752.6	66.0	18.9	60	S			2		5		SE	0	0	Cloudy	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			30.06	763.4	65.5	18.6	69	S			2		2		S	0	0	Slightly cl'dy	Normal School.
Orleans																			Normal School.
Paris Observatory			29.72	75 .0	63.1	17.3	41	SW			6		5		SW	0	0	Cloudy	National Observatory.
Parthenay																			Normal School.
Privas			30.02	762.6	67.1	19.5		S			2		2		S	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			29.71	754.6	60.4	15.8	62	S			2		5		N	0	0	Cloudy	Normal School.
Rochefort, Observatory			29.90	759.5	64.4	18.0	57	WSW			5		2		NE	0	0	½ covered	Naval Observatory.
Rouen			29.68	753.8	59.2	15.1	50	S			6		5		W	0.055	1.4	Cloudy	Normal School.
Saint Lo			29.62	752.3	55.8	13.2	75	W			3		10		W	0	0		Normal School.
Tarbes	28.89	732.9			65.3	18.5		E			1		2		E	0	0	Slightly cl'dy	Normal School.
Toulouse																			Normal School
Villefranche			29.94	760.5	70.5	21.4	74	SE			4		10			0	0	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.92	760.0	77.7	25.4	83	Calm			0		8kn			Blank	Blank		L'Abbé Marchési.
Gorée																			
Marseilles			30. 7	763.4	63.7	17.6	75	SW			1		1			0	0	Partly cloudy	Marseilles Observatory.
Mont-Louis																			—. Falguère.
Montsouris, Paris			29.72	755.0	63.9	17.7	44	SW			6		8		SW	0	0		Montsouris Observ'tory.
Perpignan			29.93	76 .3	62.8	17.1	66	E	9.3	4.17			0			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			29.74	755.3	65.1	18.	39	SSW			6		6			0	0	Very cloudy	E. Renou.
Toulouse			30.07	763.5	69 1	20.6	51	SE			1		5			0	0		Toulouse Observatory.
Tours			30.20	767.1	65.1	18.4	44	WSW			6		6		W	0	0		C. Marquet.
Versailles, (near Paris)			29.73	755.2	63.3	17.4	49	SW			8		8			0	0	Almost cov'd	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,030.9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

*Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	69.8	16.0	45	SW			4		7	SW		0	0		Prof. T. Hoh.
Berlin			29.72	755.0	61.7	16.5	49	S			7		7			0	0		Prof. Arndt.
Breslau			29.91	759.8	62.2	16.8	40	SW			7		9			0	0		Dr. P. Neugebauer.
Carlsruhe			29.81	757.1	62.2	19.0	42	SW			8		5			0	0		A. Senz.
Cassel			29.67	753.5	64.0	17.8	45	S			7		3	SSW		0	0		Dr. H. Möhl.
Cologne																			Dr. Gartlie
Emden																			Prof. Prestel.
Frankfort on the Main			29.82	757.3	64.9	18.3	30	SW			2		3			0	0		Physical Society.
Friedrichshafen	28.49	723.7	29.90	759.5	61.5	16.4	40	S					8			0.236	6.0		M. Wilhelm.
Hamburg			29.62	752 3	54.3	12.4	82	SW			7		9kn	SW		0.146	3.7	Rain-squalls	Deutsche Seewarte.
Kiel			29.57	751.1	53.4	11.9	85	WSW			4		10			0.169	4.3		Prof. G. Karsten.
Königsberg			29.67	753.7	51.8	11.0	71	W			5		5			0.012	0.3		Prof. E. Luther.
Köslin			29.66	753.4	52.7	11.5		SW			4		4			0	0		H. Müller.
Leipsic			29.81	757.1	62.6	17.0	45	SW			4		9	SW		0	0		Prof. Bruhns.
Memel			29.66	753.3	43.9	6.6	84	SW			7		10			0	0		Reinbrecht & Skalweit.
Münster			30.25	768.4	61.0	16.1	61	S			3		4			0	0		Prof. E. Heis.
Neufahrwasser			29.65	753.0	55.8	13.2	64	WSW			5		10			0.004	0.1		A. Lothes.
Posen			29.83	757.6	64.0	17.8	43	SW			8		10			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.84	758.0	68 0	20.0	39	SW			3		10	SW		0	0		Dr. Schur.
Stuttgart			29.82	757.5	67.6	19.8	34	S			3		4			0	0		Prof. Schoder.
Thorn			29.77	756.1	58.3	14.6	58	WSW			6		9			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.73	755.1	61.2	17.0	43	SW			9		5			0	0		Prof. Flesch.
Wustrow, Naval School			29.53	750.0	49.8	9.9	84	SW			4		5			0.020	0.5		E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	764.7	59.2	15.1		NE										Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.05	763.2	62.4	16.9	47	SW	1.3	0.6			1			0	0		
Padua			30.05	763.3	62.1	16.7	50	NE	3.8	1.7			3			0	0		
Vicenza			30.04	763.1	62.8	17.1	44	SE	3.8	1.7			1			0	0		
Verona			30.06	763.4	63.9	17.7	62	E			1		0			0	0		
Bergamo	28.70	728.9	30.00	762.0	62.6	17.0	38	SE			1		8			0	0		
Domodossola	29.02	737.1	30.03	762.8	60.8	16.0	58	SSW			2		10			0	0		
Milan			30.07	763.6	67.8	19.9	50	SW			1		9	SW		0	0		
Pavia			30.08	763.9	63.9	17.7	31	NW			4		7	SW		0	0		
Moncalieri			30.06	763.4	63.0	17.2	52	WNW			2		5	WNW		0	0		
Mondovi	28.13	714.5	30.03	762.8	62.6	17.0	52	NNW			2		5			0	0		
Porto Maurizio			30.15	765.8	67.5	19.7		E			2		8	SE		0	0		
Genoa			30.13	765.3	63.3	17.4	58	SE	8.7	3.9			6	S		0	0		
Piacenza			30.07	763.7	64.4	18.0	46	W	13.7	6.1			6	NW		0	0		
Parma			30.07	763.7	66.0	18.9	50	NE			2		1			0	0		
Bologna			30.11	764.8	63.9	17.7	35	E			6		0			0	0		
Florence			30.14	765.6	64.4	18.0	38	W			2		0			0	0		
Leghorn			30.15	765.7	63.0	17.2	54	WSW	8.7	3.9			8			0	0		
Siena	28.89	733.9	30.09	764.3	63.7	17.6	37	SE	0	0			1	S					
Urbino	28.55	725.2	30.11	764.9	62.4	16.9	39	WSW			4		0			0	0		
Pesaro																0	0		
Ancona			30.11	764.7	59.4	15.2	43	SE			4		0			0	0		
Grosseto			30.15	765.7	63.7	17.6	53	SSW			4		2	NE		0	0		
Rome			30.16	766.1	63.5	17.5	56	WSW	6.9	3.1			1			0	0		
Naples, O. U.			30.19	766.7	63.0	17.2	50	W			4		4	NW		0	0		
Lecce			30.18	766.5	59.7	15.4	51	NNW	8.7	3.9			1			0	0		
Cosenza			30.17	766.2	61.5	16.4	73	NW	3.8	1.7			2			0	0		
Riposto, (Sicily)			30.17	766.4	63.0	17.2	62	SE			2		3	SE		0	0		
Palermo			30.16	766.0	59.9	15.5	54	NE	8.1	3.6			5			0	0		
Caltanissetta	28.12	714.3	30.08	764.0	55.6	31.1	65	W			4		6	E		0	0		
Sub-Series.																			
Naples, S. R.			30.17	766.2	62.4	16.9	57	WSW	1.8	0.8			Cir.	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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.60	751.8	55.8	13.2		SW			5								
Groningen			29.51	749.5	51.8	11.0		SW			6								
Helder			29.50	759.4	49.6	9.8		SSW			5								
Utrecht			29.54	750.4	57.6	14.2	69	SSW			5		10					Overcast	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.20	744.0	40.3	4.6	59	WSW	3.8	1.7			10			0.024	0.6		
Brönö			29.27	743.4	30.2	— 1.0	80	NE	7	3			10			0	0	Light snow.	
Christiania			29.26	743.2	43.9	6.6	47	SSW	3.6	1.6			9			0.094	2.4		
Tromsö			29.45	747.9	19.6	— 6.9	49	SE	13	6			5			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			29.98	761.6	61.9	16.6	81	W	17.2	7.69			5			0.050	1.4		Dr. J. A. N. Sampaio.
Campo Major			30.01	762.2	71.8	22.1	39	SSW	5.4	2.41			3	SSW		0	0	Snowy	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.08	764.1	65.3	18.5	63	E	2.0	0.89			10			0	0		Capt. D. A. da Cunha.
Lisbon			30.11	764.7	61.3	16.3	57	SW	11.2	5.0			2			0	0		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.82	757.4	57.6	14.2	55	WSW	25	11			10						Astronomical Obs.
Wilna			29.65	753.1	54.0	12.2	57	W	20	9			10						Astronomical Obs.
Dorpat			29.35	745.6	38.5	3.6	95	W	13	6			10						Physical Cabinet.
St. Petersburg			29.15	740.4	27.5	— 2.5	87	NNE	11	5			10						Central Physical Obs.
Kuopio			29.27	743.5	30.2	— 1.0	100	ENE	7	3			10					Snowing	Ch. Forsten.
Kieff			29.81	757.2	62.1	16.7	46	WSW	22	10			5						Physical Cabinet.
Nikolaiev			30.19	766.7	50.4	10.2	40	SW	31	14			4						Kurdakof.
Kertch			30.24	768.0	53.1	11.7	45	SSE	2	1			0						Lagorio.
Moscow			29.41	746.9	50.4	10.2	62	ESE	13	6			7					Light rain	Meteorological Obs.
Lugan			29.97	761.2	56.7	13.7	23	WSW	40	18			2						Meteorological Obs.
Archangel			29.29	744.0	21.6	— 5.8	55	NNE	18	8			8						Ogorodnikof.
Tiflis	28.80	731.6	30.26	768.5	47.1	8.4	78	S	11	5			10						Physical Observatory.
Astrakhan			30.30	769.7	50.5	10.3	22	WSW	9	4			0						Sebastianof.
Kasan			29.36	745.7	38.5	3.6	93	SW	9	4			10						Physical Cabinet.
Orenburg			29.97	761.2	46.9	8.3	93	SE	4	2			2						Tschernischef.
Ekaterinburg	28.48	723.4	29.52	749.8	23.2	— 4.9	51	SW	18	8			3						Meteorological Obs.
Nukuss			30.19	766.8	47.1	8.4	35	NNW	9	4			8						
Kasaly																			Bobrof.
Tashkend	28.26	720.0	30.07	763.7	51.8	11.0	95	W	9	4			10						Michelson.
Barnaul			29.69	754.2	36.1	2.3	91	SW	13	6			10						Meteorological Obs.
Yeniseisk			29.30	744.3	49.6	9.8	63	S	7	3			1						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.87	758.6	61.7	16.5	27	Calm	0	0			0						Physical Observatory.
Nertchinsk	27.84	707.1	29.98	761.4	28.6	— 1.9	62	Calm	0	0			0						Meteorological Obs.
Vladivostock			29.69	754.2	39.2	4.0	70	Calm	0	0			3						
Nikolaievsk, on the Amoor					34.0	1.1	96	Calm	0	0			9					Raining	

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 405. meters, or 1,111.8 feet; Ekaterinburg, 395.4? m., or 1,295.2? ft.; Tashkend, m. 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.99	761.7	69.4	20.8	27	SW	21.6	9.66		1	0			0	0	Almost clear	Royal Observatory.
San Fernando			30.10	764.6	68.7	20.4	57	SSW	2.9	1.3		0	0			0	0		The Naval Observatory.

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.48	748.8	18.0	— 7.8	94	NE			4		0			0	0		
Umea			29.39	746.6	21.9	— 5.6	82	ENE			4		10			0	0		
Hernosand			29.33	745.0	24.6	— 4.1	91	ENE			4		10			0	0	Snowing	
Stockholm			29.26	743.3	48.6	9.2	76	SSW			2		8			0.071	1.8		
Wisby			29.45	747.9	49.8	9.9	58	W			6		5			0.012	0.3		
SUB-SERIES.																			
Upsala			29.27	743.5	38.8	3.8	97	S	8.5	3.8			9		WSW	0.283	7.20		Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.54	724.8	29.93	760.1	66.9	19.4	37	SSW			6		9			0	0	Covered	The Observatory.
Zurich	28.32	719.3	29.91	759.8	66.4	19.1	52	W			2		2			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +0.6 mm.; Thermometer, +8.2 cent.; Relative Humidity, —21 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.15	765.9	50.7	10.4	56	NE	16	7.0			4		NE	0	0		
Fao, (Persian Gulf)			30.00	762.0	77.0	25.0		NW			4		2						
Salonica			30.15	765.8	61.9	16.6		SE			2		2						
Valona			29.99	761.8	59.4	15.2		NW			2		0						
Varna			30.12	765.0	55.4	13.0		E			2		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			30.07	763.6	68.2	20.1	69	NW			1		3ck			0.30	7.6	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.67	753.6	33.7	0.9	97	NW	7	3.1									Hon. J. Ferguson.
Brockville, Ontario			30.24	768.1	33	0.6		NW	5	2.2		0	0			0	0	Clear	W. R. Bigg.
*Chatham, N. B.			29.68	753.8	34	1.1	82	NW	8	3.6			10ks		NW	0.25	6.3	Cloudy	G. A. Blair.
Charlottetown, P. E. Island.			29.59	751.6	32	0.0	97	N	9	4.0			10s			0.02	0.5	Light snow	H. J. Cundall, C. E.
Cornwall, Ontario			30.08	764.0	31.7	— 0.2	61	NW			1	3k				0	0	Fair	James Smith, M. A.
Dalhousie, N. B.			29.75	755.6	36.0	2.2	75	W			1		10n			0.70	17.8		H. A. Johnson.
Esquimault, B. C.			29.86	758.4	37.1	2.8	91	Calm	0	0		9cs				0	0	Cloudy	W. H. Bevis.
Fredericton, N. B.			29.76	755.9	34.9	1.6	73	NW	7	3.1			10n			0.30	7.6	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			29.61	752.1	33	0.6	96	SW	15	6.7		5k	5ks	S	S	0.40	10.2	Cloudy	James Stewart.
Goderich, Ontario			30.26	768.6	32.7	0.4	75	E			1	2c	3s	N		0	0	Fine	H. J. Strang, M. A.
Granton, Ontario			30.22	767.6	32.0	0.0		Calm			0					0	0	Clear	James Grant.
*Halifax, N. S.			29.58	751.3	36	2.2	89	NW	17	7.6			10n		NW	0.05	1.3	Threatening	F. Allison, M. A.
*Kingston, Ontario			30.25	768.3	31	— 0.6	58	NW	3	1.3		0	0			0	0	Clear	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			30.06	763.5	30	— 1.1	80	W	13	5.8		8k	2ks	W	W	0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.15	765.8	25	— 3.9	68	NW	4	1.8		2cs	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.29	769.4	22	— 5.6	83	N	8	3.6		0	0			0	0	Clear	Rev. R. Mooley.
*Port Dover, Ontario			30.25	768.3	30	— 1.1	67	NE	3	1.3		8ks	0	NE		0	0	Fair	H. Morgan.
Port Hastings, N. S.			29.57	751.1	33.8	1.0		Calm	0	0						0	0	Fine	Peter Grant.
*Port Stanley Ontario			30.23	767.8	32	0.0	63	E	5	2.2		2ck	0	W		0	0	Clear	M. Payne.
*Quebec, Quebec			29.96	761.0	37	2.8	91	N	5	2.2		2k	5ks	N	N	0	0	Fair	Capt. Ash, R. N.
St. John, N. B.			29.72	754.9	33	0.6	89	NW	8	3.6		9k				Inap.	Inap.		G. Murdoch, C. E.
*Saugeen, Ontario			30.23	767.8	32	0.0	74	Calm	0	0		10ks	0	S		0	0	Cloudy	K. Stewart.
Stayner, Ontario			30.25	768.3	30	— 1.1	58	Calm	0	0		2c	0	NW		0	0	Fair	R. J. Cole.
Stratford, Ontario			30.24	768.1	30.0	— 1.1	74	SE	5	2.2		3cs		NW		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.57	751.1	37	2.8	85	SW	6	2.7			10n		S	0.05	1.3	Light snow	T. C. Hill.
*Toronto, Ontario			30.28	769.1	30	— 1.1	77	N	5	2.2		5cs	0	W		0	0	Fair	Magnetic Observatory
Woodstock, Ontario			30.23	767.8	31.2	— 0.4	98	E			1	3c	1s			0	0	Fine	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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	62	NW	10	4.5		0	0			0	0	Clear	
Alpena, Mich			30.20	767.1	28	− 2.2	77	SE	4	1.8		8c	Haze	W		0	0	Fair	
Atlantic City, N. J			30.15	765.8	37	2.8	37	N	6	2.7		6	0			0	0	Clear	
Augusta, Ga.			30.12	765.0	50	10.0	86	NW	1	0.4		0	0			0	0	Clear	
Baltimore, Md			30.22	767.6	38	3.3	54	N	5	2.2		0	Sm'e		N	0	0	Clear	
Barnegat, N. J			30.13	765.3	37	2.8	46	N	15	6.7		0	0			0	0	Clear	
Benton, Montana	26.93	684.0	29.73	755.1	33	0.6	79	N	5	2.2			10n		NE	0.30	7.6	Light snow	
Bismarck, Dakota	28.00	711.2	29.38	753.9	28	− 2.2	33	NW	5	2.2		2k	0	NW		0.06	1.5	Clear	
Boston, Mass			29.94	760.5	35	1.7	61	NW	18	8.0		1s	Haze			0	0	Hazy	
Breckenridge, Minn			29.69	754.1	33	0.6	89	SE	2	0.9			10s			0	0	Cloudy	
Buffalo, N. Y.			30.24	768.1	28	− 2.2	88	Calm	0	0		5c	Sm'e	N		0	0	Fair, frost	
Burlington, Vt			30.08	764.0	31	− 0.6	68	N	1	0.4			10s			0	0	Cloudy	
Cairo, Ill			29.94	760.5	60	15.6	70	S	6	2.7		8k	0	W		0.01	0.3	Clearing	
Cape Hatteras, N. C			30.10	764.5	49	9.4	64	N	12	5.4		0	0			0	0	Clear	
Cape Henry, Va			30.17	766.3	50	10.0	65	N	8	3.6		2k	0	NW		0	0	Fair	
Cape May, N. J			30.17	766.3	38	3.3	46	W	14	6.3		0	0			0	0	Clear	
Charleston, S. C			30.12	765.0	61	16.1	70	NE	6	2.7		2k	5ks	W	W	Inap.	Inap.	Fair	
Cheyenne, Wyoming	23.61	599.7	29.55	750.6	30	− 1.1	79	S	20	8.9			10n			Inap.	Inap.	Light snow	
Chicago, Ill			29.88	758.9	44	6.7	67	SE	16	7.2		5cs	5s			0	0	Cloudy	
Cincinnati, Ohio			30.01	762.2	45	7.2	60	E	5	2.2		5c	0	W		0	0	Fair	
Cleveland, Ohio			30.20	767.1	33.4	0.8	52	E	3	1.3		1c	Sm'e	W	E	0	0	Smoky	
Colorado Springs, Col	23.70	602.2	29.57	751.1	32	0.0	79	SE	7	3.1			10ks		E	0	0	Cloudy	
Corsicana, Tex			29.81	757.2	65	18.3	94	S	7	3.1			10s			0	0	Cloudy	
Davenport, Iowa			29.72	754.9	51	10.6	59	S	16	7.2		2k	7s		SW	Inap.	Inap.	Cloudy	
Denison, Tex			29.74	755.4	67	19.4	78	S	16	7.2			10s			0	0	Cloudy	
Denver, Col.	24.40	619.8	29.62	752.3	36	2.2	80	N	2	0.9			8s		E	0.03	0.8	Cloudy	
Detroit, Mich			30.18	766.6	35	1.7	61	E	6	2.7		5cs	Sm'e	W		0	0	Fair	
Dodge City, Kan	27.13	689.1	29.39	746.5	45	7.2	76	E	7	3.1		0	0			0	0	Clear	
Dubuque, Iowa			29.69	754.1	46	7.8	76	SE	12	5.4			10s			0.10	2.5	Cloudy	
Duluth, Minn			29.76	755.9	39	3.9	91	NE	8	3.6			10n			0.21	5.3	Light rain	
Eastport, Me			29.72	754.9	34	1.1	79	NW	14	6.3			10s		NW	0.11	2.8	Cloudy	
Erie, Pa			29.87	758.7	18	− 7.8	100	W	42	18.8			10n			1.22	30.5	Light snow	
Escanaba, Mich			30.01	762.2	36	2.2	80	E	8	3.6		5cs	2s	E	E	0	0	Cloudy	
Fort Gibson, Indian Terr			29.75	755.6	63	17.2	72	E	12	5.4		0	8ks		SW	0	0	Cloudy	
Ft. St. Michaels, Alaska			30.29	769.4	− 3	−19.4		NE	8	3.6		0	0					Clear	
Fort Sill, Indian T	28.52	724.1	29.61	752.1	51	10.6	86	Calm	0	0		0	Fog			0	0	Clear	
Fort Sully, Dakota																			
Galveston, Tex			29.88	758.9	66	18.9	94	SE	5	2.2		0	5s		SE	0	0	Fair	
Grand Haven, Mich			29.99	761.7	39	3.9	55	SE	18	8.0			10s			0	0	Cloudy	
Indianapolis, Ind			29.98	761.5	46	7.8	47	SE	8	3.6			10s			0	0	Cloudy	
Indianola, Tex			29.84	757.9	68	20.0	94	SE	11	4.9			10s			0	0	Cloudy	
Jacksonville, Fla			30.03	762.7	62	16.7	94	NW	2	0.9			10n			0.34	8.6	Light rain	
Keokuk, Iowa			29.74	755.4	56	13.3	57	SW	7	3.1		0	0			0	0	Clear	
Key West, Fla			30.03	762.7	77.3	25.2	82	W	1	0.4		2k	2ks	W		0	0	Fair	
Kittyhawk, N. C			30.18	766.6	45	7.2	68	NE	7	3.1		0	0			0	0	Clear	
Knoxville, Tenn			30.10	764.5	44	6.7	92	Calm	0	0		2ks	Fog	SW		0	0	Fair	
La Crosse, Wis			29.69	754.1	46	7.8	92	SE	17	7.6			10n		SE	0.27	6.9	Heavy rain	
Leavenworth, Kan			29.76	755.9	47	8.3	85	SW	2	5.4		0	0			0.56	14.2	Clear	
Lexington, Ky	28.95	735.3	30.07	763.8	45	7.2	37	E	16	7.2		5c	0	SW		0	0	Fair	
Long Branch, N. J			30.13	765.3	39	3.9	63	NW	14	6.3		0	0			0	0	Clear	
Louisville, Ky			30.02	762.5	48	8.9	43	SE	1	0.4		8k	2ks			0	0	Cloudy	
Lynchburg, Va			30.15	765.8	48	8.9	49	SE	2	0.9		0	0			0	0	Clear	
Malone, N. Y.			30.09	764.3	28	− 2.2	78	SW	6	2.7		8k	0	W		0	0	Cloudy	
Manhattan, Kan	28.62	726.9	29.74	755.6	45	7.2	100	SW	4	1.8		0	Fog			0.32	8.1	Foggy	
Marquette, Mich			29.98	761.5	40	4.4	64	SE	12	5.4		8c	5s	S		0	0	Cloudy	
Memphis, Tenn			30.07	761.2	60	15.6	82	SE	6	2.7			10s			0	0	Cloudy	
Milwaukee, Wis			29.94	760.5	37	2.8	62	SE	14	6.3			10s		SE	0	0	Cloudy	
Mobile, Ala			30.05	763.3	61	16.1	88	NE	6	2.7		5k	5s	SW		0	0	Cloudy	
Montgomery, Ala			30.11	764.8	59.5	15.3	85	SE	4	1.8			10s			0	0	Cloudy	
Morgantown, W. Va			30.14	765.5	40	4.4	55	Calm	0	0		0	Haze			0	0	Clear	
Mt. Washington, N. H	23.38	593.8	29.74	755.4	10	−12.2	100	N	48	21.5			Fog			0	0	Foggy	
Nashville, Tenn			30.02	762.5	56	13.3	74	Calm	0	0		10k	0	SW		0	0	Cloudy	
New Haven, Conn			30.05	763.3	40	4.4	42	NW	10	4.5		0	0			0	0	Clear	
New London, Conn			30.02	762.5	37.5	3.1	54	NW	16	7.2		0	0			0	0	Clear	
New Orleans, La			29.99	761.7	63	17.2	89	E	4	1.8		8c	Fog	W		0	0	Fair	
Newport, R. I			29.98	761.5	35	1.7	70	W	16	7.2		0	0			0	0	Clear	
New York, N. Y			30.12	765.0	35	1.7	44	SW	22	9.8		0	0			0	0	Clear	
Norfolk, Va			30.20	767.1	44	6.7	68	N	8	3.6		0	0			0	0	Clear	
North Platte, Neb	26.80	680.7	29.36	745.7	38	3.3	63	E	2	0.9			10s			0	0	Cloudy	
Omaha, Neb	28.66	728.0	29.72	754.9	43	6.1	83	Calm	0	0		0	Sm'e			0	0	Clear	
Oswego, N. Y			30.23	767.8	34	1.1	69	NW	7	3.1		Haze	Haze			0	0	Clear	
Pembina, Dakota			29.62	752.3	35	1.7	89	S	8	3.6			10s			0.31	7.9	Cloudy	
Philadelphia, Penn			30.20	767.1	36	2.2	46	NW	13	5.8		2c	0	NW		0	0	Clear	
Pike's Peak, Colorado	17.27	438.6	29.18	748.8	5	−15.0	100	SW	21	9.4			10s			0.08	2.0	Cloudy	
Pittsburgh, Penn			30.18	766.6	33	0.6	50	E	2	0.9		0	0			0	0	Clear	
Port Huron, Mich			30.21	767.3	32	0.0	69	E	2	0.9		5c	0	N		0	0	Fair	
Portland, Me			29.89	759.2	36	2.2	61	NW	12	5.4		5c	0			0	0	Fair	
Portland, Oregon			29.94	757.9	38	3.3	90	Calm	0	0			10s		S	0.18	4.6	Cloudy	
Punta Rassa, Fla			30.04	763.0	68.0	20.0	76	E	5	2.2		8ks	1s	NE	E	0	0	Cloudy	
Rochester, N. Y			30.22	767.6	33	0.6	69	NW	8	3.6		0	0			0	0	Clear	
Salt Lake City, Utah	25.03	636.5	29.49	749.0	35	1.7	80	N	4	1.8			10s		N	0.12	3.0	Cloudy	
Sandy Hook, N. J			30.10	764.5	36	2.2	45	W	20	8.9		0	0			0	0	Clear	
San Diego, Cal			29.94	760.5	53	11.7	79	SW	20	8.9			10s			0.05	1.3	Cloudy	
San Francisco, Cal			29.96	761.0	45	7.2	65	NW	12	5.4		0	0			0.14	3.6	Clear	
Santa Fe, N. M	22.98	583.7	29.52	749.8	32	0.0	69	E	4	1.8		0	2s			0	0	Fair	
Savannah, Ga.			30.04	764.3	62	16.7	78	NE	8	3.6			10s		NE	0	0	Cloudy	
Shreveport, La			29.94	760.5	61	16.1	91	SE	5	2.2			10s		SE	0	0	Cloudy	
Smithville, N. C			30.14	765.5	57	13.9	76	N	4	1.8		0	0			0	0	Clear	
Springfield, Mass			30.02	762.5	36	2.2	52	N	8	3.6		0	0			0	0	Clear	
St. Louis, Mo			29.82	757.4	53	13.3	68	S	4	1.8		0	5s		SW	0	0	Fair	
St. Marks, Fla			30.08	764.0	58	14.4	93	Calm	0	0		2c	2s			0	0	Fair	
St. Paul, Minn			29.67	753.6	41.5	5.3	95	NW	4	1.8			10n			0.41	10.4	Light rain	
St. Paul's Island, Alaska			29.86	758.4	20	− 6.7	70	ENE	8.4	3.8		5c	0	S		0	0		
Thatcher's Island, Mass			29.90	759.4	34	1.1	69	NW	22	9.8		1c	0	NW		0	0	Clear	
Toledo, Ohio			30.12	765.0	41	5.0	48	E	4	1.8		5c	0			0	0	Fair	
Tucson, Arizona	27.36	694.9	29.95	760.7	51	10.6		S				0	0			0	0	Clear	
Tybee Island, Ga			30.07	763.8	63	17.2	88	E	6	2.7		5c	2s	E		0	0	Fair	
Vicksburg, Miss			30.02	762.5	59	15.0	97	SE	3	1.3		10s	Sm'e	S		0	0	Cloudy	
Virginia City, M. T.	24.91	607.1	29.39	746.5	15	− 9.4	74	SE	2	0.9		1c	0			0.02	0.5	Clear	
Washington, D. C.			30.24	767.8	37.5	3.1	56	N	6	2.7		0	0			0	0	Clear	

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Wilmington, N. C			30.15	765.8	51	10.6	72	NE	4	1.8		0	0			0	0	Clear	
Wood's Holl, Mass			29.42	747.3	46	7.8	84	W	20	8.9			10s		W	0	0	Cloudy	
Wytheville, Va	27.74	704.6	29.96	753.4	37	2.8	80	Ca'm	0	0		0	Haze			0	0	Hazy	
Yankton, Dakota	28.48	723.4	29.77	756.1	39	3.9	81	SW	1	0.4		5ck	0	W		0	0	Fair	
Yuma, Arizona			29.83	757.7	55	12.8		W				0	0			0	0	Clear	
Sub Series.																			
Bridgetown, B'b'dos, W. I.			30.08	764.0	79	26.1	72	E	4	1.8		5c	8s	E		0	0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.98	761.5	80	26.7	74	E				2k	5ks			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.21	767.3	78	25.6	69	S	9	4.0		2c	2k, ks	S		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I.			30.22	767.6	75	23.9	76	N	2	0.9		2ck	1s	NW		0	0		James Gall.
Santiago de Cuba, W. I.			29.80	756.9	79	26.1	74	NE	1.2	0.4		0	2k			0	0	Fair	Robert Mason.
Havana, Cuba, W. I.			30.03	762.7	78	25.6	74	NE	1.[illegible]	0.4		2c	0			0	0	Fair	Charles Hasselbrink.
St. Georges, Bermudas			30.13	765.3	58.5	14.7	85	NNE	6.5	2.9			10n			0.20	5.1	Raining	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.20	690.9	29.98	761.5	67	19.4	84	E	2	0.9		2c	0			1.37	34.8	Fine, clear	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.00	762.0	81	27.2	87	NE			3		5ck			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.03	762.8	82.4	28										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640.6			65.5	18.6	85		2	0.9			10n			0.10	2.5	Cloudy	Thomas Herran.
St. John's, Newfoundland.			29.87	758.7	35.0	1.7	100	S				10k	10s			0.43	10.9	Cloudy	John Delaney.
York Factory, B. A.			29.96	761.0	16.5	— 8.6	92	E	12	5.4			9s			0	0		J. Fortescue.
Honolulu, Oahu, H. I.			30.09	764.3	75	23.9	90	NE			4					0	0		E. P. Church.
Makawao, Maui, H. I.	27.86	707.6	30.03	762.7	58	14.4	81	Calm	0	0		0	2k			0	0		F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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 APRIL 11, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.09	761.7	75.0	23.9	42	Calm			0		0			0	0	Clear	Charnet.
Algiers			29.97	761.1	76.3	24.6	47	NNE			1		1			0	0	Clear	Peter.
La Calle					72.3	22.4		SW			1		1					Clear	Kuntz.
Tunis			30.05	763.2	75.2	24.0	47	E			3		0			0	0	Clear	Jacques
Sfax			30.14	765.5	69.1	20.6	59	S			3		1			0	0	Clear	Chauvey.
Saïda			30.02	762.4	78.8	26.0	16	W			4		0			0	0	Clear	Millot.
Tebessa			30.08	764.0	71.2	21.8		W			2		0			0	0	Clear	Colin.
Gerlville			30.06	763.5	69.3	20.7	44	SSW			3		2			0	0	Clear	Buard.
Laghouat			30.10	764.5	77.0	25.0	28	SW			2		0			0	0	Clear	Guyot.
Biskra			30.07	763.7	80.1	26.7	23	NE			1		0			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	758.2	63.1	17.3	40	SW			5		3			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.60	751.8	68.7	20.4	34	NE			1		10			0.028	0.7		I. R. Observatory.
Eperies			29.67	753.7	64.0	17.8	44	S			5		6			0	0		Julius Mikolik.
Gratz	28.52	724.3	29.67	753.7	68.2	20.1	33	SW			5		2			0	0		Andreas Rospini.
Hermannstadt	28.41	722.3	29.81	757.2	65.5	18.6	22	S			3		0			0	0		Prof. Reissenberger.
Kremsmünster	28.35	720.0	29.65	753.0	63.0	17.2	46	WNW			5		10			0	0		Prof. C. Wagner.
Lemberg			29.67	753.7	64.6	18.1	29	W			4		4			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			29.98	761.4	61.5	16.4	67	SSE			3		7os			0	0		I. R. Hydrographic Office
Szegedin			29.79	756.7	64.5	18.3	40	S			3		0			0	0		Karl Stancel.
Trieste			29.95	760.7	65.3	18.5	68	SW			1		7			0	0	Foggy	Prof. V. Farolfi.
Vienna			29.63	752.5	68.0	20.0	40	SE			2		3			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.67	753.6	48.6	9.2	47	W			4		5			0.130	3.30		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0 10.	Clouds. Amount. Low'r 0 10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	36.9	2.7		WNW	34	15.2			6			0.100	2.54	*D. clouds	William Boswell.
Ardrossan			29.63	752.6	39	3.9		N			5		6					*D. clouds	J. Mayes.
Armagh Observatory			29.80	756.9	39.7	4.3		W	10	4.5			8			Blank	Blank	Overcast	S. Call, for Dr. Robinson
Bidston, Liverpool Obs			29.68	752.6	39.3	4.1		WNW	31	13.9			9					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.88	758.9	42.9	6.1		WNW			3		8					*D. clouds	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			30.02	762.5	80.0	26.7		NE			1		8					Overcast	Sergt. J. F. Halanen.
Cambridge Observatory			29.59	751.6	43.0	6.1		WSW			4		10			Blank	Blank	Overcast	H. Todd.
Cardington			29.63	752.6	45.0	7.2		W			6		8					Snowing	John McLaren.
Carlisle			29.62	752.3	37.4	2.4		N			4		10			0.20	5.1	Snow-show'rs	T. Bel, for J. Carmell.
Chatham, School M. E			29.68	753.9	50.2	10.1		N			2							Overcast	Capt. J. Fellowes, R. E.
Dartmoor	28.40	721.3	29.95	760.7	35.0	1.7		NW			7		5					*D. clouds	R. E. Power.
Donaghadee			29.70	754.4	40	4.4		N			3		10					*D. clouds	J. Mac Gowan.
Dover			29.66	753.4	49	9.4		WSW			4		3					¼ clouded	J. Costello.
Eccles (near Manchester.)			29.57	751.1	41.5	5.3		NNW	8.2	3.7			8					Hazy	Thomas Mackereth.
Falmouth Observatory			29.92	760.0	46.0	7.8		WNW	25	11.2			1					*D. clouds	The Staff.
Fort Napier, (Natal)	27.92	709.2	30.16	766.1	65.9	18.8		SE			2		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	88.0	31.1		N			1		6					*D. clouds	
Galway, Queen's College			29.37	746.0	40	4.4		N			6		10					Snowing	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			29.96	761.0	67.0	19.4		W			3		4					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.59	751.6	39.4	4.1		WNW			1		7					*D. clouds	Lewis Stuart.
Great Yarmouth			29.55	750.6	40	4.4		NW			5		7					Snowing	G. T. Watson.
Greenwich Royal Obs			29.66	753.4	48.4	9.1		W			5		6			Blank	Blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			29.88	758.9	48.5	9.2		WNW			5		0					Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.60	751.8	39.7	4.3		NW			3		9			Blank	Blank	*D. clouds	L. J. Crossley
Helston			29.89	759.2	52	11.1		NW			4		10			0.25	6.3	Fine	M. P. Moyle.
Holyhead			29.73	755.1	41	5.0		WNW			6		3			Blank	Blank	*D. clouds	John Tilston.
Kew Observatory			29.67	753.6	43.8	6.6		W	31	13.9			7					Threatening	The Staff.
Kingstown			29.1	757.2	38	3.3		NW			5		9					Overcast	George Mitchell.
Leicester Museum			29.61	752.1	40.5	4.7		W			6		10					Threatening	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.16	766.1	64.2	17.9		SW			2		2k						Fred. Travis, Pvt. A.H.C.
Nairn			29.73	750.0	39	3.9		NW			3		8					¾ clouded	W. D. Penny.
Nassau, Bahamas			30.17	766.3	76.1	24.5		NE			5		6					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.59	751.6	41.4	5.2		WNW			4		10k.d		WNW	0.169	4.29	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.65	753.1	35.1	1.7		WNW			4		10			Blank	Blank	Wet	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.68	753.9	45	7.2		W			4		7			Blank	Blank	*D. clouds	J. Lucas.
Plymouth			29.87	758.7	52.1	11.2		NW			4		2					*D. clouds	John Merrifield.
Roche's Point			29.90	759.4	44	6.7		NNW			5		5					Cloudy	W. Kennedy.
Saint Ann's Head			29.81	757.2	41	5.0		WNW			6		3			Blank	Blank	Squally	John. C. Walker.
Saint Helier, Jersey)			29.98	761.5	51.2	10.7		NW			5		2					¼ clouded	A. P. Amy.
Sandwick Manse (Orkneys			29.45	748.0	34.4	1.3		NW	28	12.5			8					Snow-show'rs	Rev. Chas. Austin, LL.D.
Scarborough			29.50	749.3	41.3	5.2		NNW			4		10					Overcast	F. Shaw.
Scutari Cemetery (Turkey)			30.00	762.0	57.0	13.9		NE			2		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.50	749.3	42.0	5.6		NW			3		6			0.460	11.68	Gloomy	W. F. Cooper.
Silloth Rectory			29.62	752.3	41.2	5.1	67	N			4		7			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			29.59	751.6	37.2	2.9		NW			4		10			Blank	Blank	Threatening	S. J. Perry.
Stornoway, Lews C. Hebr.			29.56	750.8	35	1.7		NNE			4		10					Snowing	John Smith.
Stratfield Turgiss			29.67	753.6	46.8	8.2		W			1-2		5			Blank	Blank	Squally	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.45	748.0	38	3.3		NNW			6		7					Snowing	John Trotter.
Truro, Royal Institution			29.92	760.0	50	10.0		NW			7		4			Blank	Black	*D. clouds	W. Newcombe.
Valencia Observatory			29.99	761.7	39.3	4.1		NW	9	4.0			5					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man																			
Cape Good Hope Obs			30.23	767.8	75.2	24.0	46	SS	12	5.4			1						The Staff, for E. J. Stone.
Leith, Restalrig Park			29.82	757.4	36.5	2.5		NW			2		10s			0.31	7.9	Overcast	Andrew Gibb.
Mauritius			30.01	762.2				ESE	17.1	7.6						0.09	2.3		
Monach Lt-house, Hebrides			29.68	753.9	32	0.0		N			6	5	3	N		0.2	5.1		J. Youngclause.
North Unst, (Shetland Is.)			29.32	744.7	34	1.1		NE			7		10			Blank	Blank		

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 270.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			28.99	736.3	45.3	7.4	53	W			8		7						
Fanöe			29.17	740.8	42.1	5.6	75	WSW			8		10						
Godthaab, (Greenland)			30.20	767.0	28.4	— 2.0	80	Calm			0		10						
Stykkisholm, (Iceland)			30.39	772.0	13.8	—10.1	90	NE			6		5						
Thorshavn, (Faröe)			29.70	754.3	30.0	— 1.1	78	N			6		8					Snowing	
Vestervig			29.04	737.6	32.7	0.4	92	NW			8		4					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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.08	753.8	51.8	11	80	SW			3		8nk		SW	0.252	6.4	Very cloudy	Normal School.
Amiens			29.73	755.2	50.0	10.0	62	SW			6		0			0	0	Clear	Normal School.
Avignon			29.93	760.3	61.3	16.3	69	S			2		8		S	0	0	Very cloudy	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			29.82	757.4	51.8	11	37	W			4		8		W	0.098	2.50	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			29.87	758.6	58.6	12	72	SSW			2		10		W	0.295	7.5	Covered	Normal School.
Brest			29.88	759.0	51.6	10.9	65	NNW			3		5k		NW	0.220	5.75		Naval Observatory.
Caen																			Normal School
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			29.85	758.2	57.4	14.1	64	SW			3		10		W	0	0	Covered	Puy de Dome Obs.
Commercy			29.85	758.1	47.8	8.8	52	SW			4		8nk		SW	0.268	6.8	Very cloudy	Normal School.
Commune de Gréasque*			29.98	761.4	61.7	16.5	58	SE			6		5		SE	0	0		M. Kina.
Grenoble			29.91	759.6	61.2	16.2	56	ENE			1		10kn		S	0	0	Covered	Normal School.
Le Mans			29.90	759.5	50.5	10.2	40	NNW			3		8		NNW	0.177	4.5	Very cloudy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			29.93	760.1	50.2	10.1	93	S			2		10			0.018	0.45	Raining	Normal School.
Mâcon			29.86	758.4	58.6	12	80	WNW			2		10			0.020	0.5	Covered	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			29.89	759.2	65.8	18.8	64	SE			2		5		SE	0	0	Cloudy	Normal School.
Orleans																			Normal School.
Paris Observatory			29.84	757.9	50.5	10.3	30	W			2		5		W	0.063	1.34	Cloudy	National Observatory.
Parthenay																			Normal School.
Privas			29.95	760.7	60.4	15.8		S			2		5		S	0	0	Cloudy	Normal School.
La Roche-sur-Yon			29.70	754.4	54.3	12.4	70	W			1		8		E	0.087	2.2	Very cloudy	Normal School.
Rochefort, Observatory			29.96	760.9	58.3	14.6	63	NW			2		8		WSW	0	0	¾ Covered	Naval Observatory.
Rouen			29.83	757.7	53.1	11.7	37	W			6		2		W	0.079	2.0	Slightly cl'dy	Normal School.
Saint Lo			29.88	759.0	48.2	9	83	NNW			1		6		NW	0.295	7.5		Normal School.
Tarbes	28.77	730.8			63.5	17.5		E			1		0			0	0	Clear	Normal School.
Toulouse																			Normal School.
Villefranche			29.79	756.7	58.6	14.8	86	SE			2		10		W	0	0	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.7	78.8	26	76	NE			2		5ck			Blank	Blank		L'Abbé Marchésl.
Gorée																			
Marseilles			29.91	759.7	63.9	17.7	86	SE			2		8			0	0	Cloudy	Marseilles Observatory.
Mont-Louis																			—, Faiguère.
Montsouris, Paris			29.81	757.6	51.4	10.8	46	W			4		8		W	0.055	1.4		Montsouris Observ'tory.
Perpignan			29.92	759.9	62.4	16.9	68	SE	5.6	2.50			9		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			29.84	757.8	51.4	10.8	32	NW			2		6			0.059	1.5	Cloudy	E. Renou.
Toulouse			30.00	762.1	64.1	17.3	65	ESE			1		5			0	0		Toulouse Observatory.
Tours			29.91	759.6	54.1	12.3	41	WNW			3		7		NNW	0.059	1.5		C. Marquet.
Versailles, (near Paris)			29.83	757.7	52.2	11.2	36	NW			4		8			0.052	1.32	Fair	Dr. A. Béricny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Grèasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 342 m., or 1,0[illegible]9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Grèasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

* Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.64	751.9	52.2	11.2	62	W			8		9	WSW		0.008	0.2		Prof. T. Hoh.
Berlin			29.57	751.0	54.1	12.3	29	W			6		7			0.008	0.2		Prof. Arndt.
Breslau			29.58	751.4	62.8	17.1	44	SW			7		10			0	0		Dr. P. Neugebauer.
Carlsruhe			29.77	755.4	50.0	10.0	60	SW			10		9			0.225	5.6		A. Senz.
Cassel			29.54	750.2	54.0	12.2	38	SW			4		4	SW		Blank	Blank		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main			29.74	755.4	54.5	12.5	22	W			4		4			0.059	1.5		Physical Society.
Friedrichshafen	28.38	720.8	29.82	757.4	49.5	9.7	80	SW			4		10			0.976	24.8	Föhn, r in'g	M. Wilhelm.
Hamburg			29.38	746.2	42.3	5.7	71	WSW			9		7kn	SW		0.056	1.4	Vollent squalls.	Deutsche Seewarte.
Kiel			29.30	744.3	42.8	6.0	76	W			6		7			0.272	6.9		Prof. G. Karsten.
Königsberg			29.30	744.2	53.6	12.0	71	SW			7		5			0.110	2.8		Prof. E. Luther.
Köslin			29.30	744.3	52.3	11.3		SW			5		3			0.020	0.5	Storm	H. Müller.
Leipsic			29.59	751.5	55.0	12.8	26	WSW			8		6	WSW		0	0		Prof. Bruhns.
Memel			29.28	743.7	45.3	7.4	83	SW			5		10			0.039	0.9	Raining	Reinbrecht & Skalweit.
Münster			29.61	752.2	46.2	7.9	48	SW			5		6			0	0		Prof. E. Heis.
Neufahrwasser			29.23	742.4	57.4	14.1	50	WSW			8		10			0.016	0.4	Stormy	A. Lothes.
Posen			29.50	749.3	55.0	12.8	64	SW			8		10			0.008	0.2		Dr. Magener.
Strassburg, (in Alsace)			29.83	757.6	51.6	10.9	63	SW			2		10	W		0	0		Dr. Schur.
Stuttgart			29.78	756.4	49.1	9.5	67	W			2		9			0.016	0.4	Light rain	Prof. Schoder.
Thorn			29.41	747.1	57.9	14.4	62	SW			8		9			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.70	754.4	52.3	11.3	37	W			8		6			0	0		Prof. Fiesch.
Wustrow, Naval School			29.21	741.9	43.5	6.4	74	SW			9		5			0.047	1.2		E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			30.04	763.0	65.5	18.6		W										Very clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			29.91	759.8	59.0	15.0	71	Calm					9			0	0		
Padua			29.90	759.4	62.1	16.7	57	NW	2.5	1.1			8			0	0		
Vicenza			29.90	759.5	62.6	17.0	61	E	3.1	1.4			5	W		0	0		
Verona			29.89	759.2	65.1	18.4	63	E			2		0			0	0		
Bergamo																			
Domodossola	28.87	733.3	29.91	759.7	56.3	13.5	82	Calm					10			0.165	4.2	Light rain	
Milan			29.87	758.7	65.1	18.4	60	ENE			1		9			0	0		
Pavia			29.89	759.1	67.1	19.5	47	NE			4		8	SW		0	0		
Moncalieri			30.87	758.7	63.3	17.4	56	NNW	3.1	1.4			4	NE		0	0		
Mondovi	28.95	709.9	29.87	758.7	60.1	15.6	50	NW			4		3	W		0	0		
Porto Maurizio			30.03	762.7	63.7	17.6		SW			4		6	NE		0	0		
Genoa			30.00	762.0	61.3	16.3	72	SE	14.3	6.4			10	SE		0	0		
Piacenza			29.90	759.4	66.9	19.4	37	W	17.4	7.8			4	W		0	0		
Parma			29.92	760.0	65.8	18.8	43	SW			6		3			0	0		
Bologna			29.96	761.0	65.7	18.7	33	SSW			6		5	NW		0	0		
Florence			30.03	762.7	68.9	20.5	46	W			2		6	SW		0	0		
Leghorn			30.05	763.2	61.3	16.3	66	S	17.4	7.8			6			0	0		
Siena	28.89	732.1	30.03	762.7	63.7	17.6	55	SW	2.5	1.1			8	SW		0	0		
Urbino	28.44	722.4	29.99	761.8	61.5	16.4	51	SW			6		6			0	0		
Pesaro																			
Ancona			30.00	762.1	64.0	17.8	33	SE			6		5			0	0		
Grosseto			30.08	764.1	65.8	18.8	54	SSE			4		5	S		0	0		
Rome			30.11	764.9	66.4	19.1	57	SSW	9.8	4.4			3			0	0		
Naples, O. U.			30.17	766.3	64.4	18.0	55	SSW			4		5	W		0	0		
Lecce			30.12	765.0	61.9	16.6	53	ESE	10.5	4.7			1			0	0		
Cosenza			30.11	764.9	64.8	18.2	71	NW	1.8	0.8			2	SW		0	0		
Riposto, (Sicily)			30.13	765.2	61.2	16.2	69	NE			2		0			0	0		
Palermo			30.09	764.3	60.6	15.9	58	NE	3.8	1.7			0			0	0		
Caltanissetta	28.14	714.7	30.08	763.9	54.3	12.4	52	SW			1		0			0	0		
Sub-Series.																			
Naples, S. R.			30.16	766.0	62.2	16.8	59	SW	1.3	0.6			Cir.	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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters., or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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.
Tokio																			

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			29.68	753.8	45.7	7.6		W			5								
Groningen			29.46	748.2	41.5	5.3		WSW			7								
Helder			29.53	750.0	41.5	5.2		WSW			4							Cloudy	
Utrecht			29.55	750.5	49.3	9.6	48	WSW			5		5						

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			29.05	737.9	40.3	4.6	29	Calm	0	0			3			0.024	0.6		
Brönö			29.23	742.5	28.8	1.8	76	ENE	20	9			3			0	0		
Christiania			28.91	734.2	27.3	—2.6	96	NNE	33.1	14.8			10			0.051	1.3		
Tromsö			29.56	750.8	18.1	—7.7	51	SE	13	6			0			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	770.5	57.2	14.0	74	NE	22.9	10.25			4			0.024	0.6		Dr. J. A. N. Sampaio.
Campo Major			29.99	761.8	66.2	19.0	43	W	5.6	3.50			6	SW		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			29.98	761.6	66.6	19.2	62	WSW	12.8	5.73			3			0	0		Capt. D. A. da Cunha.
Lisbon			30.00	762.1	61.0	16.1	74	SSW	21.0	9.4			9	SW		0	0	Light rain	The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h., 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.47	748.5	66.7	19.3	39	SW	38	17			10					Light rain	Astronomical Obs.
Wilna			29.41	746.9	65.7	18.7	42	S	20	9			9						Astronomical Obs.
Dorpat			29.15	740.3	61.2	16.2	55	S	16	7			10						Physical Cabinet.
St. Petersburg			29.17	741.0	45.0	7.2	92	S	13	6			10					Light rain	Central Physical Obs.
Kuopio			29.14	740.2	25.9	— 3.4	100	E	18	8			10					Snowing	Ch. Forsten.
Kieff			29.76	755.9	65.5	18.6	41	S	13	6			3						Physical Cabinet
Nikolaiev			30.13	765.2	54.3	12.4	47	S	25	11			0						Kurdakof.
Kertch			30.13	765.3	57.7	14.3	57	SE	7	3			0						Lagorio.
Moscow			29.73	755.1	54.7	12.6	64	SSW	13	6			6						Meteorological Obs.
Lugan			29.93	760.2	66.2	19.0	29	W	40	18			4						Meteorological Obs.
Archangel			29.62	752.3	20.1	— 6.6	63	SE	18	8			10						Ogorodnikof.
Tiflis	28.76	730.4	30.18	766.5	54.9	12.7	55	SW	9	4			8						Physical Observatory.
Astrakhan			30.26	768.6	56.1	13.4	34	SSE	18	8			0						Sebastianof.
Kasan			29.72	754.8	43.3	6.3	58	Calm	0	0			5						Physical Cabinet.
Orenburg			29.88	759.0	45.3	7.4	86	SE					3						Tschernischef.
Ekaterinburg	28.51	724.1	29.52	749.7	36.9	2.7	66	W	18	8			8						Meteorological Obs.
Nukuss			30.24	768.2	53.6	12.0	25	N	4	2			9						
Kasaly																			Bobrof.
Tashkend	28.56	725.5	30.29	769.2	51.8	11.0	57	Calm	0	0			9						Michelson.
Barnaul			30.09	764.2	27.9	— 2.3	73	SW	16	7			9						Meteorological Obs.
Yeniseisk			25.52	749.7	45.9	7.7	58	SE	2	1			10						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.06	763.5	60.1	15.6	33	SW	22	10			2						Physical Observatory.
Nertchinsk	27.82	706.7	29.92	759.9	37.0	2.8	48	Calm	0	0			0						Meteorological Obs.
Vladivostock			29.82	757.4	38.8	3.8	85	Calm	0	0			5						
Nikolaievsk, on the Amoor					33.1	0.6	90	E	7	3			10						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 405. meters, or 1,411.8 feet; Ekaterinburg, 395.4? m., or 1,305.2? ft.; Tashkend, m. 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.88	758.9	68.2	20.1	30	SW	20.1	9.00		2	0	SW		0	0	Cloudy	Royal Observatory.
San Fernando			30.04	762.9	61.3	16.3	89	W	8.1	3.6		3	4	W	W	0	0		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.45	747.9	17.2	— 8.2	71	NE			6		0			0	0		
Umea			29.22	742.3	17.2	— 8.2	91	NE			8		10			0	0	Snow-show'rs	
Hernosand			29.07	738.1	26.1	— 6.6	89	NE			7		10			0.098	2.5	Snowing	
Stockholm			28.77	730.8	37.0	2.8	100	Calm			0		9			0.299	7.6		
Wisby			28.98	736.1	46.0	7.8	83	SW			7		3			0.272	6.9		
Sub-Series.																			
Upsala			28.82	732.1	29.5	— 1.4	87	W	10.7	4.8			10			0.227	5.77	Snowing	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.45	722.6	29.87	758.6	57.9	14.4	56	SW			7		9			0	0	Covered	The Observatory.
Zurich	28.21	716.5	29.85	758.2	51.1	10.6	88	W			2		10			0	0	Raining	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —1.6 mm.; Thermometer, +3.1 cent.; Relative Humidity, —2 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.06	763.4	52.2	11.2	56	NNE	19	8.5			0			0	0		
Fao, (Persian Gulf)			30.00	762.0	78.4	25.8		NW			4		2						
Salonica			30.06	763.5	53.3	12.4		SE			1		0						
Valona			29.99	761.7	63.0	17.2		W			2		0						
Varna			30.04	763.0	53.6	12.0		E			2		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.93	760.1	69.6	20.9	54	N			2		1k		S	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.82	757.4	37.8	3.2	67	NW	6	2.7									Hon. J. Ferguson.
Brockville, Ontario			30.22	767.6	35	1.7		S	1	0.4		5c	0	SW		0	0	Fair	W. R. Bigg.
*Chatham, N. B.			29.83	757.7	35	1.7	81	NW	12	5.4		2k	8ks	NW	NW	0.23	5.8	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			29.72	754.9	31	— 0.6	95	N	13	5.8			10s			0.20	5.1	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.12	765.0	40.2	4.6	80	SE			1	10c				0	0	Fair	James Smith, M. A.
Dalhousie, N. B.			29.87	758.7	35.5	1.9	85	W			1		8k s			0	0		H. A. Johnson.
Esquimault, B. C.			30.23	767.8	34.6	1.4	100	NE	1	0.4						0	0	Clear	W. H. Bevis.
Fredericton, N. B.			29.89	759.2	37.6	3.1	57	NW	8	3.6			10ks			0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			30.07	763.8	25	— 3.9	93	Calm	0	0		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.09	764.3	43.3	6.3	72	Calm			0					0	0	Fine	H. J. Strang, M. A.
Granton, Ontario			30.10	764.5	38.0	3.3		SE			1	1es		W		0	0	Clear	James Grant.
*Halifax, N. S.			29.63	752.6	36	2.2	74	NW	21	9.4			10n		NW	0.01	0.3	Fair	F. Allison, M. A.
*Kingston, Ontario			30.19	766.8	34	1.1	77	Calm	0	0		2c	8m'e			0	0	Fair	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			30.09	764.3	42	5.6	57	NW	4	1.8		0	0			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.14	765.5	35	1.7	76	Calm	0	0		8es	0			0	0	Fair	J. B. Haney.
*Parry Sound, Ontario			30.14	765.5	34	1.1	76	SE	7	3.1		2ek	0	W		0	0	Fair	Rev. R. Mooley.
*Port Dover, Ontario			30.12	765.0	36	2.2	71	N	5	2.2		8c	0	NW		0	0	Fair	H. Morgan.
Port Hastings, N. S.			29.64	752.8	33.6	0.9		NE	4	1.8						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.10	764.5	37	2.8	70	E	5	2.2		1haze	0			0	0	Fair	M. Payne.
*Quebec, Quebec			30.05	763.3	41	5.0	83	Calm	0	0		0	0			0	0	Clear	Capt. Ash, R. N.
St. John, N. B.			29.86	758.4	35	1.7	70	NW	11	4.9			10ks			0.016	0.25		G. Murdoch, C. E.
*Saugeen, Ontario			30.06	763.5	38	3.3	59	SE	3	1.3			10ks			0	0	Cloudy	K. Stewart.
Stayner, Ontario			30.09	764.3	40	4.4	51	Calm	0	0		10k	0	NW		0	0	Cloudy	R. J. Cole.
Stratford, Ontario			30.11	764.8	36.6	2.6	59	SE	4	1.8		1c		NW		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.69	754.1	33	0.6	88	E	6	2.7			10n		3E	0.19	4.8	Light snow	T. C. Hill.
*Toronto, Ontario			30.13	765.3	39	3.9	50	NE	5	2.2		2ek	2s	NW		0	0	Fair	Magnetic Observatory
Woodstock, Ontario			30.11	764.8	36.8	2.7	100	Calm			0	0	0			0	0	Fine	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. pper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow the past 24 hours. Inches	Rain-fall or melted snow the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.12	765.0	39	3.9	71	Calm	0	0		2k	Haze	W		0	0	Fair	
Alpena, Mich			30.01	763.0	33	0.6	79	SE	1	0.4		0	Haze			0	0	Clear	
Atlantic City, N. J			30.17	766.3	46	7.8	54	NW	4	1.8		0	0			0	0	Clear	
Augusta, Ga.			30.16	766.1	62	16.7	88	Calm	0	0			10ks			0	0	Cloudy	
Baltimore, Md			30.19	766.8	45	7.2	61	NW	2	0.9		2k	Sm'e	W		0	0	Smoky	
Barnegat, N. J			30.16	766.1	44	6.7	50	N	9	4.0		0	0			0	0	Clear	
Benton, Montana	27.36	694.9	30.16	766.1	27	— 2.8	100	NE	14	6.3			10s		NE	0.05	1.3	Cloudy	
Bismarck, Dakota	28.18	715.5	29.88	758.9	30	— 1.1	59	N	3	1.3			10s		N	0	0	Cloudy	
Boston, Mass			30.02	762.5	41	5.0	65	W	14	6.3		2ks	Sm'e			0	0	Smoky	
Breckenridge, Minn			29.87	758.7	35	1.7	90	NE	12	5.4			10s		NE	0	0	Cloudy	
Buffalo, N. Y.			30.08	764.0	41	5.0	48	E	3	1.3		1cs	Sm'e	W		0	0	Clear	
Burlington, Vt.			30.10	764.5	40	4.4	64	Calm	0	0		2c	0			0	0	Fair	
Cairo, Ill.			29.90	759.4	64	17.8	72	S	8	3.6		0	0			0	0	Clear	
Cape Hatteras, N. C.			30.11	764.8	56	13.3	87	E	3	1.3			10ks		W	0	0	Cloudy	
Cape Henry, Va.			30.16	766.1	55	12.8	56	SE	8	3.6		0	Haze			0	0	Clear	
Cape May, N. J.			30.17	766.3	46	7.8	47	SW	2	0.9		0	0			0	0	Clear	
Charleston, S. C.			30.18	766.6	64	17.8	83	Calm	0	0		2c	2s	W		0	0	Fair	
Cheyenne, Wyoming	23.70	602.0	29.64	752.8	27	— 2.8	77	E	2	0.9		2ck	0			Inap.	Inap.	Fair	
Chicago, Ill.			29.92	760.0	43	6.1	75	NE	6	2.7			10s			0.07	1.8	Cloudy	
Cincinnati, Ohio			29.98	761.5	56	13.3	74	SE	3	1.3			10ks		W	0	0	Cloudy	
Cleveland, Ohio			30.06	763.5	45.3	7.4	39	E	8	3.6		2c	Sm'e	W	E	Inap.	Inap.	Fair	
Colorado Springs, Col.	23.74	603.0	29.81	752.1	31	— 0.6	68	N	2	0.9		10k	0	SW		0	0	Cloudy	
Corsicana, Tex.			29.74	755.4	70	21.1	90	S	8	3.6			10s		S	0	0	Cloudy	
Davenport, Iowa			29.83	756.9	52	11.1	86	NE	12	5.4			10n			0.87	22.1	Light rain	
Denison, Tex.			29.68	753.9	70	21.1	50	S	12	5.4			10s			0	0	Cloudy	
Denver, Col.	21.47	621.5	29.69	754.1	32	0.0	79	NW	1	0.4			Fog			Inap.	Inap.	Foggy	
Detroit, Mich			30.03	762.7	40	4.4	73	E	6	2.7		5cs	Sm'e			0	0	Fair	
Dodge City, Kan.	27.00	685.8	29.23	742.4	45	7.2	76	W	4	1.8		0	0			0	0	Clear	
Dubuque, Iowa			29.79	756.7	48	8.9	92	SE	8	3.6			10s			0.80	20.3	Cloudy	
Duluth, Minn			30.02	762.5	34	1.1	79	Calm	0	0			Fog			0.24	6.1	Foggy	
Eastport, Me.			29.84	757.9	37	2.8	62	N	16	7.2		10k	0	N		0	0	Cloudy	
Erie, Pa.			30.22	767.6	18	— 7.8	84	W	20	8.9			10n		W	Inap.	Inap.	Light snow	
Escanaba, Mich			30.02	762.5	35	1.7	80	Calm	0	0		0	0			0.05	1.3	Clear	
Fort Gibson, Indian Terr.			29.66	753.4	71	21.7	71	S	17	7.6			10ks		SW	0	0	Cloudy	
Ft. St. Michaels, Alaska			30.07	763.8	3	—16.1		NE	15	6.7		0	0					Clear	
Fort Sill, Indian T.	28.47	723.1	29.52	749.8	67	19.4	84	S	12	5.4			10s		S	0	0	Cloudy	
Fort Sully, Dakota																			
Galveston, Tex.			29.87	758.7	69	20.6	95	SE	6	2.7			10s		SE	1.58	40.1	Cloudy	
Grand Haven, Mich			29.94	760.5	40	4.4	73	E	7	3.1			10s			0.04	1.0	Cloudy	
Indianapolis, Ind			29.98	761.5	58	14.4	76	S	4	1.8			10s		SW	0	0	Threatening	
Indianola, Tex.			29.81	757.2	70	21.1	100	S	22	9.8			Fog		S	0.01	0.3	Foggy	
Jacksonville, Fla.			30.13	765.3	68	20.0	90	Calm	0	0		0	8ks		W	0.02	0.5	Fair	
Keokuk, Iowa			29.74	755.1	58	14.4	94	NE	6	2.7			10s		NE	0.30	7.6	Threatening	
Key West, Fla.			30.09	764.3	76.9	24.9	77	E	4	1.8		1k	Haze			0	0	Clear	
Kittyhawk, N. C.			30.17	766.8	53	11.7	73	SE	5	2.2			10ks			0	0	Cloudy	
Knoxville, Tenn			30.11	764.8	49	9.4	85	Calm	0	0		8ck	Haze	S		0	0	Cloudy	
La Crosse, Wis.			29.87	758.7	44	6.7	59	N	8	3.6			10s		NE	0.22	5.6	Cloudy	
Leavenworth, Kan			29.51	749.5	67	19.4	84	S	20	8.9			10s		SW	0	0	Threatening	
Lexington, Ky.	28.97	735.8	30.07	763.8	56	13.3	80	S	12	5.4			10ks			0	0	Cloudy	
Long Branch, N. J.			30.12	765.0	49	9.4	64	N	3	1.3		0	0			0	0	Clear	
Louisville, Ky.			30.02	762.5	62	16.7	64	SE	10	4.5			8ks		W	0	0	Cloudy	
Lynchburg, Va.			30.14	765.5	49	9.4	67	Calm	0	0		0	Sm'e			0	0	Smoky	
Malone, N. Y.			30.10	764.5	36	2.2	80	SW	3	1.3		2cs	0	NW		0	0	Fair	
Manhattan, Kan.	28.42	721.9	29.50	749.3	65	18.3	89	S	28	12.5		0	5ks			0	0	Fair	
Marquette, Mich			30.03	762.7	40	4.4	73	W	4	1.8		0	8ks		W	Inap.	Inap.	Cloudy	
Memphis, Tenn			29.93	760.2	63	17.2	83	SE	7	3.1			10s			0	0	Cloudy	
Milwaukee, Wis.			29.96	761.0	38	3.3	71	NE	9	4.0		10s	Fog	W		0.08	2.0	Cloudy	
Mobile, Ala.			30.04	763.0	65	18.3	89	SE	4	1.8			10s		S	0	0	Cloudy	
Montgomery, Ala.			30.11	764.8	61	16.1	85	SE	2	0.9			10s			0	0	Cloudy	
Morgantown, W. Va.			30.07	763.8	48	8.9	62	NE	1	0.4		8c	Haze	W		0	0	Fair	
Mt. Washington, N. H.	23.51	596.9	29.83	758.4	18	— 7.8	100	NW	50	22.4			Fog			0	0	Foggy	
Nashville, Tenn			30.0	762.0	61	16.1	71	SE	4	1.8		5k	0	W		0	0	Fair	
New Haven, Conn			30.02	762.5	44	6.7	60	NW	10	4.5		2c	5s	NW		0	0	Fair	
New London, Conn			30.10	764.5	46	7.8	46	NW	9	4.0		5c	0	NW		0	0	Fair	
New Orleans, La			30.00	762.0	69.5	20.8	92	SE	12	5.4			10s		SE	0.01	0.3	Threatening	
Newport, R. I.			30.06	763.5	44	6.7	60	NW	8	3.6		0	0			0	0	Clear	
New York, N. Y.			30.16	766.1	41	5.0	48	NW	6	2.7		0	Fog			0	0	Clear	
Norfolk, Va.			30.17	766.3	52	11.1	54	SE	7	3.1		0	0			0	0	Clear	
North Platte, Neb.	20.68	677.7	29.19	741.4	43	6.1	82	N	32	14.3		0	8s			Inap.	Inap.	Cloudy	
Omaha, Neb.	28.45	722.6	29.47	748.5	53	11.7	80	SE	14	6.3		2ck	8s		S	0.49	12.4	Cloudy	
Oswego, N. Y.			30.17	766.1	41	5.0	56	S	4	1.8		Haze	Haze			0	0	Fair	
Pembina, Dakota			30.04	763.0	24	— 4.4	86	Calm	0	0		5c	0			0	0	Fair	
Philadelphia, Penn.			30.18	766.6	46	7.8	40	N	6	2.7		0	Sm'e			0	0	Clear	
Pike's Peak, Colorado	17.31	439.7	29.52	749.8	6	-14.4	57	SW	18	8.0			10s		SW	0.19	4.8	Cloudy	
Pittsburgh, Penn.			30.12	765.0	40	4.4	32	NE	3	1.3		5k	0			Inap.	Inap.	Fair	
Port Huron, Mich			30.05	763.3	40	4.4	56	SE	2	0.9		8c	0	W		0	0	Cloudy	
Portland, Me.			29.98	761.5	45	7.2	53	NW	6	2.7		0	0			0	0	Clear	
Portland, Oregon			30.26	768.6	39	9.4	91	Calm	0	0			10s			0	0	Cloudy	
Punta Rassa, Fla.			30.11	764.8	70.2	21.2	79	E	4	1.8		Haze	Sm'e	NW		0	0	Hazy	
Rochester, N. Y.			30.11	764.8	43	6.1	43	S	3	1.3		Haze	0			0	0	Clear	
Salt Lake City, Utah	25.95	643.0	29.68	753.9	31	— 0.6	48	Calm	0	0		0	0			0	0	Clear	
Sandy Hook, N. J.			30.15	765.8	41	5.0	56	NW	9	4.0		1c	0			0	0	Clear	
San Diego, Cal.			29.91	759.7	51	10.6	71	W	20	8.9		0	2ks		W	0	0	Fair	
San Francisco, Cal.			29.97	761.2	46	7.8	69	N	2	0.9		0	0			0	0	Clear	
Santa Fe, N. M.	22.92	582.2	29.46	748.3	35	1.7	70	SE	4	1.8		5k	2s	SW		0	0	Fair	
Savannah, Ga.			30.16	766.1	61	17.8	68	Calm	0	0		5k	0	W		0	0	Fair	
Shreveport, La.			29.89	759.2	68	20.0	95	SE	7	3.1		10k	2ks	SW	S	0	0	Cloudy	
Smithville, N. C.			30.19	766.8	63	17.2	83	SW	4	1.8		1c	0	W		0	0	Fair	
Springfield, Mass.			30.10	764.5	45	7.2	60	E	4	1.8		10ok,cs	0	W		0	0	Fair	
St. Louis, Mo.			29.79	756.7	65	18.3	63	SW	8	3.6		0	0			0	0	Clear	
St. Marks, Fla			30.11	764.8	66	18.9	90	SE	5	2.2		5cs	0			0	0	Fair	
St. Paul, Minn			29.82	757.4	44	6.7	67	NE	6	2.7			10n		NE	0.21	5.3	Light rain	
St. Paul's Island, Alaska			29.70	754.4	18	— 8.0	84	NNE	29	13.0		1c	0			0	0		
Thatcher's Island, Mass.			30.01	762.2	40	4.4	56	NW	13	5.8		0	0			0	0	Clear	
Toledo, Ohio			29.98	761.5	42	5.6	74	NE	8	3.6		8cs	Sm'e			0.02	0.5	Cloudy	
Tucson, Arizona	27.39	695.7	29.98	761.5	45	7.2		NW					10s		SW	0	0	Cloudy	
Tybee Island, Ga.			30.13	765.3	61	16.1	88	Calm	0	0		2c	Sm'e	E		0	0	Fair	
Vicksburg, Miss.			30.01	762.2	65.5	18.6	97	S	4	1.8			10n		S	0.02	0.5	Light rain	
Virginia City, M. T.	24.11	612.4	29.59	751.6	23	— 5.0	79	NE	21	9.4			10n		NW	0.01	0.3	Light snow	
Washington, D. C.			30.17	766.3	42	5.6	83	Calm	0	0		2ck	5s, sm'e	W		0	0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.18	766.6	61	16.1	88	SW	5	2.2		2cs	8m'e			0	0	Fair	
Wood's Holl, Mass			29.96	761.0	20	— 6.7	27	NW	32	14.3		0	2s		NW	0	0	Fair	
Wytheville, Va	27.76	705.1	29.93	760.2	49	9.4	85	Calm	0	0		2cs	0	W		0	0	Clear	
Yankton, Dakota	28.38	720.8	29.65	753.1	43	6.1	87	NE	12	5.4			10s			0.13	3.3	Cloudy	
Yuma, Arizona			29.85	758.2	48	8.9		W				0	2ks		SW	0	0	Fair	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.09	764.3	79	26.1	74	E	7	3.1		8ck	5ks	E	NE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.95	760.7	80	26.7	74	E				5c	5ks			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.21	767.3	77	25.0	76	SW	2	0.9		4ck	8kn	W		0	0	Cloudy	W. S. Cameron.
Kingston, Jamaica, W. I.			30.21	767.5	78	25.6	78	Calm	0	0		0	0			0	0		James Gall.
Santiago de Cuba, W. I.			29.86	758.4	78	25.6	72	N	6.0	2.7		Haze	2k		NE	0	0	Fair	Robert Mason.
Havana, Cuba, W. I.			30.09	764.3	78	25.6	78	NE	3.6	1.6		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			30.07	763.8	61.5	16.4	53	N	21.0	9.4		0	5k			0.05	1.3	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.19	690.6	29.98	761.5	67	19.4	84	S	2.0	0.9		5c	2k	S		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.			29.99	761.7	83	28.3	71	E			3		6ks			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			29.98	761.5	82.4	28										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.21	640.3			66.0	18.9	73		1	0.4		4ck	0			0.53	15.5	Fair	Thomas Herran.
St. John's, Newfoundland.			29.83	757.7	32.5	0.3	100	E					10n			0.06	1.5	Foggy	John Delaney.
York Factory, B. A.			30.04	763.0	23	— 5.0	93	E	8	3.6			10n			0.04	1.0		J. Fortescue.
Honolulu, Oahu, H. I.			30.10	764.5	73	22.8	95	Calm			0					0.46	11.7		E. P. Church.
Makawao, Maui, H. I.	27.86	707.6	30.03	762.7	60	15.6	66	Calm	0	0		2cs	5n	SW	NE	0.27	6.9	Misty	F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from —		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m on the same day. The altitude 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.; Colorado Springs, 6,632.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 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.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 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 direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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 APRIL 12, 1876.

7:35 A. M. WASHINGTON 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.

ALGERIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.91	759.7	69.4	20.8	54	NW			1		6			0	0	Fair	Charnot.
Algiers			29.91	759.6	69.8	21.0	49	NW			4		8			0	0	Cloudy	Peter.
La Calle					75.0	23.9		NW			1		2			0	0	Clear	Kuntz.
Tunis			29.93	760.1	83.8	28.8	19	W			3		4			0	0	Fair	Jacques.
Sfax			30.00	761.9	77.4	25.2	26	S			5		1			0	0	Clear	Chauvey.
Saida			29.93	760.1	73.4	23.0	31	N			4		4			0	0	Fair	Millot.
Tebessa			29.97	761.3	77.7	25.4		SSW			3		0			0	0	Clear	Colin.
Geriville			29.94	760.5	72.5	22.5	41	S			2		2			0	0	Clear	Buard.
Laghouat			30.08	763.9	78.8	26.0	36	SW			3		1			0	0	Clear	Guyot.
Biskra			29.88	759.0	84.7	29.3	19	NE			1		0			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	68.2	20.1	34	SW			4		4			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.79	756.7	50.7	10.4	76	NE			2		10			0.134	3.4		I. R. Observatory.
Eperies			29.78	756.3	57.6	14.2	67	N			1		10			0	0		Julius Mikolik.
Gratz	28.52	724.5	29.86	754.4	59.5	15.3	55	NW			5		8			0	0		Andreas Rospini.
Hermannstadt	28.40	721.4	29.77	756.1	67.8	19.9	29	NW			3		3			0	0		Prof. Reissenberger.
Kremsmünster	28.39	721.1	29.74	755.4	46.0	7.8	69	NE			2		10			0.079	2.0		Prof. C. Wagner.
Lemberg			29.76	755.9	49.8	9.8	71	NE			2		7			0.008	0.2		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.84	757.6	59.0	15.0	84	SSE			4		10			0	0	Low fog	I. R. Hydrographic Office
Szegedin			29.78	756.4	68.4	20.2	43	[illegible]			0		0			0	0		Karl Stancel.
Trieste			29.82	757.4	63.9	17.7	61	ESE			2		10			0	0	Foggy	Prof. V. Farolfi.
Vienna			29.73	755.1	54.9	12.7	43	SE			2		4			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.78	756.3	45.9	7.7	47	WSW			4		10			0	0		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0 10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	36.5	2.5		WNW	25	11.2			4			0.275	6.99	Blue sky	William Boswell.
Ardrossan			29.8[illegible]	758.0	41	5.[illegible]		NNW			5		3					Blue sky	William McNeil.
Armagh Observatory			30.00	762.0	39.8	4.3		W	13	5.8			10					Snowing	S. Call, for Dr. Robinson
Bidston, Liverpool Obs			29.91	759.7	41.0	5.0		WNW	31	13.9			3					Blue sky	John Hartnup.
Birr Castle, (Parsonstown)			30.07	763.8	41.3	5.2		W			3		8					*D. clouds	J. Dreyer.
Bradford			29.83	757.7	42.1	5.6		W			3		3			0.02	0.5	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.00	762.0	80.0	26.7		SE			1		8					Overcast	Sergt. J. F. Halanen.
Cambridge Observatory			29.84	757.9	44.0	6.7		NW			3		10					Snowing	H. Todd.
Cardington			29.87	758.7	43.0	6.1		NW			4		8					Snowing	John McLaren.
Carlisle			29.81	757.9	42	5.6		NW			5		5			0.34	8.6	*D. clouds	T. Bel, for J. Carmell.
Chatham, School M. E			29.91	759.7	45.2	7.3		N			2							Blue sky	Capt. J. Fellowes, R. E.
Dartmoor	28.53	725.9	30.14	765.5	36.[illegible]	2.4		NW			6		5					Hail-showers	R. E. Power.
Donaghadee			29.97	761.2	40	4.4		WNW			3		5					*D. clouds	J. Mac Gowan.
Dover			29.85	758.2	41	5.0		WNW			4		7					¾ covered	J. Costello.
Eccles (near Manchester)			29.87	758.7	43.2	6.2		NNW	16.2	7.2			6					Squally	Thomas Mackereth.
Falmouth Observatory			30.10	764.5	43.5	6.4		NW	29	13.0			4					Squally	The Staff.
Fort Napier, (Natal)	27.96	710.2	30.20	767.1	67.7	19.8		E			1		1					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.93	760.2	88.0	31.1		N			1		5					*D. clouds	
Galway, Queen's College			30.01	762.2	43	6.1		N			5		10					Snowing	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			29.90	759.4	71.0	21.7		WNW			4		4					*D. clouds	Pvt. C. Altken, A. H. C.
Glasgow Observatory			29.83	757.7	39.0	3.9		S			1		2					Fine	Lewis Stuart.
Great Yarmouth			29.81	756.9	40	4.4		WNW			4		6					Snowing	G. T. Watson.
Greenwich Royal Obs			29.88	758.9	42.5	5.8		WNW			5		10			Blank	Blank	Overcast	The Staff, for G. B. Airy.
Guernsey			30.02	762.7	45	7.2		NW			5		3			Blank	Blank	Squally	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.88	758.9	40.7	4.8		NW			2		7			Blank	Blank	Threatening	L. J. Crossley
Helston			30.09	764.3	49	9.4		NW			4		1c			0.4	10.2	Fine	M. P. Moyle.
Holyhead			29.98	761.5	42	5.6		WNW			6		3			Blank	Blank	*D. clouds	John Tilston.
Kew Observatory			29.91	759.7	37.4	3.0		NW	15	6.7			10					Raining	The Staff.
Kingstown			29.02	762.5	40	4.4		WNW			5		5			Blank	Blank	*D. clouds	George Mitchell.
Leicester Museum			29.89	759.2	42.4	5.8		N			2		6			Blank	Blank	*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.97	761.2	67.0	19.8		SW			3		0						Fred. Travis, Pvt. A.H.C.
Nairn			29.82	757.4	35	1.7		WNW			4		10					Snow-showers	W. D. Penny.
Nassau, Bahamas			30.19	766.8	75.0	23.9		NE			4		6					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.[illegible]5	758.2	41.7	5.4		NW			3		5k,ka,d		NW	0.023	5.8	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.90	759.4	43.8	6.6		NW			4		6					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.91	759.7	41	5.0		W			4		9			Blank	Blank	Overcast	J. Lucas.
Plymouth			30.07	763.8	48.5	9.2		NW			4		2					*D. clouds	John Merrifield.
Roche's Point			30.10	764.1	42	5.6		NNW			5		5			Blank	Blank	Cloudy	W. Kennedy.
Saint Ann's Head			30.06	763.5	40	4.4		NW			4		4					*D. clouds	John. C. Walker.
Saint Helier, Jersey			30.03	762.7	48.0	8.9		NW			5		5					½ clouded	A. P. Amy.
Sandwick Manse (Orkneys			29.77	756.1	36.5	−0.8		NW	29	13.0			7					Snow-show'rs	Rev. Chas. Austin, LL.D.
Scarborough			29.80	756.9	40.1	4.5		NNW			5		9					Overcast	F. Shaw.
Scutari Cemetery Turkey			29.95	760.7	55.0	13.1		SW			1		2					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.84	757.9	43.0	6.1		NW			3		6			0	0	*D. clouds	W. F. Cooper.
Silloth Rectory			29.85	758.2	45.7	7.7	57	NW			4		5			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			29.87	758.7	39.9	4.4		W			3		2			Blank	Blank	*D. clouds	S. J. Perry.
Stornoway, Lewis C., Hebr.			29.85	758.2	35	1.7		NW			2		10					Sn wing	John Smith.
Stratfield Turgiss			29.92	760.0	43.5	6.4		NW			1–2		6					Snowing	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.75	755.6	36	2.2		NNW			4		7					*D. clouds	John Trotter.
Truro, Royal Institution			30.03	765.3	47	8.3		NW			7		4			Blank	Blank	*D. clouds	W. Newcombe.
Valencia Observatory			30.20	767.1	44.0	6.7		WNW	21	9.4			7					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man																			
Cape Good Hope Obs			30.22	767.6	74.0	23.3	55	SSE	14	6.3			2						The Staff, for E. J. Stone.
Leith, Restalrig Park			29.[illegible]	758.2	43.1	6.2		W			2		6k			0.01	0.3	Fine, cloudy	Andrew Gibb.
Mauritius			29.96	761.0				E	17.1	7.6						0.45	11.4		
Monach Lt-house, Hebrides			29.89	759.2	35	1.7		NW			6	5	5	NW		0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.64	752.8	32	0.0		N			3		10			Blank	Blank		

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			29.58	751.3	35.4	1.9	91	ENE			4		10					Snowing	
Fanöe			29.61	752.1	42.6	4.9	75	WSW			4		9						
Godthaab, (Greenland)			30.02	762.5	27.3	−2.6	74	NNE			7		2						
Stykkisholm, (Iceland)			30.40	772.2	14.9	−9.5	94	E			4		0						
Thorshavn, (Faröe)			29.80	756.8				N			6		10					Snowing	
Vestervig			29.53	750.1	41.0	5.0	78	W			4		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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.67	753.5	50.0	10	80	NW			1		8nk		NW	0.008	0.2	Very cloudy	Normal School.
Amiens			29.89	759.2	41.7	5.4	67	SSW			6		0			0	0	Clear	Normal School.
Avignon			29.86	758.5	46.4	8	80	N			2		8		W	0.04	1.	Very cloudy	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			29.95	760.6	40.6	4.8	55	NW			3		8		NW	0	0	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			29.96	760.9	48.6	9.2	66	NNW			4		2		W	0	0	Slightly cl'dy	Normal School.
Brest			30.07	763.6	46.6	8.1	72	N			4		5k		N	0.059	1.50		Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			29.93	760.3	46.4	8.0	69	NW			2		10			1.035	26.3	Covered	Puy de Dome Obs.
Commercy			29.90	759.4	45.3	7.4	34	WNW			4		5kn		WNW	0	0	Cloudy	Normal School.
Commune de Gréasque*			29.80	757.0	62.4	16.9	61	W			2		8		NW	0	0		M. Kina.
Grenoble			30.00	762.1	36.1	2.3	90	NW			6		10		S	0	0	Raining	Normal School.
Le Mans			30.02	762.6	46.2	7.9	32	N			4		5		N	0	0	Cloudy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			29.96	761.0	40.5	4.7	97	S			2		10			1.882	47.80	Raining	Normal School.
Macon			29.97	761.1	40.6	4.8	89	N			4		10			1.26	32.	Covered	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			29.82	757.3	48.2	9	84	N			4		5		E	0	0	Cloudy	Normal School.
Orleans																			Normal School.
Paris Observatory			29.95	760.6	42.1	5.6	54	W			4		8		NW	0	0	Very cloudy	National Observatory.
Parthenay																			Normal School.
Privas			29.99	761.7	45.3	7.4		SW			2		10		SW	0	0	Covered	Normal School.
La Roche-sur-Yon			30.19	766.8	49.3	9.6	46	NW			6		8		SE	0.012	0.3	Very cloudy	Normal School.
Rochefort, Observatory			30.05	763.2	60.8	16.0	50	NW			3		8		SE			¾ covered	Naval Observatory.
Rouen			29.95	760.7	45.0	7.2	38	NW			6		5		NW	0	0	Cloudy	Normal School.
Saint Lo			30.01	762.3	45.5	7.5	75	N			1		5		NW	0.185	4.7		Normal School.
Tarbes	28.80	731.5			55.4	13		W			2		2		E	0.12	3.	Slightly cl'dy	Normal School.
Toulouse																			Normal School.
Villefranché			30.00	762.1	40.1	4.5	93	NW			1		5			0.764	19.40	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.89	759.2	78.8	26	76	NE			2		2ck						L'Abbé Marchési.
Gorée																			
Marseilles			29.76	756.0	59.2	15.1	67	W			1		10			0	0	Cloudy	Marseilles Observatory.
Mont-Louis																			—. Faiguère.
Montsouris, Paris			29.93	760.2	41.0	5.0	67	WNW			4		9		W	0.004	0.1		Montsouris Observ'tory.
Perpignan			29.89	759.3	50.4	10.2	52	NW	33.6	15.00			4		NW	Inap.	Inap.		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			29.93	760.3	44.4	6.9	53	WNW			3		10			0	0	Cloudy	E. Renou.
Toulouse			30.08	764.0	50.2	10.1	65	W			3		8			0	0		Toulouse Observatory.
Tours			30.01	762.3	50.0	10.0	37	NW			4		4		NW	0	0		C. Marquet.
Versailles, (near Paris)			29.90	759.5	41.7	5.4	51	NW			6		8			0	0	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

* Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.73	755.2	46.4	8.0	58	W			3		10			0	0		Prof. T. Hoh.
Berlin			29.73	755.2	49.6	9.8	39	S			4		6			0	0		Prof. Arndt.
Breslau			29.83	757.6	45.7	7.6	62	W			7		10			0.024	0.6	Raining	Dr. P. Neugebauer.
Carlsruhe			29.85	758.2	46.4	8.0	43	SW			3		10			0	0		A. Senz.
Cassel			29.71	754.8	48.0	9.4	37	W			5		7	WSW		Blank	Blank		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main			29.88	758.9	49.8	9.9	28	SW			2		8			0	0		Physical Society.
Friedrichshafen	28.47	723.2	29.97	761.2	33.1	0.6	82	W					10			0.268	6.8	Rain & snow	M. Wilhelm.
Hamburg			29.70	754.4	40.8	4.9	64	SW			7		8kn	SW		0.043	1.1	Rain, hail-squalls	Deutsche Seewarte.
Kiel			29.69	754.1	37.2	2.9	76	SW			3		10			0.126	3.2		Prof. G. Karsten?
Königsberg			29.70	754.4	45.1	7.3	52	SW			5		5			0.036	0.9		Prof. E. Luther.
Köslin			29.68	753.8	39.0	3.9		W			4		4			0	0		H. Müller.
Leipsic			29.80	756.8	47.5	8.6	40	WSW			5		9	W		0	0		Prof. Bruhns.
Memel			29.69	754.2	41.2	5.1	74	SSW			3		10			0.004	0.1		Reinbrecht & Skalweit.
Münster			29.78	756.3	47.5	8.6	57	SW			2		6			0.043	1.1	Snowing	Prof. E. Heis.
Neufahrwasser			29.63	752.7	47.5	8.6	52	W			4		8			0.004	0.1		A. Lothes.
Posen			29.79	756.6	50.5	10.3	42	SW			6		10			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.91	759.6	45.3	7.4	65	SSW			3		10	SW		0.181	4.6		Dr. Schur.
Stuttgart			29.89	759.1	53.2	11.8	67	S			2		10			0.043	1.1	Snowing	Prof. Schoder.
Thorn			29.71	754.7	49.6	9.8	89	W			4		10			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.80	756.8	48.2	9.0	41	WSW			6		6			0	0		Prof. Flesch.
Wustrow, Naval School			29.55	750.6	40.3	4.6	77	SW			6		4			0	0		E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	762.3	66.4	19.1		S										Very clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	756.8	59.5	15.3	64	SW	6.3	2.8			9			0	0		
Padua			29.74	755.5	64.6	18.1	56	SE	5.6	2.5			10	SW		0	0		
Vicenza			29.74	755.5	60.3	15.7	69	NW	1.5	0.8			8	SW		0	0		
Verona			29.74	755.3	62.1	16.7	66	NE			2		10			0	0		
Bergamo	28.34	719.7	29.65	753.2	59.1	14.5	61	SE			4		9			0.354	9.0		
Domodossola	28.64	727.5	29.68	753.9	53.6	12.0	63	Calm					10			0.024	0.6	Light rain	
Milan			29.67	753.5	65.1	18.4	61	NW			6		10	SW		0	0		
Pavia			29.70	754.3	68.5	20.3	38	SW			4		6	SW		0	0		
Moncalieri			29.68	753.9	60.8	16.0	63	NW	3.8	1.7			6	NW		0	0		
Mondovi	27.82	706.7	29.74	755.4	60.4	15.8	61	NE			1		5	W		0	0		
Porto Maurizio			29.80	756.9	65.3	18.5		SE			2		3	NE		0	0		
Genoa			29.78	756.3	60.8	16.0	74	SE	11.9	5.3			10	S		0	0		
Piacenza			29.71	754.6	66.9	19.4	42	SSW	13.7	6.1			10	WSW		0	0		
Parma			29.74	755.5	69.1	20.6	44	SSW			4		9			0	0		
Bologna			29.83	757.7	65.7	18.7	42	SW			6		7	E		0	0		
Florence			29.85	758.2	64.4	18.0	62	S			2		10	S		0	0		
Leghorn			29.83	757.6	63.1	17.5	65	S	23.7	10.6			4			0	0		
Siena	28.65	727.6	29.85	758.2	60.8	16.0	63	S	3.1	1.4			9	SW		0	0		
Urbino	28.31	719.1	29.86	758.5	60.6	15.9	43	SSW			4		10			0	0		
Pesaro																			
Ancona			29.85	758.2	61.5	16.4	55	SE			4		10			0	0		
Grosseto			29.89	759.1	61.5	16.4	70	SSE			6		8	SE		0	0		
Rome			29.89	759.3	68.2	20.1	43	SW	17.4	7.8			3			0	0		
Naples, O. U.			29.98	761.4	67.3	19.6	38	SW			2		1	SW		0	0		
Lecce			30.03	762.8	66.2	19.0	41	SSW	15.0	6.7			1	S		0	0		
Cosenza			29.97	761.2	70.0	21.1	62	NW	2.5	1.1			0			0	0		
Riposto, (Sicily)			29.99	761.8	64.8	18.2	73	ENE			2		0			0	0		
Palermo			29.87	758.6	68.0	20.0	64	ENE	2.5	1.1			0			0	0		
Caltanissetta	28.05	712.5	30.26	768.7	58.6	14.8	41	S			1		0			0	0		
Sub-Series.																			
Naples, S. R.			29.96	761.0	67.6	19.8	41	W	13.0	5.8				SSW		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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.85	758.1	40.6	4.8		NW			4								
Groningen			29.63	752.6	43.9	6.6		SW			6								
Helder			29.70	754.4	39.7	4.3		SW			6								
Utrecht			29.74	755.4	46.2	7.9	54	W			4		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.43	747.4	36.7	2.6	82	NNW	15.2	6.8			8			0	0		
Brönö			29.23	742.5	28.0	— 2.2	47	NW	7	3			7			0	0		
Christiania			29.35	745.6	39.2	4.0	35	SSW	11.0	4.9			10			0.039	1.0		
Tromsö			29.46	748.3	19.6	— 6.9	51	NE	38	17			1			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	57.9	14.4	74	ESE	8.2	3.67			6			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.93	760.2	63.3	17.4	47	WNW	5.2	2.33			7	NW		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			29.98	761.5	61.5	16.4	75	NNW	4.6	2.05			10	NNW		0.146	3.7	Rain & fog	Capt. D. A. da Cunha.
Lisbon			30.04	762.9	55.6	13.1	52	N	13.6	15.0			4	SW		0.008	0.2		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 hour, 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.78	756.5	59.4	10.2	41	S	20	9			10						Astronomical Obs.
Wilna			29.74	755.4	48.7	9.3	40	W	11	5			10						Astronomical Obs.
Dorpat			29.54	750.4	41.2	5.1	63	SSW	16	7			6					Light snow	Physical Cabinet.
St. Petersburg			29.45	747.9	36.0	2.2	55	WSW	27	12			5						Central Physical Obs.
Kuopio			29.05	737.8	16.0	— 8.9	100	SW	47	21			10						Ch. Forsten.
Kieff			29.74	755.9	61.7	16.5	58	SSE	4	2			8						Physical Cabinet
Nikolaiev			30.02	762.5	55.8	13.2	48	SW	20	9			4						Kurdakof.
Kertch			29.95	760.8	61.7	16.5	51	NNE	9	4			0						Lagorio.
Moscow			29.80	757.0	42.6	5.9	88	SSW	9	4			10						Meteorological Obs.
Lugan			29.93	760.2	67.1	19.5	18	S	18	8			3						Meteorological Obs.
Archangel			29.15	740.5	25.9	— 3.4	82	ESE	22	10			10						Ogorodnikof.
Tiflis	28.71	729.2	30.13	765.2	51.8	11.0	73	S	9	4			10						Physical Observatory.
Astrakhan			30.30	769.7	57.4	14.1	45	SE	18	8			2						Sebastianof.
Kasan			29.80	756.9	60.3	15.7	56	SW	11	5			1						Physical Cabinet.
Orenburg			30.25	768.3	56.5	13.6	52	S	9	4			0						Tchernischef.
Ekaterinburg	28.92	734.5	29.93	760.2	42.3	5.7	83	SSW	20	9			8						Meteorological Obs.
Nukuss			30.28	769.0	60.4	15.8	21	ENE	7	3			0						
Kasaly																			Bobrof.
Tashkend	28.62	727.0	30.34	770.5	53.4	11.9	59	Calm	0	0			10						Michelson.
Barnaul			30.10	764.5	37.9	3.3	85	SW	22	10			10						Meteorological Obs.
Yeniseisk			29.73	755.2	35.1	1.7	91	S	7	3			10						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.92	760.0	63.5	17.5	28	SW	4	2			0						Physical Observatory.
Nertchinsk	27.65	702.2	29.72	754.9	38.7	3.7	53	Calm	0	0			1						Meteorological Obs.
Vladivostock			29.81	757.2	38.7	3.7	97	Calm	0	0			10						
Nikolaievsk, on the Amoor					31.1	— 0.5	92	Calm	0	0			10					Raining	

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 400. meters, or 1,311.8 feet; Ekaterinburg, 175.4? m., or 1,055.2? ft.; Tashkend, m. 494.2?, 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, Directir of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.84	757.3	61.7	16.5	55	SW	15.0	6.7		0	6			0	0	Cloudy	Royal Observatory.
San Fernando			29.07	761.3	64.6	18.1	72	WNW	9.2	4.1		0	6		WNW	0	0		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; 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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Raparanda			29.04	737.0	14.0	— 10.0	94	NE			7		10			0	0		
Umea			29.18	741.1	18.0	— 7.8	77	N			7		10			0	0	Light snow	
Hernosand			29.22	742.2	21.0	— 6.1	77	WNW			2		10			0.118	3.0	Snowing	
Stockholm			29.34	745.3	36.1	2.3	98	SW			2		4			0.449	11.4		
Wisby			29.51	749.6	41.4	5.2	75	SW			4		3			0	0		
Sub-Series.																			
Upsala			29.34	745.2	33.1	0.6	67	SW	18.6	8.3			9	WNW	WNW	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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.50	724.0	29.99	761.8	34.0	1.1	100	SW			1		10			0.350	8.9	Snowing	The Observatory.
Zurich	28.25	717.6	29.97	761.1	33.1	0.6	98	NW			1		10			1.484	37.7	Snowing	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —0.2 mm.; Thermometer, —10.4 cent.; Relative Humidity, +43 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.99	761.8	55.8	13.2	66	SSE	4	2.0			0			0	0		
Fao, (Persian Gulf)			30.06	763.4	78.8	26.0		NE			3		10					Raining	
Salonica			29.98	761.6	68.7	20.4		S			2		0						
Valona			29.92	759.9	65.3	18.5		SW			3		5						
Varna			30.00	762.0	57.2	14.0		E			2		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.89	759.3	66.9	19.4	65	SW			2		3n		SW	1.23	31.2	Rainy	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.83	757.7	35.8	2.1	66	N	6	2.7									Hon. J. Ferguson.
Brockville, Ontario			30.08	764.0	49	9.4		Calm	0	0		2c	0	W		0	0	Fair	W. R. Bigg.
*Chatham, N. B.			29.86	758.4	36	2.2	58	NW	12	5.4		8ck	0	NW		0.01	0.3	Fair	G. A. Blair.
Charlottetown, P. E. Island			29.80	756.9	33	0.6	87	N	13	5.8		5k	0			0.09	2.3	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			30.03	762.7	47.2	8.4	59	SE			1	2c				0	0	Fair	James Smith, M. A.
Dalhousie, N. B.			29.99	761.7	32.5	0.3	69	NW			1		2k			0	0		H. A. Johnson.
Esquimault, B. C.			30.24	768.1	34.6	1.4	100	NE	2	0.9						0	0	Clear	W. H. Bevis.
Fredericton, N. B.			29.88	758.9	40.1	4.5	50	NW	7	3.1			1s			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			30.07	763.8	24	— 4.4	94	NW	4	1.8		8k	8ks	NW	NW	0	0	Cloudy	James Stewart.
Goderich, Ontario			29.95	760.7	46.1	7.8	89	S			1		10n			0.649	16.49	Raining	H. J. Strang, M. A.
Granton, Ontario			29.95	760.7	43.0	6.1		E			1		10n			0.56	14.2	Raining	James Grant.
*Halifax, N. S.			29.79	756.7	37	2.8	92	NW	10	4.5			10n		NW	Inap.	Inap.	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.14	765.5	38	3.3	93	NE	1	0.4		0	0			0	0	Clear	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			30.03	762.7	41	5.0	41	Calm	0	0		0	0			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.06	763.5	33	0.6	71	Calm	0	0		2c	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.01	762.2	40	4.4	52	E	6	2.7		5k	5ks	SW	SW	0	0	Threatening	Rev. R. Mooley.
*Port Dover, Ontario			29.99	761.7	40	4.4	96	NW	6	2.7			10ks		NW	0.08	2.0	Threatening	H. Morgan.
Port Hastings, N. S.			29.85	758.2	32.2	0.1		NW	16	7.2						0	0	Dull	Peter Grant.
*Port Stanley, Ontario			29.94	760.5	45	7.2	93	NE	10	4.5			10n		SW	0.20	5.1	Light rain	M. Payne.
*Quebec, Quebec			29.99	761.7	41	5.0	74	Calm	0	0		0	0			0	0	Clear	Capt. Ash, R. N.
St. John, N. B.			29.86	758.4	40	4.4	64	NW	3	1.3		6k				0	0		G. Murdoch, C. E.
*Saugeen, Ontario			29.89	759.2	41	5.0	84	SE	7	3.1			10s		E	0.06	1.5	Heavy rain	K. Stewart.
Stayner, Ontario			29.97	761.2	40	4.4	65	SE	1	0.4			10n		SE	0	0	Threatening	R. J. Cole.
Stratford, Ontario			30.10	764.5	38.6	3.7	92	E	4	1.8			10			0.751	19.08	Rainy	C. J. MacGregor, M. A.
*Sydney, C. B.			29.70	754.4	37	2.8	78	SW	5	2.2		Haze	8ks		SW	0	0	Fair	T. C. Hill.
*Toronto, Ontario			30.01	762.2	41	5.0	54	NE	11	4.9		5cs	5s	W	W	0	0	Cloudy	Magnetic Observatory
Woodstock, Ontario			29.99	761.7	37.8	3.2		Calm			0		10s			0.90	22.9	Raining	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10.	Clouds. Direction. pper. From —	Clouds. Direction. Lower. From —	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	43	6.1	75	Calm	0	0		0	Haze			0	0	Clear	
Alpena, Mich.			29.82	757.4	35	1.7	90	E	8	3.6			10s		E	0.13	3.3	Cloudy	
Atlantic City, N. J.			30.06	763.5	48	8.9	85	S	4	1.8		2cs	0			0	0	Clear	
Augusta, Ga.			30.11	764.8	68	20.0	89	SE	4	1.8			10s		SE	Inap.	Inap.	Cloudy	
Baltimore, Md.			30.06	763.5	53	11.7	73	SE	1	0.4		5k	Haze	W		Inap.	Inap.	Fair	
Barnegat, N. J.			30.04	763.0	51	10.6	64	SW	8	3.6		0	Haze			0	0	Fair	
Benton, Montana	27.33	694.2	30.13	765.3	24	— 4.4	100	W	1	0.4		0	0			0	0	Clear	
Bismarck, Dakota	28.36	720.3	30.10	764.5	24	— 4.4	48	NW	5	2.2		2k	Haze	N		0	0	Fair	
Boston, Mass.			29.98	761.5	47.5	8.6	55	SW	7	3.1		Haze	Sm'e			0	0	Smoky	
Breckenridge, Minn.			30.00	762.0	29	— 1.7	89	N	20	8.9			10s		N	0.50	14.2	Cloudy	
Buffalo, N. Y.			29.97	761.2	45.5	7.5	72	Calm	0	0			10ks		W	0	0	Threatening	
Burlington, Vt.			30.04	763.0	43	6.1	67	Calm	0	0		2c	0			0	0	Fair	
Cairo, Ill.			29.99	759.7	65	18.3	83	S	8	3.6			10s		S	0	0	Cloudy	
Cape Hatteras, N. C.			29.99	761.7	67	19.4	79	NW	12	5.4		5ck	Haze	W		0	0	Fair	
Cape Henry, Va.			30.04	763.0	58	14.4	94	SE	1	0.4		5k	5n	NW		0.05	1.3	Light rain	
Cape May, N. J.			30.06	763.5	49	9.4	64	S	4	1.8		5ck	5ks	W	W	0	0	Cloudy	
Charleston, S. C.			30.14	765.5	67	19.4	90	S	1	0.4			10s			0	0	Cloudy	
Cheyenne, Wyoming	23.97	608.8	29.91	759.7	17	— 8.3	100	N	8	3.6			10n			0.12	3.0	Light snow	
Chicago, Ill.			29.78	756.4	50	10.0	93	SE	12	5.4			Fog			0.39	9.9	Cloudy	
Cincinnati, Ohio			29.89	759.2	63	17.2	72	S	5	2.2		0	8ks		W	0	0	Cloudy	
Cleveland, Ohio			29.86	758.4	58.2	14.6	76	SE	10	4.5			10ks		SW	0.05	1.3	Cloudy	
Colorado Springs, Col.	24.01	609.8	29.88	758.9	21	— 6.1	100	NW	16	7.2			10n			0.37	9.4	Light snow	
Corsicana, Tex.			29.71	754.6	72	22.2	90	SE	12	5.4			10s		S	0	0	Cloudy	
Davenport, Iowa			29.82	757.4	61	16.1	77	SW	16	7.2			10n			2.29	58.2	Heavy rain	
Denison, Tex.			29.65	753.1	74	23.3	75	SE	11	4.9			10s			0	0	Cloudy	
Denver, Col.	24.80	629.9	30.02	762.5	24	— 4.4	87	N	4	1.8			10n			0.65	16.3	Light snow	
Detroit, Mich.			29.87	758.7	49	9.4	85	NE	6	2.7			10ks		NW	0.13	3.3	Cloudy	
Dodge City, Kan.	27.24	691.9	29.55	750.6	37	2.8	90	N	36	16.1			10s			0	0	Cloudy	
Dubuque, Iowa			29.70	754.4	58	14.4	93	S	4	1.8			10s			0.45	11.4	Cloudy	
Duluth, Minn.			29.88	758.9	36	2.2	80	SW	4	1.8			10s			0.22	5.6	Cloudy	
Eastport, Me.			29.84	757.9	41	5.0	56	NW	9	4.0		0	8k		NW	0	0	Fair	
Erie, Pa.			29.94	760.5	20	— 6.7	100	N	14	6.3			10n		N	0.04	1.0	Light snow	
Escanaba, Mich.			29.77	756.1	37	2.8	90	NE	2	0.9			10s		NE	0.35	8.9	Cloudy	
Fort Gibson, Indian Terr.			29.67	753.6	72	22.2	71	S	8	3.6			10ks		S	0	0	Cloudy	
Ft. St. Michaels, Alaska			29.88	758.9	5	—15.0		SW	1	0.4		0	0					Clear	
Fort Sill, Indian T.	28.45	722.6	29.49	749.0	69	20.6	84	S	16	7.2		8cs	0	S		0	0	Cloudy	
Fort Sully, Dakota																			
Galveston, Tex.			29.84	757.9	70	21.1	90	SE	10	4.5			Fog		SE	0	0	Foggy	
Grand Haven, Mich.			29.71	754.6	57	13.9	87	SE	16	7.2			10s		W	0.89	22.6	Cloudy	
Indianapolis, Ind.			29.87	758.7	63	17.2	72	S	6	2.7			10s		SW	0.05	1.3	Cloudy	
Indianola, Tex.			29.78	756.4	72	22.2	95	SE	16	7.2			10s		SW	0.01	0.3	Cloudy	
Jacksonville, Fla.			30.12	765.0	71	21.7	85	E	4	1.8		8k	0	SW		0	0	Fair	
Keokuk, Iowa			29.73	755.0	60	15.6	100	W	7	3.1			10s		W	0.33	8.4	Threatening	
Key West, Fla.			30.10	764.5	77.5	25.2	69	SE	13	5.8		2k	0	SE		0	0	Clear	
Kittyhawk, N. C.			30.06	763.5	57	13.9	94	W	2	0.9		5k	2s	N		0.24	6.1	Fair	
Knoxville, Tenn.			30.08	764.0	57	13.9	81	Calm	0	0		8ck	Haze	SW		Inap.	Inap.	Cloudy	
La Crosse, Wis.			29.76	755.9	43	6.1	83	N	12	5.4			10s		N	0.06	1.5	Cloudy	
Leavenworth, Kan.			29.69	754.1	53	11.7	93	NE	12	5.4		5k	5s	SW	N	1.13	28.7	Threatening	
Lexington, Ky.	28.91	734.3	29.99	761.7	61	16.1	70	S	12	5.4		5c	0	SW		0	0	Fair	
Long Branch, N. J.			30.05	763.3	59	15.0	64	SW	4	1.8		2k	0			0	0	Clear	
Louisville, Ky.			29.93	760.2	64	17.8	75	S	7	3.1		8k	Sm'e	W		0.04	1.0	Cloudy	
Lynchburg, Va.			30.05	763.3	55	12.8	76	Calm	0	0		5k	Sm'e	W		0	0	Fair	
Malone, N. Y.			29.99	761.7	40	4.4	63	S	4	1.8		2c	0	N		0	0	Fair	
Manhattan, Kan.	28.63	727.2	29.77	756.1	44	6.7	100		20	8.9			10s			2.40	61.0	Cloudy	
Marquette, Mich.			29.76	755.9	37	2.8	90	NW	4	1.8			10s			0.07	1.8	Cloudy	
Memphis, Tenn.			29.92	760.0	65	18.5	94	S	7	3.1			10s			0.45	11.4	Threatening	
Milwaukee, Wis.			29.99	754.1	60	15.6	70	SW	10	4.5		10s	Fog	SW		0.60	15.2	Cloudy	
Mobile, Ala.			30.04	763.0	68	20.0	90	S	5	2.2		2k	8s	W	S	0.02	0.5	Cloudy	
Montgomery, Ala.			30.10	764.5	61.5	17.5	89	SE	1	0.4		10cs	Fog	SW		0.46	11.7	Cloudy	
Morgantown, W. Va.			29.97	761.2	60	15.6	70	S	2	0.9			10s		SW	0.09	2.3	Cloudy	
Mt. Washington, N. H.	23.57	598.7	29.63	760.2	20	— 6.7	70	NW	48	21.5		0	0			0	0	Clear	
Nashville, Tenn.			29.98	761.5	65	18.3	73	SE	2	0.9		10k	0	SW		0	0	Cloudy	
New Haven, Conn.			30.12	765.5	53	11.7	60	NE	4	1.8		0	0			0	0	Clear	
New London, Conn.			30.03	762.7	51.7	10.3	51	N	3	1.3		0	Haze			0	0	Clear	
New Orleans, La.			29.96	761.0	72.5	22.5	88	S	14	6.3			10ks		S	Inap.	Inap.	Cloudy	
Newport, R. I.			30.01	762.2	47	8.3	55	N	3	1.3		0	0			0	0	Clear	
New York, N. Y.			30.06	763.5	51	10.6	59	Calm	0	0		0	Fog			Inap.	Inap.	Fair	
Norfolk, Va.			30.06	763.5	60	15.6	82	SE	2	0.9		0	8ks			0.18	4.6	Fair	
North Platte, Neb.	27.06	687.3	29.72	754.9	29	— 1.7	100	N	13	5.8			10n			0.19	4.8	Light snow	
Omaha, Neb.	28.77	730.7	29.45	758.2	40	4.4	82	N	20	8.9			10s			0	0	Cloudy	
Oswego, N. Y.			30.00	762.0	44.5	6.9	57	SE	5	2.2		8cs	2s	NW		0	0	Fair	
Pembina, Dakota			30.01	762.2	24	— 4.4	86	NW	12	5.4		0	0			0	0	Clear	
Philadelphia, Penn.			30.05	763.3	50	10.0	64	E	2	0.9		5ck	Sm'e	W		0	0	Smoky	
Pike's Peak, Colorado	17.39	441.7	29.60	751.8	4	—15.6	87	SE	22	9.8			10s			0.05	1.3	Cloudy	
Pittsburgh, Penn.			29.93	760.2	57	15.0	81	SW	3	1.3		8k	Sm'e	W		0.03	0.8	Cloudy	
Port Huron, Mich.			29.89	759.2	47	8.3	92	Calm	0	0			10s		W	0.35	8.9	Cloudy	
Portland, Me.			29.96	761.0	44	6.7	81	W	4	1.8		0	Haze			0	0	Clear	
Portland, Oregon			30.31	769.9	43	6.1	83	Calm	0	0			10s			0	0	Cloudy	
Punta Rassa, Fla.			30.13	765.3	73.5	23.3	81	E	16	7.2		Haze	Sm'e	SW	E	Inap.	Inap.	Hazy	
Rochester, N. Y.			29.98	761.5	47	8.3	69	SE	6	2.7			10s			0	0	Cloudy	
Salt Lake City, Utah	25.51	648.7	29.86	758.4	32	0.0	60	Calm	0	0		0	0			0	0	Clear	
Sandy Hook, N. J.			30.31	770.4	45	7.2	75	NE	4	1.8		5c	Haze			0	0	Fair	
San Diego, Cal.			30.07	763.8	43	6.1	75	NE	4	1.8		0	0			0	0	Clear	
San Francisco, Cal.			30.11	764.8	49	9.4	64	Calm	0	0		Haze	Haze			0	0	Hazy	
Santa Fe, N. M.	23.02	584.7	29.56	751.8	32	0.0	69	Calm	0	0			10s			0	0	Cloudy	
Savannah, Ga.			30.12	765.0	69	20.6	79	SW	1	0.9			10s		SW	0	0	Cloudy	
Shreveport, La.			29.87	758.7	71	21.7	95	SE	5	2.2			10s		SE	0	0	Threatening	
Smithville, N. C.			30.11	764.8	65	18.3	85	SW	6	2.7		5cs	0	W		0	0	Clearing	
Springfield, Mass.			30.02	762.5	45	7.2	69	E	4	1.8		0	Sm'e			0	0	Fair	
St. Louis, Mo.			29.77	756.1	68	20.	74	S	4	1.8			10s			0	0	Cloudy	
St. Marks, Fla.			30.10	764.5	63	17.2	94	Calm	0	0		2cs	Fog			0	0	Fair	
St. Paul, Minn.			29.82	757.4	35	1.7	99	NW	11	4.9			10s			0.30	7.6	Cloudy	
St. Paul's Island, Alaska			30.07	763.8	18	8.0	84	NNW	4	1.8		1ck	0	NW		0	0		
Thatcher's Island, Mass.			30.00	762.0	43	7.2	59	NW	3	1.3		0	0			0	0	Clear	
Toledo, Ohio			29.83	757.7	56	13.3	82	SW	1	0.4		2c	8cs	SW		0.01	0.3	Cloudy	
Tucson, Arizona	27.43	696.7	30.02	762.5	47	8.3		SE				0	5s			Inap.	Inap.	Fair	
Tybee Island, Ga.			30.11	764.5	66	18.9	94	S	2	0.9			10s		S	0	0	Threatening	
Vicksburg, Miss.			30.07	763.8	69	20.6	97	SE	4	1.8		8cs	2k		SW	0.72	18.3	Cloudy	
Virginia City, M. T.	24.26	616.9	29.77	756.1	14	—10.0	81	SE	4	1.8		1c	0	NW		0.06	1.5	Clear	
Washington, D. C.			30.04	763.0	52.5	11.4	86	S	3	1.3		Haze	8s		W	0.01	0.3	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.09	764.3	68	20.0	79	W	14	6.3		5cs	0	NW		0	0	Fair	
Wood's Holl, Mass			29.97	761.2	24	— 4.4	48	NW	14	6.3		0	8s		NW	0	0	Cloudy	
Wytheville, Va	27.75	704.8	29.87	758.7	58	14.4	76	Calm	0	0		2c	8ks		W	0	0	Cloudy	
Yankton, Dakota	28.60	728.0	29.90	761.7	33	0.6	84	N	18	8.0			10s			0	0	Cloudy	
Yuma, Arizona			29.94	760.5	48	8.9		W				0	0			0	0	Clear	
Sub Series.																			
Bridgetown, B'b'dos, W. I.			30.07	763.8	80	26.7	78	NE			6	5ck	5ks	NE	E	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.98	761.5	78	25.6	78	E				2k	5ks			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.23	767.8	78	25.6	69	NNE	14	6.3		2c	4k, ks	N		0	0	Clearing	W. S. Cameron.
Kingston, Jamaica, W. I.			30.21	767.3	78	25.6	72	Calm	0	0		2k	2s			0	0		James Gall.
Santiago de Cuba, W. I.			29.88	758.9	74	23.3	59	NNE	10.8	4.8		0	0			0	0	Clear	Robert Mason.
Havana, Cuba, W. I.			30.08	764.0	76	24.4	72	E	7.2	3.2		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			30.12	765.0	66.0	18.9	59	N	8.1	3.6		0	8k			0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.19	690.6	29.96	761.0	68	20.0	84	S	2.0	0.9		5c	0	SSW		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.			29.99	761.7	83	28.3	75	E			2		10n			0.450	11.43	Raining	C. J. Hering.
Batavia, Dutch Guiana, S. A			29.98	761.5	84.2	29										0.217	5.50		Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640.6			64.5	18.1	83		0	0		3k	6n			0.47	11.9	Cloudy	Thomas Herran.
St. John's, Newfoundland.			29.73	755.1	33.0	0.6	89	SW				10k	10s			0.06	1.5	Cloudy	John Delaney.
York Factory, B. A.			29.96	761.0	25.5	— 3.6	94	Calm	0	0		5k	2s	N		0.20	5.1		J. Fortescue.
Honolulu, Oahu, H. I.			30.11	764.8	73	22.8	90	NE			5					0.14	3.6		E. P. Church.
Makawao, Maui, H. I.	27.91	708.9	30.08	764.0	55	12.8	76	Calm	0	0		0	0			0	0		F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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 APRIL 13, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.85	758.2	65.7	18.7	69	NNE			2		9			0.079	2.0	Hidden	Charnot.
Algiers			29.85	758.2	62.6	17.0	90	NE			2		9			0	0	Hidden	Peter.
La Calle					64.2	17.9		NNW			2		4			0	0	Fair	Kuntz.
Tunis			29.82	757.5	73.4	23.0	59	E			2		7			0	0	Cloudy	Jacques
Sfax			29.81	756.9	72.7	22.6	63	E			2		1			0	0	Clear	Chauvey.
Saïda			29.84	757.9	68.9	20.5	33	N			4		4			0.039	1.0	Fair	Millot.
Tebessa			29.89	759.1	77.9	25.5		S			3		3			0	0	Fair	Colin.
Geriville			29.82	757.5	67.8	19.9	34	SW			2		2			0	0	Clear	Buard.
Laghouat			29.91	759.8	80.6	27.0	78	SW			2		2			0	0	Clear	Guyot.
Biskra			29.71	754.7	84.0	28.9	67	NE			1		8			0	0	Cloudy	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.84	757.9	46.4	8.0	67	NE			3		6			0.047	1.2		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.87	758.8	36.7	2.6	96	W			1		10			0.732	18.6		I. R. Observatory.
Eperies			29.76	755.9	44.4	6.9	84	N			3		10			0.079	2.00		Julius Mikolik.
Gratz	28.67	728.1	29.89	759.2	42.4	5.8	72	N			5		10			0.713	18.1		Andreas Rospini.
Hermannstadt	28.31	719.8	29.00	754.1	72.5	22.5	23	SW			3		3			0	0		Prof. Reissenberger.
Kremsmünster	28.59	726.2	29.98	761.6	35.2	1.8	85	W			3		10			0.283	7.2		Prof. C. Wagner.
Lemberg			29.72	754.8	47.8	8.8	80	N			1		8			0.339	8.6		Dr. T. Stanecki.
Nylregyhaza																			Habsuda Daniel.
Pola			29.09	754.0	60.1	15.6	84	SSE			5		10			0	0	Low fog	I. R. Hydrographic Office
Szegedin																			Karl Stancel.
Trieste			29.68	753.9	58.8	14.9	55	ENE			1		10			0.236	6.0	Drizzling	Prof. V. Farolfi.
Vienna			29.99	759.4	39.2	4.0	83	WNW			3		10			0.185	4.7		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.74	755.5	45.5	7.5	62	SSW			2		10			0.760	19.20		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0-10.	Clouds. Amount. Low'r 0-10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.87	758.7	37.7	3.2		NE	20	8.9			4			0.010	0.25	Blue sky	William Boswell.
Ardrossan			29.87	758.7	44	6.7		NNE			4		2					Blue sky	William McNeil.
Armagh Observatory			29.79	759.2	38.7	3.7		NW	14	6.3			7			Blank	Blank	*D. clouds	S. Call, for Dr. Robinson
Bidston, Liverpool Obs			29.78	756.4	36.0	2.2		NNW	21	9.4			10					Snowing	John Hartnup.
Birr Castle, (Parsonstown)			29.97	761.2	39.8	4.3		NW			3		8					*D. clouds	J. Dreyer.
Bradford			29.75	755.6	34.1	1.2		NE			2		8			0.02	0.5	Snowing	J. McLandsborough.
Bridgetown, (Barbados)			29.99	761.7	83.0	28.3		SE			3		5					*D. clouds	Sergt. J. F. Halanen.
Cambridge Observatory			29.48	748.8	40.0	4.4		N			1		7					Wet	H. Todd.
Cardington			29.52	749.8	35.0	1.7		N			6		10					Snowing	John McLaren.
Carlisle			29.82	757.4	42.2	5.7		N			1		4			0	0	*D. clouds	T. Bell, for J. Carmichael.
Chatham, School M. E			29.64	752.8	39.7	4.3		SSW			2							Blue sky	Capt. J. Fellowes, R. E.
Dartmoor	28.31	719.1	29.46	748.4	34.4	1.3		N			6		7					Snow-show'rs	R. E. Power.
Donaghadee			29.73	755.1	36	2.2		NNE			3		3					*D. clouds	J. Mac Gowan.
Dover			29.55	750.6	42	5.6		WSW			5		7					¾ clouded	J. Costello.
Eccles, (near Manchester.)			29.73	755.1	40.0	4.4		N	7.6	3.4			7					*D. clouds	Thomas Mackereth.
Falmouth Observatory			29.84	757.9	40.6	4.8		NNW	32	14.3			5					Squally	The Staff.
Fort Napier, (Natal)	27.83	706.9	30.06	763.5	71.5	21.9		E			2		8					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.86	758.4	88.0	31.1		N			6		7					*D. clouds	
Galway, Queen's College			29.96	761.0	41	5.0		NW			5		6					*D. clouds	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			29.85	758.2	67.0	19.4		SSE			3		3					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			29.85	758.2	39.4	4.1		NE			1		1					Fine	Lewis Stuart.
Great Yarmouth			29.49	749.0	38	3.3		SSW			4		6					*D. clouds	G. T. Watson.
Greenwich Royal Obs			29.52	750.5	38.3	3.5		W			2		10			Blank	Blank	Overcast	The Staff, for G. B. Airy.
Guernsey			29.74	755.4	41	5.0		NW			5		6			Blank	Blank	Squally	Dr. S. E. Hoskins.
Halifax, Moorside Obs.																			L. J. Crossley
Helston			29.82	757.4	47	8.3		NW			6		3c			0	0	Fair	M. P. Moyle.
Holyhead			29.84	757.9	38	3.3		NNW			5		4			Blank	Blank	*D. clouds	John Tilston.
Kew Observatory			29.73	755.0	36.8	2.7		WNW	18	8.0			10					Overcast	The Staff.
Kingstown			29.88	758.9	37	2.8		WNW			5		7			Blank	Blank	*D. clouds	George Mitchell.
Leicester Museum			29.66	753.4	33.6	0.8		N			3		10					Snowing	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.89	759.2	72.2	22.3		NE			2		6k						Fred. Travis, Pvt. A.H.C.
Nairn			29.91	759.7	39	3.9		NE			3		5					½ clouded	W. D. Penny.
Nassau, Bahamas			30.16	766.1	78.4	25.8		NE			6		7					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.68	753.9	33.7	0.9		NNE			3		10ks		NNE	1.010	25.65	Snowing	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.70	754.4	32.7	0.4		N			4		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.69	751.8	33	0.6		NNW			6		10					Snowing	J. Lucas.
Plymouth			29.79	756.7	43.6	6.4		NW			4		4					Snow & hail	John Merrifield.
Roche's Point			29.93	760.2	39	3.9		N			6		10					Snowing	W. Kennedy.
Saint Ann's Head			29.85	758.2	34	1.1		NNE			5		8					Squally	John. C. Walker.
Saint Helier, (Jersey)			29.73	755.1	43.5	6.4		NNW			5		5					½ clouded	A. P. Amy.
Sandwick Manse (Orkneys			29.95	760.7	34.2	1.2		NE	24	10.7			2					Snow-show'rs	Rev. Chas. Austin, LL.D.
Scarborough			29.76	755.9	37.1	2.8		NE			5		7					*D. clouds	F. Shaw.
Scutari Cemetery (Turkey)			29.92	760.0	59.6	15.3		S			1		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.70	754.4	37.5	3.1		N			4		10			0.231	5.87	Snowing	W. F. Cooper.
Silloth Rectory			29.82	757.4	42.7	5.9	59	NNW			3		2			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			29.76	755.9	37.5	3.2		NE			3		3			Blank	Blank	*D. clouds	S. J. Perry.
Stornoway, Lewis C., Hebr.			29.97	761.2	36	2.2		NE			3		10					Snowing	John Smith.
Stratfield Turgiss			29.59	751.6	34.7	1.5		NW			2-3		10					Snowing	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.90	759.4	40	4.4		NNE			4		6					*D. clouds	John Trotter.
Truro, Royal Institution			29.84	757.9	43	6.1		N			7		5			Blank	Blank	*D. clouds	W. Newcombe.
Valencia Observatory			30.03	762.7	42.8	6.0		N	23	10.3			6					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man																			
Cape Good Hope Obs			30.15	765.8	77.4	25.2	47	SSE	12	5.4			1						The Staff, for E. J. Stone.
Leith, Restalrig Park			29.88	758.9	39.4	4.1		E			2	2c				0.02	0.5	Fine	Andrew Gibb.
Mauritius			29.90	759.4				NE	8.2	3.7						0.27	6.9		
Monach Lt-house, Hebrides			30.03	762.7	34	1.1		N			4	3	0	NE		0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.82	757.4	39	3.9		N			6		10			Blank	Blank		

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			29.78	756.5	41.0	5.0	52	SSW			2		5						
Fanöe			28.79	756.6	41.2	5.1	71	SW			2		3						
Godthaab, (Greenland)			29.78	756.5	34.0	1.1	73	NE			4		8						
Stykkisholm, (Iceland)			30.29	769.4	30.0	− 1.1	96	E			2		10						
Thorshavn, (Faröe)			30.17	766.3	31.3	− 0.4	83	N			3		3						
Vestervig			29.73	755.1	41.4	5.2	83	Calm			0		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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er Low'r 0—10.	Clouds. Amount. Up'er Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	48.2	9	40	SSW			3		8nk		SSW	0	0	Very cloudy	Normal School.
Amiens			29.74	755.3	47.5	8.6	50	SSW			6		8		SSW	0.228	5.8	Very cloudy	Normal School.
Avignon			29.96	761.0	52.2	11.2	32	N			6		2		NNW	0	0	Slightly cl'dy	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			29.75	755.6	50.4	10.2	39	SW			6		8		SW	0.030	0.75	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			29.89	759.3	48.2	9	63	SW			6		2		SW	0	0	Slightly cl'dy	Normal School.
Brest			29.77	756.1	43.7	6.5	70	N			3		5k		N	0.010	0.25		Naval Observatory.
Caen																			Normal School
Chartres																			Normal School.
Chaumont			29.98	761.4	44.4	6.9	33	W			2		5		W	0	0	Cloudy	Normal School.
Clermont			29.95	760.6	43.2	6.2	54	W			4		5kn		W	0	0	Cloudy	Puy de Dome Obs.
Commercy			29.89	759.3	45.7	7.6	27	NW			6		5		NW	0	0		Normal School.
Commune de Gréasque*			30.00	761.9	42.4	5.8	42	NNW			6		5k		NE	0.689	17.50	Partly cloudy	M. Kina.
Grenoble			29.80	757.0	47.3	8.5	46	SW			4		8		SW	0	0	Very cloudy	Normal School.
Le Mans																			Normal School.
Loches			30.00	761.9	46.6	8.1	57	SW			2		8		S	0.386	9.80	Very cloudy	Normal School.
Lons-Le-Saulnier			30.04	763.0	43.7	6.5	51	W			4		5		W	0	0	Cloudy	Normal School.
Mâcon																			Normal School.
Mirecourt																			M. Schuster.
Metz			29.91	759.8	51.1	10.6	32	NW			4		2		N	0	0	Slightly cl'dy	Normal School.
Nismes																			Normal School.
Orleans			29.80	757.0	49.8	9.9	36	SSW			6		8		SW	0.016	0.40	Almost cov'd	National Observatory.
Paris Observatory																			Normal School.
Parthenay			30.03	762.7	43.2	6.2		N			2		2		N	0.98	25.	Slightly cl'dy	Normal School.
Privas			29.89	759.3	48.2	9.0	46	SSW			8		8		E	0	0	Very cloudy	Normal School.
La Roche-sur-Yon			29.99	761.7	51.8	11.0	52	SW			5		10		NE	0.197	5.0	Covered	Naval Observatory.
Rochefort, Observatory			29.69	754.2	45.3	7.4	53	SSE			8		10		S	0.067	1.7	Covered	Normal School.
Rouen			29.76	756.0	35.6	2	100	NW			1		10		W	0.016	0.4		Normal School.
Saint Lo	28.97	735.9			49.1	9.5		W			4		0			0.08	2.	Clear	Normal School.
Tarbes																			Normal School
Toulouse			30.00	762.1	48.0	9.2	67	NW			1		10			0.449	11.40	Covered	Normal School.
Villefranche																			
Sub-Series.																			
Fort de France, Martinique			29.88	759.0	78.8	26	76	NE			2		5k						L'Abbé Marchési.
Gorée																			
Marseilles			29.87	758.8	48.2	9.0	34	NNW			6		8			0	0	Partly cl'dy.	Marseilles Observatory.
Mont-Louis																			—. Faïguère.
Montsouris, Paris			29.79	756.6	47.8	8.8	47	SSW			4		10		SW	0.008	0.1		Montsouris Observ'tory.
Perpignan			30.01	762.3	50.0	10.0	21	N	22.4	10.00			10		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			29.80	757.0	50.0	10.0	35	SSW			3		8			0	0	Very cloudy	E. Renou.
Toulouse			30.13	765.1	46.4	8.0	36	NNW			3		2			0.039	1.0		Toulouse Observatory.
Tours			29.87	758.6	48.2	9.0	40	WSW			7		9		WSW	0	0		C. Marquet.
Versailles, (near Paris)			29.78	756.5	49.3	9.6	42	W			6		10			0	0	Squally	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Leo, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 342 m., or 1,030.9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

* Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er Low'r 0—10.	Clouds. Amount. Up'er Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	39.7	4.3	56	WNW			4		4	W		0.004	0.1	Snowing	Prof. T. Hoh.
Berlin			29.85	758.1	42.4	5.8	64	NW			3		6			0.087	2.2		Prof. Arndt.
Breslau			29.89	759.2	40.2	7.9	52	S			3		10			0	0		Dr. P. Neugebauer.
Carlsruhe			29.95	760.7	43.5	6.4	42	W			3		9			0	0		A. Senz.
Cassel			29.82	757.3	42.1	5.6	55	SE			5		8	NW				Rain, snow, gr'pel	Dr. H. Möll.
Cologne																			Dr. Gartlee.
Emden																			Prof. Prestel.
Frankfort on the Main			29.98	761.6	44.4	6.9	32	S			1		7			0	0		Physical Society.
Friedrichshafen	28.54	725.0	30.03	762.7	37.4	3.0	49	W					6			0	0		M. Wilhelm.
Hamburg			29.85	758.1	39.7	4.3	74	SW			2		10			0.028	0.7	Snow & graupel	Deutsche Seewarte.
Kiel			29.85	758.2	39.4	4.1	79	W			2		7			0.087	2.2		Prof. G. Karsten*
Königsberg			29.84	757.8	48.4	9.1	32	SW			2		5			0	0		Prof. E. Luther.*
Köslin			29.79	756.7	40.3	4.6		NW			2		4			0	0		H. Müller.
Leipsic			29.89	759.3	41.8	7.1	46				3		7	WNW		0.071	1.8		Prof. Bruhns.
Memel			29.86	758.5	49.0	4.8	71	SW			1		6			0.020	0.5		Reinbrecht & Skalweit.
Münster			29.84	758.0	41.9	5.5	87	W			2		0			0	0		Prof. E. Heis.
Neufahrwasser			29.78	756.5	41.5	5.3	76	NE			2		8	W		0.043	1.1		A. Lothes.
Posen			29.87	758.6	47.8	8.8	60	SW			7		10			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.97	761.1	44.2	6.8	48	SSW			2		7	SW		0	0		Dr. Schur.
Stuttgart			29.95	760.8	46.9	8.3	53	E			1		6			0	0		Prof. Schoder.
Thorn			29.84	758.0	50.2	10.1	41	WNW			1		10			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.85	758.2	44.6	7.0	38	S			6		4			0	0		Prof. Flesch.
Wustrow, Naval School			29.72	754.8	42.1	5.6	50	NW			2		3			0	0		E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	69.3	20.7		S										Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.67	753.6	52.0	11.1	46	NE	6.9	3.1			9			0	0		
Padua			29.61	752.2	63.9	17.7	35	NW	9.4	4.2			9	SW		0	0		
Vicenza			29.63	752.6	62.4	16.9	46	SE	2.5	1.1			7	SW		0	0		
Verona			29.63	752.3	63.0	17.2	56	NE			2		6			0	0		
Bergamo	28.30	718.8	29.63	752.3	52.5	11.4	64	SE			2		9			0	0		
Domodossola	28.71	729.1	29.74	755.5	51.8	11.0	38	NNE			6		7			0	0		
Milan			29.67	753.6	57.9	14.4	43	NW			2		9	WSW		0	0		
Pavia			29.68	753.9	55.2	12.9	24	NE			6		10	SW		0.157	4.0	Raining	
Moncalieri			29.67	753.6	58.1	14.5	19	W	2.5	1.1			5	SW		0	0		
Mondovi	27.80	706.2	29.72	755.0	53.6	12.0	30	NE			1		10			0	0		
Porto Maurizio			29.71	754.5	60.6	15.9		SW			6		10	NE		0	0		
Genoa			29.70	754.4	57.6	13.9	50	SE	12.5	5.6			10	S		0	0		
Piacenza			29.68	753.8	58.5	14.7	34	W	10.5	4.7			10			0	0		
Parma			29.67	753.6	61.3	16.3	35	SW			6		9			0	0		
Bologna			29.67	753.5	65.7	18.7	40	SW			6		5	N		0	0		
Florence			29.81	757.1	60.8	16.0	41	W			4		10	NW		0	0		
Leghorn			29.80	756.8	56.1	13.4	50	W	17.4	7.8			10			0	0		
Siena	28.60	726.5	29.81	757.1	57.6	14.2	39	NW	1.8	0.8			10	W		0.197	5.0		
Urbino	28.16	715.7	29.73	755.1	63.3	17.4	40	SW			4		9			0	0		
Pesaro																			
Ancona			29.72	754.9	64.0	17.8	56	SE			6		6			0	0		
Grosseto			29.78	756.3	65.1	18.4	60	SSE			4		8	S		0	0		
Rome			29.84	757.9	64.8	18.2	56	S	15.0	6.7			5			0	0		
Naples, O. U.			30.88	758.9	67.3	19.6	65	SW			2		3	SW		0	0		
Lecce			29.94	760.4	65.8	18.8	63	SE	34.2	15.3			6			0	0		
Cosenza			29.89	759.1	78.8	26.0	58	S	0.7	0.3			4			0	0		
Riposto, (Sicily)			29.91	759.7	64.8	18.2	82	NE			2		1			0	0		
Palermo			29.80	756.8	66.2	19.0	55	NE	6.3	2.8			1			0	0		
Caltanissetta	27.98	710.8	29.92	760.0	61.2	16.2	54	SE			1		1	NW		0	0		
Sub-Series.																			
Naples S. R.			29.87	758.8	63.9	17.7	71	WSW	2.5	1.1			..k	W		0	0	Foggy	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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Tokio

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.68	753.9	43.2	6.2		S			6								
Groningen			29.76	755.9	42.4	5.8		S			5								
Helder			29.77	756.2	40.5	4.7		SE			4								
Utrecht			29.74	755.5	42.3	5.7	58	S			4		10					Overcast	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.69	754.0	37.0	2.8	66	W	7.8	3.5			5			0.039	1.0		
Brönø			29.70	754.3	30.2	— 1.0	61	NE	7	3			4			0	0		
Christiania			29.65	753.1	41.2	5.1	34	SSW	2.7	1.2			3			0	0		
Tromsö			29.79	756.7	23.4	— 4.8	51	NE	7	3			0			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.50	774.6	58.3	14.6	76	SE	5.3	2.36			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.97	761.1	62.1	16.7	18	NNE	19.0	8.50			0			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.00	762.0	59.5	15.3	56	N	15.4	6.89			4	N		1.319	33.5	Rainy	Capt. D. A. da Cunha.
Lisbon			30.06	763.4	58.1	14.5	24	NNE	28.6	12.8			1	NW		0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 hour, 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.83	757.7	46.2	7.9	59	E	9	4			10						Astronomical Obs.
Wilna			29.74	755.4	48.7	9.3	40	W	11	5			10						Astronomical Obs.
Dorpat			29.79	756.6	43.0	6.1	55	NW	9	4			4						Physical Cabinet.
St. Petersburg			29.77	756.2	42.1	5.6	76	S	16	7			9						Central Physical Obs.
Knoplo			29.71	754.5	31.5	− 0.3	81	E	13	6			0						Ch. Forsten.
Kieff			29.78	756.3	67.1	19.5	51	S	9	4			10						Physical Cabinet.
Nikolaiev			29.63	752.5	65.3	18.5	38	Calm	0	0			0						Kurdakof.
Kertch			30.02	762.4	66.0	18.9	52	ENE	4	2			0						Lagorio.
Moscow			29.88	759.0	58.8	14.9	51	SSW	4	2			7						Meteorological Obs.
Lugan			29.96	760.9	68.4	20.2	22	ESE	34	15			0						Meteorological Obs.
Archangel			29.80	757.0	24.8	− 4.0	68	WNW	18	8			10						Ogorodnikof.
Tiflis	28.67	728.3	30.09	764.3	52.0	11.1	72	Calm	0	0			10						Physical Observatory.
Astrakhan			30.33	770.3	59.7	15.4	31	ESE	22	10			8						Sebastianof.
Kasan			30.08	763.9	59.7	15.4	48	WSW	9	4			9						Physical Cabinet.
Orenburg			29.60	751.9	56.1	13.4	82	SW	4	2			2						Tschernischef.
Ekaterinburg	29.41	741.9	30.20	767.1	56.3	13.5	44	WSW	13	6			9						Meteorological Obs.
Nukuss			30.23	767.8	63.5	17.5	16	ENE	9	4			0						
Kasaly																			Bobrof.
Tashkend	28.61	726.8	30.33	770.3	56.1	13.4	60	Calm	0	0			4						Michelson.
Barnaul			30.42	772.7	33.8	1.0	70	SW	13	6			10						Meteorological Obs.
Yenisseisk			30.00	762.1	32.7	0.4	60	SW	4	2			10						Marks.
Irkutsk	28.65	727.6	30.05	763.3	38.8	3.8	83	NE	11	5			10						Usolzef.
Oorga																			Mossin.
Peking, (China)			29.68	753.9	71.6	22.0	32	WNW	4	2			0						Physical Observatory.
Nertchinsk	27.52	699.0	29.57	751.0	42.0	5.9	46	Calm	0	0			1						Meteorological Obs.
Vladivostock			29.73	755.1	41.7	5.4	59	Calm	0	0			0						
Nikolaievsk, on the Amoor					31.8	− 0.1	91	NE	2	1			10					Snowing	

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 405. meters, or 1,111.8 feet; Ekaterinburg, 395.1? m., or 1,095.2? ft.; Tashkend, in 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.98	761.4	54.9	12.7	38	E	5.1	2.33		0	0			0	0	Clear	Royal Observatory.
San Fernando			29.89	759.1	66.4	19.1	54	WNW	8.1	3.6		1	3	WNW	WNW	0	0		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; 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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	19.8	− 6.8	73	NE			4		7			0.039	1.0		
Umea			29.76	755.9	21.4	− 5.9	80	E			2		7			0	0		
Hernosand			29.71	754.6	20.1	− 6.6	97	ENE			2		10			0.039	1.0	Snowing	
Stockholm			29.62	752.3	41.0	5.0	51	SW			4		5			0	0		
Wisby			29.82	757.3	39.6	4.2	68	W			2		3			0	0		
Sub-Series.																			
Upsala			29.64	752.7	37.8	3.2	57	SSW	11.9	5.3			2	W		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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28.54	724.9	30.01	762.3	39.4	4.1	44	NE			2		1			0.890	22.6	Clear	The Observatory.
Zurich	28.33	719.6	30.03	762.7	37.2	2.9	67	NW			1		3			0.567	14.4	Clear	The Observatory.

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +0.7 mm.; Thermometer, —7.5 cent.; Relative Humidity, —13 per cent.

NOTE.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Constantinople			29.97	761.3	63.5	17.5	34	ESE	3	1.5			0			0	0		
Fao, (Persian Gulf)			30.04	763.0	75.2	24.0		SE			3		10					Raining	
Salonica			29.98	761.4	62.2	16.8		S			2		0						
Valona			29.84	758.0	74.5	23.6		SW			2		2						
Varna			30.04	763.0	59.0	15.0		N			2		2						
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y			29.97	761.3	68.2	20.1	68	SW			2		10n		SW	0.17	4.3	Rainy	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Bathurst, N. B.			29.83	757.7	37.8	3.2	67	Calm	0	0									Hon. J. Ferguson.
Brockville, Ontario			29.86	758.4	49	9.4		Calm	0	0		5c	2s	SW	W	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B.			29.92	760.0	34	1.1	71	W	3	1.3		0	0			0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island			29.94	760.5	35	1.7	78	S	8	3.6		0	0			0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			29.81	757.2	41.7	5.4	61	E			1		4s			0	0	Fair	James Smith, M. A.
Dalhousie, N. B.			29.76	755.9	32.5	0.3	69	W			1					0	0		H. A. Johnson.
Esquimault, B. C.			30.11	764.8	37.1	2.8	91	NE	2	0.9		4cs				0.01	0.3	Clear	W. H. Bevis.
Fredericton, N. B.			29.99	761.7	35.0	1.7	63	NW	2	0.9						0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.95	760.7	26	— 3.3	94	W	6	2.7		0	2s		W	0	0	Fair	James Stewart.
Goderich, Ontario			29.70	754.4	52.5	11.4	87	SW			1		10n			0	0	Threatening	H. J. Strang, M. A.
Granton, Ontario			29.69	754.1	46.0	7.8		E			1		10n			0.41	10.4	Cloudy	James Grant.
*Halifax, N. S.			29.98	761.5	39	3.9	55	W	19	8.5		0	0			0.01	0.3	Clear	F. Allison, M. A.
*Kingston, Ontario			29.84	757.9	44	6.7	76	NE	1	0.4		10cs	0			0	0	Cloudy	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			29.83	757.7	36	2.2	70	SE	14	6.3		0	Haze			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			29.82	757.4	38	3.3	73	Calm	0	0			10ks		S	0	0	Cloudy	J. D. Haney.
*Parry Sound, Ontario			29.73	755.1	42	5.6	91	S	6	2.7		8k	5ks	SE	SE	Inap.	Inap.	Cloudy	Rev. R. Mooley.
*Port Dover, Ontario			29.76	755.9	39	3.9	100	NE	7	3.1			Fog		NE	0.39	9.9	Foggy	H. Morgan.
Port Hastings, N. S.			29.95	760.7	35.8	2.1		NW	10	4.5						0	0	Fine	Peter Grant.
*Port Stanley Ontario			29.73	755.1	45	7.2	98	Calm	0	0			Fog			0.31	7.9	Foggy	M. Payne.
*Quebec, Quebec			29.92	760.0	38	3.3	63	Calm	0	0		2k	0	W		0	0	Clear	Capt. Ash, R. N.
St. John, N. B.			30.02	762.5	37	2.8	76	Calm	0	0						0	0		G. Murdoch, C. E.
*Saugeen, Ontario			29.64	752.8	44	6.7	92	Calm	0	0			10n			0.08	2.0	Cloudy	K. Stewart.
Stayner, Ontario			29.68	753.9	44	6.7	100	S	3	1.3			Fog		S	0.02	0.5	Foggy	R. J. Cole.
Stratford, Ontario			29.73	755.1	42.6	5.9	96	SE	5	2.2			Fog			0	0	Foggy	C. J. MacGregor, M. A.
*Sydney, C. B.			29.92	760.0	42	5.6	68	SW	9	4.0		0	0			0	0	Clear	T. C. Hill.
*Toronto, Ontario			29.77	756.1	40	4.4	95	NE	5	2.2			Fog			0.25	6.3	Foggy	Magnetic Observatory
Woodstock, Ontario			29.83	757.7	41.1	5.1	99	Calm			0		10s			1.08	27.4	Raining	J. Montgomery.

NOTE.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.80	758.4	48	8.9	70	Calm	0	0		Haze	Haze			0	0	Hazy	
Alpena, Mich.			29.65	753.1	37	2.8	90	NW	2	0.9			10s			0	0	Cloudy	
Atlantic City, N. J.			29.89	759.2	50	10.0	93	S	4	1.8			Fog			0.06	1.5	Foggy	
Augusta, Ga.			29.99	761.7	60	20.6	90	S	1	0.4		5cs	5s	SW		0.02	0.5	Cloudy	
Baltimore, Md.			29.90	759.4	56	13.3	87	NE	5	2.2			10s			0	0	Cloudy	
Barnegat, N. J.			29.91	759.7	48	8.9	92	SE	2	0.9		8c	0	NW		0.65	16.5	Fair	
Benton, Montana	27.17	690.1	29.07	761.2	35	1.7	70	SW	10	4.5		5c	0			0	0	Fair	
Bismarck, Dakota	28.18	715.8	29.87	758.7	30	— 1.1	48	W	4	1.8		0	Haze		W	0	0	Clear	
Boston, Mass.			29.95	760.7	48	8.9	42	NE	6	2.7		1cs	Sm'e			0	0	Smoky	
Breckenridge, Minn.			29.97	761.2	29	— 1.7	89	NW	4	1.8		2cs	0			0	0	Fair	
Buffalo, N. Y.			29.70	754.4	50	10.0	93	NE	3	1.3			10s			0.33	8.4	Cloudy	
Burlington, Vt.			29.85	758.2	46	7.8	69	S	1	0.4		5ck	2s	E		0	0	Cloudy	
Cairo, Ill.			29.70	754.4	62	16.7	100	Calm	0	0			10n		SW	0.27	6.9	Light rain	
Cape Hatteras, N. C.			29.34	760.5	62	16.7	88	SW	12	5.4		5c	Haze			0	0	Fair	
Cape Henry, Va.			29.83	758.9	73	22.8	63	SW	16	7.2		5c	Haze	W		Inap.	Inap.	Fair	
Cape May, N. J.			29.88	758.9	47	8.3	100	E	6	2.7			Fog			0.10	2.5	Foggy	
Charleston, S. C.			30.01	763.0	69	20.6	90	S	5	2.2		5ck	2s	W		0	0	Fair	
Cheyenne, Wyoming	23.94	608.1	29.88	758.9	17	— 8.3	83	NW	12	5.4		0	0			0.01	0.3	Clear	
Chicago, Ill.			29.37	751.1	40	4.4	91	NW	16	7.2			10s			1.24	31.5	Cloudy	
Cincinnati, Ohio			29.52	749.8	64	17.8	89	SE	6	2.7			10n		S	1.12	28.4	Light rain	
Cleveland, Ohio			29.66	753.4	59.2	15.1	90	SE	7	3.1			10ks		SW	0.28	7.4	Cloudy	
Colorado Springs, Col.	24.01	609.8	29.48	748.9	21	— 6.1	58	N	8	3.6		2cs	2s			0	0	Fair	
Corsicana, Tex.			29.78	756.4	55	12.8	80	NW	12	5.4			10s			0	0	Cloudy	
Davenport, Iowa			29.62	752.3	52	11.1	93	NE	4	1.8			10s			1.07	27.2	Threatening	
Denison, Tex.			29.76	755.9	51	10.6	71	N	16	7.2			10s			0	0	Cloudy	
Denver, Col.	24.78	629.4	30.00	762.0	24	— 4.4	87	N	2	0.9			10s		N	0.15	3.8	Cloudy	
Detroit, Mich.			29.60	751.8	52	11.1	96	E	5	2.2			Fog			0.32	8.1	Foggy	
Dodge City, Kan.	27.42	696.5	29.80	756.9	30	— 1.1	94	NW	18	8.0			10s		NW	0.01	0.3	Cloudy	
Dubuque, Iowa			29.67	753.6	44	6.7	84	N	8	3.6			10s			0.95	24.1	Cloudy	
Duluth, Minn.			29.94	760.2	35	1.7	70	NE	4	1.8		0	0			0	0	Clear	
Eastport, Me.			29.95	761.0	40	4.4	56	SW	3	1.3		0	Haze			0	0	Clear	
Erie, Pa.			30.43	770.4	19	— 7.2	92	NW	20	8.9			10n		NW	Inap.	Inap.	Light snow	
Escanaba, Mich.			29.74	755.4	35	1.7	90	N	8	3.6			10s		N	0.08	2.0	Cloudy	
Fort Gibson, Indian Terr.			29.47	753.6	52	11.1	86	NW	12	5.4			10s			0.44	11.2	Cloudy	
Ft. St. Michaels, Alaska			29.70	754.1	7	—13.9		SE	1	0.4		6c,ck	0					Fair	
Fort Sill, Indian T.	28.64	727.4	29.75	753.6	45	7.2	85	N	16	7.2		0	8ks		N	0.07	1.8	Cloudy	
Fort Sully, Dakota																			
Galveston, Tex.			29.72	754.9	72	22.2	95	W	4	1.8			10s		W	0	0	Cloudy	
Grand Haven, Mich.			29.52	749.8	54	12.2	96	NE	10	4.5			10s		NE	0.45	11.4	Cloudy	
Indianapolis, Ind.			29.54	750.3	62	16.7	83	NW	1	0.4		5cs	2s	W	W	0.32	8.1	Clearing	
Indianola, Tex.			29.80	756.9	72	22.2	90	NW	8	3.6			10s			0	0	Cloudy	
Jacksonville, Fla.			30.07	763.8	70	21.1	90	E	4	1.8		10k	0	SW		0	0	Cloudy	
Keokuk, Iowa			29.60	751.8	50	10.0	100	N	3	1.3			10n		N	1.76	44.7	Light rain	
Key West, Fla.			30.58	761.0	76.2	24.6	64	SE	11	4.9		5k	0	SE		0	0	Fair	
Kittyhawk, N. C.			29.95	760.7	65	18.3	84	W	16	7.2		5c	Haze	NW		0	0	Fair	
Knoxville, Tenn.			29.82	757.1	68	20.0	79	SW	14	6.3			10ks		SW	0.22	5.6	Cloudy	
La Grosse, Wis.			29.76	755.9	38	3.3	100	N	11	4.9			10n			0.17	4.3	Heavy rain	
Leavenworth, Kan.			29.65	753.4	42	5.6	90	N	12	5.4			10s		N	0.98	24.9	Cloudy	
Lexington, Ky.	28.60	726.4	29.54	752.8	65	18.3	80	S	28	12.5			10n		S	2.00	50.8	Light rain	
Long Branch, N. J.			29.92	760.0	47	8.3	92	SW	1	0.4			10s			0.08	2.0	Cloudy	
Louisville, Ky.			29.51	752.1	66	18.9	80	SW	12	5.4			10n		SW	0.85	21.6	Light rain	
Lynchburg, Va.			29.85	758.4	64	17.8	73	W	2	0.9			10s			0	0	Cloudy	
Malone, N. Y.			29.75	756.7	47	8.3	54	S	6	2.7			10s		SW	0	0	Cloudy	
Manhattan, Kan.	28.61	726.7	29.77	756.1	35	1.7	100	NW	24	10.7			10s			0.19	4.8	Threatening	
Marquette, Mich.			29.79	756.7	37	2.8	90	NW	10	4.5			10s			0	0	Cloudy	
Memphis, Tenn.			29.73	755.1	69	20.6	90	SE	12	5.4			10ks		S	1.25	31.7	Threatening	
Milwaukee, Wis.			29.65	753.1	37	2.8	90	N	25	11.2			10ks		N	0.60	15.2	Cloudy	
Mobile, Ala.			29.96	761.0	71	21.7	90	S	12	5.4			10s		S	0.01	0.3	Cloudy	
Montgomery, Ala.			29.97	761.2	69	20.6	90	S	6	2.7			10s		SW	0	0	Cloudy	
Morgantown, W. Va.			29.72	754.9	62	16.7	71	N	2	0.9			10s		SW	Inap.	Inap.	Threatening	
Mt. Washington, N. H.	23.63	600.2	29.90	761.7	20	— 1.7	80	NW	24	10.7		8s	0			0	0	Fair	
Nashville, Tenn.			29.76	755.9	71	21.7	75	SW	9	4.0			10ks		SW	0.04	1.0	Threatening	
New Haven, Conn.			29.52	750.0	51	10.6	86	SE	4	1.8			10s, fog			0.05	1.3	Cloudy	
New London, Conn.			29.96	761.0	48	8.9	85	SE	6	2.7			10s		S	0	0	Cloudy	
New Orleans, La.			29.89	759.2	74	23.3	83	S	12	5.4			10ks		S	0	0	Cloudy	
Newport, R. I.			29.95	760.7	48	8.9	70	SE	4	1.8		0	Haze			0	0	Clear	
New York, N. Y.			29.93	760.2	50	10.0	93	E	4	1.8			Fog			0.01	0.3	Foggy	
Norfolk, Va.			29.90	759.4	68	20.0	74	SW	12	5.4		2c	Haze			0	0	Fair	
North Platte, Neb.	27.03	686.5	29.67	753.6	32	0.0	79	N	6	2.7			10s			0.09	2.3	Cloudy	
Omaha, Neb.	28.70	729.0	29.78	756.4	37	2.8	71	N	19	8.5			10s		NE	0	0	Cloudy	
Oswego, N. Y.			29.78	756.4	53	11.7	79	SE	6	2.7			10s		W	0.01	0.3	Cloudy	
Pembina, Dakota			29.91	759.7	26	— 3.3	81	Calm	0	0		0	0			0	0	Clear	
Philadelphia, Penn.			29.91	759.4	54	12.2	86	SE	4	1.8			Fog			0.05	1.3	Foggy	
Pike's Peak, Colorado	17.39	442.7	29.60	751.8	— 6	—21.1	61	NW	16	7.2		0	5s			Inap.	Inap.	Fair	
Pittsburgh, Penn.			29.70	754.1	60	15.6	88	E	4	1.8			10s			0.28	7.1	Cloudy	
Port Huron, Mich.			29.66	753.4	47	8.3	92	SE	6	2.7			10n		S	0.82	8.1	Light rain	
Portland, Me.			29.98	761.5	43	6.1	59	NE	4	1.8		0	Haze			0	0	Clear	
Portland, Oregon			30.20	767.1	47	8.3	85	Calm	0	0			10n			Inap.	Inap.	Light rain	
Punta Rassa, Fla.			30.11	764.8	69.7	20.9	79	E	6	2.7		8cs	Sm'e	NE	E	0	0	Cloudy	
Rochester, N. Y.			29.72	754.9	53	11.7	86	S	4	1.8		10cs	Sm'e			0.19	4.8	Cloudy	
Salt Lake City, Utah	25.72	653.3	30.05	763.3	30	— 1.1	48	Calm	0	0		0	0			0	0	Clear	
Sandy Hook, N. J.			29.91	759.7	50	10.0	93	SE	10	4.5			10s		SE	0.20	7.4	Cloudy	
San Diego, Cal.			30.21	767.3	46	7.8	92	Calm	0	0		0	0			0	0	Clear	
San Francisco, Cal.			30.22	767.6	50	10.0	86	S	8	3.6		5c	0			0	0	Fair	
Santa Fe, N. M.	23.07	586.0	29.61	752.1	16	— 7.8	66	SE	4	1.8		0	2s			0.42	10.7	Fair	
Savannah, Ga.			30.06	763.5	70	21.1	84	SW	5	2.2			10s			0.13	3.3	Cloudy	
Shreveport, La.			29.76	755.9	68	20.0	95	SSE	3	1.3			10ks		S	0.26	6.6	Cloudy	
Smithville, N. C.			30.04	762.7	66	18.9	90	SW	4	1.8		8ck	0	W		0	0	Cloudy	
Springfield, Mass.			29.93	760.2	48	8.9	62	N	4	1.8		5ck	Sm'e	W		0	0	Fair	
St. Louis, Mo.			29.95	753.1	61	16.1	87	SW	2	0.9			10n			0.49	12.4	Light rain	
St. Marks, Fla.			30.05	763.3	71	21.7	90	S	8	3.6		0	5s		S	0	0	Fair	
St. Paul, Minn.			29.86	758.4	33	0.6	69	N	12	5.4		10cs	0	NW		0	0	Cloudy	
St. Paul's Island, Alaska			29.99	761.7	29	— 1.7	88	WNW	2	0.9		10ck	0	WNW		0.01	0.3		
Thatcher's Island, Mass.			29.96	761.0	42	5.6	74	NE	4	1.8		0	0			0	0	Clear	
Toledo, Ohio			29.54	750.3	60	15.6	94	Calm	0	0			10n		NE	0.10	2.5	Light rain	
Tucson, Arizona	27.61	701.3	30.20	767.1	37	2.8		S				0	0			0	0	Clear	
Tybee Island, Ga.			30.12	765.0	69	20.6	90	S	4	1.8		5c	2s	S		0	0	Fair	
Vicksburg, Miss.			29.81	756.9	71	21.7	90	SW	8	3.6		10k	Haze	S		1.23	31.2	Cloudy	
Virginia City, M. T.	24.26	616.2	29.74	755.4	23	— 5.0	73	Calm	0	0		1c	0	NW		Inap.	Inap.	Clear	
Washington, D. C.			29.87	758.7	56	13.3	93	E	4	1.8			10s			Inap.	Inap.	Threatening	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			30.00	762.0	70	21.1	70	SW	10	4.5		8cs	0	W		0	0	Cloudy	
Wood's Holl, Mass			30.13	765.3	16	— 8.9	49	NW	13	5.8		0	0			0	0	Clear	
Wytheville, Va	27.58	700.5	29.60	754.1	56	13.3	92	Calm	0	0			10n		W	0.05	1.3	Light rain	
Yankton, Dakota	28.66	728.0	29.98	761.5	32	0.0	84	NW	7	3.1			10s			0	0	Cloudy	
Yuma, Arizona			30.12	765.0	47	8.3		Calm				0	0			0	0	Clear	
Sub Series.																			
Bridgetown, B'b'dos, W. I.			30.00	762.0	80	26.7	78	E	9	4.0		5ck	0	E		0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.96	761.0	77	25.0	78	E				5k	5ks			0.08	2.0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.23	767.8	76	24.4	56	E	12	5.4		4ck	8s,k	NE		0	0	Cloudy	W. S. Cameron.
Kingston, Jamaica, W. I.			30.10	766.8	77	25.0	72	Calm	0	0		2k	2s			0	0		James Gall.
Santiago de Cuba, W. I.			29.82	757.4	76	24.4	56	NE	6.0	2.7		2ck	0	NE		0	0	Fair	Robert Mason.
Havana, Cuba, W. I.			30.05	763.3	74	23.3	72	NE	4.8	2.1		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			30.13	765.3	67.5	19.7	79	Calm	0	0		0	0			Inap.	Inap.	Clear	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.16	689.8	29.92	760.0	70	21.1	79	W	5.0	2.2		2c	0	NE		0.07	1.8	Fine, clear	C. Partridge.
Paramaribo, D. Guiana, S. A.			29.99	761.7	82	27.8	82	E			3		5ks			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.04	762.9	82.4	28										0.128	3.25		Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1			66.0	18.9	84		0	0		1k	8n			0	0	Cloudy	Thomas Herran.
St. John's, Newfoundland.			29.86	758.4	35.0	1.7	70	SE				10k	10s			0.01	0.3	Cloudy	John Delaney.
York Factory, B. A.			29.84	757.9	30	— 1.1	84	NE	8	3.6			10n			0.09	2.3		J. Fortescue.
Honolulu, Oahu, H. I.			30.10	764.5	73	22.8	95	NE			2					0.10	2.5		E. P. Church.
Makawao, Maui, H. I.	27.90	708.6	30.07	763.8	60	15.6	71	Calm	0	0		0	8k			0	0		F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	Weather.

Note.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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 APRIL 14, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.87	758.6	65.3	18.5	63	Calm			0		2			0.217	5.5	Clear	Charnot.
Algiers			29.78	756.5	59.4	15.2	91	N			1		9			0.748	19.0	Hidden	Peter.
La Calle					64.4	18.0		NE			1		3			0	0	Fair	Kunts.
Tunis			29.66	753.4	71.6	22.0	50	W			3		7			0	0	Cloudy	Jacques
Sfax			29.71	754.5	78.8	26.0	13	E			4		1			0	0	Clear	Chauvey.
Saida			29.72	755.0	61.7	16.5	56	N			1		2			0.327	8.3	Clear	Millot.
Tebessa			29.75	755.7	66.9	19.4		W			1		5			0	0	Fair	Colin.
Geriville			29.76	755.9	67.5	19.7	46	S			4		2			0	0	Clear	Buard.
Laghouat			29.67	753.6	77.0	25.0	11	SW			4		5			0	0	Fair	Guyot.
Biskra			29.56	750.9	84.6	29.2	28	Calm			0		4			0	0	Fair	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.95	760.7	36.1	2.3	93	Calm			0		10			1.012	25.7	Snowing	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.04	762.9	42.3	5.7	90	NE			1		10			0.469	11.9		I. R. Observatory.
Eperies			29.94	760.5	42.3	5.7	83	NW			2		10		S	0.307	7.80		Julius Mikolik.
Gratz	28.72	729.6	29.95	760.7	44.2	6.8	70	WSW			2		10			0	0		Andreas Rospini.
Hermannstadt	28.39	721.2	29.74	755.4	74.7	23.7	39	SE			3		7			0	0		Prof. Reissenberger.
Kremsmünster	28.56	725.3	29.94	760.4	37.4	3.0	83	E			5		10			0.138	3.5		Prof. C. Wagner.
Lemberg			29.91	759.7	41.0	5.0	94	NE			1		10			0.020	0.5		Dr. T. Stanecki.
Nyiregyhaza																			Habssuda Daniel.
Pola			29.84	758.0	48.4	9.1	89	E			1		108			0.237	6.02		I. R. Hydrographic Office
Szegedin			29.89	759.3	53.8	12.1	60	N			1		10			0	0		Karl Stancel.
Trieste			29.85	758.2	48.0	9.4	61	ENE			2		10			0.634	16.1	Drizzling	Prof. V. Faroifi.
Vienna			29.93	760.3	41.4	5.2	75	NNE			2		10			0.024	0.6		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.82	757.5	48.9	9.4	44	ESE			3		10			0	0		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.24	768.1	41.0	5.0		NW	16	7.2			3			0.105	2.67	Blue sky	William Boswell.
Ardrossan			30.25	768.9	45	7.2		NW			4		5					*D. clouds	William McNeil.
Armagh Observatory			30.30	769.6	44.6	7.0		NE	12	5.4			5					*D. clouds	S. Call, for Dr. Robinson
Bidston, Liverpool Obs			30.12	765.0	45.0	7.2		NNE	28	12.5			7					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			30.28	769.1	46.9	8.3		NNE			1–2		2					*D. clouds	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			30.0[illegible]	762.0	82.5	28.1		NE			2		6					*D. clouds	Sergt. J. F. Halanen.
Cambridge Observatory			29.97	761.2	46.0	7.8		NNE			3		7					*D. clouds	H. Todd.
Cardington			29.97	761.2	40.0	4.4		E			3		7			Blank	Blank	Overcast	John McLaren.
Carlisle			30.20	767.1	45.9	7.7		NE			5		7			0	0	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E			29.99	761.7	39.7	4.3		SW			2		6					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	28.48	723.4	30.05	763.3	32.0	0.0		N			7		10					Snowing	R. E. Power.
Donaghadee			30.23	767.8	46	7.8		N			4		2					Blue sky	J. Mac Gowan.
Dover			29.85	758.2	43	6.1		NE			5		7					¾ clouded	J. Costello.
Eccles (near Manchester.)			30.08	764.0	46.5	8.1		NE	8.8	3.9			2					Squally	Thomas Mackereth.
Falmouth Observatory			30.01	762.2	43.5	6.4		NNW	51	22.8			3					Squally	The Staff.
Fort Napier, (Natal)	27.80	706.1	30.04	763.0	78.4	23.0		SE			3		1					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.86	758.4	87.0	30.6		N			2		5					*D. clouds	
Galway, Queen's College			30.24	768.1	46	7.8		NNW			1		3					*D. clouds	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean			29.71	754.6	65.0	18.3		WNW			5		1					*D. clouds	Pvt. C. Altken, A. H. C.
Glasgow Observatory			30.22	767.6	44.8	7.1		E			1		3					Fine	Lewis Stuart.
Great Yarmouth			29.97	761.2	44	6.7		E			5		2			Blank	Blank	Blue sky	G. T. Watson.
Greenwich Royal Obs			29.88	758.9	41.1	5.1		ENE			5		10			Blank	Blank	Overcast	The Staff, for G. B. Airy.
Guernsey			29.81	757.2	41.5	5.3		NNW			7		8			Blank	Blank	Squally.	Dr. S. E. Hoskins.
Halifax, Moorside Obs.																			L. J. Crossley
Helston			30.00	762.0	48	8.9		N			7		4c			0.8	20.3	Fine	M. P. Moyle.
Holyhead			30.19	766.8	44	6.7		NNE			6		2					Blue sky	John Tilston.
Kew Observatory			29.88	758.9	41.1	5.1		ENE	27	12.1			7					*D. clouds	The Staff.
Kingstown			30.28	769.1	41	5.0		N			5		7			Blank	Blank	*D. clouds	George Mitchell.
Leicester Museum			30.04	763.0	37.0	2.8		NE			2		10					Raining	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.67	753.6	69.0	20.6		SE			2		8k						Fred. Travis, Pvt.A.H.C.
Nairn			30.25	768.3	45	7.2		NE			1		2					¼ clouded	W. D. Penny.
Nassau, Bahamas			30.14	765.5	77.3	25.2		SE			6		8					*D. clouds	Surg.-Maj. Henry.
Nottingham			30.06	763.5	39.4	4.1		NNE			6		10d		NE	0.081	2.06	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.02	762.5	34.2	1.2		NNE			4		10					Raining	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.92	760.0	39	3.9		NE			4		10					Gloomy	J. Lucas.
Plymouth			29.96	761.0	45	7.2		N			5		5					*D. clouds	John Merrifield.
Roche's Point			30.22	767.6	46	7.8		N			4		2					Fine	W. Kennedy.
Saint Ann's Head																			John. C. Walker.
Saint Helier, (Jersey)			29.76	755.9	38.8	3.8		NE			6		10					Raining	A. P. Amy.
Sandwick Manse (Orkneys			30.2[illegible]	768.6	37.8	3.2		NNW	13	5.8			0					Blue sky	Rev. Chas. Austin, LL.D.
Scarborough																			F. Shaw.
Scutari Cemetery (Turkey)			29.96	761.0	63.2	17.3		SW			1		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			30.08	764.0	42.4	5.8		ENE			6		10			0.001	0.03	Gloomy	W. F. Cooper.
Silloth Rectory			30.21	767.3	47.0	8.3	66	N			4		3			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			30.11	764.8	43.6	6.4		NE			4		5					*D. clouds	S. J. Perry.
Stornoway, Lewis C., Hebr.			30.26	768.6	42	5.6		W			1		2					Blue sky	John Smith.
Stratfield Turgiss			29.84	757.9	44.2	6.8		N			1–2		8					Squally	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			30.22	767.6	43	6.1		NNE			3		7					*D. clouds	John Trotter.
Truro, Royal Institution			30.05	763.3	47	8.3		N			8		4			Blank	Blank	*D. clouds	W. Newcombe.
Valencia Observatory			30.29	769.4	46.9	8.3		NNE	11	4.9			5					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man																			
Cape Good Hope Obs			30.08	764.0	85.6	29.8	41	SSE	7	3.1			1						The Staff, for E. J. Stone.
Leith, Restalrig Park			30.27	768.7	44.0	6.7		NE			2					0.03	0.8	Fine	Andrew Gibb.
Mauritius			29.84	757.9				SSW	3.0	1.3						0.23	5.8		
Monach Lt-house, Hebrides			30.17	766.3	41	5.0		Calm			0	3	0	S		0	0	Solar halo	J. Youngclause.
North Unst, (Shetland Is.)			30.19	766.8	38	3.3		NW			4	2	2	NW					

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			30.09	764.3	43.9	6.6	53	SSE			2		5						
Fanöe			30.12	765.0	43.2	6.2	62	W			4		2						
Godthaab, (Greenland)			29.61	752.2	33.6	0.9	90	SW			2		10						
Stykkisholm, (Iceland)			29.93	760.3	30.7	−0.7	94	SE			4		10						
Thorshavn, (Faröe)			30.26	768.6	33.1	0.6	57	NW			2		4						
Vestervig			30.07	763.6	42.4	5.8	76	WNW			6		4					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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.70	754.3	47.3	8.5	66	NW			1		5nk		NW	0.354	9.0	Cloudy	Normal School.
Amiens			29.75	755.6	40.0	4.8	72	SSW			1		10			0.283	7.2	Covered	Normal School.
Avignon			29.79	756.6	45.7	7.6	64	N			2		10			0.04	1.	Covered	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			29.78	756.3	40.1	4.5	73	SE			2		10		SE	0.35	9.	Covered	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			29.82	757.4	41.7	5.4	94	SW			4		10		SSW	0.071	1.8	Covered	Normal School.
Brest			29.90	759.4	45.5	7.5	77	N			6		10		N	0.108	2.75	Hailing	Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			29.81	757.2	40.6	4.8	42	W			1		8		W	0.024	0.6	Very cloudy	Puy de Dome Obs.
Commercy			29.78	756.4	47.5	8.6	43	SSE			2		10n		SSE	0	0	Covered	Normal School.
Commune de Gréasque*			29.75	755.6	41.0	5.0	78	NW			4		10		SE	Inap.	Inap.		M. Kina.
Grenoble			29.75	755.6	43.7	6.5	60	NW			8		5ck		NW	0	0	Cloudy	Normal School.
Le Mans			29.75	755.6	38.3	3.5	83	NW			4		8		NW	0.441	11.2	Very cloudy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			29.87	758.7	41.5	5.3	66	W			2		8		SW	0	0	Very cloudy	Normal School.
Mâcon			29.81	757.1	39.6	4.2	70	NW			6		10			0.188	3.5	Covered	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			29.82	757.3	45.4	7.2	44	NW			4		10		N	0	0	Covered	Normal School.
Orleans																			Normal School.
Paris Observatory			29.75	755.6	40.1	4.5	69	SE			2		10		S	0.222	5.66	Covered	National Observatory.
Parthenay																			Normal School.
Privas			29.84	758.0	41.7	5.4		N			4		10		N	0.98	2.5	Covered	Normal School.
La Roche-sur-Yon			29.85	758.2	46.9	8.3	52	NW			4		5		SE	0.366	9.3	Cloudy	Normal School.
Rochefort, Observatory			29.89	759.3	51.1	10.6	56	W			3		5		E	0	0	½ Covered	Naval Observatory.
Rouen			29.72	754.8	42.6	5.9	70	SE			6		10		E	0.512	13.0	Covered	Normal School.
Saint Lo			29.73	755.2	38.5	3.0	97	N			1		10		N	0.307	7.8		Normal School.
Tarbes	28.74	729.9			49.1	9.5		W			4		2		E	0	0	Slightly cl'dy	Normal School.
Toulouse																			Normal School
Villefranche			29.85	758.2	39.4	4.1	80	NW			2		10		N	0.055	1.40	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.97	761.2	75.2	24	83	NNE			2		10kn			Blank	Blank		L'Abbé Marchési.
Gorée																			
Marseilles			29.76	755.8	40.3	4.6	101	NW			2		10			0.65	16.55	Rainy	Marseilles Observatory.
Mont-Louis																			—, Faiguère.
Montsouris, Paris			29.72	755.0	41.4	5.2	78	SE			2		10		SSE	0.283	7.2		Montsouris Observ'tory.
Perpignan			29.86	758.4	41.4	5.2	52	N	18.6	8.33			10		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			29.75	755.6	39.7	4.3	77	S			1		10			0.354	9.0	Very cloudy	E. Renou.
Toulouse			29.94	760.4	39.7	4.3	55	NNW			3		5			0.047	1.2		Toulouse Observatory.
Tours			29.78	756.3	41.4	5.2	74	W			3		10		W	0.449	11.4		C. Marquet.
Versailles, (near Paris)			29.72	755.0	43.5	6.4	65	S			2		10			0.365	9.27	Covered	Dr. A. Béringy.
Zi-Ka Wei, (near Shanghai)																			H. Le Leo, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 342 m., or 1,060.9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

* Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	758.3	47.3	8.5	37	E			4		4	SE		0	0		Prof. T. Hoh.
Berlin			30.08	763.9	48.4	9.1	37	E			1		2			0	0		Prof. Arndt.
Breslau			30.10	764.5	45.5	7.5	46	NE			4		5			0	0		Dr. P. Neugebauer.
Carlsruhe			29.85	758.3	45.0	7.2	47	E			5		2			0	0		A. Senz.
Cassel			29.89	759.2	51.6	10.9	27	E			6		2	E		0	0		Dr. H. Mohl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main			29.94	760.4	51.4	10.8	26	SE			3		8			0	0		Physical Society.
Friedrichshafen	28.40	721.4	29.87	758.7	41.0	5.0	58	NE			4		1			0	0		M. Wilhelm.
Hamburg			30.09	764.2	47.5	8.6	48	E			2		5c,os			0	0	Fair	Deutsche Seewarte.
Kiel			30.10	764.5	45.3	7.4	62	NE			2		2			0.008	0.2		Prof. G. Karsten.
Königsberg			30.09	764.2	41.0	5.5	58	NW			5		2			0.024	0.6		Prof. E. Luther.
Köslin			30.11	764.7	42.4	5.8		W			1		2			0.224	5.7		H. Müller.
Leipsic			30.03	762.7	48.9	9.4	59	E			4		2	E		0	0		Prof. Bruhns.
Memel			30.00	762.0	40.5	4.7	84	SW			4		5			0.079	2.0		Reinbrecht & Skalweit.
Münster			29.95	760.6	49.1	9.5	36	NE			2		4			0	0		Prof. E. Heis.
Neufahrwasser			30.02	762.4	45.5	7.5	58	NNW			3		6			0.004	0.1		A. Lothes.
Posen			30.11	764.7	46.9	8.3	35	W			2		1			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.84	757.8	47.3	8.5	52	NE			1		5	SE		0	0		Dr. Schur.
Stuttgart			29.86	758.4	44.1	6.7	50	E			2		6			0	0		Prof. Schoder.
Thorn			30.06	763.4	50.2	10.1	34	NW			4		2			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.78	756.5	48.0	8.9	38	SE			6		9			0	0		Prof. Flosch.
Wustrow, Naval School			30.04	763.0	43.5	6.4	57	N			2		2			0	0		E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	66.9	19.4		SW										Very clear...	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.84	757.9	48.7	9.3	50	NE	4.3	1.9			9			0	0		
Padua			29.80	757.0	53.8	12.1	54	NE	11.9	5.3			9	SW		0	0		
Vicenza			29.81	757.1	55.4	13.0	45	E	5.6	2.5			5	E		0	0		
Verona			29.73	755.2	59.9	15.5	87	E			4		4			0	0		
Bergamo	28.43	722.1	29.75	755.6	53.6	12.0	42	SE			2		6			0	0		
Domodossola	28.74	730.1	29.78	756.5	52.7	11.5	44	SSE			4		9			0	0		
Milan			29.80	757.0	57.0	13.9	48	ESE			1		8	ESE		0	0		
Pavia			29.80	757.0	53.6	12.0	37	NE			1		8	SW		0	0		
Moncalieri			29.80	757.0	52.3	13.3	42	E	4.3	1.9			7	SE		0	0		
Mondovi	28.88	708.0	29.80	756.8	46.2	7.9	63	WSW			2		8			0.169	4.3		
Porto Maurizio			29.79	756.7	56.3	13.5		E			6		4	NE		0	0		
Genoa			29.78	756.5	57.4	14.1	34	SE	5.6	2.5			4	E		0	0		
Piacenza			29.80	756.8	55.2	12.9	40	E	8.1	3.6			8	S		0	0		
Parma			29.84	757.8	56.7	13.7	49	NE			4		9			0	0		
Bologna			29.87	758.8	60.4	15.8	44	W			1		5	E		0	0		
Florence			29.83	757.7	62.6	17.0	47	NE			2		10	NE		0	0		
Leghorn			29.81	757.2	55.6	13.1	42	WNW	3.1	1.4			7			0	0		
Siena	28.58	725.9	30.78	756.5	49.3	9.6	68	NNW	0	0			10	E		0.181	4.6		
Urbino	28.26	717.9	29.82	757.3	49.1	9.5	72	SSE			2		10			0.181	4.6	Light rain...	
Pesaro																			
Ancona			29.84	758.0	56.5	13.6	69	E			4		10			0.276	7.0	Light rain....	
Grosseto			29.82	757.3	53.1	11.7	68	NE			2		9	SE		0	0		
Rome			29.77	756.1	57.6	14.2	67	W	9.8	4.4			9	SSE		0	0		
Naples, O. U			29.77	756.2	71.6	22.0	42	SW			4		9	SW		0	0		
Lecce			29.89	759.2	70.9	21.6	28	SSE	26.2	11.7			7	SW		0	0		
Cosenza			29.77	756.2	71.6	22.0	66	ESE	39.1	17.5			9			0	0		
Riposto, (Sicily)			29.85	758.2	65.6	18.6	71	SE			2		3	N		0	0		
Palermo			29.59	751.5	73.4	23.0	34	NE	4.9	2.2			1			0	0		
Caltanissetta	27.74	704.7	29.68	753.9	61.5	16.4	55	E			6		1	W		0	0		
Sub-Series.																			
Naples, S. R.			29.76	755.9	70.5	21.4	41	S	1.3	0.6			..ks	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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.97	759.2	47.8	8.8		ESE			5								
Groningen			29.97	761.3	49.1	9.5		E			4								
Helder			30.00	762.0	46.8	8.2		E			4								
Utrecht			29.96	760.9	50.5	10.3	27	E			4		5					Cloudy.	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.02	762.5	38.8	3.8	42	NNW	14.8	6.6			0			0	0		
Brönø			30.11	764.7	28.4	— 2.0	48	Calm	0	0			0			0	0		
Christiania			29.97	761.2	42.3	5.7	31	NW	5.4	2.4			4			0	0		
Tromsö			29.04	760.5	24.1	— 4.4	63	SW	25	11			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.43	772.9	58.0	14.8	73	S	10.6	0.73			7			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.88	759.0	57.7	14.3	18	N	27.0	12.08			3			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.06	763.4	61.7	16.5	56	N	6.6	2.95			6	N		0	0	Snowing	Capt. D. A. da Cunha.
Lisbon			30.01	762.2	55.0	12.8	35	NNE	31.1	13.9			0			0.012	0.3		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 hour, 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			30.04	762.9	44.1	6.7	63	NNW	4	2			10						Astronomical Obs.
Wilna			29.96	760.9	44.1	6.7	76	W	9	4			10						Astronomical Obs.
Dorpat			30.01	762.2	43.0	6.1	50	ENE	7	3			9						Physical Cabinet.
St. Petersburg			30.02	762.4	39.4	4.1	58	W	7	3			10						Central Physical Obs.
Kuoplo			29.95	760.7	33.6	0.9	100	W	18	8			8					Snowing	Ch. Forsten.
Kieff			29.85	758.1	67.8	19.9	40	S	13	6			7						Physical Cabinet.
Nikolaiev			30.09	764.3	66.4	19.1	34	SSW	20	9			0						Kurdakof.
Kertch			30.10	764.4	62.4	16.9	63	S	4	2			1						Lagorio.
Moscow			29.96	761.0	62.8	17.1	50	SSW	13	6			2						Meteorological Obs.
Lugan			30.05	763.2	70.0	21.1	17	SE	40	18			0						Meteorological Obs.
Archangel			29.94	760.5	41.9	5.5	53	E	13	6			9						Ogorodnikof.
Tiflis	28.70	728.9	30.09	764.2	62.2	16.8	49	SSW	9	4			3						Physical Observatory.
Astrakhan			30.45	773.4	61.7	16.5	32	SE	22	10			3						Sebastianof.
Kasan			30.27	768.8	59.5	15.3	38	WSW	9	4			6						Physical Cabinet.
Orenburg			30.56	776.1	66.4	19.1	52						0						Tschernischef.
Ekaterinburg	29.35	745.4	30.34	770.5	59.2	15.1	84	SW	20	9			1						Meteorological Obs.
Nukuss			30.24	768.0	65.3	18.5	27	NNE	13	6			2						
Kasaly																			Bobrof.
Tashkend	28.62	727.0	30.32	770.1	59.5	15.3	41	NW	9	4			4						Michelson.
Barnaul			30.41	772.3	40.1	4.5	73	NE	13	6			0						Meteorological Obs.
Yeniseisk			30.25	768.4	23.4	— 4.8	58	NW	2	1			0						Marks.
Irkutsk	28.60	726.5	30.01	762.2	39.7	4.3	60	NW	13	6			10						Usolzef.
Oorga																			Mossin.
Peking, (China)			29.71	754.7	72.3	22.3	22	SW	4	2			2						Physical Observatory.
Nertchinsk	27.56	700.0	29.64	752.8	37.4	3.0	76	Calm	0	0			1						Meteorological Obs.
Vladivostock			29.69	754.2	46.6	8.1	43	E	7	3			0						
Nikolaievsk, on the Amoor					32.7	0.4	90	Calm	0	0			10					Raining	

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 405. meters, or 1,411.8 feet; Ekaterinburg, 335.42 m., or 1,095.2? ft.; Tashkend, m 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.58	758.9	48.0	8.9	41	N	22.4	10.0		0	6			0	0	Cloudy	Royal Observatory.
San Fernando			25.79	756.7	63.1	17.3	78	WNW	16.6	7.4		0	2		W	0	0		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; 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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.10	762.6	20.8	— 6.2	74	N			2		0			0	0		
Umea			30.10	764.4	30.2	— 1.0	69	NW			2		6			0	0		
Hernosand			30.11	761.7	25.9	— 3.4	95	Calm			0		8			0	0		
Stockholm			29.97	761.3	40.1	4.5	54	NW			2		4			0	0		
Wisby			30.08	764.0	37.0	2.8	82	NW			4		5			0	0		
Sub-Series.																			
Upsala			30.01	762.3	38.8	3.8	50	NW	2.5	1.1			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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28.36	720.3	29.82	757.5	42.1	5.6	59	NW			2		8			0	0	Cloudy	The Observatory.
Zurich	28.19	715.9	29.86	758.4	43.7	6.5	60	NW			1		3			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —3.9 mm.; Thermometer, —6.1 cent.; Relative Humidity, +2 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Constantinople			30.02	762.4	63.0	17.2	47	S	3	1.5			0			0	0		
Fao, (Persian Gulf)			30.04	763.0	74.1	23.4		SE			3		10						
Salonica			30.01	762.2	68.0	20.0		S			1		0						
Valona			29.82	757.5	75.7	24.3		S			2		2						
Varna			29.92	760.0	60.8	16.0		E			2		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			30.05	763.2	66.7	19.3	58	N			1		1k		N	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Bathurst, N. B.			29.68	753.9	32.7	0.4	97	NE	11	4.9									Hon. J. Ferguson.
Brockville, Ontario			29.59	751.6	44	6.7		SW	1	0.4			Fog		SW	0.07	1.8	Foggy	W. R. Bigg.
*Chatham, N. B.			29.72	754.9	35	1.7	97	N	4	1.8			10s		N	0.18	4.6	Light rain	G. A. Blair.
Charlottetown, P. E. Island.			29.74	755.4	37	2.8	98	E	5	2.2			10n		S	0.20	5.1	Light rain	H. J. Cundall, C. E.
Cornwall, Ontario			29.50	749.3	41.5	5.3	87	E			1		Fog			0.121	3.08	Unsettled	James Smith, M. A.
Dalhousie, N. B.			29.80	756.9	32.8	0.4	100	Calm			0					0.02	0.5	Sleet. & rain.	H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			29.66	753.4	38.1	3.4	92	Calm	0	0			10n			0.280	7.11	Raining	Prof. Harrison.
*Fort Garry, Manitoba			29.77	756.1	24	— 4.4	94	N	4	1.8		2cs	2s	N	N	0	0	Fair	James Stewart.
Goderich, Ontario			29.38	746.2	43.9	6.6	88	Calm			0		10n			0.382	9.70	Threatening	H. J. Strang, M. A.
Granton, Ontario			29.34	745.2	54.0	12.2		S			2		10n			0.68	17.3	Cloudy	James Grant.
*Halifax, N. S.			29.71	754.6	40	4.4	90	SE	4	1.8			10n			Inap.	Inap.	Light rain	F. Allison, M. A.
*Kingston, Ontario			29.57	751.1	39	3.9	100	Calm	0	0			Fog			0.29	7.4	Foggy	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			29.54	750.3	37	2.8	95	S	6	2.7			10n			0.07	1.8	Light rain	C. H. McLeod, C. E.
*Ottawa, Ontario			29.52	749.8	39	3.9	83	NE	6	2.7			Fog		NE	0.06	1.5	Foggy	J. B. Haney.
*Parry Sound, Ontario			29.35	745.5	46	7.8	100	S	12	5.4			Fog		S	0.25	6.3	Foggy	Rev. R. Mooley.
*Port Dover, Ontario			29.46	748.3	46	7.8	100	S	5	2.2			Fog		S	1.53	38.9	Foggy	H. Morgan.
Port Hastings, N. S.			29.81	757.2	36.8	2.7		SE	12	5.4						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			29.42	747.3	46	7.8	99	SE	18	8.0			10n		SW	0.67	17.0	Cloudy	M. Payne.
*Quebec, Quebec			29.58	751.3	33	0.6	90	NE	31	13.8			10n		NE	0.02	0.5	Light rain	Capt. Ash, R. N.
St. John, N. B.			29.63	752.6	41	5.0	91	Calm	0	0			10n			0.170	4.32		G. Murdoch, C. E.
*Saugeen, Ontario			29.28	743.7	53	11.7	90	S	3	1.3			10ks		S	0.18	4.6	Cloudy	K. Stewart.
Stayner, Ontario			29.35	745.5	47	8.3	92	SE	1	0.4			10n			0.23	5.8	Hazy	R. J. Cole.
Stratford, Ontario			29.34	745.2	53.3	11.8	98	SW	9	4.0			10n			0.636	16.15	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			29.84	757.9	37	2.8	92	S	4	1.8			10s		W	0.13	3.3	Cloudy	T. C. Hill.
*Toronto, Ontario			29.42	747.3	43	6.1	100	E	5	2.2			Fog			0.15	3.8	Foggy	Magnetic Observatory
Woodstock, Ontario			29.36	745.7	54.8	12.7	98	S			1		10s			0.10	2.5	Cloudy	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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.			29.59	751.6	56	13.3	87	S	4	1.8			10s			0.17	4.3	Cloudy	
Alpena, Mich.			29.23	742.4	34	1.1	100	SE	8	3.6			Fog			0.64	16.3	Foggy	
Atlantic City, N. J.			29.71	754.6	53	11.7	86	S	8	3.6		8cs	Haze	W		0	0	Cloudy	
Augusta, Ga.			29.92	760.0	69	20.6	70	SE	2	0.9			10s		SW	0	0	Cloudy	
Baltimore, Md.			29.68	753.9	64	17.8	89	SW	6	2.7		8c	Sm'e	W		0	0	Cloudy	
Barnegat, N. J.			29.68	753.9	57	13.9	81	SW	7	3.1		10ck	Haze	SW		0	0	Cloudy	
Benton, Montana	27.04	686.8	29.84	757.9	34	1.1	52	SW	1	0.4		2c	2s			0	0	Fair	
Bismarck, Dakota	28.01	711.4	29.70	754.4	28	− 2.2	44	NW	5	2.2		Haze	0	NW		0	0	Clear	
Boston, Mass.			29.62	752.3	52	11.1	93	SW	1	0.4			Fog			Inap.	Inap.	Foggy	
Breckenridge, Minn.			29.68	753.9	29	− 1.7	89	NW	8	3.6		0	0			0	0	Clear	
Buffalo, N. Y.			29.41	747.0	59	15.0	94	S	4	1.8		0	10ks		SW	0.42	10.7	Cloudy	
Burlington, Vt.			29.56	750.8	50	10.0	93	Calm	0	0		0	Fog			0.21	5.3	Foggy	
Cairo, Ill.			29.92	760.0	44	6.7	51	W	14	6.3		10k	0	W		0.75	19.1	Cloudy	
Cape Hatteras, N. C.			29.87	758.7	67	19.4	90	SW	18	8.0		2c	5ks,ha.	W	SW	0	0	Fair	
Cape Henry, Va.			29.79	756.7	72	22.2	76	SW	15	6.7		5c	5s,haze		SW	0.01	0.3	Cloudy	
Cape May, N. J.			29.70	754.4	55	12.8	87	S	8	3.6			10ks		W	0	0	Cloudy	
Charleston, S. C.			29.98	761.5	60	20.6	84	S	14	6.3		2ck	2s		SW	0	0	Fair	
Cheyenne, Wyoming	23.94	608.1	29.88	758.9	27	− 2.8	60	NW	16	7.2		0	2s			0	0	Clear	
Chicago, Ill.			29.39	746.5	41	5.0	91	SW	20	8.9			10n			Inap.	Inap.	Light rain	
Cincinnati, Ohio			29.54	750.3	53	11.7	61	W	20	8.9		2k	5ks	W	W	0.87	22.1	Clearing	
Cleveland, Ohio			29.35	745.5	62.9	17.2	81	S	18	8.0			10ks		SW	0.18	4.6	Cloudy	
Colorado Springs, Col.	24.05	610.9	29.92	760.0	33	0.6	61	NW	12	5.4		0	0			Inap.	Inap.	Clear	
Corsicana, Tex.			30.18	766.6	41	5.0	74	NW	1	0.4		0	0			0	0	Clear	
Davenport, Iowa			29.59	751.6	38	3.3	90	NW	24	10.7			10s		NW	0.40	10.2	Cloudy	
Denison, Tex.			30.10	764.5	45	7.2	60	N	4	1.8		0	0			0	0	Clear	
Denver, Col.	24.77	629.2	29.99	761.7	39	3.9	48	NW	4	1.8		0	0			0	0	Clear	
Detroit, Mich.			29.32	744.7	54	12.2	86	W	12	5.4			10n		W	0.28	7.1	Light rain	
Dodge City, Kan.	27.33	694	29.74	755.4	33	0.6	89	W	9	4.0		0	0			Inap.	Inap.	Clear	
Dubuque, Iowa			29.52	749.8	37	2.8	80	NW	12	5.4			10s		NW	0.60	15.2	Cloudy	
Duluth, Minn.			29.54	750.3	36	2.2	62	NW	4	1.8			10s			0	0	Cloudy	
Eastport, Me.			29.58	751.3	38	3.3	90	NE	8	3.6			Fog		NE	0.19	4.8	Foggy	
Erie, Pa.			30.22	767.6	19	− 7.2	84	SW	22	9.8			10s			Inap.	Inap.	Cloudy	
Escanaba, Mich.			29.63	752.6	33	0.6	90	N	12	5.4			10n		N	0.86	21.8	Light rain	
Fort Gibson, Indian Terr.			30.07	763.8	41	5.0	82	S	2	0.9		0	0			0	0	Clear	
Ft. St. Michaels, Alaska			29.75	755.6	12	−11.1		N	5	2.2		1s	0					Fair	
Fort Sill, Indian T.	28.90	734.0	30.04	763.0	37	2.8	63	Calm	0	0		0	0			0	0	Clear	
Fort Sully, Dakota																			
Galveston, Tex.			30.12	765.0	56	13.3	53	N	30	13.4		5k	0	NW		0.03	0.8	Fair	
Grand Haven, Mich.			29.31	744.5	40	4.4	91	SW	23	10.3			10n		SW	1.31	33.3	Light rain	
Indianapolis, Ind.			29.60	751.8	44	6.7	67	W	10	4.5		8k	0	W		0.34	8.6	Clearing	
Indianola, Tex.			30.13	765.3	55	12.8	55	N	32	14.3		8ck	0	SW		0	0	Clearing	
Jacksonville, Fla.			30.00	762.0	71	21.7	85	SE	8	3.6		8ck	0	W		0	0	Fair	
Keokuk, Iowa			29.69	754.1	40	4.4	73	W	15	6.7		0	0			0.38	9.7	Clear	
Key West, Fla.			30.05	763.3	77.2	25.1	69	SE	16	7.2		2k	0	SE		0	0	Clear	
Kittyhawk, N. C.			29.87	758.7	69	20.6	80	SW	20	8.9		8ck	0	SW		0	0	Fair	
Knoxville, Tenn.			29.70	754.4	63	17.2	83	SW	22	9.8			10s		SW	0.78	19.8	Cloudy	
La Crosse, Wis.			29.52	749.8	36	2.2	80	N	20	8.9			10s		N	1.15	29.2	Cloudy	
Leavenworth, Kan.			29.87	758.7	39	3.9	67	W	5	2.2		0	0			0.05	1.3	Clear	
Lexington, Ky.	28.59	726.2	29.67	753.6	53	11.7	79	SW	20	8.9			10ks		W	0.95	24.1	Cloudy	
Long Branch, N. J.			29.68	753.9	50	10.0	93	SE	2	0.9		8c	Haze	SW		0.02	0.5	Cloudy	
Louisville, Ky.			29.68	753.9	52	11.1	66	SW	18	8.0			10s		SW	1.11	28.2	Cloudy	
Lynchburg, Va.			29.78	755.6	65	18.3	83	SW	3	1.3			10s		SW	0.30	7.6	Cloudy	
Malone, N. Y.			29.47	748.5	54	12.2	93	S	8	3.6			10n		S	0.10	2.5	Light rain	
Manhattan, Kan.	28.76	730.5	29.95	760.7	30	− 1.1	89	SW	20	8.9		0	0			0.03	0.8	Clear	
Marquette, Mich.			29.27	743.4	33	0.6	100	NW	12	5.4			10n		NW	0.06	1.5	Light snow	
Memphis, Tenn.			29.97	761.2	48	8.9	56	NW	12	5.4		0	5ks		NW	0.40	10.2	Fair	
Milwaukee, Wis.			29.37	746.0	35	1.7	90	NW	16	7.2			10n		W	0.87	22.1	Light rain	
Mobile, Ala.			29.95	760.7	64	17.8	89	NW	10	4.5			10n		NW	1.02	25.4	Light rain	
Montgomery, Ala.			29.87	758.7	66.5	19.2	90	SW	7	3.1			10n		SW	0.37	9.4	Light rain	
Morgantown, W. Va.			29.56	750.8	64	17.8	83	S	13	5.8			10n		S	0.25	6.3	Light rain	
Mt. Washington, N. H.	23.45	595.6	29.81	757.2	41	5.0	100	NW	36	16.1			Fog			0	0	Foggy	
Nashville, Tenn.			29.82	757.4	52	11.1	66	W	14	6.3		10k	0	W		1.93	48.5	Cloudy	
New Haven, Conn.			29.95	758.1	53	11.7	93	Calm	0	0			Fog			Inap.	Inap.	Foggy	
New London, Conn.			29.67	753.6	51.5	10.8	93	SW	2	0.9			Fog			0	0	Foggy	
New Orleans, La.			30.00	762.0	61	16.1	88	N	12	5.4			10n		N	0.65	16.5	Light rain	
Newport, R. I.			29.65	753.1	50	10.0	93	SW	2	0.9			Fog			0	0	Foggy	
New York, N. Y.			29.68	753.9	51	10.6	93	Calm	0	0			Fog			0	0	Foggy	
Norfolk, Va.			29.81	757.2	72	22.2	76	SW	14	6.3			10s		SW	Inap.	Inap.	Cloudy	
North Platte, Neb.	26.97	685.0	29.60	751.8	32	0.0	69	W	6	2.7		2c	0			0	0	Clear	
Omaha, Neb.	28.69	728.7	29.77	756.1	34	1.7	76	W	11	4.9		1k	0			0.40	10.2	Clear	
Oswego, N. Y.			29.49	749.0	56.2	13.4	90	SE	7	3.1			10s		W	0.12	3.0	Threatening	
Pembina, Dakota			29.71	754.6	23	− 5.0	86	NW	4	1.8		0	0			0	0	Clear	
Philadelphia, Penn.			29.67	753.6	61	16.1	82	SW	6	2.7		10ck	Sm'e	SW		0	0	Cloudy	
Pike's Peak, Colorado	17.48	444.0	29.69	754.1	− 6	−21.1	81	NW	36	16.1		0	2s			0.04	1.0	Fair	
Pittsburgh, Penn.			29.51	749.5	64	17.8	83	SW	16	7.2			10s		SW	0.24	6.1	Lightrain	
Port Huron, Mich.			29.26	743.2	56	13.3	87	SW	15	6.7			10n		SW	0.81	20.6	Light rain	
Portland, Me.			29.59	751.6	46	7.8	92	Calm	0	0			Fog			0.09	2.3	Foggy	
Portland, Oregon			30.06	763.5	53	11.7	86	S	9	4.0			10n			0.80	20.3	Heavy rain	
Punta Rassa, Fla.			30.06	763.5	75.8	24.3	81	SE	16	7.2		Haze	2ks	SE	SE	0	0	Cloudy	
Rochester, N. Y.			29.44	747.8	60	15.6	87	SE	8	3.6			10s		S	0.24	6.1	Cloudy	
Salt Lake City, Utah	25.76	654.3	30.09	764.3	40	4.4	56	W	1	0.4			10s			0	0	Cloudy	
Sandy Hook, N. J.			29.65	753.1	55	12.8	93	Calm	0	0		10cs	Haze	W		0	0	Cloudy	
San Diego, Cal.			30.21	767.3	50	10.0	54	NE	8	3.6		0	0			0	0	Clear	
San Francisco, Cal.			30.30	769.6	52	11.1	86	SW	4	1.8			10s			0	0	Cloudy	
Santa Fe, N. M.	23.26	590.8	29.81	756.9	25	− 3.9	75	N	8	3.6		0	0			0.01	0.3	Clear	
Savannah, Ga.			29.97	761.2	76	23.9	72	SW	11	4.9		Haze	2s			0	0	Hazy	
Shreveport, La.			30.12	765.0	49.5	9.7	72	N	8	3.6		0	0			0.08	2.0	Clear	
Smithville, N. C.			29.96	761.0	65	18.3	90	SW	9	4.0			10ks		SW	0	0	Cloudy	
Springfield, Mass.			29.63	752.6	55.5	13.1	83	Calm	0	0			10s,fog			0.01	0.3	Threatening	
St. Louis, Mo.			29.83	757.7	41	5.0	73	NW	12	5.4			10s		W	0.17	4.3	Cloudy	
St. Marks, Fla.			29.99	761.7	70	21.1	90	S	15	6.7			10s		S	0	0	Cloudy	
St. Paul, Minn.			29.52	749.8	34.5	1.4	65	NW	11	4.9		10c,cs	0	W		0.04	1.0	Cloudy	
St. Paul's Island, Alaska			30.08	764.0	20	− 6.7	85	NNW	24	10.7			10k			0.02	0.5		
Thatcher's Island, Mass.			29.62	752.3	47	8.3	92	Calm	0	0						0	0	Dense fog	
Toledo, Ohio			29.33	745.0	56	13.3	80	SW	22	9.8			10s		SW	0.02	0.5	Cloudy	
Tucson, Arizona	27.78	705.6	30.37	771.4	39	3.9		S				0	0			0	0	Clear	
Tybee Island, Ga.			29.97	761.2	68	20.0	84	S	8	3.6		Haze	Haze			0	0	Hazy	
Vicksburg, Miss.			29.99	761.7	51	10.6	67	NW	12	5.4		2c	8ck		SW	0.88	22.4	Cloudy	
Virginia City, M. T.	24.17	613.9	29.65	753.6	36	2.2	62	N	1	0.4		8ck	0	NW		0	0	Cloudy	
Washington, D. C.			29.70	754.4	66	18.9	84	SW	10	4.5			10n		SW	Inap.	Inap.	Light rain	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			29.93	760.2	70	21.1	79	SW	22	9.8		8cs	0	W		0	0	Cloudy	
Wood's Holl, Mass			30.36	771.1	16	− 8.9	65	N	6	2.7		0	0			0	0	Clear	
Wytheville, Va	27.45	697.2	29.52	749.8	59	15.0	94	SW	1	0.4			10ks		SW	0.17	4.3	Threatening	
Yankton, Dakota	28.49	723.6	29.79	756.7	35	1.7	70	W	11	4.9		2k	10s	NW	NW	0	0	Fair	
Yuma, Arizona			30.20	767.1	46	7.8		E				0	0			0	0	Clear	
Sub Series.																			
Bridgetown, B'b'dos, W. I.			30.07	763.8	78	25.6	72	NE	6	2.7		5ck	5ks	NE	NE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.04	763.0	74	23.3	90	E				10k	5n			1.40	35.6	Rainy	L. V. Bigard.
St. Thomas, St. T., W. I			30.27	768.8	77	25.0	69	E	13	5.8		2c	4kn	E		0.01	0.3	Cloudy	W. S. Cameron.
Kingston, Jamaica, W. I.			30.22	767.6	77	25.0	69	Calm	0	0		8c	8s	SE		0	0		James Gall.
Santiago de Cuba, W. I.			29.83	757.7	75	23.9	65	Calm	0	0		0	0			0	0	Clear	Robert Mason.
Havana, Cuba, W. I.			30.04	763.0	75	23.9	69	NE	3.6	1.6		0	0			0	0	Clear	Charles Hasselbrink
St. Georges, Bermudas			30.22	767.6	69.0	20.6	85	SW	15.0	6.7		8c	1k			0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.22	691.4	30.01	762.2	63	17.2	78	S	1.0	0.4		2c	0	SE		0	0	Fine, clear	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.01	762.2	81	27.2	78	E			2		5k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.03	762.8	80.6	27										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.19	639.8			65.5	18.6	78		2	0.9		3ck	0			0	0	Fair	Thomas Herran.
St. John's, Newfoundland.			29.91	759.7	37.0	2.8	62	S				10k	10s			0	0	Cloudy	John Delaney.
York Factory, B. A.			29.75	755.6	24	− 4.4	68	N	6	2.7			10s			0.05	1.3		J. Fortescue.
Honolulu, Oahu, H. I.			30.07	763.8	73	22.8	90	NE			2					0.08	2.0		E. P. Church.
Makawao, Maui, H. I.	27.85	707.4	30.02	762.5	60	15.6	82	Calm	0	0		2cs	0			0	0		F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	Weather.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below −40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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 APRIL 15, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.97	761.1	50.4	10.2	66	Calm			0		5			0.118	3.0	Fair	Charnot.
Algiers			29.84	757.8	46.4	18.0	89	NW			1		10			1.457	37.0	Hidden.	Peter.
La Calle					5[illegible].9	11.6		NW			2		8			0	0	Cloudy	Kuntz.
Tunis			29.73	755.1	73.9	23.3	57	SE			3		8			0.776	19.7	Cloudy	Jacques
Sfax			29.82	757.5	71.6	22.0	74	SE			3		6			0	0	Fair	Chauvey.
Saida			29.82	757.3	34.7	1.5	91	N			5		7			0.268	6.8	Cloudy	Millot.
Tebessa			29.8[illegible]	756.8	59.9	15.5		SW			5		10			0.630	16.0	Hidden	Colin.
Geriville			29.85	758.2	43.5	6.4	88	NW			3		6			0.067	1.7	Fair	Buard.
Laghouat			29.78	756.5	53.6	12.0	33	NW			4		5			0	0	Fair	Guyot.
Biskra			29.71	754.5	63.7	17.6	47	NW			4		4			0	0	Fair	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.05	763.3	47.3	8.5	87	SW			1		10			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Con. M. I., Hungary
Cracow			30.26	768.5	39.9	4.4	93	NNE			4		10			0.256	6.5		I. R. Observatory.
Eperies			30.08	763.9	59.4	15.2	74	Calm			0		10			0	0		Julius Mikolik.
Gratz	28.88	733.4	30.09	764.2	50.9	10.5	72	S			2		8			0	0		Andreas Rospini.
Hermannstadt	28.62	727.0	29.98	761.5	75.4	24.1	26	SE			4		1			0	0		Prof. Reissenberger.
Kremsmünster	28.60	726.3	29.96	760.9	44.6	7.0	82	ENE			3		10			0	0		Prof. C. Wagner.
Lemberg			30.15	765.8	48.7	9.3	88	SE			2		9			Inap.	Inap.		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			29.87	758.7	59.4	15.2	80	SE			4		10s			0.188	4.78		I. R. Hydrographic Office
Szegedin			29.96	760.9	74.1	23.4	33	Calm			0		2			0	0		Karl Stancel.
Trieste			29.92	759.9	59.0	15.0	59	ENE			2		9			0.154	3.9	Drizzling	Prof. V. Farolfi.
Vienna			30.06	763.4	47.8	8.8	92	ESE			1		10			0.201	5.1		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.14	765.6	53.2	11.8	33	NE			5		0			0	0	Clear	Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	44.1	6.7		SSE	30	13.4			1			0.010	0.25	Blue sky	William Boswell.
Ardrossan			30.22	767.6															William McNeil.
Armagh Observatory			30.22	767.6	47.7	8.7		S	19	8.5			10					Squally	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			30.28	769.1	51.2	10.7		SSE	14	6.3			0					Blue sky	John Hartnup.
Birr Castle, (Parsonstown)			30.20	767.1	51.0	10.6		SSW			1–2		10					Overcast	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	82.0	27.8		NE			3		4					*D. coluds	Sergt. J. F. Halanen, A.
Cambridge Observatory			30.28	769.1	57.0	13.9		E			2		1			Blank	Blank	*D. clouds	H. Todd. [H. C.
Cardington			30.29	769.4	53.0	11.7		E			1		1					Blue sky	John McLaren.
Carlisle			30.24	768.1	52.7	11.5		S			3		8			0	0	*D. clouds	T. Bell, for J. Carmell.
Chatham, School M. E			30.33	770.4	49.2	9.6		NNE			2		3					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	23.75	730.2	30.27	768.8	51.0	10.6		E			5		0					Blue sky	R. E. Power.
Donaghadee			30.22	767.6	45	7.2		SSW			4		10					Overcast	J. Mac Gowan.
Dover			30.22	767.6	48	8.9		NE			4		0					Clear	J. Costello.
Eccles (near Manchester.)			30.29	769.4	55.0	12.8		SSE	5.8	2.6								Hazy	Thomas Mackereth.
Falmouth Observatory			30.26	768.6	47.6	8.7		SE	5	2.2			1					Hazy	The Staff.
Fort Napier, (Natal)	27.72	704.1	29.95	760.7	73.4	23.0		E			1		1					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.85	758.2	88.0	31.1		N			3		6					*D. clouds	[tis-
Galway, Queen's College			30.13	765.3	48	8.9		SW			1		10					Raining	B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			29.90	759.4	61.0	16.1		WNW			4		0					Blue sky	Corp'l C. Aitken, A. H. C.
Glasgow Observatory			30.20	767.1	48.4	9.1		S			2		9					*D. clouds	Lewis Stuart.
Great Yarmouth			30.33	770.4	46	7.8		ENE			5		0					Blue sky	G. T. Watson.
Greenwich Royal Obs			30.26	768.6	54.0	12.2		ESE			4		0					Blue sky	The Staff, for G. B. Airy.
Guernsey			30.19	766.8	50	10.0		NE			4		0					Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs.																			L. J. Crossley
Helston			30.20	767.1	54	12.2		NE			2		10			0	0	Fine	M. P. Moyle.
Holyhead			30.27	768.8	50	10.0		SW			3		2					Blue sky	John Tilston.
Kew Observatory			30.26	768.6	51.5	10.8		ENE	28	12.5			0					Hazy	The Staff.
Kingstown			30.27	768.8	47	8.3		S			4		6					*D. clouds	George Mitchell.
Leicester Museum			30.33	770.4	49.9	9.9		E			1		1					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.77	756.1	62.8	17.1		NE			3		10k					Overcast	Fred. Travis, Pvt. A.H.C.
Nairn			30.11	764.8	47	8.3		SW			2		5					½ clouded	W. D. Penny.
Nassau, Bahamas			30.13	765.3	78.2	25.7		SE			5		6					*D. clouds	Surg. Maj. Henry.
Nottingham			30.33	770.4	55.5	13.1		ESE			3		4c		NE	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.30	769.6	51.2	10.7		E			2–3		6					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.25	768.3	52	11.1		E			3		4					*D clouds	J. Lucas.
Plymouth			30.21	768.1	54	12.2		ENE			2		1					Blue sky	John Merrifield.
Roche's Point			30.26	768.6	50	10.0		SSW			4		8					Cloudy	W. Kennedy.
Saint Ann's Head			30.25	768.3	46	7.8		SE			1		2					Hazy	John. C. Walker.
Saint Helier, (Jersey)			30.14	765.5	53.8	12.1		NE			4		2					¼ clouded	A. P. Amy.
Sandwick Manse (Orkneys			30.10	764.5	44.3	6.8		S	30	13.4			5					Drizzling	Rev. Chas. Austin, LL.D.
Scarborough			30.45	773.4	42.8	6.0		SE			4		1					Blue sky	F. Shaw.
Scutari Cemetery (Turkey)			30.12	765.0	64.6	18.1		NE			3		0					Blue sky	Sergt. W. H. Lyne.
Sheffield			30.32	770.1	51.2	10.7		S			1		2			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			30.24	768.1	56.0	13.3	57	SW			3		6			0	0	Hazy	Rev. Francis Redford.
Stonyhurst Observatory			30.27	768.8	50.2	10.1		SE			3		4					*D. clouds	S. J. Perry.
Stornoway, Lewis C. Hebr.			29.98	761.5	40	4.4		SSW			7		10					Drizzling	John Smith.
Stratfield Turgiss			30.26	768.6	53.7	12.1		NE			1–2		0					Blue sky	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			30.07	763.8	46	7.8		S			5		8					Gloomy	John Trotter.
Truro, Royal Institution			30.26	768.6	59	15.0		SE			3		3					*D. clouds	W. Newcombe.
Valencia Observatory			30.18	766.6	49.9	9.9		S	34	15.2			10					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man																			The Staff, for E. J. Stone.
Cape Good Hope Obs			29.96	761.0	89.0	31.7	35	SSW	9	4.0			0						Andrew Gibb.
Leith, Restalrig Park			30.24	768.1	51.8	11.0		SW			3					0	0	Fine	
Mauritius			29.82	757.4				WSW	12.1	5.4						3.97	100.8		J. Youngclause.
Monach Lt-house, Hebrides			29.91	759.7	41	5.0		SSW			7		10			0	0		
North Unst, (Shetland Is.)			30.12	765.0	45	7.2		S			4		10						

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			30.41	772.4	42.1	5.6	61	SE			2		6						
Fanöe			30.42	772.6	45.7	7.6	60	NW			4		1						
Godthaab, (Greenland)			29.61	752.0	33.1	0.6	85	Calm			0		10						
Stykkisholm, (Iceland)			29.61	752.0	31.5	−0.3	94	E			7		5						
Thorshavn, (Faröe)			29.84	758.0	41.0	5.5	88	S			5		10						
Vestervig			30.39	772.0	42.8	6.0	70	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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	48.2	9	41	NE			3		0			0.079	2.0	Clear	Normal School.
Amiens			30.11	764.9	47.5	8.6	60	ENE			6		0			0.236	6.0	Clear	Normal School.
Avignon			29.65	753.2	44.8	7.1	80	N			3		10			0.63	16.	Raining	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.10	764.6	51.3	10.7	43	NE			6		0			0	0	Clear	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			29.86	758.4	48.9	9.4	64	NNE			8		8		NNE	0.185	4.7	Very cloudy	Normal School.
Brest			30.10	764.6	52.0	11.1	68	NE			4		6k		NE	0.039	1.00		Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			29.78	756.3	41.9	5.4	77	N			1		8		N	0.051	1.3	Very cloudy	Puy de Dome Obs.
Commercy			29.98	761.6	49.1	9.5	49	E			6		2ck		E	0	0	Slightly cl'dy	Normal School.
Commune de Gréasque*			29.60	751.8	51.1	10.6	78	E			6		10		E	0.59	15.		M. Kina.
Grenoble			29.70	754.3	46.6	8.1	70	NW			2		10n		NW	0.030	0.75	Covered	Normal School.
Le Mans			30.00	762.1	53.2	11.8	37	N			8		5		NE	0.067	1.7	Cloudy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			29.76	756.0	50.4	10.2	48	NE			6		10			0	0	Covered	Normal School.
Mâcon			29.75	755.6	48.2	9	75	NNE			6		10			0.20	0.5	Covered	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			29.68	753.9	43.5	6.4	82	NW			4		10			2.05	52.	Covered	Normal School.
Orleans																			Normal School.
Paris Observatory			30.03	762.7	53.2	11.8	32	NE			4		0			0.006	0.15	Clear	National Observatory.
Parthenay																			Normal School.
Privas			29.74	755.5	44.6	7		N			4		10		N	0	0	Covered	Normal School.
La Roche-sur-Yon			29.93	761.2	53.1	11.7	54	NNE			8		5		SSW	0.075	1.9	Cloudy	Normal School.
Rochefort, Observatory			29.92	760.9	53.6	12.0	56	NE			5		8		SW	0	0	¾ covered	Naval Observatory.
Rouen			30.10	764.6	50.7	13.7	39	NE			3		0			0	0	Clear	Normal School.
Saint Lo			30.13	765.4	51.4	10.8	63	NE			4		0			0	0		Normal School.
Tarbes	28.74	729.9			50.0	10		W			4		10		E	0	0	Covered	Normal School.
Toulouse																			Normal School.
Villefranche			29.79	756.7	48.2	9	72	NE			4		10		N	0.08	2.	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.92	760.0	79.5	26.4	76	NE			2		2k						L'Abbé Marchési.
Gorée																			
Marseilles			29.56	750.9	41.4	5.2	99	W			1		10			1.354	34.40	Rainy	Marseilles Observatory.
Mont-Louis																			—. Faïguère.
Montsouris, Paris			30.01	762.3	54.1	12.3	36	NE			6		1			0.012	0.3		Montsouris Observ'tory.
Perpignan			29.77	756.1	39.9	4.4	59	NW	16.8	7.50			6		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.01	762.2	55.4	13.0	39	NE			4		0			0.051	1.3	Clear	E. Renou.
Toulouse			29.89	759.3	35.6	2.0	100	NW			3		10			0	0		Toulouse Observatory.
Tours			29.93	760.1	53.1	11.7	54	NE			5		4		NE	0.094	2.4		C. Marquet.
Versailles, (near Paris)			30.03	762.7	53.6	12.0	36	E			8		1			0.032	0.82	Clear	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,089.9 ft.; 1er mont. 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

*Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.02	762.4	47.7	8.7	61	ENE			6		10	E		0	0		Prof. T. Hoh.
Berlin			30.32	770.2	51.1	10.6	24	E			1		4			0	0		Prof. Arndt.
Breslau			30.32	770.1	40.3	4.6	84	E			6		10			0.098	2.5	Raining	Dr. P. Neugebauer.
Carlsruhe			29.99	761.8	49.6	9.8	50	NE			8		10			0	0		A. Senz.
Cassel			30.11	764.8	54.1	12.3	24	ENE			8		2	ENE		0	0		Dr. H. Möhl.
Cologne																			Dr. Gartlee.
Emden																			Prof. Prestel.
Frankfort on the Main			30.14	765.6	52.7	11.5	37	NE			5		7			0	0		Physical Society.
Friedrichshafen	28.50	723.9	29.97	761.3	41.2	5.1	74	NE			6		10			0	0		M. Wilhelm.
Hamburg			30.35	771.0	48.6	9.2	47	ENE			3		5k	NE		0	0	Partly foggy	Deutsche Seewarte.
Kiel			30.39	771.8	43.5	6.4	48	N			2		0			0.004	0.1		Prof. G. Karsten.
Königsberg			30.47	773.9	46.2	7.9	50	NE			2		5			0.008	0.2		Prof. E. Luther.
Köslin			30.39	772.0	47.1	8.4		NW			1		0			0	0		H. Müller.
Leipsic			30.27	768.8	48.6	9.2	68	NE			6		10	E		0	0		Prof. Bruhns.
Memel			30.48	774.2	41.9	5.5	72	WSW			2		1			0.008	0.2		Reinbrecht & Skalweit.
Münster			30.25	768.4	55.0	12.8	46	N			2		0			0	0		Prof. E. Heis.
Neufahrwasser			30.39	772.0	42.6	5.9	69	ENE			2		6	WSW		0	0		A. Lothes.
Posen			30.39	771.8	46.6	8.1	45	NE			6		10			0.008	0.2		Dr. Magener.
Strassburg, (in Alsace)			29.99	761.8	50.4	10.2	48	NE			4		10	E		0	0		Dr. Schur.
Stuttgart			30.00	761.9	46.4	8.0	50	NE			2		10			Inap.	Inap.		Prof. Schoder.
Thorn			30.40	772.1	48.2	9.0	39	E			4		7			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.98	761.6	54.7	12.6	38	NE			6		2			0	0		Prof. Flesch.
Wustrow, Naval School			30.32	770.2	44.4	6.9	77	NE			2		2			0	0		E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.1 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.15	765.8	67.6	19.8		S										Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.91	759.7	50.9	10.5	62	NE	6.3	2.8			10			0.039	1.0	Light rain	
Padua			29.87	758.8	49.6	9.8	89	NE	18.6	8.3			10			0.232	5.9	Raining	
Vicenza			29.90	759.4	49.1	9.5	96	NNE	3.1	1.4			10	E		0.555	14.1	Raining	
Verona			29.87	758.7	54.9	12.7	76	E			4		10			0.276	7.0	Raining	
Bergamo	28.47	723.1	29.79	756.6	51.8	11.0	77	SW			2		10			0.035	0.9	Light rain	
Domodossola	28.92	734.5	29.96	760.9	42.8	6.0	100	Calm			0		10			0.173	4.4	Light rain	
Milan			29.91	759.6	46.2	7.9	87	NE			2		10	E		0	0		
Pavia			29.87	758.6	46.2	7.9	87	NE			4		10			0.445	11.3	Raining	
Moncalieri			29.89	759.2	45.1	7.3	84	SE	0.7	0.3			10	N		1.020	25.9	Raining	
Mondovi	27.97	710.4	29.89	759.2	35.2	1.8	91	WSW			2		10			1.371	34.8	Rain & snow	
Porto Maurizio			29.74	755.4	51.6	10.9	57	NW			4		10	W		0.260	6.6	Raining	
Genoa			29.78	756.4	50.5	10.3	71	N	6.3	2.8			10	SW		0.319	8.1	Raining	
Piacenza			29.88	759.0	47.3	8.5	93	E	8.1	3.6			10	E		0.339	8.6	Light rain	
Parma			29.79	756.7	49.1	9.5	94	NE			2		10			0.063	1.6	Light rain	
Bologna			29.92	759.9	53.1	11.7	45	NE			1		8	SW		0.866	22.0		
Florence			29.75	755.7	60.8	16.0	61	NE			6		10	NE		0.012	0.3		
Leghorn			29.72	754.9	55.4	13.0	79	ENE	15.4	6.9			10			0.142	3.6		
Siena	28.50	723.8	29.70	754.4	60.6	15.9	63	SE	4.3	1.9			10	SW		0.232	5.9		
Urbino	28.30	718.8	29.86	758.4	50.4	10.2	84	SE			2		10			0.118	3.0		
Pesaro																			
Ancona			29.83	757.7	55.8	13.2	75	NNW			4		10			0	0		
Grosseto			29.72	754.8	65.1	18.4	73	E			2		9	S		0.144	3.6		
Rome			29.70	754.3	72.3	22.4	42	SE	9.4	4.2			10	SW		0	0		
Naples, U. U.			29.76	755.8	75.2	24.0	35	NW			2		10	S		0	0		
Lecce			30.02	762.5	69.4	20.8	48	E	36.0	16.1			10			0	0		
Cosenza			29.92	760.0	69.8	21.0	73	ESE	34.9	15.6			10			0.059	1.5		
Riposto, (Sicily)			29.95	760.7	64.0	17.8	77	E			2		10	W		0	0		
Palermo			29.65	753.2	78.8	26.0	29	S	8.1	3.6			10			0	0		
Caltanissetta	27.85	707.3	29.78	756.5	61.0	16.1	67	E			6		10	W		0.102	2.6		
Sub-Series.																			
Naples, S. R.			29.77	756.1	72.0	22.2	42	NW	9.4	4.2			..k	NW		1.402	35.6	Foggy	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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters., or 1,824.2 feet: Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.24	768.0	51.8	11.0		ENE			5								
Groningen			30.29	769.3	49.6	9.8		NE			4								
Helder			30.32	770.0	46.6	8.1		NE			4								
Utrecht			30.21	767.3	53.2	11.8	31	ENE			5		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.29	769.3	43.9	6.6	54	SSW	19.7	8.8			5			0	0		
Brönö			30.15	765.9	36.3	2.4	82	SSW	29	13			9			0.075	1.9		
Christiania			30.39	772.0	41.2	5.1	42	SSE	0.2	0.1			0			0	0		
Tromsö			29.96	760.9	31.1	— 0.5	71	SW	7	3			10			0.087	2.2		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.25	768.3	60.3	15.7	75	S	9.6	4.29			7			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.96	760.9	54.5	12.5	24	NW	18.6	8.33			8	NNE		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.07	763.6	63.3	17.4	55	SW	2.0	0.89			5	SW		0	0		Capt. D. A. da Cunha.
Lisbon			30.08	764.1	52.9	11.6	38	N	31.1	13.9			2			0	0		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 hour, 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			30.38	771.7	37.4	3.0	91	E	11	5			10					Light rain	Astronomical Obs.
Wilna			30.47	774.0	40.5	4.7	67	W	4	2			10						Astronomical Obs.
Dorpat			30.45	773.3	41.7	5.4	63	SW	4	2			3						Physical Cabinet.
St. Petersburg			30.38	771.7	44.8	7.1	44	SW	2	1			5						Central Physical Obs.
Kuopio			30.38	771.6	26.8	− 2.9	91	W	13	6			3					Snowy	Ch. Forsten.
Kieff			30.21	767.3	60.8	16.0	57	N	4	2			8						Physical Cabinet.
Nikolaiev			30.29	769.3	73.0	22.8	35	Calm	0	0			0						Kurdakof.
Kertch			30.20	767.0	67.8	19.9	56	NE	7	3			0						Lagorio.
Moscow			30.40	772.2	45.3	7.4	76	NNW	9	4			7						Meteorological Obs.
Lugan			30.22	767.6	72.3	22.4	17	SE	40	18			1						Meteorological Obs.
Archangel			30.21	767.2	19.0	− 7.2	84	W	40	18			10						Ogorodnikof.
Tiflis	28.74	730.0	30.17	766.3	63.0	17.2	42	S	11	5			9						Physical Observatory.
Astrakhan			30.51	774.9	65.3	18.5	27	ESE	18	8			4						Sebastianof.
Kasan			30.26	768.5	61.9	16.6	37	SW	11	5			6						Physical Cabinet.
Orenburg			30.04	763.1	49.6	9.8	42	NE											Tschernischef.
Ekaterinburg	29.28	743.6	30.26	768.7	59.5	15.3	33	SW	25	11			7						Meteorological Obs.
Nukuss			30.19	766.8	40.6	4.8	28	E	9	4			8						
Kasaly																			Bobrof.
Tashkend	28.62	727.0	30.31	769.8	61.2	16.2	36	NNE	9	4			8						Michelson.
Barnaul			30.28	769.2	45.9	7.7	50	Calm	0	0			0						Meteorological Obs.
Yeniseisk			29.88	759.0	36.0	2.2	87	W	4	2			7					Snowy	Marks.
Irkutsk	28.45	722.6	29.86	758.4	35.1	1.7	66	Calm	0	0			0						Usolzef.
Oorga																			Mossin.
Peking, (China)			29.98	761.6	68.0	20.0	28	Calm	0	0			2						Physical Observatory.
Nertchinsk	27.69	703.4	29.82	757.4	28.0	− 2.2	43	NW	13	6			0						Meteorological Obs.
Vladivostock			29.76	755.8	41.2	5.1	85	SE	4	2			1						
Nikolaievsk, on the Amoor					29.1	− 1.6	94	WNW	4	2			0						

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 405. m. eters, or 1,411.8 feet; Ekaterinburg, 395.4? m., or 1,295.2? ft.; Tashkend, m 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.87	758.7	42.8	6.0	46	NW	26.8	12.00		0	7			0	0	Cloudy	Royal Observatory.
San Fernando			30.00	761.9	55.6	13.1	42	NW	14.8	6.6		0	1		NW	0	0		The Naval Observatory.

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; 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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.20	767.0	16.9	− 8.4	88	SE			2		0			0	0		
Umea			30.33	770.4	29.5	− 1.4	72	SW			6		4			0	0		
Hernosand			30.37	771.4	32.9	0.5	73	SSW			4		1			0	0		
Stockholm			30.37	771.4	36.7	2.6	84	Calm			0		10			0	0		
Wisby			30.40	772.2	39.6	4.2	65	NW			2		3			0	0		
SUB-SERIES.																			
Upsala			30.39	772.0	33.6	0.9	74	SW	7.4	3.3			5		NW	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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28.35	720.1	29.81	757.2	42.3	5.7	71	NE			8		9			0	0	Covered	The Observatory.
Zurich	28.26	717.8	29.95	760.6	40.8	4.9	78	NE			1		10			0	0	Covered	The Observatory.

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, —4.2 mm.; Thermometer, —6.2 cent.; Relative Humidity, +14 per cent.

NOTE.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Constantinople			30.19	766.9	60.6	15.9	53	NNE	36	16.0			0			0	0		
Fao, (Persian Gulf)			30.02	765.0	76.1	24.5		NW			3		10			Blank	Blank		
Salonica			30.19	766.7	74.3	23.5		W			1		0						
Valona			29.97	761.2	83.8	28.8		S			2		2						
Varna			30.16	766.0	57.2	14.0		NW			2		8						
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y			30.10	764.5	71.4	21.9	69	W			1		1k		N	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Bathurst, N. B.			29.36	745.7	34.7	1.5	97	Calm	0	0									Hon. J. Ferguson.
Brockville, Ontario			29.60	751.8	37	2.8		SW	10	4.5			10s		SW	0.08	2.0	Cloudy	W. R. Bigg.
*Chatham, N. B.			29.44	747.8	35	1.7	98	NE	1	0.4			10s		NE	0.24	6.1	Light rain	G. A. Blair.
Charlottetown, P. E. Island			29.47	748.5	38	3.3	99	S	13	5.8			10n			0.18	4.6	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.45	748.0	42.4	5.8	58	SW			4	7k				0.033	0.84	Clearing	James Smith, M. A.
Dalhousie, N. B.			29.43	747.5	32.2	0.1		E			1					0.19	4.8	Sleet & rain.	H. A. Johnson.
Esquimault, B. C.			30.10	764.5	44.3	6.8	92	SW	1	0.4		8cs				0	0	Cloudy	W. H. Bevis.
Fredericton, N. B.			29.44	747.8	36.0	2.2	91	E	1	0.4			10n			0.422	10.72	Raining	Prof. Harrison.
*Fort Garry, Manitoba			29.81	757.2	28	— 2.2	85	NW	8	3.6		0	2s		NW	0	0	Fair	James Stewart.
Goderich, Ontario			29.68	753.9	35.6	2.0	78	W			2	10k		W		0	0	Cloudy	H. J. Strang, M. A.
Granton, Ontario			29.64	752.8	37.0	2.8		W			3		10n			0.25	6.3	Cloudy	James Grant.
*Halifax, N. S.			29.50	749.3	35	1.7	99	SE	9	4.0			Fog			0.08	2.0	Foggy	F. Allison, M. A.
*Kingston, Ontario			29.57	751.1	39	3.9	69	W	15	6.7		10cs	0	W		0.11	2.8	Cloudy	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			29.44	747.8	39	3.9	73	SW	20	8.9		Haze	2ks			0.16	4.1	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.44	747.8	38	3.3	79	SW	14	6.3		10k	0	W		0.02	0.5	Cloudy	J. B. Haney.
*Parry Sound, Ontario			29.44	747.8	34	1.1	82	SW	24	10.7		5k	5ks	SW	SW	0.25	6.3	Cloudy	Rev. R. Mooley.
*Port Dover, Ontario			29.67	753.6	40	4.4	64	SW	14	6.3		2k	0	SW		0.20	5.1	Fair	H. Morgan.
Port Hastings, N. S.			29.61	752.1	36.2	2.3		SE	7	3.1						0	0	Dull	Peter Grant.
*Port Stanley, Ontario			29.75	755.6	39	3.9	80	W	20	8.9		0	5ks		W	0.01	0.3	Fair	M. Payne.
*Quebec, Quebec			29.38	746.2	41	5.0	74	SW	19	8.5			10n		SW	0.20	5.1	Cloudy	Capt. Ash, R. N.
St. John, N. B.			29.45	748.0	39	3.9	91	NE	1	0.4			10n			0.230	5.84		G. Murdoch, C. E.
*Saugeen, Ontario			29.55	750.6	34	1.1	79	SW	12	5.4			10n			0.05	1.3	Cloudy	K. Stewart.
Stayner, Ontario			29.53	750.0	40	4.4	53	W	13	5.8			10n		W	Inap.	Inap.	Light snow	R. J. Cole.
Stratford, Ontario			29.64	752.8	35.6	2.0	64	NW	15	6.7		3cs	2s	NW		0.216	5.48	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.64	752.8	37	2.8	96	E	6	2.7			1n			0.23	5.8	Light rain	T. C. Hill.
*Toronto, Ontario			29.61	752.1	39	3.9	68	W	18	8.0		5ck	5ks	W	W	0.11	2.8	Cloudy	Magnetic Observatory
Woodstock, Ontario			29.58	751.3	38.4	3.6	96	W			4	0	4k			0.32	8.1	Fine	J. Montgomery.

—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	48	8.9	56	Calm	0	0		0	5s		SW	0.23	5.8	Fair.	
Alpena, Mich.			29.51	749.5	35	1.7	79	W	15	6.7			10s		W	Inap.	Inap.	Cloudy.	
Atlantic City, N. J.			29.77	756.1	49	9.4	63	W	4	1.8		8cs	0	S		0.20	5.1	Cloudy.	
Augusta, Ga.			30.09	764.3	52	11.1	63	NW	9	4.0		0	0			0.65	16.5	Clear.	
Baltimore, Md.			29.83	757.7	52	11.1	79	SW	8	3.6		Haze	2ks		SW	0.02	0.5	Fair.	
Barnegat, N. J.			29.77	756.1	50	10.0	58	NW	11	4.9		5ck	5s	SW	SW	0.20	5.1	Cloudy.	
Benton, Montana	27.11	688.6	29.91	759.7	48	8.9	42	W	10	4.5			10s		W	0	0	Cloudy.	
Bismarck, Dakota	28.03	711.9	29.71	754.6	33	0.6	61	N	4	1.8			10ks		N	0.02	0.5	Cloudy.	
Boston, Mass.			29.59	751.6	49	9.4	57	SW	11	4.9		10s	Haze	SW		Inap.	Inap.	Cloudy.	
Breckenridge, Minn.			29.68	753.9	33	0.6	89	N	10	4.5			10s			0	0	Cloudy.	
Buffalo, N. Y.			29.62	752.3	36.5	2.5	75	W	18	8.0		8k	0	W		0.12	3.0	Fair.	
Burlington, Vt.			29.53	750.0	46	7.8	69	SW	12	5.4		5k	2s	W		0.15	3.8	Cloudy.	
Cairo, Ill.			30.01	762.2	50	10.0	51	SW	8	3.6		0	0			0	0	Clear.	
Cape Hatteras, N. C.			29.88	758.9	53	11.7	86	NE	17	7.6			10n		NE	0.40	10.2	Light rain.	
Cape Henry, Va.			29.92	760.0	56	13.3	75	NW	5	2.2			10s		W	0.36	9.1	Cloudy.	
Cape May, N. J.			29.82	757.4	50	10.0	64	NW	12	5.4		5cs	2s	SW	W	0.36	9.1	Fair.	
Charleston, S. C.			30.05	763.3	57	13.9	75	W	9	4.0			10s		SW	0.24	6.1	Cloudy.	
Cheyenne, Wyoming	23.95	608.3	29.89	759.2	44	6.7	54	W	32	14.3		2c	2s			0	0	Fair.	
Chicago, Ill.			29.70	754.4	43	6.1	75	SW	3	1.3			10s		W	0	0	Cloudy.	
Cincinnati, Ohio			29.44	757.9	51	10.6	59	SW	9	4.0		0	Haze			0.02	0.5	Clear.	
Cleveland, Ohio			29.74	755.4	42.6	5.6	66	SW	17	7.6		5k	2s	W		0.17	4.3	Fair.	
Colorado Springs, Col.	24.05	610.9	29.42	761.0	53	11.7	30	N	12	5.4		2ck	5s	NW		0	0	Fair.	
Corsicana, Tex.			30.01	767.3	50	10.0	51	SW	12	5.4		0	0			0	0	Clear.	
Davenport, Iowa			29.64	752.8	47	8.3	62	S	12	5.4		5cs	5k	W	W	0	0	Fair.	
Denison, Tex.			30.05	763.3	60	15.6	65	S	14	6.3		0	0			0	0	Clear.	
Denver, Col.	24.75	628.6	29.97	761.2	54	12.2	15	N	4	1.8		8c, cs	0	NW		0	0	Cloudy.	
Detroit, Mich.			29.66	753.4	41	5.0	65	SW	8	3.6		5k	0	SW		Inap.	Inap.	Fair.	
Dodge City, Kan.	27.37	695.2	29.68	753.9	41	5.0	83	SW	11	4.9		5c	0			0	0	Fair.	
Dubuque, Iowa			29.60	751.8	44	6.7	75	SE	4	1.8			10s			0	0	Cloudy.	
Duluth, Minn.			29.60	751.8	34	1.1	61	NW	14	6.3		8k	0	NW		0	0	Fair.	
Eastport, Me.			29.41	747.0	38	3.3	100	NW	8	3.6			10n,fg			0.10	2.5	Light rain.	
Erie, Pa.			30.20	767.1	27	−2.8	88	S	10	4.5		2cs	Haze			0	0	Fair.	
Escanaba, Mich.			29.56	750.8	33	0.6	61	W	12	5.4		0	0			0.12	3.0	Clear.	
Fort Gibson, Indian Terr.			30.01	762.2	51	10.6	52	SE	6	2.7		0	0			Inap.	Inap.	Clear.	
Ft. St. Michaels, Alaska			30.05	763.3	7	−13.9		SW	17	7.6			10s					Cloudy.	
Fort Sill, Indian T.	28.82	732.0	29.55	760.7	42	5.6	67	S	4	1.8		0	0			0	0	Clear.	
Fort Sully, Dakota																			
Galveston, Tex.			30.20	769.4	57	13.9	68	W	4	1.8		0	0			0	0	Clear.	
Grand Haven, Mich.			29.65	753.1	42	5.6	79	W	12	5.4		0	8s		W	0.04	1.0	Cloudy.	
Indianapolis, Ind.			29.82	757.4	48	8.9	63	SW	6	2.7		2c	0	W		0.01	0.3	Clear.	
Indianola, Tex.			30.31	769.9	62	16.7	66	SE	4	1.8		0	0			0	0	Clear.	
Jacksonville, Fla.			30.12	765.0	58	14.4	87	W	4	1.8			10n		W	0.21	5.3	Light rain.	
Keokuk, Iowa			29.66	753.4	49	9.4	57	SW	13	5.8		8k	0	SW		0.06	1.5	Fair.	
Key West, Fla.			30.08	764.0	78.8	26.0	82	Calm	0	0		1ck	Haze	W	SW	0	0	Hazy.	
Kittyhawk, N. C.			29.95	760.7	50	10.0	93	N	12	5.4			10ks		N	0.38	9.7	Cloudy.	
Knoxville, Tenn.			30.08	764.0	44	6.7	67	Calm	0	0		0	0			0.01	0.3	Clear.	
La Crosse, Wis.			29.60	751.8	40	4.4	91	SW	3	1.3			10n		S	0.03	0.8	Light rain.	
Leavenworth, Kan.			29.74	754.6	50	10.0	44	SW	18	8.0		2c	0	NW		0	0	Clear.	
Lexington, Ky.	28.86	733.0	29.97	761.2	46	7.8	61	SW	16	7.2		0	0			0	0	Clear.	
Long Branch, N. J.			29.74	755.4	51	10.6	64	W	19	8.5		5cs	2s	SW	SW	0.03	0.8	Cloudy.	
Louisville, Ky.			29.83	760.2	49	9.4	57	SW	12	5.4		0	0			0	0	Clear.	
Lynchburg, Va.			29.82	760.0	53	11.7	42	SW	3	1.3		0	0			0.12	3.0	Clear.	
Malone, N. Y.			29.45	748.0	41	5.0	65	SW	18	8.0		8k	0	SW		0.05	1.3	Clearing.	
Manhattan, Kan.	28.51	724.1	29.65	753.1	40	4.4	82	SW	24	10.7		5ck	0			0	0	Fair.	
Marquette, Mich.			29.54	750.3	32	0.0	79	W	16	7.2		0	0			0.09	2.3	Clear.	
Memphis, Tenn.			30.10	764.5	52	11.1	66	SW	4	1.8		0	0			0	0	Clear.	
Milwaukee, Wis.			29.68	753.9	37	2.8	100	W	10	4.5			10n		W	0.11	2.8	Heavy rain.	
Mobile, Ala.			30.24	768.1	50	10.0	78	NW	5	2.2		0	Sm'e			0.59	15.0	Clear.	
Montgomery, Ala.			30.23	767.8	50	10.0	75	NW	5	2.2		0	0			0.34	8.6	Clear.	
Morgantown, W. Va.			29.83	757.7	50	10.0	51	W	12	5.4		0	1s		W	0.63	16.0	Clear.	
Mt. Washington, N. H.	23.18	588.8	29.54	750.3	19	−7.2	100	W	42	18.8			Fog			0.42	10.7	Foggy.	
Nashville, Tenn.			30.04	763.0	51	10.6	52	SW	5	2.2		0	0			0	0	Clear.	
New Haven, Conn.			29.97	761.6	54	12.2	55	W	10	4.5		5ck	2s	SW	W	0.25	6.3	Fair.	
New London, Conn.			29.66	753.4	49.5	9.7	77	SW	3	1.3			10s		SW	0.15	3.8	Cloudy.	
New Orleans, La.			30.25	768.3	56.5	13.6	72	Calm	0	0		0	Sm'e		W	0.19	4.8	Clear.	
Newport, R. I.			29.65	753.1	47	8.3	85	SW	3	1.3			10s		W	0.15	3.8	Cloudy.	
New York, N. Y.			29.73	755.1	49	9.4	56	W	12	5.4		0	0			0.02	0.5	Clear.	
Norfolk, Va.			29.92	760.0	56.5	13.6	72	NW	6	2.7			10s			0.33	8.4	Cloudy.	
North Platte, Neb.	26.92	683.8	29.49	749.0	50	10.0	58	W	12	5.4		2k	8s	W	W	0	0	Cloudy.	
Omaha, Neb.	28.55	725.2	29.60	751.8	44	6.7	67	Calm	0	0		10cs	0	NW		0	0	Cloudy.	
Oswego, N. Y.			29.61	752.1	43	6.1	71	SW	13	5.8			10ks		W	0.43	10.9	Cloudy.	
Pembina, Dakota			29.76	755.9	27	−2.8	81	NW	8	3.6		0	Haze			0	0	Clear.	
Philadelphia, Penn.			29.78	756.4	49	9.4	50	W	11	4.9		0	0			0.02	0.5	Clear.	
Pike's Peak, Colorado	17.70	449.6	29.92	760.0	12	−11.1	70	NW	47	21.0		0	5s		W	0	0	Fair.	
Pittsburgh, Penn.			29.80	756.9	41	5.0	73	W	14	6.3		0	0			0.21	5.3	Clear.	
Port Huron, Mich.			29.64	752.8	39	3.9	63	SW	14	6.3			10s		W	0.01	0.3	Cloudy.	
Portland, Me.			29.50	749.3	47	8.3	55	SW	12	5.4		10c	0	SW		0	0	Cloudy.	
Portland, Oregon			30.25	768.3	47	8.3	92	Calm	0	0			10n			0.76	19.3	Light rain.	
Punta Rassa, Fla.			30.07	763.8	77.5	25.3	86	SW	14	6.3			8s		SW	0	0	Cloudy.	
Rochester, N. Y.			29.63	752.6	42	5.6	66	W	16	7.2		2k	5s	SW	W	Inap.	Inap.	Fair.	
Salt Lake City, Utah	25.76	654.3	30.09	764.3	50	10.0	51	E	2	0.9		5k	0			Inap.	Inap.	Fair.	
Sandy Hook, N. J.			29.71	754.6	49	9.4	71	W	16	7.2		5c	0	SW		0.11	2.8	Fair.	
San Diego, Cal.			30.11	764.8	53	11.7	59	Calm	0	0		0	0			0	0	Clear.	
San Francisco, Cal.			30.24	768.1	50	10.0	86	W	4	1.8		0	0			0	0	Clear.	
Santa Fe, N. M.	23.39	594.1	29.93	760.2	38	3.3	71	N	13	5.8		0	0			0	0	Clear.	
Savannah, Ga.			30.09	764.3	56	13.3	98	NW	7	3.1			10s		SW	0.63	16.0	Cloudy.	
Shreveport, La.			30.23	767.8	49.5	9.7	75	Calm	0	0		0	0			0	0	Clear.	
Smithville, N. C.			29.98	761.5	56	13.3	93	W	6	2.7			10ks		W	0.15	3.8	Cloudy.	
Springfield, Mass.			29.62	752.3	55	12.8	38	W	8	3.6		2cs	2s	SW	S	0.09	2.3	Fair.	
St. Louis, Mo.			29.88	758.9	50	10.0	44	SW	8	3.6		5c	0			0	0	Fair.	
St. Marks, Fla.			30.18	766.6	54	12.2	79	NW	8	3.6		5ck	0	SW		0.60	15.2	Fair.	
St. Paul, Minn.			29.55	750.6	38	3.3	76	Calm	0	0		2c	Sm'e	W		0	0	Fair.	
St. Paul's Island, Alaska			30.31	769.9	16	−8.9	82	SSW	1	0.4			10s			0.01	0.3		
Thatcher's Island, Mass.			29.58	751.3	46	7.8	76	W	9	4.0			10s		NW	0.12	3.0	Cloudy.	
Toledo, Ohio			29.68	753.9	48	8.9	62	SW	18	8.0		0	0			0.02	0.5	Clear.	
Tucson, Arizona	27.71	703.8	30.29	769.4	40	4.4		S				0	0			0	0	Clear.	
Tybee Island, Ga.			30.07	763.8	55	12.8	73	NW	8	3.6			10s			0.48	12.2	Cloudy.	
Vicksburg, Miss.			30.24	768.1	50	10.0	81	SW	4	1.8		0	0			0	0	Clear.	
Virginia City, M. T.	24.22	615.2	29.70	754.4	38	3.3	71	SW	13	5.8			10ks		W	Inap.	Inap.	Cloudy.	
Washington, D. C.			29.86	758.4	54.5	11.9	48	SW	12	5.4		0	0			0.04	1.0	Clear.	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wilmington, N. C			29.96	761.0	57	13.9	87	NW	8	3.6			10s		SW	0.07	1.8	Cloudy	
Wood's Holl, Mass			30.30	769.6	30	− 1.1	68	NW	7	3.1		0	8s		NW	0	0	Cloudy	
Wytheville, Va	27.60	701.0	29.77	756.1	42	5.6	66	W	6	2.7		0	2ks		W	0.11	2.8	Clear	
Yankton, Dakota	28.35	720.1	29.61	752.1	47	8.3	77	NW	12	5.4			10s		NW	0	0	Cloudy	
Yuma, Arizona			30.09	764.3	53	11.7		Calm				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.04	763.0	80	26.7	70	NE	4	1.8		2k	10ks	NE		0	0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.00	762.0	78	25.6	86	E				2c	5k			0.14	3.6	Hazy	L. V. Bigard.
St. Thomas, St. T., W. I			30.26	768.6	76	24.4	81	ENE	3	1.3			8kn			0	0	Cloudy	W. S. Cameron.
Kingston, Jamaica, W. I			30.22	767.6	78	25.6	69	Calm	0	0		8c	8s	E		0	0		James Gall.
Santiago de Cuba, W. I			29.85	758.2	77	25.0	72	N	1.2	0.5		0	2k		NW	0	0	Fair	Robert Mason.
Havana, Cuba, W. I			30.08	764.0	79	26.1	70	S	4	1.8		0	0			0	0	Clear	Charles Hasselbrink
St. Georges, Bermudas			30.21	767.3	68.0	20.0	82	SW	15.0	6.7		5c	2k			0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I																			
Clifton, Jamaica, W. I	27.20	690.9	30.00	762.0	66	18.9	84	E	1.0	0.4		5c	2k	E		0.52	13.2	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.			29.99	761.7	82	27.8	82	E			2		4k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.04	763.1	82.0	27.8										0	0		Dr. H. Groot.
Medellin, Colombia, S. A	25.22	640.6			65.5	18.6	78		4	1.8		6ck	2n			0.02	0.5	Fair	Thomas Herran.
St. John's, Newfoundland			29.93	760.2	33.0	0.6	89	NE				10k	10s			0	0	Cloudy	John Delaney.
York Factory, B. A			29.74	755.4	16	− 8.9	92	NE	16	7.2		4k	4s	N		0.11	2.8		J. Fortescue.
Honolulu, Oahu, H. I			30.03	762.7	71	21.7	90	Calm			0					0.15	3.8	Cloudy	E. P. Church.
Makawao, Maui, H. I	27.80	706.1	29.97	761.2	60	15.6	88	Calm	0	0		8cs	2k	SW		0	0		F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Peruvian, N. 55° 9′, W. 9° 27′.	WSW	8	29.75	755.6	44	6.7		SSW			7			SSW		Heavy	SW	Drizzling	

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below −40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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 APRIL 16, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.10	764.6	65.3	18.5	47	NNW			4		3			0	0	Fair	Charnot.
Algiers			29.98	761.5	47.5	8.6	92	Calm			0		10			0.394	10.0	Hidden	Peter.
La Calle					55.0	1[illegible].8		WSW			2		4			0.114	2.9	Fair	Kuntz.
Tunis			29.99	761.8	60.4	15.8	85	SW			2		10			0.173	4.4	Hidden	Jacques
Sfax			30.03	762.8	69.8	21.0	73	S			5		2			0.230	6.0	Clear	Chauvey.
Saïda			30.02	762.6	38.3	3.5	67	W			2		2			0	0	Clear	Millot.
Tebessa			30.01	762.2	54.1	12.3		W			4		0			0	0	Clear	Colin.
Geriville			30.06	763.5	49.1	9.5	36	NW			4		2			0	0	Clear	Buard.
Laghouat			30.04	763.1	64.4	18.0	44	N[illegible]			3		1			0	0	Clear	Guyot.
Biskra			30.04	762.8	65.5	18.6	29	NW			1		3			0	0	Fair	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction.	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force.	Clouds. Amount. Up'er	Clouds. Amount. Low'r	Clouds. Direction. Upper.	Clouds. Direction. Lower.	Rain-fall. Inches	Rain-fall. Millimeters.	Weather.	Observer.
Agram			29.92	759.9	50.4	1[illegible].2	92	Calm			0		10			0.146	3.7	Raining	Prof. Ivan Stosir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.10	764.5	48.2	9.0	84	NNE			2		10			0.051	1.3		I. R. Observatory.
Eperies			29.98	761.5	69.4	20.8	65	Calm			0		10			0	0		Julius Mikolik.
Gratz	28.73	729.7	29.93	760.3	51.8	11.0	88	S			2		10			0	0		Andreas Rospini.
Hermannstadt	28.66	727.9	30.02	76[illegible].5	76.3	24.6	11	SE			4		3			0	0		Prof. Reissenberger.
Kremsmünster			29.71	754.6	59.7	15.4	68	ESE			3		10			0	0		Prof. C. Wagner.
Lemberg			30.05	763.2	62.2	16.8	68	E			1		5			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.83	757.7	55.8	13.2	96	SE			3		10			0.175	4.44	Foggy	I. R. Hydrographic Office
Szegedin			29.94	76[illegible].5	72.5	22.5	27	S			3		10			0	0		Karl Stancel.
Trieste			29.86	758.5	57.2	14.0	86	E			1		10			1.272	32.3	Threatening	Prof. V. Farolfi.
Vienna			29.88	758.9	58.3	14.6	78	SE			3		10			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction.	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force.	Clouds. Amount. Up'er	Clouds. Amount. Low'r	Clouds. Direction. Upper.	Clouds. Direction. Lower.	Rain-fall. Inches	Rain-fall. Millimeters.	Weather.	Observer.
Brussels			29.91	759.8	46.4	8.0	75	NE			4		10					Raining	Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	45.2	7.3		SSE	25	11.2			7			0	0	*D. clouds	William Boswell.
Ardrossan																			William McNeil.
Armagh Observatory			30.05	763.3	52.9	11.6		SSE	20	8.9			0						S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			30.14	765.5	53.8	12.1		ESE	16	7.2			0					Blue sky	John Hartnup.
Birr Castle, (Parsonstown)			29.95	760.7	54.4	12.4		SSE			1-3		7					*D. clouds	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			29.98	761.5	83.0	28.3		NE			2		5					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge Observatory			30.13	765.3	54.0	12.2		NE			2		1					*D. clouds	H. Todd.
Cardington			30.11	764.8	54.2	12.3		NE			1		1					Blue sky	John McLaren.
Carlisle			30.11	764.8	60.2	15.7		S			1		1					Blue sky	T. Bell, for J. Cartmell.
Chatham, School M. E			30.07	763.8	52.2	11.2		N			2		4					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	28.51	724.1	30.12	765.0	53.6	12.0		E			4		0					Blue sky	R. E. Power.
Donaghadee			30.08	764.0	52	11.1		S			5		3					*D. clouds	J. Mac Gowan.
Dover			29.99	761.7	48	8.9		ENE			5		4					½ clouded	J. Costello.
Eccles (near Manchester.)			30.14	765.5	58.5	14.8		SE	7.4	3.3								Misty	Thomas Mackereth.
Falmouth Observatory			30.12	765.0	50.1	10.1		SE	12	5.4			7					Overcast	The Staff.
Fort Napier, (Natal)	27.66	702.5	29.90	759.4	77.4	25.2		E			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.85	758.2	89	31.7		W			1		7					*D. clouds	
Galway, Queen's College			28.957	735.37	47	8.3		SW			1		5					*D. clouds	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.11	764.8	63.0	17.2		WNW			5		0					Blue sky	Corp'l C. Altken, A. H. C.
Glasgow Observatory			30.10	764.5	54.0	12.2		S			3		8					Fine	Lewis Stuart.
Great Yarmouth			30.15	765.8	46	7.8		NE			5		4					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			30.09	764.3	53.3	11.8		ENE			4		6					*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.04	763.0	50	10.0		NE			4		0					Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs.																			L. J. Crossley.
Helston			30.05	763.5	57	13.9		E			4		6c			0	0	Blue sky	M. P. Moyle.
Holyhead			30.11	764.8	55	12.8		SSW			2		2					Blue sky	John Tilston.
Kew Observatory			30.09	764.3	51.9	11.1		NE	26	11.6			4					*D. clouds	The Staff.
Kingstown			30.12	765.0	48	8.9		S			5		5					*D. clouds	George Mitchell.
Leicester Museum			30.19	766.8	50.7	10.4		Calm			0		0					Blue sky	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.01	762.0	64.2	17.9		SE			2		8k						Fred. Travis, Pvt. A.H.C.
Nairn			30.00	762.0	55	12.8		SW			2		2					¼ clouded	W. D. Penny.
Nassau, Bahamas																			Surg. Maj. Henry.
Nottingham			30.18	766.0	52.5	11.4		NE			3		1k		ENE	0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.14	765.5	52.8	11.6		ENE			3-4		0					Blue sky	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			30.09	764.3	52	11.1		ENE			2		1					Blue sky	J. Lucas.
Plymouth			30.08	764.0	55	12.8		ENE			1		0					Blue sky	John Merrifield.
Roche's Point			30.06	763.5	52	11.1		SSE			5		5					½ clouded	W. Kennedy.
Saint Ann's Head																			John. C. Walker.
Saint Helier, (Jersey)			29.99	761.7	53.0	11.7		NNE			5		2					¼ clouded	A. P. Amy.
Sandwick Manse (Orkneys			29.99	761.7	48.9	9.4		S	37	16.5			6					Fine	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, Turkey			30.20	767.1	65.6	18.7		NE			2		8					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.17	766.3	51.6	10.9		SE			1		1			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			30.13	765.3	57.2	14.0	61	SSW			2		2			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			30.15	765.8	54.1	12.3		E			2		4					*D. clouds	S. J. Perry.
Stornoway, Lewis C., Hebr.			29.90	759.4	45	7.2		SSW			6		10					Drizzling	John Smith.
Stratfield Turgiss			30.11	764.8	55.3	12.9		E			1-2		3					*D. clouds	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.96	761.0	49	9.4		SSW			5		7					*D. clouds	John Trotter.
Truro, Royal Institution			30.09	764.3	58	14.4		SE			4		5					*D. clouds	W. Newcombe.
Valencia Observatory			29.94	760.5	53.6	12.0		SSE	10	4.5			9					Threatening	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Cape Good Hope Obs			29.87	758.7	80.1	26.7	40	WNW	7	3.1			4						The Staff, for E. J. Stone.
Leith, Restalrig Park			30.14	765.5	56.5	13.6		SW			2		10k			0	0	Cloudy	Andrew Gibb.
Mauritius			29.95	760.7				ESE	7	3.1						0.01	0.3		
Monach Lt-house, Hebrides			29.83	757.7	45	7.2		S			7		10			1.00	25.4		J. Youngclause.
North Unst, (Shetland Is.)			29.93	760.2	47	8.3		S			8	7	8	SW					

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 270.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			30.37	771.5	44.2	6.8	50	E			6		2						
Fanöe			30.30	769.5	50.9	10.5	49	E			6		1						
Godthaab, (Greenland)			29.80	756.9	32.4	0.2	83	SW			2		10						
Stykkisholm, (Iceland)			29.63	752.5	31.5	− 0.3	96	E			4		8						
Thorshavn, (Faröe)			29.65	753.2	48.7	9.3	86	S			6		10						
Vestervig			30.34	770.6	48.0	8.9	57	E			4		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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	47.3	8.5	61	NE			4		10ks		NE	0	0	Covered	Normal School.
Amiens			29.93	760.3	44.6	7.0	71	E			3		10			0	0	Covered	Normal School.
Avignon			29.86	758.5	53.4	11.9	59	SE			2		8		S	0.583	14.8	Very cloudy	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			29.98	761.4	42.3	5.7	88	NE			3		10		NE	0	0	Covered	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			29.87	758.6	49.1	9.5	81	N			2		5		N	0	0	Cloudy	Normal School.
Brest			29.95	760.8	51.6	10.9	74	NE			4	1c				0	0		Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			29.83	757.7	45.9	7.7	77	N			2		10			0.012	0.3	Covered	Puy de Dome Obs.
Commercy			29.85	758.3	45.5	7.5	70	E			2		10k,n		E	0	0	Covered	Normal School.
Commune de Grèasque*			29.89	759.3	46.7	8.3	61	NW			1		10		SW	1.276	32.4		M. Kina.
Grenoble			29.78	756.4	53.6	12	65	W			2		10n		W	0	0	Raining	Normal School.
Le Mans			29.93	760.1	46.4	8	59	NE			4		5		NE	0	0	Cloudy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			29.80	757.0	53.4	11.9	63	SW			6		5		SW	0	0	Cloudy	Normal School.
Mâcon			29.80	757.0	51.1	10.6	77	N			2		10			0	0	Covered	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			29.88	759.0	56.1	13.4	84	NE			4		10		N	0.08	2.	Covered	Normal School.
Orleans																			Normal School.
Paris Observatory			29.90	759.5	44.1	6.7	67	N			3		10			Inap.	Inap.	Covered	National Observatory.
Parthenay																			Normal School.
Privas			29.86	758.5	51.4	10.8		N			1		10		N	1.071	27.2	Covered	Normal School.
La Roche-sur-Yon			29.90	759.5	55.0	12.8	57	NE			6		5		SSW	0	0	Cloudy	Normal School.
Rochefort, Observatory			29.89	759.2	51.8	11.0	69	NE			3		10		SW	0	0	Covered	Naval Observatory.
Rouen			29.91	759.8	50.4	10.2	56	NNE			3		10		NE	0	0	Covered	Normal School.
Saint Lo			29.98	761.6	48.2	9	69	E			6		9		E	0	0		Normal School.
Tarbes	28.71	729.2			45.1	7.3		W			2		10		E	0	0	Covered	Normal School.
Toulouse																			Normal School.
Villefranche			29.82	757.3	54.0	12.2	76	SW			3		10			0.177	4.40	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.3	77.0	25	92	NE			2		5kn						L'Abbé Marchési.
Gorée																			
Marseilles			29.86	758.4	52.7	11.5	62	WSW			1		10			1.169	29.70	Covered	Marseilles Observatory.
Mont-Louis																			— Faiguère.
Montsouris, Paris			29.88	758.9	43.9	6.6	69	NE			4		10			0	0		Montsouris Observ'tory.
Perpignan			29.87	758.7	49.6	9.8	47	SE	13.0	5.83			3		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			29.89	759.2	44.1	6.7	72	NNE			1		10			0	0	Covered	E. Renou.
Toulouse			29.90	759.4	43.9	6.6	91	SW			2		10			0	0		Toulouse Observatory.
Tours			29.88	759.0	47.1	8.4	67	NE			3		10		NE	0	0		C. Marquet.
Versailles, (near Paris)			29.89	759.2	43.9	6.6	71	NE			3		10			0	0	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Grèasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,089.9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Grèasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

* Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.75	755.6	52.3	11.3	70	NE			6		6	ENE		0	0		Prof. T. Hoh.
Berlin			30.07	763.8	43.7	6.5	89	SE			4		10			0.004	0.1		Prof. Arndt.
Breslau			30.13	765.3	45.0	7.2	93	E			3		10			0.488	12.4		Dr. P. Neugebauer.
Carlsruhe			29.78	756.4	52.9	11.6	63	NE			3		10			0	0		A. Senz.
Cassel			29.90	759.5	43.5	6.4	80	NE			4		10	NNE		0.008	0.2		Dr. H. Möhl.
Cologne																			Dr. Gartlee.
Emden																			Prof. Prestel.
Frankfort on the Main			29.85	758.2	52.0	11.1	54	N			3		10			0	0		Physical Society.
Friedrichshafen	28.35	720.1	29.89	759.2	47.3	8.5	80	W					10			0	0		M. Wilhelm.
Hamburg			30.13	765.2	50.2	10.1	63	ENE			5		10			0	0	Cloudy	Deutsche Seewarte.
Kiel			30.26	768.5	45.5	7.5	59	ENE			6		7			0	0		Prof. G. Karsten.
Königsberg			30.44	773.2	59.0	10.0	48	NE			2		5			Inap.	Inap.		Prof. E. Luther.
Köslin			30.25	768.3	47.1	8.4		E			6		4			0	0		H. Müller.
Leipsic			29.94	760.5	41.7	5.4	87	NE			7		10			0	0		Prof. Bruhns.
Memel			30.52	775.2	49.0	9.8	41	E			2		8			0	0		Reinbrecht & Skalweit.
Münster			30.07	763.8	44.4	6.9	83	NE			2		10			0.020	0.5	Raining	Prof. E. Heis.
Neufahrwasser			30.34	770.6	43.3	6.3	79	E			3		10			0	0		A. Lothes.
Posen			30.21	767.2	43.7	6.5	85	E			8		10			0.520	13.2		Dr. Magener.
Strassburg, (in Alsace)			29.82	757.5	50.0	10.0	65	NE			1		10			0	0		Dr. Schur.
Stuttgart			29.80	756.8	52.7	11.5	62	NW			1		10			0	0		Prof. Schoder.
Thorn			30.28	769.0	43.7	6.5	83	ESE			5		10			0.220	5.6		Dr. Hasenbalg.
Treves, (Trier)			29.79	756.6	46.6	8.1	68	E			6		10			0	0		Prof. Flesch.
Wustrow, Naval School			30.16	766.0	44.6	7.0	68	ENE			6		3			0	0		E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			30.17	766.4	73.9	23.3		S										Dusty	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			29.87	758.6	52.5	11.4	86	NE	2.5	1.1			10			0.390	9.9	Raining	
Padua			29.82	757.3	52.9	11.6	96	NNE	15.4	6.9			10			0.051	1.3		
Vicenza			29.85	758.1	53.6	12.0	95	NE	3.1	1.4			10	E		0.374	9.5	Light rain	
Verona			29.82	757.5	59.7	15.4	90	E			2		10			0	0		
Bergamo	28.47	723.0	29.78	756.5	52.9	11.6	85	SW			1		10			0.906	23.0	Raining	
Domodossola	28.82	731.9	30.85	758.3	48.2	9.0	95	Calm			0		10			0	0		
Milan			29.87	758.6	53.8	12.1	90	ENE			1		10	E		0	0		
Pavia			29.83	757.7	50.0	10.0	97	NW			2		10			0.260	32.0	Raining	
Moncalieri			29.84	758.0	49.6	9.8	94	NE	7.4	3.3			10	S		0.654	42.0	Raining	
Mondovi	27.89	708.3	29.01	757.1	48.6	9.2	84	E			1		10			0.941	23.9	Raining	
Porto Maurizio			29.87	758.8	55.5	13.0	78	SSW			2		10			0.244	6.2	Raining	
Genoa			29.80	756.8	58.3	14.6	71	Calm	0	0			10	S		0	0		
Piacenza			29.84	758.0	53.2	11.8	93	SE	9.8	4.4			10			0	0		
Parma			29.87	758.6	54.0	12.2	95	ENE			2		10			0.087	2.2	Light rain	
Bologna			29.83	757.6	58.3	14.6	42	SE			1		10			0.7 9	18.0		
Florence			29.81	757.1	69.4	20.8	69	NE			2		8	S		0	0		
Leghorn			29.83	757.7	59.0	15.0	77	W	6.3	2.8			10			0.055	1.4		
Siena	28.60	726.5	29.84	757.1	61.9	16.6	75	SE	0.7	0.3			9	SW		0.409	35.8		
Urbino	28.29	718.5	29.84	757.9	57.6	14.2	78	SW			2		10			0.189	4.8		
Pesaro																			
Ancona			29.82	757.5	59.7	15.4	83	ESE			4		10			0.012	0.3		
Grosseto			29.84	757.9	45.7	7.6	74	SSE			4		7	S		0.532	13.5		
Rome			29.87	758.6	66.6	19.2	70	S	18.1	8.1			9	S		0	0		
Naples, O. U.			29.98	761.4	67.6	19.8	69	SW			4		10	SW		0.720	18.5		
Lecce			30.06	763.5	66.3	19.6	51	SSE	37.4	16.7			10			0	0		
Cosenza			30.00	762.0	67.5	19.7	67	ESE	21.7	9.7			10			0.392	10.0	Raining	
Riposto, (Sicily)			29.99	761.8	63.5	17.5	80	NE			2		10			0.866	22.0	Raining	
Palermo			29.84	757.9	67.1	19.5	64	NE	1.3	0.6			9			0	0		
Caltanissetta	27.98	710.8	29.92	760.0	59.5	15.3	79	E			6		10	W		0.043	1.1		
Sub-Series.																			
Naples, S. R.			29.95	760.7	63.1	17.3	75	WNW					ck	N		0.327	8.3		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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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.
Tokio																			

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			30.00	762.0	50.7	10.4		NE			5								
Groningen			29.04	762.9	51.3	10.7		NE			5								
Helder			30.07	763.6	46.0	7.8		NNE			5								
Utrecht			29.98	761.4	49.1	9.5	57	NE			5		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			30.32	770.0	46.8	8.2	41	E	7.4	3.3			10					Raining	
Brono			30.22	767.6	42.8	6.0	56	SW	20	9			9			0	0		
Christiania			30.45	773.5	44.6	7.0	41	S	5.4	2.4			1			0	0		
Tromso			30.13	765.3	34.7	1.5	72	SW	9	4			10			0.307	7.8	Rain & snow	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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,)			30.20	767.0	63.9	17.7	82	SW	3.24	1.45			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.03	762.8	63.3	17.4	12	NNW	9.71	4.34			1			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.23	767.9	62.2	16.8	55	SE	6.22	2.78			4			0	0		Capt. D. A. da Cunha.
Lisbon			30.16	766.1	57.0	13.9	46	WSW	13.66	6.1			1	NW		0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 hour, 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.95	760.8	41.7	5.4	89	NE	20	9			10						Astronomical Obs.
Wilna			30.46	773.7	49.1	9.5	43	E	4	2			10						Astronomical Obs.
Dorpat			30.60	777.2	45.9	7.7	33	WSW	2	1			3						Physical Cabinet.
St. Petersburg			30.59	776.9	36.7	2.6	79	WNW	4	2			1						Central Physical Obs.
Kuopio			30.47	774.0	37.9	3.3	55	W	7	3			0						Ch. Forsten.
Kieff			30.22	767.6	70.5	21.4	35	S	9	4			2						Physical Cabinet
Nikolaiev			30.37	771.4	73.4	23.0	38	SE	9	4			5						Kurdakof.
Kertch			30.34	770.5	63.5	17.5	56	NNE	13	6			0						Lagorio.
Moscow			30.52	775.3	42.4	5.8	79	SE	18	8			8						Meteorological Obs.
Lugan			30.30	769.5	72.5	22.5	23	S	9	4			3						Meteorological Obs.
Archangel			30.32	770.0	31.3	− 0.4	66	W	18	8			8						Ogorodnikof.
Tiflis	28.89	733.7	30.29	769.4	63.1	17.3	41	E	9	4			8						Physical Observatory.
Astrakhan			30.49	774.4	71.2	21.8	22	ENE	13	6			1						Sebastianof.
Kasan			30.39	771.8	37.8	3.2	97	N	2	1			10					Light rain	Physical Cabinet.
Orenburg					40.8	4.9	73	NW	13	6			3						Tschernischef.
Ekaterinburg	29.29	744.0	30.32	770.1	42.3	5.7	80	W	11	5			10					Raining	Meteorological Obs.
Nukuss			30.11	764.9	71.8	22.1	25	N	9	4			1						
Kassaly																			Bohrof.
Tashkend	28.61	726.8	30.28	769.2	65.7	18.7	35	Calm	0	0			0						Michelson.
Barnaul			30.11	764.9	50.2	10.1	55	Calm	0	0			0						Meteorological Obs.
Yeniseisk			29.60	751.8	35.4	1.9	87	NW	18	8			8					Rain & snow	Marks.
Irkutsk	28.40	721.4	29.79	756.7	40.5	4.7	70	Calm	0	0			0						Usolzef.
Oorga																			Mussin.
Peking, (China)			30.13	765.2	57.2	14.0	36	SSE	7	3			8						Physical Observatory.
Nertchinsk	27.64	702.0	29.78	756.3	25.3	− 3.7	80	Calm	0	0			5			Blank	Blank		Meteorological Obs.
Vladivostock			29.84	757.9	43.3	6.3	38	[illegible]	11	5			0						
Nikolaievsk, on the Amoor					31.8	− 0.1	94	SE	20	9			10						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 490 meters, or 1,611.8 feet; Ekaterinburg, 193.42 m., or 1,005.22 ft.; Tashkend, m. 404.22, or 1,621.32 ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.02 m., or 1,942.22 ft.; Oorga, 1,281.06 m., or 4,202.02 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.98	761.4	53.1	11.7	45	SW	5.98	2.67		0	0			0	0	Almost cov'd	Royal Observatory.
San Fernando			30.15	756.9	57.7	14.3	64	WNW	15.2	6.8		1	2	NW	WNW	0	0		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; 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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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			30.37	771.4	33.1	0.6	85	SW			2		0			0	0		
Umea			30.44	773.1	35.8	2.1	68	SW			2		1			0	0		
Hernosand			30.45	773.4	38.8	3.8	64	S			4		2			0	0		
Stockholm			30.5[illegible]	774.7	40.3	4.6	71	S			2		3			0	0		
Wisby			30.59	777.0	40.6	4.8	59	N			2		3			0	0		
Sub-Series.																			
Upsala			30.51	774.9	40.6	4.8	47	S	8.1	3.6			0			0.002	0.06		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	721.0	29.82	757.5	50.0	10.0	69	ENE			1		8			0	0	Covered	The Observatory.
Zurich	28.16	715.3	29.82	757.5	46.9	8.3	81	W			1		8			0	0	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —3.3 mm.; Thermometer, —2.0 cent.; Relative Humidity, +12 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.27	768.8	58.5	14.7	63	NE	10	4.5			3		N	0	0		
Fao, (Persian Gulf)			30.12	765.0	75.9	24.4		NW			1		10						
Salonica			30.23	767.8	59.7	15.4		SE			1		8						
Valona			30.01	762.3	76.6	24.8		S			3		10						
Varna			30.47	774.0	60.8	16.0		E			2		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			30.03	762.8	67.1	19.5	73	NW			2		2k		N	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.59	751.6	33	0.6		SW	1	0.4			10s		SW	0.12	3.0	Light snow	Hon. J. Ferguson.
Brockville, Ontario			29.60	751.8	41	5.0	60	SW	13	5.8		0	0			0.09	2.3	Clear	W. R. Bigg.
*Chatham, N. B.			29.66	753.4	39	3.9	71	W	15	6.7		0	0			0.02	0.5	Clear	G. A. Blair.
Charlottetown, P. E. Island.			29.45	748.0	36.0	2.2	93	S			1		10s			Inap.	Inap.	Raining	H. J. Cundall, C. E.
Cornwall, Ontario																0.06	1.5		James Smith, M. A.
Dalhousie, N. B.			30.01	762.2	47.3	8.5	77	N	4	1.8		10cs				0.26	6.6	Cloudy	H. A. Johnson.
Esquimault, B. C.			29.68	753.9	41.6	5.3	61	SW	12	5.4		3ck		W		0	0	Cloudy	W. H. Bevis.
Fredericton, N. B.			30.08	764.0	28	— 2.2	88	NW	4	1.8		5k	5ks	NW	NW	0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			29.67	753.6	36.6	2.7	81	W			1		2s			0	0	Clear	James Stewart.
Goderich, Ontario			29.64	752.8	33.0	0.6		NW			2		10n			0	0	Cloudy	H. J. Strang, M. A.
Granton, Ontario			29.75	755.6	44	6.7	63	W	13	5.8		0	0			0.08	2.0	Clear	James Grant.
*Halifax, N. S.			29.56	750.8	35	1.7	96	W	3	1.3			10s			0.15	3.8	Cloudy	F. Allison, M. A.
*Kingston, Ontario																			S. Woods, M. A.
Little Current, Ontario			29.47	748.5	36	2.2	90	S	7	3.1			10n			0.02	0.5	Light rain	G. B. Abrey, C. E.
*Montreal, Quebec			29.49	749.0	35	1.7	71	W	6	2.7		10k	0	W		0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.53	750.0	34	1.1	80	SW	20	8.9		2ck	2ks	SW	SW	0	0	Fair	J. B. Haney.
*Parry Sound, Ontario			29.67	753.6	35	1.7	80	W	10	4.5		10k	0	SW		0.76	19.3	Fair	Rev. R. Mooley.
*Port Dover, Ontario			29.71	754.6	43.6	6.4		NW	12	5.4						0	0	Fine	H. Morgan.
Port Hastings, N. S.			29.68	753.9	36	2.2	79		4	1.8			8ks		W	0.65	16.5	Cloudy	Peter Grant.
*Port Stanley, Ontario			29.52	749.8	39	3.9	73	Calm	0	0			10n			0.03	0.8	Cloudy	M. Payne.
*Quebec, Quebec			29.74	755.4	38	3.3	77	Calm	0	0		3k				0.070	1.78		Capt. Ash, R. N.
St. John, N. B.			29.56	750.8	32	0.0	85	SW	6	2.7		10k	0			0	0	Cloudy	G. Murdoch, C. E.
*Saugeen, Ontario																Inap.	Inap.		K. Stewart.
Stayner, Ontario			29.65	753.1	34.4	1.3	81	W	8	3.6			1s			0.064	1.62	Cloudy	R. J. Cole.
Stratford, Ontario			29.66	753.4	45	7.2	65	SW	17	—7.6		0	2ks		W	0.16	4.1	Clear	C. J. MacGregor, M. A.
*Sydney, C. B.			29.64	752.8	35	1.7	85	W	5	2.2		5ck	0	W		0.02	0.5	Clearing	T. C. Hill.
*Toronto, Ontario			29.65	753.1	34.7	1.5	96	NW			2	9k	1s	W		Inap.	Inap.	Cloudy	Magnetic Observatory.
Woodstock, Ontario																			J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.48	748.8	45	7.2	75	SE	1	0.4			10s		SW	0	0	Cloudy	
Alpena, Mich.			29.54	750.3	35	1.7	61	W	16	7.2		5ck	0	W		0	0	Fair	
Atlantic City, N. J.			29.67	753.6	48	8.9	85	SW	8	3.6		2cs	8s	S	SW	Inap.	Inap.	Cloudy	
Augusta, Ga.			30.03	762.7	55	12.8	65	S	2	0.9		0	0			0	0	Clear	
Baltimore, Md.			29.68	753.9	55	12.8	50	SW	6	2.7		8k	Sm'e	SW		0	0	Cloudy	
Barnegat, N. J.			29.64	752.8	51	10.6	86	SW	24	10.7			10n		SW	Inap.	Inap.	Light rain	
Benton, Montana	27.46	697.5	30.26	768.6	30	— 1.1	79	NE	1	0.4		0	0			0	0	Clear	
Bismarck, Dakota	28.41	721.6	30.14	765.5	30	— 1.1	48	NW	6	2.7		5k	0	NW		0	0	Fair	
Boston, Mass.			29.60	751.8	51	10.6	59	S	18	8.0		10cs	Haze	S		0	0	Cloudy	
Breckenridge, Minn.			30.08	764.0	31	— 0.6	81	W	8	3.6		0	0			0	0	Clear	
Buffalo, N. Y.			29.62	752.3	33	0.6	94	W	6	2.7		10k	0	SW		0.80	20.3	Cloudy	
Burlington, Vt.			29.45	748.0	40	4.4	91	Calm	0	0			10n			0.05	1.3	Light rain	
Cairo, Ill.			29.98	761.5	55	12.8	93	Calm	0	0			10n		W	0.12	3.0	Light rain	
Cape Hatteras, N. C.			29.84	757.9	63	17.2	61	SW	28	12.5		0	Haze			0.04	1.0	Clear	
Cape Henry, Va.			29.78	756.4	59	15.0	48	S	20	8.9		5c	0	W		0	0	Fair	
Cape Lookout, N. C.			29.91	759.7	62	16.7	66	SW	16	7.2		0	0			0	0	Clear	
Cape May, N. J.			29.68	753.9	53	11.7	79	SW	16	7.2			10ks		SW	0	0	Cloudy	
Charleston, S. C.			30.04	763.0	59	15.0	54	SW	8	3.6		0	0			0	0	Clear	
Cheyenne, Wyoming	24.27	616.4	30.15	765.8	31	— 0.6	89	N	8	3.6		2ck	0	W		0	0	Fair, frost	
Chicago, Ill.			29.81	757.2	40	4.4	56	W	3	1.3		0	0			0.03	0.8	Clear	
Cincinnati, Ohio			29.79	756.7	5[illegible]	[illegible]	71	W	9	4.0		8cs	0	NW		0.19	4.8	Fair	
Cleveland, Ohio			29.69	754.1	4[illegible].7	4.8	85	SW	6	2.7		5k	2ks	W	W	0.41	10.4	Threatening	
Colorado Springs, Col.	24.24	615.7	30.12	765.0	36	2.2	80	N	18	8.0		0	0			0	0	Clear	
Corsicana, Tex.			30.03	762.7	57	13.9	69	S	10	4.5		0	0			0	0	Clear	
Davenport, Iowa			29.93	760.2	39	3.9	71	NW	12	5.4		5cs	0	NW		Inap.	Inap.	Clear	
Denison, Tex.			29.83	757.7	66	18.9	40	S	20	8.9		0	0			0	0	Clear	
Denver, Col.	25.03	637.8	30.25	768.3	40	4.4	64	S	2	0.9			10s			0	0	Cloudy	
Detroit, Mich.			29.66	753.4	37	2.8	90	W	9	4.0		2k	5ks	W	W	0.76	19.3	Clearing	
Dodge City, Kan.	27.45	697.2	29.75	755.6	46	7.8	85	N	30	13.4		0	0			0	0	Clear	
Dubuque, Iowa			29.90	759.4	38	3.3	55	NW	8	3.6		0	0			0	0	Clear	
Duluth, Minn.			29.85	758.2	33	0.6	51	NW	12	5.4		0	0			0	0	Clear	
Eastport, Me.			29.66	753.4	40	4.4	71	S	4	1.8			10s		SW	0.06	1.5	Cloudy	
Erie, Pa.			29.64	752.8	40	4.4	91	W	8	3.6			10ks		W	0.70	17.8	Cloudy	
Escanaba, Mich.			29.63	752.6	35	1.7	61	NW	11	4.9		2k	0	NW		0	0	Clear	
Fort Gibson, Indian Terr.			29.83	757.7	63	17.2	37	NE	12	5.4		0	0			0	0	Clear	
Ft. St. Michaels, Alaska			30.06	763.5	6	—14.4		SE	5	2.2			10s					Foggy	
Fort Sill, Indian T.	28.68	728.5	29.79	75[illegible].7	52	11.1	64	N	4	1.8		0	0			0	0	Clear	
Fort Sully, Dakota																			
Galveston, Tex.			30.16	766.1	64	17.8	73	SW	8	3.6		0	0			0	0	Clear	
Grand Haven, Mich.			29.72	754.9	41	5.	65	W	14	6.3		0	8s		W	0.04	1.0	Cloudy	
Indianapolis, Ind.			29.84	757.9	46	7.8	68	W	4	1.8		8cs	0	W		0.22	5.6	Fair	
Indianola, Tex.			30.17	766.3	64	17.8	78	SW	12	5.4		0	0			0	0	Clear	
Jacksonville, Fla.			30.14	765.5	60	15.6	61	NW	14	6.3		0	0			Inap.	Inap.	Clear	
Keokuk, Iowa			29.93	760.2	42	5.6	38	NW	9	4.0		2k	5s	NW	NW	0	0	Fair	
Key West, Fla.			30.13	765.3	70.6	21.4	62	NE	18	8.0			10s			0	0	Cloudy	
Kittyhawk, N. C.			29.84	757.9	57	13.9	81	SW	20	8.9		0	0			0	0	Clear	
Knoxville, Tenn.			29.94	760.5	54	12.2	55	SW	8	3.6		2ck	5ks	W	W	0	0	Cloudy	
La Crosse, Wis.			29.88	759.0	37	2.8	62	NW	10	4.5		0	0			0.03	0.8	Clear	
Leavenworth, Kan.			29.98	761.5	51	10.6	79	N	2	0.9			10s		NW	0.08	2.0	Cloudy	
Lexington, Ky.	28.79	731.3	29.88	758.9	50	10.0	79	SW	12	5.4			10s			0.02	0.5	Cloudy	
Long Branch, N. J.			29.60	751.8	49	9.4	85	SW	10	4.5			10s			0	0	Cloudy	
Louisville, Ky.			29.89	759.2	51	10.6	72	SW	4	1.8		10cs	Sm'e			0.05	1.3	Cloudy	
Lynchburg, Va.			29.75	755.6	59	15.0	42	NW	5	2.2		0	0			0	0	Clear	
Malone, N. Y.			29.43	747.5	37	2.8	90	W	4	1.8			10n		W	0.08	2.0	Light snow	
Manhattan, Kan.	28.88	733.[illegible]	30.03	762.7	48	8.9	77	NW	2	0.9		2cs	0			0	0	Clear	
Marquette, Mich.			29.62	752.3	33	0.6	80	W	16	7.2			10s		W	0	0	Cloudy	
Memphis, Tenn.			29.96	761.0	61	16.1	55	SW	6	2.7		0	Haze			0	0	Clear	
Milwaukee, Wis.			29.82	757.4	36	2.2	62	NW	13	5.8		0	0			0.17	4.3	Clear	
Mobile, Ala.			30.15	765.8	58	14.4	64	W	4	1.8		0	0			0	0	Clear	
Montgomery, Ala.			30.10	764.5	56.5	13.6	59	SW	8	3.6		0	Haze			0	0	Clear	
Morgantown, W. Va.			29.70	754.4	51	10.6	59	W	9	4.0			10s		W	0.04	1.0	Cloudy	
Mt. Washington, N. H.	23.27	591.0	29.63	752.6	25	— 3.9	87	W	48	21.5		10s	5s		W	0	0	Cloudy	
Nashville, Tenn.			29.95	760.7	57	13.9	69	[illegible]	0	0			10s		W	0	0	Cloudy	
New Haven, Conn.			29.69	754.1	52	11.1	78	S	10	4.5			10s			Inap.	Inap.	Cloudy	
New London, Conn.			29.65	753.1	51	10.6	71	SW	14	6.3		5c	0	SW		0	0	Fair	
New Orleans, La.			30.16	766.1	60.5	15.8	68	SW	3	1.3		0	0			0	0	Clear	
Newport, R. I.			29.76	755.1	47	8.3	77	S	16	7.2		8cs	0	W		0	0	Cloudy	
New York, N. Y.			29.72	752.3	49	9.4	71	Calm	0	0			10ks			0	0	Cloudy	
Norfolk, Va.			29.81	757.2	57.5	14.2	55	SW	14	6.3		2k	0			0	0	Fair	
North Platte, Neb.	27.24	691.9	29.89	758.4	42	5.6	83	NW	6	2.7		5k	0	NW		0	0	Fair	
Omaha, Neb.	28.92	736.1	30.08	764.0	40	4.4	72	N	7	3.1		10cs	0	NW		0	0	Cloudy	
Oswego, N. Y.			29.55	750.6	37.7	3.1	90	NW	3	1.3			10s		NW	0.23	5.8	Cloudy	
Pembina, Dakota			30.03	762.7	28	2.2	82	NW	4	1.8		0	0			0	0	Clear	
Philadelphia, Penn.			29.62	752.3	52	11.1	66	W	9	4.0			10ks		W	Inap.	Inap.	Cloudy	
Pike's Peak, Colorado	17.79	451.8	30.00	762.0	14	10.0	64	W	36	16.1		0	1s			0	0	Clear	
Pittsburgh, Penn.			29.69	754.1	46	7.8	61	W	12	5.4		5ck	2k	W	W	Inap.	Inap.	Fair	
Port Huron, Mich.			29.44	752.8	36	2.2	80	W	6	2.7			10s		W	0.20	5.1	Cloudy	
Portland, Me.			29.62	752.3	45	7.2	68	SE	5	2.2		Haze	Haze			0	0	Hazy	
Portland, Oregon			30.16	766.1	50	10.0	93	S	2	0.9			10n			0.30	7.6	Light rain	
Punta Rassa, Fla.			30.18	766.6	62.2	16.8	70	NE	6	2.7		Haze	0			0.02	0.5	Hazy	
Rochester, N. Y.			29.57	751.1	38	3.3	71	W	8	3.6		2cs	2s		W	0.25	6.3	Fair	
Salt Lake City, Utah	25.81	655.6	30.14	765.5	43	6.1	58	SE	4	1.8		0	0			0	0	Clear	
Sandy Hook, N. J.			29.58	751.3	53	11.7	73	SW	24	10.7			10s		W	Inap.	Inap.	Cloudy	
San Diego, Cal.			30.03	762.7	54	12.2	68	Calm	0	0		0	0			0	0	Clear	
San Francisco, Cal.			30.14	765.5	50	10.0	93	Calm	0	0			Fog			0	0	Foggy	
Santa Fe, N. M.	23.40	594.4	29.94	760.5	40	4.4	64	N	6	2.7		0	1cs			0	0	Clear	
Savannah, Ga.			30.08	764.0	65	18.3	48	SW	6	2.7		Haze	0			0	0	Clear	
Shreveport, La.			30.08	764.0	60	15.6	71	S	4	1.8		0	0			0	0	Clear	
Smithville, N. C.			29.96	761.0	61	16.1	61	SW	17	7.6		0	0			0	0	Clear	
Springfield, Mass.			29.56	750.8	48	8.9	77	S	12	5.4			10s, hz.			0	0	Threatening	
St. Louis, Mo.			29.94	760.5	51	10.6	71	N	3	1.3			10s			0.01	0.3	Cloudy	
St. Marks, Fla.			30.15	765.8	64	12.2	86	Calm	0	0		0	0			0	0	Clear	
St. Paul, Minn.			29.90	759.4	34	1.1	57	NW	11	4.9		0	0			0	0	Clear	
St. Paul's Island, Alaska			29.96	761.0	27	— 2.8	100	SE	21	9.4			10s			Inap.	Inap.		
Thatcher's Island, Mass.			29.61	752.1	47	8.3	77	SW	13	5.8		8c	0	SW		0	0	Fair	
Toledo, Ohio			29.59	750.8	45	7.2	76	SW	4	1.8		5k	0	SW		0.06	1.5	Fair	
Tucson, Arizona	27.65	702.3	30.24	768.1	47	8.3		S				0	0			0	0	Clear	
Tybee Island, Ga.			30.06	763.5	58	14.4	62	W	6	2.7		0	0			0	0	Clear	
Vicksburg, Miss.			30.11	764.8	59	15.0	76	SW	4	1.8		0	0			0	0	Clear	
Virginia City, M. T.	24.44	620.8	29.92	760.0	32	0.0	60	Calm	0	0		8c	0	NW		Inap.	Inap.	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			29 68	753.9	54.5	12.5	53	NW	5	2.2			10ks		W	0	0	Cloudy	
Wilmington, N. C			29.94	76 5.5	60	15.6	44	SW	16	7.2		0	0			0	0	Clear	
Wood's Holl, Mass			29.67	753.6	50	10.0	64	SW	31	13.9		8c	0			0	0	Fair	
Wytheville, Va	27.47	697.7	29.57	751.1	52	11.1	53	W	12	5.4		2c	5ks	W	W	0	0	Fair	
Yankton, Dakota	28.84	732.5	30.16	766.1	39	3.9	81	NW	1	0.4			10s		NW	Inap.	Inap.	Cloudy	
Yuma, Arizona			30.04	763.0	64	17.8		NE				0	0			0	0	Clear	
Sub Series.																			
Bridgetown, B'b'dos, W. I.			30.02	762.5	81	27.2	70	E	5	2.2		5k	10ks	E		0	0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.99	761.7	81	27.2	78	E				0	8ks			0.06	1.5	Fair	L. V. Bigard.
St. Thomas, S. T., W. I.			30.23	767.8	78	25.6	81	E	15	6.7		4ck	8kn	NE		0.01	0.3	Cloudy	W. S. Cameron.
Kingston, Jamaica, W. I.			30.19	766.8	77	25.0	72	Calm	0	0		0	0			0	0		James Gall.
Santiago de Cuba, W. I.			29.82	757.4	79	26.1	74	Calm	0	0		0	2ks			Inap.	Inap.	Fair	Robert Mason.
Havana, Cuba, W. I.			30.11	764.8	74	23.3	72	N	9.6	4.3		8k	2ks	N		0	0	Cloudy	Charles Hasselbrink
St. Georges, Bermudas			30.10	764.5	70.5	21.4	82	SSW	12.0	5.4		5c	2k	SW		0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.20	690.9	29.95	760.7	67	19.4	90	NE	2.0	0.9		5c	0	NE		0.09	2.3	Fine, clear	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.00	762.0	82	27.8	82	E			2		5k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.04	763.0	83.1	28.4										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.23	640.8			63.0	17.2	79		1	0.4		1ck	2ks			0	0	Fair	Thomas Herran.
St. John's, Newfoundland.			29.60	751.8	37.5	3.1	62	W				10k	10s			0.25	6.3	Cloudy	John Delaney.
York Factory, B. A.			29.99	761.0	12	−11.1	90	N	28	12.5			10s		N	Inap.	Inap.		J. Fortescue.
Honolulu, Oahu, H. I.			29.97	761.2	72	22.2	90	Calm			0					0	0		E. P. Church.
Makawao, Maui, H. I.	27.79	705.8	29.86	758.4	60	15.6	81	Calm	0	0		10c	5n			0	0		F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Peruvian, N. 54° 30′, W. 15° 25′.	S66W	12	29.38	746.2	52	11.1		S			4		Haze			Moderate.	S	Showery	Capt. W. Richardson.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below −40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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 APRIL 17, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	68.4	20.2	50	Calm			0		1			0	0	Clear	Charnot.
Algiers			30.02	762.5	65.5	18.6	60	WNW			1		2			0	0	Clear	Peter.
La Calle								Calm			0		0			0	0	Clear	Kuntz.
Tunis			30.06	763.4	65.5	18.6	36	W			4		8			0	0	Cloudy	Jacques
Sfax			30.13	765.4	64.8	18.2	37	S			4		1			0	0	Clear	Chauvey.
Salda			30.11	764.3	65.3	18.5	40	W			2		3			0	0	Fair	Millot.
Tebessa			30.09	764.2	60.1	15.6		NNW			5		0			0	0	Clear	Colin.
Geriville			30.13	765.3	63.1	17.3	26	NW			3		2			0	0	Clear	Buard.
Laghouat			30.11	764.7	73.4	23.0	25	SW			3		0			0	0	Clear	Guyot.
Biskra			30.11	764.7	72.0	22.2	29	NW			1		0			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			29.77	756.1	58.1	14.5	81	NE			1		8			0.177	4.5	Raining	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.82	757.4	64.4	18.0	75	SE			2		8			0.083	2.1		I. R. Observatory.
Eperies			29.83	757.6	71.8	22.1	47	S			2		10			0	0		Julius Mikolik.
Gratz	28.58	726.0	29.77	7 6.2	54.1	12.3	88	SW			2		10			0.709	18.0		Andreas Rospini.
Hermannstadt	28.51	724.1	29.87	758.8	70.9	21.6	33	ESE			3		10			0	0		Prof. Reissenberger.
Kremsmünster			29.51	749.5	68.7	20.4	28	SE			3		5			2.126	54.0		Prof. C. Wagner.
Lemberg			29.91	759.6	60.3	15.7	74	SE			1		8			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.26	768.7	51.9	12.7	74	WNW			2		9ks			0.091	2.30		I. R. Hydrographic Office
Szegedin			29.75	755.7	76.1	24.5	26	S			3		2			0	0		Karl Stancel.
Trieste			29.81	756.9	55.8	13.2	82	NW			1		10			0	0		Prof. V. Farolfi.
Vienna			29.65	753.1	66.9	19.4	60	SSE			3		2			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Brussels			29.63	752.5	48.9	9.4	78	SSW			3		10			0.126	3.20		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0-10.	Clouds. Amount. Low'r 0-10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.74	755.4	40.5	4.7		ESE	25	11.2			10			0	0	Rain-squalls	William Boswell.
Ardrossan			29.90	751.8	42	5.6		E			4		8					Overcast	William McNeil.
Armagh Observatory			29.53	750.0	42.3	5.8		E	16	7.2			10					Gloomy	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			30.52	749.8	44.7	7.1		ESE	12	5.4			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.40	746.7	50.6	10.3		SE			1-3		8					*D. coluds	J. Dreyer.
Bradford			29.56	750.8	44.0	6.7		E			1		10			0.04	1.0	Drizzling	J. McLandsborough.
Bridgetown, (Barbados)			30.03	762.7	79.0	26.1		NE			5		8					Overcast	Sergt. J. F. Halanen, A.
Cambridge Observatory			29.59	751.6	46.0	7.8		SE			1		10			0	0	Cloudy	H. Todd. [H. C.
Cardington			29.55	750.6	48.0	8.9		SE			1		10					Overcast	John McLaren.
Carlisle			29.57	750.6	43	6.1		E			1		10			0.09	2.3	Raining	T. Bell, for J. Carmell.
Chatham, School M. E			29.65	753.1	49.7	9.8		SSE			1		0					Blue sky	Capt. J. Fellowes, R. E.
Dartmoor	28.02	711.7	29.55	750.6	42.4	5.8		SE			6		10					Threatening	R. E. Power.
Donaghadee			29.53	750.0	42	5.6		ESE			5		10					Raining	J. Mac Gowan.
Dover			29.59	751.6	45	7.2		SSE			2		7					Gloomy	J. Costello.
Eccles, (near Manchester.)			29.54	750.3	46.5	8.1		SE	4.5	2.0			10					Gloomy	Thomas Mackereth.
Falmouth Observatory			29.42	747.3	46.0	7.8		SE	35	15.6			10					Rain-squalls	The Staff.
Fort Napier, (Natal)	27.61	701.3	29.84	757.9	83.8	28.8		E			1		8					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	86	30.0		N			2		7					*D. clouds	[tis-
Galway, Queen's College			29.03?	737.3?	48	8.9		S			3		8					Raining	B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			30.15	766.1	63.0	17.2		W			6		9					Overcast	Corp'l C. Aitken, A. H. C.
Glasgow Observatory			29.58	751.3	40.8	4.9		E			2		10					Raining	Lewis Stuart.
Great Yarmouth			29.62	752.3	44	6.7		SE			3		8					*D. clouds	G. T. Watson.
Greenwich Royal Obs			29.69	754.6	47.2	8.4		SSW			1		10					Drizzling	The Staff, for G. B. Airy.
Guernsey			29.53	750.0	48	8.9		ESE			2		7					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.																			L. J. Crossley.
Helston			29.40	746.7	49	9.4		SE			4		10n			0.45	11.4	Raining	M. P. Moyle.
Holyhead			29.47	748.5	47	8.3		E			1		10					Misty	John Tilston.
Kew Observatory			29.58	751.3	48.2	9.0		S	10	4.5			10					Gloomy	The Staff.
Kingstown			29.50	749.3	48	8.9		SSE			4		9					Overcast	George Mitchell.
Leicester Museum			29.57	751.1	46.1	7.8		SE			1		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.06	763.5	64.6	18.1		NW			2		4k						Fred. Travis, Pvt. A.H.C.
Nairn			29.70	754.4	46	7.8		ESE			2		8					¾ clouded	W. D. Penny.
Nassau, Bahamas,																			Surg. Maj. Henry.
Nottingham			29.56	750.8	48.4	9.1		SE			3		10d		ESE	0.01	0.35	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.55	750.6	44.0	6.7		SE			2		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.54	750.3	47	8.3		SE			1		10					Misty	J. Lucas.
Plymouth			29.48	748.8	49.5	9.7		SE			3		10					Overcast	John Merrifield.
Roche's Point			29.53	745.0	46	7.8		SE			6		10					Raining	W. Kennedy.
Saint Ann's Head			29.45	748.0	47	8.3		ESE			5		8					Overcast	John. C. Walker.
Saint Helier, (Jersey)			29.54	750.3	49.2	9.6		SSE			3		8					¾ clouded	A. P. Amy.
Sandwick Manse (Orkneys			29.49	750.7	45.5	7.5		SE	38	17.0			10					Overcast	Rev. C. Clouston, LL. D.
Scarborough			29.60	751.8	42.0	5.6		ESE			4		10					Foggy	F. Shaw.
Scutari Cemetery, (Turkey			30.02	762.5	62.0	16.7		NE			2		7					Misty	Sergt. W. H. Lyne.
Sheffield			29.55	750.6	46.9	8.3		SE			1		10			0.050	1.27	Gloomy	W. F. Cooper.
Silloth Rectory			29.54	750.3	41.8	5.4	98	E			3		10			0.025	0.64	Overcast	Rev. Francis Redford.
Stonyhurst Observatory			29.53	750.0	44.8	7.1		E			1		10			Blank	Blank	Threatening	S. J. Perry.
Stornoway, Lewis C. (Hebr.			29.65	753.1	48	8.9		E			6		2					Blue sky	John Smith.
Stratfield Turgiss			29.58	751.3	46.3	7.9		SE			1-2		5					*D. clouds	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.74	755.4	45	7.2		SSE			5		9					Gloomy	John Trotter.
Truro, Royal Institution			29.39	746.5	46	7.8		SE			7		10					Raining	W. Newcombe.
Valencia Observatory			29.25	742.9	46.2	7.9		SE	15	6.7			10					Raining	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man					44	6.7		E			4		2						
Cape Good Hope Obs			29.93	760.2	63.1	17.3	84	SSE	24	10.7			10			0	0		The Staff, for E. J. Stone.
Leith, Restalrig Park			29.64	752.8	40.8	4.9		E			3		10ks					Overcast	Andrew Gibb.
Mauritius			30.02	761.5				ESE	20.1	9.0						0	0		
Monach Lt-house, Hebrides			29.62	752.3	48	8.9		SE			1	5	5	SE		0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.97	761.2	44	6.7		SE			7		10						

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; *Fort Napier*, 2,200 ft., or 270.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			29.89	759.2	40.3	4.6	81	ESE			6		10						
Fanöe			29.81	757.2	41.7	5.4	91	E			6		10					Raining	
Godthaab, (Greenland)			29.99	761.7	32.4	0.2	69	NNE			2		10						
Stykkisholm, (Iceland)			29.65	758.1	21.7	— 5.7	93	E			6		8						
Thorshavn, (Faröe)			29.80	756.8	48.9	9.4	78	SE			4		5						
Vestervig			29.84	757.8	44.8	4.9	73	ENE			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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.57	751.1	50.4	10.2	62	SSW			1		5k		SSW	0.024	0.6	Cloudy	Normal School.
Amiens			29.61	752.8	48.9	9.4	70	ENE			1		10			0.228	5.8	Covered	Normal School.
Avignon			29.88	758.9	50.4	10.2	76	SE			2		8		S	0.339	8.6	Very cloudy	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			29.66	753.4	49.1	9.8	72	S			1		10		SW	0.030	0.75	Covered	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			29.76	756.0	46.4	8	86	SW			2		10		SW	0	0	Covered	Normal School.
Brest			29.40	746.7	47.7	8.7	89	WSW			3		10		WSW	0	0	Raining	Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			29.82	757.4	41.9	5.5	87	S			2		10		W	0.197	5.0	Covered	Puy de Dome Obs.
Commercy			29.77	756.1	47.3	8.5	75	N			2		10kn		N	0	0	Covered	Normal School.
Commune de Gréasque*			29.92	760.0	46.5	7.5	83	SW			2		10		SW	0.055	1.4		M. Kina.
Grenoble			29.81	757.2	47.5	8.6	81	NW			4		10			0.925	23.50	Covered	Normal School.
Le Mans			29.65	753.2	46.6	8.1	81	SW			2		5		SW	0	0	Cloudy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			29.81	757.1	46.9	8.3	77	SW			1		5		SW	0.55	14.	Raining	Normal School.
Mâcon			29.72	754.9	47.5	8.6	78	Calm			0		10			0	0	Covered	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			29.88	758.9	52.2	11.2	57	S			4		8		S	0.24	6.	Very cloudy	Normal School.
Orleans																			Normal School.
Paris Observatory			29.67	753.5	47.7	8.7	71	SSW			2		10			0	0	Covered	National Observatory.
Parthenay																			Normal School.
Privas			29.82	757.3	44.6	7		S			4		10		S	0.47	12.	Covered	Normal School.
La Roche-sur-Yon			29.66	753.4	59.2	15.1	33	SSW			4		8		NE	0.008	0.2	Very cloudy	Normal School.
Rochefort, Observatory			29.72	755.0	54.9	12.7	65	SSW			3		10		NE	0.236	6.0	Covered	Naval Observatory.
Rouen			29.64	752.8	48.2	9.0	71	S			1		10		S	0.039	1.0	Covered	Normal School.
Saint Lo			29.60	751.8	51.8	11	97	SW			3		5		SW	0.04	1.		Normal School.
Tarbes	28.74	729.9			50.9	10.5		W			2		10		E	0	0	Covered	Normal School.
Toulouse																			Normal School
Villefranche			29.88	759.0	50.2	10.1	89	SE			1		10		N	0.173	4.40	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.89	759.2	78.8	26	72	NE			2		5kn						L'Abbé Marchésl.
Gorée																			
Marseilles			29.85	758.1	48.2	9.0	84	S			1		10n			0.031	0.80	Raining	Marseilles Observatory.
Mont-Louis	24.61	625.1	29.93	760.1	41.4	5.3	70	SW	18.6	8.33			4		W	0.087	2.2		—. Falguère.
Montsouris, Paris			29.65	753.4	46.6	8.1	76	SSW			2		10		SSW	0	0		Montsouris Observ'tory.
Perpignan			29.87	758.6	50.0	10.0	68	S	11.2	5.00			10			0.024	0.6		Dr. Flues.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			29.67	753.6	47.3	8.5	76	S			1		10			0	0	Covered	E. Renou.
Toulouse			29.85	758.1	55.1	13.4	74	SW			2		6			0.110	2.8		Toulouse Observatory.
Tours								SW			1		10		SW	0	0		C. Marquet.
Versailles, (near Paris)			29.66	753.3	47.5	8.6	78	W			1		10			0	0	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Leo, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 432 m., or 1,090.9 ft.; lermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

*Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.60	751.9	54.5	12.5	71	NE			3		8	E		0	0		Prof. T. Hoh.
Berlin			29.71	754.5	49.6	9.8	90	E			2		10			0.322	8.2		Prof. Arndt.
Breslau			29.76	756.0	66.9	18.9	63	SE			7		10			0	0		Dr. P. Neugebauer.
Carlsruhe			29.71	754.6	51.1	10.6	73	SW			1		10			0	0		A. Senz.
Cassel			29.60	751.8	58.3	14.6	57	NE			2		7	S		0	0		Dr. H. Möll.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main			29.74	755.4	57.0	13.9	62	SE			1		10			0	0		Physical Society.
Friedrichshafen	28.26	717.9	29.82	757.3	53.1	11.7	61	SW					7			0	0	Light rain	M. Wilhelm.
Hamburg			29.73	755.2	46.0	7.8	90	ESE			3		10			0.276	7.0	Light fog	Deutsche Seewarte.
Kiel			29.80	757.0	44.2	6.8	85	E			3		10			0.185	4.7		Prof. G. Karsten.
Königsberg			30.12	765.0	50.5	10.3	67	E			7		5			0	0		Prof. E. Luther.
Köslin			29.80	758.5	46.0	8.1		E			6		4			0	0		H. Müller.
Leipsic			29.69	754.2	56.3	13.5	74	NNE			1		8			0.016	0.4		Prof. Bruhns.
Memel			30.20	767.1	51.8	11.0	47	E			7		9			0	0		Reinbrecht & Skalweit.
Münster			29.70	754.4	53.4	11.9	80	SE			2		10			0.024	0.6		Prof. E. Heis.
Neufahrwasser			29.97	761.3	48.3	6.3	91	E			2		10			0.181	4.6	Raining	A. Lothes.
Posen			29.83	757.6	52.3	11.3	88	E			7		10			0.004	0.1		Dr. Magener.
Strassburg, (in Alsace)			29.73	755.1	52.7	11.5	69	Calm			0		10			0	0		Dr. Schur.
Stuttgart			29.69	754.0	56.3	13.5	59	NW			1		8			0	0		Prof. Schoder.
Thorn			29.93	760.1	46.6	8.1	93	ESE			5		10			0.185	4.7		Dr. Hasenbalg.
Treves, (Trier)			29.69	754.0	52.3	11.3	57	SW			5		10			0	0		Prof. Flesch.
Wustrow, Naval School			29.71	754.6	42.8	6.0	96	E			3		10			0.706	17.9	Raining	E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			30.04	762.9	73.2	22.9		S										Clear, sirocco	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			29.79	756.7	57.0	13.9	74	SW	0.7	0.3			10			0	0		
Padua			29.78	756.5	58.8	14.9	48	WSW	15.4	6.9			6	NE		0	0		
Vicenza			30.79	756.7	59.5	15.3	50	SW	8.7	3.9			4	S		0	0		
Verona			29.79	756.6	61.9	16.6	78	E			1		10			0	0		
Bergamo	28.47	723.0	29.78	756.5	56.1	13.4	51	SSW			4		4			0	0		
Domodossola	28.80	731.6	29.84	758.0	51.8	11.0	85	Calm			0		10			0	0		
Milan			29.85	758.2	57.4	14.1	59	NNW			2		7	WSW		0	0		
Pavia			29.84	757.9	56.8	13.8	52	SE			4		4	SW		0.059	1.5		
Moncalieri			29.83	757.7	48.0	8.9	80	NW	4.3	1.9			9	E		0	0		
Mondovi	27.91	708.9	29.83	757.7	47.3	8.5	87	NNW			1		9			0	0		
Porto Maurizio			29.92	760.0	54.7	12.6	60	SW			2		7	NNE		0	0		
Genoa			29.89	759.2	55.8	13.2	54	SW	6.9	3.1			4	S		0	0		
Piacenza			29.84	757.8	58.5	14.7	46	SW	13.0	5.8			4	W		0	0		
Parma			29.84	757.9	57.0	13.9	51	W			6		1			0	0		
Bologna			29.88	758.9	59.0	15.0	44	WNW			1		5	E		0.157	4.0		
Florence			29.91	759.6	58.1	14.5	51	W			4		10	W		0	0		
Leghorn			29.91	759.7	54.1	12.3	60	WNW	7.4	3.3			3			0	0		
Siena	28.64	727.4	29.84	758.0	52.2	11.2	60	NW	4.2	1.9			8	SW		0.165	4.2		
Urbino	28.29	718.6	29.84	758.0	55.8	13.2	45	SW			4		6			0.354	9.0		
Pesaro																			
Ancona			29.87	758.7	56.8	13.8	89	SE			4		5			0	0.		
Grosseto			29.94	759.4	57.2	14.0	55	ENE			4		6	S		0.457	11.6		
Rome			29.92	760.0	55.8	13.2	73	S	9.8	4.4			10	SW		0	0		
Naples, O. U.			29.97	761.3	54.0	12.2	41	WSW			2		10	SW		0.433	11.0	Raining	
Lecce			29.97	761.2	66.9	19.4	56	S	28.0	12.5			5	S		0	0		
Cosenza			30.03	762.7	63.1	17.3	70	NW	8.1	3.6			5			17.4	7.8		
Riposto, (Sicily)			29.96	761.0	63.3	17.4	67	NE			4		0			0	0		
Palermo			29.95	760.6	61.5	16.4	42	WSW	11.9	5.2			10			0	0		
Caltanissetta	28.00	711.1	29.93	760.3	61.0	16.1	52	SW			2		1	NE		0	0		
Sub-Series.																			
Naples, S. R.			29.94	760.5	53.4	11.9	70	WSW	6.7	3.1			.c	NW		26.4	11.8		Prof. F. Briosoli.

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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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.
Tokio																			

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			29.66	753.4	46.8	8.2		SW			3								
Groningen			29.62	752.3	47.3	8.5		E			2								
Helder			29.64	752.9	46.4	8.0		ESE			2								
Utrecht			29.60	751.9	51.1	10.6	72	E			2		10					Overcast	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			30.03	762.8	52.5	11.4	27	SSW	24.8	11.1			0			0	0		
Brône			30.14	765.6	50.0	10.0	43	Calm	0	0			5			0	0		
Christiania			30.24	768.1	47.5	8.6	31	ENE	6.7	3.0			2			0	0		
Tromsö			29.84	757.8	41.4	5.2	71	SW	29	13			10			20.1	9.0	Raining	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	768.2	62.8	17.1	86	W	6.15	2.75			6			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.09	764.2	56.5	13.6	66	SW	12.41	5.56			10	SW		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.32	770.0	62.4	16.9	53	SSE	4.39	1.97			10			0	0		Capt. D. A. da Cunha.
Lisbon			30.15	765.7	57.2	14.0	80	SW	29.76	13.3			10			0	0	Showery	The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 hour, 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.96	760.9	46.9	8.3	91	E	20	9			10						Astronomical Obs.
Wilna			30.25	768.4	49.5	9.7	60	E	9	4			10						Astronomical Obs.
Dorpat			30.47	773.8	47.3	8.5	43	ESE	7	3			0						Physical Cabinet.
St. Petersburg			30.54	775.7	46.2	8.0	41	W	4	2			0						Central Physical Obs.
Kuopio			30.41	772.3	41.4	5.2	53	W	13	6			0						Ch. Forsten.
Kieff			30.01	762.3	67.1	19.5	35	SE	9	4			10						Physical Cabinet.
Nikolaiev			30.15	765.9	72.3	22.4	30	SSE	13	6			8						Kurdakof.
Kertch			30.17	766.2	64.8	18.2	64	SSE	4	2			7						Lagorio.
Moscow			30.53	775.4	45.7	7.6	44	NE	18	8			0						Meteorological Obs.
Lugan			30.11	764.8	72.1	22.3	26	SW	9	4			8						Meteorological Obs.
Archangel			30.29	769.4	38.3	3.5	58	W	18	8			10						Ogorodnikof.
Tiflis	28.76	730.4	30.15	765.9	64.9	18.3	39	S	4	2			3						Physical Observatory.
Astrakhan			30.34	770.6	73.9	23.2	26	ENE	2	1			4						Sebastianof.
Kasan			30.32	770.0	45.5	7.5	36	NE	2	1			2						Physical Cabinet.
Orenburg			30.57	776.4	40.8	4.9	97	NE					5						Tschernischef.
Ekaterinburg	29.19	741.3	30.22	767.6	38.1	3.4	44	NNW	9	4			6						Meteorological Obs.
Nukuss			30.22	767.5	68.2	20.1	29	NE	9	4			6						
Kasaly																			Bobrof.
Tashkend	28.58	726.0	30.24	768.1	69.4	20.8	38	Calm	0	0			10						Michelson.
Barnaul			29.91	759.6	47.5	8.6	70	Calm	0	0			0						Meteorological Obs.
Yeniseisk			29.95	760.7	32.2	0.1	48	S	2	1			0						Marks.
Irkutsk	28.53	724.6	29.94	760.3	36.9	2.7	80	Calm	0	0			7						Usolzef.
Oorga																			Mossin.
Peking, (China)			30.00	761.9	65.1	18.4	34	Calm	0	0			5						Physical Observatory.
Nertchinsk	27.52	699.0	29.60	751.8	35.6	2.0	59	NW	20	9			1			Blank	Blank		Meteorological Obs.
Vladivostock			29.92	759.9	42.4	5.8	93	NW	7	3			0						
Nikolaievsk, on the Amoor					31.4	— 0.9	90	NE	7	3			10					Snowing	

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Katerinburg, 331.42 m., or 1,085.22 ft.; Tashkend, m. 494.22, or 1,621.32 ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.02 m., or 1,942.22 ft.; Oorga, 1,281.6 m., or 4,202.62 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.01	762.3	49.1	9.5	50	W	9.71	4.34			10			0	0	Covered	Royal Observatory.
San Fernando			30.23	767.7	58.1	14.5	74	WNW	6.5	2.9		1	9	SE	ENE	0	0		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; 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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.21	767.3	34.2	1.2	85	SW			4		10			0	0		
Umea			30.34	770.5	36.0	2.2	77	SW			4		2			0	0		
Hernosand			30.33	770.4	38.5	3.6	63	S			6		2			0	0		
Stockholm			30.35	770.9	43.9	6.6	43	SE			4		1			0	0		
Wisby			30.32	770.0	45.0	7.2	50	ESE			6		5			0	0		
Sub-Series.																			
Upsala			30.34	770.7	46.8	8.2	44	ESE	11.2	5.0			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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.34	719.9	29.78	756.4	50.4	10.2	71	WSW			2		7			0.087	2.2	Cloudy	The Observatory.
Zurich	28.08	713.1	29.71	754.5	56.3	13.5	65	W			1		6			0	0	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —4.4 mm.; Thermometer, —2.0 cent.; Relative Humidity, +14 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.10	764.5	60.1	15.6	61	NNE	7	3.0			5		WSW	0	0		
Fao, (Persian Gulf)			30.12	765.0	75.2	24.0		NW			1		10						
Salonica			30.10	764.4	79.7	26.5		SE			1		10						
Valona			29.92	759.9	77.4	25.2		S			3		2						
Varna			30.08	764.0	53.6	12.0		E			2		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.95	760.6	70.2	21.2	63	N			2		1k		N	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.54	750.3	42.6	5.9	100	SW	12	5.4									Hon. J. Ferguson.
Brockville, Ontario			29.80	756.9	32	0.0		SW	8	3.6			10s		SW	Inap.	Inap.	Light snow	W. R. Bigg.
*Chatham, N. B.			29.60	751.8	41	5.0	73	SW	16	7.2		5k	0	SW		0.05	1.3	Fair	G. A. Blair.
Charlottetown, P. E. Island			29.71	754.6	41	5.0	78	W	5	2.2		0	0			0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			29.70	754.4	35.0	1.7	90	SW			2	10k				0.13	3.3	Unsettled	James Smith, M. A.
Dalhousie, N. B.			29.58	751.3	37.3	2.9	83	W			1		10cs			0.09	2.3		H. A. Johnson.
Esquimault, B. C.			29.85	758.2	45.3	6.3	84	SW	5	2.2		2ck				0	0	Cloudy	W. H. Bevis.
Fredericton, N. B.			29.70	754.4	41.2	5.1	65	SW	14	6.3		3ck				0.070	1.78	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			30.25	768.3	26	— 3.3	88	N	4	1.8		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			29.91	759.7	29.9	— 1.2	90	NW			1		10n			0.05	1.3	Threatening	H. J. Strang, M. A.
Granton, Ontario			29.83	757.7	29.2	— 1.6		NW			2		10n			0	0	Cloudy	James Grant.
*Halifax, N. S.			29.75	755.6	47	8.3	70	NW	10	4.5		0	2ks			0.01	0.3	Fair	F. Allison, M. A.
*Kingston, Ontario			29.77	756.1	34	1.1	87	W	4	1.8		5ck	2s	W		0	0	Fair	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			29.67	753.6	34	1.1	84	SW	15	6.7			10n		SW	0.06	1.5	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.66	753.4	34	1.1	78	W	13	5.8			10ks		W	0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario			29.78	756.4	28	— 2.2	79	W	8	3.6		2ck	5ks	W	W	0.02	0.5	Fair	Rev. R. Mooley.
*Port Dover, Ontario			29.83	757.7	33	0.6	70	W	12	5.4		10k	0	W		0	0	Fair	H. Morgan.
Port Hastings, N. S.			29.76	755.9	47.7	8.7		Calm	0	0						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			29.85	758.2	34	1.1	71	NW	14	6.3		0	2ks		NW	0.04	1.0	Clear	M. Payne.
*Quebec, Quebec			29.64	752.8	41	5.0	74	SW	1	0.4			10n		SW	0.03	0.8	Cloudy	Capt. Ash, R. N.
St. John, N. B.			29.77	756.1	39	3.9	82	S	2	0.9		4k				0	0		G. Murdoch, C. E.
*Saugeen, Ontario			29.79	756.7	29	— 1.7	89	NW	13	5.8			10n		W	0.03	0.8	Cloudy	K. Stewart.
Stayner, Ontario			29.76	755.9	28	— 2.2	78	NW	5	2.2			10n		NW	Inap.	Inap.	Light snow	R. J. Cole.
Stratford, Ontario			29.83	757.7	29.2	— 1.6	88	NW	13	5.8			10s			0.050	1.27	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			29.76	755.9	39	3.9	94	SW	8	3.6			10n			0.07	1.8	Cloudy	T. C. Hill.
*Toronto, Ontario			29.79	756.7	33	0.6	78	W	14	6.3			10cs		W	0.02	0.5	Cloudy	Magnetic Observatory.
Woodstock, Ontario			29.80	756.9	31.2	— 0.4	98	NW			2		10s			Inap.	Inap.	Cloudy	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. pper. From —	Clouds. Direction. Lower. From —	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.			29.76	755.9	43	6.1	67	Calm	0	0		2k	Haze	W		0.05	1.3	Fair	
Alpena, Mich			29.83	757.7	29	− 1.7	89	NW	12	5.4			10n		NW	0.01	0.3	Light snow	
Atlantic City, N. J.			29.84	757.9	48	8.9	49	Calm	0	0		8cs	0	SW		Inap.	Inap.	Cloudy	
Augusta, Ga.			30.00	762.0	57	13.9	66	NW	5	2.2		5k	0	NW		0	0	Fair	
Baltimore, Md.			29.88	758.9	50	10.0	58	W	10	4.5			10s		W	Inap.	Inap.	Cloudy	
Barnegat, N. J.			29.82	757.4	47	8.3	55	N	2	0.9		0	8k		W	Inap.	Inap.	Cloudy	
Benton, Montana	27.17	690.1	29.97	761.2	44	6.7	67	SE	7	3.1		2c	5s		SE	0	0	Fair	
Bismarck, Dakota	28.50	723.9	30.25	768.3	29	− 1.7	46	N	6	2.7		8c	Haze	N		0	0	Fair	
Boston, Mass.			29.74	755.4	43	6.1	66	W	13	5.8		2cs	Haze	W		0.15	3.8	Fair	
Breckenridge, Minn			30.34	770.6	28	− 2.2	88	W	4	1.8		0	0			0	0	Clear	
Buffalo, N. Y.			29.78	756.4	32.5	0.3	74	SW	9	4.0			10s		W	0.01	0.3	Cloudy	
Burlington, Vt.			29.69	754.1	39	3.9	68	SW	3	1.3		2k	5s	W		0.10	2.5	Cloudy	
Cairo, Ill.			30.17	766.3	47	8.3	48	W	12	5.4		2k	5s	W	W	0.21	5.3	Clearing	
Cape Hatteras, N. C.			29.82	757.4	55	12.8	87	W	4	1.8			10n		W	0.04	1.0	Light rain	
Cape Henry, Va.			29.88	758.9	52	11.1	69	NE	12	5.4		8k	0	NW		0.11	2.8	Fair	
Cape Lookout, N. C.			29.89	759.2	55	12.8	87	SW	4	1.8			10n			0.03	0.8	Light rain	
Cape May, N. J.			29.85	758.2	50	10.0	58	NE	8	3.6		5k	0	W		0	0	Fair	
Charleston, S. C.			29.97	761.2	61	16.1	55	N	6	2.7		2ck	5s	W		0	0	Fair	
Cheyenne, Wyoming	24.20	614.7	30.14	765.5	32	0.0	79	SW	2	0.9		0	0			0	0	Clear	
Chicago, Ill.			29.98	761.5	39	3.9	56	NW	6	2.7			10s		N	0	0	Cloudy	
Cincinnati, Ohio			29.94	760.5	43	6.1	59	W	10	4.5		2ck	0	NW		0	0	Clear	
Cleveland, Ohio			29.90	759.4	36.2	2.3	64	W	5	2.2		0	0			Inap.	Inap.	Clear	
Colorado Springs, Col.	24.28	616.7	30.16	766.1	31	− 0.6	84	N	5	2.2		0	0			0	0	Clear	
Coiscicana, Tex.			30.32	770.1	55	12.8	53	N	11	4.9		5ck	0	NW		0	0	Fair	
Davenport, Iowa			30.10	764.5	38	3.3	63	NW	16	7.2		5k	7ks		NW	0	0	Cloudy	
Denison, Tex.			30.27	768.8	60	15.6	55	Calm	0	0		0	0			0	0	Clear	
Denver, Col.	24.99	634.7	30.21	767.3	39	3.9	73	Calm	0	0		5ck	0			0	0	Fair	
Detroit, Mich			29.88	758.9	36	2.2	62	W	8	3.6		0	0			0	0	Clear	
Dodge City, Kan.	27.73	704.3	30.09	764.3	45	7.2	68	NE	5	2.2		0	0			0	0	Clear	
Dubuque, Iowa			30.09	764.3	39	3.9	55	NW	8	3.6		8k	0	NW		0	0	Cloudy	
Duluth, Minn.			30.13	765.3	34	1.1	69	NW	4	1.8		5ck	5ks	NW	NW	0	0	Cloudy	
Eastport, Me.			29.70	754.4	40	4.4	82	SW	5	2.2		5c	8s	SW	SW	0.15	3.8	Cloudy	
Erie, Pa.			29.82	757.4	37	2.8	62	W	8	3.6		2k	5ks	W	W	Inap.	Inap.	Fair	
Escanaba, Mich			29.96	761.0	31	− 0.6	68	N	14	6.3			10s		N	0	0	Cloudy	
Fort Gibson, Indian Terr.			30.23	767.8	40	9.4	71	NE	2	0.9		0	0			0	0	Clear	
Ft. St. Michaels, Alaska			29.90	759.4	4	−15.6		N	7	3.1			10s					Cloudy	
Fort Sill, Indian T.	29.10	739.1	30.22	767.6	53	11.7	68	N	4	1.8		2ck	0	N		0	0	Clear	
Fort Sully, Dakota																			
Galveston, Tex.			30.22	767.6	64	17.8	73	NE	13	5.8		0	0			0	0	Clear	
Grand Haven, Mich			29.94	760.5	39	3.9	55	NW	14	6.3		1c	0	NW		0	0	Clear	
Indianapolis, Ind.			29.98	761.5	42	5.6	65	NW	5	2.2		0	0			Inap.	Inap.	Clear	
Indianola, Tex.			30.23	767.8	64	17.8	78	N	6	2.7		0	0			0	0	Clear	
Jacksonville, Fla.			30.00	762.0	66	18.9	73	S	6	2.7		0	0			0	0	Clear	
Keokuk, Iowa			30.14	765.5	39	3.9	46	N	30	13.4		0	0			0	0	Clear	
Key West, Fla.			30.07	763.8	73.4	23.0	67	N	9	4.0		1k	0			0	0	Clear	
Kittyhawk, N. C.			29.87	758.7	51	10.6	86	NW	10	4.5			10ks			0.32	8.1	Cloudy	
Knoxville, Tenn			30.09	764.3	44	6.7	51	NW	4	1.8		0	0			0.11	2.8	Clear	
La Crosse, Wis.			30.12	765.0	35	1.7	61	N	16	7.2		0	0			0	0	Clear	
Leavenworth, Kan			30.30	769.6	41	5.0	73	N	12	5.4		0	0			0	0	Clear	
Lexington, Ky.	28.91	734.3	30.03	762.7	42	5.6	65	W	12	5.4		0	0			0	0	Clear	
Long Branch, N. J.			29.83	757.7	51	10.6	59	W	4	1.8		0	0			0.01	0.3	Clear	
Louisville, Ky.			30.02	762.5	46	7.8	54	W	10	4.5		0	0			0	0	Clear	
Lynchburg, Va.			29.90	759.4	51	10.6	46	NW	6	2.7		2k	0	W		0	0	Clear	
Malone, N. Y.			29.65	753.1	35	1.7	75	W	10	4.5			10ks		SW	0.10	2.5	Cloudy	
Manhattan, Kan.	29.15	740.4	30.34	770.6	38	3.3	80	NW	8	3.6		2c	0			0	0	Clear	
Marquette, Mich			29.98	761.5	29	− 1.7	77	NW	12	5.4		5ck	0	NW		0	0	Fair	
Memphis, Tenn.			30.23	767.8	55	12.8	44	W	3	1.3		0	0			0	0	Clear	
Milwaukee, Wis.			30.02	762.5	36	2.2	62	NW	14	6.3		5ks	Sm'e	NW		0	0	Fair	
Mobile, Ala.			30.14	765.5	62	16.7	50	NE	16	7.2		0	0			0	0	Clear	
Montgomery, Ala.			30.17	766.3	56.5	13.6	54	N	11	4.9		8k	0	NW		0	0	Fair	
Morgantown, W. Va.			29.89	759.2	45	7.2	52	SW	7	3.1		0	0			0.01	0.3	Clear	
Mt. Washington, N. H.	23.30	591.8	29.36	753.4	15	− 9.4	100	NW	30	13.4			Fog			0.08	2.0	Foggy	
Nashville, Tenn.			30.14	765.5	49	9.4	50	W	5	2.2		0	0			0.02	0.5	Clear	
New Haven, Conn.			29.80	756.9	47	8.3	60	NW	4	1.8		0	0			0.10	2.5	Clear	
New London, Conn.			29.81	757.2	48	8.9	61	NW	1	0.4		2ck	2s	SW	SW	0.07	1.8	Fair	
New Orleans, La.			30.16	766.1	60.5	15.8	68	SW	3	1.3		0	0			0	0	Clear	
Newport, R. I.			29.65	753.1	47	8.3	77	S	16	7.2		8cs	0	W		0	0	Cloudy	
New York, N. Y.			29.92	759.3	40	9.4	71	Calm	0	0			10ks			0	0	Cloudy	
Norfolk, Va.			29.81	757.2	57.5	14.2	55	SW	14	6.3		2k	0			0	0	Fair	
North Platte, Neb.	27.38	695.4	30.04	763.0	42	5.6	83	Calm	0	0		2k	0	W		0	0	Clear	
Omaha, Neb.	29.22	742.2	30.34	770.6	36	2.2	62	NW	13	5.8		8c	0	NW		0.01	0.3	Fair	
Oswego, N. Y.			29.77	756.1	36.5	2.5	66	SW	12	5.4			10s		W	0	0	Threatening	
Pembina, Dakota			30.24	768.1	27	− 2.8	81	Calm	0	0		0	0			0	0	Clear	
Philadelphia, Penn.			29.85	758.2	47	8.3	41	W	3	1.3		1ck	0	W		Inap.	Inap	Clear	
Pike's Peak, Colorado	17.92	455.2	30.13	765.3	17	− 8.3	50	W	22	9.8		2k	0	NW		0	0	Fair	
Pittsburgh, Penn.			29.88	758.8	39	3.9	55	SW	10	4.5		2ck	5k	W	W	Inap.	Inap.	Fair	
Port Huron, Mich			29.86	758.4	33	0.6	69	NW	12	5.4		2k	0	NW		0.02	0.5	Fair	
Portland, Me.			29.72	754.9	41	5.0	65	W	7	3.1		2k	0	SW		0.20	5.1	Fair	
Portland, Oregon			30.00	762.0	53	11.7	86	SW	4	1.8			10n			0.13	3.3	Light rain	
Punta Rassa, Fla.			30.10	764.5	65.7	18.7	68		6	2.7		Haze	Sm'e			0	0	Hazy	
Rochester, N. Y.			29.76	755.9	35	1.7	70	W	10	4.5			10s		W	0.10	2.5	Cloudy, frost	
Salt Lake City, Utah	25.71	653.0	30.04	763.0	47	8.3	48	Calm	0	0		0	0			0	0	Clear	
Sandy Hook, N. J.			29.80	756.9	44	6.7	67	W	6	2.7		0	0			0.04	1.0	Clear	
San Diego, Cal.			30.01	762.2	53	11.7	100	Calm	0	0			Fog			0	0	Foggy	
San Francisco, Cal.			30.11	764.8	50	10.0	80	W	2	0.9			Fog			0	0	Foggy	
Santa Fe, N. M.	23.49	596.6	30.03	762.7	46	7.8	54	E	12	5.4		0	1s			0	0	Clear	
Savannah, Ga.			29.98	761.5	66	18.9	48	NE	4	1.8		0	0			0	0	Clear	
Shreveport, La.			30.33	770.4	59	15.0	59	N	9	4.0		0	0			0	0	Clear	
Smithville, N. C.			29.93	760.2	56	13.3	62	NW	4	1.8		10k	0	SW		0	0	Cloudy	
Springfield, Mass.			29.78	756.4	45	7.2	67	Calm	0	0		1k	1s			0.40	10.2	Fair	
St. Louis, Mo.			30.13	765.3	45	7.2	60	W	3	1.3		0	0			0	0	Clear	
St. Marks, Fla.			30.04	763.0	60	15.6	88	N	4	1.8			10s		N	0	0	Cloudy	
St. Paul, Minn.			30.17	766.3	31.5	− 0.3	55	NW	16	7.2		0	0			0	0	Clear	
St. Paul's Island, Alaska			29.46	748.3	30	− 1.1	89	ENE	18	8.0		10	0			0.38	9.7		
Thatcher's Island, Mass.			29.75	755.6	43	6.1	58	W	15	6.7		0	0			0.15	3.8	Clear	
Toledo, Ohio			29.87	758.7	41	5.0	56	W	5	2.2		0	0			0	0	Clear	
Tucson, Arizona	27.61	701.3	30.20	767.1	58	14.4		SE				0	0			0	0	Clear	
Tybee Island, Ga.			29.95	760.7	61	16.1	66	NE	8	3.6		0	0			0	0	Clear	
Vicksburg, Miss.			30.29	769.4	58	14.4	47	N	10	4.5		0	0			0	0	Clear	
Virginia City, M. T.	24.32	617.7	29.80	756.9	36	2.2	62	SE	4	1.8		3c	0	N		0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			29.90	759.4	44	6.7	88	NW	8	3.6			10n			0.03	0.8	Light rain	
Wilmington, N. C			29.93	760.2	54	12.2	67	NW	8	3.6			10s		W	0	0	Cloudy	
Wood's Holl, Mass			29.77	756.1	46	7.8	61	NW	10	4.5			10s		NW	0.10	2.5	Cloudy	
Wytheville, Va	27.56	700.0	29.73	755.1	40	4.4	56	NW	7	3.1		0	5ks		W	0.03	0.8	Fair	
Yankton, Dakota	29.08	738.6	30.45	773.4	32	0.0	69	NW	7	3.1		5c	0	NW		0	0	Fair	
Yuma, Arizona			29.96	761.0	60	15.6		NE				2c	0			0	0	Fair	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.04	763.0	77	25.0	86	E	5	2.2			10ks			0.22	5.6	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.99	761.7	78	25.6	69	E				2k	5ks			0.09	2.3	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.23	767.8	78	25.6	69	ENE	6	2.7		4ck	8s, kn	S		0.02	0.5	Cloudy	W. S. Cameron.
Kingston, Jamaica, W. I.			30.19	766.8	78	25.6	78	Calm	0	0		2c	0	NE		0	0		James Gall.
Santiago de Cuba, W. I.			29.80	756.4	78	25.6	78	Calm	0	0		2ck	8s		SW	0.04	1.0	Cloudy	Robert Mason.
Havana, Cuba, W. I.			30.06	763.5	76	24.4	69	Calm	0	0		0	0			0	0	Clear	Charles Hasselbrink
St. Georges, Bermudas			30.07	763.8	68.5	20.3	92	SSW	11.0	4.9			10k			0.46	11.7	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.21	691.1	30.02	762.5	63	17.2	83	Calm	0	0		0	0			0.41	10.4	Clear	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.00	762.0	82	27.8	71	E			3		4k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.04	763.0	84.6	29.2										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.17	639.3			64.0	17.8	87		4	1.8		0	7n			0.16	4.1	Cloudy	Thomas Herran.
St. John's, Newfoundland.			30.08	764.0	38.0	3.3	81	S				10k	10s			0	0	Cloudy	John Delaney.
York Factory, B. A.			30.18	766.6	9	−12.8	89	NW	11	4.9			10s			0.03	0.8		J. Fortescue.
Honolulu, Oahu, H. I.			30.05	763.3	72	22.2	90	Calm			0					0.15	3.8		E. P. Church.
Makawao, Maui, H. I.	27.82	706.6	29.99	761.7	60	15.6	81	Calm	0	0		8cs	5n	S	NE	0	0		F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	Barometer. Inches.	Barometer. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	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.
Steamer Peruvian, N. 52° 39′, W. 23° 9′.	S66W	11.4	29.13	739.9	49	9.4		W			4	6k	4s				Smooth	Hazy	Capt. W. Richardson.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below −40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft, or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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 APRIL 18, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.01	762.3	68.9	20.5	46	NW			1		3			0	0	Clear	Charnot.
Algiers			29.93	760.3	66.2	19.0	56	N			1		8			0	0	Cloudy	Peter.
La Calle					65.5	18.6		NW			1		3			0	0	Fair	Kuntz.
Tunis			30.07	763.7	71.6	22.0	35	W			2		6			0	0	Fair	Jacques
Sfax			30.04	763.0	68.0	20.0	55	S			2		2			0	0	Clear	Chauvey.
Saida			30.04	762.9	73.1	23.0	18	W			4		2			0	0	Clear	Millot.
Tebessa			30.00	761.9	68.2	20.1		W			3		3			0	0	Fair	Colin.
Geriville			30.07	763.6	67.6	19.8	46	SW			3		2			0	0	Clear	Buard.
Laghouat			30.03	762.7	64.4	18.0	53	SE			3		0			0	0	Clear	Guyot.
Biskra			30.00	762.0	77.4	25.2	26	NW			1		3			0	0	Fair	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.80	757.0	56.7	13.7	47	SW			3		7			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.73	755.1	57.2	14.0	74	NE			1		7			0.020	0.5		I. R. Observatory.
Eperies			29.79	756.6	51.6	10.9	82	Calm			0		10			0.120	3.05		Julius Mikolik.
Gratz	28.53	724.6	29.72	754.8	54.5	12.5	58	SW			5		5			0.205	5.2		Andreas Rospini.
Hermannstadt	28.32	719.4	29.73	755.1	56.1	13.4	64	NW			5		5			0.118	3.00		Prof. Reissenberger.
Kremsmünster			29.59	751.6	52.9	11.6	64	ENE			3		5			0	0		Prof. C. Wagner.
Lemberg			29.64	752.9	65.8	18.8	51	SE			2		4			0.181	4.6		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.87	758.6	57.6	14.2	69	S			2		7ks			0	0		I. R. Hydrographic Office
Szegedin			29.83	757.7	61.2	16.2	41	S			2		3			0	0		Karl Stancel.
Trieste			29.85	758.3	54.9	12.7	69	Calm			0		10			0.051	1.3	Rainy	Prof. V. Farolfi.
Vienna			29.65	753.2	56.8	13.8	57	SSE			2		7			0.043	1.1		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.32	744.7	51.4	10.8	75	SSW			2		10					Light rain	Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0 10.	Clouds. Amount. Low'r 0 - 10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	42.5	5.8		SE	14	6.3			9			0.430	10.9	*D. clouds	William Boswell.
Ardrossan			29.20	741.7	53	11.7		ENE			5		8					Overcast	William McNeil.
Armagh Observatory			29.12	739.6	46.4	8.0		E	13	5.8			10					Drizzling	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.11	739.4	49.9	9.9		E	26	11.6			9					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.01	736.8	53.6	12.0		ESE			1-2		9					*D. clouds	J. Dreyer.
Bradford			29.17	740.9	49.9	9.7		E			2		8			0.02	0.5	Drizzling	J. McLandsborough.
Bridgetown, (Barbados)			29.98	761.5	80.0	26.7		NE			3		7					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge Observatory			29.19	741.4	53.0	11.7		SE			1		10					Showery	H. Todd.
Cardington			30.15	740.4	52.0	11.1		SE			1		9					Overcast	John McLaren.
Carlisle			29.18	741.1	49.1	9.5		NE			5		10			0.06	1.5	Overcast	T. Bell, for J. Cartmell.
Chatham, School M. E			29.23	742.4	56.2	13.4		SSE			1		3					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	27.59	700.8	29.07	738.4	44.0	6.7		SE			5		10					Raining	R. E. Power.
Donaghadee			29.14	740.1	48	8.9		SE			5		10					Overcast	J. Mac Gowan.
Dover			29.22	742.2	50	10.0		SE			2		3					½ clouded	J. Costello.
Eccles (near Manchester.)			29.16	740.7	50.1	10.1		ESE	9.0	4.0			10					Gloomy	Thomas Mackereth.
Falmouth Observatory			28.93	734.8	49.0	9.4		ESE	27	12.1			10					Rain and fog	The Staff.
Fort Napier, (Natal)	27.64	702.3	29.88	758.9	77.8	25.4		NE			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	85	29.4		N			1		8					Overcast	
Galway, Queen's College			29.12	739.6	50	10.0		W			4		5					*D. clouds	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.04	763.0	60.0	15.6		W			6		9					Drizzling	Corp'l C. Aitken, A. H. C.
Glasgow Observatory			29.22	742.2	45.8	7.7		NE			3		10					Gloomy	Lewis Stuart.
Great Yarmouth			29.28	743.7	48	8.9		SSE			3		8					Misty	G. T. Watson.
Greenwich Royal Obs			29.18	741.1	55 0	12.8		SSW			2		7					*D. clouds	The Staff, for G. B. Airy.
Guernsey			29.04	737.6	49	9.4		SSE			4		10					Raining	Dr. S. E. Hoskins.
Halifax, Moorside Obs.																			L. J. Crossley.
Helston			29.91	759.7	51	10.6		S			4		10n			0.47	11.9	Raining	M. P. Moyle.
Holyhead			29.08	738.6	49	9.4		S			2		10					Raining	John Tilston.
Kew Observatory			29.17	740.9	55.0	12.8		SSE	18	8.0			9					Threatening	The Staff.
Kingstown			29.06	738.1	50	10.0		SE			3		6					*D. clouds	George Mitchell.
Leicester Museum			29.17	740.9	52.9	11.6		E			1		8					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.04	763.0	67.2	19.6		SW			2		6k						Fred. Travis, Pvt. A.H.C.
Nairn			29.31	744.5	47	8.3		ESE			2		10					Overcast	W. D. Penny.
Nassau, Bahamas																			Surg. Maj. Henry.
Nottingham			29.17	740.9	51.2	10.7		SE			3		10k,d		SE	0	0	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.11	739.4	52.2	11.2		E			3		8					Threatening	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.12	739.6	56	13.3		SSE			1		7					*D. clouds	J. Lucas.
Plymouth			28.97	735.8	49	9.4		SE			3		10					Raining	John Merrifield.
Roche's Point			28.9[illegible]	73[illegible].3	51	10.6		SSE			4		5					½ clouded	W. Kennedy.
Saint Ann's Head			28.99	736.3	52	11.1		ESE			4		7					Showery	John. C. Walker.
Saint Helier, (Jersey)			29.03	737.3	52.4	11.4		S			4		10					Overcast	A. P. Amy.
Sandwick Manse (Orkneys			29.43	747.5	43	6.1		ESE	20	11.6			10					Misty	Rev. C. Clouston, LL. D.
Scarborough			29.22	742.2	42.6	5.9		ESE			4		10					Foggy	F. Shaw.
Scutari Cemetery (Turkey			29.78	756.4	69.4	20.8		SW			1		0					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.20	741.7	53.0	11.7		E			1		10			0.030	0.76	Gloomy	W. F. Cooper.
Silloth Rectory			29.16	740.7	56.2	13.4	64	SE			5		3			0.040	1.02	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			29.15	740.4	50.2	10.1		E			3		9					Hazy	S. J. Perry.
Stornoway, Lewis C. (Hebr.			29.29	744.0	47	8.3		E			4		10					Overcast	John Smith.
Stratfield Turgiss			29.15	740.4	50.3	10.2		S			1		7					Showery	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.37	746.0	45	7.2		ESE			5		9					Gloomy	John Trotter.
Truro, Royal Institution			30.84	757.9	57	13.9		S			6		8					Gloomy	W. Newcombe.
Valencia Observatory			28.92	734.6	50.8	10.4		ENE	11	4.9			7					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					45	7.2		NE			3		2						The Staff, for E. J. Stone.
Cape Good Hope Obs			29.80	759.2	82.2	27.9	45	W	5	2.2			7						Andrew Gibb.
Leith, Restalrig Park			29.26	743.2	43.8	6.6		E			2		10ks			0.16	4.1	Overcast	
Mauritius			30.00	762.0				ESE	20.1	9.0						0	0		
Monach Lighthouse, Hebrides			29.24	742.7	49	9.4		E			1		10			0.2	5.1		J. Youngclause.
North Unst, (Shetland Is.)			29.57	751.1	45	7.2		E			4		10						

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 270.6 m. *Detached clouds.

DANISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0 10.	Clouds. Amount. Low'r 0 - 10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.50	749.3	46.8	8.2	92	ESE			6		9						
Fanöe																			
Godthaab, (Greenland)			30.18	766.5	34.9	1.6	64	ENE			2		10						
Stykkisholm, (Iceland)			29.97	761.2	18.5	— 7.5	92	NE			8		8						
Thorshavn, (Faröe)			29.58	751.2	42.1	5.6	93	ENE			4		10					Raining	
Vestervig			29.41	747.0	46.0	7.8	100	E			4		10					Misty	

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.57	751.0	50.5	10.3	62	SSW			1		5k		SSW	0.138	3.5	Cloudy	Normal School.
Amiens			29.43	747.5	57.9	14.4	63	SW			3		0			0	0	Clear	Normal School.
Avignon			29.69	754.1	57.6	14.2	74	SE			2		8		SSE	0.291	7.4	Very cloudy	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			29.32	744.8	55.4	13	66	S			3		8		S	0	0	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			29.56	750.7	49.1	9.5	95	SW			4		10		SW	0	0	Covered	Normal School.
Brest			28.96	735.5	52.3	11.3	77	WSW			4		8n		W	0.197	5.00	Very cloudy	Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			29.48	748.9	57.2	14.0	42	S			3		8		S	0.256	6.5	Very cloudy	Puy de Dome Obs.
Commercy			29.50	749.2	53.1	11.7	77	SW			6		5kn		SW	0	0	Cloudy	Normal School.
Commune de Grèasque*			29.74	755.3	53.8	12.1	74	SE			4		10		SE	0.185	4.7		M. Kina.
Grenoble			29.64	752.8	56.8	13.8	65	S			6		10n		S	0.04	1.	Covered	Normal School.
Le Mans			29.29	743.9	48.2	9	92	SW			6		8		SW	0.004	0.1	Very cloudy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			29.54	750.4	56.3	13.5	62	S			6		2		S	0	0	Slightly cl'dy	Normal School.
Mâcon			29.52	749.8	57.2	14	57	SE			2		10			0.75	19.	Covered	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			29.58	751.4	54.7	12.6	90	E			2		10		S	0.59	15.	Covered	Normal School.
Orleans																			Normal School.
Paris Observatory			29.31	744.5	54.1	12.3	69	S			4		10			0	0	Covered	National Observatory.
Parthenay																			Normal School.
Privas			29.72	754.9	52.7	11.5		SSE			4		10		SSE	0.67	17.	Covered	Normal School.
La Roche-sur-Yon			29.26	743.3	52.9	11.6	76	SW			6		10		NE	0.150	3.8	Covered	Normal School.
Rochefort, Observatory			29.37	746.1	57.7	14.3	60	WSW			7		8		NE	0.433	11.0	¾ covered	Naval Observatory.
Rouen			29.22	742.1	54.3	12.4	83	SSE			3		10		SW	0	0	Covered	Normal School.
Saint Lo			29.15	740.3	52.7	11.5	93	S			4		10		S	0.28	7.		Normal School.
Tarbes	28.46	722.9			50.0	10		E			1		10		E	0.16	4.	Covered	Normal School.
Toulouse																			Normal School
Villefranche			29.98	761.4	57.2	14	80	SSE			4		5		SW		18.40	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.92	760.0	79.2	26.2	70	NE			3		2k						L'Abbé Marchési.
Gorée																			
Marseilles			29.68	753.8	57.7	14.3	77	ESE			2		10			0.091	2.30		Marseilles Observatory.
Mont-Louis	24.48	621.7	29.79	756.7	44.8	7.1	85	SSW	37.3	16.66			8		SSW	0	0		—. Faiguère.
Montsouris, Paris			29.31	744.4	53.4	11.9	62	SSW			3		10		SW	0.016	0.4	Raining	Montsouris Observ'tory.
Perpignan			29.63	752.7	57.7	14.3	53	SE	11.2	5.0			9		SW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			29.32	744.8	55.0	12.8	65	SSW			2		10			0	0	Covered	E. Renou.
Toulouse			29.56	750.7	56.8	13.8	62	SE			4		9			0.122	3.1		Toulouse Observatory.
Tours			29.34	745.1	53.2	11.8	80	SSW			6		8		SW	0.067	1.7		C. Marquet.
Versailles, (near Paris)			29.31	744.7	52.9	11.6	76	SW			3		10			0.006	0.15	Covered	Dr. A. Béringy.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Grèasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 342 m., or 1,060.9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Grèasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

* Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.48	748.8	56.3	13.5	49	SW			3		7	SSW		0	0		Prof. T. Hoh.
Berlin			29.55	750.6	55.0	12.8	61	S			1		6			0	0		Prof. Arndt.
Breslau			29.70	754.4	58.3	14.6	54	S			6		8			0	0		Dr. P. Neugebauer.
Karlsruhe			29.52	749.9	51.1	10.6	71	SW			3		10			0	0		A. Senz.
Cassel			29.41	747.1	52.0	11.1	59	SSW			5		5	SSW		0	0		Dr. H. Möhl.
Cologne																			Dr. Gartlie.
Emden																			Prof. Prestel.
Frankfort on the Main			29.55	750.5	55.4	13.0	59	S			2		0			Inap.	Inap.		Physical Society.
Friedrichshafen	28.15	715.3	29.70	754.3	52.2	11.2	52	NW					6			0	0		M. Wilhelm.
Hamburg			29.43	747.5	46.4	8.0	90	WSW			2		10			0.181	4.6	Light rain	Deutsche Seewarte.
Kiel			29.37	746.0	51.6	10.9	79	SW			3		10			0.051	1.3		Prof. G. Karsten.
Königsberg			29.76	755.9	53.2	11.8	68	SE			5		2			0.106	2.7		Prof. E. Luther.
Köslin			29.57	751.1	59.9	15.5		SE			6		3			0.157	4.0		H. Müller.
Leipsic			29.54	750.2	57.4	14.1	58	SSW			2		7	SSW		0.898	22.8		Prof. Bruhns.
Memel			29.84	758.0	53.6	12.0	67	ESE			8		4			0	0		Reinbrecht & Skalweit.
Münster			30.29	769.4	53.6	12.0	73	SE			2		6			0.016	0.4		Prof. E. Hels.
Neufahrwasser			29.64	752.8	60.3	15.7	74	S			4		9			0.166	4.2	Light rain	A. Lothes.
Posen			29.66	753.3	61.5	16.4	55	SW			8		9			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.52	749.8	57.2	14.0	51	SW			2		10	SW		0	0		Dr. Schur.
Stuttgart			29.58	751.2	51.4	10.8	65	W			2		8			0.008	0.2	Raining	Prof. Schoder.
Thorn			29.66	753.3	61.5	16.4	63	S			6		10			Inap.	Inap.		Dr. Hasenbalg.
Treves, (Trier)			29.42	747.3	49.6	9.8	72	S			5		10			0.407	10.6		Prof. Flesch.
Wustrow, Naval School			29.36	745.8	57.9	14.4	60	ESE			2		8			0.114	2.9		E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	75.2	24.0		W										Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.84	758.0	47.8	8.8	80	N	1.8	0.8			10			0.087	2.2	Raining	
Padua			29.81	757.1	50.5	10.3	76	NE	8.1	3.6			10	SW		0.020	0.5		
Vicenza			29.84	757.8	48.9	9.4	77	NE	3.8	1.7			10	E		0.098	2.5	Raining	
Verona			29.80	756.8	56.8	13.8	75	E			2		10			0.213	5.4	Raining	
Bergamo	28.41	721.6	29.73	755.1	42.8	6.0	82	NE			4		10			0.166	4.2	Raining	
Domodossola	28.71	729.1	29.74	755.5	46.4	8.0	89	Calm			0		10			0.087	2.2	Raining	
Milan			29.78	756.4	48.4	9.1	95	ENE			2		10			0	0		
Pavia			29.76	756.0	50.5	10.3	84	NE			4		10			0.063	1.6	Raining	
Moncalieri			29.75	755.7	49.3	9.6	71	NNW	1.8	0.8			9	E		0.315	8.0		
Mondovi	27.81	706.3	29.73	755.1	51.3	10.7	68	NNW			1		10			0	0		
Porto Maurizio			29.82	757.3	54.1	12.3	84	SSE			2		10	NE		0.362	9.2	Light rain	
Genoa			29.78	756.4	51.4	10.8	77	E	6.3	2.8			10	S		0.087	2.2		
Piacenza			29.75	755.6	52.9	11.6	63	SE	11.7	5.3			10	W		0	0		
Parma			29.77	756.2	55.4	13.0	75	NE			4		9			0	0		
Bologna			29.82	757.5	58.6	14.8	47	SW			6		5	N		0	0		
Florence			29.86	758.4	60.8	16.0	50	SW			4		10	SW		0	0		
Leghorn			29.84	757.8	57.[illegible]	13.9	63	S	17.4	7.8			10			0	0		
Siena	28.63	727.3	29.84	757.8	51.4	10.8	66	SSW	7.4	3.3			10	SW		0.056	1.4		
Urbino	28.30	718.9	29.85	758.3	53.2	11.8	58	SSW			4		10			0	0		
Pesaro																			
Ancona			29.89	759.3	57.2	14.0	62	SE			4		5			0	0		
Grosseto			29.87	758.8	57.6	14.2	64	SSE			4		9	S		0.016	0.4		
Rome			30.01	762.3	59.7	15.4	62	S	17.4	7.8			10	SW		0	0		
Naples, O. U.			30.01	762.3	60.6	15.9	73	S			4		10	SW		0.240	6.1		
Lecce			30.03	762.7	63.0	17.2	34	SSW	8.1	3.6			1			0	0		
Cosenza			30.04	762.9	62.8	17.1	65	NW	1.8	0.8			6			0	0		
Riposto, (Sicily)			30.03	762.8	63.0	17.2	62	E			2		4	W		0	0		
Palermo			29.94	760.5	63.1	17.3	52	E	4.9	2.2			9			0	0		
Caltanissetta	28.05	712.5	29.99	761.7	60.1	15.6	33	S			4		10	N		0	0		
Sub-Series.																			
Naples, S. R.			30.00	762.0	57.7	14.3	77	SW	3.1	1.4			..k	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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters., or 1,824.2 feet: Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Tokio

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.32	744.8	50.9	10.5		S			4								
Groningen			29.30	744.3	47.5	8.6		S			3								
Helder			29.31	744.5	46.8	8.2		S			1								
Utrecht			29.30	744.2	50.5	10.3	72	S			3		10					Overcast	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.53	750.0	50.7	10.4	48	NNW	4.0	1.8			8			0	0		
Brönö			29.70	754.3	52.5	11.4	37	W	11	5			7			0	0		
Christiania			29.76	755.9	37.9	3.3	92	ENE	2.5	1.1			10			0.161	4.1	Light rain	
Tromsö			29.78	756.4	43.3	6.3	49	SW	0	0			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	769.3	62.1	16.7	72	NW	9.2	4.03			0			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.88	759.0	56.3	13.5	93	SW	13.0	5.83			10	SW		0.135	3.44	Raining	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.26	768.6	63.9	17.7	61	NW	3.4	1.53			8			0	0		Capt. D. A. da Cunha.
Lisbon			29.93	760.2	57.4	14.1	87	WSW	19.9	8.9			10	SW		0.260	6.6		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 hour, 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.70	754.3	60.6	15.9	74	ESE	25	11			10						Astronomical Obs.
Wilna			29.97	761.2	54.0	12.2	65	ESE	9	4			10						Astronomical Obs.
Dorpat			30.12	766.1	57.6	14.2	69	ESE	11	5			0						Physical Cabinet.
St. Petersburg			30.23	767.9	50.7	10.4	37	S	16	7			0						Central Physical Obs.
Kuopio			30.13	765.3	42.8	6.0	65	SSW	13	6			0						Ch. Forsten.
Kieff			30.00	761.9	62.6	17.0	51	SE	18	8			10						Physical Cabinet.
Nikolaiev			30.02	762.4	69.8	21.0	44	S	18	8			3						Kurdakof.
Kertch			30.00	762.1	68.4	20.2	54	ENE	13	6			6						Lagorio.
Moscow			30.44	773.1	48.0	8.9	49	SE	9	4			0						Meteorological Obs.
Lugan			30.14	765.6	54.9	12.7	59	E	40	18			5			Blank	Blank		Meteorological Obs.
Archangel			29.96	761.0	40.5	4.7	64	Calm	0	0			10						Ogorodnikof.
Tiflis	28.53	724.7	29.89	759.1	71.1	21.7	30	E	9	4			1						Physical Observatory.
Astrakhan			30.28	769.0	48.4	9.1	52	NE	27	12			10						Sebastianof.
Kasan			30.33	770.3	46.9	8.3	36	W	2	1			8						Physical Cabinet.
Orenburg			30.48	774.1	55.0	12.8	87	NW	4	2			0						Tschernischef.
Ekaterinburg	29.11	739.3	30.18	765.3	39.0	3.9	47	SW	18	8			6						Meteorological Obs.
Nukuss			29.80	757.0	71.1	21.7	24	N	9	4			8						
Kasály																			Bobrof.
Tashkend	28.26	717.9	29.91	759.7	67.6	19.8	47	N	13	6			10						Michelson.
Barnaul			29.56	750.7	50.5	10.3	58	W	22	10			10					Light rain	Meteorological Obs.
Yeniseisk			29.41	747.1	30.7	-0.8	87	W	2	1			10					Snowing	Marks.
Irkutsk	28.36	720.3	29.76	755.9	36.9	2.7	67	Calm	0	0			0						Usolzef.
Oorga																			Mossin.
Peking, (China)			29.93	760.2	71.2	21.8	33	Calm	0	0			9						Physical Observatory.
Nertchinsk	27.90	708.7	30.06	763.4	26.4	— 3.1	56	Calm	0	0			4						Meteorological Obs.
Vladivostock			29.86	758.4	42.8	6.0	84	SE	13	6			10						
Nikolaievsk, on the Amoor					27.7	— 2.4	96	E	2	1			2						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 409.[illegible] meters, or 1,341.8 feet; Ekaterinburg, 305.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.74	755.4	54.0	12.2	88	SW	27.6	12.33			10			Inap.	Inap.	Covered	Royal Observatory.
San Fernando			30.09	764.2	58.8	14.9	91	SSW	11.2	5.0		0	10		SW	0.076	1.9		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; 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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.03	762.7	34.5	1.4	78	SW			4		5			0	0		
Umea			30.00	762.1	38.8	3.8	67	SW			2		7			0	0		
Hernosand			30.01	762.2	41.5	5.3	65	S			2		3			0	0		
Stockholm			29.87	758.6	40.3	4.6	82	E			4		10			0.004	0.1		
Wisby			29.85	758.1	44.6	7.0	79	SE			6		10			0	0		
Sub-Series.																			
Upsala			29.88	759.0	44.1	6.7	73	ESE	11.2	5.0			10		SSE	0.006	0.14		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28.14	714.8	29.56	750.8	56.8	13.8	46	SSW			5		6			0.048	1.1	Cloudy	The Observatory.
Zurich	27.95	709.9	29.59	751.6	53.2	11.8	65	N			1		2			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —0.5 mm.; Thermometer, +1.5 cent.; Relative Humidity, —11 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Constantinople			29.87	758.8	72.5	22.5	33	S	4	2.0			0			0	0		
Fao, (Persian Gulf)			30.24	768.0	79.2	26.2		NE			1		5						
Salonica			29.91	759.8	70.3	21.3		S			1		5						
Valona			29.95	760.6	75.6	24.2		SW			2		2					Raining	
Varna			29.96	761.0	57.2	14.0		E			1		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			29.95	760.6	73.0	22.8	68	W			1		0			0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Bathurst, N. B.			29.85	758.2	38.8	3.8	88	Calm	0	0									Hon. J. Ferguson.
Brockville, Ontario			30.10	764.5	34	1.1		SW	1	0.4			10s		SW	0.04	1.0	Cloudy	W. R. Bigg.
*Chatham, N. B.			29.89	759.2	38	3.3	85	SW	4	1.8		10ck	0	SW		0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island.			29.95	760.7	37	2.8	90	S	4	1.8			10s			0.06	1.5	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.00	762.0	34.5	1.4	74	S			1		10s			0.04	1.0	Unsettled	James Smith, M. A.
Dalhousie, N. B.			29.89	759.2	38.8	3.8	68	W			1		3ks			0	0		H. A. Johnson.
Esquimault, B. C.			29.86	758.4	40.1	4.5	90	W	2	0.9		2cs				0	0	Clear	W. H. Bevis.
Fredericton, N. B.			29.99	761.7	36.0	2.2	80	Calm	0	0			10s			0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			30.09	764.3	33	0.6	80	SE	6	2.7		5k	5ks	NW	NW	0	0	Cloudy	James Stewart.
Goderich, Ontario			30.17	766.3	31.1	— 0.5	86	NW			2		10n			Inap.	Inap.	Cloudy	H. J. Strang, M. A.
Granton, Ontario			30.13	765.3	29.2	— 1.6		N			1		10n			0	0	Cloudy	James Grant.
*Halifax, N. S.			29.98	761.5	37	2.8	97	W	4	1.8			10n			0.07	1.8	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.09	764.3	33	0.6	89	NW	3	1.3		10cs	0			Inap.	Inap.	Cloudy	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			30.00	762.0	34	1.1	71	W	4	1.8			10n			0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.01	762.2	33	0.6	75	W	3	1.3		10k	0	W		Inap.	Inap.	Cloudy	J. B. Haney.
*Parry Sound, Ontario			30.09	764.3	30	— 1.1	68	N	9	4.0		2ck	2ks	N	W	0.01	0.3	Fair	Rev. R. Mooley.
*Port Dover, Ontario			30.12	765.0	32	0.0	69	NW	7	3.1		10k	0	NW		0	0	Fair	H. Morgan.
Port Hastings, N. S.			29.98	761.7	36.7	2.6		SE	3	1.3						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.13	765.3	32	0.0	70	NW	7	3.1			10n		W	0	0	Cloudy	M. Payne.
*Quebec, Quebec			29.94	760.5	37	2.8	81	SW	3	1.3			10n			0.02	0.5	Cloudy	Capt. Ash, R. N.
St. John, N. B.			30.00	762.0	35	1.7	90	Calm	0	0			9ks			0	0		G. Murdoch, C. E.
*Saugeen, Ontario			30.08	764.0	33	0.6	85	Calm	0	0		8k	2s	N		0.02	0.5	Cloudy	K. Stewart.
Stayner, Ontario			30.11	764.8	30	— 1.1	79	Calm	0	0			10n			Inap.	Inap.	Cloudy	R. J. Cole.
Stratford, Ontario			30.13	765.3	29.7	— 1.2	73	NW	5	2.2		4cs	4cs	NW		Inap.	Inap.	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			29.99	761.7	40	4.4	95	S	4	1.8			10		S	0.08	2.0	Cloudy	T. C. Hill.
*Toronto, Ontario			30.11	764.8	33	0.6	65	NW	9	4.0		5ck	5ks	W	W	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.12	765.0	30.5	— 0.8	95	Calm			0		10s			0	0	Cloudy	J. Montgomery

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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.	.....	.....	30.02	762.5	36	2.2	70	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Alpena, Mich.	.....	.....	30.11	764.8	32	0.0	69	NW	7	3.1	.....	0	5s	.....	NW	Inap.	Inap.	Fair	
Atlantic City, N. J.	.....	.....	30.08	764.0	43	6.1	66	N	12	5.4	.....	5ck	0	SW	.....	0	0	Fair	
Augusta, Ga.	.....	.....	30.17	766.3	45	7.2	84	NW	4	1.8	.....	5k	0	NW	.....	0	0	Fair	
Baltimore, Md.	.....	.....	30.11	764.8	44	6.7	52	NW	5	2.2	.....	5k	Haze	W	.....	0	0	Fair	
Barnegat, N. J.	.....	.....	30.06	763.5	44	6.1	59	N	14	6.3	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Benton, Montana	26.85	682.0	29.65	753.1	42	5.6	83	Calm	0	0	.....	5c	5s	.....	.....	0	0	Cloudy	
Bismarck, Dakota	28.04	712.2	29.69	754.1	39	3.9	47	S	18	8.0	.....	5k	0	S	.....	0	0	Fair	
Boston, Mass.	.....	.....	29.97	761.2	41	5.0	56	W	8	3.6	.....	0	Haze	.....	.....	0	0	Clear	
Breckenridge, Minn.	.....	.....	30.08	764.0	34	1.1	79	SE	12	5.4	.....	.....	8s	.....	S	0	0	Cloudy	
Buffalo, N. Y.	.....	.....	30.08	764.0	31.5	— 0.3	84	W	8	3.6	.....	5k	5s	NW	NW	Inap.	Inap.	Cloudy	
Burlington, Vt.	.....	.....	29.99	761.7	36	2.2	80	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Cairo, Ill.	.....	.....	30.34	770.6	43	6.1	66	W	4	1.8	.....	1cs	0	.....	.....	0	0	Clear	
Cape Hatteras, N. C.	.....	.....	29.99	761.7	53	11.7	60	N	10	4.5	.....	0	2ks	.....	N	Inap.	Inap.	Fair	
Cape Henry, Va.	.....	.....	30.05	763.3	60	15.6	60	NW	12	5.4	.....	2k	0	NW	.....	0.01	0.3	Fair	
Cape Lookout, N. C.	.....	.....	30.06	763.5	52	11.1	72	NW	9	4.0	.....	5k	0	NW	.....	0.01	0.3	Fair	
Cape May, N. J.	.....	.....	30.08	764.0	44	6.7	67	NW	7	3.1	.....	0	8ks	.....	NW	0	0	Cloudy	
Charleston, S. C.	.....	.....	30.14	765.5	52	11.1	47	N	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Cheyenne, Wyoming	23.92	607.6	29.86	758.4	36	2.2	71	W	4	1.8	.....	0	1s	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.2[illegible]	767.1	39	3.9	63	SW	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	30.18	766.6	41	5.0	48	N	6	2.7	.....	10ck	0	N	.....	0	0	Cloudy	
Cleveland, Ohio	.....	.....	30.16	766.1	34.3	1.3	52	NW	14	6.3	.....	0	1ks	.....	.....	0	0	Clear	
Colorado Springs, Col.	24.06	611.1	29.93	760.2	48	8.9	42	NW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Colsicana, Tex.	.....	.....	30.22	767.6	54	12.2	79	E	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Davenport, Iowa	.....	.....	30.25	768.3	39	3.9	63	NW	2	0.9	.....	5cs	0	NW	.....	0	0	Fair	
Denison, Tex.	.....	.....	30.16	766.1	62	16.7	46	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Denver, Col.	24.71	627.6	29.93	760.2	49	9.4	37	S	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.16	766.1	35	1.7	70	NW	6	2.7	.....	0	5s	.....	W	0	0	Fair	
Dodge City, Kan.	27.38	695.4	29.64	752.8	50	10.0	64	S	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	30.24	768.1	36	2.2	70	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	
Duluth, Minn.	.....	.....	30.16	766.1	32	0.0	79	SW	4	1.8	.....	8ck	Haze	N	.....	0	0	Fair	
Eastport, Me.	.....	.....	29.93	760.2	37	2.8	80	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Erie, Pa.	.....	.....	30.09	764.3	35	1.7	70	W	7	3.1	.....	4ck	5ks	W	W	0	0	Fair	
Escanaba, Mich.	.....	.....	30.16	766.1	29	— 1.7	67	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Fort Gibson, Indian Terr.	.....	.....	30.19	766.8	51	10.6	45	NE	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Ft. St. Michaels, Alaska	.....	.....	29.89	759.2	5	—15.0	.....	SW	3	1.3	.....	10ck	0	S	.....	.....	.....	Fair	
Fort Sill, Indian T.	.....	.....	30.04	763.0	59	15.0	59	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Galveston, Tex.	.....	.....	30.25	768.6	64	17.8	78	E	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Grand Haven, Mich.	.....	.....	30.18	766.1	42	5.6	69	NW	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Indianapolis, Ind.	.....	.....	30.22	767.6	42	5.6	49	N	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Indianola, Tex.	.....	.....	30.25	768.3	66	18.9	78	SE	7	3.1	.....	2cs	0	NW	.....	0	0	Fair	
Jacksonville, Fla.	.....	.....	30.16	766.1	55	12.8	43	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Keokuk, Iowa	.....	.....	30.25	768.3	40	4.4	56	Calm	0	0	.....	8c	0	.....	.....	0	0	Fair	
Key West, Fla.	.....	.....	30.11	764.8	71.0	21.7	66	N	23	10.3	.....	8k	0	N	.....	0	0	Cloudy	
Kittyhawk, N. C.	.....	.....	30.07	764.8	49	9.4	85	N	14	6.3	.....	2k	0	NW	.....	0	0	Fair	
Knoxville, Tenn.	.....	.....	30.22	767.6	40	4.4	83	Calm	0	0	.....	2ck	0	NW	.....	0.01	0.3	Clear	
La Crosse, Wis.	.....	.....	30.23	767.8	34	1.1	79	S	5	2.2	.....	2c	0	.....	.....	0	0	Clear	
Leavenworth, Kan.	.....	.....	30.23	767.8	42	5.6	65	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Lexington, Ky.	29.10	739.1	30.25	768.3	38	3.3	62	N	4	1.8	.....	.....	10ks	.....	.....	0	0	Cloudy	
Long Branch, N. J.	.....	.....	30.08	764.0	50	10.0	58	NW	8	3.6	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Louisville, Ky.	.....	.....	30.23	767.8	43	6.1	59	NW	7	3.1	.....	5k	0	NW	.....	Inap.	Inap.	Fair	
Lynchburg, Va.	.....	.....	30.12	765.0	46	7.8	57	NW	4	1.8	.....	2ck	0	W	.....	0	0	Clear	
Malone, N. Y.	.....	.....	29.98	761.5	35	1.7	62	Calm	0	0	.....	.....	10s	.....	W	0	0	Cloudy	
Manhattan, Kan.	28.88	733.5	30.05	763.3	44	6.7	67	SW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Marquette, Mich.	.....	.....	30.15	765.8	32	0.0	69	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn.	.....	.....	30.32	770.1	46	7.8	47	NE	6	2.7	.....	2c	Haze	.....	.....	0	0	Clear	
Milwaukee, Wis.	.....	.....	30.23	767.8	34	1.1	69	NW	3	1.3	.....	2c	Fog	.....	.....	0	0	Clear	
Mobile, Ala.	.....	.....	30.26	768.6	52	11.1	59	N	8	3.6	.....	0	Sm'e	.....	.....	0	0	Clear	
Montgomery, Ala.	.....	.....	30.26	768.6	50	10.0	54	N	7	3.1	.....	0	Haze	.....	.....	0	0	Clear	
Morgantown, W. Va.	.....	.....	30.11	764.8	42	5.6	65	E	2	0.9	.....	.....	10s	.....	SW	0.04	1.0	Cloudy	
Mt. Washington, N. H.	23.51	597.1	29.87	758.7	16	— 8.9	100	NW	2	0.9	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	30.26	768.6	43	6.1	66	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
New Haven, Conn.	.....	.....	30.03	762.7	43	6.1	67	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
New London, Conn.	.....	.....	30.02	762.5	46	7.8	45	NW	6	2.7	.....	0	Haze	.....	.....	0	0	Clear	
New Orleans, La.	.....	.....	30.26	768.6	60	15.6	65	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Clear	
Newport, R. I.	.....	.....	30.01	762.2	41	5.0	57	NW	6	2.7	.....	2ck	0	W	.....	0	0	Fair	
New York, N. Y.	.....	.....	30.07	763.8	41	5.0	41	NW	4	1.8	.....	2ck	0	W	.....	0.01	0.3	Clear	
Norfolk, Va.	.....	.....	30.07	763.8	48	8.9	63	N	4	1.8	.....	2k	0	.....	.....	0.14	3.6	Fair	
North Platte, Neb.	26.99	685.5	29.57	751.1	41	5.0	74	SE	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb.	29.06	738.1	30.16	766.1	40	4.4	73	SE	2	0.9	.....	2c	0	.....	W	0	0	Clear	
Oswego, N. Y.	.....	.....	30.05	763.3	34.8	1.6	70	NW	10	4.5	.....	.....	10ks	.....	NW	0	0	Cloudy	
Pembina, Dakota	.....	.....	30.02	762.5	35	1.7	84	SE	4	1.8	.....	5c	Haze	.....	.....	0	0	Cloudy	
Philadelphia, Penn.	.....	.....	30.10	764.5	41	5.0	48	N	11	4.9	.....	1ck	0	W	.....	0.02	0.5	Clear	
Pike's Peak, Colorado	17.79	451.8	30.00	762.0	21	— 6.1	43	SW	26	11.6	.....	8c	0	NW	.....	0	0	Fair	
Pittsburgh, Penn.	.....	.....	30.12	765.0	38	3.3	63	NW	8	3.6	.....	.....	10ks	.....	N	Inap.	Inap.	Cloudy	
Port Huron, Mich.	.....	.....	30.15	765.8	32	0.0	69	NW	9	4.0	.....	1c	2s	NW	.....	0	0	Fair	
Portland, Me.	.....	.....	29.94	760.5	41	5.0	57	NW	5	2.2	.....	1k	0	NW	.....	0	0	Clear	
Portland, Oregon	.....	.....	29.97	761.2	45	7.2	84	Calm	0	0	.....	.....	10s	.....	.....	0.15	3.8	Cloudy	
Punta Rassa, Fla.	.....	.....	30.16	766.1	61.2	16.2	44	N	16	7.2	.....	Haze	Sm'e	.....	.....	0	0	Hazy	
Rochester, N. Y.	.....	.....	30.05	763.3	35	1.7	70	W	7	3.1	.....	.....	10s	.....	W	0.01	0.3	Cloudy	
Salt Lake City, Utah	25.33	643.4	29.66	753.4	54	12.2	55	S	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Sandy Hook, N. J.	.....	.....	30.05	763.3	40.5	4.7	56	NW	11	4.9	.....	0	2ks	.....	NW	Inap.	Inap.	Clear	
San Diego, Cal.	.....	.....	30.01	762.2	56	13.3	81	SE	8	3.6	.....	.....	10s	.....	SE	0	0	Cloudy	
San Francisco, Cal.	.....	.....	30.03	762.7	50	10.0	79	NW	12	5.4	.....	.....	10ks	.....	NW	0.09	2.3	Cloudy	
Santa Fe, N. M.	23.28	591.3	29.82	757.4	48	8.9	42	SE	9	4.0	.....	2cs	2s	SW	SW	0	0	Fair	
Savannah, Ga.	.....	.....	30.16	766.1	53	11.7	53	N	4	1.8	.....	Haze	0	SW	.....	0	0	Clear	
Shreveport, La.	.....	.....	30.31	769.9	57	13.9	63	N	2	0.9	.....	0	Haze	.....	.....	0	0	Hazy	
Smithville, N. C.	.....	.....	30.10	764.5	50	10.0	53	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Springfield, Mass.	.....	.....	30.02	762.5	40	4.4	55	NW	8	3.6	.....	.....	10ks	.....	.....	0	0	Cloudy	
St. Louis, Mo.	.....	.....	30.3[illegible]	769.6	42	5.6	57	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.21	767.3	50	10.0	64	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
St. Paul, Minn.	.....	.....	30.15	765.8	33.5	0.8	74	NW	1	0.4	.....	10c,cs	Sm'e	.....	.....	0	0	Cloudy	
St. Paul's Island, Alaska	.....	.....	30.07	763.8	30	— 1.1	89	NW	14	6.3	.....	.....	10s	.....	.....	0.06	1.5	.....	
Thatcher's Island, Mass.	.....	.....	29.98	761.5	40	4.4	56	NW	15	6.7	.....	0	0	.....	.....	0	0	Clear	
Toledo, Ohio	.....	.....	30.16	766.1	40	4.4	56	W	3	1.3	.....	2c	0	.....	.....	0	0	Clear	
Tucson, Arizona	27.76	697.5	30.05	763.3	59	15.0	.....	SE	.....	.....	.....	5c	0	W	.....	0	0	Fair	
Tybee Island, Ga.	.....	.....	30.15	765.8	58	14.4	41	N	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Vicksburg, Miss.	.....	.....	30.32	770.1	55	12.8	37	E	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Virginia City, M. T.	24.02	607.6	29.40	746.7	43	6.1	50	SE	4	1.8	.....	2c	8s	SW	S	0	0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.11	764.8	42.5	5.8	56	NW	3	1.3		2ck	2ks	W	W	0	0	Fair	
Wilmington, N. C			30.09	764.3	48	8.9	49	NE	6	2.7		0	1s			0	0	Clear	
Wood's Holl, Mass			30.02	762.5	44	6.7	44	NW	8	3.6		5k	0	NW		0	0	Fair	
Wytheville, Va	27.72	704.1	29.94	760.5	35	1.7	90	NW	1	0.4			10ks		NW	0.05	1.3	Threatening	
Yankton, Dakota	28.80	731.5	30.12	765.0	39	3.9	64	SE	5	2.2		0	0			0	0	Clear	
Yuma, Arizona			29.85	758.2	64	17.8		NE				8c	0			0	0	Fair	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.04	763.0	79	26.1	69	E	10	4.5		5ck	5ks	E	E	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.00	762.0	79	26.1	69	E				0	2k			0	0	Clear	L. V. Bigard.
St. Thomas, St. T., W. I			30.24	768.1	76	24.4	63	ESE	2	0.9		4ck	8kn	SE		0	0	Cloudy	W. S. Cameron.
Kingston, Jamaica, W. I.			30.19	766.8	78	25.6	78	Calm	0	0		2c	0			0	0		James Gall.
Santiago de Cuba, W. I.			29.77	756.1	79	26.1	74	Calm	0	0		0	8ks			0	0	Cloudy	Robert Mason.
Havana, Cuba, W. I.			30.09	764.3	74	23.3	63	NE	3.6	1.6		5k	0	N		0	0	Fair	Charles Hasselbrink
St. Georges, Bermudas			30.06	763.5	68.0	20.0	90	SSW	13.0	5.8		10pk	2k			0	0	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.19	690.6	29.97	761.2	69	20.6	84	N	1.0	0.4		5c	5k	NE		0.89	22.6	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.00	762.0	79	26.1	78	E			2		5k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.04	763.1	86.0	30										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.18	639.6			64.5	18.1	85		0	0		5c	5s			0.03	0.8	Cloudy	Thomas Herran.
St. John's, Newfoundland.			30.04	763.0	41.0	5.0	91	S					10n			0.06	1.5	Cloudy	John Delaney.
York Factory, B. A.			30.28	769.1	9.5	—12.5	90	N	1	0.4			10s			0.02	0.5		J. Fortescue.
Honolulu, Oahu, H. I.			30.06	763.5	72	22.2	95	NE			4					0.15	3.8		E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Peruvian, N. 50° 32′, W. 30° 32′.	S66W	12	29.89	759.2	52	11.1		WNW			3		10k					*D. clouds	Capt. W. Richardson.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher. * 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 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* of clouds, 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 APRIL 19, 1876.

7:35 A. M. WASHINGTON 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.

ALGERIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.04	760.4	68.2	20.1	45	NNW			1		9			0	0	Hidden	Charnot.
Algiers			29.00	759.4	69.8	21.0	65	NW			1		2			0	0	Clear	Peter.
La Calle					67.1	19.5		NW			1		0			0	0	Clear	Kuntz.
Tunis			29.95	760.7	78.3	25.7	39	NE			3		0			0	0	Clear	Jacques.
Sfax			29.98	761.5	74.8	23.8	33	S			3		1			0	0	Clear	Chauvey.
Saida			29.97	761.1	70.7	21.5	28	N			4		0			0	0	Clear	Millot.
Tebessa			29.91	759.8	81.7	27.6		W			4		0			0	0	Clear	Colin.
Geriville			29.9[illegible]	761.5	69.4	20.8	42	NW			2		1			0	0	Clear	Buard.
Laghouat			29.92	759.9	78.8	26.0	36	S			2		1			0	0	Clear	Guyot.
Biskra			29.89	759.1	86.4	30.2	20	NE			1		0			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.71	754.6	55.4	13.0	72	NE			1		10			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.75	755.7	61.2	16.2	47	ESE			3		6			0.012	0.3		I. R. Observatory.
Eperies			29.82	757.3	58.8	14.6	53	S			4		10		N	0	0		Julius Mikolik.
Gratz	28.51	724.1	29.69	754.2	55.9	13.3	52	SW			5		10			0.087	2.2		Andreas Rospini.
Hermannstadt	28.46	722.9	29.85	758.1	63.9	17.7	42	ESE			1		4			0	0		Prof. Reissenberger.
Kremsmünster			29.43	747.6	61.9	16.6	46	SE			3		3			0	0		Prof. C. Wagner.
Lemberg			29.80	756.8	61.9	16.6	40	SE			2		4			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.73	755.2	59.0	15.0	83	SE			6		8[illegible]			0.090	2.53		I. R. Hydrographic Office
Szegedin			29.82	757.3	63.5	17.5	35	S			1		10			0.016	0.25		Karl Stancel.
Trieste			29.71	754.7	59.2	15.1	76	ENE			3		10			0.453	11.5	Threatening	Prof. V. Farolfi.
Vienna			29.63	752.6	55.4	13.0	50	SE			4		9			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.17	741.0	56.1	13.4	69	S			4		10			0.047	1.20		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0 10.	Clouds. Amount. Low'r 0 10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.06	738.1	42.9	6.1		E	18	8.0			10			0.565	14.35	Drizzling	William Boswell.
Ardrossan			28.96	735.6	49	9.4		ENE			3		7					*D. clouds	William McNeil.
Armagh Observatory			28.98	736.1	45.0	7.2		N	3	1.3			10					Raining	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			28.89	733.8	49.9	9.9		ESE	5	2.2			9					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			28.99	736.3	47.3	8.5		Calm			0		10					Raining	J. Dreyer.
Bradford			28.92	734.6	45.3	7.4		E			1		10			0.23	5.8	Raining	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	81.5	27.5		NE			4		6					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge Observatory			29.91	734.3	50.0	10.0		S			1		7					Showery	H. Todd.
Cardington			28.88	733.5	51.0	10.6		S			1		9					Overcast	John McLaren.
Carlisle			28.92	734.6	51.3	10.7		NE			1		9			0.05	1.3	*D. clouds	T. Bell, for J. Carmichael.
Chatham, School M. E			29.14	740.1	49.7	9.8		SW			2		0?					Overcast?	Capt. J. Fellowes, R. E.
Dartmoor	27.54	700.5	29.06	738.1	43.6	6.4		W			4		10					Gloomy	R. E. Power.
Donaghadee			28.95	735.3	47	8.3		NE			2		10					Overcast	J. Mac Gowan.
Dover			28.97	735.8	49	9.4		SW			5		6					Showery	J. Costello.
Eccles, (near Manchester.)			28.91	734.3	49.8	9.9		SE	3.4	1.5			10					Raining	Thomas Mackereth.
Falmouth Observatory			29.00	736.6	53.3	11.8		WNW	24	10.7			9					Overcast	The Staff.
Fort Napier, (Natal)	27.66	702.5	29.89	759.2	77.8	25.4		NE			1		5					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	85	29.7		N			2		6					*D. clouds	
Galway, Queen's College			29.17	740.9	51	10.6		SW			1		2					*D. clouds	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			29.94	760.5	62.9	17.2		W			6		6					*D. clouds	Corp'l C. Aitken, A. H. C.
Glasgow Observatory			28.97	735.8	46.4	8.0		E			2		10					Overcast	Lewis Stuart.
Great Yarmouth			28.99	736.3	47	8.3		SSE			4		8					Raining	G. T. Watson.
Greenwich Royal Obs			28.92	734.6	52.0	11.1		SSW			2		9					Drizzling	The Staff. for G. B. Airy.
Guernsey			29.00	736.6	52	11.1		SW			2		3			Blank	Blank	*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.94	760.5	45.6	7.6		ESE			1		10					Raining	L. J. Crossley.
Helston			28.97	735.8	54	12.2		W			4		6n			0.22	5.6	Fair	M. P. Moyle.
Holyhead			28.93	734.8	48	8.9		N			4		3					Blu sky	John Tilston.
Kew Observatory			28.92	734.6	50.2	10.1		SSW	20	8.9			10					Raining	The Staff.
Kingstown			28.97	735.8	46	7.8		NNE			3		10					Overcast	George Mitchell.
Leicester Museum			28.91	734.3	51.0	10.6		S			1		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.99	761.7	71.2	21.8		SW			2		6k						Fred. Travis, Pvt. A.H.C.
Nairn			29.03	737.3	47	8.3		ESE			1		10					Overcast	W. D. Penny.
Nassau, Bahamas																			Surg. Maj. Henry.
Nottingham			28.91	734.0	49.5	9.9		NE			1	..k	10d.ksn		SSE	0.129	3.28	Raining	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			28.89	733.8	50.1	10.1		ENE			1		9					Showery	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			28.88	733.5	53	11.7		SE			1		8					Overcast	J. Lucas.
Plymouth			28.95	735.3	50	10.0		W			2		10					Raining	John Merrifield.
Roche's Point			28.98	736.1	51	10.6		N			2		10					Overcast	W. Kennedy.
Saint Ann's Head			28.93	734.8	48	8.9		NW			3		8					Overcast	John. C. Walker.
Saint Helier, (Jersey)			29.00	736.6	52.0	11.1		W			5		5						A. P. Amy.
Sandwick Manse (Orkneys			29.16	740.7	44	6.7		E	28	12.5			10					Misty	Rev. C. Clouston, LL. D.
Scarborough			29.06	761.0	43.2	6.2		SE			3		10					Misty	F. Shaw.
Scutari Cemetery, Turkey			29.92	760.0	64.4	18.0		NE			2		2					Blue sky	Sergt. W. H. Lyne.
Sheffield			28.89	733.8	52.0	11.1		SE			1		10			0.059	1.50	Gloomy	W. F. Cooper.
Silloth Rectory			28.92	734.6	51.5	10.8	78	E			2		5			0.120	3.05	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			29.87	758.7	54.2	12.3		E			1		10			Blank	Blank	Gloomy	S. J. Perry.
Stornoway, Lewis C. Hebr.			29.02	737.1	48	8.9		ENE			4		10					Overcast	John Smith.
Stratfield Turgiss			28.90	734.0	48.3	9.1		S			1		10					Raining	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.10	739.1	45	7.2		ESE			4		9					Gloomy	John Trotter.
Truro, Royal Institution			29.05	737.9	51	10.6		W			7		10					Gloomy	W. Newcombe.
Valencia Observatory			29.04	737.6	50.0	10.0		NW	13	5.8			10					Misty	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man					49	9.4		E			3		2						The Staff. for E. J. Stone.
Cape Good Hope Obs			29.98	761.5	74.2	22.4	57	WNW	13	5.8			2						
Leith, Restalrig Park			29.01	736.8	43.0	6.1		E			2		10s			0.15	3.8	Foggy	Andrew Gibb.
Mauritius			29.99	761.7				ESE	15.1	6.8						0	0		
Monach Lt-house, Hebrides			29.05	737.9	45	7.2		NE			3		10			0.3	7.6		J. Youngelause.
North Unst, (Shetland Is.)			29.31	744.5	45	7.2		E			6		10			Blank	Blank		

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 270.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			29.45	747.9	52.2	11.2	74	S			2		8						
Fanöe			29.31	745.1	56.8	13.8	68	S			4		1						
Godthaab, (Greenland)			30.26	768.7	31.3	— 0.4	72	NNE			2		10						
Stykkisholm, (Iceland)			30.00	762.0	22.1	— 5.5	96	NE			8		0						
Thorshavn, (Faröe)			29.35	745.5	41.9	5.5	96	NE			4		10					Raining	
Vestervig			29.35	745.4	52.9	11.6	86	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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	10.0	80	S			4		5k		S	0.591	15.0	Cloudy	Normal School.
Amiens			29.29	743.9	55.0	12.8	70	SW			6		0			0	0	Clear	Normal School.
Avignon			29.55	750.5	67.6	19.8	57	SE			2		1			0.445	11.3	Clear	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			29.13	739.9	54.1	12.2	66	SW			6		10		S	0.285	7.25	Covered	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			29.46	748.2	56.3	13.5	61	SW			8		8		SW	0.110	2.8	Very cloudy	Normal School.
Brest			29.05	737.9	54.1	12.3	74	W			4		10		W	0.512	13.00	Raining	Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			29.47	748.4	59.5	15.3	39	S			3		8		SW	0.224	5.7	Very cloudy	Puy de Dome Obs.
Commercy			29.40	746.8	54.3	12.4	70	SE			6		10k		SE	0.201	5.1	Covered	Normal School.
Commune de Gréasque*			29.61	752.1	59.5	15.3	55	SE			6		5		SE	0.150	3.8		M. Kina.
Grenoble			29.64	752.8	51.4	10.8	85	E			2		8k		SW	0.059	1.50	Very cloudy	Normal School.
Le Mans			29.17	740.9	49.6	9.8	72	E			6		5		NE	0.59	15.	Cloudy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			29.49	749.0	58.1	14.5	76	S			2		2		SW	0.32	8.	Slightly cl'dy	Normal School.
Mâcon			29.50	749.3	59.0	15	78	NE			2		5		NE	0.150	3.8	Cloudy	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			29.54	750.4	68.7	20.4	58	NW			2		5		S	0	0	Cloudy	Normal School.
Orleans																			Normal School.
Paris Observatory			29.18	741.1	55.8	13.2	81	S			6		8	SW	NE	0.112	2.84	Very cloudy	National Observatory.
Parthenay																			Normal School.
Privas			29.52	749.7	60.8	16		ESE			2		10		S	0.43	11.	Covered	Normal School.
La Roche-sur-Yon			29.26	743.3	53.8	12.1	74	SW			8		8		NE	0.559	14.2	Very cloudy	Normal School.
Rochefort, Observatory			29.39	746.4	52.7	11.5	80	WSW			8		10		NE	0.079	2.0	Covered	Naval Observatory.
Rouen			29.06	738.2	57.2	14.0	58	SE			8		5		SW	0.106	2.7	Cloudy	Normal School.
Saint Lo			29.03	737.4	53.6	12	76	W			3		9		W	0.098	2.5		Normal School.
Tarbes	28.42	721.8			51.8	11		W			4		8		E	0	0	Very cloudy	Normal School.
Toulouse																			Normal School
Villefranche			29.75	755.6	63.7	17.6	84	SSW			3		5		SW	0.189	4.80	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.7	78.8	26	76	NE			2		5k						L'Abbé Marchési.
Gorée																			
Marseilles			29.54	750.2	63.9	17.7	71	S			2		4			0	0	Cloudy	Marseilles Observatory.
Mont-Louis	24.42	620.3	29.74	755.3	44.6	7.0	59	SSW	31.7	14.17			2		SSW	0.087	2.2		—. Falguère.
Montsouris, Paris			29.17	740.9	56.1	13.4	65	SW			4		10		SW	0.201	5.1	Rain-squalls	Montsouris Observ'tory.
Perpignan			29.56	750.9	60.6	15.9	62	SE	10.2	5.00			1			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			29.19	741.5	58.6	14.8	59	SSW			4		8			0.189	4.8	Very cloudy	E. Renou.
Toulouse			29.54	750.3	61.9	16.6	61	WSW			2		4			0	0		Toulouse Observatory.
Tours			29.21	742.8	55.4	13.0	60	WSW			8		7		WSW	0.358	9.1		C. Marquet.
Versailles, (near Paris)			29.16	740.7	56.8	13.8	62	SW			6		10			0.269	6.83	Covered	Dr. A. Béringy.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lee, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7., 8. or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

* Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.44	747.8	58.5	14.7	52	SW			3		9	SW		0.039	1.0		Prof. T. Hoh.
Berlin			29.49	749.0	63.7	17.6	43	S			1		6			0	0		Prof. Arndt.
Breslau			29.64	752.9	61.0	16.1	53	SE			6		10			0	0		Dr. P. Neugebauer.
Carlsruhe			29.40	746.7	61.2	16.2	49	S			8		10			0	0		A. Senz.
Cassel			29.31	744.5	62.6	17.0	39	SSW			6		4			0.232	5.9		Dr. H. Möhn.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main			29.45	747.9	63.1	17.3	42	S			3		5			0.051	1.3		Physical Society.
Friedrichshafen	28.13	714.4	29.07	753.7	54.3	12.4	58	S					7			0	0		M. Wilhelm.
Hamburg			29.38	746.2	60.3	15.7	51	SSE			4		9k	SW		0.004	0.1	Pleasant	Deutsche Seewarte.
Kiel			29.35	745.6	57.4	14.1	64	SSE			2		3			0.004	0.1		Prof. G. Karsten.
Königsberg			29.65	753.0	63.1	17.3	44	S			5		6			0.059	1.5		Prof. E. Luther.
Köslin			29.54	750.2	66.0	18.9		S			2		3			0	0		H. Müller.
Leipsic			29.40	749.0	62.8	17.1	44	SSE			3		7			0.106	2.7		Prof. Bruhns.
Memel			29.71	754.6	54.0	12.2	74	S			3		1			0.020	0.5		Reinbrecht & Skalweit.
Münster			29.30	744.3	62.6	17.0	49	S			5		3			0.031	0.8		Prof. E. Reis.
Neufahrwasser			29.56	750.9	59.4	15.2	59	SSW			5		5			0.079	2.0		A. Lothes.
Posen			29.61	752.2	66.2	19.1	45	E			2		9			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.43	747.6	60.1	15.6	51	SSW			4		9	SW		0.036	0.9		Dr. Schur.
Stuttgart			29.54	750.2	62.2	16.8	42	SW			3		4			0.028	0.7		Prof. Schoder.
Thorn			29.62	752.3	62.4	16.9	49	S			6		3	SW		0.114	2.9		Dr. Hasenbalg.
Treves, (Trier)			29.32	744.6	59.5	15.3	52	S			7		2			0.106	2.7		Prof. Flesch.
Wustrow, Naval School			29.36	745.8	61.0	16.1	54	SE			3		4			0	0		E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	75.6	24.2		SW										Clear, dusty.	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.69	754.0	53.6	12.0	90	S	8.7	3.9			10			1.032	26.2		
Padua			29.65	753.2	52.0	11.2	93	NNE	10.5	4.7			10	NW		0.114	2.9	Light rain	
Vicenza			29.69	754.0	50.2	10.1	91	NE	4.3	1.9			10	S		0.220	5.6	Light rain	
Verona			29.63	752.7	56.3	13.5	93	E			2		10			0.106	2.7	Raining	
Bergamo	28.30	718.7	29.61	752.2	48.2	9.0	76	NE			4		10			0.209	5.3	Raining	
Domodossola	28.41	721.5	29.68	753.9	42.8	6.0	88	Calm			0		10			0.276	7.0	Raining	
Milan			29.67	753.6	47.8	8.8	96	NNE			1		10	E		0	0	Raining	
Pavia			29.67	753.6	49.8	9.9	89	E			4		10			0.736	18.7	Raining	
Moncalieri			29.68	753.9	49.3	9.6	80	WNW	1.8	0.8			9	N		0.134	3.4		
Mondovi	27.76	705.0	29.68	753.8	47.1	8.4	73	NW			1		10			0.512	13.0		
Porto Maurizio			29.69	754.2	52.9	11.6	86	S			2		10			0.717	18.2	Raining	
Genoa			29.66	753.3	54.5	12.5	88	SE	3.1	1.4			10	SE		0.114	2.9		
Piacenza			29.66	753.4	50.5	10.3	94	E	8.7	3.9			10			0.299	7.6	Light rain	
Parma			29.66	753.3	53.6	12.0	95	SE			2		10			0.047	1.2	Light rain	
Bologna			29.69	754.1	62.1	16.7	40	SW			4		4	S		0	0		
Florence			29.74	755.5	65.3	18.5	60	SW			6		10	SW		0	0		
Leghorn			29.70	754.4	64.0	17.8	72	S	19.9	8.9			8			0	0		
Siena	28.04	724.8	29.74	755.4	62.[illegible]	17.1	67	SW	6.3	2.8			7	SW		0.205	5.2		
Urbino	28.19	715.9	29.74	755.3	58.5	14.7	67	SSW			4		10			0.138	3.5		
Pesaro																			
Ancona			29.75	755.7	66.2	19.0	46	SSW			6		3			0	0		
Grosseto			29.78	756.3	64.0	17.8	72	SSE			8		6	SW		0.402	10.2		
Rome			29.94	760.5	66.0	18.9	58	S	25.5	11.4			4	SW		0	0		
Naples, O. U.			29.98	761.5	68.4	20.1	54	SSW			2		9	WSW		0	0		
Lecce			30.01	762.3	69.4	20.8	43	SSE	18.1	8.1			5			0	0		
Cosenza			29.98	761.5	73.[illegible]	22.8	70	NW	1.3	0.6			7			0	0		
Riposto, (Sicily)			30.03	762.8	64.0	17.8	74	SE			2		2			0	0		
Palermo			29.85	758.3	79.5	26.4	34	WSW	15.4	6.9			6			0	0		
Caltanissetta	28.03	711.9	29.97	761.1	63.5	17.5	61	SE			2		1	NW		0	0		
Sub-Series.																			
Naples, S. R.			29.96	761.0	64.8	18.2	54	SW	1.8	0.8			..k,c	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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.12	739.6	54.5	12.5		S			6								
Groningen			29.19	741.5	54.7	12.6		S			5								
Helder			29.15	740.5	53.6	12.0		SSE			4								
Utrecht			29.15	740.5	54.9	12.7	60	SSE			5		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.35	745.5	57.6	14.2	41	E	9.8	4.4			5			0	0		
Brönö			29.47	748.4	53.6	12.0	54	E	11	5			3			0	0		
Christiania			29.54	750.2	43.0	6.1	86	NE	0.7	0.3			10			0.118	3.0		
Tromsö			29.67	753.7	36.9	2.7	84	NE	2	1			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1 h., 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				Temperature of the Air.		Relative Humidity.	Winds.				Clouds.				Rain-fall or melted snow in the past 24 hours.		Weather.	Observer.
	Corrected for instrumental errors.		Reduced to sea-level.					Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
	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,)			30.24	768.1	63.7	17.6	80	WNW	19.6	8.78			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.84	757.9	55.4	13.0	62	SW	16.8	7.50			9	SW		0.043	1.10	Raining	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.17	766.2	66.2	19.0	57	SW	5.8	2.58			2			0	0		Capt. D. A. da Cunha.
Lisbon			29.86	758.5	56.3	13.5	54	WSW	22.4	10.0			8	W		0.106	2.7	Raining	The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 hour, 6 min.

RUSSIAN SERIES.

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

Stations.	Corr. Inches.	Corr. Millimeters.	Red. Inches.	Red. Millimeters.	Fahrenheit.	Centigrade.	Per cent.	Wind from—	Miles per hour.	Meters per second.	Force 0—10.	Clouds Up'er 0—10.	Clouds Low'r 0—10.	Upper from—	Lower from—	Rain Inches.	Rain Millimeters.	Weather.	Observer.
Warsaw			29.71	754.6	61.0	16.1	54	SE	31	14			5						Astronomical Obs.
Wilna			29.84	757.8	63.1	17.3	43	S	9	4			5						Astronomical Obs.
Dorpat			29.81	757.2	62.2	16.8	53	S	13	6			9						Physical Cabinet.
St. Petersburg			29.87	758.8	61.9	16.6	54	S	18	8			2						Central Physical Obs.
Kuopio			29.75	755.7	48.2	9.0	73	SSE	7	3			3						Ch. Forsten.
Kieff			30.02	762.6	57.9	14.4	59	SE	9	4			10					Raining	Physical Cabinet.
Nikolaiev			30.07	763.7	67.6	19.8	37	SE	20	9			5						Kurdakof.
Kertch			30.02	762.6	62.1	16.7	55	ENE	18	8			0						Lagorio.
Moscow			30.23	767.9	55.0	12.8	48	SSW	4	2			0						Meteorological Obs.
Lugan			30.17	766.4	58.5	14.7	21	ESE	34	15			0						Meteorological Obs.
Archangel			29.80	756.9	42.6	5.9	51	Calm	0	0			10						Ogorodnikof.
Tiflis	28.69	728.7	30.09	764.2	59.0	15.0	56	SSE	9	4			9						Physical Observatory.
Astrakhan			30.42	772.7	54.1	12.3	15	ENE	7	3			0					Smoke-haze.	Sebastianof.
Kasan			30.04	763.1	52.3	11.3	42	W	9	4			8						Physical Cabinet.
Orenburg			30.18	765.9	54.0	12.2	51	NW					0						Tschernischef.
Ekaterinburg	28.81	731.7	29.83	757.6	39.6	4.2	66	W	25	11			10						Meteorological Obs.
Nukuss			29.88	759.0	57.6	14.2	44	N	13	6			7						
Kasaly																			Bobrof.
Tashkend	28.10	716.0	29.87	758.0	57.2	14.0	96	Calm	0	0			10						Michelson.
Barnaul			29.91	759.6	25.2	− 3.8	71	Calm	0	0			0						Meteorological Obs.
Yeniseisk			29.61	752.1	27.9	− 2.3	54	S	11	5			0						Marks.
Irkutsk	28.39	721.0	29.79	756.7	36.5	2.5	50	NNW	18	8			10						Usolzef.
Oorga																			Mossin.
Peking, (China)			30.10	764.5	44.1	6.7	34	SSW	4	2			9						Physical Observatory.
Nertchinsk	27.76	705.2	29.86	758.5	35.4	1.9	44	Calm	0	0			0						Meteorological Obs.
Vladivostock			30.03	762.8	45.7	7.5	22	NW	4	2			0						
Nikolaievsk, on the Amoor					29.5	− 1.4	90	NE	4	2			10						

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 40[illegible] meters, or 1,311.8 feet; Ekaterinburg, [illegible] m., or 1,995.2? ft.; Tashkend, m. 494.2?, or 1,621.3? ft.; Irkutsk, 302 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.

Stations.	Corr. Inches.	Corr. Millimeters.	Red. Inches.	Red. Millimeters.	Fahrenheit.	Centigrade.	Per cent.	Wind from—	Miles per hour.	Meters per second.	Force 0—10.	Clouds Up'er 0—10.	Clouds Low'r 0—10.	Upper from—	Lower from—	Rain Inches.	Rain Millimeters.	Weather.	Observer.
Madrid			29.71	754.7	49.1	9.5	67	SW	38.8	17.33			10			0	0	Covered	Royal Observatory.
San Fernando			29.95	760.8	58.3	14.6	81	WNW	11.2	5.0		0	10			0.016	0.4		The Naval Observatory.

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; 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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Corr. Inches.	Corr. Millimeters.	Red. Inches.	Red. Millimeters.	Fahrenheit.	Centigrade.	Per cent.	Wind from—	Miles per hour.	Meters per second.	Force 0—10.	Clouds Up'er 0—10.	Clouds Low'r 0—10.	Upper from—	Lower from—	Rain Inches.	Rain Millimeters.	Weather.	Observer.
Haparanda			29.72	754.9	36.0	2.2	96	SE			2		10			0	0		
Umea			29.68	753.9	39.9	4.4	87	SW			2		10			0.016	0.4		
Hernosand			29.66	753.3	40.6	4.8	82	E			2		10			0	0		
Stockholm			29.53	75 .0	46.9	8.3	87	E			2		10			0.075	1.9	Light rain	
Wisby			29.54	750.2	47.5	8.6	87	SE			2		10			0.024	0.6		
SUB-SERIES.																			
Upsala			29.55	750.6	54.0	12.2	72	ESE	9.4	4.2			10		SE	0.087	2.20		Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28.19	715.9	29.64	752.9	44.2	6.8	88	NNE			0		10			1.465	37.2	Covered	The Observatory.
Zurich	27.92	709.2	29.56	750.8	54.5	12.5	61	W			2		8			0	0	Cloudy	The Observatory.

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, —8.4 mm.; Thermometer, —5.6 cent.; Relative Humidity, +31 per cent.

NOTE.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Constantinople			29.98	761.5	62.6	17.0	63	NNE	9	4.0			3		SW	0	0		
Fao, (Persian Gulf)			30.11	764.7	75.2	24.0		SE			3		10						
Salonica			30.02	762.6	62.2	16.8		NW			1		5						
Valona			29.96	761.0	71.8	22.1		SW			2		2						
Varna			29.88	759.0	57.2	14.0		SE			2		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.99	761.8	72.5	22.5	73	W			1		0			0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Bathurst, N. B.			29.94	760.5	41.0	5.0	87	Calm	0	0									Hon. J. Ferguson.
Brockville, Ontario			30.26	768.6	36	2.2		Calm	0	0		0	5s		W	0.04	1.0	Fair	W. R. Bigg.
*Chatham, N. B.			29.97	761.2	36	2.2	78	SW	1	0.4		8ck	2ks	SW	SW	0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island			29.99	761.7	39	3.9	83	SW	8	3.6			8s			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.17	766.3	36.7	2.6	66	N			1	10k				0	0	Clearing	James Smith, M. A.
Dalhousie, N. B.			29.92	760.0	38.0	3.3	76	W			1		10cs			0	0		H. A. Johnson.
Esquimault, B. C.			30.06	763.5	37.1	2.8	91	NE	2	0.9		2cs				0	0	Clear	W. H. Bevis.
Fredericton, N. B.			30.02	762.5	36.0	2.2	70	NW	8	3.6			10s			0.040	1.02	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			29.64	752.8	41	5.0	82	SE	15	6.7		5k	5n	W	W	0	0	Threatening	James Stewart.
Goderich, Ontario			30.32	770.1	35.4	1.9	79	Calm			0					0	0	Clear	H. J. Strang, M. A.
Granton, Ontario			30.29	769.4	32.1	0.1		N			1					0	0	Clear	James Grant.
*Halifax, N. S.			29.98	761.5	41	5.0	74	NW	4	1.8		0	2ks			Inap.	Inap.	Fair	F. Allison, M. A.
*Kingston, Ontario			30.32	767.8	35	1.7	70	NW	5	2.2		0	0			Inap.	Inap.	Clear	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			30.15	765.8	35	1.7	66	W	7	3.1		2c	2ks			0	0	Fair	C. H. McLeod, C. E.
*Ottawa, Ontario			30.20	767.1	34	1.1	76	N	10	4.5		10k	0	N		0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario			30.29	769.4	30	— 1.1	89	N	2	0.9		5k	2ks	NW	NW	0	0	Fair	Rev. R. Mooley.
*Port Dover, Ontario			30.28	769.1	31	— 0.6	79	N	10	4.5		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.			30.00	762.0	39.8	2.8		NW	2	0.9						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.28	769.1	32	0.0	72	NE	10	4.5		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			30.08	764.0	36	2.2	61	W	9	4.0			10n		W	0	0	Cloudy	Capt. Ash, R. N.
St. John, N. B.			30.03	762.7	37	2.8	95	Calm	0	0			9ks			Inap.	Inap.		G. Murdoch, C. E.
*Saugeen, Ontario			30.27	768.8	34	1.1	62	Calm	0	0		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.27	768.8	30	— 1.1	79	NW	1	0.4			10k		SW	0	0	Cloudy	R. J. Cole.
Stratford, Ontario			30.30	769.6	29.6	— 1.3	72	N	3	1.3						0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.99	761.7	45	7.2	77	W	3	1.3		5ck	0	SW		0.07	1.8	Fair	T. C. Hill.
*Toronto, Ontario			30.29	769.4	35	1.7	80	N	9	4.0		0	0			0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.29	769.4	31.5	— 0.3	82	Calm			0	0	0			0	0	Fine	J. Montgomery.

NOTE.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. pper. From —	Clouds. Direction. Lower. From —	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.			30.15	765.8	37	2.8	70	NW	1	0.4			10ks		W	0	0	Cloudy	
Alpena, Mich			30.27	768.8	31	— 0.6	68	NW	4	1.8		0	0			0	0	Clear	
Atlantic City, N. J.			30.22	767.6	41	5.0	48	NE	8	3.6		5ck	0	SW		0	0	Fair	
Augusta, Ga.			30.36	771.1	48	8.9	52	E	5	2.2		0	0			0	0	Clear	
Baltimore, Md.			30.29	769.4	40	4.4	48	NW	4	1.8		3m'e	0			0	0	Clear	
Barnegat, N. J.			30.21	767.3	43	6.1	43	NW	12	5.4		2ck	0	NW		0	0	Fair	
Benton, Montana	27.04	686.8	29.84	757.9	40	4.4	63	Calm	0	0		0	0			0.44	11.2	Clear	
Bismarck, Dakota	27.99	703.3	29.28	743.7	45	7.2	37	Calm	0	0		1ck	Haze	SW		0	0	Fair	
Boston, Mass			30.12	765.0	39	3.9	72	NW	7	3.1		10cs	Haze	W		0	0	Cloudy	
Breckenridge, Minn			29.55	750.6	44	6.7	60	E	30	13.4		2c	5s	S	SE	0	0	Cloudy	
Buffalo, N. Y.			30.24	768.1	32.5	0.3	89	N	6	2.7		0	0			Inap.	Inap.	Clear	
Burlington, Vt.			30.17	766.3	38	3.3	72	Calm	0	0			10s			0	0	Cloudy	
Cairo, Ill.			30.21	767.8	52	11.1	40	SE	9	4.0		5c	0			0	0	Fair	
Cape Hatteras, N. C.			30.19	766.8	49	9.4	71	N	15	6.7		0	5ks		N	0.05	1.3	Fair	
Cape Henry, Va.			30.28	769.1	49	9.4	50	NW	25	11.2		2k	0	NW		0.15	3.8	Clear	
Cape Lookout, N. C.			30.29	769.4	47	8.3	77	NW	16	7.2		2k	Haze	W		0.08	2.0	Fair	
Cape May, N. J.			30.25	768.3	41	5.0	56	NW	12	5.4		2k	0	W		Inap.	Inap.	Fair	
Charleston, S. C.			30.36	771.1	49	9.4	37	NE	14	6.3		0	0			0	0	Clear	
Cheyenne, Wyoming	23.77	603.8	29.71	754.6	38	3.3	45	NW	20	8.9		5ck	0			0	0	Fair	
Chicago, Ill.			30.18	766.6	47	8.3	40	S	6	2.7		5c	0	N		0	0	Fair	
Cincinnati, Ohio			30.27	768.8	43	6.1	59	SE	4	1.8		Haze	Fog			0	0	Clear	
Cleveland, Ohio			30.30	769.6	36.4	2.4	80	N	4	1.8		1c	0			0	0	Clear	
Colorado Springs, Col.	23.82	605.0	29.69	754.1	53	11.7	66	NW	12	5.4		0	0			0	0	Clear	
Corsicana, Tex.			30.04	763.0	57	13.9	87	SE	7	3.1		5ck	2k	W	S	0	0	Cloudy	
Davenport, Iowa			30.05	763.3	48	8.9	56	SE	16	7.2		10k	0			0	0	Cloudy	
Denison, Tex.			29.92	760.0	65	18.3	73	S	16	7.2			10s			0	0	Cloudy	
Denver, Col.	24.52	622.8	29.74	755.4	51	10.6	22	SW	2	0.9		0	0			0	0	Clear	
Detroit, Mich			30.29	769.4	35	1.7	70	N	3	1.3		2c	0			0	0	Clear	
Dodge City, Kan.	27.02	686.3	29.18	741.1	62	16.7	50	S	24	10.7		0	0			0	0	Clear	
Dubuque, Iowa			30.05	763.0	48	8.9	56	SE	12	5.4			10s			0	0	Cloudy	
Duluth, Minn.			30.04	763.0	33	0.6	79	NE	20	8.9		5k	2s	E	E	0	0	Fair	
Eastport, Me.			29.98	761.5	38	3.3	63	N	11	4.9		8k,ck	0	NW		0	0	Fair	
Erie, Pa.			30.25	768.3	34	1.1	79	NE	14	6.3		2ck	0	NE		0	0	Fair	
Escanaba, Mich			30.23	767.8	30	— 1.1	68	N	4	1.8		0	0			0	0	Clear	
Fort Gibson, Indian Terr.			29.39	759.2	63	17.2	51	SE	16	7.2		5c	0	N		0	0	Fair	
Ft. St. Michaels, Alaska			30.11	764.8	11	—11.7		SW	12	5.4		0	2s			0	0	Fair	
Fort Sill, Indian T.	28.63	727.2	29.72	754.9	58	14.4	70	S	16	7.2		5c	0	S		0	0	Fair	
Fort Sully, Dakota																			
Galveston, Tex.			30.12	765.0	67	19.4	83	SE	6	2.7		0	0			0	0	Clear	
Grand Haven, Mich.			30.22	767.6	40	4.4	68	SE	5	2.2		5c	0	W		0	0	Fair	
Indianapolis, Ind.			30.26	768.6	43	6.1	66	NE	1	0.4		0	0			0	0	Clear	
Indianola, Tex.			30.08	764.0	68	20.0	84	SE	14	6.3		0	2s		S	0	0	Fair	
Jacksonville, Fla.			30.28	769.1	57	13.9	57	E	4	1.8		0	0			0	0	Clear	
Keokuk, Iowa			29.97	761.2	47	8.3	70	SE	11	4.9		8c	0	SE		0	0	Fair	
Key West, Fla.			30.18	766.1	70	21.1	66	E	19	8.5		1ck	0	S		0	0	Clear	
Kittyhawk, N. C.			30.28	769.1	45	7.2	84	N	24	10.7		2k	Haze	NE		0	0	Fair	
Knoxville, Tenn			30.36	771.1	37	2.8	71	Calm	0	0		0	Haze			0	0	Fair	
La Crosse, Wis.			29.99	761.7	46	7.8	54	SE	18	8.0		10ck	0	SE		0	0	Cloudy	
Leavenworth, Kan.			29.71	755.4	56	13.3	56	S	16	7.2		10c	0			0	0	Cloudy	
Lexington, Ky.	29.18	741.1	30.32	770.1	43	6.1	50	S	8	3.6		0	0			0	0	Clear	
Long Branch, N. J.			30.20	767.1	45	7.2	63	NW	13	5.8		0	1s		NW	0	0	Clear	
Louisville, Ky.			30.28	769.1	45	7.2	68	Calm	0	0			Fog			0	0	Foggy	
Lynchburg, Va.			30.34	771.1	42	5.6	52	NW	2	0.9		0	0			0	0	Clear	
Malone, N. Y.			30.14	765.5	35	1.7	70	W	4	1.8		10k	0	NW		0.05	1.3	Cloudy	
Manhattan, Kan.	28.54	724.9	29.63	752.6	61	16.1	76	S	40	17.9		5ck	5s			0	0	Cloudy	
Marquette, Mich			30.24	768.1	29	— 1.7	70	N	4	1.8		2cs	0	NW		0	0	Fair	
Memphis, Tenn.			30.21	767.3	54	12.2	49	SE	8	3.6		1ck	Haze	NW		0	0	Clear	
Milwaukee, Wis.			30.20	767.1	40	4.4	63	S	4	1.8		2c	3m'e	NW		0	0	Clear	
Mobile, Ala.			30.27	768.8	55	12.8	68	N	3	1.3		0	3m'e			0	0	Clear	
Montgomery, Ala.			30.32	770.1	51.5	10.8	56	E	2	0.9		0	3m'e		E	0	0	Clear	
Morgantown, W. Va.			30.25	768.3	46	7.8	39	S	3	1.3		0	0			Inap.	Inap.	Clear	
Mt. Washington, N. H.	23.60	599.4	29.96	761.0	15	— 9.4	100	NW	8	3.6			Fog			0	0	Foggy	
Nashville, Tenn.			30.28	769.1	47	8.3	62	NE	5	2.2		2k	0	NW		0	0	Fair	
New Haven, Conn.			30.16	766.1	40	4.4	56	NW	12	5.4		8k	2s	N		0	0	Cloudy	
New London, Conn.			30.13	765.3	41	5.0	60	NW	8	3.6		10k	0	N		0	0	Cloudy	
New Orleans, La.			30.22	767.6	59.5	15.3	79	SE	2	0.9		0	3m'e		SE	0	0	Clear	
Newport, R. I.			30.10	764.5	42	5.6	58	NW	12	5.4			10s		NW	0	0	Cloudy	
New York, N. Y.			30.24	767.1	40	4.4	56	NW	16	7.2		2ck	0	W		0	0	Clear	
Norfolk, Va.			30.30	769.6	44.5	6.9	46	N	12	5.4		Haze	0			0.06	1.5	Clear	
North Platte, Neb.			29.91	759.8	48	8.9	63	SW	8	3.6		2k	2s	SW	W	0	0	Fair	
Omaha, Neb.	26.55	674.4	29.54	750.3	56	13.3	62	S	20	8.9		5c	2s	SW	S	Inap.	Inap.	Fair	
Oswego, N. Y.	28.52	724.4	30.23	767.8	36	2.2	75	N	5	2.2		Haze	8s		N	0	0	Fair	
Pembina, Dakota			29.53	750.0	44	6.7	67	SE	24	10.7		8c	Haze	SE	SE	0	0	Threatening	
Philadelphia, Penn			30.25	768.3	41	5.0	41	SW	15	6.7		5k	0	W		0	0	Fair	
Pike's Peak, Colorado	17.53	445.2	29.74	755.4	11	—11.7	79	W	40	17.9		0	1s			0	0	Clear	
Pittsburgh, Penn.			30.25	768.3	38	3.3	63	NW	5	2.2		0	0			Inap.	Inap.	Clear	
Port Huron, Mich.			30.29	769.4	33	0.6	61	NE	8	3.6		1c	0			6	0	Clear	
Portland, Me.			30.10	764.5	39	3.9	55	NW	3	1.3			10s			0	0	Cloudy	
Portland, Oregon			30.17	766.3	40	4.4	91	Calm	0	0		0	2s		N	0.09	2.3	Fair	
Punta Rassa, Fla.			30.24	768.1	63.2	17.3	66	NE	8	3.6		Haze	3m'e			0	0	Hazy	
Rochester, N. Y.			30.23	767.8	36	2.2	62	W	10	4.5			10s			Inap.	Inap.	Cloudy	
Salt Lake City, Utah			29.98	761.5	38	3.3	54	NE	4	1.8			10s		NW	0.08	2.0	Cloudy	
Sandy Hook, N. J.	25.04	651.2	30.18	766.6	41	5.0	56	NW	20	8.9		0	2ks			0	0	Clear	
San Diego, Cal.			30.04	763.0	55	12.8	76	W	12	5.4			10s		NW	0	0	Cloudy	
San Francisco, Cal.			30.07	763.8	47	8.3	85	N	4	1.8		0	0		W	0	0	Clear	
Santa Fe, N. M.			29.58	753.9	36	2.2	62	Calm	0	0		0	2s			0	0	Fair	
Savannah, Ga.	23.14	587.8	30.34	770.6	55	12.8	48	NE	5	2.2		0	Haze		SW	0	0	Hazy	
Shreveport, La.			30.10	766.1	60	15.6	49	SE	4	1.8		2cs	Haze			0	0	Fair	
Smithville, N. C.			30.33	770.4	47	8.3	42	N	11	4.9		0	0		NW	0	0	Clear	
Springfield, Mass.			30.14	765.5	40	4.4	56	Calm	0	0			10s			0	0	Cloudy	
St. Louis, Mo.			30.11	764.8	49	9.4	57	S	4	1.8		0	0			0	0	Clear	
St. Marks, Fla.			30.28	769.1	53	11.7	60	E	9	4.0		0	0			0	0	Clear	
St. Paul, Minn.			29.80	756.0	45.5	7.5	50	SE	29	13.0		8c,haze	0		SW	0	0	Fair	
St. Paul's Island, Alaska			30.25	768.3	33	0.6	89	SSE	11	4.9			10s			0	0		
Thatcher's Island, Mass.			30.10	764.5	39	3.9	63	N	15	6.7			10s			0	0	Cloudy	
Toledo, Ohio			30.26	768.6	41	5.0	57	Calm	0	0		2c	3m'e		W	0	0	Smoky	
Tucson, Arizona			30.18	764.0	58	14.4		SE				0	0			0	0	Clear	
Tybee Island, Ga.	27.49	698.2	30.34	770.6	54	12.2	62	NE	16	7.2		0	0			0	0	Clear	
Vicksburg, Miss.			30.23	767.8	56	13.3	60	SE	8	3.6		2c	3m'e		W	0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Virginia City, M. T.	24.15	613.4	29.63	752.6	25	— 3.9	63	SW	26	11.6		1c	0	W		0.05	1.3	Clear	
Washington, D. C.			30.31	769.9	40	4.4	52	NW	8	3.6		0	0			Inap.	Inap.	Clear	
Wilmington, N. C			30.33	770.4	45	7.2	45	N	6	2.7		0	0			Inap.	Inap.	Clear	
Wood's Holl, Mass.			30.10	764.5	43	6.1	51	NW	10	4.5			10s		NW	0	0	Cloudy	
Wytheville, Va.	27.90	708.6	30.16	766.1	33	0.6	74	W	4	1.8		5c	0	W		0	0	Fair	
Yankton, Dakota	28.20	716.3	29.43	747.5	53	11.7	67	SE	16	7.2			10s		SW	0	0	Cloudy	
Yuma, Arizona			29.90	759.4	61	16.1		W				0	0			0	0	Clear	
Sub Series.																			
Bridgetown, B'b'dos, W. I.			30.04	763.0	81	27.2	58	NE	5	2.2		8ck	5s	NE	SE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.01	762.2	80	26.7	78	E				5c	5ks			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.25	768.3	75	23.9	72	E	4	1.8		4ck	8kn	E		0	0	Clearing	W. S. Cameron.
Kingston, Jamaica, W. I.			30.20	767.1	76	24.4	90	W	2	0.9		5c	2s			0.35	8.9		James Gall.
Santiago de Cuba, W. I.			29.82	757.4	75	23.9	76	N	7.2	3.2		8ck	4s	NW		6.0	152.4	Fair	Robert Mason.
Havana, Cuba, W. I.			30.15	765.8	70	21.1	71	Calm	0	0		5k	0	E		0	0	Fair	Charles Hasselbrink
St. Georges, Bermudas			30.07	763.8	63.5	17.5	100	WSW	8.0	3.6			10n			1.12	28.4	Raining	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.21	691.1	30.01	762.2	64	17.8	90	N	2.0	0.9		8c	0	NE		0.92	23.4	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.			30.00	762.0	79	26.1	78	E			2		4k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.03	762.7	85.1	29.5										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1			62.8	17.1	81		1	0.4		1c	2s			0.35	8.9	Fair	Thomas Herran.
St. John's, Newfoundland.			29.94	760.5	39.0	3.6	91	W				10k	10s			0.25	6.3	Cloudy	John Delaney.
York Factory, B. A.			30.30	769.6	0.5	—17.5	85	NE	1	0.4		0	0			0	0		J. Fortescue.
Honolulu, Oahu, H. I.			30.06	763.5	72	22.2	90	NE			3					0.06	1.5		E. P. Church.
Makawao, Maui, H. I.	27.85	707.4	30.02	762.5	60	15.6	76	Calm	0	0		2c	5ks		NE	Inap.	Inap.		F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	Weather.	Observer.
Steamer Peruvian, N. 48° 00′, W. 36° 57′.	S69W	12	Smooth		Raining	Capt. W. Richardson.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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 APRIL 20, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.94	760.4	65.5	18.6	53	Calm			0		8			0.039	1.0	Cloudy	Charnot.
Algiers			29.89	759.3	63.3	17.4	67	WNW			2		9			0	0	Hidden	Peter.
La Calle					68.2	20.1		N			2		5			0	0	Fair	Kuntz.
Tunis			29.89	759.1	79.3	26.3	48	ENE			3		7			0	0	Cloudy	Jacques
Sfax			29.86	758.5	72.0	22.2	64	E			2		1			0	0	Clear	Chauvey.
Saida			29.93	760.3	58.1	14.5	67	NNW			1		4			0	0	Fair	Millot.
Tebessa			29.81	757.1	83.1	28.4		SSE			4		5			0	0	Fair	Colin.
Geriville			29.92	760.0	62.2	16.8	52	NNE			3		3			0	0	Fair	Buard.
Laghouat			29.89	759.3	77.0	25.0	47	N			3		5			0	0	Fair	Guyot.
Biskra			29.79	756.7	89.2	31.8		NE			3		5			0	0	Fair	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.91	759.7	72.1	22.3	34	SW			4		3			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.83	757.6	71.2	21.8	41	ESE			3		3			0.004	0.1		I. R. Observatory.
Eperies			29.81	757.2	70.9	21.6	44	S			6		4		N	0	0		Julius Mikolik.
Gratz	28.71	729.1	29.87	758.7	67.3	19.6	46	SW			5		3			0.020	0.5		Andreas Rospini.
Hermannstadt	29.59	726.1	29.95	760.7	73.4	23.0	34	ESE			3		0			0	0		Prof. Reissenberger.
Kremsmünster			29.71	754.7	66.2	19.0	42	E			3		2			0	0		Prof. C. Wagner.
Lemberg			29.83	757.6	67.3	19.6	47	SW			4		3			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habszuda Daniel.
Pola			30.01	762.3	56.8	13.8	95	SE			5		10			0.056	1.42		I. R. Hydrographic Office
Szegedin			29.95	760.7	75.9	24.4	31	S			1		1			0	0		Karl Stancel.
Trieste			30.02	762.4	65.3	18.5	75	ESE			2		10			0.252	6.4	Threatening	Prof. V. Farolfi.
Vienna			29.74	755.3	71.6	22.0	45	S			3		4			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.49	749.0	58.1	14.5	62	SSW			5		8			0.067	1.70		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	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.
Aberdeen			29.09	738.9	46.6	8.1		SSE	14	6.3			7			0.170	4.32	Showery	William Boswell.
Ardrossan			29.10	739.1	51	10.6		W			2		4					Hazy	William McNeil.
Armagh Observatory			29.13	739.9	51.9	11.1		NW	2	0.9			7					*D. clouds	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.11	739.4	50.2	10.1		S	13	5.8			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.12	739.6	54.4	12.4		WNW			1		7					*D. clouds	J. Dreyer.
Bradford			29.14	740.1	52.1	11.2		S			2		9			0.08	2.0	Gloomy	J. McLandsborough.
Bridgetown, (Barbados)			30.02	762.5	80.0	26.7		NE			5		7					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge Observatory			29.28	743.7	56.0	13.3		SSW			4		10					Showery	H. Todd.
Cardington			29.23	742.4	57.0	13.9		SW			3		8					Overcast	John McLaren.
Carlisle			29.11	739.4	50.1	10.1		Calm			0		10			0.04	1.0	Rain & snow	T. Bell, for J. Carmell.
Chatham, School M. E			29.[illegible]4	742.7	54.7	12.6		SW			2		9					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	27.84	707.1	29.33	745.0	44.0	6.7		SW			5		10					Raining	R. E. Power.
Donaghadee			29.10	739.1	49	9.4		SSE			1		2					Blue sky	J. Mac Gowan.
Dover			29.36	746.2	51	10.6		SW			5		4						J. Costello.
Eccles (near Manchester)			29.13	739.9	52.0	11.1		S	5.2	2.3			10					Showery	Thomas Mackereth.
Falmouth Observatory			29.26	743.2	49.7	9.8		SW	26	11.6			10					Rain and fog	The Staff.
Fort Napier, (Natal)	27.73	704.3	29.97	761.2	70.2	21.2		E			1		10					Raining	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.92	760.5	86	30.0		W			1		8					Overcast	
Galway, Queen's College			29.37	746.0	52	11.1		W			1		1					Blue sky	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			29.50	758.2	56.6	13.7		W			5		10					Drizzling	Corp'l C. Aitken, A. H. C.
Glasgow Observatory			29.08	738.6	51.4	10.8		W			1		9					Fine	Lewis Stuart.
Great Yarmouth			29.30	744.2	52	11.1		S			4		6					Raining	G. T. Watson.
Greenwich Royal Obs			29.32	744.7	53.0	11.7		SSW			4		9					Showery	The Staff, for G. B. Airy.
Guernsey			29.37	746.0	55	12.8		SSW			3		5					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.17	740.9	52.4	11.3		SSW			2		10					Raining	L. J. Crossley.
Helston			29.[illegible]2	742.7	53	11.7		SW			4		10n			0.11	2.8	Raining	M. P. Moyle.
Holyhead			29.12	739.6	51	10.6		SW			2		3					Blue sky	John Tilston.
Kew Observatory			29.31	744.5	52.7	11.5		SSW	29	13.0			9					Threatening	The Staff.
Kingstown			29.1[illegible]	739.6	47	8.3		WNW			1		9					Overcast	George Mitchell.
Leicester Museum			29.2[illegible]	742.2	51.3	10.7		SW			3		5					Showery	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.[illegible]0	761.5	71.2	21.8		SE			2		4k						Fred. Travis, Pvt. A.H.C.
Nairn			29.[illegible]0	738.6	49	9.4		Calm			0		10					Raining	W. D. Penny.
Nassau, Bahamas																			Surg. Maj. Henry.
Nottingham			29.19	741.4	54.3	12.4		S			6		9k,ks,d		S	0.083	2.11	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.17	740.9	49.5	9.4		S			4		10					Raining	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.24	742.7	54	12.2		SW			3		10					Gloomy	J. Lucas.
Plymouth			29.2[illegible]	742.9	50	10.0		SW			4		10					Raining	John Merrifield.
Roche's Point			29.1[illegible]	740.9	49	9.4		W			3		10					Raining	W. Kennedy.
Saint Ann's Head			29.1[illegible]	740.1	50	10.0		W			2		8					Overcast	John C. Walker.
Saint Helier, (Jersey)			29.38	746.2	53.4	11.9		WNW			5		8						A. P. Amy.
Sandwick Manse (Orkneys			29.00	736.6	46.4	8.0		NE	14	6.3			10					Misty	Rev. C. Clouston, LL. D.
Scarborough			29.17	740.9	48.7	9.3		S			3		10					Overcast	F. Shaw.
Scutari Cemetery, Turkey			30.00	763.5	73.8	23.2		NNE			1		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.19	740.7	54.0	12.2		SW			3		9			0.066	1.67	Overcast	W. F. Cooper.
Silloth Rectory			29.11	739.4	49.8	9.9	87	W			1		8			0.020	0.51	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			30.1[illegible]	765.3	47.1	8.4		S			2		10					Raining	S. J. Perry.
Stornoway, Lewis C., Hebr.			29.10	739.1	49	9.4		NE			1		10					Gloomy	John Smith
Stratfield Turgiss			29.29	744.0	53.7	12.1		S			1-2		9					Squally	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.0[illegible]	737.9	46	7.8		NNE			1		10					Raining	John Trotter.
Truro, Royal Institution			29.29	744.0	52	11.1		W			7		10					Raining	W. Newcombe.
Valencia Observatory			29.18	741.1	52.5	11.4		WNW	17	7.6			10					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man					50	10.0		E			1		3						
Cape Good Hope Obs			30.11	764.8	72.1	22.3	59	SE	15	6.7			1						The Staff, for E. J. Stone.
Leith, Restalrig Park			29.1[illegible]	739.6	49.0	9.4		W			1		10k			0.04	1.0	Cloudy	Andrew Gibb.
Mauritius			30.00	762.0					21.1	9.4						0	0		C. Meldrum.
Monach Lt-house, Hebrides			29.12	739.6	45	7.2		NE			2		10			0	0	Solar halo	J. Youngclause.
North Unst, (Shetland Is.)			29.14	740.1	44	6.7		E			4		10			Blank	Blank		

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 270.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			29.58	751.3	56.5	13.6	63	SSW			2		2						
Fanöe			29.52	749.9	52.2	11.2	94	SSW			4		1						
Godthaab, (Greenland)			30.28	769.0	29.8	— 1.2	73	NNE			4		10						
Stykkisholm, (Iceland)			30.17	766.2	12.7	—10.7	94	NE			8		0						
Thorshavn, (Faröe)			29.34	745.0	42.6	5.9	88	NE			4		10					Raining	
Vestervig			29.46	748.3	48.2	9.0	89	S			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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.58	751.2	50.9	10.5	88	SW			2		5k		SW	0.295	7.5	Cloudy	Normal School.
Amiens			29.62	752.4	58.6	14.8	89	SW			6		0			0	0	Clear	Normal School.
Avignon			29.80	757.0	60.3	15.7	68	SE			6		8		S	0	0	Very cloudy	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			29.53	750.0	58.5	14.7	58	SSW			3		8		SW	0.384	9.75	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			30.04	763.0	62.6	17	65	SW			2		2		SW	0	0	Slightly cl'dy	Normal School.
Brest			29.34	745.3	57.1	14.1	71	SW			5		5k		WSW	0.030	0.75		Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			29.62	752.4	58.6	12.8	70	N			2		10		N	0.028	0.7	Covered	Puy de Dome Obs.
Commercy			29.70	754.4	58.3	14.6	58	S			4		5kn		S	0	0	Cloudy	Normal School.
Commune de Grèasque*			29.88	759.0	52.3	11.3	78	SE			4		10		SE	0	0		M. Kina.
Grenoble			29.71	754.5	59.0	15	74	SSE			4		5ck		SW	0.12	3.	Cloudy	Normal School.
Le Mans			29.60	751.8	55.2	12.9	45	S			6		5		S	0	0	Cloudy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			29.80	756.8	52.3	11.3	85	S			2		10		S	1.26	32.	Raining	Normal School.
Mâcon			29.66	753.4	53.6	12	83	SE			2		10			0.20	5.	Covered	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			29.76	755.8	59.4	15.2	78	E			6		5		S	0	0	Cloudy	Normal School.
Orleans																			Normal School.
Paris Observatory			29.55	750.6	58.6	14.8	52	S			4		2		SW	0.169	4.31	Slightly cl'dy	National Observatory.
Parthenay																			Normal School.
Privas			29.78	756.3	58.1	14.5		SSE			8		10		SSE	0.51	13.	Covered	Normal School.
La Roche-sur-Yon			29.57	751.1	54.3	12.4	70	S			8		5		SW	0.315	9.0	Cloudy	Normal School.
Rochefort, Observatory			30.44	773.1	54.1	12.3	73	WSW			4		10		NE	0	0	Covered	Naval Observatory.
Rouen			29.48	748.7	61.3	16.3	38	S			6		8		SSW	0.047	1.2	Very cloudy	Normal School.
Saint Lo			29.45	748.0	51.4	10.8	94	W			3		10		W	0.386	9.8		Normal School.
Tarbes	28.59	726.3			51.8	11		NW			3		5		E	0	0	Cloudy	Normal School.
Toulouse																			Normal School
Villefranche			29.79	756.7	55.9	13.3	99	SE			3		10		SE	0.654	16.60	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.88	759.0	78.8	26	78	NE			2		8kn						L'Abbé Marchési.
Gorée																			
Marseilles			29.79	756.7	56.7	13.7	86	SE			1–2		10			0.081	2.06	Covered	Marseilles Observatory.
Mont-Louis	24.54	623.3	29.85	758.3	37.4	3.0	93	SSW	9.3	4.17			10		SSW	0.031	0.8		—. Faiguère.
Montsouris, Paris			29.54	750.3	62.1	16.7	52	SW			4		8		SW	0.106	2.7		Montsouris Observ'tory.
Perpignan			29.68	753.8	50.0	10.0	35	SW	26.1	11.67			6		S	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			29.57	751.0	60.8	16.0	43	SSW			3		3			0.118	3.0		E. Renou.
Toulouse			29.69	754.0	55.6	13.1	67	NNW			4		5			0.043	1.1		Toulouse Observatory.
Tours			29.59	751.5	59.0	15.0	55	SW			2		8		WSW	0.165	4.2		C. Marquet.
Versailles, (near Paris)			29.56	750.7	59.7	15.4	52	W			3		8			0.108	2.74	Very cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lee, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Grèasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,089.9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Grèasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

* Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.65	753.2	59.9	15.5	46	SW			4		3	SW		0	0		Prof. T. Hoh.
Berlin			29.72	754.8	63.3	17.4	42	S			3		7			0	0		Prof. Arndt.
Breslau			29.85	758.2	57.4	14.1	61	NNW			4		7			0	0		Dr. P. Neugebauer.
Carlsruhe			29.71	754.6	63.3	17.4	42	S			3		1			0.205	5.2		A. Senz.
Cassel			29.59	751.6	61.0	16.1	48	S			7		7	S		0.028	0.7		Dr. H. Mohl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main			29.74	755.5	64.9	18.3	41	SW			5		6			0	0		Physical Society.
Friedrichshafen	28.34	719.8	29.91	759.8	59.0	15.0	52	SW					8			0	0		M. Wilhelm.
Hamburg			29.63	752.6	59.5	15.3	52	SW			5		8k	SW		0.004	0.1	Threatening	Deutsche Seewarte.
Kiel			29.58	751.2	52.7	11.5	78	SW			2		8			0.035	0.9		Prof. G. Karsten.
Königsberg			29.67	753.6	64.0	18.1	54	W			5		6			0.051	1.3		Prof. E. Luther.
Köslin			29.68	753.8	61.0	15.9		NW			2		1			0	0		H. Müller.
Leipsic			29.74	755.3	63.7	17.6	42	SSW			4		5	SSW		0	0		Prof. Bruhns.
Memel			29.70	754.3	55.9	13.3	77	SW			1		7			0.063	1.6		Reinbrecht & Skalweit.
Münster			29.51	749.5	58.6	14.8	74	S			5		3			0	0		Prof. E. Reis.
Neufahrwasser			29.61	752.0	66.6	19.2	50	W			4		8			0	0		A. Lothes.
Posen			29.82	757.4	63.5	17.5	60	W			8		10			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.72	755.0	63.5	17.5	53	SW			2		9	SW		0.110	2.8		Dr. Schur.
Stuttgart			29.75	755.6	66.2	19.0	34	SW			1		2			Blank	Blank		Prof. Schoder.
Thorn			29.74	755.3	66.0	18.9	50	W			6		6			0.033	0.9		Dr. Hasenbalg.
Treves, (Trier)			29.62	752.3	59.9	15.5	50	S			8		9			0.008	0.2		Prof. Flesch.
Wustrow, Naval School			29.54	750.2	55.	12.8	69	WSW			2		7			0	0		E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	75.0	23.9		S										Clear, dusty.	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.98	761.4	61.7	16.5	78	S	8.7	3.9			1			0	0		
Padua			29.95	760.8	61.3	16.3	80	NE	7.4	3.3			10	W		0	0		
Vicenza			29.96	760.9	62.2	16.8	72	NE	3.8	1.7			8	S		0	0		
Verona			29.95	760.6	63.1	17.3	74	E			2		10			0.157	4.0	Light rain	
Bergamo	28.58	725.8	29.89	759.3	57.2	14.0	67	S			4		10			0.008	0.2	Light rain	
Domodossola	28.89	733.8	29.93	760.2	51.8	11.0	90	Calm			0		10			0.028	0.7	Light rain	
Milan			29.95	760.6	59.4	15.2	78	E			1		9	SE		0	0		
Pavia			29.94	760.4	59.0	15.0	83	SE			2		9	SE		0	0		
Moncalieri			29.93	760.3	53.8	12.1	82	ESE	3.9	1.7			9	N		0.256	6.5		
Mondovi	28.01	711.5	29.93	760.3	49.5	9.7	78	NW			2		10			0	0		
Porto Maurizio			29.97	761.3	54.9	12.7	95	ENE			2		10			1.056	26.8	Light rain	
Genoa			29.92	760.0	58.6	14.8	82	SE	3.1	1.4			10	SE		0	0		
Piacenza			29.94	760.4	60.6	15.9	68	SE	17.4	7.8			10	W		0	0		
Parma			29.94	760.5	62.4	16.9	75	NE			2		10			0	0		
Bologna			29.99	761.7	63.9	17.7	41	SW			2		7	N		0	0		
Florence			30.01	762.3	63.5	17.5	73	S			2		10	SW		0	0		
Leghorn			29.98	761.5	60.4	15.8	84	SSE	10.5	4.7			10			0	0		
Siena	28.80	731.5	30.0[illegible]	762.1	63.0	17.2	66	S	3.8	1.7			10	SW		0	0		
Urbino	28.43	722.2	29.98	761.6	65.1	18.4	53	SW			4		10			0	0		
Pesaro																			
Ancona			29.98	761.4	63.3	17.4	69	SE			4		7			0	0		
Grosseto			30.02	762.5	64.8	18.2	65	ENE			2		7	S		0	0		
Rome			30.07	763.7	71.4	21.9	47	S	18.1	8.1			5	SW		0	0		
Naples, O. U.			30.06	763.4	72.5	22.5	35	WSW			2		1	SW		0	0		
Lecce			30.13	765.4	69.1	20.6	60	SW	14.5	4.7			5			0	0		
Cosenza			30.10	764.6	74.1	23.4	70	SE	1.3	0.6			2			0	0		
Riposto, (Sicily)			30.11	764.9	64.8	18.2	75	E			2		2			0	0		
Palermo			29.93	760.3	85.8	29.9	20	S	8.7	3.9			0			0	0		
Caltanissetta	28.11	714.1	30.05	763.3	66.4	19.1	32	E			6		0			0	0		
Sub-Series.																			
Naples, S. R.			30.07	763.8	73.4	23.0	43	SW	4.9	2.2				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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	748.6	53.2	11.8		SSW			5								
Groningen			29.44	747.7	54.7	12.6		S			4								
Helder			29.43	747.5	54.7	12.6		SSW			5							Very cloudy	
Utrecht			29.44	747.8	55.4	13.0	68	SSW			5		8						

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.23	742.5	53.6	12.0	58	S	24.4	10.9			8			0.106	2.7		
Brönö			29.32	744.8	48.2	9.0	80	SE	11	5			9			0.016	0.4		
Christiania			29.45	748.1	45.7	7.6	88		2.7	1.2			10			0.004	0.1		
Tromsö			29.40	746.8	38.1	3.4	76	NE	16	7			10			0.346	8.8		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	766.3	62.4	16.9	81	W	20.5	9.17			6			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.79	756.7	59.9	10.5	70	SW	6.3	2.84			9	W		0.308	7.83	Raining	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.11	764.7	65.7	18.7	62	SSE	4.6	2.05			0			0	0		Capt. D. A. da Cunha.
Lisbon			29.80	757.0	54.7	12.6	57	WSW	21.0	9.4			6			0.169	4.3		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 hour, 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.73	755.2	60.1	20.6	46	SSW	18	8			5						Astronomical Obs.
Wilna			29.76	755.9	60.1	15.6	64	SE	11	5			9						Astronomical Obs.
Dorpat			30.73	755.2	60.6	15.9	59	<	7	3			10						Physical Cabinet.
St. Petersburg			29.79	756.7	64.8	18.2	48	SSW	13	6			8						Central Physical Obs.
Kuopio			29.68	753.8	47.5	8.6	79	SSE	13	6			0						Ch. Forsten.
Kieff			29.96	761.0	68.2	20.1	38	S	16	7			2						Physical Cabinet.
Nikolaiev			30.15	765.7	70.9	21.6	40	SW	9	4			0						Kurdakof.
Kertch			30.13	765.4	60.6	15.9	67	SSE	9	4			3						Lagorio.
Moscow			30.14	765.5	60.1	15.6	34	SSW	13	6			7						Meteorological Obs.
Lugan			30.13	765.3	65.3	18.5	18	ESE	34	15			1						Meteorological Obs.
Archangel			29.70	754.4	42.8	5.7	85	E	9	4			10					Raining	Ogorodnikof.
Tiflis	28.93	734.9	30.36	771.1	56.1	13.4	59	E	11	5			8						Physical Observatory.
Astrakhan			30.48	774.1	64.8	18.2	22	NNW	2	1			1						Sebastianof.
Kasan			30.06	763.5	57.4	14.1	49	W	11	5			1						Physical Cabinet.
Orenburg			30.11	764.9	52.9	11.6	48	SE					0						Tschernischef.
Ekaterinburg	28.91	734.4	29.92	759.9	46.9	8.3	41	W	18	8			10						Meteorological Obs.
Nukuse			30.15	765.9	51.8	11.0	26	NNW	16	7			6						
Kasaly																			Bobrof.
Tashkend	28.52	724.5	30.23	767.9	56.1	13.4	87	W	9	4			10						Michelson.
Barnaul			29.86	758.5	26.8	— 2.9	59	SW	22	10			10						Meteorological Obs.
Yeniseisk			29.48	748.7	21.7	— 5.7	60	W	7	3			1			Blank	Blank		Marks.
Irkutsk	28.02	711.6	29.40	746.7	36.9	2.7	61	Calm	0	0			10						Usolzef.
Oorga																			Mossin.
Peking, (China)			30.01	762.2	61.7	16.5	35	Calm	0	0			3						Physical Observatory.
Nertchinsk	27.46	697.5	29.44	747.8	56.5	13.6	64	S	13	6			10			Blank	Blank		Meteorological Obs.
Vladivostock			30.17	766.4	39.4	4.	54	Calm	0	0			0						
Nikolaievsk, on the Amoor					23.7	— 4.6	93	NW	7	3			2						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 301.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.6 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.77	756.2	50.9	10.5	70	W	8.9	4.00		0	8			Inap.	Inap.	Cloudy	Royal Observatory.
San Fernando			29.48	758.9	55.6	13.1	80	SW	5.6	2.6		0	5		SW	0.177	4.5		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; 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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.52	749.8	39.6	4.2	97	S			2		10			0.157	4.0		
Umea			30.51	749.6	38.3	3.5	92	SW			2		10			0	0		
Hernosand			29.46	748.8	45.5	7.5	70	S			2		2			0	0		
Stockholm			29.51	740.6	55.8	13.2	75	S			4		5			0.094	2.4		
Wisby			29.08	753.8	59.7	15.4	59	SW			4		3			0.083	2.1		
Sub-Series.																			
Upsala			29.52	749.7	59.7	15.4	56	S	11.9	5.3			7		SW	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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28.34	719.9	29.78	756.3	52.2	11.2	80	N			1		10			0.776	19.7	Covered	The Observatory.
Zurich	28.13	714.6	29.75	755.6	60.8	16.0	54	N			1		3			0	0	Clear	The Observatory.

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, —4.4 mm.; Thermometer, —1.4 cent.; Relative Humidity, +23 per cent.

NOTE.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	Rain-fall. Inches.	Rain-fall. Mill meters.	Weather.	Observer.
Constantinople			30.14	765.6	71.4	21.9	24	NNE	9	3.5			0			0	0		
Fao, (Persian Gulf)																			
Salonica			30.15	765.9	72.1	22.3		SE			1		0						
Valona			30.07	763.6	74.3	23.5		SW			2		2						
Varna			30.04	763.0	57.2	14.0		W			2		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			30.02	762.6	70.5	21.4	78	N			1		0			0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	Rain-fall. Inches.	Rain-fall. Mill meters.	Weather.	Observer.
Bathurst, N. B.			29.75	755.6	37.8	3.2	61	Calm	0	0									Hon. J. Ferguson.
Brockville, Ontario			30.33	770.4	45	7.2		Calm	0	0		2c	0	W		0	0	Fair	W. R. Bigg.
*Chatham, N. B.			29.80	756.9	40	4.4	62	W	8	3.6		2c	0	W		0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island.			29.79	759.2	39	3.9	69	W	8	3.6		0	2s			0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			30.24	768.1	47.7	8.7	44	NW			1					0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			29.82	757.4												0	0		H. A. Johnson.
Esquimault, B. C.			30.08	764.0	45.3	7.4	84	N	3	1.3		10cs				0	0	Cloudy	W. H. Bevis.
Fredericton, N. B.			29.87	758.7	36.0	2.2	69	NW	13	5.8			10ks			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.74	755.4	37	2.8	85	SW	22	9.4		2ck	2ks	W	W	0.03	0.8	Fair	James Stewart.
Goderich, Ontario			30.15	765.8	40.0	4.4	64	SE			3	8ck		W		0	0	Threatening	H. J. Strang, M. A.
Granton, Ontario			30.20	767.1	35.2	1.8		SE			1		10n			0	0	Cloudy	James Grant.
*Halifax, N. S.			29.78	756.4	43	6.1	67	NW	7	3.1		0	2ks		NW	0	0	Fair	F. Allison, M. A.
*Kingston, Ontario			30.34	770.6	38	3.3	63	Calm	0	0		0	0			0	0	Clear	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			30.19	766.8	37	2.8	53	W	17	7.6		0	2s			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.28	769.1	36	2.2	71	SW	6	2.7		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.27	768.8	34	1.1	61	E	13	5.8		2cs	0	E		0	0	Fair	Rev. R. Mooley.
*Port Dover, Ontario			30.29	769.4	35	1.7	70	S	5	2.2			10n		W	0	0	Cloudy	H. Morgan.
Port Hastings, N. S.			29.72	754.9	35.7	2.1		NW	14	6.3						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.24	768.1	37	2.8	80	SE	14	6.3			10n		W	0	0	Cloudy	M. Payne.
*Quebec, Quebec			30.07	763.8	38	3.3	63	W	9	4.0		5c	0	NW		0	0	Fair	Capt. Ash, R. N.
St. John, N. B.			29.89	759.2	37	2.8	66	W	3	1.3		3k				Inap.	Inap.		G. Murdoch, C. E.
*Saugeen, Ontario			30.17	766.3	37	2.8	71	SE	8	3.6			10s			0	0	Cloudy	K. Stewart.
Stayner, Ontario			30.22	767.6	38	3.3	63	SE	3	1.3			8n		NW	0	0	Cloudy	R. J. Cole.
Stratford, Ontario			30.25	768.3	34.6	1.4	70	SE	7	3.1			1[illegible]			0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			29.66	753.4	42	5.6	64	W	10	4.5		2ck	2ks	NW	NW	0	0	Clear	T. C. Hill.
*Toronto, Ontario			30.30	769.6	37	2.8	76	SW	3	1.3		2c[illegible]	2s	W		0	0	Fair	Magnetic Observatory.
Woodstock, Ontario			30.23	767.8	32.6	0.3	69	Calm			0		10s			0	0	Fine	J. Montgomery.

NOTE.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. pper. From	Clouds. Direction. Lower. From	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	43	6.1	67	NW	7	3.1	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Alpena, Mich	.....	.....	30.14	763.0	34	1.1	90	SE	13	5.8	.....	.....	10n	.....	.....	0.01	0.3	Light rain	
Atlantic City, N. J.	.....	.....	30.38	771.6	43	6.1	43	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.42	772.7	49	9.4	78	Calm	0	0	.....	2cs	Haze	W	.....	0	0	Fair	
Baltimore, Md.	.....	.....	30.42	772.7	42	5.6	49	NE	2	0.9	.....	Haze	Sm'e	.....	.....	0	0	Smoky	
Barnegat, N. J.	.....	.....	30.36	771.1	40	7.8	47	NW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Benton, Montana	27.25	692.1	30.05	763.3	42	5.6	35	W	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.30	718.8	29.99	761.7	36	2.2	29	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass	.....	.....	30.17	766.3	43	6.1	50	W	10	4.5	.....	1cs	Haze	.....	.....	0	0	Hazy	
Breckenridge, Minn	.....	.....	30.02	762.5	34	1.1	79	W	10	4.5	.....	0	2s	.....	.....	0.01	0.3	Clear	
Buffalo, N. Y.	.....	.....	30.27	768.8	38	3.3	58	SE	4	1.8	.....	1c	2s	W	SW	0	0	Fair	
Burlington, Vt.	.....	.....	30.24	768.1	40	4.4	64	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Cairo, Ill.	.....	.....	30.18	766.1	63	17.2	46	S	9	4.0	.....	5c	Haze	.....	.....	0	0	Fair	
Cape Hatteras, N. C.	.....	.....	30.35	770.9	58	14.4	47	W	6	2.7	.....	0	Haze	.....	.....	0	0	Clear	
Cape Henry, Va.	.....	.....	30.37	771.4	62	16.7	41	SW	8	3.6	.....	0	Haze	.....	.....	0	0	Clear	
Cape Lookout, N. C.	.....	.....	30.44	773.2	58	14.4	57	SW	10	4.5	.....	0	Haze	.....	.....	0	0	Fair	
Cape May, N. J.	.....	.....	30.40	772.1	44	6.7	36	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Charleston, S. C.	.....	.....	30.43	772.9	58	14.4	69	S	2	0.9	.....	2c	Sm'e	.....	.....	0	0	Fair	
Cheyenne, Wyoming	24.12	612.6	30.06	763.5	39	3.9	52	SW	8	3.6	.....	5c	0	W	.....	0	0	Fair	
Chicago, Ill.	.....	.....	29.81	757.2	59	15.0	54	SW	20	8.9	.....	Haze	Haze	.....	.....	0	0	Fair	
Cincinnati, Ohio	.....	.....	30.10	764.5	55	12.8	50	S	5	2.2	.....	8ck	Sm'e	W	.....	0	0	Cloudy	
Cleveland, Ohio	.....	.....	30.16	766.1	43.1	6.2	48	SE	20	8.9	.....	2c	5s	W	W	0	0	Fair, smoky.	
Colorado Springs, Col.	24.20	614.7	30.07	763.8	37	2.8	54	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	
Corsicana, Tex.	.....	.....	30.13	765.3	61	16.1	94	SE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Davenport, Iowa	.....	.....	29.92	760.0	54	12.2	70	W	16	7.2	.....	0	7s	.....	.....	Inap.	Inap.	Fair	
Denison, Tex.	.....	.....	30.07	763.8	69	20.6	74	SE	12	5.4	.....	.....	10s	.....	S	0	0	Cloudy	
Denver, Col.	24.90	632.4	30.12	765.0	38	3.3	45	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich	.....	.....	30.07	763.8	46	7.8	54	SE	9	4.0	.....	.....	10s	.....	.....	0	0	Cloudy	
Dodge City, Kan.	27.44	697.0	29.72	754.9	50	10.0	78	N	15	6.7	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	29.84	757.9	55	12.8	80	NW	8	3.6	.....	.....	10s	.....	.....	0.15	3.8	Clear	
Duluth, Minn.	.....	.....	29.85	758.2	39	3.9	91	Calm	0	0	.....	.....	10s	.....	.....	0.48	12.2	Cloudy	
Eastport, Me.	.....	.....	29.89	759.2	38	3.3	63	NW	17	7.6	.....	2c	8s	.....	NW	0	0	Cloudy	
Erie, Pa.	.....	.....	30.22	767.6	40	4.4	48	S	20	8.9	.....	.....	10s	.....	.....	0	0	Threatening	
Escanaba, Mich	.....	.....	29.82	757.4	39	3.9	81	E	8	3.6	.....	.....	10s	.....	E	0.22	5.6	Cloudy	
Fort Gibson, Indian Terr.	.....	.....	30.08	764.0	66	18.9	68	SE	8	3.6	.....	.....	10ks	.....	.....	0	0	Cloudy	
Ft. St. Michaels, Alaska	.....	.....	29.40	746.9	16	−8.9	.....	NE	19	8.5	.....	.....	10s	.....	.....	.....	.....	Cloudy	
Fort Sill, Indian T.	28.84	732.3	29.72	760.0	64	16.7	83	S	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Galveston, Tex.	.....	.....	30.21	767.3	68	20.0	83	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Grand Haven, Mich	.....	.....	29.82	757.4	54	12.2	61	SE	12	5.4	.....	0	5s	.....	W	0	0	Fair	
Indianapolis, Ind.	.....	.....	30.02	762.5	55	12.8	56	SE	6	2.7	.....	8ck	0	W	.....	0	0	Fair	
Indianola, Tex.	.....	.....	30.17	766.3	69	20.6	84	SE	8	3.6	.....	5ck	0	SW	.....	0	0	Fair	
Jacksonville, Fla.	.....	.....	30.37	771.4	61	16.1	78	NE	4	1.8	.....	5c	0	.....	.....	0	0	Fair	
Keokuk, Iowa	.....	.....	29.98	761.5	56	13.3	63	W	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla.	.....	.....	30.24	768.1	71.0	21.7	75	E	16	7.2	.....	2ck	1s	SE	.....	0	0	Clear	
Kittyhawk, N. C.	.....	.....	30.41	772.4	54	12.2	67	SW	14	6.3	.....	0	Haze	.....	.....	0	0	Clear	
Knoxville, Tenn	.....	.....	30.38	771.6	45	7.2	76	Calm	0	0	.....	0	Haze	.....	.....	0	0	Fair	
La Crosse, Wis.	.....	.....	29.84	757.9	51	10.6	65	N	20	8.9	.....	8cs	0	NW	.....	0.10	2.5	Clearing	
Leavenworth, Kan.	.....	.....	30.14	765.5	51	10.6	65	NW	6	2.7	.....	0	0	.....	.....	0.28	7.1	Clear	
Lexington, Ky.	29.12	739.6	30.23	767.8	58	14.4	49	S	20	8.9	.....	5c	5s	S	S	0	0	Cloudy	
Long Branch, N. J.	.....	.....	30.35	770.9	46	7.8	54	NW	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Louisville, Ky.	.....	.....	30.13	765.3	60	15.6	39	S	10	4.5	.....	Haze	Haze	.....	.....	0	0	Hazy	
Lynchburg, Va.	.....	.....	30.40	772.1	46	8.9	56	Calm	0	0	.....	10k	0	W	.....	0	0	Cloudy	
Malone, N. Y.	.....	.....	30.22	767.6	37	2.8	54	W	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Manhattan, Kan.	28.98	736.1	30.14	765.5	50	10.0	57	N	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Marquette, Mich	.....	.....	29.82	757.4	40	4.4	91	E	4	1.8	.....	.....	10n	.....	.....	0.05	1.3	Light rain	
Memphis, Tenn	.....	.....	30.26	768.6	64	17.8	57	S	7	3.1	.....	Haze	Haze	.....	.....	0	0	Hazy	
Milwaukee, Wis.	.....	.....	29.74	755.4	56	13.3	62	SW	10	4.5	.....	5c	Fog	W	.....	0.01	0.3	Fair	
Mobile, Ala.	.....	.....	30.34	770.6	55	12.8	87	S	2	0.9	.....	0	Sm'e	.....	.....	0	0	Clear	
Montgomery, Ala.	.....	.....	30.38	771.6	54	12.2	70	SE	1	0.4	.....	0	Sm'e	.....	.....	0	0	Clear	
Morgantown, W. Va.	.....	.....	29.28	769.1	44	6.7	52	N	1	0.4	.....	1c	0	W	.....	Inap.	Inap.	Clear	
Mt. Washington, N. H.	28.49	596.6	29.85	758.2	11	−11.7	100	NW	60	26.8	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	30.24	768.1	61	16.1	49	S	3	1.3	.....	8k	0	.....	W	0	0	Fair	
New Haven, Conn	.....	.....	30.30	769.6	45	7.2	54	NW	8	3.6	.....	0	0	.....	.....	Inap.	Inap.	Clear	
New London, Conn	.....	.....	30.28	769.1	44	6.7	43	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
New Orleans, La.	.....	.....	30.29	769.4	62	16.7	72	SE	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Newport, R. I.	.....	.....	30.24	768.1	42	5.6	50	W	10	4.5	.....	0	0	.....	.....	Inap.	Inap.	Clear	
New York, N. Y.	.....	.....	30.35	770.9	40	4.4	46	NW	10	4.5	.....	0	Sm'e	.....	.....	0	0	Clear	
Norfolk, Va.	.....	.....	30.40	772.1	52	11.1	60	S	6	2.7	.....	0	Haze	.....	.....	0	0	Clear	
North Platte, Neb.	27.23	691.6	29.85	758.2	42	5.6	74	Calm	0	0	.....	1c	5s	.....	W	0	0	Fair	
Omaha, Neb.	29.03	737.3	30.10	764.5	40	9.4	61	N	3	1.3	.....	.....	10s	.....	NW	0	0	Cloudy	
Oswego, N. Y.	.....	.....	30.31	769.9	39.5	4.2	56	SW	6	2.7	.....	2cs, h.r.	Haze	.....	.....	0	0	Fair	
Pembina, Dakota	.....	.....	29.80	756.9	40	4.4	73	SW	8	3.6	.....	0	0	.....	.....	0.06	1.5	Clear	
Philadelphia, Penn	.....	.....	30.41	772.4	43	6.1	41	NW	11	4.9	.....	0	0	.....	.....	0	0	Clear	
Pike's Peak, Colorado	.....	.....	29.97	761.2	14	−10.0	64	SW	32	14.3	.....	0	Haze	.....	.....	0	0	Clear	
Pittsburgh, Penn	17.76	451.1	30.29	769.4	39	3.9	63	E	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Port Huron, Mich	.....	.....	30.11	764.8	42	5.6	49	SE	9	4.0	.....	.....	10s	.....	.....	0	0	Cloudy	
Portland, Me.	.....	.....	30.08	764.0	42	5.6	50	SW	9	4.0	.....	2k	0	W	.....	Inap.	Inap.	Fair	
Portland, Oregon	.....	.....	30.15	765.8	48	6.1	88	Calm	0	0	.....	0	5s	.....	.....	0	0	Fair	
Punta Rassa, Fla.	.....	.....	30.31	769.9	66.8	19.3	60	NE	14	6.3	.....	Haze	Sm'e	NE	.....	0	0	Hazy	
Rochester, N. Y.	.....	.....	30.30	769.6	37	2.8	62	S	7	3.1	.....	5c	Haze	W	.....	0	0	Fair	
Salt Lake City, Utah	.....	.....	30.04	763.0	39	3.9	39	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	25.77	654.6	30.34	770.6	40.5	4.7	63	NW	18	8.0	.....	0	0	.....	.....	0	0	Clear	
San Diego, Cal.	.....	.....	30.10	764.5	60	15.0	93	.....	4	1.8	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.04	763.0	47	8.3	85	Calm	0	0	.....	5cs	5s	W	W	0	0	Cloudy	
Santa Fe, N. M.	.....	.....	29.86	758.4	39	3.9	47	Calm	0	0	.....	0	2s	.....	.....	0	0	Fair	
Savannah, Ga.	23.22	598.9	30.43	772.9	61	16.1	66	S	8	1.3	.....	0	Sm'e	.....	.....	0	0	Smoky	
Shreveport, La.	.....	.....	30.26	768.6	63	17.2	78	SE	3	1.3	.....	0	Haze	.....	.....	0	0	Clear	
Smithville, N. C.	.....	.....	30.34	770.2	50	12.8	68	Calm	0	0	.....	5c	0	.....	.....	0	0	Fair	
Springfield, Mass.	.....	.....	30.25	768.3	44	6.7	43	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
St. Louis, Mo.	.....	.....	30.26	768.6	65	18.3	44	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla	.....	.....	30.36	771.1	59	15.0	76	SE	6	2.7	.....	2c	0	W	.....	0	0	Fair	
St. Paul, Minn.	.....	.....	29.88	758.9	46	7.8	80	W	8	3.6	.....	2c	0	W	.....	0.22	5.6	Clear	
St. Paul's Island, Alaska	.....	.....	29.28	743.7	33	0.6	100	SSW	15	6.7	.....	.....	Fog	.....	.....	0.69	17.5	.....	
Thatcher's Island, Mass.	.....	.....	30.15	765.8	41	5.0	48	NW	24	10.7	.....	0	0	.....	.....	0	0	Clear	
Toledo, Ohio	.....	.....	30.11	762.2	49	9.4	50	S	8	3.6	.....	5cs	5ks	.....	S	Inap.	Inap.	Cloudy	
Tucson, Arizona	.....	.....	30.19	766.8	60	15.6	.....	S	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga.	27.60	701.0	30.42	772.7	60	15.6	70	E	6	2.7	.....	2c	0	.....	.....	0	0	Clear	
Vicksburg, Miss.	.....	.....	30.32	770.4	57.5	14.2	72	SE	10	3.1	.....	8ck	Sm'e	W	.....	0	0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Virginia City, M. T.	24.32	617.7	29.80	756.9	27	— 2.8	66	Calm	0	0		sk	0	W		0	0	Cloudy	
Washington, D. C.			30.41	772.4	43	6.1	60	Calm	0	0		Haze	Sm'e			0	0	Hazy	
Wilmington, N. C			30.43	772.9	54	12.2	73	S	1	0.4		2c	Sm'e	W		0	0	Smoky	
Wood's Holl, Mass			30.21	767.3	45	7.2	46	NW	12	5.4		0	0			0	0	Clear	
Wytheville, Va	27.96	710.2	30.20	767.1	40	4.4	71	Calm	0	0		5c	0			0	0	Fair	
Yankton, Dakota	28.86	733.0	30.18	766.6	42	5.6	50	NW	8	3.6		8c	5s	NW	NW	0	0	Cloudy	
Yuma, Arizona			30.02	762.5	59	15.0		E				Haze	0			0	0	Hazy	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.05	763.3	79	26.1	69	NE	4	1.8		5ck	10s	NE		0	0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.01	762.2	80	26.7	70	E				5k	2ks			0	0	Fair	L. V. Bigard.
St. Thomas, S. T., W. I			30.24	768.1	78	25.6	69	SSE	2	0.9		4ck,cs	4k	E		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I.			30.21	767.3	78	25.6	78	Calm	0	0		2ck	2s			0	0		James Gall.
Santiago de Cuba, W. I.			29.86	758.4	76	24.4	76	NE	7.2	3.2		8k	0	NE		12.6?	320.0?	Fair	Robert Mason.
Havana, Cuba, W. I.			30.16	766.1	74	23.3	76	NE	2.4	1.1		2k	0	E		0	0	Fair	Charles Hasselbrink
St. Georges, Bermudas			30.26	768.5	63.0	17.2	50	NNW	22.0	9.8		0	8k			Inap.	Inap.	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.21	691.1	30.01	762.2	63	17.2	88									0.41	10.4		C. Partridge.
Paramaribo, D. Guiana, S.A.			29.99	761.7	81	27.2	74	NE			2		5k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.05	763.3	85.1	29.5										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.24	641.1			62.5	16.9	83		0	0		7k	2s			0.19	4.8		Thomas Herran.
St. John's, Newfoundland.			29.00	736.6	30.0	— 1.1		NE					10n			0.50	12.7	Rain & sleet	John Delaney.
York Factory, B. A.			29.90	759.4	25.5	— 3.6	88	E	26	11.6		4c	4s	SE		0	0		J. Fortescue.
Honolulu, Oahu, H. I.			30.06	763.5	72	22.2	90	NE			3					0	0		E. P. Church.
Makawao, Maui, H. I.	27.82	706.6	29.98	761.5	59	15.0	82	Calm	0	0		2cs	8ks	SW	NE	0	0		F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Peruvian, N. 45° 39′, W. 42° 00′.	S65W	11	29.59	751.6	56	13.3		S			4		Haze			Smooth		Hazy	Capt. W. Richardson.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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 APRIL 21, 1876,

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	760.8	52.3	11.3	83	NNW			2		10			0.551	14.0	Hidden.	Charnot.
Algiers			29.85	758.1	61.2	16.2	67	NW			2		6			Inap.	Inap.	Fair	Peter.
La Calle					69.8	21.0		NE			1		1			0.008	0.2	Clear	Kunts.
Tunis			29.82	757.5	65.1	18.4	71	NW			3		10			0.043	1.1	Hidden	Jacques
Sfax			29.75	755.7	71.6	22.0	66	N			3		5			0	0	Fair	Chauvey.
Saida			29.92	759.9	56.3	13.5	66	S			5		3			0.504	12.8	Fair	Millot.
Tebessa			29.76	755.8	64.8	18.2		W			1		8			0	0	Cloudy	Colin.
Geriville			29.89	759.3	55.8	13.2	57	NNW			3		3			0.031	0.8	Fair	Buard.
Laghouat			29.89	759.3	71.6	22.0	36	NW			3		3			0	0	Fair	Guyot.
Biskra			29.80	756.8	73.4	23.0	31	NW			4		8			0	0	Cloudy	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			29.83	757.7	78.4	25.8	38	NE			2		7			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.87	758.8	77.4	25.2	35	ESE			3		8			0	0		I. R. Observatory.
Eperies			29.90	759.5	74.3	23.6	46	S			5		7			0	0		Julius Mikolik.
Gratz	28.67	728.1	29.83	757.7	67.3	19.6	54	SW			2		10			0	0		Andreas Rospini.
Hermannstadt	28.60	726.3	29.94	760.4	79.5	26.4	19	SSE			3		0			0	0		Prof. Reissenberger.
Kremsmünster			29.74	755.3	63.3	17.4	53	WNW			2		10			0	0		Prof. C. Wagner.
Lemberg			29.90	759.5	77.2	25.1	33	SW			2		2			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habasuda Daniel.
Pola			29.90	759.5	60.6	15.9	80	SE			3		10ks			0	0		I. R. Hydrographic Office
Szegedin			29.88	758.9	82.0	27.8	53	S			3		6			0	0		Karl Stancel.
Trieste			29.90	759.5	65.1	18.4	65	E			1		10			0	0	Rainy	Prof. V. Farolfi.
Vienna			29.79	756.6	70.5	21.4	42	S			3		4			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 388.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Brussels			29.72	754.8	56.1	13.4	61	SSW			3		8			0.121	3.05		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	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.
Aberdeen			29.47	748.5	50.4	10.2		WNW	15	6.7			6			0.180	4.57	*D. clouds	William Boswell.
Ardrossan			29.50	749.3	52	11.1		SSW			3		4					*D. clouds	William McNeil.
Armagh Observatory			29.53	750.0	51.8	11.0		ENE	3	1.3			6					*D. clouds	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.49	749.0	52.2	11.8		NW	6	2.7			7					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			29.51	749.5	54.8	12.7		Calm			0		10					*D. clouds	J. Dreyer.
Bradford			29.49	749.0	55.6	13.1		SW			1		6			0.07	1.8	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.02	762.5	79.0	26.1		E			2		7					Overcast	Sergt. J. F. Halanen, A. [H. C.
Cambridge Observatory			29.55	750.6	53.0	11.7		SSW			3		10					Showery	H. Todd.
Cardington			29.52	749.8	56.0	13.3		SW			2		6					*D. clouds	John McLaren.
Carlisle			29.51	749.5	52.9	11.6		W			2		8			0.08	2.0	*D. clouds	T. Bell, for J. Carmell.
Chatham, School M. E			29.62	752.3	54.6	12.6		SW			2		10					Gloomy	Capt. J. Fellowes, R. E.
Dartmoor	28.13	714.5	29.04	752.8	45.0	7.2		SW			5		10					Gloomy	R. E. Power.
Donaghadee			29.52	749.8	49	9.4		ESE			2		4					*D. clouds	J. Mac Gowan.
Dover			29.64	752.8	51	10.6		SW			3		5					½ clouded	J. Costello.
Eccles (near Manchester.)			29.49	749.0	54.8	12.7		S	0.8	0.4			10					Gloomy	Thomas Mackereth.
Falmouth Observatory			29.55	751.3	50.7	10.4		ENE	4	1.8			9					Gloomy	The Staff.
Fort Napier, (Natal)	27.71	703.8	29.95	760.7	72.4	22.4		E			1		7					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	88	31.1		N			0		7					*D. clouds	[tis-
Galway, Queen's College			29.55	750.6	48	8.9		SW			5		10					Raining	B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			29.87	758.7	60.4	15.8		NW			3		6					Showery	Corp'l C. Aitken, A. H. C.
Glasgow Observatory			29.94	760.5	40.6	4.8		NE			1		9					D. clouds	Lewis Stuart.
Great Yarmouth			29.59	751.6	51	10.6		S			3		5					*D. clouds	G. T. Watson.
Greenwich Royal Obs			29.60	751.8	55.5	13.1		SSW			3		8			Blank	Blank	*D. clouds	The Staff. for G. B. Airy.
Guernsey			29.59	751.6	53	11.7		SSW			1		7			Blank	Blank	*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.52	749.8	54.3	12.4		WSW			1		8			Blank	Blank	*D. clouds	L. J. Crossley.
Helston			29.53	750.0	59	15.0		SW			2		10			0	0	Blue sky	M. P. Moyle.
Holyhead			29.52	749.8	54	12.2		SW			2		4					*D. clouds	John Tilston.
Kew Observatory			29.58	751.3	53.7	12.1		S	21	9.4			9			Blank	Blank	Threatening	The Staff.
Kingstown			30.52	749.8	50	10.0		E			2		7					*D. clouds	George Mitchell.
Leicester Museum			29.54	750.3	57.2	14.0		SW			1		4					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.76	755.9	69.6	20.9		SE			4		8k						Fred. Travis, Pvt.A.H.C.
Nairn			29.49	749.0	47	8.3		NNW			1		10					Overcast	W. D. Penny.
Nassau, Bahamas																			Surg. Maj. Henry.
Nottingham			29.51	749.5	54.6	12.6		WNW			1		7k, ks		SW	0.080	2.20	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.51	749.5	53.9	12.2		SSW			2		7					Blue sky	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.54	750.3	53	11.7		SSW			1		10					Raining	J. Lucas.
Plymouth			29.55	750.6	53.5	11.9		S			2		7					*D. clouds	John Merrifield.
Roche's Point			29.52	749.8	52	11.1		SW			2		5					½ clouded	W. Kennedy.
Saint Ann's Head			29.52	749.8	54	12.2		SW			1		5					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.60	751.8	53.0	11.7		SW			6		10					Raining	A. P. Amy.
Sandwick Manse (Orkneys			29.49	749.0	45.6	7.6		NNW	30	13.4			10					Misty	Rev. C. Clouston, LL. D.
Scarborough			29.50	749.3	55.7	13.2		SW			2		7					*D. clouds	F. Shaw.
Scutari Cemetery (Turkey			30.07	763.8	68.4	20.2		NE			2		3					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.48	748.8	57.0	13.9		W			2		9			0.130	3.53	Overcast	W. F. Cooper.
Silloth Rectory			29.50	749.3	54.4	12.4	87	W			1		0			0.074	1.88	Blue sky	Rev. Francis Redford.
Stonyhurst Observatory			29.48	748.8	50.2	10.1		N			1		10			Blank	Blank	Threatening	S. J. Perry.
Stornoway, Lewis C. Hebr.			29.55	750.6	43	6.1		N			5		10					Squally	John Smith.
Stratfield Turgiss			29.57	751.1	50.3	10.2		SW			1		10					Raining	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.48	748.8	42	5.6		N			3		9					Gloomy	John Trotter.
Truro, Royal Institution			29.51	752.1	55	12.8		W			4		6					*D. clouds	W. Newcombe.
Valencia Observatory			29.53	750.0	53.2	11.8		NNW	15	6.7			6					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man					49	9.4		SE			1		10						The Staff, for E. J. Stone.
Cape Good Hope Obs			30.21	767.3	73.0	21.7	59	SE	21	9.4			2						Andrew Gibb.
Leith, Restalrig Park			29.48	748.8	55.1	12.8		W			2		6k			0.13	3.3	Fine	C. Meldrum.
Mauritius			30.00	762.0				ESE	17.6	7.9						0	0		J. Youngclause.
Monach Lighthouse, Hebrides			29.56	750.8	44	6.7		NE			6	5	5	NE		0.2	5.1		
North Unst, (Shetland Is.)			29.30	744.2	47	8.3		N			1		10			Blank	Blank		

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			29.67	753.5	52.5	11.4	84	E			2		10					Raining	
Fanöe			29.64	752.9	46.8	8.2	98	S			2		10					Raining	
Godthaab, (Greenland)			29.94	760.5	21.1	— 4.4	86	NNW			4		10						
Stykkisholm, (Iceland)			30.32	770.1	16.3	— 8.7	94	NE			6		0						
Thorshavn, (Faröe)			29.69	754.2	32.4	0.2	65	NE			6		3						
Vestervig			29.60	751.7	50.0	10.0	87	SW			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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.68	753.9	51.8	11	72	SSW			1		5k		SSW	0.039	1.0	Cloudy	Normal School.
Amiens			29.88	758.9	60.8	16.0	76	W			6		5		W	0	0	Cloudy	Normal School.
Avignon			29.60	751.8	61.5	16.4	66	SSE			1		8		SE	0	0	Very cloudy	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			29.74	755.5	57.9	14.4	52	W			3		8		SW	0.008	0.20	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			29.76	755.8	63.5	17.5	77	E			2		2		E	0.650	16.5	Slightly cl'dy	Normal School.
Brest			29.56	750.8	55.6	13.1	77	W			3		8n		W	0.138	3.50		Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			29.76	755.8	59.4	15.2	38	SE			2		8		S	0.366	9.3	Very cloudy	Puy de Dome Obs.
Commercy			29.84	757.9	57.2	14	61	SW			2		2kn		SW	0.110	2.8	Slightly cl'dy	Normal School.
Commune de Gréasque*			29.82	757.4	58.1	14.5	57	SE			4		10		SE	0.063	1.6		M. Kina.
Grenoble			29.73	755.1	60.8	16	59	NW			2		10		SW	0	0	Misty	Normal School.
Le Mans			29.74	755.3	55.4	13	77	E			2		5		SE	0	0	Cloudy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			29.87	758.8	58.1	14.5	74	W			1		2			0.291	7.40	Slightly cl'dy	Normal School.
Mâcon			29.86	758.4	56.3	13.5	88	SE			2		5		NE	0.386	9.8	Cloudy	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			29.76	756.0	61.9	16.6	61	SE			2		8		S	0.12	3.	Very cloudy	Normal School.
Orleans																			Normal School.
Paris Observatory			29.75	755.7	59.2	15.1	45	SSW			3		5		SW	0	0	Cloudy	National Observatory.
Parthenay																			Normal School.
Privas			29.81	758.1	59.5	15.3		SSE			1		10		S	0.244	6.2	Covered	Normal School.
La Roche-sur-Yon			29.72	755.0	57.2	14.0	55	S			4		5		NE	0	0	Cloudy	Normal School.
Rochefort, Observatory			29.76	755.9	60.8	16.0	62	SSW			1		8		NE	0	0	¾ Covered	Naval Observatory.
Rouen			29.86	758.5	59.4	15.2	47	S			4		8		S	0	0	Very cloudy	Normal School.
Saint Lo			29.67	753.5	56.3	13.5	78	W			2		9		SW	0.067	1.7		Normal School.
Tarbes	28.66	728 0			51.8	11		W			3		2		E	0	0	Slightly cl'dy	Normal School.
Toulouse																			Normal School
Villefranche			29.73	755.2	58.6	14.8	99	SE			1		5			0.20	5.	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.88	759.0	77.2	25.1	83	NE			2		2k						L'Abbé Marchési.
Gorée																			
Marseilles			29.76	756.0	61.2	16.2	68	SE			1		10			0.094	2.40		Marseilles Observatory.
Mont-Louis	24.54	623.2	29.85	758 2	37.8	3.2	94	ESE	16.8	7.50			8		NE	0.067	1.7		—. Falguère.
Montsouris, Paris			29.74	755.5	60.8	16.0	38	SW			3		7		SW	0	0		Montsouris Observ'tory.
Perpignan			29.72	754.9	53.4	11.9	76	S	7.4	3.33			10			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			29.76	755.8	60.4	15.8	49	SW			2		3			0.012	0.3	Slightly cl'dy	E. Renou.
Toulouse			29.75	755.7	59.5	15.3	59	SSE			4		8			0	0		Toulouse Observatory.
Tours			29.74	755.5	60.8	16.0	41	SW			2		6		WSW	0.008	0.2		C. Marquet.
Versailles, (near Paris)			29.75	755.7	59.4	15.2	48	W			3		8			0	0	Very cloudy	Dr. A. Béligny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Leo, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
*Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.78	756.3	60.4	15.8	59	W			3		6	SW		0	0		Prof. T. Hoh.
Berlin			29.75	755.7	65.8	18.8	48	S			3		7			0	0		Prof. Arndt.
Breslau			29.82	757.5	75.0	23.9	39	SSW			5		10			0.161	4.1		Dr. P. Nasgebauer.
Carlsruhe			29.82	757 4	60.1	15.6	53	W			1		3			0.287	7.3		A. Senz.
Cassel			30.69	754.2	64.6	18.1	43	SSW			6		4	S		0	0		Dr. H. Möll.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main			29.87	758.6	61.5	16.4	50	WSW			2		4			0.209	5.3		Physical Society.
Friedrichshafen	28.41	721.5	29.98	761 5	58.1	14.5	51	NW					8			0.591	15.0		M. Wilhelm.
Hamburg			29.70	754.4	55.4	13.0	77	WSW			4		8kn	SW		0.157	4.0	Squally	Deutsche Seewarte.
Kiel			29.64	752.8	52.5	12.4	84	SW			3		8			0.433	11.0		Prof. G. Karsten.
Königsberg			29.79	756.6	68.2	20.1	49	SE			5		9			0	0		Prof. E. Luther.
Köslin			29 66	753.4	71.6	22.0		SE			1		3			0	0		H. Müller.
Leipsic			29.78	756.4	65.1	18.4	57	SSE			4		8			0	0		Prof. Brulins.
Memel			29.91	759.8	63.7	17.6	51	S			2		8			0	0		Reinbrecht & Skalweit.
Münster			29.76	755.9	58.3	14.6	63	W			2		6			0.067	1.7		Prof. E. Heis.
Neufahrwasser			29.70	754.3	70.2	21.2	48	SE			4		8			0	0		A. Lothes.
Posen			29.82	757.3	74.3	23.5	59	W			1		5			0.043	1.1		Dr. Magener.
Strassburg, (in Alsace)			29.83	757.7	60.4	15.8	48	SSW			1		3	SW		0.056	1.4		Dr. Schur.
Stuttgart			29.82	757.5	60.4	15.8	47	SE			1		4			0	0		Prof. Schoder.
Thorn			29.76	755.0	71.4	21.9	46	SW			5		7			0.079	2.0		Dr. Hasenbalg.
Treves, (Trier)			29.76	755.8	60.8	16.0	46	S			6		3			0	0		Prof. Flesch.
Wustrow, Naval School			29.60	751.7	53.4	11.9	79	NW			3		4			0	0	Foggy	E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
28.			30.06	763.5	80.2	26.8		NE										Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.95	760.6	55.0	12.8	89	N	3.1	1.4			10			0.228	5.8	Raining	
Padua			29.85	758.3	57.6	14.2	91	NE	15.4	6.9			10	NE		0.501	5.1	Stormy	
Vicenza			29.87	758.7	56.5	13.6	91	NE	4.3	1.9			10	E		0.157	4.0	Light rain	
Verona			29.82	757.3	62.4	16.9	82	SE			4		10			0	0		
Bergamo	28.49	723.7	29.80	757.0	49.3	9.6	79	NW			4		10			0.512	13.0	Raining	
Domodossola	28.80	731.6	29.82	757.5	58.5	14.7	63	ENE			2		10			0	0		
Milan			29.86	758.5	60.4	15.8	85	ENE			2		9	S		1.575	40.0		
Pavia			29.87	758.6	56.1	13.4	83	E			1		9	E		0.059	1.5		
Moncalieri			29.88	758.9	55.0	12.8	72	N	2.5	1.1			10	SE		0.610	15.5	Raining	
Mondovi	27.95	709.9	29.87	758.6	50.2	10.1	87	NE			2		10			0.059	1.5	Raining	
Porto Maurizio			29.85	758.2	58.6	14.5	87	E			2		10	W		0.071	1.8	Raining	
Genoa			29.84	757.9	57.9	14.4	73	Calm	0	0			10	E		0.039	1.0	Raining.	
Piacenza			29.85	758.3	54.5	12.5	89	NNE			4		10			0.276	7.0	Raining	
Parma			29.86	758.4	57.2	14.0	91	S			2		10			0.815	20.7	Raining	
Bologna			29.89	759.2	58.5	14.7	51	W			1		10			0.079	2.0		
Florence			29.82	757.5	64.4	18.0	80	NW			2		10	S		0.008	0.2		
Leghorn			29.82	757.4	59.0	15.0	86	NE	7.4	3.3			10			0.067	1.7		
Siena	28.60	726.5	29.80	756.9	66.0	18.9	60	SE	1.8	0.8			7	SW		0.327	8.3		
Urbino	28.34	719.7	29.88	759.0	59.7	15.4	65	SE			2		10			0	0		
Pesaro																			
Ancona			29.81	757.1	61.2	16.2	79	SE			4		10			0	0		
Grosseto			29.80	756.9	68.4	20.2	58	SSE			4		7	S		0.012	0.3		
Rome			29.78	756.5	75.2	24.0	40	S	10.5	4.7			7	SW		0	0		
Naples, O. U.			29.85	758.1	73.0	22.8	34	S			4		10	SW		0	0		
Lecce			30.07	763.6	72.7	22.6	24	SSW	15.0	6.7			8			0	0		
Cosenza			29.98	761.5	72.9	22.7	72	NW	3.1	1.4			10			0	0		
Riposto, (Sicily)			30.00	762.0	67.3	19.6	60	E			2		7	SW		0	0		
Palermo			29.68	753.8	82.8	28.2	31	S	18.6	8.3			10			0	0		
Caltanissetta	27.94	709.7	29.87	758.8	62.4	16.9	51	E			6		10	W		0.008	0.2		
Sub-Series.																			
Naples, S. R.			29.85	758.1	73.2	22.9	30	NE	2.5	1.1			..k	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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.72	754.8	55.0	12.8		SW			4								
Groningen			29.64	752.9	51.1	10.6		SW			3								
Helder			29.68	753.8	52.0	11.1		SSW			4								
Utrecht			29.67	753.5	59.0	15.0	58	SW			4		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.38	746.3	45.7	7.6	86	S	23.7	10.6			10			0.453	11.5		
Brönö			29.51	749.6	48.2	9.0	66	NW	11	5			5			0	0		
Christiania			29.62	752.4	48.9	9.4	89	SW	0.7	0.3			10			0.110	2.8		
Tromsö			29.46	748.3	40.1	4.5	76	W	2	1			10			0.063	1.6		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1 h., 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 instrumental errors, Inches.	Barometer: Corrected for instrumental errors, Millimeters.	Barometer: Reduced to sea-level, Inches.	Barometer: Reduced to sea-level, Millimeters.	Temperature of the Air, Fahrenheit.	Temperature of the Air, Centigrade.	Relative Humidity, Per cent.	Winds: Direction, From—	Winds: Velocity, Miles per hour.	Winds: Velocity, Meters per second.	Winds: Force, 0—10.	Clouds: Amount, Up'er, 0—10.	Clouds: Amount, Low'r, 0—10.	Clouds: Direction, Upper, From—	Clouds: Direction, Lower, From—	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,)			30.24	768.2	64.9	18.3	84	W	4.1	1.84			4			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.87	758.8	50.9	10.5	60	NW	12.7	5.67			6	WNW		0.177	4.50		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.17	766.3	67.8	19.9	65	SW	4.2	1.88			5			0	0		Capt. D. A. da Cunha.
Lisbon			29.94	760.5	56.5	13.6	51	NW	15.0	6.7			4			0.110	2.8	Rainy.	The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 hour, 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors, Inches.	Barometer: Corrected for instrumental errors, Millimeters.	Barometer: Reduced to sea-level, Inches.	Barometer: Reduced to sea-level, Millimeters.	Temperature of the Air, Fahrenheit.	Temperature of the Air, Centigrade.	Relative Humidity, Per cent.	Winds: Direction, From—	Winds: Velocity, Miles per hour.	Winds: Velocity, Meters per second.	Winds: Force, 0—10.	Clouds: Amount, Up'er, 0—10.	Clouds: Amount, Low'r, 0—10.	Clouds: Direction, Upper, From—	Clouds: Direction, Lower, From—	Rain-fall or melted snow in the past 24 hours, Inches.	Rain-fall or melted snow in the past 24 hours, Millimeters.	Weather.	Observer.
Warsaw			29.80	757.0	72.7	22.6	57	SE	16	7			4						Astronomical Obs.
Wilna			29.96	761.0	66.6	18.9	44	W	4	2			6						Astronomical Obs.
Dorpat			29.92	760.0	60.6	15.9	46	W	4	2			3						Physical Cabinet.
St. Petersburg			29.86	758.5	41.7	5.4	94	NW	13	6			4						Central Physical Obs.
Kuopio			29.69	754.0	46.8	8.2	92	W	7	3			10					Raining.	Ch. Forsten.
Kieff			30.02	762.4	72.9	22.7	35	N	2	1			7						Physical Cabinet.
Nikolaiev			30.23	767.7	65.5	18.6	53	SSW	13	6			0						Kurdakof.
Kertch			30.21	767.2	60.4	15.8	72	S	13	6			0						Lagorio.
Moscow			29.95	760.8	53.4	11.9	86	SSW	9	4			10					Raining.	Meteorological Obs.
Lugan			30.04	763.1	73.9	23.3	23	SW	22	10			0						Meteorological Obs.
Archangel			29.73	755.2	44.8	7.1	80	SE	13	6			8						Ogorodnikof.
Tiflis	28.82	731.9	30.21	767.3	66.7	19.3	34	SE	11	5			0						Physical Observatory.
Astrakhan			30.38	771.6	69.3	20.7	23	SSW	2	1			0						Sebastianof.
Kasan			29.96	760.9	62.1	16.7	40	W	4	2			7						Physical Cabinet.
Orenburg			30.13	765.2	40.8	4.9	54	SE	4	2			2						Tschernischef.
Ekaterinburg	28.97	735.8	29.99	761.7	40.8	4.9	94	N	4	2			10					Raining.	Meteorological Obs.
Nukuss			30.11	764.9	61.3	16.3	31	N	9	4			9						
Kasaly	28.56	725.4	30.28	769.2	51.8	11.0	82	NW	9	4			10					Raining.	Bobrof.
Tashkend			29.90	759.5	28.4	— 2.0	84	Calm	0	0			10						Michelson.
Barnaul			29.69	754.2	18.1	— 7.7	46	WNW	2	1			7						Meteorological Obs.
Yeniseisk			29.59	751.2	36.9	2.7	80	Calm	0	0			0						Marks.
Irkutsk	28.19	715.9	29.58	751.2															Usolzef.
Oorga													3						Mossin.
Peking, (China)			29.82	757.5	67.1	19.5	39	Calm	0	0			4						Physical Observatory.
Nertchinsk	27.28	692.8	29.27	743.5	50.0	10.0	69	NW	9	4			0						Meteorological Obs.
Vladivostock			30.19	766.7	38.7	3.7	78	SE	7	3			3						
Nikolaievsk, on the Amoor					28.2	— 2.1	94	ENE	11	5									

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 403. meters, or 1,411.8 feet; Ekaterinbourg, 304.4? m., or 1,005.2? ft.; Tasnkent, in 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors, Inches.	Barometer: Corrected for instrumental errors, Millimeters.	Barometer: Reduced to sea-level, Inches.	Barometer: Reduced to sea-level, Millimeters.	Temperature of the Air, Fahrenheit.	Temperature of the Air, Centigrade.	Relative Humidity, Per cent.	Winds: Direction, From—	Winds: Velocity, Miles per hour.	Winds: Velocity, Meters per second.	Winds: Force, 0—10.	Clouds: Amount, Up'er, 0—10.	Clouds: Amount, Low'r, 0—10.	Clouds: Direction, Upper, From—	Clouds: Direction, Lower, From—	Rain-fall or melted snow in the past 24 hours, Inches.	Rain-fall or melted snow in the past 24 hours, Millimeters.	Weather.	Observer.
Madrid			29.76	755.8	50.7	10.4	60	NW	6.0	2.67			10			0.075	1.9	Covered	Royal Observatory.
San Fernando			29.91	759.8	58.5	14.7	61	WNW	13.0	5.8		0	2		NW	0.315	8.0		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; 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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors, Inches.	Barometer: Corrected for instrumental errors, Millimeters.	Barometer: Reduced to sea-level, Inches.	Barometer: Reduced to sea-level, Millimeters.	Temperature of the Air, Fahrenheit.	Temperature of the Air, Centigrade.	Relative Humidity, Per cent.	Winds: Direction, From—	Winds: Velocity, Miles per hour.	Winds: Velocity, Meters per second.	Winds: Force, 0—10.	Clouds: Amount, Up'er, 0—10.	Clouds: Amount, Low'r, 0—10.	Clouds: Direction, Upper, From—	Clouds: Direction, Lower, From—	Rain-fall or melted snow in the past 24 hours, Inches.	Rain-fall or melted snow in the past 24 hours, Millimeters.	Weather.	Observer.
Raparanda			29.56	750.8	36.0	2.2	100	S			2		10			0	0	Foggy	
Umea			29.58	751.2	42.1	5.6	82	SW			2		1			0	0		
Hernosand			29.59	751.6	52.5	11.4	65	S			2		0			0.224	5.7		
Stockholm			29.71	754.5	59.5	15.3	63	SSW			2		4			0	0		
Wisby			29.86	758.5	56.5	13.6	75	W			2		5						
Sub-Series.																			
Upsala			29.72	754.9	60.1	15.6	58	S	11.2	5.0			7	SW	SW	0.140	3.55		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.41	721.5	29.83	757.7	53.4	11.9	64	NNW			2		10			0.047	1.2	Covered	The Observatory.
Zurich	28.22	716.8	29.85	758.2	56.7	13.7	54	NW			1		8			0	0	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —2.9 mm.; Thermometer, —0.9 cent.; Relative Humidity, +7 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.16	766.0	63.0	17.2	52	NE	9	4.0			2		W	0	0		
Fao, (Persian Gulf)			30.04	763.0	84.2	29.0		NW			3		10						
Salonica			30.15	765.8	74.1	23.4		S			2		0						
Valona			29.97	761.2	78.4	25.8		S			2		2						
Varna			30.12	765.0	59.0	15.0		NE			2		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.96	760.9	71.4	21.9		N			3		1k		N	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.02?	737.1?	40.1	4.5	91	Calm	0	0									Hon. J. Ferguson.
Brockville, Ontario			29.87	758.7	36	2.2		SW	8	3.6			10s		W	0.40	10.2	Light rain	W. R. Bigg.
*Chatham, N. B.			29.88	758.9	39	3.9	74	W	5	2.2		10c	0	W		0.04	1.0	Fair	G. A. Blair.
Charlottetown, P. E. Island			29.85	758.2	41	5.0	56	N	10	4.5		2cs	0			0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			29.78	756.4	33.7	0.9	99	E			1		10s			0.39	9.9	Snowing	James Smith, M. A.
Dalhousie, N. B.			29.89	759.2	34.5	1.4	79	NW			1					0	0		H. A. Johnson.
Esquimault, B. C.			29.96	761.0	45.3	7.4	84	NE	2	0.9		3cs				0	0	Clear	W. H. Bevis.
Fredericton, N. B.			29.88	758.9	39.1	3.9	55	NW	2	0.9		2c				0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			30.08	764.0	37	2.8	81	W	9	4.0		0	2ks		W	0	0	Fair	James Stewart.
Goderich, Ontario			30.10	764.5	41.2	5.1	73	W			2					Inap.	Inap.	Clear	H. J. Strang, M. A.
Granton, Ontario			30.04	763.0	46.0	7.8		NW			2					0	0	Clear	James Grant.
*Halifax, N. S.			29.87	758.7	47	8.3	60	W	4	1.8		0	0			0.01	0.3	Clear	F. Allison, M. A.
*Kingston, Ontario			29.85	758.2	38	3.3	75	W	18	8.0			10ks		W	0.08	2.0	Cloudy	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			29.79	756.7	33	0.6	95	NE	8	3.6			10n			0.05	1.3	Heavy snow	C. H. McLeod, C. E.
*Ottawa, Ontario			29.80	756.9	34	1.1	79	Calm	0	0			10n			0.21	5.3	Light snow	J. B. Haney.
*Parry Sound, Ontario			29.94	760.5	34	1.1	92	W	14	6.3			10n		W	0.13	3.3	Sleeting	Rev. R. Moodey.
*Port Dover, Ontario			30.06	763.5	44	6.7	68	W	10	4.5		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.			29.83	757.7	40.7	4.5		NW	20	8.9						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.08	764.0	47	8.3	55	W	24	10.7		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			29.87	758.7	36	2.2	61	NE	7	3.1			10n		NE	0	0	Cloudy	Capt. Ash, R. N.
St. John, N. B.			29.91	759.7	43	6.1	67	Calm	0	0		ck				0	0		G. Murdoch, C. E.
*Saugeen, Ontario			30.03	762.7	35	1.7	85	NW	13	5.8			10ks		N	0	0	Cloudy	K. Stewart.
Stayner, Ontario			29.95	760.7	36	2.2	81	NW	13	5.8			10n		NW	0.07	1.8	Cloudy	R. J. Cole.
Stratford, Ontario			30.03	762.7	42.6	5.9	59	W	17	7.6						0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.77	756.1	43	6.1	56	NW	11	4.9		2c	ks		NW	0	0	Clear	T. C. Hill.
*Toronto, Ontario			29.98	761.5	44	6.7	63	NW	22	9.8			1 ks		W	0.01	0.3	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.02	762.5	47.1	8.4	55	Calm			0	0	0			0	0	Fine	J. Montgomery

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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.			29.86	758.4	46	7.8	76	W	4	1.8			10ks		W	0.16	4.1	Cloudy	
Alpena, Mich			30.06	763.5	42	5.6	65	NW	16	7.2		0	0			0.01	0.3	Clear	
Atlantic City, N. J			30.00	762.0	57	13.9	57	W	12	5.4		8cs	Haze	SW		0	0	Cloudy	
Augusta, Ga.			30.30	769.6	58	14.4	82	SE	2	0.9		0	Haze			0	0	Clear	
Baltimore, Md			30.09	764.3	59	15.0	38	NW	12	5.4		5ck	2ks	NW	NW	0	0	Cloudy	
Barnegat, N. J			29.97	761.2	56	13.3	62	NW	18	8.0			10s		NW	0.02	0.5	Cloudy	
Benton, Montana	27.35	694.7	30.15	765.8	36	2.2	45	E	3	1.3		0	0			0	0	Clear	
Bismarck, Dakota	28.39	721.1	30.10	764.5	33	0.6	26	NW	5	2.2		Haze	0			0	0	Fair	
Boston, Mass			29.80	756.9	44	6.7	92	SW	1	0.4		10s	Fog	SW		0.06	1.5	Foggy	
Breckenridge, Minn			30.12	765.0	37	2.8	81	S	4	1.8		8c	2s			0	0	Cloudy	
Buffalo, N. Y.			30.09	764.0	39	3.9	72	SW	17	7.6		0	0			Inap.	Inap.	Clear	
Burlington, Vt			29.77	756.1	39	3.9	100	Calm	0	0			10s			0.47	11.9	Cloudy	
Cairo, Ill			30.32	770.1	56	13.3	68	E	9	4.0		5k	5s	W	NW	0.04	1.0	Cloudy	
Cape Hatteras, N. C			30.16	766.1	63	17.2	72	SW	22	9.8		2c	Haze			0	0	Fair	
Cape Henry, Va			30.11	764.8	61	16.1	50	SW	18	8.0		5k	Haze	W		0	0	Fair	
Cape Lookout, N. C.			30.28	769.1	63	17.2	78	SW	18	8.0		0	Haze			0	0	Clear	
Cape May, N. J			30.03	762.7	56	13.3	68	NW	16	7.2			10s			0	0	Cloudy	
Charleston, S. C.			30.32	770.1	62	16.7	77	SW	5	2.2		0	Sm'e			0	0	Clear	
Cheyenne, Wyoming	24.14	613.1	30.08	764.0	37	2.8	52	NW	8	3.6		1c	0			0	0	Clear	
Chicago, Ill			30.27	768.8	51	10.6	45	W	4	1.8		0	Haze			0	0	Clear	
Cincinnati, Ohio			30.21	767.3	58	14.4	53	NW	3	1.3		Haze	Sm'e			0	0	Fair	
Cleveland, Ohio			30.20	767.1	47.4	8.6	43	SW	14	6.3		8k	0	W		Inap.	Inap.	Fair	
Colorado Springs, Col	24.23	615.4	30.10	764.5	40	4.4	73	NW	4	1.8		1cs	0			0	0	Clear	
Corsicana, Tex			30.21	767.3	60	15.6	94	S	2	0.9		0	0			0	0	Clear	
Davenport, Iowa			30.30	769.6	49	9.4	77	Calm	0	0		8ck	0	W		0	0	Fair	
Denison, Tex			30.14	765.5	70	21.1	75	S	12	5.4			10s		S	0	0	Cloudy	
Denver, Col.	24.92	633.0	30.14	765.5	43	6.1	51	SW	4	1.8		0	0			0	0	Clear	
Detroit, Mich			30.17	766.3	48	8.9	62	W	6	2.7		0	Haze			0	0	Clear	
Dodge City, Kan	27.56	700.0	29.94	757.0	53	11.7	86	N	12	5.4			10s			0	0	Cloudy	
Dubuque, Iowa			30.27	768.8	45	7.2	76	Calm	0	0		0	5s			0	0	Fair	
Duluth, Minn			30.16	766.1	43	6.1	59	Calm	0	0		2k	Haze	N		0	0	Fair	
Eastport, Me			29.86	758.4	38	3.3	63	Calm	0	0			10s			0	0	Cloudy	
Erie, Pa			30.10	764.5	47	8.3	55	W	21	10.7		4ck	0	W		0	0	Fair	
Escanaba, Mich			30.22	767.6	42	5.6	40	NW	4	1.8		0	0			0.16	4.1	Clear	
Fort Gibson, Indian Terr.			30.14	765.5	68	20.0	60	S	6	2.7		5k	0	SW		0	0	Fair	
Ft. St. Michaels, Alaska			29.56	750.8	27	− 2.8		NE	4	1.8			10s					Cloudy	
Fort Sill, Indian T.	28.90	734.1	29.99	761.7	63	17.2	78	SW			6	0	0			0	0	Clear	
Fort Sully, Dakota																			
Galveston, Tex			30.25	768.3	68	20.0	90	SE	4	1.8		0	0			0	0	Clear	
Grand Haven, Mich			30.23	767.8	46	7.8	61	NW	10	4.5		1c	Haze	NW		0	0	Clear	
Indianapolis, Ind			30.29	769.4	54	12.2	55	Calm	0	0		10cs	0	W		0	0	Fair	
Indianola, Tex			30.22	767.6	70	21.1	84	SE	10	4.5		2k	0	SE		0	0	Fair	
Jacksonville, Fla			30.32	770.1	61	16.1	76	E	3	1.3		0	0			0	0	Clear	
Keokuk, Iowa			30.25	768.3	52	11.1	53	E	6	2.7		8c	0	SW		0	0	Fair	
Key West, Fla			30.20	767.1	71.9	22.2	75	E	12	5.4		2ck	1s	SE		0	0	Clear	
Kittyhawk, N. C			30.18	766.6	60	15.6	65	SW	22	9.8		Haze	Haze			0	0	Hazy	
Knoxville, Tenn			30.28	769.1	58	14.4	98	Calm	0	0		10ck,cs	Haze	W		0	0	Cloudy	
La Crosse, Wis			30.25	768.3	48	8.9	62	S	6	2.7			10s		S	0	0	Cloudy	
Leavenworth, Kan			30.24	767.8	54	12.2	73	SE	8	3.6		0	2s			0.03	0.8	Clear	
Lexington, Ky	29.18	741.1	30.24	767.8	55	12.8	80	W	5	2.2			10s			0.10	2.5	Cloudy	
Long Branch, N. J			29.95	760.7	52	11.1	70	W	18	8.0		5c	5s	W	W	0.02	0.5	Cloudy	
Louisville, Ky			30.29	769.4	56	13.3	81	SW	8	3.6		10cs	Fog	SW		0.92	23.4	Cloudy	
Lynchburg, Va			30.14	765.5	66	18.9	45	NW	8	3.6		5k	5s	W	W	0	0	Cloudy	
Malone, N. Y.			29.71	754.6	37	2.8	90	NE	1	0.4			10n		NW	0.35	8.9	Light rain	
Manhattan, Kan	28.89	733.8	30.02	762.5	55	12.8	79	S	16	7.2		5cs	0			0.07	1.8	Fair	
Marquette, Mich			30.18	766.6	41	5.0	74	NE	4	1.8		0	0			0.02	0.5	Clear	
Memphis, Tenn			30.28	769.1	63	17.2	51	E	6	2.7		Haze	Haze			0	0	Hazy	
Milwaukee, Wis			30.28	769.1	46	7.8	54	NW	9	4.0		2c	Sm'e	NW		0	0	Clear	
Mobile, Ala			30.31	769.9	58	14.4	93	S	4	1.8		0	Sm'e			0	0	Clear	
Montgomery, Ala			30.34	770.6	61	16.1	74	W	2	0.9		0	Haze			0	0	Hazy	
Morgantown, W. Va			30.21	767.3	55	12.8	41	W	6	2.7		5c	0	W		0.05	1.3	Fair	
Mt. Washington, N. H	23.43	595.1	29.79	756.7	24	− 5.6	100	SW	15	6.7			Fog			0	0	Foggy	
Nashville, Tenn			30.28	769.1	64	17.8	57	NE	3	1.3		5	0	W		0	0	Fair	
New Haven, Conn			29.86	758.4	57	13.9	62	NW	8	3.6		0	0			0.07	1.8	Clear	
New London, Conn			29.85	758.2	50.5	10.3	78	W	7	3.1		Haze	2s		W	0.09	2.3	Fair	
New Orleans, La			30.28	769.1	63	17.2	83	SE	3	1.3		0	Sm'e			0	0	Clear	
Newport, R. I			29.82	757.4	46	7.8	92	SW	12	5.4		5ck	Haze	W		0.06	1.5	Fair	
New York, N. Y			29.94	760.2	46	7.8	76	NW	6	2.7		0	Fog			0.14	3.6	Clear	
Norfolk, Va			30.13	765.3	63	17.2	52	SW	18	8.0		8k	0	SW		0	0	Fair	
North Platte, Neb	27.20	690.9	29.78	756.4	48	8.9	63	Calm	0	0		5c	Haze	W		0	0	Fair	
Omaha, Neb	29.09	738.9	30.16	766.1	52	11.1	60	Calm	0	0		8c	0	W		0	0	Fair	
Oswego, N. Y			29.87	758.7	43	6.1	71	SW	20	8.9			10ks		NW	0.10	2.5	Cloudy	
Pembina, Dakota			30.08	764.0	36	2.2	90	SW	1	0.4		5k	0	SW		0	0	Fair	
Philadelphia, Penn			30.01	762.2	59	15.0	54	NW	20	8.9		5ck	0	NW		0.03	0.8	Fair	
Pike's Peak, Colorado	17.89	454.4	30.10	764.5	19	− 7.2	53	SW	17	7.6		1cs	0			Inap.	Inap.	Clear	
Pittsburgh, Penn			30.19	766.8	51	10.6	52	W	10	4.5		2c	0			Inap.	Inap.	Clear	
Port Huron, Mich			30.11	764.8	48	8.9	49	W	14	6.3		0	0			Inap.	Inap.	Clear	
Portland, Me			29.84	757.9	44	6.7	84	Calm	0	0			10n			0.15	3.8	Light rain	
Portland, Oregon			29.95	760.7	46	7.8	92	N	5	2.2			10s			0.02	0.5	Cloudy	
Punta Rassa, Fla			30.26	768.6	63.2	17.3	83	NE	10	4.5		Haze	Sm'e	E	NE	0	0	Hazy	
Rochester, N. Y			29.88	758.9	47	8.3	55	W	27	12.1		5k	2s	W	W	0.05	1.3	Fair	
Salt Lake City, Utah			30.00	762.0	48	8.9	49	N	4	1.8		10ck	0			0	0	Cloudy	
Sandy Hook, N. J	25.67	652.0	29.94	760.5	48	8.9	85	W	19	8.5		5cs	Haze	W		0.03	0.8	Fair	
San Diego, Cal.			30.12	765.0	52	11.1	93	Calm	0	0		0	0			0	0	Clear	
San Francisco, Cal			30.00	762.0	52	11.1	73	SW	2	0.9		8c	2s			0	0	Cloudy	
Santa Fe, N. M			29.52	760.0	43	6.1	50	Calm	0	0		2cs	2s			0	0	Fair	
Savannah, Ga.	23.38	593.8	30.34	770.6	65	18.3	68	SW	2	0.9		0	Sm'e			0	0	Smoky	
Shreveport, La			30.34	769.6	61.5	16.4	85	S	2	0.9		2c	0			0	0	Fair	
Smithville, N. C			30.29	769.4	64	17.2	78	SW	8	3.6		0	0			0	0	Clear	
Springfield, Mass.			29.82	757.4	50	10.0	71	S	4	1.8		5k,sm'e	0	W		0.10	2.5	Fair	
St. Louis, Mo			30.30	769.6	57	13.3	68	Calm	0	0			10s			0.03	0.8	Cloudy	
St. Marks, Fla			30.33	770.4	69	15.6	82	Calm	0	0		0	0			0	0	Clear	
St. Paul, Minn			30.17	766.3	43.5	6.4	62	E	6	2.7			10s		S	Inap.	Inap.	Cloudy	
St. Paul's Island, Alaska			29.04	754.8	33	0.6	89	W	29	13.0		10	0			0.05	1.3		
Thatcher's Island, Mass			29.78	756.4	44	6.7	84	S	13	5.8			10s		W	0.14	3.6	Cloudy	
Toledo, Ohio			30.17	766.3	54	12.2	61	SW	8	3.6		0	Haze			0	0	Clear	
Tucson, Arizona	27.65	702.3	30.24	768.1	61	16.1		S				0	0			0	0	Clear	
Tybee Island, Ga			30.31	769.9	69	15.6	88	SW	3	1.3		0	Sm'e			0	0	Clear	
Vicksburg, Miss			30.32	770.1	60	15.6	84	SE	4	1.8		8c	Sm'e	N		0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Virginia City, M. T.	24.33	618.0	29.81	757.2	32.5	0.3	42	SE	3	1.3		3c	0	W		0	0	Fair	
Washington, D. C.			30.13	765.3	59	15.0	48	NW	18	8.0			10s		W	0	0	Cloudy	
Wilmington, N. C			30.28	769.1	63	17.2	62	W	12	5.4		0	Haze			0	0	Hazy	
Wood's Holl, Mass			29.83	757.7	50	10.0	78	S	12	5.4		0	5s		SW	0	0	Fair	
Wytheville, Va	27.85	707.1	29.99	761.7	57	13.9	71	NW	12	5.4		2ck	8ks		NW	0	0	Cloudy	
Yankton, Dakota	28.88	733.5	30.18	766.6	49	9.4	64	S	6	2.7		8cs	0	W		0	0	Fair	
Yuma, Arizona			30.04	763.0	63	17.2		E				2c	0	W		0	0	Fair	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.04	763.0	81	27.2	61	E	4	1.8		2k	5ks	E	E	1.00	25.4	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.98	761.5	81	27.2	70	E				0	5k			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.23	767.8	76	24.4	72	ESE	6	2.7		4ck	4k	E		0	0	Cloudy	W. S. Cameron.
Kingston, Jamaica, W. I.			30.19	766.8	75	23.9	81	Calm	0	0		2c	2s			0.54	13.7		James Gall.
Santiago de Cuba, W. I.			29.84	757.9	74	23.3	76	NNE	8.4	3.8		0	2s		ENE	3.3	83.8	Fair	Robert Mason.
Havana, Cuba, W. I.			30.15	765.8	77	25.0	65	NE	9.6	4.3		2k	0	E		0	0	Fair	Charles Hasselbrink
St. Georges, Bermudas			30.28	769.8	59.5	15.3	65	NE	1.0	0.4			10pk			0	0	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.21	691.1	30.01	762.2	64	17.8	90									0.16	4.1		C. Partridge.
Paramaribo, D. Guiana, S. A.			30.01	762.2	81	27.2	74	E			2		5k			2.040	51.82	Rainy	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.07	763.8	86.0	30										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.19	639.8			65.5	18.6	84		0	0		4ck	4s			0	0	Fair	Thomas Herran.
St. John's, Newfoundland.			29.25	742.9	36.0	2.2	90	W				..k	10s			0.48	12.2	Fair	John Delaney.
York Factory, B. A.			29.87	758.7	31.5	— 0.3	90	SE	14	6.3		6cs	0	S		0.02	0.5		J. Fortescue.
Honolulu, Oahu, H. I.			30.13	765.3	71	21.7	90	NE			4					0	0		E. P. Church.
Makawao, Maui, H. I.	27.89	708.4	30.06	763.5	59	15.0	87	NE	2.4	1.1			10n					Light rain	F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	Barometer.	Temperature.	Relative Humidity.	Wind. Direction.	Wind. Velocity.	Wind. Force.	Clouds. Amount. Up'er	Clouds. Amount. Low'r	Clouds. Direction. Upper.	Clouds. Direction. Lower.	State of ocean.	Direction of swell from—	Weather.	Observer.
Steamer Peruvian, N. 44° 32′, W. 45° 50′.	S59W	7	29.39	77.9	50	10.6	WSW		6	2c	2k				*D. clouds	Capt. W. Richardson.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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. 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher. *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 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* of clouds, 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 APRIL 22, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Namours			30.08	764.1	62.8	17.1	55	NW			4		4			0.079	2.0	Fair	Charnot.
Algiers			29.04	760.4	54.3	12.4	72	NW			1		10			0.827	21.0	Hidden	Peter.
La Calle					59.4	15.2		NW			2		5			0.079	2.0	Fair	Kunts.
Tunis			29.02	759.9	70.2	21.2	55	ENE			4		0			0	0	Clear	Jacques.
Sfax			29.77	756.2	73.4	23.0	44	NE			4		3			0	0	Fair	Chauvey.
Gafda			30.00	762.1	50.0	10.5	74	W			4		7			0.378	9.6	Cloudy	Millot.
Tebessa			29.82	757.5	64.9	18.3		N			2		10			0	0	Hidden	Colin.
Geriville			29.98	761.6	50.4	10.2	44	NNW			3		3			0.043	1.1	Fair	Buard.
Laghouat			29.84	757.9	73.4	23.0	25	NW			4		2			0		Clear	Guyot.
Biskra			29.92	760.0	66.2	19.0	42	NW			4		7			0	0	Cloudy	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.78	756.4	70.2	26.2	39	NE			3		4			0	0		Prof. Ivan Stosir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.76	755.8	78.1	25.6	42	SE			3		7			0	0		I. R. Observatory.
Eperies			29.84	757.9	75.6	24.2	48	S			4		9			0	0		Julius Mikolik.
Gratz	28.03	727.1	29.78	756.1	71.2	21.8	44	SW			5		0			0	0		Andreas Rospini.
Hermannstadt	28.51	725.0	29.80	759.1	70.0	26.1	14	SSE			4		5			0	0		Prof. Reissenberger.
Kremsmünster			29.63	752.5	73.0	22.8	37	WSW			2		2			0	0		Prof. C. Wagner.
Lemberg			29.81	747.8	77.2	25.1	30	S			2		3			0	0		Dr. T. Stanecki.
Nylregyhaza																			Habsuda Daniel.
Pola			29.82	757.5	63.7	17.6	75	SSE			5		10cs			0	0		I. R. Hydrographic Of'ce
Segedin			29.85	758.3	81.0	27.2	20	S			3		5			0	0		Karl Stancel.
Trieste			29.80	758.4	63.9	17.7	73	W			1		3			0	0	Partly clear.	Prof. V. Farolfi.
Vienna			29.67	753.5	77.9	25.5	30	S			4		2			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.85	758.1	61.2	16.2	50	WNW			1	1	7			0.047	1.20		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0 10.	Clouds. Amount. Low'r 0 10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From -	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			29.96	761.0	39.1	3.9		NW	19	8.5			5			0	0	Blue sky	William Boswell.
Ardrossan			29.96	761.0	43	6.1		NE			1		8					Overcast	William McNeil.
Armagh Observatory			29.99	761.7	51.9	11.1		ENE	11	4.9			2					*D. clouds	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.90	759.4	48.0	8.9		WNW	16	7.2			7					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			29.97	761.2	50.0	10.0		NE			1		7					*D. clouds	J. Dreyer.
Bradford			29.90	759.4	45.1	7.3		NE			1		10			0	0	Gloomy	J. McLandsborough.
Bridgetown, (Barbados)			30.03	762.7	81.5	27.0		NE			3		6					*D. clouds	Sergt. J. F. Halanen, A. [H. C.
Cambridge Observatory			29.89	759.2	60.0	15.6		NNW			1		7					Misty	H. Todd.
Cardington			29.86	758.4	56.0	13.3		N			1		7					*D. clouds	John McLaren.
Carlisle			29.92	760.0	39.9	4.4		NE			1		10			0.13	3.3	Drizzling	T. Bell, for J. Carmell.
Chatham, School M. E			29.87	758.7	55.2	12.9		NE			1		9					Overcast	Capt. J. Fellowes, R. E.
Dartmoor	28.50	723.9	30.01	762.2	49.6	9.8		N			3		5					*D. clouds	R. E. Power.
Donaghadee			29.95	760.7	47	8.3		N			4		3					*D. clouds	J. Mac Gowan.
Dover			29.89	759.2	52	11.1		SSW			2		5					½ clouded	J. Costello.
Eccles (near Manchester.)			29.88	758.9	51.1	10.6		WSW	4.0	1.8			10					Gloomy	Thomas Mackereth.
Falmouth Observatory			29.95	760.7	55.9	13.5		SSW	16	7.2			5					*D. clouds	The Staff.
Fort Napier, (Natal)	27.70	703.6	29.95	760.2	68.2	20.1		SW			3		10					Overcast	Pvt. G. Salmon, A. H. C. [tis-
Free Town, (Sierra Leone)			29.95	760.7	86	30.0		N			2		6					*D. clouds	
Galway, Queen's College			29.59	751.6	47	8.3		SE			4		10					Hailing	B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			30.10	764.5	61.4	16.3		NW			4		3					*D. clouds	Corp'l C. Aitken, A. H. C.
Glasgow Observatory			29.94	760.5	40.6	4.8		NE			1		9					*D. clouds	Lewis Stuart.
Great Yarmouth			29.87	758.7	52	11.1		NW			3		6					Misty	G. T. Watson.
Greenwich Royal Obs			29.89	759.2	57.2	14.0		N			1		8					Misty	The Staff, for G. B. Airy.
Guernsey			29.98	761.5	54	12.2		WNW			1		3					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.95	760.2	45.1	7.3		NE			1		10					Overcast	L. J. Crossley.
Helston			29.91	759.7	59	15.0		SW			2		1c			0	0	Blue sky	M. P. Moyle.
Holyhead			29.95	760.2	47	8.3		NNW			3		10					Hailing	John Tilston.
Kew Observatory			29.90	759.4	58.1	14.5		W	10	4.5			8			Blank	Blank	Threatening	The Staff.
Kingstown			29.96	761.0	46	7.8		NNE			4		10					Overcast	George Mitchell.
Leicester Museum			29.94	760.5	51.0	10.6		ENE			1		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.73	755.1	70.0	21.1		S			2		8k						Fred. Travis, Pvt. A.H.C.
Nairn			29.97	761.2	39	3.9		NNE			2		2					¼ clouded	W. D. Penny.
Nassau, Bahamas																			Surg. Maj. Henry.
Nottingham			29.90	759.4	53.7	12.1		ESE			2		7k		NNW	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.90	759.4	55.1	12.8		WSW			2		9					Misty	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.89	759.2	57	13.9		WSW			1		9					Overcast	J. Lucas.
Plymouth			29.93	760.2	54.7	12.6		SSW			2		5		NW			*D. clouds	John Merrifield.
Roche's Point			29.94	760.5	52	11.1		SSE			3		8					¾ clouded	W. Kennedy.
Saint Ann's Head			29.93	760.2	48	8.9		WNW			1		6					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.97	761.2	58.0	14.4		W			4		5					½ clouded	A. P. Amy.
Sandwick Manse (Orkneys			29.93	760.2	35.5	1.9		NW	30	13.4			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough			29.92	760.0	41.8	5.4		NNE			3		10					Drizzling	F. Shaw.
Scutari Cemetery, Turkey			30.06	763.5	59.2	15.1		NNE			3		6					Misty	Sergt. W. H. Lyne.
Sheffield			29.91	759.7	51.0	10.6		NNE			2		10			0	0	Gloomy	W. F. Cooper.
Silloth Rectory			29.92	760.0	41.8	5.4	90	E			3		10			0	0	Overcast	Rev. Francis Redford.
Stonyhurst Observatory			29.89	759.2	48.0	8.9		NE			1		10			Blank	Blank	Gloomy	S. J. Perry.
Stornoway, Lewis C. Hebr.			30.02	762.5	37	2.8		N			5		8					*D. clouds	John Smith.
Stratfield Turgiss			29.91	759.7	57.6	14.2		NW			1		2					Blue sky	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.94	760.5	36	2.2		NNW			5		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.96	761.0	60	15.6		W			6		4					*D. clouds	W. Newcombe.
Valencia Observatory			29.96	761.0	52.7	11.5		SW	14	6.3			5					Drizzling	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					47	8.3		N			3		0						The Staff, for E. J. Stone.
Cape Good Hope Obs.			30.23	767.8	67.1	19.5	58	SSE	30	13.4			0						
Leith, Restalrig Park			29.98	761.5	39.0	3.9		NE			2		10s			0.12	3.0	Overcast	Andrew Gibb.
Mauritius			29.99	761.7				E	25.1	11.2						0	0		C. Meldrum.
Monach Lt-house, Hebrides			30.02	762.5	40	4.4		NE			4	5	5	NE		0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.65	753.1	36	2.2		NW			8		10			Blank	Blank		

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			29.83	757.7	48.0	8.9	89	SE			2		10						
Faröe			29.81	757.2	50.7	10.4	87	W			4		3						
Godthaab, (Greenland)			29.77	756.1	23.0	— 5.0	69	N			4		10						
Stykkisholm, (Iceland)			30.19	766.8	21.6	— 5.8	95	E			7		5						
Thorshavn, (Faröe)			29.95	760.7	31.8	— 0.1	74	N			6		8					Snowing	
Vesterisig			29.78	756.5	43.2	6.2	97	Calm			0		10					Misty	

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.95	760.8	57.2	14	69	NE			1		0			0.039	1.0	Clear	Normal School.
Amiens			30.06	763.5	55.0	12.8	73	NW			3		0			0	0	Clear	Normal School.
Avignon			29.85	758.2	52.9	11.6	93	E			2		10		SE	0.346	8.8	Raining	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			29.92	760.0	60.1	15.6	52	NW			2		5		WNW	0.002	0.05	Cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			29.87	758.8	62.6	17	65	NE			2		2		SW	0	0	Slightly cl'dy	Normal School.
Brest			29.95	760.7	60.6	15.9	58	SW			3		4k		W	0.148	3.75		Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			29.89	759.2	49.8	9.9	86	N			2		10			0.154	3.9	Covered	Puy de Dome Obs.
Commercy			29.88	758.9	60.3	15.7	33	NE			2	cir.	5kn		NE	0	0	Cloudy	Normal School.
Commune de Gréasque*			30.10	764.4	50.5	10.3	82	NE			2		10		SE	0.748	19.0		M. Kina.
Grenoble			29.82	757.5	54.3	12.4	83	N			2		10n		NE	0.030	0.75	Raining	Normal School.
Le Mans			29.93	760.3	58.5	14.7	53	N			2		5		N	0	0	Cloudy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			29.89	759.3	57.0	13.9	71	NE			2		5			0	0	Cloudy	Normal School.
Mâcon			29.85	758.1	57.6	14.2	69	N			2		10			0.04	1.	Covered	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			29.80	756.8	54.0	12.2	83	E			2		10			0.728	18.5	Covered	Normal School.
Orleans																			Normal School.
Paris Observatory			29.91	759.6	60.3	15.7	49	NW			2		5		W	Inap.	Inap.	Cloudy	National Observatory.
Parthenay																			Normal School.
Privas			29.85	758.2	57.9	14.4		SSE			1		10		SSE	0.12	3.	Covered	Normal School.
La Roche-sur-Yon			29.95	760.8	57.6	14.2	62	NW			2		5		S	0	0	Cloudy	Normal School.
Rochefort, Observatory			29.97	761.2	63.9	17.7	60	WNW			4		5		S	0	0	½ Covered	Naval Observatory.
Rouen			29.90	759.4	60.3	15.7	53	SW			3		5		W	0	0	Cloudy	Normal School.
Saint Lo			29.97	761.2	54.9	15.2	62	NW			1		2		NW	0.047	1.2		Normal School.
Tarbes	28.85	732.9			50.0	10		W			2		10		E	0.87	22.	Covered	Normal School.
Toulouse																			Normal School.
Villefranche			29.83	757.6	54.3	12.4	97	NNW			3		10		N	0.031	0.80	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.93	760.1	77.7	25.4	82	NE			2		8kn						L'Abbé Marchési.
Gorée																			
Marseilles			29.75	755.7	61.5	16.4	55	S			2–3		4			0.703	17.75		Marseilles Observatory.
Mont-Louis	24.59	624.5	29.9	759.5	36.7	2.6	70	NNW	11.2	5.00			8		NNW	0.516	13.1		—. Falguère.
Montsouris, Paris			29.90	759.5	61.3	16.3	48	W			1		7			0	0		Montsouris Observ'tory.
Perpignan			29.80	758.4	48.7	9.3	66	N	20.5	9.17			9		SE	2.767	70.3		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			29.91	759.6	60.8	16.0	47	NW			1		9			0.177	4.5		E. Renou.
Toulouse			29.89	759.3	47.8	8.8	92	NW			4		10			1.004	25.5		Toulouse Observatory.
Tours			29.92	759.9	64.0	17.8	46	WSW			1		6		N	0	0		C. Marquet.
Versailles, (near Paris)			29.92	759.9	61.5	16.4	53	NW			2		4			0	0		Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Leo, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7., 8. or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

* Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.65	753.2	58.5	14.7	70	NE			4		9	E		1.18	30.0		Prof. T. Hoh.
Berlin			29.82	757.5	49.6	9.8	87	N			1		10			0.575	14.6		Prof. Arndt.
Breslau			29.72	754.8	77.4	25.2	32	S			6		8			0	0		Dr. P. Neugebauer.
Carlsruhe			29.87	758.7	53.6	12.0	76	NW			1		10			0.177	4.5		A. Senz.
Cassel			29.78	756.5	54.1	12.3	70	ENE			2		7	NE		0.020	0.5		Dr. H. Möhl.
Cologne																			Dr. Gartlee.
Emden																			Prof. Prestel.
Frankfort on the Main			29.93	760.2	52.7	11.5	70	NE			2		10			0.217	5.5		Physical Society.
Friedrichshafen	28.43	722.0	29.99	761.8	55.4	13.0	69	SW					9			0.220	5.6	Raining	M. Wilhelm.
Hamburg			29.84	757.9	57.2	14.0	69	SSE			1		10k			0	0	Foggy	Deutsche Seewarte.
Kiel			29.83	757.7	57.4	14.1	83	SSW			2		10			0.051	1.3		Prof. G. Karsten.
Königsberg			29.81	757.2	58.1	14.5	68	NW			2		2			0	0		Prof. E. Luther.
Köslin			29.78	756.5	49.3	9.6		Calm			0		5			0	0		H. Müller.
Leipsic			29.81	757.1	46.6	8.1	99	N			3		10	N		0.524	13.3		Prof. Bruhns.
Memel			29.90	759.4	48.9	9.4	84	NW			3		10			0.012	0.3		Reinbrecht & Skalweit.
Münster			29.84	758.0	62.4	16.9	48	SE			2		3			0	0		Prof. E. Heis.
Neufahrwasser			29.76	755.8	45.5	7.5	96	N			3		10			0.036	0.9		A. Lothes.
Posen			29.73	755.1	74.3	23.5	58	WSW			1		5			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.89	759.1	56.5	13.6	68	Calm			0		10			0.206	5.2		Dr. Schur.
Stuttgart			29.85	758.2	51.8	11.0	73	NW			1		10			0.724	18.4		Prof. Schoder.
Thorn			29.69	754.0	73.9	23.3	50	SSW			6		4			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.81	757.2	62.2	16.8	45	E			3		10			0	0		Prof. Flesch.
Wustrow, Naval School			29.76	756.0	56.5	13.6	64	NE			2		7			0	0	Foggy	E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			30.05	763.2	79.5	26.4		NE										Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			29.86	758.4	65.5	18.6	58	Calm	0	0			8			0	0		
Padua			29.81	757.2	63.0	17.2	67	NNE	13.7	6.1			9	S		0.020	0.5		
Vicenza			29.83	757.7	60.6	15.9	79	NNE	3.8	1.7			10	S		0	0		
Verona			29.78	756.3	59.7	15.4	92	E			2		10			0	0		
Bergamo	28.50	724.0	29.82	757.3	57.2	14.0	82	W			2		9			0	0		
Domodossola	28.84	732.4	29.85	758.3	54.5	12.5	76	Calm			0		10			0	0		
Milan			29.86	758.5	61.9	16.6	40	E			2		9	ENE		0.551	14.0		
Pavia			29.85	758.2	59.7	15.4	69	E			1		9	E		1.095	27.8		
Moncalieri			29.89	759.1	50.9	10.5	96	WNW	1.8	0.8			10	E		0.697	17.7		
Mondovi	27.96	710.1	29.87	758.8	49.3	9.6	88	NW			2		10			0.118	3.0	Raining	
Porto Maurizio			29.87	758.8	59.0	15.0	83	E			2		10	WSW		0.169	4.3	Raining	
Genoa			29.82	757.3	58.1	14.5	79	Calm	0	0			10	S		0	0		
Piacenza			29.85	758.2	57.2	14.0	84	SE			2		10			0.472	12.0	Raining	
Parma			29.85	758.2	58.1	14.5	94	SSW			4		10			0.350	8.9	Raining	
Bologna			29.89	759.1	63.9	17.7	41	W			1		5	N		0	0		
Florence			29.83	757.6	68.0	20.0	61	NW			2		10	S		0	0		
Leghorn			29.82	757.3	60.8	15.7	86	NNW	4.3	1.9			10			0	0		
Siena	28.60	726.4	29.80	756.9	60.4	15.8	77	NE	1.3	0.6			10	SW		0.012	0.3		
Urbino	28.28	718.2	29.82	757.5	62.8	17.1	55	NE			2		5			0	0		
Pesaro																			
Ancona			29.82	757.3	64.4	18.0	69	SE			4		3			0	0		
Grosseto			29.82	757.5	63.0	17.2	76	SSE			4		8	S		0.056	1.4		
Rome			29.80	757.0	70.0	21.1	59	SW	11.2	5.0			8	S		0	0		
Naples, O. U.			29.84	757.9	72.3	22.4	48	SSE			2		10	SW		0	0		
Lecce			30.00	762.0	72.3	22.4	32	WSW	24.8	11.1			10			0	0		
Cosenza			29.89	759.3	74.1	23.4	69	WSW	9.8	4.4			10			0	0		
Riposto, (Sicily)			29.93	760.3	68.4	20.2	72	E			2		6	W		0	0		
Palermo			29.72	754.9	72.3	22.4	51	SE	8.7	3.9			9			0	0		
Caltanissetta	27.87	708.0	29.81	757.1	61.7	16.5	40	E			6		10	W		0.016	0.4		
Sub-Series.																			
Naples, S. R.			29.84	758.0	71.2	21.8	46	SW	3.8	1.7			..k	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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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.
Tokio																			

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			29.93	760.1	51.4	10.8		WNW			2								
Groningen			29.77	756.2	59.0	15.0		NW			2								
Helder			29.84	758.0	53.8	12.1		SSW			1								
Utrecht			29.80	757.0	63.5	17.5	62	WSW			3		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			29.69	754.0	41.7	5.4	60	SSW	13.4	6.0			8			0.256	6.5		
Brönö			29.58	751.4	45.0	7.2	83	Calm	0	0			10			0.0 8	0.2		
Christiania			29.70	754.3	43.9	6.6	87	SSE	1.3	0.6			10			0.126	3.2		
Tromsö			29.54	750.4	41.7	5.4	68	NE	2	1			1			0.087	2.2		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.24	768.1	63.0	17.2	90	W	11.4	5.11			7			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.07	763.8	60.4	15.8	31	NW	11.9	5.31			3			0.070	1.78		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.31	769.8	66.2	19.0	67	SW	3.6	1.61			10			0	0		Capt. D. A. da Cunha.
Lisbon			30.21	767.2	57.4	14.1	52	NNW	15.0	6.7			4			0.008	0.2		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 hour, 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.72	754.9	77.2	25.1	40	S	25	11			9						Astronomical Obs.
Wilna			29.78	756.4	75.0	23.9	51	SW	9	4			10						Astronomical Obs.
Dorpat			29.82	757.4	61.3	16.3	55	W	9	4			4						Physical Cabinet.
St. Petersburg			29.75	758.6	56.8	13.8	66	W	13	6			10						Central Physical Obs.
Kuopio			29.59	751.5	87.2	2.9	100	S	7	3			10					Thunder-storm	Ch. Forsten.
Kieff			29.99	761.8	80.8	27.1	35	S	18	8			8						Physical Cabinet.
Nikolaiev			30.24	768.2	70.5	21.4	34	S	13	6			4						Kurdakof.
Kertch			30.22	767.6	62.8	17.1	75	SSE	7	3			5						Lagorio.
Moscow			30.05	763.2	67.3	19.6	44	SW	9	4			8						Meteorological Obs.
Lugan			30.08	764.1	75.7	24.3	26	NW	13	6			5						Meteorological Obs.
Archangel			29.75	755.6	48.7	9.3	74	Calm	0	0			0						Ogorodnikof.
Tiflis	28.69	728.8	30.05	763.2	63.0	22.8	29	SE	11	5			7						Physical Observatory.
Astrakhan			30.18	766.6	60.6	15.9	55	S	22	10			9			Blank	Blank		Sebastianof.
Kasan			29.94	760.5	63.0	17.2	43	W	4	2			3						Physical Cabinet.
Orenburg			30.52	775.1	53.2	11.8	76	SE					0						Tschernischef.
Ekaterinburg	28.22	742.3	30.28	769.2	27.1	— 2.7	79	E	9	4			10						Meteorological Obs.
Nukuss			30.13	765.3	66.7	19.3	23	NE	7	3			0						
Kasaly																			Bobrof.
Tashkend	28.70	729.0	30.46	773.6	44.2	6.8	88	NNE	9	4			10						Michelson.
Barnaul			30.25	768.4	25.0	— 3.9	40	Calm	0	0			0						Meteorological Obs.
Yeniseisk			29.93	760.3	7.0	—13.9	63	W	11	5			6					Snowing	Marks.
Irkutsk	28.32	719.2	29.74	755.2	28.9	— 1.7	94	Calm	0	0			10					Snowing	Usolzef.
Oorga																			Mossin.
Peking, (China)			29.75	755.7	72.0	22.2	36	WSW	4	2			9						Physical Observatory.
Nertchinsk	27.51	698.8	29.89	751.5	37.8	3.2	48	SW	4	2			0			Blank	Blank		Meteorological Obs.
Vladivostock			30.08	764.1	39.4	4.1	90	SE	7	3			0						
Nikolaievsk, on the Amoor					32.2	0.1	96	E	9	4			2						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 40[illegible] meters, or 1,311.8 feet; Ekaterinburg, 305.4[illegible] m., or 1,005.2[illegible] ft.; Tashkend, m. 494.2[illegible], or 1,621.3[illegible] ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0[illegible] m., or 1,942.27 ft.; Oorga, 1,281.0[illegible] m., or 4,202.6[illegible] 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.96	760.9	58.8	14.9	40	N	12.7	5.67		0	7			0	0	Cloudy	Royal Observatory.
San Fernando			30.15	765.8	59.7	15.4	54	NW	13.9	6.2		0	5		NW	0.016	0.4		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; 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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.58	751.3	43.5	6.4	94	NE			2		10			0	0		
Umea			29.53	750.0	42.6	5.9	93	NW			2		10			0	0		
Hernosand			29.54	750.3	46.0	7.8	57	SSW			2		3			0.197	5.0		
Stockholm			29.71	754.5	53.4	11.9	81	WSW			4		9			0	0		
Wisby			29.88	758.9	49.3	9.6	76	WSW			2		5			0	0		
Sub-Series.																			
Upsala			29.72	754.9	48.2	9.0	77	SW	13.4	6.0			9		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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.43	722.0	29.86	758.5	51.4	10.8	71	NNE			2		10			0.150	3.8	Covered	The Observatory.
Zurich	28.24	717.2	29.87	758.7	53.8	12.1	76	E			1		8			1.319	33.5	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —2.3 mm.; Thermometer, —2.2 cent.; Relative Humidity, +14 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.13	765.2	55.8	13.2	74	NNE ?	18	8.0			6		SW	0	0		
Fao, (Persian Gulf)			30.02	763.2	84.2	29.0		E			3		10						
Salonica			30.14	766.5	62.6	17.0		S			2		0						
Valona			29.97	761.2	81.5	27.5		SW			1		5						
Varna			30.04	763.0	57.2	14.0		E			2		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.91	759.6	75.2	24.2	69	NE			1		1k		N	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.96	761.0	35.8	2.1	88	Calm	0	0									Hon. J. Ferguson.
Brockville, Ontario			30.16	766.1	41	5.0		SW	6	2.7		5c	0	W		0.08	2.0	Fair	W. R. Bigg.
*Chatham, N. B.			29.99	761.7	38	3.3	76	SW	7	3.1		2k	8ks	SW	SW	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			29.94	760.5	37	2.8	84	N	8	3.6		2k	0			0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			30.05	763.3	44.2	6.8	82	S			1	8ck				0	0	Clearing	James Smith, M. A.
Dalhousie, N. B.			30.01	762.2	35.3	1.8	70	NW			1		10			0	0		H. A. Johnson.
Esquimault, B. C.			29.65	753.1	49.3	9.6	78	SE	2	0.9		8cs				0.03	0.8	Cloudy	W. H. Bevis.
Fredericton, N. B.			30.01	762.2	38.1	3.4	80	NE	2	0.9		6k				0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			30.15	765.8	30	— 1.1	89	Calm	0	0		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.07	763.8	48.2	9.0	78	SW			2	8ck		W		Inap.	Inap.	Clearing	H. J. Strang, M. A.
Granton, Ontario			30.12	765.0	39.0	3.9		NW			1		10n			0	0	Cloudy	James Grant.
*Halifax, N. S.			29.92	760.0	40	4.4	67	NW	3	1.3			8ks			0.02	0.5	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.16	766.1	38	3.3	82	Calm	0	0		10c	0			Inap.	Inap.	Fair	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			30.07	763.8	43	6.1	67	SW	5	2.2		5cs	2s	W		0.15	3.8	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.08	764.0	40	4.4	74	Calm	0	0		10cs	0	SW		0.04	1.0	Cloudy	J. B. Haney.
*Parry Sound, Ontario			30.10	764.5	34	1.1	92	S	5	2.2		5k	5n	S	S	0.01	0.3	Cloudy	Rev. R. Mooley.
*Port Dover, Ontario			30.13	765.3	39	3.9	82	S	3	1.3		10k	0	NW		0	0	Fair	H. Morgan.
Port Hastings, N. S.			29.92	760.0	36.2	2.3		NW	10	4.5						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.09	764.3	42	5.6	74	E	10	4.5			10n		W	0.94	1.0	Cloudy	M. Payne.
*Quebec, Quebec			30.06	763.5	40	4.4	82	SW	4	1.8			10n		SW	0	0	Cloudy	Capt. Ash, R. N.
St. John, N. B.			30.02	762.5	37	2.8	90	S	2	0.9			n			0.060	1.52		G. Murdoch, C. E.
*Saugeen, Ontario			30.04	763.0	43	6.1	83	S	4	1.8		5k	2n	N		0	0	Cloudy	K. Stewart.
Stayner, Ontario			30.07	763.8	42	5.6	71	Calm	0	0		5k	0	W		0	0	Fair	R. J. Cole.
Stratford, Ontario			30.11	764.8	38.1	3.4	77	Calm	0	0			1 s			0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			29.88	758.9	42	5.6	57	NW	2	0.9		8k	0	NW		0	0	Fair	T. C. Hill.
*Toronto, Ontario			30.14	765.5	38	3.3	85	Calm	0	0		5ck	Haze	NW		0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.18	766.6	41.1	5.1	77	Calm			0		10s			0.30	9.9	Cloudy	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	48	8.9	63	Calm	0	0		0	Haze			0	0	Clear	
Alpena, Mich			29.99	761.7	42	5.6	83	SW	1	0.4		10ck	0	SW		0.07	1.8	Fair	
Atlantic City, N. J			30.22	767.6	48	8.9	56	N	7	3.1		5cs	Haze	W		0	0	Fair	
Augusta, Ga			30.15	765.8	61	16.1	74	Calm	0	0		0	Haze			0	0	Clear	
Baltimore, Md			30.25	768.3	50	10.0	48	SE	1	0.4		8c	Sm'e			0	0	Fair	
Barnegat, N. J			30.22	767.6	48	8.9	56	NW	7	3.1		5cs	0	NW		0	0	Fair	
Benton, Montana	26.91	683.5	29.71	754.6	53	11.7	67	S	1	0.4			10s			0	0	Cloudy	
Bismarck, Dakota	28.27	718.0	29.95	760.7	39	3.9	47	SE	6	2.7			10ks			0	0	Cloudy	
Boston, Mass			30.10	764.5	45	7.2	76	W	8	3.6		1cs	Haze	NW		0	0	Hazy	
Breckenridge, Minn			30.15	765.8	36	2.2	70	N	4	1.8		5c	0			0	0	Fair	
Buffalo, N. Y			30.12	765.0	40	4.4	60	SE	4	1.8		8ck	0	NW		0	0	Fair	
Burlington, Vt			30.07	763.8	44	6.7	68	S	4	1.8		2ck	2s			0.09	2.3	Fair	
Cairo, Ill			30.11	764.8	57	13.9	100	E	8	3.6			10n			0.04	1.0	Light rain	
Cape Hatteras, N. C			30.13	765.3	61	16.1	61	NE	24	10.7			10n		NE	0.11	2.8	Light rain	
Cape Henry, Va			30.22	767.6	56	13.3	63	E	15	6.7		2c	0			0	0	Clear	
Cape Lookout, N. C			30.20	767.1	63	17.2	72	N	10	4.5		2ck	2s	W	W	0.16	4.1	Cloudy	
Cape May, N. J			30.23	767.8	47	8.3	77	Calm	0	0		5c	0			0	0	Fair	
Charleston, S. C			30.17	766.3	64	17.8	78	W	4	1.8		0	Sm'e			0	0	Clear	
Cheyenne, Wyoming	23.92	607.6	29.86	758.4	39	3.9	63	W	4	1.8		0	1s			0	0	Clear	
Chicago, Ill			30.05	763.3	55	12.8	60	SW	3	1.3		0	Haze			0	0	Clear	
Cincinnati, Ohio			30.09	764.3	53	11.7	61	Calm	0	0		8k	Sm'e			0	0	Cloudy	
Cleveland, Ohio			30.10	764.5	51.9	11.1	51	SW	7	3.1			8k		NW	0	0	Fair, smoky	
Colorado Springs, Col	24.03	610.4	29.90	759.4	41	5.7	59	N	2	0.9			10s			0	0	Cloudy	
Corsicana, Tex			30.08	764.0	63	17.2	94	S	8	3.6			10s		S	0	0	Cloudy	
Davenport, Iowa			30.10	764.5	53	11.7	73	N	2	0.9		0	2s			0.01	0.3	Clear	
Denison, Tex			29.98	761.5	71	21.7	71	S	4	1.8		0	0			0	0	Clear	
Denver, Col	24.70	627.4	29.92	760.0	51	10.6	34	S	6	2.7			8s			0	0	Clearing	
Detroit, Mich			30.06	763.5	50	10.0	58	NW	5	2.2		2ck	2s	NW	NW	0	0	Fair	
Dodge City, Kan	27.30	693.4	29.51	749.5	60	15.6	82	SE	7	3.1		2c	2s			0	0	Fair	
Dubuque, Iowa			30.11	764.8	47	8.3	77	Calm	0	0		0	Haze			0	0	Clear	
Duluth, Minn			30.14	765.5	44	6.7	44	N	4	1.8		0	0			0	0	Clear	
Eastport, Me			29.95	760.7	30	3.9	80	N	13	5.8		5c	2s	N		0.02	0.5	Fair	
Erie, Pa			30.03	763.5	48	8.9	49	SE	16	7.2		2ck	5ks	W		0	0	Fair	
Escanaba, Mich			30.02	762.5	34	1.1	90	N	4	1.8			Fog			0.35	8.9	Foggy	
Fort Gibson, Indian Terr			29.99	761.7	65	18.3	68	E	6	2.7		2c	2ks	NW	W	0	0	Fair	
Ft. St. Michaels, Alaska			29.41	757.2	35	1.7	95	S	36	17.4			10s					Cloudy	
Fort Sill, Indian T	28.74	730.0	29.83	757.7	59	15.0	81	S			9	0	0			0	0	Clear	
Fort Sully, Dakota																			
Galveston, Tex			30.16	766.1	69	20.6	95	S	4	1.8		0	0			0	0	Clear	
Grand Haven, Mich			30.02	762.5	54	12.2	61	S	8	3.6		4ck	Haze	W		0	0	Fair	
Indianapolis, Ind			30.10	764.5	55	12.8	50	SE	7	3.1			10ks		W	0	0	Cloudy	
Indianola, Tex			30.14	765.5	70	21.1	95	SE	8	3.6		0	2ks		SE	0	0	Fair	
Jacksonville, Fla			30.21	767.1	67	19.4	68	E	2	0.9		0	0			0	0	Clear	
Keokuk, Iowa			30.04	763.0	56	13.3	63	E	7	3.1		2k	0	E		0	0	Clear	
Key West, Fla			30.11	765.3	71.3	21.8	90	E	14	6.3			8ks		E	Inap.	Inap.	Cloudy	
Kittyhawk, N. C			30.21	767.3	54	12.2	67	E	19	8.5		0	5s			0	0	Fair	
Knoxville, Tenn			30.15	765.8	57	13.9	69	Calm	0	0			10ks		W	0	0	Cloudy	
La Crosse, Wis			30.10	764.5	46	7.8	61	SW	5	2.2		0	0			0	0	Clear	
Leavenworth, Kan			30.02	762.5	57	13.9	93	NE	6	2.7			10s		NE	1.20	30.5	Threatening	
Lexington, Ky	29.02	737.1	30.13	765.3	51	10.6	72	E	4	1.8			10s			0	0	Cloudy	
Long Branch, N. J			30.20	767.1	50	10.0	64	NW	14	6.3		10cs	0			0	0	Cloudy	
Louisville, Ky			30.12	765.0	51	10.6	79	S	3	1.3			10n			Inap.	Inap.	Light rain	
Lynchburg, Va			30.21	767.1	56	13.3	51	E	1	0.4		0	0			0	0	Clear	
Malone, N. Y			30.06	763.5	42	5.6	74	SW	5	2.2		8k	0	SW		0.28	7.1	Cloudy	
Manhattan, Kan	28.80	731.5	29.91	759.7	60	15.6	76	S	6	2.7		2c	0			0	0	Clear	
Marquette, Mich			30.03	762.7	41	5.0	82	NW	4	1.8		2k	5ks	W	NW	0	0	Fair	
Memphis, Tenn			30.10	764.5	67	19.4	64	SW	6	2.7		Haze	2s			0	0	Fair	
Milwaukee, Wis			30.04	763.0	51	10.6	59	W	12	5.4		2c	Fog			0	0	Clear	
Mobile, Ala			30.22	767.6	61	16.1	88	Calm	0	0		0	Fog			0	0	Clear	
Montgomery, Ala			30.21	767.3	62.5	16.9	80	SW	2	0.9		5	Haze			0	0	Fair	
Morgantown, W. Va			30.19	766.8	43	6.1	66	Calm	0	0			10s		W	0	0	Cloudy	
Mt. Washington, N. H	23.60	599.4	29.96	761.0	20	−6.7	100	NW	24	10.7			Fog			0.46	11.7	Foggy	
Nashville, Tenn			30.04	763.0	59	15.0	70	Calm	0	0		10k	0	W		0	0	Cloudy	
New Haven, Conn			30.16	766.1	55	12.8	57	NW	4	1.8		0	0			0	0	Clear	
New London, Conn			30.14	765.5	53	11.7	50	NW	5	2.2		2c	0	W		0	0	Clear	
New Orleans, La			30.20	767.1	65	18.3	78	Calm	0	0		5c	0	W		0	0	Fair	
Newport, R. I			30.13	765.3	46	7.8	62	NW	5	2.2		0	0			0	0	Clear	
New York, N. Y			30.20	767.1	47	8.3	56	NW	6	2.7		2c	0	W		0	0	Clear	
Norfolk, Va			30.24	768.1	56	13.3	57	E	7	3.1		0	0			Inap.	Inap.	Clear	
North Platte, Neb	27.01	686.0	29.55	750.6	50	10.0	93	SE	12	5.4		2cs	5s	W		0	0	Cloudy	
Omaha, Neb	28.93	735.0	30.03	762.7	54	12.2	86	SE	6	2.7		2c	0			0.66	16.8	Fair	
Oswego, N. Y			30.14	765.5	43.8	6.4	63	SW	4	1.8		5ck	2ks,s	NW	W	0	0	Fair	
Pembina, Dakota			30.12	765.0	30	−1.1	89	Calm	0	0		0	0			0	0	Clear	
Philadelphia, Penn			30.23	767.8	47	8.3	55	NW	14	6.3		10ck	0	NW		0	0	Cloudy	
Pike's Peak, Colorado			29.98	761.5	21	−6.1	85	SW	46	20.6			10s		SW	0	0	Cloudy	
Pittsburgh, Penn	17.76	451.1	30.17	766.3	42	5.6	65	Calm	0	0			Fog			0	0	Foggy	
Port Huron, Mich			30.08	764.0	43	6.1	66	NW	3	1.3			10s		W	Inap.	Inap.	Threatening	
Portland, Me			30.04	764.0	44	6.7	67	W	3	1.3		2c	Haze			0.03	0.8	Fair	
Portland, Oregon			29.88	758.9	49	9.4	85	S	8	3.6		0	5ks		SE	0.56	14.2	Fair	
Punta Rassa, Fla			30.19	766.8	67.9	19.9	90	NE	8	3.6			10s		NE	0	0	Cloudy	
Rochester, N. Y			30.12	765.0	41	5.0	73	SW	5	2.2		2ck	Haze	W		Inap.	Inap.	Fair	
Salt Lake City, Utah			29.81	757.2	59	15.0	48	SW	12	5.4			10ks		SW	0	0	Cloudy	
Sandy Hook, N. J	25.48	647.2	30.18	766.6	45	7.2	67	NW	10	4.5		10c	0	W		0	0	Cloudy	
San Diego, Cal			30.15	765.8	54	12.2	80	N	8	3.6		0	2s		N	0.01	0.3	Fair	
San Francisco, Cal			30.11	764.8	54	12.2	93	W	6	2.7		5k	0	W		0.15	3.8	Fair	
Santa Fe, N. M			29.87	758.7	43	6.1	66	NE	4	1.8		1ck	2s	SW		0	0	Fair	
Savannah, Ga	23.33	592.6	30.16	766.1	68	20.0	64	SW	8	3.6		0	Sm'e			0	0	Smoky	
Shreveport, La			30.17	766.3	65.5	18.6	84	S	4	1.8			10ks			0	0	Cloudy	
Smithville, N. C			30.18	766.6	64	17.8	78	NE	5	2.2		2ck	0	W		0	0	Fair	
Springfield, Mass			30.14	765.5	49	9.4	57	S	4	1.8		1cs	0			0	0	Clear	
St. Louis, Mo			30.08	764.0	55	12.8	80	Calm	0	0			10s			0.25	6.3	Cloudy	
St. Marks, Fla			30.19	766.8	63	17.2	83	N	3	1.3		0	0			0	0	Clear	
St. Paul, Minn			30.09	764.3	44	6.7	52	NW	2	0.9		0	Haze			0	0	Clear	
St. Paul's Island, Alaska			29.85	758.2	32	0.0	89	W	7	3.1			10s			0.01	0.3		
Thatcher's Island, Mass			30.09	764.3	44	6.7	67	NW	14	6.3		0	0			0	0	Clear	
Toledo, Ohio			30.04	763.0	57	13.9	52	SW	5	2.2		5k	5ks	SW	SW	0	0	Cloudy	
Tucson, Arizona	27.61	701.3	30.24	768.1	61	16.1		S				8c	0			0	0	Fair	
Tybee Island, Ga			30.15	765.8	66	18.9	78	SW	6	2.7		Haze	Sm'e			0	0	Smoky	
Vicksburg, Miss			30.20	767.1	63	17.2	83	S	4	1.8		8c	0	N		0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Virginia City, M. T.	24.06	611.1	29.54	750.3	43	6.1	79	N	1	0.4			10ks		NW	0.01	0.3	Cloudy	
Washington, D. C.			30.24	768.1	51	10.6	59	Calm	0	0		2ck	2s	W		0	0	Fair	
Wilmington, N. C.			30.18	766.6	64	17.8	62	NE	4	1.8		2c	Sm'e		N	0	0	Smoky	
Wood's Holl, Mass.			30.13	765.3	50	10.0	51	NW	9	4.0		0	0			0	0	Clear	
Wytheville, Va.	27.83	706.9	30.02	762.5	45	7.2	76	Calm	0	0		5ck	2ks	W	W	0	0	Fair	
Yankton, Dakota	28.77	730.7	30.07	763.8	45	7.2	84	E	4	1.8		8cs	0	W		0	0	Hazy	
Yuma, Arizona			30.01	762.2	72	22.2		W				5c	0	W		0	0	Fair	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.05	763.3	69	20.6	79	NE	7	3.1		5ck	10s	SE		0.16	4.1	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.04	763.0	76	24.4	90	E				10k?	0?			0.42	10.7	Raining?	L. V. Bigard.
St. Thomas, St. T., W. I.			30.24	768.1	78	25.6	81	ESE	1	0.4		4ck.cs	8kn	E		Blank	Blank	Cloudy	W. S. Cameron.
Kingston, Jamaica, W. I.			30.19	766.8	76	24.4	76	Calm	0	0		8c	2s			0	0		James Gall.
Santiago de Cuba, W. I.			29.78	756.8	74	23.3	81	Calm	0	0		0	2s		SW	Blank	Blank	Fair	Robert Mason.
Havana, Cuba, W. I.			30.09	764.3	76	24.4	78	NE	2.4	1.1		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			30.28	769.1	66.5	19.2	55	NW	4.0	1.8		0	10k			0	0		C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.18	690.4	29.93	761.5	66	18.9	84									0.82	20.8		C. Partridge.
Paramaribo, D. Guiana, S. A.			30.02	762.5	80	26.7	82	E			1		6ks			0.600	15.24	Rainy	C. J. Hering.
Batavia, Dutch Guiana, S. A.			30.07	763.7	86.9	30.5										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640.6			64.5	18.1	85		0	0		8k	2s			0.55	14.0	Cloudy	Thomas Herran.
St. John's, Newfoundland.			29.78	756.4	42.0	5.6	60	NE				10k	10s			0.01	0.3	Fair	John Delaney.
York Factory, B. A.			30.09	764.3	21	— 6.1	93	Calm	0	0		0	0			0	0		J. Fortescue.
Honolulu, Oahu, H. I.			30.12	765.0	72	22.2	90	NE			4					0.28	7.1		E. P. Church.
Makawao, Maui, H. I.	27.88	708.1	30.06	763.5	57	13.9	87	NE	2.4	1.1		0	5n		NE	0.6	15.2	Misty	F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	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.
Steamer Peruvian, N. 42° 40′, W. 48° 54′.	S79W	11			29.55	750.6	34	1.1		WSW			5		Fog					Foggy	Capt. W. Richardson.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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 APRIL 23, 1876,

7:35 A. M. WASHINGTON 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.

ALGERIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.18	766.6	65.7	18.7	49	WNW			2		1			0	0	Clear	Charnot.
Algiers			30.07	763.6	62.6	17.0	61	N			1		3			0	0	Fair	Peter.
La Calle					59.2	15.1		NW			3		5			0.020	0.5	Fair	Kuntz.
Tunis			30.04	763.1	55.9	13.3	94	W			3		10			0.437	11.1	Hidden	Jacques.
Sfax			29.96	761.0	77.0	25.0	28	N			4		4			0	0	Fair	Chauvey.
Saida			30.13	765.2	59.9	15.5	54	W			4		3			0	0	Fair	Millot.
Tebessa			29.95	760.8	50.2	10.1		NW			4		8			0.126	3.2	Cloudy	Colin.
Geriville			30.11	764.7	50.2	10.1	56	NNW			3		3			0.071	1.8	Fair	Buard.
Laghouat			29.99	761.8	66.2	19.0	38	NW			4		1			0	0	Clear	Guyot.
Biskra			30.05	763.3	69.4	20.8	32	NW			3		5			0	0	Fair	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.80	759.2	73.6	23.1	47	Calm			0		9			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.99	761.8	61.2	16.2	83	E			2		9			0	0		I. R. Observatory.
Eperies			29.92	759.9	76.6	24.8	51	S			4		2			0	0		Julius Mikolik.
Gratz	28.69	728.8	29.85	758.1	70.2	21.2	58	S			2		10			0	0		Andreas Rospini.
Hermannstadt	28.56	725.3	29.89	759.2	82.8	28.2	17	SE			2		3			0	0		Prof. Reissenberger.
Kremsmünster			29.90	759.5	58.6	14.8	68	W			2		10			0	0		Prof. C. Wagner.
Lemberg			29.80	759.3	80.6	27.0	33	SW			2		5			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsauda Daniel.
Pola			29.91	759.8	59.0	15.0	85	ESE			4		10s			0.014	0.36		I. R. Hydrographic Office
Szegedin			29.91	759.8	79.5	26.4	46	S			2		7			0	0		Karl Stancel.
Trieste			29.92	760.0	65.1	18.4	66	ESE			1		10			0.201	5.1	Threatening	Prof. V. Farolfi.
Vienna			29.87	758.0	64.4	18.0	63	NE			2		10			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.04	762.9	49.1	9.5	89	N			0		10			0.002	0.05	Foggy	Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0 10.	Clouds. Amount. Low'r 0 10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.03	762.7	42.6	5.9		SSE	13	5.8			4			0	0	Blue sky	William Boswell.
Ardrossan																			William McNeil.
Armagh Observatory			29.90	759.4	52.8	11.6		SE	16	7.2			0						S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			29.91	759.7	53.0	11.7		ESE	11	4.9			6					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			29.83	757.7	51.8	11.0		ESE			1		10					Raining	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			30.02	762.5	81.0	27.2		NE			2		4					D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge Observatory			30.00	762.0	53.0	11.7		SE			1		10					Overcast	H. Todd.
Cardington			29.96	761.0	57.0	13.9		S			1		9					Overcast	John McLaren.
Carlisle			29.94	760.5	53	11.7		SE			1		9			0.01	0.3	*D. clouds	T. Bel, for J. Carmell.
Chatham, School M. E.			30.01	762.2	59.2	15.1		NW			4		4					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	28.71	724.1	30.03	762.7	46.8	8.2		SW			4		10					Gloomy	R. E. Power.
Donaghadee			29.90	759.4	49	9.4		SSE			3		8					*D. clouds	J. Mac Gowan.
Dover			30.02	762.5	52	11.1		SSW			2		5					½ clouded	J. Costello.
Eccles, (near Manchester.)			29.94	760.5	54.9	12.7		S	5.4	2.4			8					*D. clouds	Thomas Mackereth.
Falmouth Observatory			29.91	759.7	50.0	10.0		SSE	24	10.7			10					Rain and fog	The Staff.
Fort Napier, (Natal)	27.71	703.8	29.95	760.7	64.5	18.1		S			3		9					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.93	760.2	90	32.2		N			1		4					*D. clouds	
Galway, Queen's College			29.62	752.3	49	9.4		SE			2		7					Showery	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.17	766.3	64.0	17.8		SW			6		0					Blue sky	Corp'l C. Aitken, A. H. C.
Glasgow Observatory			29.95	760.7	47.0	8.3		E			2		10					Overcast	Lewis Stuart.
Great Yarmouth			30.03	762.7	46	7.8		SE			2		8					Overcast	G. T. Watson.
Greenwich Royal Obs.			30.00	762.0	58.0	14.4		SSW			1		7					*D. clouds	The Staff, for G. B. Airy.
Guernsey			29.98	761.5	54.5	12.5		SE			3		3					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.97	761.2	47.6	8.7		E			2		10					Overcast	L. J. Crossley.
Helston			29.89	759.2	54	12.2		S			6		10n			0.7	17.8	Raining	M. P. Moyle.
Holyhead			29.91	759.4	56	13.3		SSW			3		3					Blue sky	John Tilston.
Kew Observatory			29.99	761.7	54.8	12.7		SSW	10	4.5			5					Threatening	The Staff.
Kingstown			29.89	759.2	50	10.0		SE			4		9					Overcast	George Mitchell.
Leicester Museum			29.98	761.5	55.0	12.8		SE			2		6			Blank	Blank	*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.91	759.7	69.4	20.8		SE			3		8k						Fred. Travis, Pvt. A.H.C.
Nairn			29.98	761.5	44	6.7		ESE			1		2					¼ clouded	W. D. Penny.
Nassau, Bahamas																			Surg. Maj. Henry.
Nottingham			29.97	761.2	57.9	14.4		S			3		8k, k8		8	0.154	3.9	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.95	760.7	54.2	12.3		S			3		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.95	760.7	55	12.8		S			1		10					Overcast	J. Lucas.
Plymouth			29.94	760.5	53.5	11.9		S			4		10					Overcast	John Merrifield.
Roche's Point			29.83	757.7	52	11.1		SSE			4		10					Raining	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			30.00	762.0	57.0	13.9		SSE			2		2					¼ clouded	A. P. Amy.
Sandwick Manse (Orkneys)			29.90	759.1	42.8	6.0		NW	15	6.7			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, Turkey			30.07	763.8	60.4	15.8		NNE			3		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.97	761.2	51.0	10.6		S			1		9			0.040	1.17	Overcast	W. F. Cooper.
Silloth Rectory			29.94	760.5	53.4	11.9	62	E			1		5			0.050	1.27	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			29.94	760.5	46.6	8.1		N			1		10					Hazy	S. J. Perry.
Stornoway, Lewis C. Hebr.			29.97	761.2	42	5.6		SE			3		2					Blue sky	John Smith.
Stratfield Turgiss			29.98	761.5	55.7	13.2		SW			1		7					*D. clouds	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			30.00	762.0	46	7.8		NNW			2		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.92	760.0	54	12.2		S			4		10					Raining	W. Newcombe.
Valencia Observatory			29.79	756.7	55.3	12.9		SSW	16	7.2			8					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					48	8.9		E			3		3						The Staff, for E. J. Stone.
Cape Good Hope Obs.			30.09	764.3	72.8	22.7	49	SSE	5	2.2			5						Andrew Gibb.
Leith, Restalrig Park			30.00	762.0	44.0	6.7		NE			2	1	9k	SW		0	0	Fine, cloudy	C. Meldrum.
Mauritius			30.00	762.0					22.6	10.1						0.11	2.8		J. Youngclause.
Monach Lt-house, Hebrides			29.92	760.0	40	8.9		SE			4		10			0	0		
North Unst, (Shetland Is.)			29.89	759.2	42.5	5.8		NW			3	0	1						

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 270.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			30.04	763.1	46.0	8.8	56	WNW			2		3						
Fanöe			30.10	764.4	43.9	6.6	65	W			4		1						
Godthaab, (Greenland)			29.64	752.8	26.6	— 3.0	72	NNE			4		0						
Stykkisholm, (Iceland)			30.14	765.6	23.2	— 4.9	100	E			4		5						
Thorshavn, (Faröe)			30.06	763.5	38.3	3.5	67	NE			2		5						
Vestervig			29.98	761.5	45.9	7.7	67	WNW			4		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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	54.5	12.5	58	SSW			1		2k		SSW	0	0	Slightly cl'dy	Normal School.
Amiens			29.70	754.4	49.3	9.6	86	SW			3		0			0	0	Clear	Normal School.
Avignon			29.91	759.6	62.2	16.8	61	N			2		8		NNE	0.366	9.3	Very cloudy	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.06	763.5	55.6	13.1	53	W			1		2		NW	0	0	Slightly cl'dy	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			30.06	763.4	64.4	18	73	NNW			2		2		NNW	0	0	Slightly cl'dy	Normal School.
Brest			29.92	759.9	54.5	12.5	72	SW			3		10		SW	0	0	Misty	Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			30.01	762.2	52.2	11.2	80	E			1		10		N	0.646	16.4	Covered	Puy de Dome Obs.
Commercy			30.02	762.4	58.6	14.8	59	NW			2		5kn		NW	0	0	Cloudy	Normal School.
Commune de Gréasque*			29.93	760.2	58.5	14.7	78	W			2		8		SW	0.453	11.5		M. Kina.
Grenoble			29.9	759.5	58.6	14.8	87	N			2		10kn		N	0.738	18.75	Covered	Normal School.
Le Mans			30.05	763.3	53.6	12	74	W			2		5		W	0	0	Cloudy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			29.97	761.3	59.7	15.4	50	N			3		2			0	0	Slightly cl'dy	Normal School.
Mâcon			30.03	762.8	59.4	15.2	58	NW			2		5		SE	0.031	0.8	Cloudy	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			29.85	758.2	60.4	15.8	53	N			6		5		N	0	0	Cloudy	Normal School.
Orleans																			Normal School.
Paris Observatory			30.06	763.4	54.7	12.6	46	NW			1		0			0	0	Clear	National Observatory.
Parthenay																			Normal School.
Privas			29.93	760.3	56.5	13.6		N			4		10		N	0.12	3.	Covered	Normal School.
La Roche-sur-Yon			30.07	763.7	59.7	15.4	52	WSW			2		2		NE	0.004	0.1	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.11	764.7	61.7	16.5	50	W			3		0			0	0	Blue sky	Naval Observatory.
Rouen			30.04	762.9	63.7	17.6	46	W			1		2		S	0	0	Slightly cl'dy	Normal School.
Saint Lo			30.03	762.7	59.0	15	55	SW			1		5		SW	0	0		Normal School.
Tarbes	29.01	736.9			50.0	10		E			1		8		W	0.965	24.5	Very cloudy	Normal School.
Toulouse																			Normal School
Villefranche			29.92	760.0	63.9	17.7	96	NW			4		5		N	0.724	18.40	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.93	760.1	78.8	26	87	NE			2		8kn						L'Abbé Marchési.
Gorée																			
Marseilles			29.87	758.8	54.1	12.3	79	W			1		9			0.110	2.80		Marseilles Observatory.
Mont-Louis	24.80	629.8	30.11	764.8	39.2	4.0	65	NNW	26.1	11.67			8		NNW	0.083	2.1		—. Faiguère.
Montsouris, Paris			30.04	763.1	55.9	13.3	40	NW			2		0			0	0		Montsouris Observ'tory.
Perpignan			29.99	761.8	57.6	14.2	52	N	9.3	4.17			4		NW	0.067	1.7		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.5	763.2	58.3	14.6	30	NW			1		0			0	0	Clear	E. Renou.
Toulouse			30.11	764.8	54.5	12.7	73	WNW			3		10			0.114	2.9		Toulouse Observatory.
Tours			30.04	762.9	62.6	17.0	47	SSW			1		3		W	0	0		C. Marquet.
Versailles, (near Paris)			30.05	763.3	57.2	14.0	57	N			2		4			0	0		Dr. A. Béricny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Leo, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,089.9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

*Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.91	759.8	56.8	13.8	67	NNE			3		6	N		0.012	0.3		Prof. T. Hoh.
Berlin			30.03	762.8	61.5	16.4	56	S			2		7			0	0		Prof. Arndt
Breslau			30.08	763.9	55.0	12.8	76	NE			1		10			0	0		Dr. P. Neugebauer.
Carlsruhe			30.01	762.2	58.3	14.6	62	E			3		0			0	0		A. Senz.
Cassel			29.97	761.1	62.2	16.8	56	NNW			2		1	N		0	0		Dr. H. Mohr.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main			30.08	764.1	60.4	15.8	60	NNE			1		4			0	0		Physical Society.
Friedrichshafen		725.4	30.12	765.1	51.3	10.7	61	N					10			0.209	5.3		M. Wilhelm.
Hamburg			30.09	764.2	49.8	9.9	68	NNW			2		10			0.091	2.3	Cloudy	Deutsche Seewarte.
Kiel			30.07	763.8	48.2	9.0	60	N			2		5			0.020	0.5		Prof. G. Karsten.
Königsberg			30.01	762.3	55.0	12.8	67	NW			2		6			0.039	1.0		Prof. E. Luther.
Köslin			30.01	762.2	54.5	12.5		N			1		2			0.228	5.8		H. Müller.
Leipsic			30.04	763.1	57.7	14.3	61	N			1		6	N		0.453	11.5		Prof. Bruhns.
Memel			30.04	763.1	48.0	8.9	83	W			2		1			0.039	1.0		Reinbrecht & Skalweit.
Münster			30.04	763.1	55.2	12.9	74	NE			2		0			0	0		Prof. E. Heis.
Neufahrwasser			29.96	761.0	57.6	14.2	67	ESE			1		5	W		0	0		A. Lothes.
Posen			30.08	764.1	58.3	14.6	64	E			1		10			0.043	1.1		Dr. Magener.
Strassburg, (in Alsace)			30.01	762.2	59.4	15.2	53	NNE			1		10			0.091	2.3		Dr. Schur.
Stuttgart			30.00	762.1	56.3	13.5	63	E			1		8			Blank	Blank		Prof. Schoder.
Thorn			30.02	762.7	58.1	14.5	68	SE			3		7			0.028	0.7		Dr. Hasenbalg.
Treves, (Trier)			29.96	760.9	62.2	16.8	47	E			3		6			0	0		Prof. Flesch.
Wustrow, Naval School			29.97	761.3	44.1	6.9	91	NW			3		10			0.008	0.2		E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			30.04	763.1	79.0	26.1		SW										Very clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			29.95	760.8	58.1	14.5	82	N	1.3	0.6			10			0.299	7.6	Raining	
Padua			29.88	758.9	59.4	15.2	86	ESE	12.5	5.6			10	ESE		0.260	6.6		
Vicenza			29.89	759.2	59.4	15.2	83	NE	4.9	2.2			10	E		0.118	3.0	Stormy	
Verona			29.86	758.5	62.2	16.8	85	E			4		10			0.122	3.1	Raining	
Bergamo	28.51	724.1	29.82	757.4	53.6	12.0	76	W			2		10			0.315	8.0	Raining	
Domodossola	28.85	732.8	29.87	758.7	56.8	13.8	78	Calm			0		10			0	0		
Milan			29.90	759.5	54.3	12.4	89	NNE			2		9	NW		0.929	23.6		
Pavia			29.89	759.3	56.5	13.6	77	WNW			4		10			0.118	3.0		
Moncalieri			29.89	759.2	58.3	14.6	64	SE	1.3	0.6			9	N		0	0		
Mondovi	28.00	711.2	29.02	759.9	48.9	9.4	84	E			2		10			0.024	0.6	Raining	
Porto Maurizio			29.91	759.7	60.6	15.9	73	SSW			2		10	NW		0	0		
Genoa			29.84	758.0	60.1	15.6	63	N	3.8	1.7			10	S		0	0		
Piacenza			29.88	759.0	55.0	12.8	86	NW			4		10	SE		0.150	3.8	Light rain	
Parma			29.89	759.1	56.3	13.5	92	NW			2		10			0.024	0.6	Raining	
Bologna			29.92	759.9	59.0	15.0	50	W			1		6	E		0	0		
Florence			29.85	758.3	66.2	19.0	68	SW			2		10	SW		0	0		
Leghorn			29.85	758.3	60.3	15.7	66	N	6.9	3.1			10			0	0		
Siena	28.62	727.0	29.82	757.4	59.4	15.2	85	WSW	0.7	0.3			10	WSW		0.220	5.6		
Urbino	28.35	720.0	29.89	759.3	56.7	13.7	92	SE			2		10			0.217	5.5		
Pesaro																			
Ancona			29.91	759.6	59.4	15.2	85	NW			4		10			0.039	1.0		
Grosseto			29.86	758.5	61.9	16.6	79	NW			2		10			0	0		
Rome			29.83	757.6	60.4	15.8	90	NNW	3.1	1.4			10			0.146	3.7		
Naples, O. U.			29.86	758.4	72.5	22.5	46	SSW			2		10	S		0	0		
Lecce			29.98	761.6	75.9	24.4	29	WSW	17.4	7.8			9			0	0		
Cosenza			29.91	759.8	69.3	20.7	71	N	2.5	1.1			10			0	0		
Riposto, (Sicily)			29.90	759.4	66.6	19.2	71	NE			2		5	NW		0	0		
Palermo			29.77	756.2	59.4	15.2	85	NE	8.1	3.6			10			0	0		
Caltanissetta	27.81	706.5	29.75	755.6	63.9	17.7	49	E			6		10	W		0.126	3.2		
Sub-Series.																			
Naples, S. R.			29.86	758.4	67.6	19.8	68	SW	1.3	0.6				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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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.
Tokio																			

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			30.08	764.0	50.7	10.4		SE			1								
Groningen			29.99	761.7	50.0	10.0		NNE			2								
Helder			30.07	763.8	48.2	9.0		ENE			2								
Utrecht			30.02	762.5	53.8	12.1	73	NNE			1		10					Overcast	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			29.58	751.3	42.8	6.0	70	SSE	8.5	3.8			10			0.228	5.8		
Brönö			29.69	754.1	45.3	7.4	80	N	18	8			7			0	0		
Christiania			29.71	754.6	46.9	8.3	49	SSW	11.6	5.2			6			0	0		
Tromsö			29.68	753.8	39.9	4.4	85	NE	0	0			10			0.071	1.8		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1 h., 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 instrumental err (Inches.)	Barometer: Corrected for instrumental err (Millimeters.)	Barometer: Reduced to sea-level (Inches.)	Barometer: Reduced to sea-level (Millimeters.)	Temperature of the Air (Fahrenheit.)	Temperature of the Air (Centigrade.)	Relative Humidity (Per cent.)	Wind: Direction (From—)	Wind: Velocity (Miles per hour.)	Wind: Velocity (Meters per second.)	Wind: Force (0—10.)	Clouds: Amount Up'er (0—10.)	Clouds: Amount Low'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.
Angra, (Azores,)			30.30	769.6	62.8	17.1	80	W	4.9	2.19			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.15	765.9	64.4	18.0	41	WNW	10.6	4.75			3	NW		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.29	769.4	65.5	18.6	65	SW	7.4	3.32			8			0	0		Capt. D. A. da Cunha.
Lisbon			30.24	768.1	60.1	15.6	70	SSW	17.4	7.8			7			0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 hour, 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental err (Inches.)	Barometer: Corrected for instrumental err (Millimeters.)	Barometer: Reduced to sea-level (Inches.)	Barometer: Reduced to sea-level (Millimeters.)	Temperature of the Air (Fahrenheit.)	Temperature of the Air (Centigrade.)	Relative Humidity (Per cent.)	Wind: Direction (From—)	Wind: Velocity (Miles per hour.)	Wind: Velocity (Meters per second.)	Wind: Force (0—10.)	Clouds: Amount Up'er (0—10.)	Clouds: Amount Low'r (0—10.)	Clouds: Direction Upper (From—)	Clouds: Direction Lower (From—)	Rain-fall (Inches.)	Rain-fall (Millimeters.)	Weather.	Observer.
Warsaw			29.97	761.2	64.2	17.9	64	N	2	1			10						Astronomical Obs.
Wilna			29.95	760.6	63.7	17.6	56	NW	9	4			7						Astronomical Obs.
Dorpat			29.88	758.9	53.2	11.8	68	WNW	7	3			9						Physical Cabinet.
St. Petersburg			29.81	757.2	42.4	5.8	84	WNW	7	3			10						Central Physical Obs.
Kuopio			29.69	754.1	49.6	9.8	76	WSW	7	3			10						Ch. Forsten.
Kieff			30.00	761.9	76.5	24.7	36	S	9	4			4						Physical Cabinet.
Nikolaiev			30.26	768.5	77.0	25.0	40	S	18	8			6						Kurdakof.
Kertch			30.21	767.3	75.4	24.1	49	NE	4	2			7						Lagorio.
Moscow			29.84	758 0	75.0	24.2	50	SSW	9	4			3						Meteorological Obs.
Lugan			30.10	764.5	81.5	27.5	29	Calm	0	0			0						Meteorological Obs.
Archangel			29.66	753.4	42.3	5.7	85	Calm	0	0			10						Ogorodnikof.
Tiflis	28.87	730.9	30.18	766.6	62.1	16.7	57	SE	13	6			9						Physical Observatory.
Astrakhan			30.34	770.5	63.5	17.5	43	SE	13	6			5						Sebastianof.
Kasan	29.75*	755.7*	29.49†	749.0†	56.8	13.8	70	SW	9	4			10						Physical Cabinet.
Orenburg			30.19	766.8	54.3	12.4	28	SE	4	2			0						Tschernischef.
Ekaterinburg	28.87	733.4	29.86	758.4	50.5	13.6	54	SW	9	4			8						Meteorological Obs.
Nukuss			30.18	766.5	70.0	21.1	29	ENE	4	2			9						
Kasaly																			Bobrof.
Tashkend	28.76	730.5	30.50	774.6	54.5	12.5	68	Calm	0	0			5						Michelson.
Barnaul			30.35	770.9	23.9	— 4.5	58	Calm	0	0			0						Meteorological Obs.
Yeniseisk			30 15	765.9	20.7	— 6.3	43	SW	2	1			0						Marks.
Irkutsk	28.76	730.5	30.23	767.8	21.7	— 5.7	46	NW	9	4			10						Usolzof.
Oorga																			Mossin.
Peking, (China)			29.86	758.5	73.2	22.9	38	SSE	4	2			9						Physical Observatory.
Nertchinsk	27.72	704.2	29.8	757.4	35.4	1.9	45	NW	7	3			0						Meteorological Obs.
Vladivostock			30.02	762.5	41.4	5.2	92	Calm	0	0			10						
Nikolaievsk, on the Amoor					29.5	— 1.4	96	Calm	0	0			0						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis 18 40[illegible] meters, or 1,111.8 feet; Ekaterinburg, 1[illegible] m. or 1,915.2[illegible] ft.; Tashkend, m 4[illegible].2[illegible], or 1,621.3[illegible] ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0[illegible] m., or 1,942.2[illegible] ft.; Oorga, 1,281.0[illegible] m., or 4,202.6[illegible] ft. *Evidently reduced reading. †Evidently unreduced reading.

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.

Stations.	Barometer: Corrected for instrumental err (Inches.)	Barometer: Corrected for instrumental err (Millimeters.)	Barometer: Reduced to sea-level (Inches.)	Barometer: Reduced to sea-level (Millimeters.)	Temperature of the Air (Fahrenheit.)	Temperature of the Air (Centigrade.)	Relative Humidity (Per cent.)	Wind: Direction (From—)	Wind: Velocity (Miles per hour.)	Wind: Velocity (Meters per second.)	Wind: Force (0—10.)	Clouds: Amount Up'er (0—10.)	Clouds: Amount Low'r (0—10.)	Clouds: Direction Upper (From—)	Clouds: Direction Lower (From—)	Rain-fall (Inches.)	Rain-fall (Millimeters.)	Weather.	Observer.
Madrid			30.08	763.9	60.4	15.8	35	NW	19.4	8.67		0	5			0	0	Cloudy	Royal Observatory.
San Fernando			30.24	768.2	59.9	15.5	65	WNW	11.9	5.3		0	0			0	0		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; 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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental err (Inches.)	Barometer: Corrected for instrumental err (Millimeters.)	Barometer: Reduced to sea-level (Inches.)	Barometer: Reduced to sea-level (Millimeters.)	Temperature of the Air (Fahrenheit.)	Temperature of the Air (Centigrade.)	Relative Humidity (Per cent.)	Wind: Direction (From—)	Wind: Velocity (Miles per hour.)	Wind: Velocity (Meters per second.)	Wind: Force (0—10.)	Clouds: Amount Up'er (0—10.)	Clouds: Amount Low'r (0—10.)	Clouds: Direction Upper (From—)	Clouds: Direction Lower (From—)	Rain-fall (Inches.)	Rain-fall (Millimeters.)	Weather.	Observer.
Haparanda			29.68	753.9	37.0	2.8	93	S			2		10			0.236	6.0		
Umea			29.67	753.6	38.1	3.4	93	SSW			2		6			0.476	12.1		
Hernosand			29.61	752.1	38.8	3.8	87	SW			2		10			0	0	Raining	
Stockholm			29.75	755.7	48.7	9.3	52	WSW			4		4			0	0		
Wisby			29.95	760.8	44.2	6.8	80	W			4		5			0	0		
Sub-Series.																			
Upsala			29.76	755.9	46.9	8.3	42	SW	21.5	9.6			1		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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.54	725.0	29.97	761.2	54.3	12.4	54	NNE			3		9			0.098	2.5	Covered	The Observatory.
Zurich	28.36	720.3	30.01	762.2	50.7	10.4	78	N			2		10			0.276	7.0	Raining	The Observatory.

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +0.7 mm.; Thermometer, —0.7 cent.; Relative Humidity, —3 per cent.

NOTE.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.15	765.7	57.4	14.1	73	NNE	9	4.0			0			0	0		
Fao, (Persian Gulf)			30.04	763.0	84.2	29.0		NW			3		10						
Salonica			30.11	764.9	86.4	30.2		SE			1		0						
Valona			29.95	760.7	77.4	25.2		SW			1		2						
Varna			30.08	764.0	57.2	14.0		NE			2		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.92	760.0	82.9	28.3	32 ?	N			1		0			0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.																			Hon. J. Ferguson.
Brockville, Ontario			30.06	763.5	38	3.3		Calm	0	0			10s		W	0.02	0.5	Light rain	W. R. Bigg.
*Chatham, N. B.			30.09	764.3	31	— 0.6	97	N	7	3.1			10s		N	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			30.10	764.5	34	1.1	76	SE	5	2.2			10s			Inap.	Inap.	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.97	761.2	47.0	8.3	66	E			1	9k		N		0	0	Fair	James Smith, M. A.
Dalhousie, N. B.																0	0		H. A. Johnson.
Esquimault, B. C.			29.92	760.0	47.3	8.5	85	NE	3	1.3		9cs				0.02	0.5	Cloudy	W. H. Bevis.
Fredericton, N. B.			30.09	764.3	36.0	2.2	72	NE	1	0.4		2c				0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			30.15	765.8	31	— 0.6	84	E	10	4.5		2cs	Haze			0	0	Fair	James Stewart.
Goderich, Ontario			30.10	764.5	35.7	2.1	82	Calm			0		10n			0.064	1.62	Cloudy	H. J. Strang, M. A.
Granton, Ontario			30.08	764.0	37.0	2.8		N			1					0.50	12.7	Clear	James Grant.
*Halifax, N. S.			30.08	764.0	38	3.3	87	SE	7	3.1		5ck	0			Inap.	Inap.	Fair	F. Allison, M. A.
*Kingston, Ontario			30.03	762.7	43	6.1	83	Calm	0	0		2k	0	NW		0	0	Clear	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			30.01	762.2	39	3.9	73	NE	5	2.2		2cs	5ks			0.02	0.5	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.99	761.7	38	3.3	72	NW	6	2.7		10k	0	NW		0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario			30.07	763.8	35	1.7	90	NE	4	1.8		2k	2ks	NW	NW	0	0	Fair	Rev. R. Mooley.
*Port Dover, Ontario			30.04	763.0	39	3.9	73	NW	10	4.5		0	0			0.36	9.1	Clear	H. Morgan.
Port Hastings, N. S.			30.12	765.0	38.7	3.7		NW	6	2.7						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.06	763.5	39	3.9	69	NW	9	4.0		0	0			0.40	10.2	Clear	M. Payne.
*Quebec, Quebec			30.07	763.8	34	1.1	79	NE	15	6.7		8k	2n	NE	SE	0	0	Fair	Capt. Ash, R. N.
St. John, N. B.			30.10	764.5	38	3.3	91	Calm	0	0		k				0	0		G. Murdoch, C. E.
*Sangeen, Ontario			30.03	762.7	34	1.1	52	W	6	2.7			10n			0	0	Cloudy	K. Stewart.
Stayner, Ontario																			R. J. Cole.
Stratford, Ontario			30.05	763.3	38.2	3.4	70	SW	10	4.5						0.267	6.78	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			30.11	764.8	38	3.3	66	NW	4	1.8		Haze	0ks		N	0.01	0.3	Fair	T. C. Hill.
*Toronto, Ontario			30.03	762.7	39	3.9	87	NW	6	2.7		5ck	0	NW		0.25	6.3	Fair	Magnetic Observatory.
Woodstock, Ontario			29.99	761.7	39.4	4.1	72	N			2	0	0			0	0	Fine	J. Montgomery.

NOTE.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	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.			29.94	760.5	42	5.6	83	Calm	0	0			10ks		W	0.08	2.0	Cloudy	
Alpena, Mich.			30.06	763.5	39	3.9	63	NW	8	3.6		0	0			0.04	1.0	Clear	
Atlantic City, N. J.			29.98	761.5	49	9.4	85	SW	4	1.8		2cs	Haze	SW		0	0	Fair	
Augusta, Ga.			30.05	763.3	63	17.2	78	Calm	0	0		5cs	Haze			0	0	Fair	
Baltimore, Md.			29.98	761.5	51	10.6	73	SW	2	0.9		5c	2s			0	0	Fair	
Barnegat, N. J.			30.00	762.0	52	11.1	79	SW	3	1.3		1c	Haze			0	0	Fair	
Benton, Montana	27.17	690.1	29.97	761.2	37	2.8	37	SW	6	2.7		2c	0			0	0	Fair	
Bismarck, Dakota	28.20	716.3	29.86	758.4	42	5.6	91	E	4	1.8			10n			0.83	21.1	Light rain	
Boston, Mass.			29.97	761.2	42	5.6	100	SE	3	1.3		10n	Fog	SE		Inap.	Inap.	Light rain	
Breckenridge, Minn.			29.98	761.5	41	5.0	65	E	14	6.3			10n			0.05	1.3	Light rain	
Buffalo, N. Y.			30.00	762.0	34	1.1	100	SW	4	1.8			Fog		SW	0.36	9.1	Foggy	
Burlington, Vt.			29.93	761.5	43	6.1	67	Calm	0	0		5ck	2s			0	0	Cloudy	
Cairo, Ill.			29.88	758.9	63	17.2	72	S	4	1.8			10s		NW	0.13	3.3	Cloudy	
Cape Hatteras, N. C.			29.96	761.0	63	17.2	88	S	1	0.4			10s		SW	0.04	1.0	Cloudy	
Cape Henry, Va.			30.31	762.2	55	12.8	87	SW	1	0.4		Haze	Haze			0.04	1.0	Hazy	
Cape Lookout, N. C.			30.04	763.0	64	17.8	94	SW	7	3.1		1c	2ck	W	W	0	0	Fair	
Cape May, N. J.			29.99	761.7	50	10.0	78	S	6	2.7		Haze	0			0	0	Fair	
Charleston, S. C.			30.07	763.8	67	19.4	79	SW	4	1.8		0	Haze			0	0	Clear	
Cheyenne, Wyoming	23.99	609.3	29.93	760.2	39	3.9	71	NW	12	5.4		0	0			0	0	Clear	
Chicago, Ill.			30.02	763.5	44	6.7	67	NE	14	6.3			10s			0	0	Cloudy	
Cincinnati, Ohio			29.86	761.0	54	12.2	67	E	2	0.9			10s			0	0	Cloudy	
Cleveland, Ohio			30.07	763.8	39.3	4.1	89	N	5	2.2		2c	5s	W	W	0.01	0.3	Fair	
Colorado Springs, Col.	24.05	610.9	29.82	760.0	45	7.2	67	NW	7	3.1		0	0			0	0	Clear	
Corsicana, Tex.			29.86	758.4	67	19.4	84	S	12	5.4		10k	0	S		0	0	Cloudy	
Davenport, Iowa			29.90	759.4	51	10.6	59	E	20	8.9			10s			0	0	Cloudy	
Denison, Tex.			29.71	754.6	69	20.6	74	S	24	10.7			10s			0	0	Cloudy	
Denver, Col.	24.76	628.6	29.88	761.5	47	8.3	70	S	1	0.4		0	0			0.02	0.5	Clear	
Detroit, Mich.			30.07	763.8	41	5.0	65	NW	4	1.8		5ck	0	NW		0.01	0.3	Fair	
Dodge City, Kan.	27.15	689.6	29.34	745.2	58	14.4	93	W	20	8.9		0	10s		W	0	0	Cloudy	
Dubuque, Iowa			29.99	761.7	47	8.3	62	E	4	1.8			10s			0	0	Cloudy	
Duluth, Minn.			30.14	765.5	39	3.9	63	Calm	0	0		8c	0			0	0	Fair	
Eastport, Me.			30.03	762.7	42	5.6	83	S	5	2.2			10s			0	0	Cloudy	
Erie, Pa.			30.02	762.5	39	3.9	91	W	8	3.6			Fog			0.15	3.8	Foggy	
Escanaba, Mich.			30.14	765.5	34	1.1	69	N	7	3.1		0	0			0	0	Clear	
Fort Gibson, Indian Terr.			29.85	758.1	72	22.2	54	S	18	8.0		0	0			0	0	Clear	
Ft. St. Michaels, Alaska			29.97	761.2	25	— 3.9		NE	20	8.9			10s					Threatening	
Fort Sill, Indian T.	28.48	723.4	29.[illegible]	75[illegible]	66	18.9	73	SW			6	5cs	0	SW		0	0	Fair	
Fort Sully, Dakota																			
Galveston, Tex.			30.05	762.0	70	21.1	90	S	11	4.9		2c	0	W		0	0	Fair	
Grand Haven, Mich.			30.09	764.3	45	7.2	53	SE	5	2.2			10s			0	0	Cloudy	
Indianapolis, Ind.			29.97	761.2	52	11.1	50	E	4	1.8			10n			0.03	0.8	Light rain	
Indianola, Tex.			29.96	761.0	71	21.7	90	S	12	5.4		Haze	2ks		S	0	0	Fair	
Jacksonville, Fla.			30.11	765.5	71	21.7	71	S	3	1.3		0	0			0	0	Clear	
Keokuk, Iowa			29.76	755.9	54	12.2	87	SE	24	10.7			10n		SE	0.12	3.0	Light rain	
Key West, Fla.			30.00	764.3	75.8	24.3	76	E	12	5.4		0	2ks		E	0.16	4.1	Clear	
Kittyhawk, N. C.			30.02	762.5	58	14.4	94	SW	3	1.3		5k	5s	W		0.03	0.8	Cloudy	
Knoxville, Tenn.			30.01	762.2	53	11.7	93	Calm	0	0			10n			0.05	1.3	Misting	
La Crosse, Wis.			30.[illegible]	762.2	47	8.3	62	E	3	1.3			10s			0	0	Cloudy	
Leavenworth, Kan.			29.64	752.8	61	16.1	94	NE	1	0.4			10s		SW	1.14	29.0	Threatening	
Lexington, Ky.	28.89	733.9	29.99	761.7	50	10.0	100	E	4	1.8			10s			0.17	4.3	Cloudy	
Long Branch, N. J.			29.97	761.2	47	8.3	85	S	6	2.7			10ks		SW	0	0	Cloudy	
Louisville, Ky.			29.95	761.0	55	12.8	87	SE	8	3.6			10s		SE	0.04	1.0	Threatening	
Lynchburg, Va.			30.01	762.2	56	13.3	68	Calm	0	0		10c	Sm'e	W		Inap.	Inap.	Cloudy	
Malone, N. Y.			29.94	760.5	47	8.3	91	NE	1	0.4		2ck	2s	W	W	0.01	0.3	Fair	
Manhattan, Kan.	28.51	724.1	29.61	752.1	58	14.4	87	SW	4	1.8		2c	0			3.62	91.9	Clear	
Marquette, Mich.			30.16	766.1	37	2.8	81	NW	8	3.6		0	0			0	0	Clear	
Memphis, Tenn.			29.94	760.5	66	18.9	73	S	5	2.2			10s		W	0	0	Cloudy	
Milwaukee, Wis.			30.10	764.5	39	3.9	63	E	5	2.2			10s			0	0	Cloudy	
Mobile, Ala.			29.98	761.0	63	17.2	83	Calm	0	0		0	Sm'e			0	0	Clear	
Montgomery, Ala.			30.08	764.0	64	17.8	75	S	4	1.8		10c	Haze			0	0	Cloudy	
Morgantown, N. V.			29.94	760.5	55	12.8	73	Calm	0	0		1c	2s	W	W	0	0	Fair	
Mt. Washington, N. H.	23.51	597.1	29.87	758.7	27	— 2.8	100	Calm	0	0			10n			0.40	10.2	Light snow	
Nashville, Tenn.			29.92	760.0	59	15.0	81	Calm	0	0		10k	0	W		0	0	Cloudy	
New Haven, Conn.			29.97	761.2	52	11.1	73	S	4	1.8		10k	0	W		0.03	0.8	Cloudy	
New London, Conn.			29.98	761.5	44	6.7	84	SE	12	5.4			10s		SW	Inap.	Inap.	Threatening	
New Orleans, La.			30.04	763.0	65	18.3	81	S	3	1.3		2c	0	W		0	0	Clear	
Newport, R. I.			30.01	762.0	44	6.7	84	S	8	3.6			10s		S	0	0	Threatening	
New York, N. Y.			29.97	761.2	47	8.3	69	Calm	0	0		5ck	0	W		0.02	0.5	Fair	
Norfolk, Va.			30.[illegible]	762.7	56	13.3	80	S	5	2.2		8k	Sm'e			Inap.	Inap.	Fair	
North Platte, Neb.			29.38	745.7	56	13.3	75	N	10	4.5		5c	Haze			0	0	Fair	
Omaha, Neb.	26.89	683.0	29.67	753.4	57	13.9	93	E	8	3.6			10s		SE	0.67	17.0	Cloudy	
Oswego, N. Y.	28.64	727.4	29.98	761.5	41.8	5.4	95	W	2	0.9			10s			0.11	2.8	Cloudy	
Pembina, Dakota			30.03	763.5	36	2.2	80	E	8	3.6		5c	0			0	0	Fair	
Philadelphia, Penn.			29.98	761.5	48	8.9	79	SW	5	2.2		2ck	Sm'e	W		0	0	Fair	
Pike's Peak, Colorado	17.73	450.3	29.94	760.5	19	— 7.2	100	SW	28	12.5			Fog			0	0	Foggy	
Pittsburgh, Penn.			29.95	761.7	45	7.2	84	NW	6	2.7		8cs	0	NW		Inap.	Inap.	Fair	
Port Huron, Mich.			30.03	763.5	39	3.9	72	NW	6	2.7		1c	0			0	0	Clear	
Portland, Me.			30.01	762.2	43	6.6	83	E	6	2.7			10n			0.07	1.8	Light rain	
Portland, Oregon			29.95	760.7	47	8.3	85	Calm	0	0			10s			0.36	9.1	Cloudy	
Punta Rassa, Fla.			30.12	765.0	72.0	22.0	75	E	8	3.6		Haze	Sm'e	E		0	0	Hazy	
Rochester, N. Y.			29.97	761.2	44	6.7	84	NW	3	1.3			10k		SW	0.04	1.0	Cloudy	
Salt Lake City, Utah			29.96	761.0	40	4.4	56	Calm	0	0		0	0			0.16	4.1	Clear	
Sandy Hook, N. J.	25.63	651.0	29.95	76[illegible].7	50	10.0	77	S	6	2.7		0	5ks		SW	0	0	Fair	
San Diego, Cal.			30.12	765.0	50	10.0	100	NE	8	3.6		0	0			0	0	Clear	
San Francisco, Cal.			30.12	765.0	50	10.0	86	SW	4	1.8		Haze	2s			0	0	Hazy	
Santa Fe, N. M.			29.78	756.4	44	6.7	75	E	4	1.8		1ck	2s	SE	NW	0	0	Fair	
Savannah, Ga.	23.24	590.3	30.09	764.3	70	21.1	69	W	6	2.7		0	Sm'e			0	0	Smoky	
Shreveport, La.			29.99	761.7	64.5	18.1	86	S	6	2.7		5c	0	W		0	0	Fair	
Smithville, N. C.			30.04	763.0	66	18.9	84	SW	12	5.4		8ck	0	W		0	0	Cloudy	
Springfield, Mass.			29.95	760.7	45.5	7.6	76	Calm	0	0			10ks			0.08	2.0	Cloudy	
St. Louis, Mo.			29.76	755.9	59	15.0	94	S	1	0.4			10s		S	0.03	0.8	Cloudy	
St. Marks, Fla.			30.13	765.3	60	15.6	88	Calm	0	0		2cs	0			0	0	Fair	
St. Paul, Minn.			29.97	761.2	48	8.9	36	E	7	3.1		8ck,cs	0	W		0	0	Fair	
St. Paul's Island, Alaska			29.68	753.0	33	0.6	100	SSE	7	3.1			10s			0.65	16.5		
Thatcher's Island, Mass.			29.99	761.7	42	5.6	91	SW	10	4.5			10s		SW	0	0	Cloudy	
Toledo, Ohio			30.04	763.0	46	7.8	70	N	2	0.9		8cs	Haze			0	0	Fair	
Tucson, Arizona	27.53	699.2	30.12	765.0	70	21.1		SE				0	0			0	0	Clear	
Tybee Island, Ga.			30.00	763.5	68	20.0	68	SW	4	1.8		2c	Sm'e			0	0	Fair	
Vicksburg, Miss.			30.01	762.7	64	17.8	88	SW	7	3.1		2c	2k		SW	0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Virginia City, M. T.	24.27	616.4	29.75	755.6	27	— 2.8	55	Calm	0	0		1c	0	W		0.08	2.0	Clear	
Washington, D. C.			29.99	761.7	52	11.1	79	SW	8	3.6		10cs	Haze	W		0	0	Cloudy	
Wilmington, N. C			30.02	762.5	66	18.9	78	SW	6	2.7			10s		W	0	0	Cloudy	
Wood's Holl, Mass			30.01	762.2	46	7.8	68	S	12	5.4			10s		S	0	0	Cloudy	
Wytheville, Va	27.67	702.8	29.80	756.9	54	12.2	86	Calm	0	0			10s		W	0.15	3.8	Cloudy	
Yankton, Dakota	28.52	724.4	29.79	756.7	48	8.9	85	E	12	5.4			10s			0.45	11.4	Cloudy	
Yuma, Arizona			29.97	761.2	64	17.8		W				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.09	764.3	79	26.1	78	NE	7	3.1		5ck	2ks	NE	E	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.01	762.2	80	26.7	78	SE				5cs	5ks			1.48	37.6	Fair	L. V. Bigard.
St. Thomas, St. T., W. I			30.25	768.3	77	25.0	81	E	3	1.3		4ck	8kn	E		0	0	Cloudy	W. S. Cameron.
Kingston, Jamaica, W. I.			30.19	766.8	76	24.4	76	Calm	0	0		5c	n			0	0		James Gall.
Santiago de Cuba, W. I.			29.79	756.7	75	23.9	76	NE	6.0	2.7		8c	8s	NE		1.3	33.0	Cloudy	Robert Mason.
Havana, Cuba, W. I.			30.07	763.8	77	25.1	78	NE	2.4	1.1		0	0			0	0	Clear	Charles Hasselbrink
St. Georges, Bermudas			30.20	767.1	66.0	18.9	66	SW	8.0	3.6		0	10k			0	0	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.17	690.1	29.98	761.5	66	18.9	90	N	0.5	0.2		2c	0	NE		1.05	26.7	Fine, clear	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.02	762.5	80	26.7	78	E			2		5k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.07	763.7	85.6	29.8										0.108	2.75		Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640.6			65.0	18.3	83		2	0.9		6ck	2s			0.03	0.8	Cloudy	Thomas Herran.
St. John's, Newfoundland.			30.05	763.3	34.0	1.1	79	NE				10k	10s			0.01	0.3	Cloudy	John Delaney.
York Factory, B. A.			30.18	766.6	26	— 2.2	94	S	4	1.8		0	0			0	0		J. Fortescue.
Honolulu, Oahu, H. I.			30.12	765.0	72	22.2	90	NE			5					0.17	4.3		E. P. Church.
Makawao, Maui, H. I.	27.84	707.1	30.00	762.0	54	12.2	87	NE	2.4	1.1		0	2k		NE	0	0		F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Peruvian, N. 43° 00′, W. 54° 36′.	W	12	29.91	759.7	48	8.9		W			3		0			Smooth		Clear	Capt. W. Richardson.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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 APRIL 24, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.22	767.5	69.4	20.8	36	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.16	766.1	66.2	19.0	63	NW			3		3			0	0	Fair	Peter.
La Calle					65.3	18.5		NW			2		3			0.177	4.5	Fair	Kunts.
Tunis			30.14	765.5	70.3	21.3	40	W			3		6			0	0	Fair	Jacques.
Sfax			30.16	766.0	68.4	20.2	51	SSE			2		3			0.102	2.6	Fair	Chauvey.
Saïda			30.2[illegible]	767.0	66.2	19.0	34	NNW			2		1			0	0	Clear	Millot.
Tebessa			30.09	764.2	61.7	16.5		W			3		6			0	0	Fair	Colin.
Geriville			30.20	767.0	57.4	14.1	33	NNW			2		1			0	0	Clear	Buard.
Laghouat			30.21	767.3	73.4	23.0	31	NW			2		0			0	0	Clear	Guyot.
Biskra			30.18	766.6	83.8	28.8	21	NW			1		3			0	0	Fair	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	758.6	77.0	25.0	51	SW			2		8			0	0		Prof. Ivan Stosir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.95	760.6	76.3	24.6	60	NE			2		8			0	0		I. R. Observatory.
Eperies			29.89	759.1	79.2	26.2	44	S			3		0			0	0		Julius Mikolik.
Gratz	28.72	729.5	29.88	758.9	71.4	21.9	54	S			2		5			0	0		Andreas Rospini.
Hermannstadt	28.54	725.0	29.88	759.0	80.4	26.9	21	SE			5		0			0	0		Prof. Reissenberger.
Kremsmünster			29.84	757.8	64.8	18.2	77	ENE			2		8			0	0		Prof. C. Wagner.
Lemberg			29.87	758.7	75.4	24.1	46	S			1		0			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsauda Daniel.
Pola			29.87	758.8	59.9	15.5	87	E			3		10			0.029	0.73		I. R. Hydrographic Office
Szegedin			29.87	758.8	82.2	27.9	19	S			2					0	0		Karl Stancel.
Trieste			29.91	759.8	63.3	17.4	72	NE			1		10			0.098	2.5		Prof. V. Farolfi.
Vienna			29.84	757.9	78.3	25.7	32	SE			2		4			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.08	764.0	55.6	13.1	76	E			1	8		SSW		0.002	0.05		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0 10.	Clouds. Amount. Low'r 0 10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.04	763.0	42.2	5.7		SE	30	13.4			9			0	0	*D. clouds	William Boswell.
Ardrossan			29.86	758.4	51	10.6		ESE			2		7					*D. clouds	William McNeil.
Armagh Observatory			29.75	755.6	48.9	9.4		SE	21	9.4			7					Squally	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.89	759.2	53.2	11.8		SE	17	7.6			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.72	754.9	56.4	13.6		SW			1		10					*D. clouds	J. Dreyer.
Bradford			29.94	760.5	54.7	12.6		SE			2		10			0.22	5.6	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			29.99	761.7	85.0	29.4		NE			2		5					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge Observatory			30.02	762.5	59.0	15.0		SW			1		10					Threatening	H. Todd.
Cardington			30.00	762.0	62.0	16.7		S			1		7					*D. clouds	John McLaren.
Carlisle			29.87	758.7	58.1	14.5		S			2		8			0.04	1.0	*D. clouds	T. Bell, for J. Carmell.
Chatham, School M. E			30.05	763.3	62.0	16.7		W			0		8					Blue sky	Capt. J. Fellowes, R. E.
Dartmoor	28.56	725.4	30.08	764.0	47.2	8.4		S			6		10					Raining	R. E. Power.
Donaghadee			29.79	756.7	46	7.8		SE			3		10					Raining	J. Mac Gowan.
Dover			30.08	764.0	54	12.2		SW			2		2					½ clouded	J. Costello.
Eccles, (near Manchester.)			29.93	760.2	53.7	12.1		SE	4.6	2.1			10					Gloomy	Thomas Mackereth.
Falmouth Observatory			29.97	761.2	52.0	11.1		SSW	28	12.5			10					Rain and fog	The Staff.
Fort Napier, (Natal)	27.72	704.1	29.95	760.7	69.4	20.8		SE			3		1					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.93	760.2	88	31.1		N			0		6					*D. clouds	
Galway, Queen's College			29.94	760.5	52	11.1		S			1		4					Showery	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.17	766.3	66.8	19.3		W			5		1					*D. clouds	Corp'l C. Aitken, A. H. C.
Glasgow Observatory			29.86	758.4	49.0	9.4		E			1		10					Gloomy	Lewis Stuart.
Great Yarmouth			30.08	764.0	49	9.4		SSE			3		4					Hazy	G. T. Watson.
Greenwich Royal Obs			30.06	763.5	63.1	17.3		SSW			1		7					*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.07	763.8	57.5	14.2		SSW			2		4					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.97	761.2	53.4	11.9		S			2		3			Blank	Blank	Threatening	L. J. Crossley.
Helston			29.94	760.5	54	12.2		SW			4		10n			0	0	Misty	M. P. Moyle.
Holyhead			29.81	757.2	51	10.6		SSW			4		10					Raining	John Tilston.
Kew Observatory			30.05	763.3	58.4	14.7		SSW	15	6.7			7					*D. clouds	The Staff.
Kingstown			29.76	755.9	53	11.7		SSE			5		4					*D. clouds	George Mitchell.
Leicester Museum			30.01	762.2	56.0	13.3		S			1		10					Threatening	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.03	762.7	64.6	18.1		NW			2		6k						Fred. Travis, Pvt. A.H.C.
Nairn			29.96	761.0	48	8.9		ESE			1		8					¾ clouded	W. D. Penny.
Nassau, Bahamas																			Surg. Maj. Henry.
Nottingham			29.99	761.7	59.3	15.2		SSW			4		7k		S	0.077	1.96	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.98	761.5	54.2	12.3		S			3		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.76	755.9	58	14.2		S			2		7					D. clouds	J. Lucas.
Plymouth			29.98	761.5	52.1	11.2		S			4		10					Drizzling	John Merrifield.
Roche's Point			29.78	756.4	53	11.7		SW			4		5					½ clouded	W. Kennedy.
Saint Ann's Head			29.86	758.4	49	9.4		SSW			4		10					Raining	John C. Walker.
Saint Helier, Jersey)			30.09	764.3	59.0	15.0		S			2		2					¼ clouded	A. P. Amy.
Sandwick Manse (Orkneys			30.05	763.3	44.6	7.0		SE	34	15.2			10					Misty	Rev. C. Clouston, LL. D.
Scarborough			29.99	761.7	49.2	9.6		SSE			3		9					Overcast	F. Shaw.
Scutari Cemetery (Turkey			30.05	763.3	61.2	16.2		NNE			2		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.96	761.0	58.4	14.7		SW			3		8			0.047	1.20	Showery	W. F. Cooper.
Silloth Rectory			29.88	758.9	57.6	14.2	67	SE			1		6			0.525	13.34	D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			29.92	760.0	51.4	10.2		S			3		10			Blank	Blank	Threatening	S. J. Perry.
Stornoway, Lews C. (Hebr.			29.90	759.4	49	9.4		SE			5		8					*D. clouds	John Smith.
Stratfield Turgiss					58.3	14.6		S			1		0					Blue sky	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			30.04	763.0	45	7.2		ESE			5		9					Gloomy	John Trotter.
Truro, Royal Institution.			29.97	761.2	54	12.2		SW			6		10					Raining	W. Newcombe.
Valencia Observatory			29.78	756.4	52.7	11.5		WSW	18	8.0			10					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man					47	8.3		SE			4		5						The Staff, for E. J. Stone.
Cape Good Hope Obs			30.21	767.3	66.2	19.0	59	S	24	10.7			1						Andrew Gibb.
Leith, Restalrig Park			29.94	760.5	48.0	8.9		SE			2		10ks			0	0	Cloudy	C. Meldrum.
Mauritius			30.04	763.0				ESE	18.1	8.1						0.04	1.0		J. Youngclause.
Monach Lt-house, Hebrides			29.80	756.9	42	5.6		SE			2		10			0	0		
North Unst, (Shetland Is.)			30.14	765.5	45	7.2		E			4	0	0						

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 270.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			30.21	767.3	44.6	7.0	66	NNE			2		3						
Fanöe			30.23	767.8	47.3	8.5	67	W			2		1						
Godthaab, (Greenland)			29.75	755.7	36.[illegible]	2.5	67	Calm			0		2						
Stykkisholm, (Iceland)			30.04	763.1	31.8	−0.1	94	E			4		8						
Thorshavn, (Faröe)			30.17	766.3	45.2	7.3	83	ESE			4		10						
Vestervig			30.20	767.1	46.4	8.0	83	W			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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.71	754.5	55.0	12.8	71	SW			1	2c		SW		0	0	Slightly cl'dy	Normal School.
Amiens			30.21	767.4	59.4	15.2	78	SW			3		0			0	0	Clear	Normal School.
Avignon			29.87	758.6	57.4	12.6	79	N			3		8		N	0.04	1.	Raining	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.10	764.6	63.3	17.4	43	Calm			0		5		WNW	0	0	Cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			30.13	765.4	54.4	13	78	N			2		2		N	0	0	Slightly cl'dy	Normal School.
Brest			30.03	762.8	59.9	15.5	75	SW			2		8		SW	0.069	1.75	Misty	Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			30.04	763.1	56.7	13.7	43	N			3		10		N	0	0	Covered	Puy de Dome Obs.
Commercy			30.03	762.8	59.9	15.5	35	W			2	8c	10nk		W	0.098	2.5	Covered	Normal School.
Commune de Gréasque*			29.85	758.1	53.4	11.9	71	NW			2		10		NE	0.181	4.6		M. Kina.
Grenoble			29.88	759.0	52.5	11.4	75	N			4		10		N	0.148	3.75	Raining	Normal School.
Le Mans			30.13	765.4	57.6	14.2	61	NW			2		5		NW	0	0	Cloudy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier					54.1	12.3	87	NE			2		10			0.08	2.	Raining	Normal School.
Mâcon			29.98	761.5	55.4	13	77	WNW			2		10			0.063	1.6	Covered	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			29.91	759.6	53.6	12	80	NW			2		10		NE	0.20	5.	Covered	Normal School.
Orleans																			Normal School.
Paris Observatory			30.09	764.3	62.2	16.8	32	NNW			1		5	N	S	0	0	Cloudy	National Observatory.
Parthenay																			Normal School.
Privas			29.95	760.6	52.9	11.6		NNW			6		10		N	0.08	2.	Covered	Normal School.
La Roche-sur-Yon			30.19	766.7	59.7	15.4	65	SSW			2		5		E	0.004	0.1	Cloudy	Normal School.
Rochefort, Observatory			30.19	766.8	65.8	18.8	54	WNW			3		2		E	0	0	¼ covered	Naval Observatory.
Rouen			30.15	765.7	65.7	18.7	41	SSW			1		5		S	0	0	Cloudy	Normal School.
Saint Lo			30.12	765.0	62.6	17	57	W			4		7		W	0.004	0.1		Normal School.
Tarbes	29.13	739.8			51.8	11		W			4		10		E	0.08	2.	Covered	Normal School.
Toulouse																			Normal School
Villefranche			29.98	761.4	56.7	13.7	94	NNW			4		10		N	0	0	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.8	80.6	27	84	NE			2		5kn			0	0		L'Abbé Marchési.
Gorée																			
Marseilles			29.79	756.7	57.7	14.3	77	NW			2		10			0.008	0.20		Marseilles Observatory.
Mont-Louis	28.76	630.4	30.13	765.4	38.1	3.4	82	NNW	18.6	8.33			10		NW	0	0		—. Faiguère.
Montsouris, Paris			30.08	764.1	63.0	17.2	39	N			2		7		S	0	0		Montsouris Observ'tory.
Perpignan			30.00	762.0	55.9	13.3	56	NW	29.8	13.33			9		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.09	764.2	64.8	18.2	31	NW			1		5			0	0		E. Renou.
Toulouse			30.19	766.9	55.0	12.8	64	NNW			4		7			0.051	1.3		Toulouse Observatory.
Tours			30.13	765.4	59.4	15.2	50	NW			2		3		NW	0	0		C. Marquet.
Versailles, (near Paris)			30.10	764.4	64.0	17.8	36	NW			2		7			0	0		Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Leu, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 312 m., or 1,023.9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,356 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
*Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.93	760.2	56.7	13.7	82	NNE			4		10	NE		0.157	4.0		Prof. T. Hoh.
Berlin			30.13	765.3	49.1	9.5	60	NE			2		10			0.051	1.3		Prof. Arndt.
Breslau			30.03	762.7	70.9	21.6	63	NE			3		10			Blank	Blank		Dr. P. Neugebauer.
Carlsruhe			29.98	761.6	50.4	10.2	95	N			4		10			0.315	8.0	Raining	A. Senz.
Cassel			30.02	762.5	48.7	9.3	79	NE			2		10	SW		0.043	1.1		Dr. H. Mönl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main			30.08	764.1	51.8	11.0	79	NNE			4		9			0.039	1.0		Physical Society.
Friedrichshafen	28.51	724.1	30.07	763.6	50.0	10.0	86	W					10			0.157	4.0	Light rain	M. Wilhelm.
Hamburg			30.21	767.4	47.1	8.4	82	NE			3		10			0.035	0.9	Cloudy, foggy	Deutsche Seewarte.
Kiel			30.23	767.7	47.5	8.6	53	NE			2		10			0	0		Prof. G. Karsten.
Königsberg			30.18	766.5	50.7	10.4	38	N			2		6			Inap.	Inap.		Prof. E. Lether.
Köslin			30.27	768.8	47.1	8.4		NE			1		4			0	0		H. Müller.
Leipsic			30.10	764.5	47.3	8.5	99	NE			3		10			0.087	2.2	Light rain	Prof. Brunns.
Memel			30.21	767.4	45.7	7.6	57	WNW			3		6			0	0		Reinbrecht & Skalweit.
Münster			30.13	765.3	55.4	13.0	66	NE			2		10			0	0		Prof. E. Heis.
Neufahrwasser			30.15	765.9	46.6	7.8	62	ENE			1		10			0	0		A. Lothes.
Posen			30.11	764.9	59.9	15.5	75	E			6		1			0.110	2.8		Dr. Magener.
Strassburg, (in Alsace)			30.02	762.4	52.3	11.3	84	NE			2		10	NE		0.059	1.5		Dr. Schur.
Stuttgart			29.95	760.8	52.7	11.5	86	N			1		10			0.067	1.7	Raining	Prof. Schoder.
Thorn			30.10	764.5	59.2	15.1	67	NE			4		3			0.035	0.9		Dr. Hasenbalg.
Treves, (Trier)			29.96	761.0	61.5	16.4	55	E			2		10			0	0		Prof. Flesch.
Wustrow, Naval School			30.14	765.5	45.7	7.6	65	NNW			2		10			0	0		E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.02	762.4	83.3	28.5		S										Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.93	760.1	62.4	16.9	71	SW	0.7	0.3			10			0	0		
Padua			29.87	758.6	59.4	15.2	90	E	11.2	5.0			10	E		0.098	2.5	Raining	
Vicenza			29.88	758.9	58.8	14.9	88	E	6.3	2.8			10	E		0.051	1.3		
Verona			29.84	757.8	62.2	16.8	91	SE			2		10			0.094	2.4	Light rain	
Bergamo	28.49	723.6	29.80	756.9	54.3	12.4	86	N			2		10			0.079	2.0	Raining	
Domodossola	28.85	732.7	29.87	758.6	51.8	11.0	98	Calm			0		10			0.299	7.6	Raining.	
Milan			29.85	758.3	57.0	13.9	88	E			1		10	E		0.946	24.0	Raining	
Pavia			29.80	756.8	57.6	14.2	87	NE			8		10	E		0.591	15.0	Raining	
Moncalieri			29.82	757.5	51.6	10.9	76	NNW	7.4	3.3			10			1.803	45.8	Raining	
Mondovi	27.91	708.8	29.82	757.5	48.0	8.9	77	NNW			2		10			0.197	5.0	Raining	
Porto Maurizio			29.85	758.3	56.3	13.5	91	E			2		10	SW		0.358	9.1	Raining	
Genoa			29.81	757.2	57.2	14.0	85	SE	1.8	0.8			8	SE		0.335	8.5		
Piacenza			29.80	756.9	57.9	14.4	88	E			4		10	E		0.362	9.2		
Parma			29.81	757.2	57.4	14.1	89	NE			4		9			0.087	2.2		
Bologna			29.87	758.7	62.1	16.7	46	NE			6		5	E		0.551	14.0		
Florence			29.86	758.5	62.0	17.0	70	SE			2		10	SE		0.126	3.2		
Leghorn			29.83	757.6	60.8	16.0	67	SSE	8.1	3.6			4			0.012	0.3		
Siena	28.63	727.2	29.83	757.6	59.4	15.2	70	SSE	4.3	1.9			7	SE		0.075	1.9		
Urbino	28.30	718.7	29.84	758.0	58.5	14.7	72	SE			2		8			0.413	10.5		
Pesaro																			
Ancona			29.88	758.9	59.4	15.2	87	ESE			4		10			0.106	2.7	Raining	
Grosseto			29.85	758.2	62.6	17.0	62	SSW			4		6	S		0.630	16.0		
Rome			29.74	755.4	63.3	17.4	67	SSW	12.5	5.6			4	SSW		0	0		
Naples, O. T.			29.98	761.5	65.5	18.6	61	SSW			4		4	S		0.512	13.0		
Lecce			29.93	760.2	72.7	22.6	51	SW	34.9	15.6			7			0	0		
Cosenza			29.99	761.7	68.6	20.3	67	NW	3.8	1.7			6			0	0		
Riposto, (Sicily)			29.99	761.7	63.1	17.3	87	ENE			2		8	SW		0	0		
Palermo			29.94	760.5	66.9	19.4	42	W	7.4	3.3			9			0	0		
Caltanissetta	28.00	711.1	29.93	760.2	59.0	15.0	58	W			6		4	E		0	0		
Sub-Series.																			
Naples, S. R.			29.98	761.4	60.8	16.0	61	SW	0.7	0.3			..c	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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.13	765.4	55.0	12.8		NW			2								
Groningen			30.10	764.5	54.3	12.4		ENE			4								
Helder			30.14	765.6	51.1	10.6		ENE			2								
Utrecht			30.07	763.8	61.0	16.1	.48	ENE			2		2					Light cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.15	765.7	47.1	8.4	67	W	6.5	2.9			5			0	0		
Brönö			30.15	765.7	38.1	3.4	63	N	27	12			9			0	0		
Christiania			30.13	765.2	54.3	12.4	38	SSW	2.0	0.9			0			0	0		
Tromsö			29.89	759.2	34.7	1.5	72	NE	2	1			10			0.146	3.7	Rain & snow	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	769.3	64.9	18.3	69	W	4.5	2.00			4			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.18	766.6	69.8	21.0	81	N	7.4	3.33			1			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.23	767.8	66.7	19.3	61	SW	8.0	3.58			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.28	769.2	63.9	17.7	45	NE	4.9	2.2			1	NW		0.039	1.0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 hour, 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.99	761.7	69.8	21.0	57	NNE	18	8			4						Astronomical Obs.
Wilna			30.11	764.7	59.6	15.5	56	NW	4	2			10						Astronomical Obs.
Dorpat			30.04	763.0	48.4	9.1	47	W	9	4			2						Physical Cabinet.
St. Petersburg			29.92	760.0	39.7	4.3	69	WNW	25	11			7						Central Physical Obs
Kuopio			29.73	755.1	42.8	6.0	87	W	18	8			0						Ch. Forsten.
Kieff			30.0[illegible]	762.1	78.6	25.9	27	SSW	13	6			4						Physical Cabinet.
Nikolaiev			30.20	767.1	81.0	27.2	26	SW	18	8			0						Kurdakof.
Kertch			30.17	766.4	74.5	23.6	51	Calm	0	0			1						Lagorio.
Moscow			30.00	762.1	63.7	17.6	52	SW	4	2			4						Meteorological Obs.
Lugan			30.05	763.3	83.8	28.8	24	WSW	13	6			0						Meteorological Obs.
Archangel			29.71	754.5	33.8	1.0	79	E	18	8			10						Ogorodnikof.
Tiflis	28.81	731.7	30.18	766.6	71.6	22.0	34	S	11	5			3						Physical Observatory.
Astrakhan			30.33	770.4	73.6	23.1	34	SW	18	8			5						Sebastianof.
Kasan			29.72	754.9	60.3	15.7	57	NW	4	2			5						Physical Cabinet.
Orenburg			30.11	764.9	49.6	9.8	42	NE	4	2			1						Tschernischef.
Ekaterinburg	28.65	727.6	29.63	752.6	50.9	10.5	62	W	11	5			9						Meteorological Obs.
Nukuss			30.19	766.7	72.5	22.5	20	NNE	11	5			3						
Kasalv																			Bobrof.
Tashkend	28.72	729.4	30.40	772.2	61.2	16.2	50	NNW	13	6			8						Michelson.
Barnaul			29.88	758.9	49.5	9.7	52	S	2	1			5						Meteorological Obs.
Yeniseisk			29.88	759.0	31.5	— 0.3	47	ESE	9	4			10						Marks.
Irkutsk	28.74	73[illegible].1	30.19	766.8	28.9	— 1.7	42	Calm	0	0			0						Usolzef.
Gorga																			Mossin.
Peking, (China)			29.99	761.7	69.4	20.8	47	SE	4	2			7						Physical Observatory.
Nertchinsk	27.95	709.9	30.11	764.9	24.1	— 4.4	38	NW	4	2			1						Meteorological Obs.
Vladivostock			29.98	761.6	40.8	4.9	94	SE	4	2			10						
Nikolaievsk, on the Amoor					30.4	— 0.0	96	NW	7	3			10						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 40[illegible] meters, or 1,3[illegible].8 feet; Ekaterinburg, 30[illegible].4[illegible] m., or 1,035.2[illegible] ft.; Tashkend, m. 494.2[illegible], or 1,621.3[illegible] ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0[illegible] m., or 1,942.2[illegible] ft.; Gorga, 1,281.0[illegible] m., or 4,202.0[illegible] 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.14	765.5	66.7	19.3	10	W	6.0	2.67		1	0	NE		0	0	Light clouds	Royal Observatory.
San Fernando			30.23	767.7	61.4	18.0	72	WNW	12.3	5.5		0	1		W	0	0		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; 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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	756.2	37.4	3.0	96	SW			2		10			0	0		
Umea			29.82	757.5	45.8	7.4	64	NNW			2		9			0	0		
Hernosand			29.90	759.4	50.5	10.3	48	WNW			6		5			Inap.	Inap.		
Stockholm			29.98	761.5	56.1	13.4	42	W			4		5			0	0		
Wisby			30.17	766.2	47.[illegible]	8.4	70	W			6		3			0	0		
Sub-Series.																			
Upsala			30.02	762.5	55.0	12.8	38	NW	14.3	6.4			5		NW	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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.50	723.9	29.93	760.2	54.0	12.2	70	NE			7		10			0.098	2.5	Covered	The Observatory.
Zurich	28.32	719.3	29.97	761.2	49.8	9.9	96	NW			1		10			0.984	25.0	Rain & fog	The Observatory.

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, —0.4 mm.; Thermometer, —1.0 cent.; Relative Humidity, +13 per cent.

NOTE.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.11	764.7	55.9	13.3	72	NNE	13	6.5			3		NE	0	0		
Fao, (Persian Gulf)			30.08	763.9	82.4	28.0		SE			3		5						
Salonica			30.09	764.3	77.6	25.2		S			2		0						
Valona			29.91	759.8	81.0	27.2		S			3		2						
Varna			30.08	764.0	64.4	18.0		S			2		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.95	760.8	75.9	24.4	60	N			2		0			0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			30.14	765.3	30.7	— 0.7	97	NE	5	2.2									Hon. J. Ferguson.
Brockville, Ontario			30.22	767.6	44	6.7		NE	5	2.2		0	0			0.02	0.5	Clear	W. R. Bigg.
*Chatham, N. B.			30.11	764.8	35	1.7	65	N	8	3.6		5k	5ks	N	N	0.02	0.5	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			30.03	762.7	34	1.1	93	N	14	6.3			8ks			Inap.	Inap.	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.15	765.8	48.2	9.0	56	E			1					0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			30.16	766.1	34.0	1.1	76	NW			1	2k				0	0		H. A. Johnson.
Esquimault, B. C.			30.05	763.3	46.3	7.9	88	N	3	1.3		9cs				0	0	Cloudy	W. H. Bevis.
Fredericton, N. B.			30.13	765.3	36.0	2.2	56	NE	14	6.3		1k				0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			30.19	766.8	31	— 0.6	89	E	3	1.3		Haze	2s			0	0	Fair	James Stewart.
Goderich, Ontario			30.16	766.1	42.8	6.0	74	Calm			0					0	0	Clear	H. J. Strang, M. A.
Granton, Ontario			30.13	765.3	40.0	4.4		N			1	1cs		S		0	0	Clear	James Grant.
*Halifax, N. S.			29.96	761.7	38	3.3	95	N	14	6.3			8n			0.16	4.1	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.20	767.1	41	5.0	79	NE	1	0.4		0	0			0	0	Clear	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E
*Montreal, Quebec			30.18	766.6	42	5.6	47	NE	8	3.6		0	0			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.19	766.8	38	3.3	69	N	6	2.7		2k	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.19	766.8	39	3.9	55	N	11	4.9		0	0			0	0	Clear	Rev. R. Mooley.
*Port Dover, Ontario			30.12	765.0	37	2.8	90	NE	10	4.5		10c	0	W		0	0	Fair	H. Morgan.
Port Hastings, N. S.			29.94	760.5	34.2	1.2		NW	10	4.5						0.05	1.3	Fine	Peter Grant.
*Port Stanley, Ontario			30.11	764.8	42	5.6	73	NE	9	4.0		5c	2ks	W	E	0	0	Fair	M. Payne.
*Quebec, Quebec			30.21	767.3	36	2.2	61	NE	8	3.6		0	0			0	0	Clear	Capt. Ash, R. N.
St. John, N. B.			30.12	765.0	36	2.2	85	N	8	3.6		2k				0	0		G. Murdoch, C. E.
*Saugeen, Ontario			30.16	766.1	43	6.1	62	Calm	0	0		2cs	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.17	766.3	41	5.0	74	Calm	0	0		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario			30.14	765.5	39.0	3.9	77	NE	5	2.2		3c		NW		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.94	760.5	33	0.6	92	N	8	3.6			10n			0.07	1.8	Light snow	T. C. Hill.
*Toronto, Ontario			30.17	766.3	44	6.7	66	NE	7	3.1		5cs	0	W		0	0	Fair	Magnetic Observatory.
Woodstock, Ontario			30.09	764.3	41.6	5.3	81	Calm			0	3c	2s			Inap.	Inap.	Fine	J. Montgomery

NOTE.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. pper. From —	Clouds. Direction. Lower. From —	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	44	6.7	75	NW	1	0.4		Haze	Haze			0.05	1.3	Hazy	
Alpena, Mich.			30.18	766.6	44	6.7	44	NE	2	0.9		0	0			0	0	Clear	
Atlantic City, N. J.			30.06	763.5	47	8.3	85	E	16	7.2			10s		SW	Inap.	Inap.	Threatening	
Augusta, Ga.			29.6	761.0	67	19.4	69	SW	3	1.3		0	0			0	0	Clear	
Baltimore, Md.			30.05	763.3	49	9.4	77	NE	7	3.1			10n		E	0.12	3.0	Light rain	
Barnegat, N. J.			30.06	763.5	47	8.3	85	E	14	6.3			10s			0	0	Cloudy	
Benton, Montana	27.38	695.4	30.18	766.6	34	1.1	90	NE	4	1.8			10s		NE	0	0	Cloudy	
Bismarck, Dakota	28.35	720.1	30.03	762.7	40	4.4	64	SW	5	2.2			Fog		SW	0.80	20.3	Foggy	
Boston, Mass.			30.12	765.0	38	3.3	100	NE	4	1.8			Fog			0.10	2.5	Dense fog	
Breckenridge, Minn.			30.19	766.8	41	5.0	91	SE	4	1.8			10s			0	0	Cloudy	
Buffalo, N. Y.			30.09	764.3	40	4.4	82	NE	9	4.0		8c	0	W		0	0	Fair	
Burlington, Vt.			30.16	766.1	40	4.4	64	N	3	1.3		0	0			0	0	Clear	
Cairo, Ill.			30.02	762.5	51	10.6	86	N	14	6.3			10s		N	0.28	7.1	Cloudy	
Cape Hatteras, N. C.			29.8	756.9	67	19.4	84	W	17	7.6		2ck	Haze	W		0.14	3.6	Fair	
Cape Henry, Va.			29.91	759.7	54	12.2	93	NE	24	10.7			10n		NE	0.11	2.8	Light rain	
Cape Lookout, N. C.			29.89	759.2	66	18.9	90	SW	21	9.4		0	Haze			0	0	Fair	
Cape May, N. J.			30.03	762.7	48	8.9	92	E	8	3.6			10n			0.09	2.3	Light rain	
Charleston, S. C.			29.98	761.5	68	20.0	60	SW	9	4.0		5ck	0	W		0	0	Fair	
Cheyenne, Wyoming	24.14	613.1	30.08	764.0	37	2.8	71	W	4	1.8		0	0			0	0	Clear	
Chicago, Ill.			30.13	765.3	42	5.6	66	NE	6	2.7		0	0			Inap.	Inap.	Clear	
Cincinnati, Ohio			29.95	760.7	45	7.2	68	N	9	4.0			10s			0.44	11.2	Cloudy	
Cleveland, Ohio			30.06	763.5	38.6	3.7	84	NE	14	6.3		2k	5ks	W	W	0	0	Fair	
Colorado Springs, Col.			30.08	764.0	48	8.9	71	SE	16	7.2		0	1s			0.06	1.5	Clear	
Corsicana, Tex.			29.89	759.2	70	21.1	85	S	5	2.2			10s			0	0	Cloudy	
Davenport, Iowa			30.18	766.6	44	6.7	67	NE	8	3.6		7k	0	NW		0.02	0.5	Fair	
Denison, Tex.			29.9	759.4	72	22.2	80	SE	8	3.6			10s			0	0	Cloudy	
Denver, Col.	24.9	632.7	30.13	765.3	45	7.2	61	S	4	1.8		0	0			0	0	Clear	
Detroit, Mich.			30.11	764.8	39	3.9	81	NE	7	3.1		8ck	0	W		0	0	Fair, frost	
Dodge City, Kan.	27.54	699.5	29.83	757.7	49	9.4	100	W	11	4.9			10n		W	Inap.	Inap.	Light rain	
Dubuque, Iowa			30.19	766.8	45	7.2	60	NE	4	1.8			10s			Inap.	Inap.	Cloudy	
Duluth, Minn.			30.28	769.1	32	0.0	68	Calm	0	0		0	0			0	0	Clear	
Eastport, Me.			30.05	763.3	40	4.4	64	N	11	4.9		0	0			0.05	1.3	Clear	
Erie, Pa.			30.06	763.5	38	3.3	80	NE	12	5.4		2c	5k	W	SE	0	0	Fair	
Escanaba, Mich.			30.25	768.3	32	0.0	79	N	5	2.2		0	0			0	0	Clear	
Fort Gibson, Indian Terr.			29.96	761.0	62	16.7	88	N	8	3.6			10s		N	0.45	11.4	Cloudy	
Ft. St. Michaels, Alaska			29.84	757.9	23	− 5.0		NE	17	7.6			10s			0.47	11.9	Cloudy	
Fort Sill, Indian T.	28.70	729.	29.78	756.4	66	18.9	78	N			5		10s		N	0	0	Cloudy	
Fort Sully, Dakota																			
Galveston, Tex.			29.98	761.5	71	21.7	90	S	4	1.8		0	0			0	0	Clear	
Grand Haven, Mich.			30.10	766.1	44	6.7	71	SE	8	3.6		0	0			0	0	Clear	
Indianapolis, Ind.			30.04	763.0	45	7.2	60	NE	7	3.1		2cs	0			0.45	11.4	Clear	
Indianola, Tex.			29.95	760.7	71	21.7	90	S	8	3.6		0	5ks		S	0	0	Fair	
Jacksonville, Fla.			30.07	763.8	74	23.3	59	S	4	1.8		0	0			0	0	Clear	
Keokuk, Iowa			30.38	764.0	46	7.8	69	NE	8	3.6		5k	0	NE		0.19	4.8	Fair	
Key West, Fla.			30.0	763.5	77.6	25.3	73	SE	8	3.6		1k	Haze	SE	SE	0	0	Clear	
Kittyhawk, N. C.			29.37	758.7	55	12.8	93	NE	14	6.3		2k	5s	NW		0.73	18.5	Fair	
Knoxville, Tenn.			29.85	758.2	66	18.9	59	SW	3	1.3		5ck,cs	0	SW		Inap.	Inap.	Fair	
La Crosse, Wis.			30.22	767.6	46	7.8	61	SE	4	1.8		8ck	Sm'e			0	0	Cloudy	
Leavenworth, Kan.			30.12	765.0	50	10.0	78	NE	8	3.6			10s		NE	0	0	Cloudy	
Lexington, Ky.	28.83	732.3	29.94	760.5	44	6.7	100	N	16	7.2			10n			0.74	18.8	Light rain	
Long Branch, N. J.			30.09	764.3	45	7.2	84	NE	20	8.9			10s		NE	0	0	Cloudy	
Louisville, Ky.			29.94	761.2	46	7.8	92	N	12	5.4			10n			1.17	29.7	Light rain	
Lynchburg, Va.			29.97	761.2	51	10.6	82	NE	5	2.2			10s		NE	0.24	6.1	Cloudy	
Malone, N. Y.			30.13	765.3	40	4.4	73	Calm	0	0		0	0			0	0	Clear	
Manhattan, Kan.	29.02	737.1	30.18	766.6	50	10.0	93	N	8	3.6			10s			0	0	Cloudy	
Marquette, Mich.			30.27	768.8	37	2.8	71	Calm	0	0		0	0			0	0	Clear	
Memphis, Tenn.			29.94	759.7	69	20.6	70	SW	3	1.3		5k	5s	NW		0	0	Fair	
Milwaukee, Wis.			30.24	767.3	40	4.4	64	NE	8	3.6		0	0			0	0	Clear	
Mobile, Ala.			30.06	763.5	65	18.3	94	S	2	0.9		0	Sm'e			0	0	Clear	
Montgomery, Ala.			30.03	762.7	66.5	19.2	87	W	8	3.6		2c	2ks		W	0	0	Fair	
Morgantown, W. Va.			29.92	760.0	47	8.3	85	NE	4	1.8			10n		E	0.30	7.6	Light rain	
Mt. Washington, N. H.	23.72	602.5	30.08	764.0	18	− 7.8	68	NW	18	8.0		0	2s		NW	0.22	5.6	Fair	
Nashville, Tenn.			29.85	758.2	63	17.2	83	NW	2	0.9		2k	5s	W	W	0.02	0.5	Clearing	
New Haven, Conn.			30.11	764.8	47	8.3	60	NE	10	4.5		Haze	0			0	0	Clear	
New London, Conn.			30.13	765.4	52	11.1	64	NE	4	1.8		2c	0	W		0	0	Clear	
New Orleans, La.			30.04	763.0	66	18.9	70	Calm	0	0		0	Sm'e			0	0	Clear	
Newport, R. I.			30.12	765.0	43	6.1	75	NE	8	3.6		0	0			0.03	0.7	Clear	
New York, N. Y.			30.10	764.5	48	8.9	62	NE	9	4.0		0	8ks			0	0	Fair	
Norfolk, Va.			29.91	759.7	55	12.8	80	E	8	3.6			10s		E	0.13	3.3	Threatening	
North Platte, Neb.			29.83	757.7	45	7.2	100	Calm	0	0			Fog			0	0	Foggy	
Omaha, Neb.	27.23	691.6	30.16	766.1	47	8.3	92	NE	4	1.8			10s		E	0.01	0.3	Cloudy	
Oswego, N. Y.	29.07	738.4	30.18	766.8	46	7.8	69	NW	4	1.8		Haze	Haze			0	0	Fair	
Pembina, Dakota			30.13	765.3	40	4.4	82	Calm	0	0		Haze	Haze			0	0	Hazy	
Philadelphia, Penn.			30.07	763.8	49	9.4	71	E	15	6.7			10ks		E	0	0	Cloudy	
Pike's Peak, Colorado			30.05	763.3	16	− 8.9	100	NW	24	10.7		0	5ks			0.12	3.0	Clear	
Pittsburgh, Penn.	17.84	453.1	29.98	761.5	44	6.7	75	N	7	3.1			Fog			Inap.	Inap.	Foggy	
Port Huron, Mich.			30.14	765.5	37	2.8	90		10	4.5		5c	0	W		0	0	Fair	
Portland, Me.			30.14	765.5	42	5.6	66	N	6	2.7		0	Haze			0.04	1.0	Clear	
Portland, Oregon			30.03	762.7	49	9.4	93	Calm	0	0			10n			0.23	5.8	Light rain	
Punta Rassa, Fla.			30.09	764.3	74.2	23.4	85	E	4	1.8		Haze	Sm'e		E	0	0	Hazy	
Rochester, N. Y.			30.11	764.8	39	3.9	91	Calm	0	0			Fog		W	0.03	0.8	Foggy	
Salt Lake City, Utah			29.99	761.7	44	6.7	67	Calm	0	0		0	0			0	0	Clear	
Sandy Hook, N. J.	25.66	651.8	30.08	764.0	46	7.8	85	E	13	5.8			10s		SE	0	0	Cloudy	
San Diego, Cal.			30.15	764.5	50	10.0	93	Calm	0	0		0	0			0	0	Clear	
San Francisco, Cal.			30.12	765.0	52	11.1	86	S	2	0.9			10s			0	0	Cloudy	
Santa Fe, N. M.			29.85	758.2	45	7.2	60	E	4	1.8		0	0			0	0	Clear	
Savannah, Ga.	23.31	592.1	30.02	762.5	73	21.7	49	W	10	4.5		0	Sm'e			0	0	Clear	
Shreveport, La.			30.00	762.0	70	21.1	82	S	4	1.8		5k	2ks	SW	S	0	0	Cloudy	
Smithville, N. C.			29.92	760.0	67	19.4	82	SW	12	5.4		0	0			0	0	Clear	
Springfield, Mass.			30.14	765.5	46.5	8.1	69	N	4	1.8		2cs	Sm'e			0	0	Clear	
St. Louis, Mo.			30.08	764.0	47	8.3	85	NE	4	1.8			10s			0.30	7.6	Cloudy	
St. Marks, Fla.			30.08	764.0	63	17.2	88	Calm	0	0		0	2s		W	0	0	Fair	
St. Paul, Minn.			30.18	766.6	36.5	2.5	70	N	4	0.4		10cs	0			0	0	Cloudy	
St. Paul's Island, Alaska			29.79	756.7	34	1.1	100	SE	10	4.5			10s			0.30	7.6		
Thatcher's Island, Mass.			30.13	765.3	40	4.4	91	NE	7	3.1			10ks		NE	0.19	4.8	Cloudy	
Toledo, Ohio			30.07	763.8	40	4.4	83	N	9	4.0		2ck	5ks		NE	0	0	Fair	
Tucson, Arizona	27.56	700.0	30.15	765.8	54	12.2		S				0	0			0	0	Clear	
Tybee Island, Ga.			30.0	762.0	68	20.0	60		4	1.8		0	Sm'e			0	0	Clear	
Vicksburg, Miss.			30.01	762.0	67	19.4	90	SSW	5	2.2		10k	0	N		0	0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer
Virginia City, M. T.	24.36	618.7	29.84	757.9	32	0.0	69	Calm	0	0		10c	0	W		0	0	Cloudy	
Washington, D. C.			30.03	762.7	48	8.9	92	E	7	3.1			10n		NE	0.21	5.3	Light rain	
Wilmington, N. C.			29.90	759.4	71	21.7	53	SW	12	5.4		0	Haze			0	0	Clear	
Wood's Holl, Mass.			30.12	765.0	49	9.4	57	E	6	2.7		2c	0	S		0	0	Clear	
Wytheville, Va.	27.55	699.8	29.68	753.9	50	10.0	100	E	5	2.2			10n		E	0.54	13.7	Light rain	
Yankton, Dakota	28.92	734.6	30.24	768.1	44	6.7	87	N	1	0.4			10s			0.08	2.0	Cloudy	
Yuma, Arizona			29.96	761.0	55	12.8		E				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.04	763.0	81	27.2	74	E	5	2.2		2k	10ks	N		0	0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.99	761.7	81	27.2	78	E				5k	5ks			0	0	Fair	L. V. Bigard.
St. Thomas, S. T., W. I.			30.22	767.6	78	25.6	81	S	3	1.3		4c.cs	8kn	E		0	0	Clearing	W. S. Cameron.
Kingston, Jamaica, W. I.			30.19	766.8	78	25.6	82	Calm	0	0		8c	2s			0	0		James Gall.
Santiago de Cuba, W. I.			29.82	757.4	77	25.0	76	ENE	1.2	0.5		8c	8s	N		0.74	18.8	Fair	Robert Mason.
Havana, Cuba, W. I.			30.04	763.0	76	24.4	78	Calm	0	0		0	0			1.08	27.4	Clear	Charles Hasselbrink.
St. Georges, Bermudas			30.08	764.0	69.5	20.8	82	WSW	18.0	8.0		0	5k			0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.17	690.1	29.98	761.5	65	18.3	90	NW	2.0	0.9		0	0			1.22	31.0	Clear	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.02	762.5	79	26.1	87	E			2		6ks			0	0	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S. A.			30.04	762.9	83.1	28.4										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.29	640.1			64.0	17.8	81		5	2.2		4ck	2s			0.10	2.5	Fair	Thomas Herran.
St. John's, Newfoundland			30.10	764.5	34.0	1.1	79	N				10ks	10s,n			0.01	0.3	Cloudy	John Delaney.
York Factory, B. A.			30.30	769.6	14	—10.0	91	N	4	1.8		0	0			0	0		J. Fortescue.
Honolulu, Oahu, H. I.			30.09	764.3	71	21.7	90	NE			5					0	0		E. P. Church.
Makawao, Maui, H. I.	27.80	706.1	29.96	761.0	57	13.9	86	Calm	0	0		5cs	2ks	W	NE	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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	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
Steamer Peruvian, N. 42° 50′, W. 61° 25′.	N85W	13	29.74	755.4	37	2.8	NNW			4	6ck,k	3s					*D. clouds	Capt. W. Richardson.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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 4,268.8 ft., or 1,301.1 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.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher. *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 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* of clouds, 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 APRIL 25, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.20	769.3	71.2	21.8	45	N			1		0			0	0	Clear	Charnot.
Algiers			30.30	769.5	67.6	19.8	67	N			2		0			0	0	Clear	Peter.
La Calle					61.2	16.2		NW			4		7			0.154	3.9	Cloudy	Kuntz.
Tunis			30.18	766.6	60.8	16.0	81	WNW			4		6			0.311	7.9	Fair	Jacques.
Sfax			30.21	767.2	72.0	22.2	29	W			3		4			0		Fair	Chauvey.
Saida			30.27	768.9	68.9	20.5	26	NNW			2		1			0	0	Clear	Millot.
Tebessa			30.17	766.2	48.4	9.1		NW			3		10			0.079	2.0	Fair	Colin.
Geriville			30.28	769.0	64.9	18.3	39	W			2		1			0	0	Clear	Buard.
Laghouat			30.28	769.1	69.8	21.0	34	NW			2		0			0	0	Clear	Guyot.
Biskra			30.26	768.6	76.6	24.8	21	NW			3		4			0	0	Fair	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	72.1	22.3	39	NW			1		3			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.91	759.8	72.3	22.4	72	NE			2		6			0.024	0.6		I. R. Observatory.
Eperies			29.87	758.8	77.9	25.5	47	S			2		9			0	0		Julius Mikolik.
Gratz	28.78	730.9	29.95	760.8	63.5	17.5	63	SW			3		10			0.043	1.1		Andreas Rospini.
Hermannstadt	28.49	723.7	29.83	757.7	81.3	27.4	13	ESE			3		4			0	0		Prof. Reissenberger.
Kremsmünster			30.05	763.3	54.7	12.6	91	W			3		10			0	0		Prof. C. Wagner.
Lemberg			29.83	757.7	78.4	25.8	39	NE			2		0			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.04	763.1	61.0	16.1	78	WNW			2		1k			0.030	0.75		I. R. Hydrographic Office
Szegedin			29.93	760.3	77.9	25.5	42	W			2		6			0	0		Karl Stancel.
Trieste			30.05	763.2	60.6	15.9	81	Calm			0		0			0	0		Prof. V. Farolfi.
Vienna			29.98	761.4	63.0	17.2	67	W			2		10			0.026	0.7		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.15	765.8	58.8	14.9	51	SW			2	6	5	W		0	0		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0-10.	Clouds. Amount. Low'r 0-10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	44.5	6.9		SE	7	3.1			10			0.430	10.92	Raining	William Boswell.
Ardrossan			29.88	758.9	51	10.6		WSW			3		5					*D. clouds	William McNeil.
Armagh Observatory			29.97	761.2	51.0	10.6		WSW	15	6.7			9					Showery	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.97	761.2	53.1	11.7		W	34	15.2			2					Blue sky	John Hartnup.
Birr Castle, (Parsonstown)			30.04	763.0	52.9	11.6		SW			2		5					D. clouds	J. Dreyer.
Bradford			29.95	760.7	53.3	11.8		W			2		8			0.11	2.8	Drizzling	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	82.0	27.8		NE			3		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge Observatory			30.05	763.3	56.0	13.3		W			2		10					Thunder-storm.	H. Todd. [H. C.
Cardington			30.03	762.7	59.0	15.0		W			3		6					*D. clouds	John McLaren.
Carlisle			29.89	759.2	54.6	12.6		W			5		3			0.29	7.4	*D. clouds	T. Bell, for J. Carmell.
Chatham, School M. E			30.11	764.8	58.9	14.9		WSW			2		10					Gloomy	Capt. J. Fellowes, R. E.
Dartmoor	27.75	730.2	30.28	769.1	49.6	9.8		W			6		5					*D. clouds	R. E. Power.
Donaghadee			29.89	759.2	52	11.1		WSW			4		2					Blue sky	J. Mac Gowan.
Dover			30.14	765.5	54	12.2		WSW			3		6					½ clouded	J. Costello.
Eccles, (near Manchester.)			29.97	761.2	54.1	12.3		W	6.6	3.0			6					*D. clouds	Thomas Mackereth.
Falmouth Observatory			30.24	768.1	53.5	11.9		W	21	9.4			9					Overcast	The Staff.
Fort Napier, (Natal)	28.03	711.9	30.26	768.6	65.7	18.7		S			1		8					*D. clouds	Pvt. G. Salmon, A. H. C. [tis.
Free Town, (Sierra Leone)			29.96	761.0	85	29.4		N			2		9					Overcast	
Galway, Queen's College			29.97	761.2	53	11.7		SW			2		5					Misty	B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			30.26	768.6	73.4	23.0		E			4		0					Blue sky	Corp'l C. Aitken, A. H. C.
Glasgow Observatory			29.84	757.9	53.0	11.7		W			2		7					Fine	Lewis Stuart.
Great Yarmouth			30.04	763.0	52	11.1		WNW			4		7			Blank	Blank	*D. clouds	G. T. Watson.
Greenwich Royal Obs			30.11	764.8	55.7	13.2		WSW			4		4			Blank	Blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.25	768.3	54.5	12.5		WSW			3		5					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs			29.99	761.7	50.6	10.3		W			3		9					Showery	L. J. Crossley.
Helston			30.20	767.1	56	13.3		SW			6		4c			0.12	3.0	Blue sky	M. P. Moyle.
Holyhead			30.01	762.2	52	11.1		SW			4		3					Blue sky	John Tilston.
Kew Observatory			30.11	764.8	56.7	13.7		SW	24	10.7			5					D. clouds	The Staff.
Kingstown			30.01	762.2	49	9.4		W			5		9					Overcast	George Mitchell.
Leicester Museum			30.04	763.0	55.0	12.8		W			2		8					Showery	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.10	764.5	64.8	18.2		SW			3		8kn					Overcast	Fred. Travis, Pvt. A.H.C.
Nairn			29.77	756.1	54	12.2		Calm			0		5					½ clouded	W. D. Penny.
Nassau, Bahamas																			Surg. Maj. Henry.
Nottingham			30.01	762.2	54.4	12.4		WSW			5		4d,ks,n		W	0.239	6.07	Raining	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.01	762.2	57.1	13.9		WSW			4-5		5					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.06	763.5	57	13.3		W			3		7					*D. clouds	J. Lucas.
Plymouth			30.20	767.1	57.8	14.3		WSW			4		7					*D. clouds	John Merrifield.
Roche's Point			30.10	764.5	52	11.1		WNW			5		8					Squally	W. Kennedy.
Saint Ann's Head			30.12	765.0	50	10.0		W			4		2					Blue sky	John C. Walker.
Saint Helier, Jersey)			30.73	768.8	57.0	13.3		W			4		5					½ clouded	A. P. Amy.
Sandwick Manse (Orkneys			29.81	757.9	45.5	7.5		SE	28	12.5			10					Raining	Rev. C. Clouston, LL. D.
Scarborough			29.92	760.0	55.0	13.1		W			3		7					*D. clouds	F. Shaw.
Scutari Cemetery, Turkey			30.00	762.0	58.0	14.8		SW			1		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.98	761.5	53.0	11.7		WNW			4		7			0.053	1.35	Overcast	W. F. Cooper.
Silloth Rectory			29.90	759.4	55.0	12.8	75	SW			3		1			0.064	1.62	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			29.95	760.7	51.7	10.9		W			4		10			Blank	Blank	Threatening	S. J. Perry.
Stornoway, Lewis C. Hebr.			29.73	755.1	50	10.0		S			4		8					*D. clouds	John Smith.
Stratfield Turgiss					54.4	12.4		SW			2		5					*D. clouds	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.81	757.2	44	6.7		ESE			4		10					Raining	John Trotter.
Truro, Royal Institution			30.23	767.8	58	14.4		W			6		4					*D. clouds	W. Newcombe.
Valencia Observatory			30.14	765.5	53.5	11.9		W	24	10.7			5					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man					46	7.8		SW			4		2						The Staff, for E. J. Stone.
Cape Good Hope Obs			30.33	770.6	78.0	25.6	36	SSE	13	5.8			1					Fine	Andrew Gibb.
Leith, Restalrig Park			29.85	758.2	53.1	11.7		W			3		5k			0.21	5.3		C. Meldrum.
Mauritius			30.05	763.3				ESE	13.1	5.9						0.05	1.3		J. Youngclause.
Monach Lt-house, Hebrides			29.67	753.6	48	8.9		S			4		10			0	0		
North Unst, (Shetland Is.)			30.03	762.7	45	7.2		E			4	5	1	E					

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier 2,200 ft., or 270.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			30.14	765.6	50.5	10.3	48	NE			2		0						
Fanöe																			
Godthaab, (Greenland)			29.85	758.1	32.7	0.4	76	NNW			2		5						
Stykkisholm, (Iceland)			30.06	763.5	36.9	2.9	93	E			4		5						
Thorshavn, (Faröe)			30.02	762.6	44.4	6.9	81	E			6		10						
Vestervig			30.08	764.1	49.3	9.6	89	SE			2		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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.30	769.5	56.3	13.5	82	N			1	2c		N		0.008	0.2	Slightly cl'dy	Normal School.
Amiens			30.35	770.8	62.6	17.0	72	SW			3		0			0	0	Clear	Normal School.
Avignon			30.01	762.2	66.2	19	59	N			6		0			0.08	2.	Very clear	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.25	768.4	61.7	16.5	38	WNW			2		8		W	0	0	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			30.27	768.9	59.4	15.2	66	W			2		2		W	0	0	Slightly cl'dy	Normal School.
Brest			30.26	768.6	61.7	16.5	59	W			3		8		W	0	0	Misty	Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			30.31	769.8	56.5	13.6	64	NW			3		10		N	0	0	Covered	Puy de Dome Obs.
Commercy			30.19	766.9	59.0	15	53	WNW			2		8nk		WNW	0	0	Very cloudy	Normal School.
Commune de Gréasque*			30.18	766.6	62.4	16.9	52	NW			4		5		W	0	0		M. Kina.
Grenoble			30.25	768.3	55.4	13	75	NW			6		5k		N	0.24	6.	Cloudy	Normal School.
Le Mans			30.30	769.6	59.0	15	56	NW			2		5		NW	0	0	Cloudy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			30.29	769.4	57.7	14.3	70	NW			2		5		N	0.169	4.30	Cloudy	Normal School.
Mâcon			30.26	768.6	57.6	14.2	71	WNW			6		10			0.59	15.	Covered	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			30.19	766.8	68.0	20	36	NW			8		2		N	0.08	2.	Slightly cl'dy	Normal School.
Orleans																			Normal School.
Paris Observatory			30.26	768.6	60.4	15.8	44	WNW			2		5	W	E	0	0	Cloudy	National Observatory
Parthenay																			Normal School.
Privas			30.23	767.9	69.8	16		N			6		2		N	0.24	6.	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.35	770.8	61.3	16.3	59	W			1		8		E	0.016	0.4	Very cloudy	Normal School.
Rochefort, Observatory			30.40	772.1	64.9	18.3	60	W			3		8		E	0	0	¾ covered	Naval Observatory.
Rouen			30.27	768.8	60.6	15.9	52	WSW			2		5		S	0	0	Cloudy	Normal School.
Saint Lo			30.30	769.6	58.1	14.5	62	W			2		9		W	0	0		Normal School.
Tarbes	29.37	746.1			53.6	12		W			2		10		E	0	0	Covered	Normal School.
Toulouse																			Normal School
Villefranche			30.24	768.0	64.8	18.2	94	NW			4		10		N	0.654	16.60	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.92	759.9	77.0	25	84	NE			2		2k						L'Abbé Marchési.
Gorée																			
Marseilles			30.12	765.0	65.1	18.4	51	NNW			2		3			0	0	Cloudy	Marseilles Observatory.
Mont-Louis	29.00	636.6	30.38	771.6	48.9	9.4	59	NNW	11.2	5.00			2		NNW	0.020	0.5		—. Falguère.
Montsouris, Paris			30.25	768.4	62.8	17.1	44	WNW			3		7		WSW	0	0		Montsouris Observ'tory.
Perpignan			30.32	770.1	60.4	15.8	52	N	22.4	10.0			4		WNW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.26	768.5	64.4	18.0	44	WSW			2		5			0	0	Cloudy	E. Renou.
Toulouse			30.45	773.5	55.9	13.3	74	W			3		10			0	0		Toulouse Observatory.
Tours			30.30	769.7	62.6	17.0	46	WNW			2		7		NW	0	0		C. Marquet.
Versailles, (near Paris)			30.26	768.5	63.3	17.4	43	NW			4		8			0	0		Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Leo, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are requently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

* Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.00	762.1	52.5	11.4	83	N			4		10	N		0	0		Prof. T. Hoh.
Berlin			30.09	764.3	55.0	12.8	53	N			1		9			0	0		Prof. Arndt.
Breslau			30.07	764.6	55.6	13.1	90	NW			6		10			0	0		Dr. P. Naugebauer.
Carlsruhe			30.14	765.5	61.5	16.4	63	SSW			1		9			0.031	0.8		A. Senz.
Cassel			30.03	762.8	61.0	16.1	67	NW			2		6	S		0.035	0.9		Dr. H. Mohl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main			30.19	766.8	62.4	16.9	53	W			1		4			Inap.	Inap.		Physical Society.
Friedrichshafen			30.30	769.5	48.2	9.0	86	NW					10			0.244	6.2	Raining	M. Wilhelm.
Hamburg			30.11	764.9	50.9	10.5	69	ENE			2		10			0	0	Foggy	Deutsche Seewarte.
Kiel			30.13	765.4	49.1	9.5	58	Calm			0		10			0	0		Prof. G. Karsten.
Königsberg			30.11	764.9	51.4	10.8	65	E			2		9			0.004	0.1		Prof. E. Luther
Köslin			30.11	764.7	47.3	8.5		Calm			0		4			0	0		H. Müller.
Leipsic			30.13	765.4	47.1	8.4	87	NW			2		10			0.071	1.8		Prof. Bruhns.
Memel			30.20	767.0	52.7	11.5	62	E			4		10			0.039	1.0	Light rain	Reinbrecht & Skalweit.
Münster			30.10	764.6	59.5	15.3	70	NW			2		4			0.035	0.9		Prof. E. Heis.
Neufahrwasser			30.08	764.0	45.9	7.7	93	ENE			2		10			0.043	1.1	Light rain	A. Lothes.
Posen			30.08	763.9	59.0	15.0	73	N			5		10			0.173	4.4		Dr. Magener.
Strassburg, (in Alsace)			30.18	766.5	65.7	18.7	45	NW			1		10	NW		0	0		Dr. Schur.
Stuttgart			30.20	767.0	55.8	13.2	66	N			1		8			0.016	0.4		Prof. Schoder.
Thorn			30.04	763.1	56.3	13.5	78	NE			4		10			0.150	3.8		Dr. Hasenbalg.
Treves, (Trier)			30.13	765.2	63.7	17.6	43	W			5		10			0	0		Prof. Flesch.
Wustrow, Naval School			30.06	763.4	46.4	8.0	67	NE			2		10			0	0		E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	77.5	25.3		S										Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.01	762.2	64.9	18.3	67	SW	0.7	0.3			7			0	0		
Padua			30.02	762.5	64.2	17.9	63	W	6.3	2.8			3	SW		0	0		
Vicenza			29.01	762.3	65.3	18.5	60	SW	7.4	3.3			2	S		0	0		
Verona			29.98	761.4	60.1	15.6	81	SE			4		10			0	0		
Bergamo	28.69	728.8	30.00	762.1	60.8	16.0	71	SW			4		4			0	0		
Domodossola	29.08	738.5	30.10	764.4	57.2	14.0	68	Calm			0		10			0.244	6.2	Raining	
Milan			30.09	764.3	63.7	17.6	61	NNW			2		8	W		0	0		
Pavia			30.09	764.2	61.2	16.2	71	SW			4		2	NW		0.296	7.5		
Moncalieri			30.13	765.2	58.5	14.7	77	NW	3.8	1.7			10	E		0.193	4.9		
Mondovi	28.22	716.7	30.13	765.4	52.9	11.6	79	NNW			2		10			0.047	1.2	Raining	
Porto Maurizio			30.16	766.0	64.4	18.0	73	SSW			2		7	SW		0	0		
Genoa			30.09	764.3	61.2	16.2	64	Calm	0	0			4	NE		0	0		
Piacenza			30.08	764.1	61.3	16.3	69	WNW			4		0			0	0		
Parma			30.08	763.9	62.6	17.0	61	NW			4		5			0	0		
Bologna			30.10	764.4	62.1	16.7	38	NW			1		4	N		0	0		
Florence			30.08	764.1	68.0	20.0	46	SW			2		4	S		0	0		
Leghorn			30.09	764.3	58.8	14.9	74	SSW	5.6	2.5			10			0.056	1.4		
Siena	28.86	733.1	30.06	763.5	61.2	16.2	53	S	1.3	0.6			9	SW		0	0		
Urbino	28.52	724.4	30.07	763.7	60.6	15.9	49	NE			2		7			0	0		
Pesaro																			
Ancona			30.07	763.8	61.7	16.5	62	NW			4		2			0	0		
Grosseto			30.11	764.7	58.3	14.6	79	ESE			4		8	SE		0.063	1.6		
Rome			30.07	763.8	66.6	19.2	56	SSW	6.3	2.8			6	SE		0	0		
Naples, O. U.			30.09	764.3	65.3	18.5	56	SSW			2		7	SE		0	0		
Lecce			30.10	764.4	64.4	18.0	46	ENE	9.4	4.2			6			0	0		
Cosenza			30.06	763.5	70.3	21.3	71	NW	2.5	1.1			7			0	0		
Riposto, (Sicily)			30.08	764.0	62.2	16.2	66	NE			2		9	SW		0.142	3.6		
Palermo			30.01	762.2	63.7	17.6	46	WNW	4.3	1.9			10			0	0		
Caltanissetta	28.09	713.4	30.02	762.5	57.6	14.2	57	S			4		10	N		0	0		
Sub-Series.																			
Naples, S. R.			30.09	764.3	63.0	17.2	63	WSW	4.9	2.2			..ck	W		0.472	12.0		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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.18	766.5	52.9	11.6		W			4								
Groningen			30.03	762.8	54.1	12.3		SW			4								
Helder			30.07	763.8	52.7	11.5		SSW			4								
Utrecht			30.09	764.2	60.8	16.0	60	WSW			5		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.10	764.6	51.1	10.6	46	NW	5.1	2.3			8			0	0		
Brönö			30.30	769.6	39.2	4.0	67	N	11	5			9			0	0		
Christiania			30.19	766.7	54.7	12.6	42	ESE	2.5	1.1			4			0	0		
Tromsö			30.07	763.8	28.6	— 1.9	82	NE	2	1			10			0.343	8.7	Snowing	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.35	770.9	65.7	18.7	83	W	4.1	1.84			4			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.25	768.4	81.0	27.2	26	E	1.9	0.83			1			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.28	769.2	66.2	19.0	68	SW	3.4	1.52			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.35	770.9	70.3	21.3	53	SSE	4.9	2.2			1			0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 hour, 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.94	760.5	69.1	20.6	59	E	7	3			9						Astronomical Obs.
Wilna			30.13	765.3	59.2	15.1	40	NE	9	4			10						Astronomical Obs.
Dorpat			30.24	768.2	53.1	11.7	50	ENE	2	1			7						Physical Cabinet.
St. Petersburg			30.16	766.0	41.7	5.4	72	WNW	18	8			6						Central Physical Obs.
Kuopio			30.12	765.0	41.0	5.0	60	NE	13	6			3						Ch. Forsten.
Kieff			29.93	760.3	72.7	22.6	38	SE	4	2			0						Physical Cabinet.
Nikolaiev			30.08	764.1	79.0	26.1	40	SSW	4	2			0						Kurdakof.
Kertch			30.09	764.2	66.4	19.1	71	SSE	7	3			1						Lagorio.
Moscow			30.13	765.4	55.4	13.0	32	NNW	9	4			3						Meteorological Obs.
Lugan			29.98	761.4	85.5	29.7	16	SW	29	13			0						Meteorological Obs.
Archangel			29.95	760.7	24.8	— 4.0	64	NW	18	8			10						Ogorodnikof.
Tiflis	28.73	729.8	30.08	764.0	75.0	24.2	27	SE	9	4			2						Physical Observatory.
Astrakhan			30.13	765.2	83.7	28.7	28	NW	13	6			8						Sebastianof.
Kasan			29.72	755.0	47.3	8.5	44	NW	13	6			6						Physical Cabinet.
Orenburg			30.57	776.4	43.5	6.4	76	SE	4	2			2						Tschernischef.
Ekaterinburg	28.29	718.6	29.28	743.7	43.2	6.2	83	SW	9	4			10						Meteorological Obs.
Nukuss			30.05	763.3	78.3	25.7	20	WNW	11	5			7						
Kasalv																			Bobrof.
Tashkend	28.60	726.4	30.27	768.9	64.0	17.8	50	Calm	0	0			0						Michelson.
Barnaul			29.60	751.9	52.2	11.2	65	SW	38	17			10						Meteorological Obs.
Yeniseisk			29.34	745.2	45.7	7.6	87	S	7	3			10					Raining	Marks.
Irkutsk	28.43	722.2	29.89	759.1	21.7	— 5.7	39	Calm	0	0			0						Usolzef.
Oorga																			Mossin.
Peking, (China)			30.22	767.5	61.2	16.2	49	SSE	7	3			2						Physical Observatory.
Nertchinsk	27.91	708.6	30.06	763.5	25.2	— 3.8	43	W	4	2			1			Blank	Blank		Meteorological Obs.
Vladivostock			30.04	762.9	39.6	4.2	82	Calm	0	0			1						
Nikolaievsk, on the Amoor					26.4	— 3.1	94	Calm	0	0			0						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 401 meters, or 1,311.8 feet; Ekaterinburg, 593.4? m., or 1,945.2? ft.; Tashkend, in 404.2?, or 1,321.3? 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.24	768.1	75.6	24.2	37	SW	5.2	2.33		0	0			0	0	Clear	Royal Observatory.
San Fernando			30.28	769.0	75.6	24.2	45	WNW	6.5	2.9		0	0			0	0		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; 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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.15	765.7	37.4	3.0	53	NW			2		10			0	0		
Umea			30.25	768.3	44.4	6.9	44	NW			2		0			0	0		
Hernosand			30.28	769.1	43.5	6.4	43	SSW			2		1			0	0		
Stockholm			30.21	767.4	49.5	9.7	43	ENE			2		3			0	0		
Wisby			30.30	769.7	48.2	9.0	66	NNE			4		7			0	0		
Sub-Series. Upsala			30.23	767.7	52.3	11.3	37	N	4.3	1.9			2			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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observed.
Geneva	28.86	733.1	30.30	769.5	51.6	10.9	63	NE			2		10			0.047	1.2	Covered	The Observatory.
Zurich	28.62	726.9	30.27	768.9	49.1	9.5	83	NW			1		10			0.630	16.0	Raining	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +8.7 mm.; Thermometer, —2.5 cent.; Relative Humidity, +6 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Corrected for instrumental errors. Inches.	Corrected for instrumental errors. Millimeters.	Reduced to sea-level. Inches.	Reduced to sea-level. 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.	Mill meters.	Weather.	Observed.
Constantinople			30.06	763.4	57.9	14.4	77	ENE	7	3.0			0			0	0		
Fao, (Persian Gulf)			30.09	764.3	78.8	26.0		SE			3		10						
Salonica			30.03	762.8	81.7	27.6		S			2		0						
Valona			30.01	762.2	66.0	18.9		W			1		8						
Varna			30.00	762.0	57.2	14.0		NE			2		8						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			30.02	762.6	77.7	25.4	49	NE			1		0			0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Corrected for instrumental errors. Inches.	Corrected for instrumental errors. Millimeters.	Reduced to sea-level. Inches.	Reduced to sea-level. 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.	Mill meters.	Weather.	Observed.
Bathurst, N. B.			30.34	770.6	30.7	— 0.7	86	NE	2	0.9									Hon. J. Ferguson.
Brockville, Ontario			30.25	768.3	43	6.1		E	4	1.8		5c	2s	E	SW	0	0	Fair	W. R. Bigg.
*Chatham, N. B.			30.37	771.4	33	0.6	74	NW	1	0.4		0	0			0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island.			30.38	771.6	33	0.6	88	E	6	2.7		5k	0			0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			30.20	767.1	41.9	5.5	58	E			1	8c				0	0	Fair	James Smith, M. A.
Dalhousie, N. B.			30.41	772.4	26.0	— 3.3	81	NW			1					0	0		H. A. Johnson.
Esquimault, B. C.			30.06	763.5	45.3	7.4	92	NE	1	0.4		10cs				0.05	1.3	Cloudy	W. H. Bevis.
Fredericton, N. B.			30.40	772.1	33.4	0.8	56	NE	2	0.9		1c				0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			30.01	762.2	42	5.6	91	W	14	6.3		5k	5ks	W	W	0.02	0.5	Cloudy	James Stewart.
Goderich, Ontario			30.22	767.6	41.9	5.5	82	N			1		1s			0	0	Clear	H. J. Strang, M. A.
Granton, Ontario			30.19	766.8	41.0	5.0		NE			1	1cs		S		0	0	Clear	James Grant.
*Halifax, N. S.			30.34	770.6	31	— 0.6	80	NE	10	4.5			5ks		NE	Inap.	Inap.	Fair	F. Allison, M. A.
*Kingston, Ontario			30.22	767.6	42	5.6	66	NE	3	1.3		10ck	0			0	0	Cloudy	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E
*Montreal, Quebec			30.22	767.6	37	2.8	62	NE	6	2.7		2c	5ks			0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.20	767.1	38	3.3	75	N	4	1.8		2cs	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.22	767.6	40	4.4	48	N	7	3.1		2ck	0	N		0	0	Fair	Rev. R. Mooley.
*Port Dover, Ontario			30.18	766.6	42	5.6	83	NE	7	3.1		10k	0	NE		0	0	Fair	H. Morgan.
Port Hastings, N. S.			30.36	771.1	37.6	3.1		NE	3	1.3						0	0	Fine	Peter Grant.
*Port Stanley Ontario			30.18	766.6	39	3.9	70	N	10	4.5		2k	0	N		0	0	Clear	M. Payne.
*Quebec, Quebec			30.27	768.8	33	1.7	67	NE	12	5.4		0	0			0	0	Clear	Capt. Ash, R. N.
St. John, N. B.			30.40	772.1	32	0.0	59	NE	1	0.4						0	0		G. Murdoch, C. E.
*Saugeen, Ontario			30.22	767.6	38	3.3	67	Calm	0	0		5k	0			0	0	Fair	K. Stewart.
Stayner, Ontario			30.20	767.1	43	6.1	65	N	1	0.4		2c	0			0	0	Fair	R. J. Cole.
Stratford, Ontario			30.20	767.1	35.6	2.0	79	Calm	0	0		3c	4c	NE		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			30.34	770.6	33	0.6	72	NW	6	2.7		5k	5ks		N	0	0	Fair	T. C. Hill.
*Toronto, Ontario			30.20	767.1	41	6.7	71	SW	4	1.8		5cs	5s	SW		0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.18	766.6	40.1	4.5	78	Calm			0	0	5ck			0	0	Fine	J. Montgomery

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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.			30.18	766.6	44	6.7	75	NE	1	0.4		10k	0	W		0	0	Cloudy	
Alpena, Mich.			30.22	767.6	40	4.4	47	NW	4	1.8		0	0			0	0	Clear	
Atlantic City, N. J.			30.6	763.5	42	5.6	83	NE	26	11.6			10n		NE	0.58	2.0	Light rain	
Augusta, Ga.			30.01	762.2	63	17.2	67	NE	5	2.2		5k	5s	W	E	Inap.	Inap.	Cloudy	
Baltimore, Md.			30.10	764.5	43	6.1	75	NE	4	1.8			10n		E	0.21	5.3	Light rain	
Barnegat, N. J.			30.07	763.8	43	6.1	75	NE	27	12.1			10s		E	0	0	Cloudy	
Benton, Montana	27.22	691.4	30.62	762.5	46	7.8	60	W	2	0.9		2c	5s			0	0	Fair	
Bismarck, Dakota	28.24	716.8	29.36	758.4	46	7.8	54	SE	3	1.3		Haze	Haze			0	0	Hazy	
Boston, Mass.			30.23	767.8	40	4.4	82	E	18	8.0		5c	5ck	W	E	0	0	Cloudy	
Breckenridge, Minn.			30.10	764.5	47	8.3	92	S	8	3.6			10n		S	0.43	10.9	Light rain	
Buffalo, N. Y.			30.15	765.8	39	3.9	91	E	7	3.1			10n		E	0.42	10.7	Light rain	
Burlington, Vt.			30.20	767.1	41	5.0	65	W	2	0.9		2c	2s			0	0	Fair	
Cairo, Ill.			30.29	769.4	51	10.6	52	N	6	2.7		0	0			0	0	Clear	
Cape Hatteras, N. C.			29.44	757.0	54	12.2	86	NE	24	10.7			10s		NE	0.38	9.7	Cloudy	
Cape Henry, Va.			29.94	761.5	47	8.3	100	N	24	10.7			10n		N	1.45	36.8	Light rain	
Cape Lookout, N. C.			29.94	760.5	52	11.1	86	N	20	8.9			10s		N	0.11	2.8	Cloudy	
Cape May, N. J.			30.04	763.0	42	5.6	83	NE	16	7.2			10n		NE	0.32	8.1	Light rain	
Charleston, S. C.			29.96	761.0	64	17.8	78	N	10	4.5			10s			0	0	Cloudy	
Cheyenne, Wyoming	24.10	612.1	30.04	763.0	37	2.8	71	W	8	3.6		1c	0			0	0	Clear	
Chicago, Ill.			30.27	768.8	44	6.7	52	NW	2	0.9		0	0			0	0	Clear	
Cincinnati, Ohio			30.19	766.8	47	8.3	41	N	10	4.5		Haze	Fog			0	0	Clear	
Cleveland, Ohio			30.19	766.8	39.6	4.2	38	N	9	4.0		5k	0	N		0	0	Fair	
Colorado Springs, Col.	24.21	614.9	30.38	764.0	39	3.9	81	N	3	1.3		0	0			0.05	1.3	Clear	
Corsicana, Tex.			30.08	764.0	65	18.3	83	NE	3	1.3		2ck	2s			0	0	Fair	
Davenport, Iowa			30.28	769.1	49	9.4	71	SW	4	1.8		10ck	0	NW		0	0	Cloudy	
Denison, Tex.			30.12	765.0	65	18.3	67	SE	4	1.8		1c	0	N		0	0	Clear	
Denver, Col.	24.88	631.9	30.10	764.5	46	7.8	69	SW	6	2.7		0	0			Inap.	Inap.	Clear	
Detroit, Mich.			30.21	767.3	45	7.2	38	N	6	2.7		8k	0	N		0	0	Fair	
Dodge City, Kan.	27.61	701.0	29.89	759.2	55	12.8	80	E	9	4.0			10s		E	0.05	1.3	Cloudy	
Dubuque, Iowa			30.27	768.8	45	7.2	76	Calm	0	0		0	Haze			0	0	Clear	
Duluth, Minn.			30.20	767.1	34	1.1	60	Calm	0	0		0	8ks		W	0	0	Cloudy	
Eastport, Me.			30.33	770.4	34	1.1	61	E	12	5.4		8c	0			0	0	Fair	
Erie, Pa.			30.13	765.3	38	3.3	90	NE	16	7.2			10n			0.19	4.8	Light rain	
Escanaba, Mich.			30.21	767.3	35	1.7	61	N	3	1.3		0	0			0	0	Clear	
Fort Gibson, Indian Terr.			30.21	767.3	55	12.8	68	E	2	0.9		5c	0	NW		0	0	Fair	
Ft. St. Michaels, Alaska			29.98	761.5	13	−10.6		NE	34	15.2			10s					Heavy snow	
Fort Sill, Indian T.	28.96	735.6	30.09	764.3	52	11.1	79	N			1	5ck	0	N		0	0	Fair	
Fort Sully, Dakota																			
Galveston, Tex.			30.10	764.5	72	22.2	90	SE	2	0.9		2c	2s	W	SE	0	0	Fair	
Grand Haven, Mich.			30.24	768.1	47	8.3	55	NE	2	0.9		0	Sm'e		NE	0	0	Clear	
Indianapolis, Ind.			30.26	768.6	45	7.2	68	NW	1	0.4		0	0			0	0	Clear	
Indianola, Tex.			30.06	763.5	73	22.8	90	SE	8	3.6		2cs	0			0	0	Fair	
Jacksonville, Fla.			29.93	761.5	70	21.1	79	W	12	5.4		0	5s		W	0	0	Fair	
Keokuk, Iowa			30.24	768.1	48	8.9	70	Calm	0	0		0	0			0	0	Clear	
Key West, Fla.			30.04	763.5	77.4	25.2	77	E	1	0.4		0	2ks		E	0	0	Clear	
Kittyhawk, N. C.			29.94	760.5	49	9.4	93	N	38	17.0			10ks		N	0.39	9.9	Cloudy	
Knoxville, Tenn.			30.16	766.1	48	8.9	64	Calm	0	0		0	0			0	0	Clear	
La Crosse, Wis.			30.22	767.6	45	7.2	76	S	5	2.2		0	Sm'e			0	0	Smoky	
Leavenworth, Kan.			30.28	769.1	40	7.8	92	Calm	0	0			Fog			0	0	Foggy	
Lexington, Ky.	29.09	738.9	30.23	767.8	42	5.6	74	N	20	8.9		0	0			0.03	0.8	Clear	
Long Branch, N. J.			30.10	764.5	43	6.1	75	NE	22	9.8			10s		NE	0	0	Cloudy	
Louisville, Ky.			30.24	768.1	47	8.3	70	N	8	3.6		0	0			0.02	0.5	Clear	
Lynchburg, Va.			30.05	763.3	48	8.9	77	NE	3	1.3			10s		NE	0.19	4.8	Cloudy	
Malone, N. Y.			30.16	766.1	40	4.4	64	NE	2	0.9		5c	0	W		0	0	Fair	
Manhattan, Kan.	29.11	739.4	30.27	768.8	50	10.0	86	SW	2	0.9		0	8ks			0	0	Cloudy	
Marquette, Mich.			30.24	768.1	34	1.1	79	Calm	0	0		0	0			0	0	Clear	
Memphis, Tenn.			30.28	769.1	56	13.3	56	NE	3	1.3		0	0			0	0	Clear	
Milwaukee, Wis.			30.29	769.4	41	5.0	57	W	3	1.3		2c	Fog	NW		0	0	Fair	
Mobile, Ala.			30.11	764.8	64	17.8	83	N	18	8.0			10s		N	0	0	Cloudy	
Montgomery, Ala.			30.14	765.5	63	15.6	65	N	12	5.4		0	0			Inap.	Inap.	Clear	
Morgantown, W. Va.			30.08	764.0	44	6.7	75	NW	4	1.8			10s		NW	0.24	6.1	Cloudy	
Mt. Washington, N. H.	23.80	604.5	30.16	766.1	22	−5.6	72	NE	6	2.7		0	2s			0	0	Fair	
Nashville, Tenn.			30.20	767.1	54	12.2	55	N	4	1.8		0	0			0	0	Clear	
New Haven, Conn.			30.14	765.5	46	7.8	48	NE	20	8.9		10k	0	W		0	0	Cloudy	
New London, Conn.			30.15	765.8	45	7.2	54	NE	17	7.6		5ck	0	W		0	0	Fair	
New Orleans, La.			30.09	764.3	60	20.0	85	N	6	2.7		8k	0	N		0	0	Fair	
Newport, R. I.			30.16	766.1	44	6.7	60	E	12	5.4		8ck	0	SW		0	0	Cloudy	
New York, N. Y.			30.11	764.8	43	6.1	58	NE	16	7.2		5k	Fog			Inap.	Inap.	Fair	
Norfolk, Va.			30.00	762.0	43.5	8.1	96	NE	14	6.3			10n		NE	0.41	10.4	Light rain	
North Platte, Neb.			29.77	756.1	51	10.6	78	S	7	3.1		8c	0	W		Inap.	Inap.	Fair	
Omaha, Neb.	27.20	690.9	30.23	767.8	47	8.3	85	S	3	1.3			10s		SW	0	0	Cloudy	
Oswego, N. Y.	29.14	740.1	30.17	766.4	49	9.4	67	S	5	2.2		2k	8s	NE		0.08	2.0	Cloudy	
Pembina, Dakota			29.98	761.5	39	3.9	86	SW	8	3.6		0	0			0	0	Clear	
Philadelphia, Penn.			30.10	764.5	42	5.6	70	NE	18	8.0			10s			Inap	Inap.	Cloudy	
Pike's Peak, Colorado			30.16	766.1	21	−6.1	56	N	4	1.8		0	Haze		NE	0	0	Clear	
Pittsburgh, Penn.	17.89	454.4	30.07	763.8	48	6.1	75	N	8	3.6			10s		N	0.12	3.0	Cloudy	
Port Huron, Mich.			30.21	767.3	40	4.4	56	N	12	5.4		2ck	2s	N		0	0	Fair	
Portland, Me.			30.30	769.6	43	6.1	75	SE	12	5.4		10k	0	SE		0	0	Cloudy	
Portland, Oregon			30.07	763.8	51	10.6	86	Calm	0	0			10n			0.11	2.8	Light rain	
Punta Rassa, Fla.			30.07	763.8	76.5	24.7	85	E	4	1.8			8ks			0	0	Cloudy	
Rochester, N. Y.			30.15	765.8	43	6.1	83	S	3	1.3			10n		SW	0.08	2.0	Light rain	
Salt Lake City, Utah			29.99	761.7	50	10.0	51	Calm	0	0		0	0		SW	0	0	Clear	
Sandy Hook, N. J.	25.66	651.8	30.09	764.3	46	7.8	60	NE	25	11.2			8s			0	0	Cloudy	
San Diego, Cal.			30.09	764.3	52	11.1	93	Calm	0	0		5	0		NE	0	0	Clear	
San Francisco, Cal.			30.13	765.3	55	12.8	87	S	2	0.9		0	Fog			0	0	Fair	
Santa Fe, N. M.			29.88	758.9	49	9.4	85	SE	5	2.2		2cs	Fog	NW		0	0	Fair	
Savannah, Ga.	23.34	592.8	29.94	760.5	73	21.7	87	W	7	3.1		2c	Sm'e	SW	SE	Inap.	Inap.	Fair	
Shreveport, La.			30.21	767.3	65	18.3	68	NE	11	4.9		10ck	0	W		0	0	Cloudy	
Smithville, N. C.			29.97	761.2	54	12.2	86	N	11	4.9			10s		N	0.32	8.1	Cloudy	
Springfield, Mass.			30.19	766.8	44	6.7	50	NE	8	3.6		8cs	2s			0	0	Fair	
St. Louis, Mo.			30.31	769.9	51	10.6	59	Calm	0	0		0	0			0	0	Clear	
St. Marks, Fla.			30.02	762.5	68	20.0	90	W	4	1.8		2cs	0			0	0	Fair	
St. Paul, Minn.			30.15	765.8	44	6.7	75	SE	5	2.2		8c,cs	Haze			0	0	Fair	
St. Paul's Island, Alaska			29.78	756.4	33	0.6	100	SSE	8	3.6			Fog			0.43	10.9		
Thatcher's Island, Mass.			30.25	768.3	42	5.6	83	E	16	7.2		5ck	0	NW		0	0	Clearing	
Toledo, Ohio			30.18	766.6	45	7.2	46	N	8	3.6		2c	0			0	0	Clear	
Tucson, Arizona	27.56	700.0	30.15	765.8	55	12.8		S				5c	0	W		0	0	Fair	
Tybee Island, Ga.			29.91	759.7	68	20.0	79	W	6	2.7		5ck	Sm'e	W		0	0	Fair	
Vicksburg, Miss.			30.22	767.6	60.5	15.8	55	E	11	4.9		5c	Haze					Fair	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer
Virginia City, M. T.	24.29	617.0	29.77	756.1	40.5	4.7	69	Calm	0	0		10c	0	W		0	0	Cloudy	
Washington, D. C.			30.10	764.5	41	5.0	91	N	10	4.5			10n		NE	0.41	10.4	Light rain	
Wilmington, N. C.			29.96	761.0	52	11.1	86	N	12	5.4			10s		N	0.66	16.8	Cloudy	
Wood's Holl, Mass.			30.19	766.8	42	5.6	49	E	17	7.6			10s			0	0	Cloudy	
Wytheville, Va.	27.67	702.8	29.85	758.2	44	6.7	75	NW	12	5.4			10ks		N	0.36	9.1	Cloudy	
Yankton, Dakota	28.92		30.23	767.8	49	9.4	85	S	3	1.3			10s		SW	0	0	Cloudy	
Yuma, Arizona			29.96	761.0	66	18.9		N				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.04	763.0	81	27.2	70	E	5	2.2		5ck	8s	NE		0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.99	761.7	81	27.2	78	E				8k	0			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I.			30.22	767.6	79	26.1	78	SSE	3	1.3		2c	8kn	SE		0	0	Cloudy	W. S. Cameron.
Kingston, Jamaica, W. I.			30.18	766.6	77	25.0	76	Calm	0	0		8k	0			0	0		James Gall.
Santiago de Cuba, W. I.			29.81	757.2	78	25.6	78	Calm	0	0		4cs	0			0	0	Fair	Robert Mason.
Havana, Cuba, W. I.			30.04	763.0	76	24.4	82	NE	2.4	1.1		0	0			0	0	Clear	Charles Hasselbrink
St. Georges, Bermudas			30.16	766.1	72.0	22.2	82	SSW	10.0	4.5		0	8k			0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.19	690.6	29.93	761.5	66	18.9	90	SW	2.0	0.9		0	8k			0.70	17.8	Dull	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.00	762.0	79	26.1	82	E			3		5k			0	0	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S. A.			30.03	762.7	84.2	29										0.315	8.00		Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1			64.0	17.8	85		0	0		1c	1s			0.08	2.0	Fair	Thomas Herran.
St. John's, Newfoundland.			30.22	767.6	24.0	— 4.4	79	NE				10k	10s			0	0	Cloudy	John Delaney.
York Factory, B. A.			30.02	762.5	21.5	— 5.8	93	E	1	0.4		2c	2s	E		0	0		J. Fortescue.
Honolulu, Oahu, H. I.			30.01	762.2	71	21.7	90	Calm			0					0	0		E. P. Church.
Makawao, Maui, H. I.	27.79	761.0	29.96	761.0	61	16.1	81	Calm	0	0		2c	0			0	0		F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per Cent.	From—	Miles per hour.	Meters per second.	0—10	0—10	0—10	From—	From—	State of ocean.	Direction of swell from—	Weather.	Observer
Steamer Peruvian, N. 43° 18′, W. 68° 30′.	N79W	13½	30.15	765.8				E			2	4c,ck	2s				Tranq'l	*D. clouds	Capt. W. Richardson.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 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.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher. *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 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* of clouds, 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 APRIL 26, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.25	768.4	68.9	20.5	58	NW			1		0			0	0	Clear	Charnot.
Algiers			30.27	768.8	66.9	19.4	70	E			1		0			0	0	Clear	Peter.
La Calle					62.6	17.0		WNW			4		3			0.004	0.1	Fair	Kunts.
Tunis			30.12	765.0	64.4	18.0	62	NW			5		7			0.016	0.4	Cloudy	Jacques.
Sfax			30.17	766.3	68.7	20.4	40	NW			4		4			0	0	Fair	Chauvey.
Saida			30.25	768.3	73.4	23.0	18	NNE			4		1			0	0	Clear	Millot.
Tebessa			30.17	766.2	52.3	11.3		N			4		10			0	0	Hidden	Colin.
Geriville			30.26	768.5	68.4	20.2	19	N			2		1			0	0	Clear	Buard.
Laghouat			30.30	769.5	75.2	24.0	26	N			1		0			0	0	Clear	Guyot.
Biskra			30.23	767.8	77.0	25.0	28	NNE			1		0			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.95	760.8	59.0	15.0	80	Calm			0		10			0.417	10.6	Raining	Prof. Ivan Stosir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.93	760.2	50.7	10.4	93	E			3		9			0.362	9.2		I. R. Observatory.
Eperies			29.78	756.5	64.8	18.2	73	N			4		10		S	0	0		Julius Mikolik.
Gratz	28.76	730.4	29.94	760.4	60.1	15.6	45	NW			5		10			0	0		Andreas Rospini.
Hermannstadt	28.34	719.7	29.68	753.8	77.7	25.4	27	ESE			3		3			0	0		Prof. Reissenberger.
Kremsmünster			30.07	763.6	50.9	10.5	79	W			3		10			0.504	12.8		Prof. C. Wagner.
Lemberg			29.67	753.6	71.2	21.8	56	NE			1		4			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.92	759.9	62.8	17.1	77	WSW			2		8cks			0	0		I. R. Hydrographic Office
Szegedin			29.82	757.4	66.6	19.2	63	SW			1		7			0.171	4.35		Karl Stancel.
Trieste			29.91	759.7	67.1	19.5	73	Calm			0		6			0.122	3.1	Partly clear.	Prof. V. Farolfi.
Vienna			29.98	761.6	54.3	12.4	63	NW			2		10			0.268	6.8		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.14	765.5	55.2	12.9	50	NW			2		8			0	0		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	48.4	9.1		WNW	20	8.9			5			0.080	2.03	Blue sky	William Boswell.
Ardrossan			30.02	762.5	51	10.6		WNW			3		7					*D. clouds	William McNeil.
Armagh Observatory			30.10	764.5	55.3	12.9		SW	10	4.5			7					*D. clouds	S. Call. for Dr. Robinson.
Bidston, Liverpool Obs			30.11	764.8	52.7	11.5		W	22	9.8			6					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			30.11	764.8	49.5	9.7		SW			1		10					Misty	J. Dreyer.
Bradford			30.07	763.8	54.1	12.3		W			2		6			0.01	0.3	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.03	762.7	83.5	28.6		NE			5		7					Overcast	Sergt. J. F. Halanen, A. H. C.
Cambridge Observatory			30.13	765.3	56.0	13.3		WNW			1		7						H. Todd.
Cardington			30.11	764.8	57.4	14.1		W			1		6					*D. clouds	John McLaren.
Carlisle			30.03	762.7	53.7	12.1		W			6		3			0.06	1.5	*D. clouds	T. Bell, for J. Carmichael.
Chatham, School M. E			30.17	766.3	56.7	13.7		W			1		7					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	28.74	730.0	30.28	769.1	45.0	7.2		SW			1		10					Showery	R. E. Power.
Donaghadee			30.06	763.5	56	13.3		WSW			4		3					*D. clouds	J. Mac Gowan.
Dover			30.16	766.1	53	11.7		W			3		5					½ clouded	J. Costello.
Eccles, (near Manchester)			30.11	764.8	53.5	11.9		S	10.0	4.5			7					Squally	Thomas Mackereth.
Falmouth Observatory			30.21	767.3	50.3	10.2		SSE	10	4.5			10					Raining	The Staff.
Fort Napier, (Natal)	28.10	713.7	30.33	770.4	65.4	18.6		SE			1		9					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.03	762.7	86	30.0		E			1		7					*D. clouds	
Galway, Queen's College			30.05	763.3	50	10.0		SSW			1		10					Gloomy	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.25	768.3	73.6	23.1		E			4		0					Blue sky	Corp'l C. Aitken, A. H. C.
Glasgow Observatory			29.99	761.7	49.0	9.4		W			1		9					Threatening	Lewis Stuart.
Great Yarmouth			30.13	765.3	56	13.3		NW			3		4					*D. clouds	G. T. Watson.
Greenwich Royal Obs			30.17	766.3	61.0	16.1		W			1		6					*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.21	767.3	53.5	11.9		SSW			1		8					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			30.10	764.5	52.0	11.1		WNW			3		5			Blank	Blank	*D. clouds	L. J. Crossley.
Helston			30.18	766.6	56	13.3		S			4		10			0	0	Raining	M. P. Moyle.
Holyhead			30.13	765.3	52	11.1		SW			3		3					*D. clouds	John Tilston.
Kew Observatory			30.16	766.1	55.8	13.2		W	13	5.8			5					*D. clouds	The Staff.
Kingstown			30.12	765.0	52	11.1		SE			1		10					Overcast	George Mitchell.
Leicester Museum			30.14	765.5	55.0	12.8		W			2		6					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.01	762.2	65.4	18.6		NW			2		4k						Fred. Travis, Pvt. A.H.C.
Nairn			29.92	760.0	56	13.3		Calm			0		10					Overcast	W. D. Penny.
Nassau, Bahamas																			Surg. Maj. Henry.
Nottingham			30.11	764.8	56.6	13.7		W			3		5c,ck,k	NW	W	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.11	764.8	55.0	12.8		W			2		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.06	764.5	55	12.8		WNW			1		6					*D. clouds	J. Lucas.
Plymouth			30.21	767.3	53	11.7		SSW			2		10					Showery	John Merrifield.
Roche's Point			30.13	765.3	50	10.0		S			3		10					Raining	W. Kennedy.
Saint Ann's Head			30.17	766.3	51	10.6		WSW			2		7					Misty	John C. Walker.
Saint Helier, Jersey			30.24?	768.1?	52.2	11.2		WSW			3		8					2 clouded	A. P. Amy.
Sandwick Manse, Orkneys			29.95	760.7	46.9	8.3		N	16	7.2			8					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough			30.03	762.7	54.2	12.3		W			2		8					Overcast	F. Shaw.
Scutari Cemetery Turkey			29.82	757.4	68.2	20.1		S			0		1					*D clouds	Sergt. W. H. Lyne.
Sheffield			30.08	764.0	55.7	13.2		W			3		6			0.102	2.59	*D. clouds	W. F. Cooper.
Silloth Rectory			30.04	763.0	53.7	12.1	74	SW			4		2			0.030	0.76	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			30.09	764.3	51.2	10.7		W			4		6			Blank	Blank		S. J. Perry.
Stornoway, Lewis C. Hebr.			29.93	760.2	48	8.9		NE			1		10					Raining	John Smith.
Stratfield Turgiss					57.7	14.3		NW			3		0?					Overcast?	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.94	760.5	45	7.2		NNE			2		9					Overcast	John Trotter.
Truro, Royal Institution.			30.15	765.8	47	8.3		SW			4		10					Raining	W. Newcombe.
Valencia Observatory			30.06	763.5	52.4	11.3		SW	22	9.8			10					Misty	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man					46	7.8		S			3		0						The Staff, for E. J. Stone.
Cape Good Hope Obs			30.21	769.4	89.4	31.9	25	S	4	1.8			1						Andrew Gibb.
Leith, Restalrig Park			29.99	761.7	53.7	12.1		W			4		6k			0.01	0.3	Fine	C. Meldrum.
Mauritius			30.01	762.2				ESE	7.3	3.3						0.01	0.3		J. Youngclause.
Monach Lt-house, Hebrides			29.91	759.7	51	10.6		W			3	3	0			0.1	2.5		
North Unst, (Shetland Is.)			29.98	761.5	48	8.9		E			4	6	4	NE					

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			30.03	762.7	50.5	10.3	74	SE			2		9						
Faröe			30.00	761.9	51.8	11.0	75	WNW			2		1						
Godthaab, (Greenland)			30.02	762.5	29.1	− 1.6	82	NNW			4		10						
Stykkisholm, (Iceland)			30.05	763.2	35.1	1.7	93	SE			0		8						
Thorshavn, (Faröe)			30.11	764.9	45.0	7.2	77	ENE					7						
Vestervig			29.97	761.2	54.0	12.2	67	Calm			0		4					Thunder-storm	

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	55.4	13	87	SW			1		8nk		SW	0.047	1.2	Very cloudy	Normal School.
Amiens			30.24	768.0	63.0	17.2	59	W			3		0			0	0	Clear	Normal School.
Avignon			30.18	766.6	66.9	19.4	51	N			4		0			0	0	Clear	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory.
Beauvais			30.21	767.4	60.6	15.9	31	W			2		8		W	0	0	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			30.22	767.5	53.6	12	90	WNW			2		10		WNW	0	0	Covered	Normal School.
Brest			30.17	766.3	56.7	13.7	86	SW			2		10		SW	0.187	4.75	Rain and fog	Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			30.26	768.7	53.4	11.9	63	NW			3		10		W	0	0	Covered	Puy de Dome Obs.
Commercy			30.60	777.2	54.3	12.4	48	NW			2		8kn		NW	0.047	1.2	Very cloudy	Normal School.
Commune de Gréasque*			29.91	759.8	63.5	17.5	41	NW			6		5		NW	0	0		M. Kina.
Grenoble			30.22	767.6	55.4	13	77	NW			6		10n		NE	0.016	0.40	Raining	Normal School.
Le Mans			30.26	768.6	56.5	13.6	75	W			2		8		W	0.20	5.	Very cloudy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			30.29	769.3	51.1	10.6	90	NE			2		5		N	0.142	3.60	Cloudy	Normal School.
Mâcon			30.30	769.5	57.6	14.2	78	W			2		10			0	0	Covered	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			30.17	766.2	68.0	20	39	NW			8		5		N	0	0	Partly cloudy	Normal School.
Orleans																			Normal School.
Paris Observatory			30.21	767.4	58.5	14.7	40	WNW			1		5	WSW	WNW	0	0	Cloudy	National Observatory
Parthenay																			Normal School.
Privas			30.22	767.5	61.2	16.2		NNW			4		5		NNW	0	0	Cloudy	Normal School.
La Roche-sur-Yon			30.29	769.4	55.6	13.1	84	W			4		10		E	0	0	Covered	Normal School.
Rochefort, Observatory			30.35	770.0	58.3	14.6	77	W			4		10		E	0	0	Covered	Naval Observatory.
Rouen			30.21	767.2	63.9	17.7	37	WSW			2		5		SW	0	0	Cloudy	Normal School.
Saint Lo			30.25	768.4	58.3	14.6	77	SW			4		7		SW	0	0		Normal School.
Tarbes	29.32	744.8			59.0	15		NNW			2		0			0	0	Clear	Normal School.
Toulouse																			Normal School.
Villefranche			30.29	769.4	58.3	14.6	58	NNW			3		8		W	0	0	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.8	81.0	27.2	83	NE			2		2k			0	0		L'Abbé Marchési.
Gorée																			
Marseilles			30.11	764.8	66.4	19.1	48				5		7			0	0		Marseilles Observatory.
Mont-Louis	29.03	637.3	30.41	772.3	48.4	9.1	57	WNW	16.8	7.50			8		WNW	0	0		—. Falguère.
Montsouris, Paris			30.21	767.3	58.6	14.8	42	WNW			1		8		W	0	0		Montsouris Observ'tory.
Perpignan			30.29	769.4	65.5	18.6	92	N	33.6	15.00			6		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.21	767.3	62.6	17.0	44	NNW			1		7			0	0	Very cloudy	E. Renou.
Toulouse			30.40	772.2	57.9	14.4	70	WNW			3		5			0	0		Toulouse Observatory.
Tours			30.26	768.5	55.8	13.2	84	W			1		10		WNW	0.110	2.8		C. Marquet.
Versailles, (near Paris)			29.82	757.3	59.0	15.0	42	NW			2		8			0	0	Cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.01	762.2	56.8	13.8	85	NE	5.4	2.4			10c8			0.575 0.685	14.6 17.4	Misty	H. Le Lec, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.04	762.9	55.9	13.3	50	W			4		9	WSW		0	0		Prof. T. Hoh.
Berlin			30.03	762.8	58.6	14.8	54	SW			1		5			0	0		Prof. Arndt.
Breslau			30.04	762.9	50.0	10.0	85	NW			5		10			0	0	Raining	Dr. P. Neugebauer.
Carlsruhe			30.14	765.5	53.6	12.0	68	SSW			8		5			0	0		A. Senz.
Cassel			30.03	762.8	53.2	11.8	70	NW			2		6	NW		0.256	6.5		Dr. H. Möll.
Cologne																			Dr. Gartlie.
Emden																			Prof. Prestel.
Frankfort on the Main			30.17	766.2	57.7	14.3	45	NW			3		5			Inap.	Inap.		Physical Society.
Friedrichshafen		728.9	30.28	769.0	55.4	13.0	59	S					9			0.362	9.2		M. Wilhelm.
Hamburg			30.03	762.8	54.7	12.6	59	WSW			2		5ck, k	W		0	0	Fair	Deutsche Seewarte.
Kiel			30.02	762.6	51.4	10.8	72	SW			2		10			0.209	5.3		Prof. G. Karsten.
Königsberg			29.89	759.3	49.6	9.8	93	NE			2		9			0.213	5.4		Prof. E. Luther.
Köslin			30.00	761.9	42.8	6.0		W			2		4			0.059	1.5		H. Müller.
Leipsic			30.05	763.2	59.9	15.5	51	SW			3		6	W		0	0		Prof. Bruhns.
Memel			29.98	761.4	51.8	11.0	75	NE			2		10			0.228	5.8	Raining	Reinbrecht & Skalweit.
Münster			30.11	764.9	51.1	10.6	89	SW			2		7			0.224	5.7		Prof. E. Heis.
Neufahrwasser			29.91	759.6	43.7	6.5	94	NNW			3		10			0.091	2.3	Light rain	A. Lothes.
Posen			30.01	762.2	48.4	9.1	92	NW			6		10			0.406	10.3		Dr. Magener.
Strassburg, (in Alsace)			30.20	767.0	53.4	11.9	74	Calm			0		5			0	0		Dr. Schur.
Stuttgart			30.14	765.5	51.1	10.6	56	NW			1		10			0.059	1.5	Rain & hail	Prof. Schoder.
Thorn			29.92	760.0	52.5	11.4	86	NW			1		10			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.09	764.2	58.6	14.8	28	W			8		3			0	0		Prof. Flesch.
Wustrow, Naval School			29.95	760.8	48.0	8.9	88	WNW			2		Fog			0	0	Foggy	E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	758.8	70.7	21.5		S										Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.89	759.1	67.5	19.7	57	SW	0.7	0.3			9			0	0		
Padua			29.89	759.3	67.3	19.6	53	S	2.5	1.1			9			0.059	1.5		
Vicenza			29.89	759.3	69.4	20.8	49	S	4.9	2.2			5	SE		0	0		
Verona			29.89	759.3	65.5	18.6	80	E			1		6			0	0		
Bergamo	28.96	725.3	29.87	758.6	66.2	19.0	40	SW			2		6			0	0		
Domodossola	28.94	735.1	29.90	761.0	68.4	20.2	35	NNE			6		5			0	0		
Milan			29.93	760.3	70.9	21.6	43	WNW			2		6	N		0	0		
Pavia			29.95	760.6	67.5	19.7	51	W			6		2	W		0	0		
Moncalieri			29.97	761.3	64.6	18.1	49	ESE	6.3	2.8			8	N		0	0		
Mondovi	28.07	713.1	29.99	761.8	63.0	17.2	36	NW			4		1	N		0	0		
Porto Maurizio			30.04	762.9	61.2	16.2	75	SW			4		2	SSW		0	0		
Genoa			29.99	761.8	63.0	17.2	66	SW	0.7	0.3			10			0	0		
Piacenza			29.93	760.2	68.9	20.7	46	NW			6		0			0	0		
Parma			29.94	760.4	68.2	20.1	41	NW			4		2			0	0		
Bologna			30.02	762.6	65.7	18.7	42	SE			6		4	W		0	0		
Florence			30.01	762.3	66.2	19.0	64	NNE			2		10	S		0	0		
Leghorn			30.02	762.5	61.2	16.2	68	WSW	8.7	3.9			10			0	0		
Siena	28.76	730.5	29.96	760.9	61.0	16.1	63	NW	4.3	1.9			10	NW		0	0		
Urbino	28.42	721.9	29.97	761.2	60.4	15.8	57	NNE			2		8			0	0		
Pesaro																			
Ancona			29.97	761.1	61.9	16.6	75	NW			4		2			0	0		
Grosseto			30.00	762.1	65.1	18.4	53	NNE			6		8	SW		0	0		
Rome			29.97	761.3	63.7	17.6	78	W	6.9	3.1			5	NNW		0	0		
Naples, O. U.			29.97	761.1	67.3	19.6	42	WNW			2		4	NE		0	0		
Lecce			29.93	760.1	61.9	16.6	53	NNW	7.4	3.3			6	NNE		0	0		
Cosenza			29.98	761.6	68.7	20.4	66	N	0	0			9			0	0		
Riposto, (Sicily)			29.96	760.9	64.0	17.8	62	SE			2		4	SW		0	0		
Palermo			30.00	761.9	62.2	16.8	59	W	9.4	4.2			10	W		0	0		
Caltanissetta	28.04	712.1	29.97	761.2	55.9	13.3	62	NW			6		8	SE		0	0		
Sub-Series.																			
Naples, S. R.			29.96	761.0	66.6	19.2	55	SW	4.9	2.2			8,k	SW		0.047	1.2		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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.20	767.0	50.0	10.0		WNW			4								
Groningen			30.01	762.3	53.6	12.0		WNW			4								
Helder			30.10	764.4	48.9	9.4		W			4								
Utrecht			30.09	764.2	54.9	12.7	53	WNW			4		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.94	760.5	52.5	11.4	52	SSW	7.2	3.2			5			0	0		
Brönö			30.20	767.1	44.6	7.0	44	NE	11	5			0			0	0		
Christiania			30.08	763.9	44.2	6.8	82	NNE	1.3	0.6			10			0.240	6.1	Light rain	
Tromsö			30.28	769.0	31.3	−0.4	79	E	2	1			10			0.296	7.5		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	65.5	18.0	77	SSW	2.4	2.19	.....	.....	1	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.24	768.2	83.3	28.5	20	ESE	5.6	2.50	.....	.....	3	.....	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)	.....	.....	30.28	769.1	69.8	21.0	45	SW	9.4	4.20	.....	.....	0	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.32	770.2	74.7	23.7	36	NE	3.8	1.7	.....	.....	0	.....	.....	0	0	.....	The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 hour, 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw	.....	.....	29.86	758.5	60.4	15.8	68	W	18	8	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.84	757.8	59.5	15.3	59	E	4	2	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.09	764.2	52.5	11.4	37	ENE	7	3	.....	.....	5	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.13	765.4	43.9	6.6	33	ENE	7	3	.....	.....	2	.....	.....	.....	.....	.....	Central Physical Obs.
Kaopio	.....	.....	30.14	765.5	37.6	3.1	53	N	13	6	.....	.....	5	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.74	755.3	78.3	25.7	21	S	9	4	.....	.....	4	.....	.....	.....	.....	Solar corona	Physical Cabinet.
Nikolaiev	.....	.....	29.91	759.7	71.2	21.8	47	S	11	5	.....	.....	0	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.93	760.2	72.1	22.3	65	SE	4	2	.....	.....	0	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.[illegible]6	763.4	52.7	11.5	48	NNW	13	6	.....	.....	2	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.80	756.8	85.1	29.5	15	SW	31	14	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.99	761.8	26.2	− 3.2	82	NW	34	15	.....	.....	8	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.65	727.8	30.00	761.9	77.7	25.4	27	S	9	4	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.15	765.7	68.0	20.0	52	ESE	18	8	.....	.....	3	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.83	757.7	50.2	10.1	51	NNW	4	2	.....	.....	0	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.26	768.7	56.5	13.6	52	SE	9	4	.....	.....	2	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.70	728.9	29.72	754.8	33.8	1.0	38	WSW	13	6	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.02	762.6	78.1	25.6	29	N	7	3	.....	.....	8	.....	.....	.....	.....	.....	
Kasalv	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.53	724.6	30.18	766.5	70.9	21.6	38	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.26	743.2	52.7	11.5	83	SW	34	15	.....	.....	10	.....	.....	.....	.....	Raining	Meteorological Obs.
Yeniseisk	.....	.....	29.29	743.9	42.8	6.0	87	S	4	2	.....	.....	10	.....	.....	.....	.....	Raining	Marks.
Irkutsk	28.22	716.7	30.61	777.2	35.8	2.1	49	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	30.12	765.0	60.1	15.6	30	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	27.78	705.6	29.90	759.4	31.1	− 0.5	45	SW	4	2	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.11	764.8	40.1	4.5	42	SE	2	1	.....	.....	0	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	22.3	− 5.4	96	Calm	0	0	.....	.....	10	.....	.....	.....	.....	Snowing	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 401 meters, or 1,311.8 feet; Ekaterinburg, 1[illegible] m., or 1,[illegible] ft.; Tashkend, 4[illegible].2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid	.....	.....	30.24	768.0	79.0	26.1	27	W	5.2	2.33	.....	1	1	NE	.....	0	0	Light clouds	Royal Observatory.
San Fernando	.....	.....	30.27	769.0	80.4	26.9	32	E	0	0	.....	0	0	.....	.....	0	0	.....	The Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; 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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	.....	.....	30.21	767.3	37.0	2.8	55	N	.....	.....	2	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	30.29	769.3	35.8	2.1	58	ESE	.....	.....	4	.....	5	.....	.....	0	0	.....	
Hernosand	.....	.....	30.25	768.4	39.2	4.0	52	E	.....	.....	4	.....	2	.....	.....	0	0	.....	
Stockholm	.....	.....	30.07	763.8	46.4	8.0	36	N	.....	.....	4	.....	9	.....	.....	0	0	.....	
Wisby	.....	.....	30.15	765.9	39.6	4.2	68	ENE	.....	.....	6	.....	7	.....	.....	0	0	.....	
SUB-SERIES.																			
Upsala	.....	.....	30.13	765.3	46.6	8.1	38	NE	11.2	5.0	.....	.....	8	SSW	.....	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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28.80	731.5	30.23	767.8	53.6	12.0	66	WSW			2		10			0	0	Covered	The Observatory.
Zurich	28.53	724.7	30.19	766.9	47.3	8.5	89	NW			1		10		N	0.360	9.3	Raining	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +7.1 mm.; Thermometer, —1.5 cent.; Relative Humidity, +9 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Constantinople			29.98	759.2	73.2	22.9	44	SE	3	1.5			4		WSW	0.012	0.3		
Fao, (Persian Gulf)			30.12	765.0	80.6	27.0		NW			3		10						
Salonica			29.85	758.2	79.7	26.5		S			1		0						
Valona			29.87	758.6	67.6	19.7		W			1		8					Thunder-storm	
Varna			29.84	758.0	57.2	14.0		N			1		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			29.91	759.8	81.0	27.2	54	W			2		1c			0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Bathurst, N. B.			30.33	770.4	30.4	— 0.9	89	NE	3	1.3									Hon. J. Ferguson.
Brockville, Ontario			30.25	768.3	49	9.4		Calm	0	0		0	0			0	0	Clear	W. R. Bigg.
*Chatham, N. B.			30.34	770.6	33	0.6	84	N	5	2.2		0	0			0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island.			30.31	769.9	36	2.2	74	E	11	4.9			10ks			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.20	767.1	46.7	8.2	51	E			1					0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			30.38	771.6	29.0	— 1.7	100	SE			1					0	0		H. A. Johnson.
Esquimault, B. C.			30.07	763.8	50.3	10.2	86	SW	6	2.7		10cs				0	0	Cloudy	W. H. Bevis.
Fredericton, N. B.			30.29	769.4	35.0	1.7	80	NE	12	5.4		10cs				0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.78	756.4	41	5.0	95	SW	4	1.8		2ck	2s	W	W	0	0	Fair	James Stewart.
Goderich, Ontario			30.22	767.6	46.2	7.9	81	SW			2					0	0	Clear	H. J. Strang, M. A.
Granton, Ontario			30.22	767.6	44.0	6.7		Calm			0					0	0	Clear	James Grant.
*Halifax, N. S.			30.15	765.8	34	1.1	70	NE	18	8.0			8n		NE	0	0	Threatening	F. Allison, M. A.
*Kingston, Ontario			30.23	767.8	44	6.7	79	Calm	0	0		0	0			0	0	Clear	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			30.22	767.6	42	5.6	66	E	1	0.4		0	2s			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.23	767.8	38	3.3	67	E	3	1.3		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.26	768.6	38	3.3	63	N	4	1.8		0	0			0	0	Clear	Rev. R. Mooley.
*Port Dover, Ontario			30.28	769.1	39	3.9	91	S	5	2.2		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.			30.30	769.6	38.8	3.8		E	4	1.8						0.40	10.2	Fine	Peter Grant.
*Port Stanley, Ontario			30.25	768.3	39	3.9	91	E	5	2.2		2k	0	NW		0.01	0.3	Clear	M. Payne.
*Quebec, Quebec			30.27	768.8	38	3.3	63	NE	5	2.2		0	0			0	0	Clear	Capt. Ash, R. N.
St. John, N. B.			30.24	768.1	33	0.6	70	NE	6	2.7			8			0.010	0.25		G. Murdoch, C. E.
*Saugeen, Ontario			30.19	766.8	46	7.8	62	SW	3	1.3		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.22	767.6	46.1	7.1	62	Calm	0	0		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario			30.24	768.1	39.6	4.2	81	SW	3	1.3						0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			30.38	771.6	32	0.0	84	NE	8	3.6		2ck	8s8		E	0	0	Cloudy	T. C. Hill.
*Toronto, Ontario			30.25	768.3	47	8.3	42	NW	5	2.2		0	0			0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.23	767.8	41.5	5.3	83	Calm			0	0	0			0	0	Fine	J. Montgomery

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	766.1	42	5.6	74	Calm	0	0			10s			0	0	Cloudy	
Alpena, Mich.			30.12	765.0	39	3.9	72	SE	4	1.8		8ck	0	NW		0	0	Fair	
Atlantic City, N. J.			30.17	766.3	40	4.4	73	N	8	3.6		8cs	0	N		0.07	1.8	Cloudy	
Augusta, Ga.			30.28	769.1	58	14.4	58	SE	3	1.3		5k	0	W		0	0	Fair	
Baltimore, Md.			30.24	768.1	43	6.1	75	N	3	1.3		2c	2s	N	N	0.01	0.3	Fair	
Barnegat, N. J.			30.18	766.6	42	5.6	49	N	24	10.7		5k	0	N		0.07	1.8	Fair	
Benton, Montana	27.10	688.3	29.90	759.4	50	10.0	51	SW	10	4.5		2c	5s	NE	SW	0	0	Fair	
Bismarck, Dakota	28.08	713.2	29.72	754.9	45	7.2	37	NW	8	3.6		8ck	0	NW		0.19	4.8	Fair	
Boston, Mass.			30.10	764.5	37	2.8	71	N	20	8.9		10ks	1s	N	N	0	0	Cloudy	
Breckenridge, Minn.			29.88	758.9	44	6.7	92	SE	4	1.8		8ck	Fog			0.27	6.9	Cloudy	
Buffalo, N. Y.			30.24	768.1	35	1.7	90	SW	5	2.2		0	0			0.10	2.5	Clear	
Burlington, Vt.			30.18	766.6	47	8.3	61	SE	2	0.9		2cs	0			0	0	Fair	
Cairo, Ill.			30.24	768.1	54	12.2	43	E	10	4.5		0	0			0	0	Clear	
Cape Hatteras, N. C.			30.17	766.3	46	7.8	60	NE	24	10.7		0	5s		NE	0.02	0.5	Fair	
Cape Henry, Va.			30.24	768.1	45	7.2	61	NW	16	7.2		0	0			0.06	1.5	Clear	
Cape Lookout, N. C.			30.24	768.1	47	8.3	69	N	20	8.9		2k	0	N		0	0	Fair	
Cape May, N. J.			30.10	766.8	43	6.1	63	W	13	5.8		0	5ks		NW	0.05	1.3	Fair	
Charleston, S. C.			30.27	768.8	56	13.3	62	NE	9	4.0		0	0			0	0	Clear	
Cheyenne, Wyoming	24.08	611.6	30.02	762.5	49	9.4	27	W	12	5.4		8c	0	W		0	0	Fair	
Chicago, Ill.			30.14	765.5	52	11.1	53	SW	9	4.0		0	8s		W	0	0	Fair	
Cincinnati, Ohio			30.24	768.1	46	7.8	76	SE	4	1.8		0	Fog			0	0	Clear	
Cleveland, Ohio			30.27	768.8	40.8	4.9	69	SE	5	2.2		1k	Sm'e	NW		0	0	Smoky	
Colorado Springs, Col.	24.16	613.6	30.02	762.5	45	7.2	42	N	10	4.5		2c	0			0	0	Fair	
Corsicana, Tex.			30.01	763.5	68	20.0	90	E	7	3.1			10n		S	0.05	1.3	Light rain	
Davenport, Iowa			30.08	764.0	53	11.7	66	S	20	8.9			10s		S	Inap.	Inap.	Cloudy	
Denison, Tex.			30.01	762.2	60	15.6	94	SE	4	1.8			10n			0.55	14.0	Light rain	
Denver, Col.	24.85	631.2	30.07	763.8	51	10.6	28	S	5	2.2		8c	0	W		0	0	Fair	
Detroit, Mich.			30.23	767.8	46	7.8	54	SW	6	2.7		5k	0	N		0	0	Fair	
Dodge City, Kan.	27.39	695.7	29.61	752.1	61	16.1	82	S	4	1.8		0	0			0.01	0.3	Clear	
Dubuque, Iowa			30.03	762.7	53	11.7	79	S	4	1.8			10s			0.03	0.8	Cloudy	
Duluth, Minn.			29.84	757.9	41	5.0	91	Calm	0	0			10n			0.06	1.5	Light rain	
Eastport, Me.			30.16	766.1	35	1.7	52	NE	24	10.7			10s			0	0	Cloudy	
Erie, Pa.			30.24	768.1	44	6.7	67	S	4	1.8		0	Haze			0.01	0.3	Clear	
Escanaba, Mich.			29.99	761.7	40	4.4	73	S	5	2.2			10s		S	0	0	Cloudy	
Fort Gibson, Indian Terr.			30.04	763.0	62	16.7	50	SE	8	3.6		10cs	0	W		Inap.	Inap.	Cloudy	
Ft. St. Michaels, Alaska			29.99	761.7	35	1.7		Calm	0	0			10s					Snowing	
Fort Sill, Indian T.	28.82	732.0	29.9[illegible]	759.4	62	16.7	88	S			1		10s		S	0.74	18.8	Cloudy	
Fort Sully, Dakota																			
Galveston, Tex.			30.14	765.5	72	22.2	90	SE	4	1.8		0	5s		SE	0	0	Fair	
Grand Haven, Mich.			30.14	765.5	50	10.0	51	S	21	9.4		4cs	4s	NW	NW	0	0	Fair	
Indianapolis, Ind.			30.24	768.1	49	9.4	57	W	1	0.4		Haze	0			0	0	Fair	
Indianola, Tex.			30.12	765.0	70	21.1	95	S	6	2.7		0	5ks			0	0	Fair	
Jacksonville, Fla.			30.16	766.1	68	20.0	68	NE	12	5.4		8k	2s		SE	0.17	4.3	Fair	
Keokuk, Iowa			30.05	763.3	54	12.2	61	SE	12	5.4		5k	0		NE	0.01	0.3	Fair	
Key West, Fla.			30.[illegible]8	764.0	75.5	24.1	81	NE	9	4.0		2k	1ks	SE		0	0	Fair	
Kittyhawk, N. C.			30.25	768.3	44	6.	75	N	20	8.9		5k	0	NW	NE	0	0	Fair	
Knoxville, Tenn.			29.32	770.1	44	6.7	60	Calm	0	0		1ck	Haze	N		0	0	Fair	
La Crosse, Wis.			29.91	759.7	53	11.7	79	S	12	5.4		2cs	5ks	SW		0	0	Clearing	
Leavenworth, Kan.			29.97	761.2	59	15.0	64	S	8	3.6		10k	0	SE	S	0.02	0.5	Cloudy	
Lexington, Ky.	29.16	740.7	30.20	769.4	48	8.9	70	NE	1	0.4		5c	0	W		0	0	Fair	
Long Branch, N. J.			30.19	766.8	41	5.0	48	N	16	7.2		5c	2s			0	0	Cloudy	
Louisville, Ky.			30.27	768.8	49	9.4	71	Calm	0	0			Fog	NW	N	0	0	Foggy	
Lynchburg, Va.			30.27	768.8	47	8.3	76	W	4	1.8		0	0			0	0	Clear	
Malone, N. Y.			30.16	766.1	42	5.6	74	NW	3	1.3		0	0			0.01	0.3	Clear	
Manhattan, Kan.	28.85	732.8	29.97	761.2	59	15.0	81	SW	20	8.9		2cs	0			0	0	Clear	
Marquette, Mich.			29.92	760.0	48	8.9	63	SW	16	7.2			8s			0	0	Cloudy	
Memphis, Tenn.			30.23	767.8	54	12.2	49	SE	6	2.7		5k	0		SW	0	0	Fair	
Milwaukee, Wis.			30.12	765.0	49	9.4	64	SW	14	6.3		10s	Fog	NW		0	0	Cloudy	
Mobile, Ala.			30.20	767.1	59	15.0	76	N	6	2.7		0	0	W		0	0	Clear	
Montgomery, Ala.			30.24	768.1	56	13.3	51	N	4	1.8		2c	Haze	W		0	0	Clear	
Morgantown, W. Va.			30.28	769.1	44	6.7	66	Calm	0	0			Fog			0	0	Foggy	
Mt. Washington, N. H.	23.09	601.7	30.[illegible]5	763.3	13	−10.6	81	NE	28	12.5		10s	0			0	0	Fair	
Nashville, Tenn.			30.27	768.8	52	11.1	59	Calm	0	0		0	0			0	0	Clear	
New Haven, Conn.			30.14	765.5	41	5.0	42	NE	10	4.5		Haze	10s		NE	0	0	Cloudy	
New London, Conn.			30.12	765.0	40	4.4	48	N	12	5.4			10s			Inap.	Inap.	Cloudy	
New Orleans, La.			30.17	766.7	65.5	18.6	54	E	10	4.5		5cs	0	W		0	0	Fair	
Newport, R. I.			30.08	764.0	37	2.8	71	NW	8	3.6			10s		NE	Inap.	Inap.	Cloudy	
New York, N. Y.			30.18	766.6	43	6.1	43	NW	2	0.9		5ck	Fog	W		0	0	Fair	
Norfolk, Va.			30.25	768.3	44	6.7	67	N	4	1.8		0	0			0.04	1.0	Clear	
North Platte, Neb.			29.19	749.0	51	10.6	72	SW	2	0.9		2c	0			0	0	Clear	
Omaha, Neb.	26.97	685.0	29.87	758.7	56	13.3	74	S	6	2.7		1c	0			0	0	Clear	
Oswego, N. Y.	28.84	732.3	30.22	767.6	41.2	5.1	83	W	6	2.7		2cs	Haze			0	0	Fair	
Pembina, Dakota			29.79	756.7	42	5.6	86	S	1	0.4		5k	Fog	NW		0	0	Fair	
Philadelphia, Penn.			30.20	767.1	42	5.6	58	N	14	6.3		8k	0	NW		0.01	0.3	Fair	
Pike's Peak, Colorado			30.13	765.3	23	−5.0	46	NW	18	8.0		2c	0	W		0	0	Fair	
Pittsburgh, Penn.	17.92	455.2	30.29	769.4	37	2.8	90	Calm	0	0			Fog			Inap.	Inap.	Foggy	
Port Huron, Mich.			30.21	767.3	42	5.6	83	SW	9	4.0		2c	1s	N		0	0	Fair	
Portland, Me.			30.16	766.1	39	3.9	55	NE	18	8.0		10k	Haze			0	0	Cloudy	
Portland, Oregon			30.21	767.3	50	10.0	100	Calm	0	0			10s			0.45	11.4	Cloudy	
Punta Rassa, Fla.			30.10	764.5	69.8	21.0	90	NE	10	4.5		Haze	2ks	NE	NE	0	0	Cloudy	
Rochester, N. Y.			30.21	767.3	44	6.7	75	W	8	3.6		0	Haze			0.03	0.8	Clear	
Salt Lake City, Utah			30.01	762.2	48	8.9	42	SW	4	1.8		10cs	0			0	0	Cloudy	
Sandy Hook, N. J.	25.08	652.3	30.16	766.1	43	6.1	35	NE	12	5.4			8s			Inap.	Inap.	Cloudy	
San Diego, Cal.			30.08	764.0	56	13.3	87	N	8	3.6		0	2s		NW	0	0	Fair	
San Francisco, Cal.			30.21	767.1	55	12.8	87	Calm	0	0			10s			0	0	Cloudy	
Santa Fe, N. M.			29.89	759.2	49	9.4	37	NE	12	5.4		0	0			0	0	Clear	
Savannah, Ga.	24.35	593.1	30.24	768.1	61	16.1	66	E	14	6.3		Haze	2s			0	0	Fair	
Shreveport, La.			30.20	767.1	62	16.7	69	SE	5	2.2		10ck	0		E	0	0	Cloudy	
Smithville, N. C.			30.27	768.8	48	8.9	64	N	11	4.9		1c	0	SW		0	0	Clear	
Springfield, Mass.			30.15	765.8	41.5	5.3	33	NE	12	5.4		2k	8s	W		0	0	Cloudy	
St. Louis, Mo.			30.21	767.3	54	12.2	55	Calm	0	0			10s	N		0	0	Cloudy	
St. Marks, Fla.			30.17	766.3	61	16.1	49	N	9	4.0		0	0			0	0	Clear	
St. Paul, Minn.			29.79	756.7	55	12.8	68	S	12	5.4		2c	0			0.02	0.5	Clear	
St. Paul's Island, Alaska			29.98	761.5	34	1.1	89	SE	3	1.3			Fog			0.61	0.3		
Thatcher's Island, Mass.			30.10	764.5	38	3.3	63	NE	33	14.8			10s			0	0	Cloudy	
Toledo, Ohio			30.21	767.3	50	10.0	50	S	8	3.6		2ck	Haze		NE	0	0	Hazy	
Tucson, Arizona	27.62	701.5	30.21	767.3	69	20.6		S				2c	0	SW		0	0	Clear	
Tybee Island, Ga.			30.22	767.6	62	16.7	61	E	18	8.0		5k	0	W		0	0	Fair	
Vicksburg, Miss.			30.24	768.1	58	14.5	57	SE	12	5.4		8c	2ck	SE		0	0	Fair	
														NW	NW				

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer
Virginia City, M. T.	24.22	615.2	29.70	754.4	42	5.6	34	Calm	0	0		8ck	0	W		0	0	Cloudy	
Washington, D. C.			30.26	768.6	42	5.6	83	NW	8	3.6		0	0			Inap.	Inap.	Clear	
Wilmington, N. C.			30.27	768.8	48	8.9	63	NE	6	2.7		5c	0	NW		0	0	Fair	
Wood's Holl, Mass.			30.05	763.3	38	3.3	71	N	12	5.4			10s		N	0	0	Cloudy	
Wytheville, Va.	27.87	707.9	30.10	764.5	39	3.9	71	Calm	0	0		2c	0			0	0	Clear	
Yankton, Dakota	28.60	726.4	29.86	758.4	54	12.2	74	E	2	0.9		5ck	0	W		Inap.	Inap.	Fair	
Yuma, Arizona			30.01	762.2	71	21.7		SW				8c	0	W		0	0	Fair	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.07	763.8	82	27.8	70	NE	5	2.2		5ck	8s	NE	NE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.02	762.5	79	26.1	86	E				10pk	2n			0.23	5.8	Fair	L. V. Bigard.
St. Thomas, St. T., W. I.			30.24	768.1	79	26.1	76	S	15	5.8		4c,cs	4ks	SE		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I.			30.20	767.1	79	26.1	79	Calm	0	0		2c	2s	E		0	0		James Gall.
Santiago de Cuba, W. I.			29.83	757.7	78	25.6	78	NE	1.2	0.5		2c	2k	N		0	0	Fair	Robert Mason.
Havana, Cuba, W. I.			30.06	763.5	77	25.0	78	Calm	0	0		5k	0	E		0	0	Fair	Charles Hasselbrink
St. Georges, Bermudas			30.04	763.0	72.5	22.5	93	SSW				0	5k			0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.21	691.1	30.02	762.5	65	18.3	83	SE	2.0	0.9		5c	0	SSE		0.67	17.0	Dull	C. Partridge.
Paramaribo, D. Guiana, S. A.			29.99	761.7	79	26.1	87	E			3		8ks			0.130	3.30	Rainy	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.08	763.9	84.2	29										0.177	4.50		Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640.6			64.5	18.1	85		0	0		3k	5s			0.10	2.5	Cloudy	Thomas Herran.
St. John's, Newfoundland.			30.50	774.7	39.5	4.2	51	W				0	0			Inap.	Inap.	Clear	John Delaney.
York Factory, B. A.			29.62	752.1	31	— 0.6	64	E	2	0.9		2c	0	SW		0	0		J. Fortescue.
Honolulu, Oahu, H. I.			29.99	761.7	72	22.2	90	NE			6					0	0		E. P. Church.
Makawao, Maui, H. I.	27.81	706.4	29.98	761.5	60	15.6	76	Calm	0	0		2c	5k		NE	0	0		F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from ↑

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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 APRIL 27, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.08	764.0	72.3	22.4	53	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.08	764.1	73.0	22.8	41	N			1		1			0	0	Clear	Peter.
La Calle								Calm			0		0			0	0	Clear	Kunts.
Tunis			30.04	763.0	70.1	21.1	42	NW			6		5			0	0	Fair	Jacques.
Sfax			30.10	764.4	75.9	24.4	29	NW			5		2			0	0	Clear	Chauvey.
Saïda			30.11	764.8	76.1	24.5	19	N			2		0			0	0	Clear	Millot.
Tebessa			30.09	764.2	66.6	19.2		W			3		3			0	0	Fair	Colin.
Geriville			30.11	764.8	59.7	15.4	58	N			2		1			0	0	Clear	Buard.
Laghouat			30.18	766.6	73.4	23.0	37	N			1		0			0	0	Clear	Guyot.
Biskra			30.12	765.1	79.3	26.3	21	NW			2		0			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.82	757.3	57.6	14.2	39	NE			1		9			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.84	757.8	48.2	9.0	76	E			2		10			0.244	6.2		I. R. Observatory.
Eperies			29.74	755.5	50.0	10.1	86	N			2		10			0.406	10.30		Julius Mikolik.
Gratz	28.65	727.8	29.84	757.9	57.2	14.0	30	NW			8		8			0	0		Andreas Rospini.
Hermannstadt	28.16	715.2	29.54	750.2	61.5	16.4	58	NW			4		6			0.087	2.20	Raining	Prof. Reissenberger.
Kremsmünster			29.96	760.9	50.5	10.3	61	W			3		6			0.138	3.5		Prof. C. Wagner.
Lemberg			29.63	752.7	52.4	11.1	90	NW			1		10			1.091	27.7		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.86	758.5	55.0	12.8	68	WNW			1		88			0.024	0.59		I. R. Hydrographic Office
Szegedin			29.61	752.0	53.6	12.0	83	Calm			0		10			0	0		Karl Stancel.
Trieste			29.85	758.1	54.9	16.7	58	W			2		8			0	0	Drizzling	Prof. V. Farolfi.
Vienna			29.88	758.9	51.3	10.7	64	NW			3		10			0.634	16.1		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.99	761.8	60.1	15.6	42	SSW			1	8	1	NW		0	0		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0 10.	Clouds. Amount. Low'r 0 10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	45.0	7.2		SE	12	5.4			7			0	0	*D clouds	William Boswell.
Ardrossan			29.79	756.7	48	8.9		ESE			3		9					Raining	William McNeil.
Armagh Observatory			29.73	755.1	53.0	11.7		SSE	13	5.8			10					Raining	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.80	756.9	57.0	13.9		SE	13	5.8			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.68	753.9	53.5	11.9		SSE			1		10					Raining	J. Dreyer.
Bradford			29.65	758.2	47.7	8.7		SE			1		10			0.01	0.3	Drizzling	J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	82.0	27.8		NE			2		5					*D. clouds	Sergt. J. F. Halanen. A.
Cambridge Observatory			29.92	760.0	50.0	10.0		SSW			1		10					Raining	H. Todd. [H. C.
Cardington			29.89	759.2	53.0	11.7		S			1		10					Overcast	John McLaren.
Carlisle			29.80	756.9	49.4	9.7		SE			1		10			0.02	0.5	Rain & snow	T. Bel, for J. Carmell.
Chatham, School M. E			29.95	760.7	51.7	10.9		SW			2							Overcast	Capt. J. Fellowes, R. E.
Dartmoor	28.46	722.9	29.91	761.2	47.2	8.4		SW			3		10					Foggy	R. E. Power.
Donaghadee			29.73	755.1	48	8.9		S			2		10					Raining	J. Mac Gowan.
Dover			29.98	761.5	50	10.0		WSW			3		6					¾ covered	J. Costello.
Eccles, (near Manchester)			29.93	760.2	52.8	11.6		SSE	4.2	1.9			10					Gloomy	Thomas Mackereth.
Falmouth Observatory			29.89	759.2	53.0	11.7		SSW	16	7.2			10					Rain and fog	The Staff.
Fort Napier, (Natal)	27.96	710.2	30.19	766.8	67.1	19.5		E			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	87	30.6		N			0		5					*D. clouds	[tis-
Galway, Queen's College			29.67	753.6	51	10.6		SW			2		10					Raining	B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			30.09	764.3	68.2	20.1		E			2		0					Blue sky	Corp'l C. Aitken, A. H. C.
Glasgow Observatory			29.78	756.4	48.8	9.3		ESE			2		10					Threatening	Lewis Stuart.
Great Yarmouth			29.95	760.7	49	9.4		S			2		6					*D. clouds	G. T. Watson.
Greenwich Royal Obs			29.94	760.5	52.8	11.6		SSW			1		10					Overcast	The Staff, for G. B. Airy.
Guernsey			29.96	761.0	53.5	11.9		SSE			1		10					Misty	Dr. S. E. Hoskins.
Halifax, Moorside Obs			29.35	758.9	46.8	8.2		ESE			1		10					Drizzling	L. J. Crossley.
Helston			29.87	758.7	56	13.3		S			4		10n			0.26	6.6	Misty	M. P. Moyle.
Holyhead			29.77	756.1	50	10.0		SSW			3		10					Foggy	John Tilston.
Kew Observatory			29.94	760.5	53.1	11.7		S	12	5.4			10			Blank	Blank	Threatening	The Staff.
Kingstown			29.73	755.1	55	12.8		S			5		9					Overcast	George Mitchell.
Leicester Museum			29.90	759.4	54.3	12.4		SW			1		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.87	758.7	63.0	17.2		NW			2		8k						Fred. Travis, Pvt. A.H.C.
Nairn			29.78	756.4	55	12.8		SE			1		2					¼ clouded	W. D. Penny.
Nassau, Bahamas																			Surg. Maj. Henry.
Nottingham			29.56	758.9	53.	11.9		S			2		10d		S	0.022	0.56	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.57	758.7	52.2	11.2		S			2–3		10					Misty	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.89	759.2	55	12.8		S			2		10					Gloomy	J. Lucas.
Plymouth			29.91	759.7	52	11.1		S			2		10					Misty	John Merrifield.
Roche's Point			29.70	754.4	51	10.6		S			4		10					Raining	W. Kennedy.
Saint Ann's Head			29.82	757.4	49	9.4		S			4		10					Overcast	John C. Walker.
Saint Helier, (Jersey)					56.4	13.3		SSE			2		8					¾ clouded	A. P. Amy.
Sandwick Manse (Orkneys			29.87	758.7	46	7.8		E	27	12.1			5					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough			29.89	759.2	45.	7.7		SSE			2		10					Overcast	F. Shaw.
Scutari Cemetery (Turkey			29.68	753.9	69.	21.0		SW			1		6					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.87	758.7	50.2	10.1		SW			1		10			0.017	0.43	Gloomy	W. F. Cooper.
Silloth Rectory			29.81	757.2	51.7	10.9	76	E			1		10			0.090	2.29	Overcast	Rev. Francis Redford.
Stonyhurst Observatory			29.83	757.7	47.7	8.7		NE			0		10			Blank	Blank	Hazy	S. J. Perry.
Stornoway, Lewis C. Hebr.																			John Smith.
Stratfield Turgiss					53.3	11.8		S			2		10					Raining	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.83	757.7	47	8.3		ESE			3		6					*D. clouds	John Trotter.
Truro, Royal Institution			29.81	757.2	53	11.7		S			4		10					Raining	W. Newcombe.
Valencia Observatory			29.65	753.1	50.3	10.2		SSW	16	7.2			10					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man					47	8.3		S			4		10						The Staff, for E. J. Stone.
Cape Good Hope Obs			30.15	765.8	83.7	28.7	29	SSE	9	4.0			5						Andrew Gibb.
Leith, Restalrig Park			29.84	757.9	52.4	11.3		SE			2		10s			0	0	Overcast	C. Meldrum.
Mauritius			29.98	761.5				ESE	11.2	5.0						0.04	1.0		J. Youngclause.
Monach Lt-house, Hebrides			29.61	752.1	50	10.0		SE			4		10			0	0		
North Unst, (Shetland Is.)			30.01	762.2	45	7.2		SE			4		10						

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 270.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			29.98	761.6	47.1	8.4	59	SE			4		3						
Fanöe			29.98	761.4	49.3	9.6	84	SW			2		9						
Godthaab, (Greenland)			30.32	770.0	25.7	— 3.5	78	N			4		10						
Stykkisholm, (Iceland)			30.01	762.3	28.2	— 2.1	92	E			6		0						
Thorshavn, (Faröe)			30.00	761.9	44.1	6.7	87	ENE			4		10						
Vestervig			29.97	761.1	51.8	11.0	70	E			6		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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	762.2	57.2	14	79	SW			1		8nk		SW	0.031	0.8	Very cloudy	Normal School.
Amiens			30.03	762.7	63.7	17.6	58	W			3		8		W	0	0	Very cloudy	Normal School.
Avignon			30.01	762.2	66.0	18.9	60	NNW			2		0			0	0	Clear	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory.
Beauvais			30.07	763.8	61.9	16.6	55	SSW			1		8		SSW	0	0	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			30.06	763.4	58.6	14.8	89	SSW			2		10		SSW	0.374	9.5	Covered	Normal School.
Brest			29.90	759.5	55.9	13.3	81	SW			3		10		SW	0.039	1.00	Misty	Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			30.07	763.8	53.1	11.7	86	NE			1		10			0.094	2.4	Covered	Puy de Dome Obs.
Commercy			30.06	763.4	56.7	13.7	50	E			2		8kn		E	0	0	Very cloudy	Normal School.
Commune de Gréasque*			29.98	761.6	62.8	17.1	43	NW			6		8		NW	0	0		M. Kina.
Grenoble			30.03	762.8	58.3	14.6	63	NNW			4	2c		S		0	0	Slightly cl'dy	Normal School.
Le Mans			30.04	763.0	58.5	14.7	78	W			2		8		W	0.035	0.9	Very cloudy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			30.05	763.2	57.4	14.1	67	N			2		5		NE	0	0	Cloudy	Normal School.
Mâcon			30.10	764.6	54.0	12.2	87	NE			2		10		NW	0.134	3.4	Cloudy	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			29.98	761.4	67.3	19.6	40	N			1		0			0	0	Clear	Normal School.
Orleans																			Normal School.
Paris Observatory			30.03	762.7	57.4	14.1	62	SW			2		10		SW	0.009	0.24	Covered	National Observatory
Parthenay																			Normal School.
Privas			29.08	763.9	59.2	15.2		NNW			4		5		NNW	0	0	Cloudy	Normal School.
La Roche-sur-Yon			30.10	764.4	57.0	13.9	78	S			2		10		N	0.039	1.0	Covered	Normal School.
Rochefort, Observatory			30.10	764.5	59.4	15.2	77	S			3		10		NE	0	0	Covered	Naval Observatory.
Rouen			30.00	762.0	58.5	14.7	68	SSE			2		10		SW	0	0	Covered	Normal School.
Saint Lo			29.99	761.8	56.3	13.5	85	SW			4		10		SW	0	0		Normal School.
Tarbes	28.99	736.4			57.0	13.9		S			1		0			0	0	Clear	Normal School.
Toulouse																			Normal School.
Villefranche			30.10	764.5	58.3	14.6	72	NE			3		8		E	0.322	8.20	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.92	760.0	79.5	26.4	76	NE			2		2k						L'Abbé Marchési.
Gorée																			
Marseilles			30.00	762.0	66.6	19.2	47	NW			6		0			0	0		Marseilles Observatory.
Mont-Louis	28.85	632.7	30.23	767.7	59.5	15.3	31	SW	9.3	4.17			0			0	0		—. Falguère.
Montsouris, Paris			30.02	762.6	56.1	13.4	71	SSW			2		10		SSW	0.008	0.2		Montsouris Observ'tory.
Perpignan			30.03	762.7	69.8	21.0	43	NE	14.9	6.66			1		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.03	762.7	58.7	14.7	58	S			2		10			0.008	0.2	Very cloudy	E. Renou.
Toulouse			30.15	765.7	57.6	14.2	78	NNE			1		5			0	0		Toulouse Observatory.
Tours			30.05	763.2	61.2	16.2	69	SW			1		7		W	0.260	6.6		C. Marquet.
Versailles, (near Paris)			30.02	762.5	61.2	16.2	61	S			1		10			0.024	0.61	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.07	763.7	55.8	12.2	99	ENE	9.8	4.4			10n			{0.102 / 0.177}	{2.6 / 4.5}	Raining	H. Le Leo, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.

*Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Augsburg			30.01	762.2	53.1	11.7	69	WNW			3		8	W		0.012	0.3		Prof. T. Hoh.
Berlin			29.99	761.8	51.4	10.8	72	NW			3		8			0.129	3.2		Prof. Arndt.
Breslau			29.95	760.6	50.2	10.1	61	NW			8		10			0.843	21.4		Dr. P. Nasgebauer.
Carlsruhe			30.04	763.1	55.4	13.0	51	E			1		2			0	0		A. Sens.
Cassel			29.97	761.2	51.7	12.0	62	WNW			2		8	NW		0	0		Dr. H. Mönl.
Cologne																			Dr. Gartler.
Emden																			Prof. Prestel.
Frankfort on the Main			30.11	764.9	58.1	14.5	39	NNW			1		4			0.008	0.2		Physical Society.
Friedrichshafen	28.65	727.7	30.17	766.4	50.0	10.0	61	W					7			0.051	1.3		M. Wilhelm.
Hamburg			29.98	761.4	54.7	12.6	69	WSW			3		7k	WNW		0.063	1.6	Partly foggy	Deutsche Seewarte.
Kiel			29.98	761.5	48.9	9.4	83	NW			2		10			0.213	5.4		Prof. G. Karsten.
Königsberg			29.80	756.8	40.1	4.5	94	N			2		10			0.079	2.0		Prof. E. Luther.
Köslin			29.95	761.0	40.0	4.8		N			1		4			0	0		H. Müller.
Leipsic			30.02	762.6	52.5	11.4	57	NW			3		7		NW	0	0		Prof. Brühns.
Memel			29.82	757.4	38.1	3.4	90	NE			6		10			0.217	5.5	Raining	Reinbrecht & Skalweit.
Münster			30.04	762.9	57.2	14.0	60	W			2		0			0.039	1.0		Prof. E. Hels.
Neufahrwasser			29.82	757.1	40.8	4.9	91	N			3		10			0.157	4.0	Light rain	A. Lothes.
Posen			29.93	760.2	50.9	10.5	63	NW			7		10			0.004	0.1		Dr. Magener.
Strassburg, (in Alsace)			30.07	763.7	58.8	14.9	46	SSE			2		5	NW		0.154	3.9		Dr. Schur.
Stuttgart			30.18	766.0	53.6	12.0	43	N			1		2			0	0		Prof. Schoder.
Thorn			29.85	758.2	49.1	9.5	77	N			2		9			0.437	11.1		Dr. Hasenbalg.
Treves, (Trier)			30.00	762.0	58.6	14.8	26	SW			3		1			0	0		Prof. Fiesch.
Wustrow, Naval School			29.92	760.0	46.9	8.3	61	N			3		3			0.059	1.5		E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	755.3	68.4	20.2		W										Cloudy	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.83	757.7	58.6	14.8	54	W	1.3	0.6			7			0	0		
Padua			29.84	758.0	60.1	15.6	56	SSE	3.8	1.7			5	N		0.110	2.8		
Vicedza			29.84	757.9	61.9	16.6	49	S	8.1	3.6			3	E		0	0		
Verona			29.89	759.2	69.4	20.8	58	E			1		0			0	0		
Bergamo	28.50	723.9	29.81	757.2	62.6	17.0	24	N			2		0			0	0		
Domodossola	28.87	733.3	29.89	759.2	63.5	17.5	29	ENE			8		1			0	0		
Milan			29.89	759.1	64.0	17.8	22	SW			4		1	NW		0	0		
Pavia			29.88	759.0	63.7	17.6	11	N			8		0			Blank	Blank		
Moncalieri			29.93	760.2	61.2	16.2	35	WSW	4.3	1.9			0			0	0		
Mondovi	28.01	711.5	29.93	760.2	57.4	14.1	36	NNW			4		1	N		0	0		
Porto Maurizio			29.93	760.1	66.4	19.1	28	E			4		2	S		0	0		
Genoa			29.87	758.8	66.2	19.0	18	NW	3.8	1.7			0			0	0		
Piacenza			29.86	758.5	63.9	17.7	30	WNW			2		0			0	0		
Parma			29.87	758.6	63.0	17.2	45	NW			4		2			0	0		
Bologna			29.90	759.5	61.2	16.2	44	SE			8		4	E		0	0		
Florence			29.88	759.0	59.9	15.5	48	NW			2		7	NW		0.029	0.5		
Leghorn			29.89	759.1	61.5	16.4	69	NW	6.3	2.8			2			0	0		
Siena	28.63	727.3	29.83	757.7	55.0	12.8	56	SSW	4.3	1.9			9	SSW		0.039	1.0		
Urbino	28.34	719.9	29.89	759.2	45.5	7.5	93	NNE			4		10			1.102	28.0		
Pesaro																		Raining	
Ancona			29.87	758.7	56.1	13.4	78	NNW			6		10			0.406	10.3	Raining	
Grosseto			29.82	757.3	50.4	10.2	94	NNW			4		8	NW		0.140	3.7	Rain & hail	
Rome			29.78	756.3	58.6	14.8	77	NW	7.4	3.3			10			0.272	6.9	Raining	
Naples, O. U.			29.81	757.1	67.1	19.5	55	WNW			4		6	W			0		
Lecce			29.80	756.8	60.8	16.0	66	N	11.2	5.0			5	N		0.059	1.5		
Cosenza			29.83	757.6	66.0	18.9	72	SW	3.1	1.4			10			0.252	6.4	Stormy	
Riposto, (Sicily)			29.85	758.1	65.8	18.8	61	SE			2		4			0	0		
Palermo			29.81	747.1	65.5	18.6	58	NE	4.3	1.9			5			0	0		
Caltanissetta	27.87	708.0	29.81	757.1	58.5	14.7	62	WSW			4		4	NE		0.409	10.4	Stormy	
Sub-Series.																			
Naples, S. R.			29.79	756.7	65.3	18.5	66	WSW	6.9	3.1			..e	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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.02	762.6	57.2	14.0		SSW			3								
Groningen			29.94	760.5	55.9	13.3		NW			4								
Helder			30.00	761.9	53.1	11.7		SW			2								
Utrecht			29.98	761.5	61.3	16.3	44	WSW			2		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.03	762.8	50.0	10.0	60	N	6.5	2.9			8			0	0		
Brönö			30.17	766.2	44.6	7.0	44	E	11	5			0			0	0		
Christiania			30.13	765.4	49.8	9.9	45	NE	1.8	0.8			7			0.181	4.6		
Tromsö			30.23	767.8	35.1	1.7	63	SW	9	4			9			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1 h., 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 instrumental errors. 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.
Angra, (Azores.)			30.39	771.8	61.5	16.4	61	NNW	6.5	2.92			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.04	763.0	84.0	28.9	16	SW	8.0	3.58			0			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.23	767.8	69.3	20.7	59	SW	7.2	3.23			0			0	0		Capt D. A. da Cunha.
Lisbon			30.13	765.4	75.2	24.0	39	WNW	9.8	4.4			1	NNW		0	0		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 hour, 6 min.

RUSSIAN SERIES.

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

Stations.	Corr. Inches.	Corr. Millimeters.	Red. Inches.	Red. Millimeters.	Fahrenheit.	Centigrade.	Per cent.	Wind from—	Miles per hour.	Meters per second.	Force.	Up'er.	Low'r.	Upper from—	Lower from—	Rain Inches.	Rain Millimeters.	Weather.	Observer.
Warsaw			29.87	758.8	46.8	8.2	81	NW	20	9			10						Astronomical Obs.
Wilna			29.64	752.9	55.6	13.1	81	NE	4	2			10						Astronomical Obs.
Dorpat			29.96	761.0	41.6	5.3	46	NE	9	4			10						Physical Cabinet.
St. Petersburg			30.15	765.9	38.5	3.6	41	NE	16	7			10						Central Physical Obs.
Kuopio			30.24	768.0	38.8	3.8	03	E	7	3			3						Ch. Forsten.
Kieff			29.56	750.7	79.5	26.4	38	SSE	7	3			2						Physical Cabinet.
Nikolaiev			29.74	755.4	75.2	24.0	33	S	4	2			3						Kurdakof.
Kertch			29.72	755.0	75.	23.9	47	S	4	2			5						Lagorio.
Moscow			30.06	763.4	42.1	5.6	48	NE	13	6			10						Meteorological Obs.
Lugan			29.64	752.8	85.3	29.	22	NW	13	6			3						Meteorological Obs.
Archangel			30.28	769.1	16.6	− 8.6	88	NW	22	10			0						Ogorodnikof.
Tiflis	28.58	726.0	29.91	760.1	77.5	25.3	30	E	11	5			0						Physical Observatory.
Astrakhan			30.02	762.5	71.8	22.1	20	S	34	15			0						Sebastianof.
Kasan			30.04	762.9	43.2	6.2	33	Calm	0	0			4						Physical Cabinet.
Orenburg			30.23	767.9	53.6	12.0	40	NW					2						Tschernischef.
Ekaterinburg	28.89	733.7	29.91	759.7	30.7	− 0.7	34	WSW	18	8			7						Meteorological Obs.
Nukuss			30.08	764.1	74.7	23.7	16	NE	9	4			0						
Kasalinsk																			Bobrof.
Tashkend	28.53	724.7	30.18	766.5	73.8	23.2	37	Calm	0	0			0						Michelson.
Barnaul			29.84	757.8	42.3	5.7	39	Calm	0	0			2						Meteorological Obs.
Yeniseisk			29.60	751.8	35.1	1.7	57	WSW	9	4			4						Marks.
Irkutsk	28.12	714.3	29.45	748.1	54.9	12.7	34	Calm	0	0			0						Usolzef.
Ourga																			Mossin.
Peking, (China)			30.09	764.2	58.6	14.8	50	SSE	4	2			4						Physical Observatory.
Nertchinsk	27.46	697.5	29.14	747.8	57.0	13.9	27	SW	4	2			10						Meteorological Obs.
Vladivostock			30.19	766.9	42.1	5.6	62	Calm	0	0			0						
Nikolaievsk, on the Amoor					25.5	− 3.6	93	Calm	0	0			0						

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 40[illegible] meters, or 1,[illegible]1.8 feet; Ekaterinburg, [illegible] m., or 1,[illegible] ft.; Tashkend, m. 494.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Ourga, 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.

Stations.	Corr. Inches.	Corr. Millimeters.	Red. Inches.	Red. Millimeters.	Fahrenheit.	Centigrade.	Per cent.	Wind from—	Miles per hour.	Meters per second.	Force.	Up'er.	Low'r.	Upper from—	Lower from—	Rain Inches.	Rain Millimeters.	Weather.	Observer.
Madrid			29.99	761.8	80.1	26.7	27	W	10.4	4.06		0	0			0	0	Clear	Royal Observatory.
San Fernando			30.11	764.8	77.2	25.1	54	WSW	5.8	2.6		0	0			0	0		The Naval Observatory.

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; 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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Corr. Inches.	Corr. Millimeters.	Red. Inches.	Red. Millimeters.	Fahrenheit.	Centigrade.	Per cent.	Wind from—	Miles per hour.	Meters per second.	Force.	Up'er.	Low'r.	Upper from—	Lower from—	Rain Inches.	Rain Millimeters.	Weather.	Observer.
Haparanda			30.34	770.6	36.0	2.2	65	SW			2		0			0	0		
Umea			30.34	770.7	38.8	3.8	48	SE			2		0			0	0		
Hernosand			30.31	769.9	38.5	3.6	87	ENE			4		0			0	0		
Stockholm			30.12	765.0	41.0	5.0	57	ENE			4		10			0	0		
Wisby			30.15	765.9	43.9	6.6	51	ENE			4		5			0	0		
SUB-SERIES.																			
Upsala			30.15	765.8	45.3	7.4	36	NE	11.9	5.3			0		E	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; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28.65	727.6	30.08	763.9	54.0	12.2	49	NNE			2		2			0.079	2.0	Clear	The Observatory.
Zurich	28.45	722.7	30.10	764.4	52.7	11.5	54	SW			1		8			0.425	10.8	Bright	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +3.2 mm.; Thermometer, —1.5 cent.; Relative Humidity, —8 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Constantinople			29.73	755.2	73.4	23.0	39	WSW	4	1.5			6		SW	0	0		
Fao, (Persian Gulf)			30.04	763.0	82.4	28.0		NE			3		10						
Salonica			29.69	754.0	77.9	25.5		W			2		5			Blank	Blank		
Valona			29.68	753.9	68.9	20.5		SW			3		8					Thunder-storm	
Varna			29.72	755.0	57.2	14.0		S			2		10					Raining	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.83	757.6	78.1	25.6	60	NE			1		0			0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Bathurst, N. B.			30.07	763.8	32.7	0.4	94	NE	18	8.0									Hon. J. Ferguson.
Brockville, Ontario			30.15	765.8	48	8.9		Calm	0	0		5c	0			0	0	Fair	W. R. Bigg.
*Chatham, N. B.			30.02	762.5	35	1.7	95	N	14	6.3			10s		N	0.01	0.3	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			29.84	757.9	32	0.0	97	NE	19	8.5			10n			0.30	7.6	Light rain	H. J. Cundall, C. E.
Cornwall, Ontario			30.06	763.5	47.9	8.8	47	SE			1	6c				0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			30.11	764.8	41.5	5.3	53	NE			1		10			0	0		H. A. Johnson.
Esquimault, B. C.																0	0		W. H. Bevis.
Fredericton, N. B.			29.94	760.5	31.5	— 0.3	95	NE	11	4.9			10n			0.040	1.02		Prof. Harrison.
*Fort Garry, Manitoba			29.44	747.8	42	5.6	91	W	18	8.0		2k	5ks	W	W	0	0	Fair	James Stewart.
Goderich, Ontario			29.95	760.5	49.7	9.8	82	SW			2		10n			0.089	0.26	Threatening	H. J. Strang, M. A.
Granton, Ontario			29.97	761.2	47.0	8.3		SE			1		10n			0	0	Cloudy	James Grant.
*Halifax, N. S.			29.67	753.6	35	1.7	96	NE	13	5.8			10n			0.84	21.3	Light rain	F. Allison, M. A.
*Kingston, Ontario			30.13	765.3	44	6.7	69	Calm	0	0		5c	0			0	0	Fair	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			30.11	764.8	41	5.0	57	NE	6	2.7		0	2s			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.12	765.0	41	5.0	61	E	8	3.6		8c	0			0	0	Fair	J. B. Haney.
*Parry Sound, Ontario			29.99	761.7	44	6.7	82	S	12	5.4		2k	5ks	S	S	0.04	1.0	Fair	Rev. R. Modley.
*Port Dover, Ontario			30.05	763.3	45	7.2	78	Calm	0	0		10k	0	SW		0	0	Cloudy	H. Morgan.
Port Hastings, N. S.			29.82	757.4	34.6	1.4		E	12	5.4						0.30	7.6	Dark	P. ter Grant.
*Port Stanley, Ontario			30.02	762.5	45	7.2	76	E	7	3.1			10ks		W	0	0	Cloudy	M. Payne.
*Quebec, Quebec			30.15	765.8	35	1.7	70	NE	22	9.8		0	0			0	0	Clear	Capt. Ash, R. N.
St. John, N. B.			29.84	757.9	32	0.0	89	NE	15	6.7			n			0.190	4.83		G. Murdoch, C. E.
*Saugeen, Ontario			29.91	759.7	49	9.4	74	S	7	3.1		5k	5s			0.10	2.5	Cloudy	K. Stewart.
Stayner, Ontario			29.94	760.5	49.0	9.4	79	SE	6	2.7			10n		W	0.03	0.8	Cloudy	R. J. Cole.
Stratford, Ontario			30.00	762.0	46.3	7.9	72	S	5	2.2			10s			0.089	2.26	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			29.90	759.4	33	0.6	97	NE	10	4.5			10n			0.63	16.0	Light rain	T. C. Hill.
*Toronto, Ontario			30.07	763.8	42	5.6	74	S	2	0.9			10n		W	Inap.	Inap.	Light rain	Magnetic Observatory.
Woodstock, Ontario			29.94	760.5	49.5	9.7	65	Calm			0		10s			0	0	Fine	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. pper. From	Clouds. Direction. Lower. From	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.			30.08	764.0	46	7.8	76	NW	2	0.9		0	Haze			0	0	Clear	
Alpena, Mich			29.82	757.4	42	5.6	83	SE	4	1.8		5ck	Haze	W		0.21	5.3	Fair	
Atlantic City, N. J			30.13	765.3	51	10.6	52	W	4	1.8		5c	0	W		Inap.	Inap.	Fair	
Augusta, Ga.			30.25	768.3	58	14.4	76	Calm	0	0		5cs	0	SW		0	0	Fair	
Baltimore, Md			30.16	766.1	51	10.6	65	NW	1	0.4		8ck	Sm'e	W		Inap.	Inap.	Smoky	
Barnegat, N. J			30.12	765.0	53	11.7	48	NW	10	4.5		1c	0	NW		Inap.	Inap.	Clear	
Benton, Montana	27.35	694.7	30.15	765.3	35	1.7	79	E	3	1.3			10s			0.14	3.6	Cloudy	
Bismarck, Dakota	27.97	710.4	29.59	751.6	48	8.9	55	NW	26	11.6		5k	0	NW		Inap.	Inap.	Fair	
Boston, Mass			29.98	761.5	47	8.3	34	NW	9	4.0		1cs	Haze			0	0	Hazy	
Breckenridge, Minn			29.48	748.8	54	12.2	80	NW	4	1.8			10s			0.07	1.8	Threatening	
Buffalo, N. Y			30.04	763.0	46	7.8	61	S	2	0.9			10s			0	0	Cloudy	
Burlington, Vt			30.09	764.3	39	3.9	64	N	4	1.8		0	0			0	0	Clear	
Cairo, Ill			30.02	762.5	58	14.4	58	SE	5	2.2		5c	1s			0	0	Fair	
Cape Hatteras, N. C			30.19	766.8	59	15.0	53	W	8	3.6		0	0			0	0	Clear	
Cape Henry, Va			30.22	767.6	55	12.8	56	W	13	5.8		2c	Haze	W		0	0	Fair	
Cape Lookout, N. C			30.11	764.8	66	18.9	78	SW	12	5.4		2c	0	W		0	0	Clear	
Cape May, N. J			30.15	765.3	50	10.0	71	NW	8	3.6		2c	0	NW		0.01	0.3	Fair	
Charleston, S. C			30.27	768.8	64	17.8	52	SE	7	3.1		2c	0	NW		0	0	Fair	
Cheyenne, Wyoming	24.02	610.1	29.96	761.0	50	10.0	10	NW	16	7.2		1ck	1s	W	W	0	0	Fair	
Chicago, Ill			29.77	756.1	55	12.8	68	S	8	3.6		Haze	5s			0.01	0.3	Fair	
Cincinnati, Ohio			29.96	761.0	54	12.2	55	SE	4	1.8			10ks		W	0	0	Threatening	
Cleveland, Ohio			29.98	761.5	52	11.1	48	SE	12	5.4			10ks		W	0	0	Cloudy	
Colorado Springs, Col	24.07	611.4	29.94	760.5	50	10.0	26	NW	7	3.1		10cs	0			0	0	Cloudy	
Corsicana, Tex			29.92	760.0	67	19.4	84	S	5	2.2		5cs	Haze			0.50	12.7	Fair	
Davenport, Iowa			29.72	754.9	60	15.6	76	SW	12	5.4		5cs	0	NW		0	0	Fair	
Denison, Tex			29.85	758.2	64	17.8	94	S	4	1.8			10s			0.56	14.2	Cloudy	
Denver, Col.	24.79	629.6	30.01	762.2	61	16.1	3	NW	21	9.4		8c	0	NW		0	0	Fair	
Detroit, Mich			29.89	759.2	54	12.2	43	S	11	4.9		5ck	0			Inap.	Inap.	Cloudy	
Dodge City, Kan	27.51	691.1	29.40	746.7	61	16.1	82	S	4	1.8		10cs	0			0.02	0.5	Cloudy	
Dubuque, Iowa			29.68	753.9	60	15.6	77	Calm	0	0		5cs	0			0	0	Fair	
Duluth, Minn			29.65	753.1	39	3.9	81	NE	6	2.7			Fog			0.11	2.8	Foggy	
Eastport, Me			29.80	756.9	33	0.6	80	N	28	12.5			10n		NE	0.26	5.1	Light snow	
Erie, Pa			29.99	761.7	52	11.1	53	SE	12	5.4		4ck	5ks	W		0	0	Fair	
Escanaba, Mich			29.78	756.4	37	2.8	90	Calm	0	0			Fog			0.74	18.8	Dense fog	
Fort Gibson, Indian Terr			29.86	758.4	61	16.1	79	SE	8	3.6		0	8ks		S	0	0	Fair	
Ft. St. Michael, Alaska			30.17	766.3	24	— 4.4		NE	2	0.9			10s			*1.11	*28.2	Cloudy	
Fort Sill, Indian T	28.64	727.4	29.71	754.6	63	17.2	94	S			5		Fog			0	0	Foggy	
Fort Sully, Dakota																			
Galveston, Tex			30.02	762.5	72	22.2	85	SE	5	2.2		0	0			0	0	Clear	
Grand Haven, Mich			29.77	756.1	54	12.2	67	S	24	10.7			10s		W	0.01	0.3	Cloudy	
Indianapolis, Ind			29.88	758.9	55	12.8	62	SE	8	3.6			10s		S	0.03	0.8	Cloudy	
Indianola, Tex			29.98	761.5	73	22.8	85	S	18	8.0		5ck	2ks	W		0	0	Cloudy	
Jacksonville, Fla			30.23	767.8	68	20.0	68	SE	4	1.8			9ks		SE	0	0	Cloudy	
Keokuk, Iowa			29.74	755.4	61	16.1	66	S	16	7.2		8c	0	SW		0.37	9.4	Fair	
Key West, Fla			30.10	764.5	77.5	25.3	73	E	6	2.7		1k	0	E		0	0	Clear	
Kittyhawk, N. C			30.25	768.3	55	12.8	62	W	20	8.9		0	Haze			0	0	Clear	
Knoxville, Tenn			30.16	766.1	49	9.4	71	Calm	0	0		10ck	Haze	W		0	0	Cloudy	
La Crosse, Wis			29.68	753.9	52	11.1	86	S	5	2.2			10n		S	Inap.	Inap.	Heavy rain	
Leavenworth, Kan			29.73	755.1	59	15.0	81	S	6	2.7		0	0			0.01	0.3	Clear	
Lexington, Ky	28.95	735.3	30.06	763.5	52	11.1	69	S	16	7.2		2c	5s	S		0	0	Cloudy	
Long Branch, N. J			30.09	764.3	52	11.1	53	W	12	5.4		0	0			0	0	Clear	
Louisville, Ky			30.00	762.0	57	13.9	46	S	8	3.6		10cs	Sm'e			0	0	Cloudy	
Lynchburg, Va			30.16	766.1	49	9.4	71	Calm	0	0		10c	Sm'e	W		0	0	Cloudy	
Malone, N. Y			30.08	764.0	42	5.6	50	E	2	0.9		5c	0	W		0	0	Fair	
Manhattan, Kan	28.58	725.9	29.67	753.6	61	16.1	94	SW	12	5.4		5ck	2ks			0	0	Cloudy	
Marquette, Mich			29.75	755.6	41	5.0	82	Calm	0	0			8s			0.01	0.3	Cloudy	
Memphis, Tenn			30.02	762.5	61	16.1	60	Calm	0	0		0	Haze			0	0	Dense haze	
Milwaukee, Wis			29.75	755.6	49	9.4	77	S	4	1.8		8ks	Fog	W		0	0	Cloudy	
Mobile, Ala			30.12	765.0	65	18.3	94	S	6	2.7			10s		SW	0	0	Cloudy	
Montgomery, Ala			30.17	766.3	63	17.2	90	SE	5	2.2		10cs	Haze			0	0	Cloudy	
Morgantown, W. Va			30.08	764.0	49	9.4	70	Calm	0	0			10s		SW	0	0	Cloudy	
Mt. Washington, N. H	23.62	599.9	29.98	761.5	18	— 7.8	84	NE	22	9.8		2c	0			0	0	Fair	
Nashville, Tenn			30.07	763.8	54	12.2	91	Calm	0	0		8ck	0	W		0	0	Fair	
New Haven, Conn			30.04	763.0	55	12.8	30	N	8	2.7		Haze	0			0	0	Clear	
New London, Conn			30.04	763.0	51	10.6	46	N	4	1.8		0	Haze			0	0	Clear	
New Orleans, La			30.10	764.5	65.5	18.6	71	SE	5	2.2		2cs	0	W		0	0	Clear	
Newport, R. I			30.01	762.2	46	7.8	40	NW	8	3.6		0	0			0.03	0.8	Clear	
New York, N. Y			30.11	764.8	45	7.2	60	Calm	0	0		0	0			0	0	Clear	
Norfolk, Va			30.23	767.8	55	12.8	61	SW	12	5.4		0	0			0	0	Clear	
North Platte, Neb			29.42	747.3	58	14.4	47	N	14	6.3		5cs	1s	NW	NW	0	0	Fair	
Omaha, Neb	26.94	684.3	29.47	748.5	68	20.0	74	SW	15	6.7		10c	0	W		0	0	Cloudy	
Oswego, N. Y	28.47	723.1	30.08	764.0	49.5	9.7	61	SE	3	1.3		8cs	2s			0	0	Cloudy	
Pembina, Dakota			29.44	747.8	48	8.9	81	W	8	3.6		8c	0	SW		0.03	0.8	Cloudy	
Philadelphia, Penn			30.15	765.8	53	11.7	31	N	12	5.4		8ck	0	N		0.01	0.3	Fair	
Pike's Peak, Colorado			29.99	761.7	19	— 7.2	69	NW	34	15.2		8c	0			0	0	Fair	
Pittsburgh, Penn	17.78	451.6	30.06	763.5	48	8.9	70	Calm	0	0		10cs	0	SW		0	0	Cloudy	
Port Huron, Mich			29.89	759.2	53	11.7	48	S	13	5.8		5k	5s			Inap.	Inap.	Cloudy	
Portland, Me			29.95	760.7	45	7.2	39	N	20	8.9		5c	Haze	NW		0	0	Fair	
Portland, Oregon			30.40	772.1	44	6.7	92	Calm	0	0			10s			0.01	0.3	Cloudy	
Punta Rassa, Fla			30.15	765.8	72.5	22.3	79	E	14	6.3		Haze	Sm'e			0	0	Hazy	
Rochester, N. Y			30.06	763.5	47	8.3	55	SW	7	3.1		2ck	2s	W		0	0	Fair	
Salt Lake City, Utah			30.16	766.1	54	12.2	37	NE	6	2.7		10k	0	NW		0	0	Cloudy	
Sandy Hook, N. J	25.83	656.1	30.08	764.0	47	8.3	60	NW	13	5.8		1c	Haze			Inap.	Inap.	Clear	
San Diego, Cal.			30.09	764.3	58	14.4	81	N	8	3.6		0	0			0	0	Clear	
San Francisco, Cal			30.22	767.6	58	14.4	82	SW	4	1.8		Haze	5s			Inap.	Inap.	Fair	
Santa Fe, N. M			29.82	757.4	44	6.7	52	Calm	0	0		5cs	5s	SW		0	0	Cloudy	
Savannah, Ga.	23.28	591.3	30.26	768.6	70	21.1	67	Calm	0	0		0	Sm'e			0	0	Smoky	
Shreveport, La			30.03	762.7	63	17.2	94	SE	3	1.3			10ks		SW	1.77	45.0	Cloudy	
Smithville, N. C			30.28	769.1	60	15.6	66	S	7	3.1		0	0			0	0	Clear	
Springfield, Mass.			30.04	763.0	47.5	8.4	69	Calm	0	0		0	Sm'e			0	0	Dense smoke	
St. Louis, Mo			29.91	759.7	59	15.0	48	S	4	1.8		0	5s			0.04	1.0	Fair	
St. Marks, Fla			30.20	767.1	66	18.9	73	SE	6	2.7		2k	0	S		0	0	Fair	
St. Paul, Minn			29.49	749.0	57	13.9	62	SE	23	10.3		10cs	0	W		0	0	Cloudy	
St. Paul's Island, Alaska			30.16	766.1	33	0.6	89	SE	3	1.3			Fog			Inap.	Inap.		
Thatcher's Island, Mass			29.96	761.0	43	6.1	58	N	15	6.7		2c	0	NW		0	0	Clearing	
Toledo, Ohio			29.88	758.9	56	13.3	51	S	11	4.9		8k	Haze	SW		0	0	Cloudy	
Tucson, Arizona	27.58	700.5	30.17	766.3	64	17.8		SE				0	0			0	0	Clear	
Tybee Island, Ga			30.32	767.6	66	18.9	64	S	8	3.6		Haze	0			0	0	Clear	
Vicksburg, Miss			30.08	764.0	64	17.8	84	S	10	4.5		8k.hz.	2s, sm'e	S		0.01	0.3	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Virginia City, M. T.	24.38	619.2	29.86	758.4	35	1.7	61	SW	12	5.4		3c	0	W		0.01	0.3	Fair	
Washington, D. C.			30.16	766.1	46	7.8	85	W	3	1.3		8ck	2s	W		0	0	Cloudy	
Wilmington, N. C.			30.27	768.8	58	14.4	69	Calm	0	0		0	Haze			0	0	Clear	
Wood's Holl, Mass.			29.99	761.7	48	8.9	42	NW	12	5.4		0	0			0.50	12.7	Clear	
Wytheville, Va.	27.78	705.6	29.98	761.5	43	6.1	75	Calm	0	0		8k	0	W		0	0	Cloudy	
Yankton, Dakota	28.29	718.6	29.54	749.5	60	15.6	55	NW	28	12.5			10s		NW	0	0	Cloudy	
Yuma, Arizona			29.97	761.2	73	22.8		NE				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.05	763.3	82	27.8	67	E	6	2.7		0	10s			0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.00	762.0	78	25.6	82	E				5pc	5ks			0	0	Fair	L. V. Bigard.
St. Thomas, St. T., W. I.			30.25	768.3	79	26.1	76	SE	10	4.5		2c.cs	4k,kn	SE		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I.			30.20	767.1	82	27.8	67	Calm	0	0		8c	2s			0	0		James Gall.
Santiago de Cuba, W. I.			29.74	755.4	78	25.6	69	N	8.4	3.8		4c	0	N		Inap.	Inap.	Fair	Robert Mason.
Havana, Cuba, W. I.			30.08	764.0	79	26.1	70	NE	4.8	2.1		2k	0	NE		0	0	Fair	Charles Hasselbrink
St. Georges, Bermudas			30.13	765.3	64.0	17.8	87	W	18.0	8.0		0	5k			0.11	2.8	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa W. I.																			
Clifton, Jamaica W. I.	27.24	691.9	30.02	762.5	69	20.6	84	N	1.0	0.4		2c	8k	E		0.86	21.8	Dull	C. Partridge.
Paramaribo, D. Guiana, S.A.			30.00	762.0	82	27.8	79	NE			2		5k			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S.A			30.08	763.9	83.8	28.8										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.21	640.3			65.5	18.6	82		5	2.2		3c	4s			0.45	11.4	Fair	Thomas Herran.
St. John's, Newfoundland			30.36	771.1	33.0	0.6	89	NE				10k	10s			0	0	Cloudy	John Delaney.
York Factory, B. A.			29.36	745.7	40.5	4.7	65	S	1	0.4		8k	0	W		0	0		J. Fortescue.
Honolulu, Oahu, H. I.			30.05	763.3	71	21.7	56	NE			6					0	0		E. P. Church.
Makawao, Maui, H. I.																3.0	76.2		F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.													State of ocean.	Direction of swell from—		
Steamer Hibernian, N. 37° 18', W. 74° 25'.	ENE	11	30.17	766.3	56	13.3		NW			4	2c			Heavy	E	Blue sky	Lieut. F. Archer, R.N.R.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below −40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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, 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher. *Amount of snow-fall on 24th, 25th and 26th.

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* of clouds, 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. Assist.) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON APRIL 28, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	74.3	23.5	74	Calm			0		0			0	0	Clear	Charnot.
Algiers			29.94	760.5	78.8	26.0	53	N			1		1			0	0	Clear	Peter.
La Calle																			Kuntz.
Tunis			30.00	761.9	68.0	20.0	64	E			3		0			0	0	Clear	Jacques
Sfax			30.10	764.4	70.5	21.4	57	N			4		1			0	0	Clear	Chauvey.
Salda			30.01	762.2	80.6	27.0	18	NNE			1		0			0		Clear	Millot.
Tebessa			30.04	762.9	76.3	24.6		S			3		0			0	0	Clear	Colin.
Geriville			29.99	761.7	71.1	21.4	43	NW			2		2			0	0	Clear	Buard.
Laghouat			30.10	764.5	80.6	27.0	10	Calm			0		0			0	0	Clear	Guyot.
Biskra			30.06	763.5	83.3	28.5	27	NE			1		0			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	758.6	63.5	17.5	41	SW			2		3			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.88	758.9	48.2	9.0	61	ENE			2		6			0	0		I. R. Observatory.
Eperies			29.84	758.0	50.0	10.0	72	N			5		3			0.085	2.15		Julius Mikolik.
Gratz	28.64	727.4	29.82	757.3	61.5	16.4	34	NW			5		0			0	0		Andreas Rospini.
Hermannstadt	28.29	718.6	29.39	754.1	57.9	14.4	55	WNW			4		7			0.059	1.50		Prof. Reissenberger.
Kremsmünster			29.77	756.1	54.3	12.4	55	ENE			3		1			0.047	1.2		Prof. C. Wagner.
Lemberg			29.78	756.1	42.4	5.8	75	NE			3		10			Inap.	Inap.		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.91	760.4	59.2	15.1	62	SW			1		2cs			0.003	0.07		I. R. Hydrographic Office
Szegedin			29.84	757.9	56.3	13.5	73	NW			1		10			0.512	13.00		Karl Stancel.
Trieste			29.93	760.2	62.1	16.7	62	NW			1		0			0	0		Prof. V. Farolfi.
Vienna			29.82	757.4	57.6	14.2	50	NE			1		2			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.15	740.5	54.0	12.2	87	SW			1		10			0.114	2.90	Sprinkling	Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0 10.	Clouds. Amount. Low'r 0 10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.67	753.6	42.9	6.1		E	30	13.4			9			0.030	0.76	Squally	William Boswell.
Ardrossan			29.43	747.5	48	8.9		ENE			4		9					Raining	William McNeil.
Armagh Observatory			29.39	746.5	53.4	11.9		WSW	3	1.3			10					Gloomy	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.40	746.7	48.7	9.3		W	16	7.2			7					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			29.35	745.5	55.7	13.2		SE			1		7					*D. clouds	J. Dreyer.
Bradford			29.38	746.2	49.1	9.5		W			2		9			0.31	7.9	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.00	762.0	81.0	27.2		NE			3		8					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge Observatory			29.45	748.0	58.0	14.4		WSW			2		7					Showery	H. Todd. [H C.
Cardington			29.45	748.0	58.0	14.4		W			2		9					Rain and hail	John McLaren.
Carlisle			29.37	746.0	47.9	8.8		NE			2		10			0.22	5.6	Raining	T. Bel, for J. Carmell.
Chatham, School M. E			29.53	750.0	51.2	10.7		SSW			1		8					Raining	Capt. J. Fellowes, R. E.
Dartmoor	28.10	713.7	29.59	751.6	48.0	8.9		W			5		6					*D. clouds	R. E. Power.
Donaghadee			29.27	743.4	48	8.9		SW			1		10					Raining	.. Mac Gowan.
Dover			29.52	749.8	52	11.1		SW			4		6					¾ clouded	J. Costello.
Eccles (near Manchester)			29.40	746.7	53.0	11.7		SSW	9.2	4.1			7					*D. clouds	Thomas Mackereth.
Falmouth Observatory			29.50	749.3	54.0	12.2		SSW	26	11.6			7					Squally	The Staff.
Fort Napier, (Natal)	27.99	710.9	30.12	765.0	73.4	23.0		E			1		1					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.85	758.2	88	31.1		N			2		6					*D. clouds	tis-
Galway, Queen's College			29.28	743.7	53	11.7		S			1		3					*D. clouds	B. G. Corre, for Prof. Cur-
Gibraltar, (Mediterranean)			29.94	760.5	71.7	22.1		W			6		2					*D. clouds	Corp'l C. Aitken, A. H. C.
Glasgow Observatory			29.45	748.0	44.2	6.8		ENE			5		10					Rain-squalls	Lewis Stuart.
Great Yarmouth			29.45	748.0	55	12.8		W			3		4					*D. clouds	G. T. Watson.
Greenwich Royal Obs			29.50	749.3	55.7	13.2		WSW			1		7			Blank	Blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			29.59	751.6	55	12.8		SSW			3		0					Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.40	746.7	49.4	9.7		WN			2		10			Blank	Blank	*D. clouds	L. J. Crossley.
Helston			29.48	748.8	58	14.4		S			6		10			0.38	9.7	Blue sky	M. P. Moyle.
Holyhead			29.41	747.0	53	11.7		SW			4		2					Blue sky	John Tilston.
Kew Observatory			29.51	749.5	49.2	9.6		WNW	13	5.8			10					Rain and hail	The Staff.
Kingstown			29.39	746.5	52	11.1		SE			3		9					Raining	George Mitchell.
Leicester Museum			29.45	748.0	52.7	11.5		SW			2		6					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.96	761.0	66.8	19.3		NW			2		2k						Fred. Travis, Pvt. A.H.C.
Nairn			29.63	752.6	45	7.2		ENE			4		10					Overcast	W. D. Penny.
Nassau, Bahamas																			Surg. Maj. Henry.
Nottingham			29.44	747.8	55.3	12.9		SW			2		8ks.n.c		WSW	0.148	3.76	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.44	747.8	48.4	9.1		WNW			2		10					Raining	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.47	748.5	55	12.8		SW			2		9					Overcast	J. Lucas.
Plymouth			29.52	749.8	55.3	12.9		SW			4		1					Blue sky	John Merrifield.
Roche's Point			29.36	745.7	50	10.0		SSW			4		5					½ clouded	W. Kennedy.
Saint Ann's Head			29.45	748.0	51	10.6		SSW			3		2					Blue sky	John C. Walker.
Saint Helier, Jersey)					56.2	13.4		W			4		2					½ clouded	A. P. Amy.
Sandwick Manse, Orkneys			29.79	756.7	45.5	7.5		ESE	38	17.0			10					Showing	Rev. C. Clouston, LL. D.
Scarborough			30.11	747.0	43.2	6.2		SSE			6		10					Rain and fog	F. Shaw
Scutari Cemetery Turkey			29.77	756.1	68.2	20.1		S			1		4					D. clouds	Sergt. W. H. Lyne.
Sheffield			29.39	746.5	54.0	12.2		W			3		8			0.273	6.94	Overcast	W. F. Cooper.
Silloth Rectory			29.37	746.0	47.3	8.5	93	SE			2		10			0.470	11.94	Raining	Rev. Francis Redford.
Stonyhurst Observatory			29.50	749.3	47.0	8.3		W			3		10			Blank	Blank	Threatening	S. J. Perry.
Stornoway, Lewis C. Hebr.			29.58	751.3	46	7.8		E			6		10					Gloomy	John Smith
Stratfield Turgiss					54.1	12.3		SW			2		7					Showery	Rev. Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.74	755.1	45	7.2		ESE			5		9					Gloomy	John Trotter.
Truro, Royal Institution			29.54	750.0	57	13.9		W			6		6					*D clouds	W. Newcombe.
Valencia Observatory			29.28	743.7	53.5	11.9		SSE	26	11.6			5					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man					48	8.9		SW			3		5						The Staff, for E. J. Stone.
Cape Good Hope Obs			30.06	763.5	81.7	27.6	31	WNW	18	8.0			1						Andrew Gibb.
Leith, Restalrig Park			29.53	750.0	43.8	6.6		E			6		10ks			0.94	23.9	Overcast	C. Meldrum.
Mauritius			30.03	762.7				SE	23.1	10.3						0.03	0.8		J. Youngclause.
Monach Lt-house, Hebrides			29.48	748.8	48	8.9		E			6		10			0.4	10.2		
North Unst, (Shetland Is.)			29.97	761.2	44	6.7		SE			4	0	0						

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier 2,200 ft., or 670.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			29.87	758.7	40.8	7.9	82	S			2		10						
Fanöe			29.80	757.0	45.7	7.6	61	E			6		8						
Godthaab, (Greenland)			30.47	773.8	30.9	− 0.6	73	NNE			4		5						
Stykkisholm, (Iceland)			30.16	766.0	33.6	0.9	92	NE			6		0						
Thorshavn, (Faröe)			30.02	762.4	47.5	8.6	76	ESE			4		4						
Vestervig			30.85	758.1	45.7	7.6	59	E			6		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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.64	752.9	57.2	14	60	SW			1		5nk		SW	0.059	1.5	Cloudy	Normal School.
Amiens			29.60	751.8	59.4	15.2	74	SSW			3		10			0	0	Covered	Normal School.
Avignon			29.80	757.0	69.4	20.8	49	SSE			2		2		SW	0	0	Slightly cl'dy	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory.
Beauvais			29.64	752.9	59.7	15.4	44	W			3		8		W	0.030	0.75	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			29.72	754.8	55.0	12.8	88	WSW			2		10		W	0	0	Covered	Normal School.
Brest			29.55	750.5	57.7	14.3	82	SW			5		2k		SW	0.089	2.25		Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			29.74	755.5	56.1	13.4	68	W			4		10			0.024	0.6	Covered	Puy de Dome Obs.
Commercy			29.70	754.4	49.1	9.5	95	W			8		8nk		W	0	0	Very cloudy	Normal School.
Commune de Gréasque*			29.87	758.8	65.3	18.5	35	SE			6		8		SE	0	0		M. Kina.
Grenoble			29.76	755.9	57.2	14	57	N			2		8n		N	0	0	Very cloudy	Normal School.
Le Mans			30.09	764.3	55.8	13.2	53	NNW			3		5		NNW	0.08	2.	Cloudy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			29.75	755.7	56.7	13.7	67	SW			2		10			0.016	0.4	Sprinkling	Normal School.
Mâcon			29.75	755.0	53.1	11.7	93	S			2		10			0	0	Covered	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			29.78	756.3	68.4	20.2	58	S			4		5		W	0.098	2.5	Cloudy	Normal School.
Orleans																			Normal School.
Paris Observatory			29.65	753.0	57.9	14.4	44	W			3		5		W	0.010	0.25	Cloudy	National Observatory
Parthenay																			Normal School.
Privas			29.77	756.2	63.3	17.4		SSE			4		10		S	0.16	4.	Covered	Normal School.
La Roche-sur-Yon			29.72	755.0	56.8	13.8	62	S			6		5		N	0	0	Cloudy	Normal School.
Rochefort, Observatory			29.79	756.7	59.0	15.0	61	SW			4		8		NE	0.315	8.0	¾ covered	Naval Observatory.
Rouen			29.72	752.3	58.3	14.6	53	W			2		5		W	0.012	0.3	Cloudy	Normal School.
Saint Lo			29.62	752.4	69.0	15	50	NW			5		5		W	0	0		Normal School.
Tarbes	28.76	730.4			58.0	14.5		W			2		8		E	0	0	Very cloudy	Normal School.
Toulouse																			Normal School.
Villefranche			29.74	755.5	59.0	15	81	SE			3		8		E	0	0	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.8	77.4	25.2	83	NE			1		5k						L'Abbé Marchési.
Gorée																			
Marseilles			29.82	757.4	65.1	18.4	58	SE			2		8			0	0		Marseilles Observatory.
Mont-Louis	24.63	625.6	29.95	760.6	58.8	14.9	41	SSW	33.6	15.00			5		SSW	0	0		—. Faiguère.
Montsouris, Paris			29.65	753.0	56.8	13.8	52	W			3		8		W	0.008	0.2		Montsouris Observ'tory.
Perpignan			29.76	755.9	64.2	17.9	53	N	7.4	3.33			8		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			29.65	753.0	61.2	16.2	48	SW			2		7			0	0	Very cloudy	E. Renou.
Toulouse			29.87	758.6	53.1	11.7	100	NW			1		10			0.079	2.0		Toulouse Observatory.
Tours			29.92	759.9	53.2	11.8	70	WSW			2		7		W	0.094	2.4		C. Marquet.
Versailles, (near Paris)			29.61	752.0	60.8	16.0	40	W			4		8			0.016	0.40	Almost cov'd	Dr. A. Béricny.
Zi-Ka-Wei, (near Shanghai)			30.11	764.9	53.8	12.1	95	ESE	3.8	1.7			10ks			{0.122 / 0.161}	{3.1 / 4.1}	Misty	H. Le Léo, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0–4. The rain-fall is generally measured at 7., 8. or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,089.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
*Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	754.7	57.2	14.0	56	SW			2		3	SW		0	0		Prof. T. Huh.
Berlin			29.80	756.9	54.1	12.3	57	SE			1		4			0.028	0.6		Prof. Arndt.
Breslau			29.90	759.1	49.8	9.9	62	NW			3		7			0	0		Dr. P. Neugebauer.
Carlsruhe			29.66	753.4	64.4	18.0	40	NW			1		10			0	0		A. Senz.
Cassel			29.59	751.5	62.6	17.0	37	SSE			8		8	SSW		0	0		Dr. H. Mohl.
Cologne																			Dr. Gartlie.
Emden																			Prof. Prestel.
Frankfort on the Main			29.73	755.2	62.4	16.9	32	SW			3		10			0	0		Physical Society.
Friedrichshafen	28.34	719.7	29.89	759.3	51.3	12.4	45	SW					6			0.280	7.1	Föhn, rain	M. Wilhelm.
Hamburg			29.76	755.8	45.9	7.7	88	ESE			4		10			0.083	2.1	Raining	Deutsche Seewarte.
Kiel			29.80	757.0	46.1	7.8	73	ESE			4		10			0.268	6.8		Prof. G. Karsten
Königsberg			29.75	755.7	39.7	4.3	80	W			1		9			0.098	0.2		Prof. E. Luther.
Köslin			29.85	758.3	40.3	4.6		NW			5		4			0.028	0.7		H. Müller.
Leipsic			29.76	755.9	60.4	15.8	45	SSE			2		7	SSW		0	0		Prof. Bruhns.
Memel			29.71	754.7	43.2	6.2	82	W			3		10			0.047	1.2		Reinbrecht & Skalweit.
Münster			29.65	753.1	54.5	12.5	87	NE			2		6			0.126	3.2		Prof. E. Heis.
Neufahrwasser			29.75	755.7	41.9	5.5	71	WNW			3		10			0.008	0.2	Light rain	A. Lothes.
Posen			29.90	759.4	48.2	9.0	59	W			4		5			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.68	753.8	64.4	18.0	39	SSW			2		10	W		Blank	Blank		Dr. Schur.
Stuttgart			29.76	755.8	63.5	17.5	35	N			1		2			0	0		Prof. Schoder.
Thorn			29.84	757.9	44.6	7.0	71	N			4		10			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.57	751.0	62.2	16.8	41	SW			7		10			0.449	11.4		Prof. Flesch.
Wustrow, Naval School			29.78	756.5	43.9	6.6	64	E·E			3		10			0	0		E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			29.75	755.6	66.6	19.2		S										Half clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			29.89	759.3	60.4	15.8	49	SW	4.3	1.9			8			0	0		
Padua			29.83	757.7	62.2	16.8	44	SSE	6.9	3.1			5	WSW		0	0		
Vicenza			29.87	758.7	63.9	17.7	40	SW	1.8	0.8			3	S		0	0		
Verona			29.85	758.2	67.3	19.6	55	E			1		0			0	0		
Bergamo																			
Domodossola	28.81	731.8	29.83	757.7	65.3	18.5	38	SSW			2		10			0	0		
Milan			29.90	759.4	65.5	18.6	59	SW			2		5	SW		0.197	5.0		
Pavia			29.89	759.2	62.4	16.9	33	N			1		6	SW		0	0		
Moncalieri			29.88	759.0	62.1	16.7	38	SE	8.1	3.6			5	W		0.039	1.0		
Mondovi	27.97	710.4	29.89	759.1	57.9	14.4	47	NNE			4		3	W		0	0		
Porto Maurizio			29.96	760.9	63 0	17.2	79	SW			2		4	NE		0	0		
Genoa			29.91	760.4	63.3	17.4	68	SE	11.9	5.3			8	SW		0	0		
Piacenza			29.89	759.2	62.8	17.1	43	ENE			2		9			0	0		
Parma			29.88	759.0	66.7	19.3	43	SW			4		3			0	0		
Bologna			29.96	760.9	62.1	16.7	41	NE			1		3	N		0	0		
Florence			29.95	760.6	67.1	19.5	35	S			2		2			0	0		
Leghorn			29.95	760.7	62.8	17.1	46	S	8.1	3.6			6			0	0		
Siena	28.72	729.6	29.92	760.0	63.7	17.6	37	SSE	0	0			3	SSE		0	0		
Urbino	28.41	721.7	29.96	761.0	57.7	14.3	50	SW			2		0			0	0		
Pesaro																			
Ancona			29.98	761.4	59.0	15.0	64	E			4		1			0	0		
Grosseto			29.99	761.7	64.4	18.0	42	NNE			4		4			0	0		
Rome			29.97	761.2	65.3	18.5	35	W	3.1	1.4			1			0	0		
Naples, O. U.			29.97	761.3	56.5	13.6	44	NW			2		2	SE		0.024	0.6		
Lecce			29.93	760.1	60.8	16.0	44	ENE	12.5	5.6			3			0	0		
Cosenza			29.92	760.0	63.3	17.4	72	NW	3.17	1.42			10			0	0		
Riposto, (Sicily)			29.91	759.8	69.1	20.6	45	NNE			6		3	S		0	0		
Palermo			29.94	760.5	79.3	26.3	40	WSW	14.3	6.4			0			0	0		
Caltanissetta	27.99	711.0	29.93	760.1	56.7	13.7	52	WNW			4		1	ENE		0	0		
Sub-Series.																			
Naples, S. R.			29.98	761.5	64.0	17.8	50	W	4.9	2.2				SW		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 in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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.
Tokio																			

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			29.57	751.1	51.8	11.0		WNW			4								
Groningen			29.53	750.0	49.3	9.6		E			5								
Helder			29.49	749.0	52.2	11.2		ESE			2								
Utrecht			29.47	748.4	56.3	13.5	83	SSE			3		10					Overcast	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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			29.96	760.9	52.5	11.4	43	WNW	7.2	3.2			3			0	0		
Brönö			30.04	763.1	44.6	7.0	44	NNE	11	5			1			0	0		
Christiania			29.98	761.5	46.2	7.9	30	E	3.6	1.6			9			0	0		
Tromsö			30.02	762.5	38.7	3.7	55	SW	16	7			9			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	769.6	60.6	15.9	67	W	10.2	4.58			3			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.96	761.0	64.2	17.9	36	WNW	13.2	5.91			9	WNW		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.14	765.6	66.4	19.1	66	SW	2.6	1.17			9			0	0		Capt. D. A. da Cunha.
Lisbon			30.06	763.4	60.6	15.9	43	WNW	13.7	6.1			3	WSW		0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 hour, 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.83	757.7	41.9	5.5	76	WNW	16	7			10						Astronomical Obs.
Wilna			29.65	753.0	47.5	8.6	76	W	4	2			10						Astronomical Obs.
Dorpat			29.81	757.9	34.5	1.4	93	ENE	13	6			10						Physical Cabinet.
St. Petersburg			30.02	762.4	42.3	5.7	52	ESE	20	9			10						Central Physical Obs.
Kuopio			30.17	766.3	37.8	3.2	75	E	13	6			0						Ch. Forsten.
Kieff			29.52	749.9	72.7	22.6	44	SW	4	2			4						Physical Cabinet.
Nikolaiev			29.68	753.8	79.2	26.2	31	SW	18	8			4						Kurdakof.
Kertch			29.72	754.8	67.8	19.9	66	S	13	6			6						Lagorio.
Moscow			29.98	761.4	50.9	10.5	55	SE	13	6			8						Meteorological Obs.
Lugan			29.57	751.0	87.3	30.7	20	ESE	34	15			7						Meteorological Obs.
Archangel			30.32	770.2	37.2	2.9	71	Calm	0	0			0						Ogorodnikof.
Tiflis	28.45	722.1	29.76	755.8	82.4	28.0	25	S	4	2			5						Physical Observatory.
Astrakhan			29.94	759.6	68.7	20.4	39	SSE	22	10			0						Sebastianof.
Kasan			30.21	767.4	41.5	5.3	39	SE	4	2			8						Physical Cabinet.
Orenburg			30.20	767.0	50.0	10.0	36	E					1						Tschernischef.
Ekaterinburg	29.09	738.8	30.12	765.1	52.7	0.4	35	W	20	9			1						Meteorological Obs.
Nukuss			30.02	762.4	79.3	26.3	24	NNE	9	4			0						
Kasaly																			Bebrof.
Tashkend	28.37	720.7	30.04	762.9	68.7	20.4	52	NW	13	6			10						Michelson.
Barnaul			29.90	759.5	33.6	0.9	56	WSW	18	8			10						Meteorological Obs.
Yeniseisk			29.22	742.2	34.2	1.2	92	ENE	7	3			10					Heavy snow	Marks.
Irkutsk	28.19	715.9	29.56	750.8	42.3	5.7	72	Calm	0	0			0						Usolzef.
Oorga																			Mossin.
Peking, (China)			29.92	760.0	68.0	20.0	46	Calm	0	0			4						Physical Observatory.
Nertchinsk	27.52	699.1	29.53	750.1	51.8	11.0	48	Calm	0	0			3						Meteorological Obs.
Vladivostock			30.08	764.1	42.1	5.6	83	E	4	2			9						
Nikolaievsk, on the Amoor					34.9	1.6	87	NW	4	2			4						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis 18.49 meters, or 1,111.8 feet; Ekaterinburg, 495.12 m., or 1,995.2? ft.; Tashkend, m. 194.27, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.02 m., or 1,942.27 ft.; Oorga, 1,281.06 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.77	756.1	67.1	19.5	38	W	21.6	9.60		3	1	W		0	0	Cloudy	Royal Observatory.
San Fernando			30.02	762.5	64.2	17.9	63	NW	13.0	5.8		0	3		NW	0	0		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; 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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.27	768.8	37.8	3.2	59	S			2		0			0	0		
Umea			30.19	766.7	40.8	4.9	55	SW			2		0			0	0		
Hernosand			30.15	765.8	43.0	6.1	28	NE			2		0			0	0		
Stockholm			29.90	759.4	38.8	3.8	97	N			4		10			0.299	7.6		
Wisby			29.88	759.0	33.4	0.8	92	NE			4		10			0.039	1.0	Snowing	
Sub-Series.																			
Upsala			29.97	761.2	38.8	3.8	100	NNE	17.0	7.6			10			0.077	1.94		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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	28.38	720.7	29.80	756.9	54.3	12.4	55	ESE			1		10			0	0	Covered	The Observatory.
Zurich	28.13	714.6	29.75	755.7	60.4	15.8	48	SW			2		9			0	0	Raining	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —4.2 mm.; Thermometer, —1.4 cent.; Relative Humidity, —2 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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			29.81	757.2	85.0	29.8	56	SW	7	3.0			4		SW	0	0		
Fao, (Persian Gulf)			30.08	764.0	80.6	27.0		SW			3		5						
Salonica			29.83	757.6	65.1	18.4		S			2		10					aining	
Valona			29.74	755.5	61.2	16.2		SW			2		10					Raining	
Varna			29.96	761.0	66.2	19.0		SW			1		8						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.99	761.8	73.0	22.8	62	NW			2		1k		SE	0	0	Fai	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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.			29.86	758.4	34.7	1.5	78	N	9	4.0									Hon. J. Ferguson.
Brockville, Ontario			29.59	751.6	43	6.1		Calm	0	0			10s		E	0.50	12.7	Light rain	W. R. Bigg.
*Chatham, N. B.			29.87	758.7	33	0.6	84	NW	15	6.7			10ks		NW	0.19	4.8	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			29.74	755.4	32	0.0	90	N	15	6.7			10n			0.13	3.3	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.67	753.6	37.7	3.2	75	E			3		10s			0.291	7.40	Threatening	James Smith, M. A.
Dalhousie, N. B.			29.93	760.2	38.5	3.6	43	N			1		10			0	0		H. A. Johnson.
Esquimault, B. C.			30.10	764.5	40.1	4.5	100	N	2	0.9						0.01	0.3	Clear	W. H. Bevis.
Fredericton, N. B.			29.92	760.0	35.7	2.1	73	N	4	1.8			10ks			0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			29.98	761.5	22	— 5.6	86	NW	17	7.6		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			29.66	753.4	42.0	5.6	85	NW			2		10n			0.395	10.04	Threatening	H. J. Strang, M. A.
Granton, Ontario			29.70	754.4	49.0	9.4		NW			2		10n			0.39	9.9	Cloudy	James Grant.
*Halifax, N. S.			29.74	755.4	37	2.8	84	NW	15	6.7			8n		NW	0.61	15.5	Cloudy	F. Allison, M. A.
*Kingston, Ontario			29.59	751.6	46	7.8	93	S	18	8.0			10n		W	0.21	5.3	Heavy rain	S. Woods, M. A.
Little Current, Ontario																			G. B. Abney, C. E.
*Montreal, Quebec			29.78	756.4	37	2.8	62	NE	8	3.6		2k	10n			0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.67	753.6	37	2.8	76	NE	12	5.4			10n		S	0.05	1.3	Heavy rain	J. B. Haney.
*Parry Sound, Ontario			29.54	750.3	40	4.4	92	W	21	9.4		5k	5ks	W	W	0.48	12.2	Cloudy	Rev. R. Mooley.
*Port Dover, Ontario			29.58	751.3	52	11.1	93	SW	12	5.4			10n		SW	0.16	4.1	Threatening	H. Morgan.
Port Hastings, N. S.			29.60	751.8	34.9	1.6		NW	10	4.5						Inap.	Inap.	Snowy	Peter Grant.
*Port Stanley, Ontario			29.61	752.1	47	8.3	95	SW	12	5.4		2ck	5n	W	W	0.08	2.0	Clearing	M. Payne.
*Quebec, Quebec			29.93	760.2	36	2.2	71	NE	28	12.5		0	0			0	0	Clear	Capt. Ash, R. N.
St. John, N. B.			29.91	759.7	35	1.7	70	NW	7	3.1			8ks			0	0		G. Murdoch, C. E.
*Saugeen, Ontario			29.61	752.1	39	3.9	82	NW	8	3.6			10ks			0.38	9.7	Cloudy	K. Stewart.
Stayner, Ontario			29.56	750.8	44.6	7.0	85	NW	13	5.8			10n		NW	0.40	10.2	Threatening	R. J. Cole.
Stratford, Ontario			29.72	754.9	49.5	9.7	84	NW	18	8.0			10s			0.560	14.22	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			29.62	752.3	33	0.6	92	N	6	2.7			10n			0.29	7.4	Light snow	T. C. Hill.
*Toronto, Ontario			29.53	750.0	48	8.9	92	SW	9	4.0			10n		SW	0.36	9.1	Cloudy	Magnetic Observatory.
Woodstock, Ontario			29.55	750.6	53.6	12.0	81	N			1	3k	5n			0.18	4.6	Fine	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From -	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. pper. From -	Clouds. Direction. Lower. From -	Rain-fall or melted snow the past 24 hours. Inches	Rain-fall or melted snow the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	29.78	756.4	46	7.8	76	S	2	0.9	.....	5s	5n	W	W	0.01	0.3	Light rain	
Alpena, Mich.	.....	.....	29.58	751.3	41	5.0	73	NW	22	9.8	.....	0	5ks	.....	NW	0.24	6.1	Fair	
Atlantic City, N. J.	.....	.....	29.85	758.2	50	10.0	93	S	9	4.0	.....	10s	Haze	S	.....	0	0	Cloudy	
Augusta, Ga.	.....	.....	30.07	763.8	68	20.0	65	SW	5	2.2	.....	5	0	W	.....	0	0	Fair	
Baltimore, Md.	.....	.....	29.83	757.7	57	13.9	75	SW	6	2.7	.....	5ck	2s	W	W	Inap.	Inap.	Fair	
Barnegat, N. J.	.....	.....	29.46	758.4	51	10.6	86	S	15	6.7	.....	10k	Haze	W	.....	0	0	Cloudy	
Benton, Montana	27.17	690.1	29.97	761.2	44	6.7	67	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.29	718.6	30.01	762.2	28	− 2.2	45	NW	5	2.2	.....	.....	10s	.....	NW	0	0	Cloudy	
Boston, Mass.	.....	.....	29.82	760.0	45	7.2	68	SE	3	1.3	.....	2cs	Fog	NW	.....	0	0	Foggy	
Breckenridge, Minn.	.....	.....	30.02	762.5	30	− 1.1	67	W	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	29.54	750.3	49	9.4	93	SW	12	5.4	.....	.....	10n	.....	W	0.34	8.6	Light rain	
Burlington, Vt.	.....	.....	29.79	756.7	40	9.4	71	SE	8	3.6	.....	.....	10s	.....	SW	0	0	Cloudy	
Cairo, Ill.	.....	.....	29.94	760.5	60	15.6	76	N	16	7.2	.....	2k	8s	N	N	0	0	Cloudy	
Cape Hatteras, N. C.	.....	.....	30.34	762.7	65	18.3	73	W	16	7.2	.....	2c	Haze	.....	.....	0	0	Fair	
Cape Henry, Va.	.....	.....	29.95	760.7	64	17.8	62	SW	20	8.9	.....	.....	10s	.....	SW	0	0	Cloudy	
Cape Lookout, N. C.	.....	.....	30.11	764.8	66	18.9	78	SW	12	5.4	.....	2c	0	W	.....	0	0	Clear	
Cape May, N. J.	.....	.....	29.46	758.4	51	10.6	93	SE	10	4.5	.....	10ck	Haze	W	.....	0	0	Cloudy	
Charleston, S. C.	.....	.....	30.12	765.0	68	20.0	74	SW	9	4.0	.....	5cs	2s	W	.....	0	0	Fair	
Cheyenne, Wyoming	24.08	611.6	30.12	762.5	34	1.1	52	W	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	29.93	757.7	49	9.4	57	NW	10	4.5	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Cincinnati, Ohio	.....	.....	29.74	754.9	63	17.2	72	SW	4	1.8	.....	.....	10n	.....	SW	0.02	0.5	Light rain	
Cleveland, Ohio	.....	.....	29.52	752.3	57.5	14.2	85	SW	15	6.7	.....	.....	10ks	.....	W	0.22	5.6	Threatening	
Colorado Springs, Col.	24.15	613.4	30.2	762.5	40	4.4	56	NW	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Corsicana, Tex.	.....	.....	29.99	761.7	65	18.3	90	NE	2	0.9	.....	5ck	5s	NE	.....	0	0	Cloudy	
Davenport, Iowa	.....	.....	30.00	762.0	44	6.7	52	NW	16	7.2	.....	0	0	.....	.....	0.21	5.3	Clear	
Denison, Tex.	.....	.....	30.05	763.3	66	18.9	83	NE	4	1.8	.....	5c	0	N	.....	0.98	24.9	Fair	
Denver, Col.	24.34	618.4	30.08	764.0	50	10.0	26	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	29.52	750.3	55	12.8	61	NW	13	5.8	.....	0	8s	.....	NW	0.10	2.5	Fair	
Dodge City, Kan.	27.19	690.9	29.76	755.9	52	11.1	72	SE	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Dubuque, Iowa	.....	.....	29.95	760.9	45	7.2	38	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Duluth, Minn.	.....	.....	29.93	757.0	36	2.2	52	W	8	3.6	.....	2k	0	W	.....	0.22	5.6	Clear	
Eastport, Me.	.....	.....	29.47	758.7	39	3.9	63	N	9	4.0	.....	0	8s	.....	NE	0.01	0.3	Fair	
Erie, Pa.	.....	.....	29.58	751.3	57	13.9	87	SW	16	7.2	.....	.....	10ks	.....	.....	0.33	8.4	Cloudy	
Escanaba, Mich.	.....	.....	29.39	751.0	36	2.2	62	NW	12	5.4	.....	0	0	.....	.....	0.95	24.1	Clear	
Fort Gibson, Indian Terr.	.....	.....	30.03	762.7	61	16.1	60	N	4	1.8	.....	8c	0	W	.....	0.13	3.3	Fair	
Ft. St. Michael, Alaska	.....	.....	30.28	769.0	25	− 3.9	.....	NE	1	0.4	.....	8c,ck	0	S	.....	.....	.....	Fair	
Fort Sill, Indian T.	28.81	732.5	29.94	760.5	56	13.3	81	N	.....	.....	1	5k	2s	N	N	0.15	3.8	Cloudy	
Fort Sully, Dakota	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Galveston, Tex.	.....	.....	30.03	762.5	73	22.8	81	S	5	2.2	.....	0	5s	.....	N	0	0	Fair	
Grand Haven, Mich.	.....	.....	29.76	755.9	46	7.8	61	NW	23	10.3	.....	5k	0	NW	.....	0.01	0.3	Fair	
Indianapolis, Ind.	.....	.....	29.42	747.4	55	12.8	73	NW	9	4.0	.....	8cs	0	SW	.....	0.43	10.9	Fair	
Indianola, Tex.	.....	.....	30.00	762.0	73	22.8	81	NE	9	4.0	.....	0	8ks	.....	.....	0	0	Cloudy	
Jacksonville, Fla.	.....	.....	30.11	765.0	67	19.4	73	E	4	1.8	.....	8k	0	SW	.....	0	0	Fair	
Keokuk, Iowa	.....	.....	30.00	762.0	48	8.9	70	S	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla.	.....	.....	30.13	765.2	77.6	25.3	77	SE	13	5.8	.....	1ck	2ks	.....	W	0.42	10.7	Fair	
Kittyhawk, N. C.	.....	.....	30.14	765.5	64	17.8	68	W	18	8.0	.....	2c	Haze	W	.....	0	0	Fair	
Knoxville, Tenn.	.....	.....	29.88	759.0	66	18.9	68	SW	12	5.4	.....	1ck	9ks	SW	SW	0	0	Cloudy	
La Crosse, Wis.	.....	.....	29.91	760.2	41	5.0	48	W	13	5.8	.....	0	0	.....	.....	0.05	1.3	Clear	
Leavenworth, Kan.	.....	.....	30.09	764.3	54	12.2	57	N	8	3.6	.....	0	0	.....	.....	0.01	0.3	Clear	
Lexington, Ky.	28.74	730.0	29.92	760.4	59	15.0	87	SW	12	5.4	.....	.....	10n	.....	SW	0.12	3.0	Light rain	
Long Branch, N. J.	.....	.....	29.84	758.4	49	9.4	93	SE	10	4.5	.....	.....	10s	.....	.....	0	0	Cloudy	
Louisville, Ky.	.....	.....	29.79	756.7	62	16.7	83	SW	7	3.1	.....	.....	10s	.....	SW	0.10	2.5	Threatening	
Lynchburg, Va.	.....	.....	29.87	758.9	66	18.9	71	W	4	1.8	.....	5k	0	SW	.....	0	0	Fair	
Malone, N. Y.	.....	.....	29.92	760.2	49	9.4	37	S	16	7.2	.....	.....	0s	.....	.....	0	0	Threatening	
Manhattan, Kan.	28.89	733.8	30.05	763.3	55	7.2	85	NE	4	1.8	.....	5ck	0	.....	.....	0	0	Fair	
Marquette, Mich.	.....	.....	29.58	751.0	35	1.7	51	W	24	10.7	.....	0	0	.....	.....	0.72	18.3	Clear	
Memphis, Tenn.	.....	.....	29.96	761.0	61	16.1	94	NW	7	3.1	.....	.....	10ks	.....	NW	0.83	21.1	Cloudy	
Milwaukee, Wis.	.....	.....	29.87	758.9	43	6.1	43	NW	18	8.0	.....	0	0	.....	.....	0	0	Clear	
Mobile, Ala.	.....	.....	30.01	762.7	70	21.1	90	S	2	0.9	.....	.....	10s	.....	SW	0	0	Cloudy	
Montgomery, Ala.	.....	.....	30.14	765.0	68	20.0	84	S	6	2.7	.....	10c	Haze	.....	.....	0	0	Cloudy	
Morgantown, W. Va.	.....	.....	29.90	759.5	65	18.3	58	SW	12	5.4	.....	2c	8s	SW	SW	0.02	0.5	Threatening	
Mt. Washington, N. H.	23.59	599.2	29.45	748.7	28	− 2.2	77	NW	10	4.5	.....	2s	0	.....	.....	0	0	Fair	
Nashville, Tenn.	.....	.....	29.44	747.9	62	16.7	88	S	5	2.2	.....	.....	10n	.....	S	0.25	6.3	Light rain	
New Haven, Conn.	.....	.....	29.88	758.9	48	8.9	71	NW	4	1.8	.....	.....	10s	.....	.....	0.03	0.8	Foggy	
New London, Conn.	.....	.....	29.92	760.0	47	8.3	77	0	0	0	.....	.....	10s	.....	SW	0	0	Cloudy	
New Orleans, La.	.....	.....	30.03	762.7	70.7	21.4	79	Calm	0	0	.....	5k	0	W	.....	0	0	Fair	
Newport, R. I.	.....	.....	29.92	760.0	47	8.3	85	Calm	0	0	.....	10ck	0	W	.....	0	0	Cloudy	
New York, N. Y.	.....	.....	29.[illegible]	758.4	52	11.1	72	Calm	0	0	.....	.....	Fog	.....	.....	Inap.	Inap.	Foggy	
Norfolk, Va.	.....	.....	29.93	761.0	62	16.7	61	SW	16	7.2	.....	.....	10s	.....	SW	0	0	Cloudy	
North Platte, Neb.	27.10	689.8	29.78	756.4	41	5.0	73	Calm	0	0	.....	5k	0	NW	.....	0	0	Fair	
Omaha, Neb.	20.01	736.8	30.09	764.3	48	8.9	77	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	29.60	751.5	49	9.4	96	SE	13	5.8	.....	.....	10n	.....	W	0.38	9.7	Heavy rain	
Pembina, Dakota	.....	.....	29.96	761.0	24	− 4.4	86	N	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Penn.	.....	.....	29.83	757.7	59	15.0	65	SW	11	4.9	.....	10ck	Sm'e	SW	.....	0	0	Cloudy	
Pike's Peak, Colorado	.....	.....	29.99	761.7	16	− 8.9	48	NW	36	16.1	.....	0	Haze	.....	.....	0	0	Clear	
Pittsburgh, Penn.	17.78	451.6	29.67	753.6	62	15.6	57	SW	8	3.6	.....	10cs	0	W	.....	0.03	0.8	Cloudy	
Port Huron, Mich.	.....	.....	29.90	759.8	55	12.8	61	NW	15	6.7	.....	5k	0	NW	.....	0	0	Fair	
Portland, Me.	.....	.....	29.95	760.0	41	6.7	67	S	4	1.8	.....	Haze	Haze	.....	.....	0	0	Hazy	
Portland, Oregon	.....	.....	30.10	764.5	48	8.9	85	Calm	0	0	.....	.....	10s	.....	S	0	0	Cloudy	
Punta Rassa, Fla.	.....	.....	30.11	764.8	71.6	22.0	90	E	10	4.5	.....	Haze	Sm'e	SE	E	0.58	14.7	Hazy	
Rochester, N. Y.	.....	.....	29.54	750.9	55	12.8	80	SW	12	5.4	.....	.....	10s	.....	SW	0.37	9.4	Cloudy	
Salt Lake City, Utah	.....	.....	30.09	764.3	48	8.9	42	S	3	1.3	.....	5ck	0	NW	.....	0	0	Fair	
Sandy Hook, N. J.	25.76	654.3	29.83	757.7	52	11.1	86	SE	4	1.8	.....	.....	10s	.....	SW	0.01	0.3	Cloudy	
San Diego, Cal.	.....	.....	29.94	760.5	64	17.2	66	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.08	764.0	61	16.1	80	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Santa Fe, N. M.	.....	.....	29.85	758.2	45	8.9	49	E	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	29.31	592.1	30.12	765.0	69	20.6	64	SW	8	3.6	.....	.....	10s	.....	SW	0	0	Cloudy	
Shreveport, La.	.....	.....	30.04	763.2	67	19.4	9	W	2	0.9	.....	.....	10s	.....	.....	0	0	Threatening	
Smithville, N. C.	.....	.....	30.11	764.8	66	18.9	73	SW	11	4.9	.....	1c	0	W	.....	0	0	Clear	
Springfield, Mass.	.....	.....	29.88	758.9	45	7.2	69	W	4	1.8	.....	.....	10s,s'ke	.....	.....	0	0	Cloudy	
St. Louis, Mo.	.....	.....	30.0	762.0	52	11.1	58	NW	5	2.2	.....	0	0	.....	.....	0.51	13.0	Clear	
St. Marks, Fla.	.....	.....	30.04	763.2	72	21.1	75	S	12	5.4	.....	5k	0	S	.....	0	0	Fair	
St. Paul, Minn.	.....	.....	29.92	760.0	37	2.8	41	W	8	3.6	.....	1c	0	.....	.....	0.17	4.3	Clear	
St. Paul's Island, Alaska	.....	.....	30.22	767.8	32	0.0	89	ESE	2	0.9	.....	.....	Fog	.....	.....	Inap.	Inap.	.....	
Thatcher's Island, Mass.	.....	.....	29.92	760	46	7.8	69	S	13	5.8	.....	0	0	.....	.....	0	0	Clear	
Toledo, Ohio	.....	.....	29.65	753.1	57	13.9	69	S	8	3.6	.....	8k	0	W	.....	0.13	3.3	Fair	
Tucson, Arizona	27.49	698.2	30.08	764.0	71	21.7	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30.12	765.0	67	19.4	79	SW	4	1.8	.....	10ck	0	SW	.....	0	0	Cloudy	
Vicksburg, Miss.	.....	.....	30.07	763.8	61.5	16.4	94	SE	1	0.4	.....	.....	10n	.....	SW	0.57	14.5	Light rain	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer
Virginia City, M. T.	24.31	617.5	29.79	756.7	40	4.4	40	SW	8	3.6		1c	0	W		0	0	Clear	
Washington, D. C.			29.83	757.7	58.5	14.7	81	S	8	3.6			10s		SW	Inap.	Inap.	Cloudy	
Wilmington, N. C.			30.09	764.	68	20.0	64	SW	16	7.2		1c	0	SW		0	0	Clear	
Wood's Holl, Mass.			29.94	760.5	48	8.9	77	SE	6	2.7		0	0			0	0	Clear	
Wytheville, Va.	27.58	700.5	29.70	754.4	53	11.7	86	Calm	0	0		2ck	5ks	NW	NW	0	0	Fair	
Yankton, Dakota	28.82	732.0	30.14	765.5	39	3.9	64	W	1	0.4		8cs	0	W		0	0	Fair	
Yuma, Arizona			29.84	757.9	83	28.3		NW				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.06	763.5	81	27.2	61	NE	5	2.2		5k	10ks	NE		0	0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.98	761.5	80	26.7	78	E				5c	2k			0	0	Fair	L. V. Bigard.
St. Thomas, S. T., W. I.			30.24	768.1	79	26.1	72	S	15	6.7		2c	2k	S		0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I.			30.16	766.1	79	26.1	82	Calm	0	0		8c	5ks	NE		0	0		James Gall.
Santiago de Cuba, W. I.			29.79	756.7	78	25.6	74	NE	6.0	2.7		2c	0			0.33	8.4	Fair	Robert Mason.
Havana, Cuba, W. I.			30.03	762.7	77	25.0	78	NE	2.4	1.1		0	0			2.19	55.6	Clear	Charles Hasselbrink
St. Georges, Bermudas			30.20	767.1	66.0	18.9	62	NW	7.0	3.1		0	2k			0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.					70	21.1	85	S	0.5	0.2		10c	0			0	0	Fine	C. Partridge.
Clifton, Jamaica W. I.	27.20	690.9	29.97	761.2	83	28.3	71	E			2		5k			0	0	Dry and fair	C. J. Hering.
Paramaribo, D. Guiana, S. A.			30.00	762.0	86.0	30										0	0		Dr. H. Groot.
Batavia, Dutch Guiana, S. A.			30.08	763.9	67.0	19.4	78		4	1.8		1c	1s			0	0	Fair	Thomas Herran.
Medellin, Colombia, S. A.	25.18	639.8			35.0	1.7	90						Fog			0.45	11.4	Foggy	John Delaney.
St. John's, Newfoundland			29.81	757.2	9.5	−12.5	90	W	10	4.5			10n			0.06	1.5		J. Fortescue.
York Factory, B. A.			29.45	748.0	72	22.2	90	NE			6					0.05	1.3		E. P. Church.
Honolulu, Oahu, H. I.			30.09	764.3												0.15	3.8		F. L. Clarke.
Makawao, Maui, H. I.																			
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Hibernian, N. 39° 35′, W. 69° 30′.	NEby E½E	11	30.00	762.0	66	18.9		SE			3	1ck	3k			Moderate	NE	Blue sky	Lieut F. Archer, R.N.R.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below −40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m. on the same day. The altitude 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.; Colorado Springs, 6,632.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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 APRIL 29, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	761.0	69.4	20.8	59	NNW			3		2			0	0	Clear	Charnot.
Algiers			29.99	761.0	73.4	23.0	44	NW			2		1			0	0	Clear	Peter.
La Calle																			Kunts.
Tunis			30.00	762.0	80.6	30.0	18	SE			4		0			0	0	Clear	Jacques.
Sfax			30.11	764.8	73.0	22.8	55	S			2		1			0	0	Clear	Chauvey.
Salda			30.04	762.9	76.1	24.5	33	N			4		1			0	0	Clear	Millot.
Tebessa			30.06	763.5	79.2	26.2		SW			3		0			0	0	Clear	Colin.
Geriville			30.06	763.4	76.6	24.8	18	SSE			3		2			0	0	Clear	Buard.
Laghouat			30.11	764.7	82.4	28.0	17	SW			2		0			0	0	Clear	Guyot.
Biskra			30.08	763.9	85.3	29.6	22	NE			1		0			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.78	756.3	69.4	20.8	43	SW			4		4			0.126	3.2		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.75	755.6	63.0	17.2	45	E			2		7			0	0		I. R. Observatory.
Eperies			29.83	757.6	60.1	15.6	55	S			5		9		N	0	0		Julius Mikolik.
Gratz	28.53	724.7	29.70	754.3	64.6	18.1	41	NW			5		8			0	0		Andreas Rospini.
Hermannstadt	28.47	723.0	29.85	758.1	66.9	19.4	43	SE			3		4			0	0		Prof. Reissenberger.
Kremsmünster			29.72	755.0	54.0	12.2	72	WNW			3		10			0	0		Prof. C. Wagner.
Lemberg			29.80	756.8	58.1	14.5	53	S			2		5			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.86	758.4	59.7	15.4	72	SE			4		10s			0	0		I. R. Hydrographic Office
Szegedin			29.85	758.1	67.1	19.5	70	SW			1		5			0	0		Karl Stancel.
Trieste			29.85	758.1	66.2	19.0	57	W			1		4			0	0	Rainy	Prof. V. Farolfi.
Vienna			29.70	754.3	61.5	16.4	57	NNE			1		2			0	0		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.61	752.1	57.6	14.2	54	WSW			1		4			0.071	1.80		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0 10.	Clouds. Amount. Low'r 0 10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	43.0	6.1		ESE	19	8.5			2			0	0	Blue sky	William Boswell.
Ardrossan			29.67	753.6	47	8.3		E			5		8					Overcast	William McNeil.
Armagh Observatory			29.59	751.6	46.8	8.2		ENE	14	6.3			10					Gloomy	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.51	749.5	52.0	11.1		ENE	16	7.2			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.46	748.3	52.5	10.8		E			3		9					*D. clouds	J. Dreyer.
Bradford			29.59	751.6	45.7	7.6		NE			1		10			0.11	2.8	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	82.5	28.1		NE			2		6					*D. clouds	Sergt. J. F. Halanen. A. C.
Cambridge Observatory			29.55	750.6	58.0	14.4		SSE			1		7					Showery	H. Todd.
Cardington			29.54	750.3	53.0	11.7		N			1		8					Rain and hail	John McLaren.
Carlisle			29.64	752.8	44.9	7.2		NE			3		10			0.44	11.2	Overcast	T. Bell, for J. Carmichael.
Chatham, School M. E			29.62	752.3	57.2	14.0		W			1		5					Overcast	Capt. J. Fellowes, R. E.
Dartmoor	24.04	712.2	29.54	750.3	40.0	9.4		S			4		8					Overcast	R. E. Power.
Donaghadee			29.58	751.3	49	9.4		ESE			6		5					*D. clouds	J. Mac Gowan.
Dover			29.58	751.3	55	12.8		SSW			2		2					¼ clouded	J. Costello.
Eccles, (near Manchester.)			29.50	749.3	53.9	12.2		NE	12.2	5.5			7					Misty	Thomas Mackereth.
Falmouth Observatory			29.40	746.7	52.3	11.3		SSE	22	9.8			2					*D. clouds	The Staff.
Fort Napier, (Natal)	27.82	706.6	30.06	763.5	77.6	25.3		E			1		9					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.93	760.2	88	31.1		N			0		7					*D. clouds	Lieut. B. G. Clare, for Prof. Curtis.
Galway, Queen's College			29.44	747.8	52	11.1		NE			7		10					Gloomy	
Gibraltar, (Mediterranean)			30.03	762.7	69.0	20.6		W			6		2					*D. clouds	Corp'l C. Aitken, A. H. C.
Glasgow Observatory			29.70	754.4	44.8	7.1		E			5		7					Squally	Lewis Stuart.
Great Yarmouth			29.59	751.6	48	8.9		S			2		8					Raining	G. T. Watson.
Greenwich Royal Obs			29.55	750.6	57.3	14.1		SSW			1		9			Blank	Blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			29.48	748.8	54	12.2		SE			3		3					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.60	751.8	45.4	7.4		NE			2		10			Blank	Blank	Overcast	L. J. Crossley.
Helston			29.38	746.2	58	14.4		SE			3		4k			0	0	Fine	M. P. Moyle.
Holyhead			29.50	749.3	53	11.7		ENE			4		4					*D. clouds	John Tilston.
Kew Observatory			29.54	750.3	55.7	13.2		S	16	7.2			8					Threatening	The Staff.
Kingstown			29.52	749.8	49	9.4		ENE			4		8					Overcast	George Mitchell.
Leicester Museum			29.54	750.3	57.0	13.9		Calm			0		7					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)			30.11	764.8	66.8	19.3		S			1		2k						Fred. Travis, Pvt. A.H.C.
Nairn			29.80	756.9	47	8.3		ENE			4		2					¼ clouded	W. D. Penny.
Nassau, Bahamas																			Surg. Maj. Henry.
Nottingham			29.55	750.6	56.7	13.7		ESE			3		5c,ck,k			0.340	8.64	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.52	749.8	52.4	11.3		E			2-3		9					Threatening	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.50	749.3	57	13.9		SE			2		10					Gloomy	J. Lucas.
Plymouth			29.43	747.5	53.6	12.0		S			4		2					*D. clouds	John Merrifield.
Roche's Point			29.37	746.0	53	11.7		SE			5		8					¾ clouded	W. Kennedy.
Saint Ann's Head			29.42	747.3	54	12.2		ESE			3		7					*D. clouds	John C. Walker.
Saint Helier, Jersey)			29.49	749.0	55.0	12.8		SSE			5		8					¾ clouded	A. P. Amy.
Sandwick Manse, Orkneys			29.86	758.4	43.5	6.4		ENE	13	5.8			4					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough			29.65	753.1	42.2	5.7		ENE			3		10					Overcast	F. Shaw.
Scutari Cemetery Turkey			29.98	761.5	64.0	17.8		NNE			2		1					D. clouds	Sergt. W. H. Lyne.
Sheffield			29.58	751.3	48.0	8.9		NE			1		10					Rain and hail	W. F. Cooper.
Silloth Rectory			29.64	752.8	48.6	9.2	76	E			6		6			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			29.56	750.8	50.6	10.3		NE			3		9					Threatening	S. J. Perry.
Stornoway, Lewis C. Hebr.			29.84	757.9	48	8.9		ENE			4		2					Blue sky	John Smith.
Stratfield Turgiss					57.0	13.9		SE			1		10					Overcast	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.83	757.7	50	10.0		NNE			2		6					*D. clouds	John Trotter.
Truro, Royal Institution			29.40	746.7	57	13.9		SE			6		5					*D. clouds	W. Newcombe.
Valencia Observatory			30.36	745.7	50.2	10.1		ENE	18	8.0			10					Raining	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					47	8.3		E			3		5						The Staff, for E. J. Stone.
Cape Good Hope Obs			29.93	760.2	71.6	22.0	45	WNW	20	8.9			10						Andrew Gibb.
Leith, Restalrig Park			29.77	756.1	42.9	6.1		E			5		10k			0.62	15.7	Cloudy	C. Meldrum.
Mauritius			30.10	764.5					14.1	6.3						0	0		J. Youngclause.
Monach Lt-house, Hebrides			29.81	757.2	46	7.8		ENE			6	5	5	NE		0	0		
North Unst, (Shetland Is.)			29.87	758.7	44	6.7		NE			4	5	2	NE					

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. *Detached clouds.

DANISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0 10.	Clouds. Amount. Low'r 0 10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.67	753.5	38.1	3.4	87	E			2		10						
Fanöe			29.63	752.6	39.7	4.3	92	E			6		10						
Godthaab, (Greenland)			30.32	770.0	32.5	0.3	74	NNE			2		2						
Stykkisholm, Iceland)			30.26	768.7	35.4	1.9	95	E			4		5						
Thorshavn, (Faröe)			30.07	763.7	42.6	5.9	72	NE			2		4						
Vestervig			29.68	753.8	40.8	4.8	81	ENE			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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.63	752.6	53.6	12	39	S			4		8n		S	0.169	4.3	Very cloudy	Normal School.
Amiens			29.63	752.7	63.0	17.2	55	SSW			3		2		SW	0.409	10.4	Slightly cl'dy	Normal School.
Avignon			29.69	754.2	58.5	14.7	93	SSW			3		8		SW	0.098	2.5	Stormy	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory.
Beauvais			29.62	752.4	61.7	16.1	47	SSW			3		8		SW	0	0	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			29.68	753.8	57.2	14	78	SSW			2		8		SW	0.185	4.7	Very cloudy	Normal School.
Brest			29.34	745.7	55.2	12.9	65	SW			4		4n		SW	0.049	1.25	Squally	Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			29.71	754.5	58.3	14.6	35	SW			3		8		SW	0.012	0.3	Very cloudy	Puy de Dome Obs.
Commercy			29.72	754.9	55.9	13.3	62	SSE			2		8kn		SSE	0.346	8.8	Very cloudy	Normal School.
Commune de Gréasque*			29.73	755.2	64.9	18.3	59	SW			4		5		SW	0	0		M. Kina.
Grenoble			29.71	754.7	55.4	13	88	NW			2		10n		S	0.167	4.25	Raining	Normal School.
Le Mans			29.63	752.6	52.3	11.3	72	W			3		5		W	0.142	3.6	Cloudy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			29.74	755.4	59.2	15.1	56	NW			2		5		SW	0.654	16.60	Cloudy	Normal School.
Mâcon			29.70	754.3	57.7	14.3	82	SE			2		5		W	0.31	8.	Cloudy	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			29.71	754.7	55.4	13	93	W			1		10		W	0.059	1.5	Covered	Normal School.
Orleans																			Normal School.
Paris Observatory			29.63	752.6	59.0	15.0	50	SSW			3		8			0.009	0.22	Very cloudy	National Observatory
Parthenay																			Normal School.
Privas			29.68	753.9	56.1	13.4		SW			2		10		SW	0.24	6.	Covered	Normal School.
La Roche-sur-Yon			29.59	751.5	52.9	11.6	80	SE			6		10		N	0.20	5.	Covered	Normal School.
Rochefort, Observatory			29.71	754.5	56.7	13.7	65	SW			6		10		NE	0.669	17.0	Covered	Naval Observatory.
Rouen			29.58	751.4	60.6	15.9	53	SE			2		5		SW	0.228	5.8	Cloudy	Normal School.
Saint Lo			29.55	75[illegible].6	56.3	13.5	52	SW			6		9		SW	0	0		Normal School.
Tarbes	28.63	727.3			59.0	15		W			6		2		E	0	0	Slightly cl'dy	Normal School.
Toulouse																			Normal School
Villefranche			29.69	754.2	64.0	17.8	77	ESE			3		5		S	0.677	17.20	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.88	759.0	78.8	26	76	NE			3		2k			Blank	Blank		L'Abbé Marchési.
Gorée																			
Marseilles			29.69	754.0	65.1	18.4	76	SW			1		4			0	0		Marseilles Observatory.
Mont-Louis	24.58	634.2	29.89	759.2	48.6	9.2	41	SSW	26.1	11.67			4		SW	0.311	7.9		—. Faiguère.
Montsouris, Paris			29.63	752.6	57.4	14.1	55	SSW			3		8		SSW	0.008	0.2		Montsouris Observ'tory.
Perpignan			29.72	755.0	59.5	15.3	74	SE	7.4	3.33			10			0.390	9.9		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			29.64	752.9	57.7	14.3	65	SSW			3		10			0.035	0.9	Cloudy	E. Renou.
Toulouse			29.77	75[illegible].1	62.6	17.0	43	[illegible]			3		3			0	0		Toulouse Observatory.
Tours			29.66	753.4	56.8	13.8	57	WSW			6		7		WSW	0.165	4.2		C. Marquet.
Versailles, (near Paris)			29.63	752.6	59.0	15.0	50	SW			3		0			0.006	0.14	Almost cov'd	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.09	764.2	56.0	13.3	95	SSE	4.5	2.0			10k			{0.020 / 0.024}	{0.5 / 0.6}		H. Le Leo, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are requently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,0[illegible]0.9 ft.; lermont 388 m., o[illegible] 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet: Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	754.5	54.5	12.5	77	SSW			3		7	SW		0.059	1.5		Prof. T. Hoh.
Berlin			29.65	753.2	62.2	16.8	41	S			1		2			0.008	0.2		Prof. Arndt.
Breslau			29.80	756.7	51.1	10.6	78	W			3		10			0.063	1.6	Raining	Dr. P. Neugebauer.
Karlsruhe			29.69	754.2	60.4	15.8	39	SW			3		1			0.091	2.3		A. Senz.
Cassel			29.62	752.3	58.6	14.8	64	E			4		3	S		0.071	1.8		Dr. H. Möll.
Cologne																			Dr. Gartler.
Emden																			Prof. Prestel.
Frankfort on the Main			29.69	754.0	53.6	12.0	62	NW			3		8			0.035	0.9	Raining	Physical Society.
Friedrichshafen	28.34	719.7	29.89	759.2	52.5	11.4	57	S					9			0	0	Föhn	M. Wilhelm.
Hamburg			29.64	752.8	57.0	13.9	59	W			3		5k	W		0.835	21.2	Squally	Deutsche Seewarte.
Kiel			29.69	754.9	50.9	10.5	82	N			2		10			0.504	12.8		Prof. G. Karsten.
Königsberg			29.67	753.5	59.2	15.1	46	S			5		5			0	0		Prof. E. Luther.
Köslin			29.68	752.7	49.8	9.9		SW			3		3			0.051	1.3		H. Müller.
Leipsic			29.71	754.7	57.7	14.3	57	SSW			4		8			0	0		Prof. Bruhns.
Memel			29.71	754.5	51.8	11.0	63	SSE			3		3			0	0		Reinbrecht & Skalweit.
Münster			29.67	753.7	55.4	13.0	73	SW			2		3			0	0		Prof. E. Heis.
Neufahrwasser			29.58	751.2	57.6	14.2	63	SSW			5		10			0	0		A. Lothes.
Posen			29.75	755.6	59.0	15.0	61	W			2		10			0.004	0.1		Dr. Magener.
Strassburg, (in Alsace)			29.71	754.0	56.5	13.6	52	N			1		8	NW		0.126	3.2		Dr. Schur.
Stuttgart			29.79	756.6	58.1	14.5	50	E			2		5			0.059	1.5		Prof. Schoder.
Thorn			29.67	753.6	56.3	13.5	72	WSW			4		9			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.65	753.0	58.6	14.8	48	W			8		8			0	0		Prof. Flesch.
Wustrow, Naval School			29.56	750.9	47.8	8.8	83	NNE			3		3			0.406	10.3		E. F. Schütz.

Note.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	73.8	23.2		NE										Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.82	757.5	52.5	11.4	80	NE	1.8	0.8			10			0.169	4.3	Raining	
Padua			29.82	757.4	55.0	12.8	80	NE	14.3	6.4			10	SW		0.012	0.3		
Vicenza			29.84	757.8	55.6	13.1	74	NE	6.9	3.1			10	E		0.713	18.1	Showery	
Verona			29.74	755.4	59.4	15.[illegible]	69	E			2		10			0	0		
Bergamo	28.38	720.9	29.69	754.2	49.1	9.5	74	S			4		10			0.079	2.0		
Domodossola	28.71	729.3	29.73	755.2	50.9	10.5	99	Calm			0		10			0.067	1.7	Raining	
Milan			29.74	755.4	51.6	10.9	92	SE			2		10	SE		0.354	9.0		
Pavia			29.72	754.8	59.0	15.0	73	E			6		9	E		0.236	6.0		
Moncalieri			29.75	755.7	49.1	9.5	91	NW	2.5	1.1			10	N		0.382	9.7		
Mondovi	27.81	706.5	29.73	755.2	50.2	10.1	88	NW			2		10			0	0		
Porto Maurizio			29.72	754.9	66.9	19.4	76	E			2		8	NE		0.22[illegible]	5.8		
Genoa			29.77	756.2	60.3	15.7	76	SE	13.7	6.1			10	SE		0	0		
Piacenza			29.72	754.8	58.3	14.6	72	ESE			8		10	S		0	0		
Parma			29.76	756.0	61.2	16.2	68	NNE			2		9			0	0		
Bologna			29.82	757.5	65.7	18.7	47	S			8		5	N		0	0		
Florence			29.80	756.9	71.6	22.0	42	SW			4		10	SW		0	0		
Leghorn			29.74	755.5	65.7	18.7	58	ESE	2.5	1.1			10			0	0		
Siena	28.61	726.6	29.80	757.0	63.9	17.7	54	SSE	5.6	2.5			10	S		0	0		
Urbino	28.27	718.1	29.82	757.4	64.8	18.2	40	SSW			4		5			0	0		
Pesaro																			
Ancona			29.73	755.1	60.8	16.0	60	SE			6		6			0	0		
Grosseto			29.82	757.4	65.1	18.4	64	NNE			8		6	SE		0	0		
Rome			29.91	759.8	65.8	18.8	54	SSE	28.0	12.5			4	W		0	0		
Naples, O. H.			30.06	763.4	67.6	19.8	50	SW			4		2			0	0		
Lecce			30.10	764.5	60.8	16.0	49	WNW	6.3	2.8			5			0	0		
Cosenza			30.04	763.0	74.2	23.4	72	SW	1.8	0.8			0			0	0		
Riposto, (Sicily)			30.[illegible]8	764.1	62.4	16.9	78	NNE			4		0			0	0		
Palermo			29.94	760.5	79.3	26.3	40	WSW	14.3	6.4			0			0	0		
Caltanissetta	28.15	714.9	30.08	764.0	60.3	15.7	48	S			2		0			0	0		
Sub-Series.																			
Naples, S. R.			30.04	763.0	64.9	18.3	57	WSW						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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 550 meters., or 1,824.2 feet: Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.63	752.7	55.0	12.8		W			2								
Groningen			29.56	750.9				SW			3								
Helder			29.61	752.2	52.2	11.2		SW			2								
Utrecht			29.58	751.4	55.9	13.3	64	WSW			3		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.76	755.9	52.5	11.4	33	Calm	0	0			4			0	0		
Bröno			29.88	758.9	44.6	7.0		E	11	5			0			0	0		
Christiania			29.73	755.2	45.0	7.2	24	NNE	3.1	1.4			10			0	0		
Tromsö			29.99	761.8	37.6	3.1	48	N	0	0			5			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds: Direction. From—	Winds: Velocity. Miles per hour.	Winds: Velocity. Meters per second.	Winds: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	63.1	17.3	76	WNW	12.3	5.50			2			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.97	761.3	60.6	15.9	50	SW	11.9	5.34			8	WNW		0.022	0.55		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.15	765.8	65.8	18.8	61	SW	8.0	3.58			10			0	0		Capt. D. A. da Cunha.
Lisbon			30.02	762.4	59.4	15.2	59	SW	28.6	12.8			5			0.055	1.4	Rainy	The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 hour, 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds: Direction. From—	Winds: Velocity. Miles per hour.	Winds: Velocity. Meters per second.	Winds: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.73	755.1	57.4	14.1	65	S	20	9			10					Raining	Astronomical Obs.
Wilna			29.79	756.7	55.6	13.1	48	SW	4	2			1						Astronomical Obs.
Dorpat			29.71	754.5	41.2	5.1	66	SSW	7	3			10						Physical Cabinet.
St. Petersburg			29.73	755.1	38.7	3.7	91	SW	11	5			10						Central Physical Obs
Kuopio			29.75	755.7	30.7	— 0.7	100	E	27	12			10					Snowing	Ch. Forsten.
Kieff			29.81	757.8	56.5	13.6	62	NNW	4	2			8						Physical Cabinet.
Nikolaiev			30.00	762.0	58.6	14.8	63	NNW	11	5			8						Kurdukof.
Kertch			29.97	761.2	66.0	18.9	72	S	9	4			4						Lagorio.
Moscow			29.80	756.8	59.4	15.2	69	S	9	4			9						Meteorological Obs.
Lugan			29.89	757.0	74.7	23.7	32	SW	29	13			2						Meteorological Obs.
Archangel			30.23	767.8	37.9	3.3	46	SE	29	13			10						Ogorodnikof.
Tiflis	28.54	724.8	29.88	758.9	77.4	25.	28	SW	13	6			9						Physical Observatory.
Astrakhan			30.02	762.6	68.7	20.4	50	S	13	6			5						Sebastianof.
Kasan			30.12	765.0	55.0	12.8	24	SE	13	6			6						Physical Cabinet.
Orenburg			30.19	766.8	52.3	11.3	49						0						Tschernischef.
Ekaterinburg	29.28	743.7	30.31	769.9	39.2	4.0	36	W	9	4			1						Meteorological Obs.
Nukuss			30.10	764.4	83.7	28.7	18	E	9	4			0						
Kasaly																			Bobrof.
Tashkend	28.58	726.0	30.24	768.2	68.4	20.2	58	SSE	9	4			8						Michelson.
Barnaul			30.08	764.1	28.8	— 1.8	64	W	18	8			8						Meteorological Obs.
Yeniseisk			29.72	755.0	26.4	— 3.1	56	SW	7	3			5						Marks.
Irkutsk	28.28	718.2	29.67	753.7	36.9	2.7	77	Calm	0	0			10						Usolzef.
Oorga																			Mossin.
Peking, (China)			29.76	756.0	75.2	24.0	37	Calm	0	0			2			Blank	Blank		Physical Observatory.
Nertchinsk	27.46	697.5	29.50	749.4	43.2	6.2	85	NW	4	2			2			Blank	Blank		Meteorological Obs.
Vladivostock			30.04	763.0	39.9	4.4	90	SE	11	5			10						
Nikolaievsk, on the Amoor					33.6	0.9	94	Calm	0	0			0						

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 401 meters, or 1,311.8 feet; Ekaterinburg, 195.4? m., or 1,905.2? ft.; Tashkend, m. 494.2?, or 1,621.3? ft.; Irkutsk, 592 m., or 1,286. ft.; Nertchinsk 592.0? m., or 1,942.2? ft.; Dorpat, 1,281.6 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds: Direction. From—	Winds: Velocity. Miles per hour.	Winds: Velocity. Meters per second.	Winds: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.87	758.8	58.5	14.7	52	SW	25.3	11.33		0	7			0	0	Cloudy	Royal Observatory.
San Fernando			30.10	764.4	63.7	17.6	63	WNW	13.2	5.9		0	8		ESE	0	0		The Naval Observatory.

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; 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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds: Direction. From—	Winds: Velocity. Miles per hour.	Winds: Velocity. Meters per second.	Winds: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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			30.07	763.6	39.2	4.0	46	E			4		5			0	0		
Umea			29.86	758.4	35.2	1.8	67	E			7		10			0	0		
Hernosand			29.79	756.7	34.2	1.2	75	NE			6		9			0	0		
Stockholm			29.62	752.4	36.7	2.6	67	N			2		10			0.012	0.3		
Wisby			29.71	754.5	38.8	3.8	73	NNE			4		5			0.280	7.1		
Sub-Series.																			
Upsala			29.67	753.6	31.2	1.2	75	NNW	14.3	6.4			10		NNE	0.042	1.07		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0-10.	Clouds. Amount. Low'r 0-10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28.31	719.1	29.74	755.5	51.1	10.6	76	N			2		4			0.657	16.7	Vapory	The Observatory.
Zurich	28.13	714.4	29.76	755.9	55.2	12.9	76	SE			1		8			0.811	20.6	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —5.4 mm.; Thermometer, —3.4 cent.; Relative Humidity, +19 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0-10.	Clouds. Amount. Low'r 0-10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.03	762.7	61.5	16.4	59	NNE	16	7.0			2		SW	0	0		
Fao, (Persian Gulf)			30.11	764.9	80.6	27.0		SE			3		10						
Salonika			30.05	763.2	63.1	17.3		SE			1		0						
Valona			30.03	762.8	69.8	21.0		W			2		5						
Varna			29.98	761.5	62.6	17.0		SE			3		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.94	760.4	74.7	23.7	58	NW			1		1k		SE	0	0	Fair	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0-10.	Clouds. Amount. Low'r 0-10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.			29.77	756.1	34.7	1.5	89	Calm	0	0									Hon. J. Ferguson.
Brockville, Ontario			29.95	760.7	45	7.2		W	5	2.2		0	5s		W	0.33	8.4	Fair	W. R. Bigg.
*Chatham, N. B.			29.80	756.9	34	1.1	87	W	1	0.4			10ks		W	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			29.80	756.9	35	1.7	80	S	3	1.3			10s			Inap.	Inap.	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.86	758.4	42.7	5.9	58	W			3					0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			29.80	756.9	33.8	1.0	81	E			1		10			Inap.	Inap.		H. A. Johnson.
Esquimault, B. C.			29.62	752.3	48.3	9.1	93	SE	2	0.9		6cs				0.18	4.6	Cloudy	W. H. Bevis.
Fredericton, N. B.			29.81	757.2	36.5	2.5	85	SE	2	0.9			10s			0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			30.16	766.1	21	— 6.1	94	NW	16	7.2		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			29.88?	758.9?	39.5	4.2	78	W			3	5ck		W		0	0	Fine	H. J. Strang, M. A.
Granton, Ontario			29.91	759.7	38.0	3.3		W			1	1cs		E		0	0	Clear	James Grant.
*Halifax, N. S.			29.77	756.1	39	3.9	83	SE	8	3.6		5ck	0			0	0	Fair	F. Allison, M. A.
*Kingston, Ontario			29.96	761.0	38	3.3	55	W	7	3.1		5k	0	W		0.27	6.9	Fair	S. Woods, M. A.
Little Current, Ontario																			G. B. Abney, C. E.
*Montreal, Quebec			29.83	757.7	38	3.3	68	W	17	7.6		0	2s			0.43	10.9	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			29.89	759.2	36	2.2	71	W	12	5.4		2c	0	W		0.07	1.8	Clear	J. B. Haney.
*Parry Sound, Ontario			29.91	759.7	33	0.6	70	N	3	1.3		2cs	5ks			0	0	Fair	Rev. R. Mooley.
*Port Dover, Ontario			29.92	760.0	43	6.1	75	S	15	6.7		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.			29.81	757.2	32.4	0.2		NW	1	0.4						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			29.94	760.5	43	6.1	67	NW	10	4.5			10ks		W	0	0	Cloudy	M. Payne.
*Quebec, Quebec			29.73	755.1	37	2.8	90	SW	20	8.9			10n		SW	0.04	1.0	Light snow	Capt. Ash, R. N.
St. John, N. B.			29.81	757.2	37	2.8	81	Calm	0	0			ks			0	0		G. Murdoch, C. E.
*Saugeen, Ontario			29.82	757.4	39	3.9	64	SW	12	5.4		2c	2s			0	0	Fair	K. Stewart.
Stayner, Ontario			29.88	758.9	45.1	7.3	42	W	10	4.5		5ck	0	NW		0	0	Fair	R. J. Cole.
Stratford, Ontario			29.89	759.2	37.8	3.2	69	SW	9	4.0		2cs		NW		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.80	756.9	42	5.6	77	SW	1	0.4		2ck	cs		S	0.01	0.3	Fair	T. C. Hill.
*Toronto, Ontario			29.92	760.0	41	5.0	67	S	5	2.2		2c	0	W		0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			29.90	759.4	42.1	5.6	62	Calm			0	10ck	0			0	0	Fine	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	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.			29.92	760.0	47	8.3	54	NW	2	0.9		0	0			0.11	2.8	Clear	
Alpena, Mich			29.82	757.4	35	1.7	61	W	11	4.9		2c	0	W		0	0	Fair	
Atlantic City, N. J.			29.98	761.5	53	11.7	73	N	10	4.5		1cs	0	S		0.55	14.0	Clear	
Augusta, Ga.			30.05	763.3	65	18.3	61	N	6	2.7		0	0			0.18	4.6	Clear	
Baltimore, Md			30.00	762.0	54	12.2	37	NW	10	4.5		0	2s			0.12	3.0	Clear	
Barnegat, N. J			29.97	761.2	51	10.6	45	N	22	9.8		1k	0	NW		0.07	1.8	Clear	
Benton, Montana	25.98	685.3	29.78	756.4	40	4.4	51	E	18	8.0		10k	0			0	0	Cloudy	
Bismarck, Dakota	28.33	719.6	30.04	763.0	32	0.0	60	NE	8	3.6		8k	0	NE		0	0	Fair	
Boston, Mass			29.85	758.2	49	9.4	42	W	12	5.4		0	Haze			0.07	1.8	Clear	
Breckenridge, Minn			30.11	765.5	28	— 2.2	65	N	6	2.7		2c	1s			0	0	Clear	
Buffalo, N. Y.			29.89	759.2	40	4.4	64	SW	6	2.7		0	0			0.07	1.8	Clear	
Burlington, Vt.			29.83	757.7	40	4.4	73	W	8	3.6		0	0			0.20	5.1	Clear	
Cairo, Ill.			30.11	765.5	56	13.3	56	SE	4	1.8		2ck	0			0	0	Clear	
Cape Hatteras, N. C			29.88	758.9	61	16.1	94	NE	8	3.6			10n		NE	1.02	25.9	Light rain	
Cape Henry, Va			29.98	761.5	58	14.4	70	N	10	4.5		2cs	5s	NW	NW	0.45	11.4	Fair	
Cape Lookout, N. C.			29.93	760.2	62	16.7	94	N	11	4.9			10s		N	1.00	25.4	Cloudy	
Cape May, N. J.			29.98	761.5	54	12.2	73	NW	12	5.4		0	0			0.41	10.4	Clear	
Charleston, S. C.			30.00	762.0	66	18.9	84	N	8	3.6			10s			0.24	6.1	Cloudy	
Cheyenne, Wyoming	24.02	610.1	29.96	761.0	47	8.3	37	W	8	3.6		5c	0			0	0	Fair	
Chicago, Ill.			29.99	761.7	48	8.9	77	SW	8	3.6			1cs			0.01	0.3	Cloudy	
Cincinnati, Ohio			30.04	763.0	52	11.1	47	W	5	2.2		Haze	0			Inap.	Inap.	Clear	
Cleveland, Ohio			29.93	761.7	45.8	7.7	45	SW	8	3.6		2ck	0	W		0	0	Clear	
Colorado Springs, Col.	24.09	611.9	29.96	761.0	45	7.2	38	Calm	0	0		1ck	0	NW		0	0	Clear	
Corsicana, Tex			30.02	762.5	67	19.4	90	SE	3	1.3		0	0			0	0	Clear	
Davenport, Iowa			29.98	761.5	51	10.6	72	SE	4	1.8		10k	0	W		Inap.	Inap.	Cloudy	
Denison, Tex			30.02	762.5	72	22.2	75	SE	8	3.6		0	0			0	0	Clear	
Denver, Col.	24.77	629.2	29.99	761.7	48	8.9	29	Calm	0	0		0	5s			0	0	Fair	
Detroit, Mich			29.93	760.2	43	6.1	43	SW	7	3.1		2ck	5ks	W	W	0	0	Fair	
Dodge City, Kan	27.35	694.7	29.96	750.8	63	17.2	57	SE	5	2.2		5ck	0	SW		0	0	Fair	
Dubuque, Iowa			30.00	762.0	48	8.9	70	NW	4	1.8			10s			0.25	6.3	Cloudy	
Duluth, Minn			29.98	761.5	32	0.0	41	W	10	4.5		0	0			0	0	Clear	
Eastport, Me			29.77	755.1	35	1.7	100	NE	8	3.6			Fog		E	Inap.	Inap.	Light rain	
Erie, Pa			29.91	759.7	47	8.3	55	SW	14	6.3		1cs	Haze			0	0	Clear	
Escanaba, Mich			29.85	758.2	33	0.6	61	W	9	4.0		5k	0	W		0	0	Fair	
Fort Gibson, Indian Terr.			30.00	762.0	67	19.4	46	SE	6	2.7		0	0			0	0	Clear	
Ft. St. Michael, Alaska			30.03	762.7	30	— 1.1		NE	7	3.1		10c	0					Fair	
Fort Sill, Indian T.	28.79	731.3	29.89	759.2	58	14.4	76	S			5	2ck	0	S		0	0	Clear	
Fort Sully, Dakota																			
Galveston, Tex			30.07	763.8	73	22.8	90	SE	5	2.2		0	5s		SE	0	0	Fair	
Grand Haven, Mich			29.95	760.7	43	6.1	58	W	15	6.7			10s		W	0	0	Cloudy	
Indianapolis, Ind			30.10	764.5	48	8.9	70	SW	2	0.9			10n			Inap.	Inap.	Light rain	
Indianola, Tex			30.06	763.5	72	22.2	90	SE	6	2.7		1cs	2k		SE	0	0	Fair	
Jacksonville, Fla			30.02	762.5	72	22.2	81	W	6	2.7		8k	0	SW		0.15	3.8	Fair	
Keokuk, Iowa			29.96	761.0	53	11.7	73	SE	7	3.1		0	8s		SE	0	0	Cloudy	
Key West, Fla			30.06	763.5	78.2	25.7	77	Calm	0	0		2c	0	W		0	0	Fair	
Kittyhawk, N. C			29.97	761.2	54	12.2	86	NE	20	8.9			10s		N	0.81	20.6	Cloudy	
Knoxville, Tenn			30.14	765.5	50	10.0	85	Calm	0	0		0	Haze			0.84	21.3	Hazy	
La Crosse, Wis			29.93	761.5	44	6.7	52	W	4	1.8		10c	0	W		0	0	Cloudy	
Leavenworth, Kan			29.92	760.0	57	3.9	57	S	8	3.6		1c	0			0	0	Clear	
Lexington, Ky	29.02	737.1	30.13	765.3	53	11.7	48	NW	2	0.9		0	0			0.06	1.5	Clear	
Long Branch, N. J			29.98	761.5	53	11.7	51	NW	10	4.5		0	0			0.12	3.0	Clear	
Louisville, Ky			30.11	764.8	53	11.7	61	S	2	0.9		0	Sm'e			0	0	Clear	
Lynchburg, Va			30.01	762.2	61	16.1	31	NW	4	1.8		0	0			0.37	9.4	Clear	
Malone, N. Y.			29.84	757.9	35	1.7	52	W	12	5.4		0	0			0.15	3.8	Clear	
Manhattan, Kan	28.79	731.3	29.93	760.2	51	10.6	78	SW	8	3.6		2cs	0			0	0	Clear	
Marquette, Mich			29.85	758.2	32	0.0	59	W	20	8.9		0	0			0	0	Clear	
Memphis, Tenn			30.14	765.5	57	13.9	52	E	3	1.3		0	0			0	0	Clear	
Milwaukee, Wis			30.01	762.2	43	6.1	43	NW	12	5.4			10n			Inap.	Inap.	Light rain	
Mobile, Ala			30.13	764.5	65	18.3	83	N	6	2.7		5c	0			0.05	1.3	Fair	
Montgomery, Ala			30.10	764.5	64	17.8	70	N	6	2.7		0	Haze			0.05	1.3	Clear	
Morgantown, W. Va			30.01	762.2	53	11.7	53	Calm	0	0		0	0			0.25	6.3	Clear	
Mt. Washington, N. H			29.79	756.7	12	—11.1	80	N	42	18.8		0	2s			0.07	1.8	Fair	
Nashville, Tenn	23.43	595.1	30.12	765.0	53	11.7	60	NW	1	0.4		0	0			0.04	1.0	Clear	
New Haven, Conn			29.95	760.7	50	10.0	32	NW	10	4.5		0	0			0.17	4.3	Clear	
New London, Conn			29.93	761.5	51	10.6	27	NW	16	7.2		0	0			0.12	3.0	Clear	
New Orleans, La			30.08	764.0	70.5	21.4	68	NE	8	3.6		5c	0	W		0	0	Fair	
Newport, R. I.			29.88	758.9	50	10.0	41	NW	12	5.4		0	0			0.13	3.3	Clear	
New York, N. Y.			29.93	761.5	49	9.4	37	NW	4	1.8		0	0			0.37	9.4	Clear	
Norfolk, Va			30.03	762.0	58	14.4	58	NE	16	7.2		0	8s			0.31	7.9	Fair	
North Platte, Neb			29.90	749.3	52	11.1	53	W	1	0.4		2c	0	W	NE	0	0	Clear	
Omaha, Neb.	28.98	685.8	29.87	758.7	55	12.8	61	S	5	2.2		2c	0	NW		0	0	Fair	
Oswego, N. Y.	28.82	732.0	29.93	760.2	41	5.0	56	SW	4	1.8		Haze	2s			0.35	8.9	Clear	
Pembina, Dakota			30.17	766.3	21	— 6.1	78	NW	8	3.6		0	Sm'e			0	0	Clear	
Philadelphia, Penn			29.98	761.5	50	10.0	45	NE	13	5.8		0	0			0.31	7.9	Clear	
Pike's Peak, Colorado			30.05	763.3	22	— 5.6	59	NW	22	9.8		1cs	0			0	0	Clear	
Pittsburgh, Penn	17.84	453.1	29.98	761.5	47	8.3	48	SW	9	4.0		0	0			0.55	14.0	Clear	
Port Huron, Mich			29.9	759.4	39	3.9	55	W	12	5.4		5c	1s	W		0	0	Fair	
Portland, Me			29.84	757.7	42	5.6	83	NW	6	2.7			10s		NW	0.11	2.8	Cloudy	
Portland, Oregon			29.75	755.6	48	8.9	92	S	5	2.2			10s			0.44	11.2	Cloudy	
Punta Rassa, Fla			30.08	764.0	74.5	23.6	90	SE	2	0.9		Haze	2ks	SW	SW	0	0	Hazy	
Rochester, N. Y			29.90	759.4	41	5.0	57	S	6	2.7		0	Haze			0.02	0.5	Clear	
Salt Lake City, Utah	25.49	647.4	29.82	757.4	56	13.3	45	SE	1	0.4			10s			0	0	Cloudy	
Sandy Hook, N. J			29.93	761.0	49	9.4	42	S	9	4.0		0	0			0.40	10.2	Clear	
San Diego, Cal.			29.87	758.7	63	17.2	73	Calm	0	0		0	2s			0	0	Fair	
San Francisco, Cal.			29.94	760.5	56	13.3	87	W	8	3.6		2c	5cs	SW	SW	0.04	1.0	Fair	
Santa Fe, N. M	23.28	591.3	29.82	757.4	49	9.4	63	NW	6	2.7		1c	2cs	NW		0	0	Fair	
Savannah, Ga.			30.02	762.5	67	19.4	84	S	8	3.6		Haze	8ks		N	0.08	2.0	Cloudy	
Shreveport, La			30.11	764.8	67	19.4	79	E	3	1.3		2ck	2s	W		Inap	Inap	Fair	
Smithville, N. C.			29.96	761.0	64	17.8	78	N	9	4.0		10cs	0	W		0.35	8.9	Cloudy	
Springfield, Mass.			29.90	759.4	48.5	9.2	36	NW	14	6.3		1cs	0			0.05	1.3	Clear	
St. Louis, Mo.			30.08	764.0	55	12.8	50	S	4	1.8		0	5s		W	0	0	Fair	
St. Marks, Fla			30.06	763.5	68	20.0	84	N	8	3.6		2ck	0	W		0	0	Fair	
St. Paul, Minn			30.02	762.5	35.5	1.9	36	NW	12	5.4		8c,ck	0	W		0	0	Fair	
St. Paul's Island, Alaska			29.98	761.5	31	— 0.6	89	S	2	0.9			10s			0.07	1.8		
Thatcher's Island, Mass.			29.82	757.4	45	7.2	60	NW	16	7.2		0	0			0	0	Clear	
Toledo, Ohio			29.94	760.5	48	8.9	56	SW	10	4.5			10ks		SW	0	0	Cloudy	
Tucson, Arizona	27.45	697.2	30.04	763.0	68	20.0		S				5c	0	W		0	0	Fair	
Tybee Island, Ga.			29.97	761.2	65	18.3	94	NW	6	2.7			10ks		NW	0.36	9.1	Cloudy	
Vicksburg, Miss.			30.14	765.5	63	17.2	61	SE	12	5.4		2ck	5k	W	W	0.01	0.3	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer
Virginia City, M. T.	24.07	611.4	29.55	750.6	47	8.3	55	Calm	0	0		10ck	0	W		0	0	Cloudy	
Washington, D. C.			30.02	762.5	53	11.7	38	NW	8	3.6		0	0			0.16	4.1	Clear	
Wilmington, N. C.			29.95	760.7	62	16.7	83	N	11	4.9		10cs	0	W		0.62	15.7	Cloudy	
Wood's Holl, Mass.			29.87	758.7	54	12.2	49	NW	8	3.6		0	0			0.14	3.6	Clear	
Wytheville, Va.	27.71	691.1	29.86	758.4	50	10.0	44	W	4	1.8		0	0			0.18	4.6	Clear	
Yankton, Dakota	28.72	729.5	30.03	762.7	41	5.0	65	NE	12	5.4		0	0			0	0	Clear	
Yuma, Arizona			29.79	756.7	74	23.3		N				5c	0	NW		0	0	Fair	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.01	762.2	81	27.2	70	NE	6	2.7		0	8ks		NW	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.98	761.5	82	27.8	70	E				2k	5ks			0.15	3.8	Fair	L. V. Bigard.
St. Thomas, S. T., W. I.			30.22	767.6	80	26.7	65	ESE	4	1.8		2c	2k			0	0	Fair	W. S. Cameron.
Kingston, Jamaica, W. I.			30.15	765.8	79	26.1	78	Calm	0	0		5ck	5s	NE		0	0		James Gall.
Santiago de Cuba, W. I.			29.77	756.7	79	26.1	70	NW	1.2	0.5		4c	0			0	0	Fair	Robert Mason.
Havana, Cuba, W. I.			30.02	762.5	77	25.0	82	E	2.4	1.1		5c,ck	0	NW		0	0	Fair	Charles Hasselbrink
St. Georges, Bermudas			30.13	765.3	65.5	18.6	64	S	11.0	4.9		0	5k			0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.19	690.6	29.88	758.9	69	20.6	79	NE	0.5	0.2		5c	0	E		0.29	7.4	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.00	762.0	83	28.3	71	E			2		6ks			0	0	Dry and fair	C. J. Hering.
Batavia, Dutch Guiana, S. A.			30.04	762.9	86.0	30										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.16	639.1			68.0	20.0	77		2	0.9		1c	2s			0.07	1.8	Fair	Thomas Herran.
St. John's, Newfoundland.			29.81	757.2	38.0	3.3	72	NE				10ks	10s,n			0	0	Cloudy	John Delaney.
York Factory, B. A.			29.74	755.4	6.5	—14.2	88	W	22	9.8			10n			0.07	1.8		J. Fortescue.
Honolulu, Oahu, H. I.			30.05	763.3	72	22.2	90	NE			6					0.30	7.6		E. P. Church.
Makawao, Maui, H. I.	27.82	706.6	29.99	761.7	59	15.0	77	Calm	0	0		2c	0			Blank	Blank		F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Hibernian, N. 42° 11′, W. 65° 22′.	NE½E	10½	29.68	753.9	39	3.9		E			3		8s			Smooth		*D. clouds	Lieut F. Archer, R.N.R.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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 4,208.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,291.8 ft., or 699.4 m; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher. *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 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* of clouds, 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 APRIL 30, 1876.

7:35 A. M. WASHINGTON 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	68.7	20.4	57	WNW			1		3			0	0	Fair	Charnot.
Algiers			30.03	762.7	72.0	22.2	56	N			1		1			0	0	Clear	Peter.
La Calle																0	0		Kunts.
Tunis			29.99	761.8	77.0	25.0	54	E			3		0			0	0	Clear	Jacques.
Sfax			30.08	764.0	74.5	23.6	64	SSE			3		1			0	0	Clear	Chauvey.
Saida			30.10	764.6	75.2	24.0	26	N			5		1			0	0	Clear	Millot.
Tebessa			30.04	763.1	80.8	27.1		SW			2		0			0	0	Clear	Colin.
Geriville			30.13	765.3	81.5	27.5	16	SW			3		2			0	0	Clear	Buard.
Laghouat			30.08	763.9	80.6	27.0	26	SW			3		0			0	0	Clear	Guyot.
Biskra			30.03	762.8	86.9	31.6	20	NE			2		0			0	0	Clear	Laromer.

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 Carl Jelinek, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.83	757.7	68.0	20.0	43	SW			3		10			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.78	756.5	51.8	11.0	87	NE			1		8			0.291	7.4		I. R. Observatory.
Eperies			29.72	754.9	56.8	13.8	91	Calm			0		10			0.298	7.54		Julius Mikolik.
Gratz	28.72	729.5	29.89	759.3	63.7	17.6	48	NW			5		5			0.378	9.6		Andreas Rospini.
Hermannstadt	28.39	721.0	29.74	755.3	73.4	23.0	27	NW			5		5			0	0		Prof. Reissenberger.
Kremsmünster			29.82	757.5	55.0	12.8	64	WSW			2		5			0.146	3.7		Prof. C. Wagner.
Lemberg			29.66	753.4	55.9	13.3	75	S			2		9			0.374	9.5		Dr. T. Stanecki.
Nyiregyhaza																			Halassuda Daniel.
Pola			29.89	759.3	65.9	19.4	55	S			1		9cs			0	0		I. R. Hydrographic Office
Szegedin			29.80	756.8	70.5	21.4	45	W			2		8			0	0		Karl Stancel.
Trieste			29.99	759.4	63.0	17.2	68	N			1		10			0	0		Prof. V. Farolfi.
Vienna			29.80	756.8	62.2	16.8	80	W			2		3			0.047	1.2		I. R. Central Institute.

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 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.65	753.2	55.6	13.1	77	W			1		9			0.091	2.30		Royal Observatory.

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, and Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0 10.	Clouds. Amount. Low'r 0 10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.92	760.0	45.0	7.2		NNE	27	12.1			2			0.070	1.78	Squally	William Boswell.
Ardrossan																			William McNeil.
Armagh Observatory			29.94	760.5	49.9	9.9		NNE	11	4.9			0						S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.82	757.4	45.2	7.3		NE	20	8.9			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.93	760.2	48.0	8.9		NE			1		8					*D. clouds	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			30.00	762.0	83.0	28.3		NE			2		8					Overcast	Sergt. J. F. Halanen, A.
Cambridge Observatory			29.73	755.1	43.0	6.1		NNE			2		10			2.210†	56.36†	Raining	H. Todd. [H C.
Cardington			29.72	754.9	45.0	7.2		NE			3		10					Overcast	John McLaren.
Carlisle			29.87	758.7	48.2	9.0		NE			3		7					*D. clouds	T. Bel, for J. Carmell.
Chatham, School M. E			29.74	755.4	43.7	6.5		N			1		6					Raining	Capt. J. Fellowes, R. E.
Dartmoor	28.23	717.0	29.76	755.9	40.0	4.4		NE			8		10					Fog and rain	R. E. Power.
Donaghadee			29.90	759.4	51	10.6		NE			3		5					*D. clouds	J. Mac Gowan.
Dover			29.65	753.1	51	10.6		S			2		7					¾ clouded	J. Costello.
Eccles (near Manchester)			29.81	757.2	45.1	7.3		NE	3.0	1.3			10					Gloomy	Thomas Mackereth.
Falmouth Observatory			29.67	753.6	50.6	10.3		NNE	21	9.4			10					Overcast	The Staff.
Fort Napier, (Natal)	27.69	703.3	29.93	760.2	79.1	26.2		E			1		1					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.95	760.7	90	32.2		N			1		5					*D. clouds	[tis.
Galway, Queen's College			29.89	759.2	50	10.0		NE			6		4					*D. clouds	B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			30.04	763.0	63.5	17.5		W			5		9			Blank	Blank	Gloomy	Corp'l C. Aitken, A. H. C.
Glasgow Observatory			29.89	759.2	44.4	6.9		E			2		9					*D. clouds	Lewis Stuart.
Great Yarmouth			29.74	755.4	45	7.2		ENE			4		6					*D. clouds	G. T. Watson.
Greenwich Royal Obs			29.70	754.4	43.6	6.4		NE			1		10					Drizzling	The Staff. for G. B. Airy.
Guernsey			29.58	751.3	53.5	11.9		ESE			1		7					Showery	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.85	758.2	42.6	5.9		NE			2		10					Overcast	L. J. Crossley.
Helston			29.64	752.8	54	12.2		NE			4		6k			0.16	4.1	Fair	M. P. Moyle.
Holyhead			29.87	758.7	45	7.2		N			5		3					Blue sky	John Tilston.
Kew Observatory			29.71	754.6	44.7	7.1		NE	20	8.9			10					Raining	The Staff.
Kingstown			29.91	759.7	44	6.7		NE			5		5					*D. clouds	George Mitchell.
Leicester Museum			29.80	756.9	44.9	7.2		E			2		10					Threatening	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.15	765.8	67.4	19.7		NW			2		4k						Fred. Travis, Pvt.A.H.C.
Nairn			29.97	761.2	47	8.3		ENE			4		2					¼ clouded	W. D. Penny.
Nassau, Bahamas)																			Surg. Maj. Henry.
Nottingham			29.82	787.4	42.7	5.9		NNE			4		10k,d		NNE	0.128	3.25	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.79	756.7	43.0	6.1		NE			3		10					Threatening	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.72	754.9	43	6.1		NE			3		10					Raining	J. Lucas.
Plymouth			29.66	753.4	48	8.9		NE			3		4					Overcast	John Merrifield.
Roche's Point			29.84	757.9	49	9.4		NE			5		5					½ clouded	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, Jersey)			29.56	750.8	60.4	15.8		SSE			2		8					¾ clouded	A. P. Amy.
Sandwick Manse (Orkneys			29.98	761.5	41.6	5.3		N	27	12.1			5			Blank	Blank	*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, Turkey			30.03	762.7	63.6	17.6		SW			1		4					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.81	757.2	44.4	6.9		ENE			2		9			0.158	4.0	Overcast	W. F. Cooper.
Silloth Rectory			29.84	757.9	49.3	9.6	62	E			1		2			0.035	0.89	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			29.83	757.7	46.8	8.2		E			2		6					Hazy	S. J. Perry.
Stornoway, Lewis C. Hebr.			30.03	762.7	46	7.8		NE			4		2					Blue sky	John Smith.
Stratfield Turgiss					44.5	6.9		NE			1		3						Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.96	761.0	44	6.7		NNE			5		3					Blue sky	John Trotter.
Truro, Royal Institution			29.74	755.4	54	12.2		N			3		6					*D. clouds	W. Newcombe.
Valencia Observatory			29.91	759.7	50.3	10.2		NNE	30	13.4			6					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					46	7.8		NE			3		0						The Staff. for E. J. Stone.
Cape Good Hope Obs			29.96	761.0	62.9	17.2	93	WNW	12	5.4			10						Andrew Gibb.
Leith, Restalrig Park			29.95	760.7	42.0	5.6		NE			3		10k			0	0	Cloudy	C. Meldrum.
Mauritius			30.06	763.5				ESE	15.1	6.8						0.01	0.3		J. Youngclause.
Monach Lt-house, Hebrides			30.01	762.2	46	7.8		NE			3	3	0	NE		0	0		
North Unst, (Shetland Is.)			29.93	760.2	38	3.3		NE			3	7	2	E					

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. *Detached clouds. †Total precipitation for the month.

DANISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. 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. Inches.	Millimeters.	Weather.	Observer.
Copenhagen			29.72	754.8	42.6	5.9	90	SSE			2		10						
Faröe			29.69	754.0	47.1	8.4	78	WSW			4		9						
Godthaab, (Greenland)			30.26	768.5	32.5	0.3	74	S			2		10						
Stykkisholm, (Iceland)			30.15	765.7	31.5	— 0.3	96	E			6		8						
Thorshavn, (Faröe)			30.15	765.9	37.4	3.0	50	N			2		6						
Vestervig			29.65	753.1	40.3	4.6	97	NE			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 coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.59	751.6	55.4	13	90	SW			1		5nk		SW	0.50	12.7	Cloudy	Normal School.
Amiens			29.63	752.5	59.4	15.2	77	SSW			3		10			0	0	Covered	Normal School.
Avignon			29.74	755.4	62.6	17	73	SSE			2		8		SSW	0.453	11.5	Very cloudy	Normal School.
Bar-sur-Seine																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory.
Beauvais			29.67	753.7	60.1	15.6	53	S			3		8		S	0.024	0.60	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse																			Normal School.
Bourges			29.68	753.8	55.0	12.8	88	SE			2		10		SW	0.134	3.4	Covered	Normal School.
Brest			29.53	750.1	57.7	14.3	65	NNE			3		10		NNE	0.148	3.75	Squally	Naval Observatory.
Caen																			Normal School
Chartres																			Normal School.
Chaumont																			Normal School.
Clermont			29.70	754.4	48.9	9.4	63	W			3		8			0	0	Cloudy	Puy de Dome Obs.
Commercy			29.74	755.4	57.9	14.4	55	SSE			2		8kn		SSE	0.067	1.7	Cloudy	Normal School.
Commune de Gréasque*			29.83	757.6	61.7	16.5	56	SE			6		8		S	0	0		M. Kina.
Grenoble			29.76	755.9	61.3	16.3	55	SSE			6		10n		SE	0.256	6.50	Covered	Normal School.
Le Mans			29.67	753.6	52.7	11.5	75	SW			3		8		SW	0.114	2.9	Very cloudy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			29.71	754.5	61.9	16.6	37	W			6		10			0.20	5.	Covered	Normal School.
Mâcon			29.69	754.2	58.3	14.6	72	S			2		10			0.35	9.	Covered	Normal School.
Mirecourt																			Normal School.
Metz																			M. Schuster.
Nismes			29.74	755.3	64.0	17.8	88	SE			4		10		S	0.04	1.	Covered	Normal School.
Orleans																			Normal School.
Paris Observatory			29.67	753.6	53.1	11.7	81	SE			2		8		SSE	0.003	0.08	Almost cov'd	National Observatory
Parthenay																			Normal School.
Privas			29.71	754.6	58.3	14.6		SSE			6		10		SSE	0.339	8.6	Covered	Normal School.
La Roche-sur-Yon			29.66	753.3	55.4	13.0	77	S			2		10		N	0.528	13.4	Covered	Normal School.
Rochefort, Observatory			29.69	754.2	56.7	13.7	74	SW			4		10		NE	0.394	10.0	Covered	Naval Observatory.
Rouen			29.65	753.2	55.0	12.8	70	SE			2		10		S	0.169	4.3	Covered	Normal School.
Saint Lo			29.58	751.3	55.0	12.8	95	W			1		9		W	0.480	12.2		Normal School.
Tarbes	28.98	736.1			63.0	17.2		W			4		2		NE	0	0	Slightly cl'dy	Normal School.
Toulouse																			Normal School
Villefranche			29.74	755.3	56.1	13.4	61	SSE			2		8		S	0.24	6.	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.88	759.0	78.8	26	75	NE			2		2k			0	0		L'Abbé Marchési.
Gorée																			
Marseilles			29.77	756.1	64.0	17.8	68	SE			2		10			0	0		Marseilles Observatory.
Mont-Louis	24.59	624.5	29.90	759.5	46.4	8.0	58	SSW	31.7	14.17			4		SSW	0	0		—. Faiguère.
Montsouris, Paris			29.65	753.4	52.2	11.2	73	SSW			2		10		SSW	0.024	0.6	Raining	Montsouris Observ'tory.
Perpignan			29.72	754.8	65.5	18.6	47	NE	14.9	6.66			4		SW	0	0		Dr. Pines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			29.67	753.6	53.6	12.0	74	S			2		10			0.039	1.0	Covered	F. Renou.
Toulouse			29.79	756.7	62.1	16.7	47	NW			3		9			0.063	1.6		Toulouse Observatory.
Tours			29.65	753.0	55.2	12.9	68	SW			2		10		WSW	0.224	5.7		C. Marquet.
Versailles, (near Paris)			29.65	753.2	56.5	13.6	69	S			2		10			0.073	1.84	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.01	762.3	57.4	14.1	78	ESE	12.1	5.4			10k		S	0 / 0	0 / 0	Misty	H. Le Lec, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0-4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 432 m., or 1,0[illegible]0.9 ft.; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges.
* Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.73	755.2	57.7	14.3	63	SW			3		4	WSW		0	0		Prof. T. Ilch.
Berlin			29.74	755.5	58.6	14.8	52	N			1		8			0.047	1.2		Prof. Arndt.
Breslau			29.84	757.9	60.1	15.6	44	NE			3		7			0	0		Dr. P. Neugebauer
Carlsruhe			29.71	754.7	63.0	17.2	44	SE			5		9			0	0		A. Senz.
Cassel			29.65	753.2	60.1	15.6	60	S			3		4	S		0.020	0.5		Dr. H. Möhl.
Cologne																			Dr. Gartlie.
Emden																			Prof. Prestel.
Frankfort on the Main			29.79	756.7	62.6	17.0	47	SW			4		4			0	0		Physical Society.
Friedrichshafen	28.36	720.3	29.92	760.0	57.2	14.0	43	S					5			0.031	0.8	Light rain	M. Wilhelm.
Hamburg			29.69	754.0	56.8	13.8	79	WNW			4		8n			0.024	0.6		Deutsche Seewarte.
Kiel			29.66	753.3	55.0	12.8	77	SW			3		7			0.020	0.5		Prof. G. Karsten.
Königsberg			29.82	757.4	45.1	7.3	68	NW			2		6			0	0		Prof. E. Luther.
Köslin			29.75	755.6	55.9	13.3		W			2		4			0.083	2.1		H. Müller.
Leipsic			29.78	756.4	54.5	13.6	79	SSE			2		4			0	0	Raining	Prof. Bruhns.
Memel			29.86	758.4	40.8	4.8	68	NNW			4		4			0.020	0.5		Reinbrecht & Skalweit.
Münster			29.70	754.4	56.5	13.6	86	W			2		6			0.39	9.9		Prof. E. Heis.
Neufahrwasser			29.78	756.4	41.9	5.5	85	W			2		9			0	0		A. Lothes.
Posen			29.80	756.9	64.0	17.8	44	SW			3		9			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.72	755.0	62.6	17.0	46	SW			2		8			0.06	2.7		Dr. Schur.
Stuttgart			29.78	756.3	60.8	16.0	47	E			2		4			0	0		Prof. Schoder.
Thorn			29.79	756.6	60.4	15.8	68	ESE			2		4			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.67	753.6	61.9	16.6	43	SW			5		8			0.417	10.6		Prof. Flesch.
Wustrow, Naval School			29.62	752.3	55.9	13.3	66	N			3		10			0.016	0.4		E. F. Schütz.

NOTE.—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. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	75.7	24.3		SW										Very clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; the weather and occasionally the wind force in general terms; occasionally, the kind of clouds.

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.86	758.4	61.3	16.3	76	S	4.3	1.9			9			0	0		
Padua			29.85	758.3	64.0	17.8	54	W	3.1	1.4			5	WSW		0	0		
Vicenza			29.85	758.1	64.2	17.9	65	SE	1.8	0.8			4	W		0	0		
Verona			29.85	758.2	65.3	18.5	47	E			1		0			0	0		
Bergamo	28.49	723.6	29.80	756.9	58.1	14.[illegible]	69	S			2		9			0	0		
Domodossola	28.75	730.3	29.77	756.2	61.7	16.5	54	WSW			4		10			0	0		
Milan			29.85	758.3	63.5	17.6	64	NW			1		9	SW		0	0		
Pavia			29.84	758.0	60.8	16.0	64	E			4		7	W		0.157	4.0		
Moncalieri			29.83	757.7	59.2	15.1	70	ESE	1.8	0.8			9	NE		0.020	0.5		
Mondovi	27.91	708.8	29.83	757.5	54.9	12.7	75	NW			2		10			0	0		
Porto Maurizio			29.92	759.9	61.2	16.2	81	SW			4		5	E		0	0		
Genoa			29.88	759.0	61.0	16.1	72	SE	4.9	2.2			10	S		0	0		
Piacenza			29.83	757.7	63.3	17.4	58	NE			2		8	E		0	0		
Parma			29.85	758.1	66.9	19.4	49	S			6		8			0	0		
Bologna			29.89	759.1	63.9	17.7	42	NW			1		4	E		0	0		
Florence			29.93	760.1	70.7	21.5	41	W			4		10	SW		0	0		
Leghorn			29.91	759.6	65.3	18.5	66	S	5.6	2.5			6			0	0		
Siena	28.71	729.1	29.90	759.5	66.7	19.3	47	S	3.1	1.4			6	SW		0	0		
Urbino	28.36	720.4	29.91	759.7	63.1	17.3	42	SW			4		10			0	0		
Pesaro																			
Ancona			29.92	760.0	63.3	17.4	50	SE			4		6			0	0		
Grosseto			29.96	760.9	67.6	19.8	57	SSE			4		5	NW		0	0		
Rome			30.00	762.0	70.0	21.1	63	S	12.5	5.6			7	SSW		0	0		
Naples, O. U.			30.07	763.8	70.2	21.2	65	SW			4		9	SSW		0	0		
Lecce			30.07	763.8	69.8	21.0	51	WSW	11.9	5.3			0			0	0		
Cosenza			30.02	762.5	83.5	28.6	69	SW	0.7?	0.3?			0			0	0		
Riposto, (Sicily)			30.07	763.8	62.6	17.0	75	NE			1		0			0	0		
Palermo			29.97	761.2	70.3	21.3	48	NE	3.8	1.7			0			0	0		
Caltanissetta	28.14	714.8	30.08	763.9	62.2	16.8	55	S			4		0			0	0		
Sub-Series.																			
Naples, S. R.			30.02	762.4	65.3	18.5	76	W					..k	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 altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters., or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.68	753.8	53.6	12.0		N			2								
Groningen			29.63	752.5	49.1	9.5		NW			2								
Helder			29.71	754.6	45.0	7.2		NNE			2								
Utrecht			29.63	752.6	53.6	12.0	87	WNW			2		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.76	755.9	45.3	7.4	66	NW	7.8	3.6			6			0	0		
Brönö			29.79	756.7	45.3	7.4	37	NNW	20	9			0			0	0		
Christiania			29.74	755.3	48.2	9.0	29	SSW	3.4	1.5			3			0	0		
Tromsö			29.81	757.2	38.3	3.5	49	SW	16	7			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1 h., 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 instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.24	768.0	64.0	17.8	80	SW	7.0	3.12			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.00	762.1	61.7	16.5	46	SW	11.6	5.17			7	SW		0.043	1.11		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.20	767.1	66.7	19.3	69	SW	6.0	2.68			3			0	0		Capt D. A. da Cunha.
Lisbon			30.10	764.4	59.9	15.5	51	W	17.4	7.8			6			0.043	1.1		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 hour, 6 min.

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.76	755.8	50.7	10.4	85	NNW	13	6			10						Astronomical Obs.
Wilna			29.74	755.3	55.9	13.3	62	S	4	2			10						Astronomical Obs.
Dorpat			29.76	755.8	41.0	5.0	83	N	13	6			10						Physical Cabinet.
St. Petersburg			29.68	753.9	51.1	10.6	75	S	18	8			10						Central Physical Obs.
Kuopio			29.61	752.0	38.5	3.6	95	E	7	3			10					Rain & snow	Ch. Forsten.
Kieff			29.74	755.3	66.4	19.1	49	S	9	4			10					Raining.	Physical Cabinet.
Nikolaiev			30.07	763.7	68.7	20.4	42	SSE	25	11			2						Kurdakof.
Kertch			30.07	763.7	74.5	23.6	50	SE	2	1			0						Lagorio.
Moscow			29.90	759.5	57.6	14.2	60	SSW	4	2			7						Meteorological Obs.
Lugan			29.92	759.9	76.1	24.5	32	WSW	18	8			1						Meteorological Obs.
Archangel			29.94	760.4	33.4	0.8	75	ESE	29	13			10						Ogorodnikof.
Tiflis	28.56	725.5	29.89	759.1	83.5	28.6	22	S	9	4			5						Physical Observatory.
Astrakhan			30.11	764.9	74.3	23.5	46	SSW	9	4			6						Sebastianof.
Kasan			29.89	756.8	60.6	15.9	64	ENE	4	2			10					Thunder-storm	Physical Cabinet.
Orenburg			30.05	763.2	79.[illegible]	26.1	23	S	11	5									Tschernischef.
Ekaterinburg	29.30	744.1	30.34	770.7	31.3	— 0.4	79	E	13	6			10						Meteorological Obs.
Nukuss			30.11	764.7	82.4	28.0	19	E	18	8			0						
Kasaly																			Bobrof.
Tashkend	28.53	724.6	30.17	766.2	76.1	24.5	40	Calm	0	0			0						Michelson.
Barnaul			30.26	768.7	18.1	— 7.7	60	NW	31	14			10						Meteorological Obs.
Yeniseisk			29.83	757.7	27.7	— 2.4	65	WNW	2	1			9						Marks.
Irkutsk	28.43	722.2	29.85	758.1	33.3	0.7	42	Calm	0	0			0						Usolzef.
Oorga																			Mossin.
Peking, (China)			29.79	756.6	79.7	26.5	29	Calm	0	0			2						Physical Observatory.
Nertchinsk	27.25	692.1	29.27	743.5	43.9	6.6	57	Calm	0	0			2						Meteorological Obs.
Vladivostock			30.01	762.3	43.5	6.4	90	SE	7	3			9						
Nikolaievsk, on the Amoor					34.5	1.4	85	E	11	5			6						

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 40[illegible] meters, or 1,[illegible].8 feet; Ekaterinburg, 1[illegible] m., or 1,09[illegible] ft.; Tashkend, m. 494.2?, 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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.88	758.9	50.0	15.0	50	SW	23.1	10.34		0	8					Cloudy	Royal Observatory.
San Fernando			30.1[illegible]	764.6	62.6	17.0	62	WNW	11.9	5.3		0	2		W	0.008	0.2		The Naval Observatory.

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight, for Madrid for 8 hours preceding; 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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.81	757.1	34.2	1.2	82	NE			4		10			0	0		
Umea			29.69	754.1	36.8	2.4	55	NE			4		10			0.094	2.4	Snowing	
Hernosand			29.71	754.7	33.8	1.0	85	N			2		10			0.079	2.0	Snowing	
Stockholm			29.70	754.3	36.1	2.3	80	NW			4		10			0.012	0.3		
Wisby			29.85	758.3	37.8	3.2	80	WNW			4		0			0	0		
SUB-SERIES.																			
Upsala			29.74	755.3	35.1	1.7	85	NNW	10.7	4.8			10		NW	0.022	0.56	Snowing	Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; the weather by Vienna symbols, or, occasionally, 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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0-10.	Clouds. Amount. Low'r 0-10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather	Observer.
Geneva	28.35	720.2	29.78	756.4	54.9	12.7	59	SW			2		10			0.295	7.5	Raining	The Observatory.
Zurich	28.15	714.9	29.76	756.0	60.3	15.7	56	W			1		4			0.339	8.6	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —4.3 mm.; Thermometer, —1.4 cent.; Relative Humidity, +2 per cent.

Note.—The originals give 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 altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0-10.	Clouds. Amount. Low'r 0-10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather	Observer.
Constantinople			30.09	764.2	71.4	21.9	39	SSW	3	1.5			4		NW	0	0		
Fao, (Persian Gulf)			29.95	760.8	81.7	27.6		SE			3		10						
Salonica			30.12	765.0	70.2	21.2		W			1		5						
Valona			30.01	762.2	74.3	23.5		S			4		2						
Varna			30.12	765.0	71.6	22.0		W			3		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.98	761.4	68.7	20.4	69	W			2		5k		W	1.02	25.9	Fal	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 by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms; 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0-10.	Clouds. Amount. Low'r 0-10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather	Observer.
Bathurst, N. B.																			Hon. J. Ferguson.
Brockville, Ontario			29.79	756.7	41	5.0		NW	4	1.8		0	5s		W	0	0	Fair	W. R. Biggs.
*Chatham, N. B.			29.91	759.7	33	0.6	84	Calm	0	0			10k			0.02	0.5	Cloudy	G. A. [illegible]
Charlottetown, P. E. Island			29.95	760.7	35	1.7	95	S	3	1.3			Fog			0	0	Foggy	H. J. [illegible], C. E.
Cornwall, Ontario			29.69	754.1	43.5	6.4	63	SE			3	6k				0	0	Fair	James Shillin, M. A.
Dalhousie, N. B.																			A. A. [illegible]
Esquimault, B. C.			29.94	760.5	46.3	7.9	100	N	2	0.9		10cs				0	0	Cloudy	W. H. Bevis.
Fredericton, N. B.			29.89	759.2	35.0	1.7	85	SE	11	4.9			10n			0.785	19.94	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			30.23	767.8	22	— 5.6	93	E	8	3.6		2cs	8	SW	W	0	0	Fair	James Stewart.
Goderich, Ontario			29.97	761.2	29.1	— 1.6	77	NW			3	8k		N		0	0	Fair	H. J. Strang, M. A.
Granton, Ontario			29.89	759.2	27.2	— 2.7		NW			3	1cs		S		0	0	Clear	James Grant.
*Halifax, N. S.			29.93	760.2	37	2.8	98	SE	6	2.7			Fog			0	0	Foggy	F. Allison, M. A.
*Kingston, Ontario			29.77	756.1	38	3.3	86	W	4	1.8		10ck	0	W		0	0	Cloudy	S. Woods, M. A.
Little Current, Ontario																			G. B. Abney, C. E.
*Montreal, Quebec			29.67	753.6	35	1.7	95	N	4	1.8			10n			0.19	4.8	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.71	754.6	34	1.1	76	W	12	5.4		1k	0	W		Inap.	Inap.	Cloudy	J. B. Tansey.
*Parry Sound, Ontario			29.86	758.4	25	— 3.9	69	N	11	4.9		8k	5k	N	N	0.02	0.5	Cloudy	Rev. R. Mooley.
*Port Dover, Ontario			29.85	758.2	30	— 1.1	78	NW	18	8.0		10k	0	W		0	0	Fair	H. Morgan.
Port Hastings, N. S.			29.96	761.0	35.2	1.8		SW	3	1.3						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			29.88	758.9	29	— 1.7	57	NW	20	8.9			10ks		NW	0	0	Cloudy	M. Payne.
*Quebec, Quebec			29.71	754.6	31	— 0.6	100	NE	25	11.6			10n		NE	0.10	2.5	Light snow	Capt. Ash, R. N.
St. John, N. B.			29.93	760.2	35	1.7	95	SE	2	0.9			Fog			0.300	7.62	Showery	G. Murdoch, C. E.
*Saugeen, Ontario			29.90	759.4	27	— 2.8	64	NW	14	6.3		8k	2s			0.01	0.3	Cloudy	K. Stewart.
Stayner, Ontario																			R. J. Cole.
Stratford, Ontario			29.92	760.0	23.8	— 4.6	87	NW	18	8.0			1n			0.050	1.27	Snowing	C. J. MacGregor, M. A.
*Sydney, C. B.			29.98	761.5	46	7.8	64	S	2	0.9		5c	0			0	0	Fair	T. C. Hill.
*Toronto, Ontario			29.82	757.4	31	— 0.6	75	NW	20	8.9		5ck	5n	W	NW	0.04	1.0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			29.82	757.4	29.9	— 1.2	73	W			4	2k	0	W		0	0	Fine	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 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 instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From–	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10	Clouds. Amount. Up'er. 0–10	Clouds. Amount. Low'r. 0–10	Clouds. Direction. Upper. From	Clouds. Direction. Lower. From–	Rain-fall or melted snow the past 24 hours. Inches	Rain-fall or melted snow the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.66	753.4	46	7.8	68	NW	10	4.5		5k	0	W		0.38	9.7	Fair	
Alpena, Mich			30.00	762.0	25	− 3.9	50	NW	19	8.5		5k	0	NW		Inap.	Inap.	Fair	
Atlantic City, N. J.			29.75	755.6	50	10.0	100	Calm	0	0		8cs	Haze	SW		0.03	0.8	Cloudy	
Augusta, Ga.			30.02	762.5	59	15.0	76	Calm	0	0		2cs	0	NW		0	0	Fair	
Baltimore, Md			29.75	755.6	55	12.8	74	Calm	0	0			10n		W	Inap.	Inap.	Light rain	
Barnegat, N. J.			29.74	755.4	51	10.0	86	SW	6	2.7			10s		W	0.01	0.3	Cloudy	
Benton, Montana	27.06	687.3	29.86	758.4	44	6.7	75	SW	8	3.6		0	0			0.12	3.0	Clear	
Bismarck, Dakota	28.25	717.5	29.96	761.0	31	− 0.6	100	E	8	3.6			10n		E	0.13	3.3	Light rain	
Boston, Mass			29.66	753.4	45	7.2	100	S	12	5.4		10n	Fog	S		0.20	5.1	Light rain	
Breckenridge, Minn			30.09	764.3	30	− 1.1	67	E	16	7.2		2cs	8s			0	0	Cloudy	
Buffalo, N. Y.			29.78	756.4	32	0.0	89	NW	16	7.2			10n		NW	Inap.	Inap.	Heavy snow	
Burlington, Vt			29.64	752.8	34	1.1	100	NW	4	1.8			10n		W	0.13	3.3	Light snow	
Cairo, Ill			29.91	759.7	62	16.7	77	E	4	1.8			10n			0.07	1.8	Light rain	
Cape Hatteras, N. C.			29.89	759.2	66	18.9	73	SW	16	7.2		0	0			Inap.	Inap.	Clear	
Cape Henry, Va			29.80	756.9	63	17.2	67	SW	24	10.7		5c	Haze	SW		0	0	Fair	
Cape Lookout, N. C.			29.98	761.5	66	18.9	78	SW	20	8.9		0	0			0	0	Clear	
Cape May, N. J.			29.76	755.9	53	11.7	86	W	4	1.8			10ks		W	0.01	0.3	Cloudy	
Charleston, S. C.			30.04	763.0	67	19.4	79	SW	8	3.6		0	0			0	0	Clear	
Cheyenne, Wyoming	23.90	607.0	29.84	757.9	49	9.4	59	W	20	8.9		5ck	0	W		0	0	Fair	
Chicago, Ill			30.06	763.5	35	1.7	52	NE	13	5.8		2k	0	NE		0.01	0.3	Fair	
Cincinnati, Ohio			29.83	757.7	53	11.7	60	NW	12	5.4		5k	0	NW		0.14	3.6	Fair	
Cleveland, Ohio			29.89	759.2	32.8	0.4	63	N	16	7.2		1k	0	W		0.15	3.8	Clear	
Colorado Springs, Col	23.98	609.1	29.85	758.2	58	14.4	31	NW	5	2.2		0	0			0	0	Clear	
Corsicana, Tex			29.87	758.7	70.6	21.4	85	S	12	5.4		8ck	Haze		S	0	0	Cloudy	
Davenport, Iowa			30.05	763.3	43	6.1	35	NE	12	5.4		5cs	0			0	0	Fair	
Denison, Tex			29.82	757.4	74	23.3	81	S	16	7.2		5c	0	S		0	0	Fair	
Denver, Col.	24.68	626.9	29.90	759.4	54	12.2	43	NE	2	0.9		5k	0	SW		0	0	Fair	
Detroit, Mich			29.93	760.2	31	− 0.6	79	N	12	5.4		2k	0	N		0.04	1.0	Fair	
Dodge City, Kan	27.15	689.6	29.32	744.7	64	17.8	83	E	5	2.2		8c	0			0	0	Fair	
Dubuque, Iowa			30.08	764.0	38	3.3	46	E	7	3.1		5c	0			0	0	Fair	
Duluth, Minn			30.25	768.3	30	− 1.1	68	NE	12	5.4		0	0			0	0	Clear	
Eastport, Me			29.84	757.9	35	1.7	90	SE	9	4.0			Fog			0.03	0.8	Foggy	
Erie, Pa			29.82	757.4	34	1.1	69	NW	14	6.3		5cs	5ks		NW	0.38	9.7	Cloudy	
Escanaba, Mich			30.17	766.3	25	− 3.9	63	N	24	10.7		5k	2s	N	N	0.06	1.5	Cloudy	
Fort Gibson, Indian Terr			29.77	756.1	71	21.1	80	SE	10	4.5		8ck	0	SW		0	0	Fair	
Ft. St. Michael, Alaska			29.81	757.2	17	− 8.3		NW	4	1.8		5ck	0	N				Fair	
Fort Sill, Indian T.	28.48	723.4	29.54	750.3	66	18.9	84	S			6		10s		S	0.41	10.4	Cloudy	
Fort Sully, Dakota																			
Galveston, Tex			30.01	762.7	74	23.3	85	S	8	3.6		0	5s		S	0	0	Fair	
Grand Haven, Mich			30.05	763.3	31	− 0.6	60	N	14	6.3			10s		N	0	0	Cloudy	
Indianapolis, Ind			29.91	759.7	48	8.9	49	NW	6	2.7		0	0			0.12	3.0	Clear	
Indianola, Tex			30.01	762.2	74	23.3	81	S	15	6.7			10s		S	0	0	Cloudy	
Jacksonville, Fla			30.08	764.[illegible]	72	22.2	75	NE	2	0.9		0	0			0	0	Clear	
Keokuk, Iowa			29.92	760.0	57	13.9	53	NE	8	3.6		5c	0			0	0	Fair	
Key West, Fla			30.18	764.0	76.1	24.5	81	NE	10	4.5		Haze	Haze	W	N	0	0	Fair	
Kittyhawk, N. C.			29.88	758.9	63	17.2	72	W	26	11.6		0	Haze			0	0	Clear	
Knoxville, Tenn			29.94	760.5	57	13.9	57	SW	3	1.3		8ck	0	SW		0	0	Cloudy	
La Crosse, Wis			30.07	763.8	37	2.8	54	NE	8	3.6		0	0			0	0	Clear	
Leavenworth, Kan			29.83	757.7	55	12.8	73	NE	8	3.6			10s		E	0.89	22.6	Threatening	
Lexington, Ky	28.79	731.3	29.88	758.9	55	12.8	80	W	8	3.6		2k	5s	W		0	0	Cloudy	
Long Branch, N. J.			29.72	754.9	53	11.7	70	SW	7	3.1			10n			0.06	1.5	Light rain	
Louisville, Ky			29.87	758.7	58	14.4	64	NW	8	3.6		2k	0	NW		0	0	Clear	
Lynchburg, Va			29.75	755.6	68	20.0	34	SW	3	1.3		5k	0	SW		0	0	Fair	
Malone, N. Y.			29.65	753.1	39	3.9	72	N	8	3.6		5k	0	NW		0.05	1.3	Cloudy	
Manhattan, Kan	28.64	727.4	29.77	756.1	52	11.1	93	NE	15	6.7			10ks			0	0	Cloudy	
Marquette, Mich			30.22	767.6	25	− 3.9	75	N	12	5.4		0	5ks		NW	0.01	0.3	Fair	
Memphis, Tenn			29.96	761.0	64	17.8	73	S	1	0.4		5ck	2s	W		0	0	Fair	
Milwaukee, Wis			30.11	764.8	31	− 0.6	79	NE	13	5.8			10ks		NE	0.01	0.3	Cloudy	
Mobile, Ala			30.08	764.0	70	21.1	70	Calm	0	0		0	0			0	0	Clear	
Montgomery, Ala			30.06	763.5	63.5	17.5	60	N	3	1.3		8c	0			0	0	Fair	
Morgantown, W. Va			29.75	755.6	49	9.4	70	N	4	1.8		8c	0	W		0.50	12.7	Fair	
Mt. Washington, N. H	23.31	592.1	29.67	753.6	22	− 5.6	100	NW	24	10.7			Fog			0.13	3.3	Foggy	
Nashville, Tenn			29.92	760.0	60	15.6	70	Calm	0	0			10s		NW	0	0	Cloudy	
New Haven, Conn			29.66	753.4	54	12.2	73	SW	12	5.4		5k	5s	SW	SW	0.25	6.3	Cloudy	
New London, Conn			29.7[illegible]	754.4	47	8.3	92	SW	14	6.3			10s		SW	0.35	8.9	Cloudy	
New Orleans, La			30.05	763.3	67	19.4	90	Calm	0	0		2cs	Fog	W		0	0	Clear	
Newport, R. I.			29.69	754.1	45	7.2	92	S	16	7.2			10n		SW	0.25	6.3	Light rain	
New York, N. Y.			29.7[illegible]	754.4	48	8.9	93	SW	16	7.2			10s		SW	0.32	8.1	Cloudy	
Norfolk, Va			29.84	757.9	63	17.2	57	SW	16	7.2		0	0			0	0	Clear	
North Platte, Neb	26.92	683.8	29.45	748.0	47	8.3	62	E	8	3.6			10s			0	0	Cloudy	
Omaha, Neb.	28.88	733.5	29.96	761.0	42	5.6	49	NE	9	4.0		10cs	0			0	0	Cloudy	
Oswego, N. Y.			29.73	755.1	37.1	2.8	90	W	8	3.6			10s		W	0	0	Threatening	
Pembina, Dakota			30.16	766.1	25	− 3.9	87	E	4	1.8		8c	0			0	0	Cloudy	
Philadelphia, Penn			29.73	755.1	51	10.6	86	SW	9	4.0		8k	2s	SW	SW	0.02	0.5	Cloudy	
Pike's Peak, Colorado	17.74	450.6	29.95	760.7	21	− 6.1	71	W	40	17.9		1k	0	W		0.02	0.5	Clear	
Pittsburgh, Penn			29.76	755.9	45	7.2	68	NW	6	2.7		0	2ks		NW	0.42	10.7	Clear	
Port Huron, Mich			29.92	76[illegible]	29	− 1.7	46	N	18	8.0		5k	0	N		0	0	Fair	
Portland, Me			29.66	753.4	44	6.7	83	S	8	3.6			10n		S	0.34	8.6	Light rain	
Portland, Oregon			30.14	765.5	50	10.0	78	SW	12	5.4			10s		SW	0.12	3.0	Cloudy	
Punta Rassa, Fla			30.08	764.0	71.9	22.2	90	N	10	4.5		8cs	Sm'e	N	N	0	0	Cloudy	
Rochester, N. Y.			29.74	755.4	34	1.1	69	NW	15	6.7			10s		W	0	0	Cloudy	
Salt Lake City, Utah	25.55	649.0	29.88	758.9	51	10.6	59	SE	4	1.8		5c	5s	SW	SE	0.88	22.4	Cloudy	
Sandy Hook, N. J.			29.63	753.0	52.5	11.4	86	SW	18	8.0			10n		SW	0.13	3.3	Light rain	
San Diego, Cal.			30.00	762.0	57	13.9	78	Calm	0	0		0	0			0	0	Clear	
San Francisco, Cal			30.12	765.0	53	11.7	66	NW	6	2.7		0	0			0	0	Clear	
Santa Fe, N. M.	23.23	590.0	29.77	756.1	53	11.7	36	N	8	3.6		1c	2s	N		0	0	Fair	
Savannah, Ga.			30.03	763.5	73	21.7	63	W	8	3.6		0	Sm'e			0	0	Clear	
Shreveport, La			29.98	761.5	69	20.6	90	S	6	2.7			10ks		S	0	0	Threatening	
Smithville, N. C.			29.99	761.7	66	18.9	84	SW	14	6.3		0	0			0	0	Clear	
Springfield, Mass.			29.65	753.1	49	9.4	92	W	4	1.8		1k	8ks		W	0.15	3.8	Cloudy	
St. Louis, Mo			29.95	760.7	52	11.1	65	NE	4	1.8			10s			0.02	0.5	Cloudy	
St. Marks, Fla			30.09	764.3	63	17.2	84	Calm	0	0		2c	0			0	0	Fair	
St. Paul, Minn			30.11	764.8	34.5	1.4	44	E	9	4.0		5c	0			0	0	Fair	
St. Paul's Island, Alaska			30.06	763.5	29	− 1.7	77	N	9	4.0		1c	0			0.01	0.3		
Thatcher's Island, Mass			29.66	754.4	43	6.1	100	SW	9	4.0			10n		SW	0.41	10.4	Raining	
Toledo, Ohio			29.9[illegible]	759.4	37	2.8	54	N	8	3.6		0	0			0.06	1.5	Clear	
Tucson, Arizona	27.51	698.7	30.10	764.5	70	21.1		S				2c	Haze	W		0	0	Fair	
Tybee Island, Ga			30.04	763.0	67	19.4	84	W	6	2.7		0	0			0	0	Clear	
Vicksburg, Miss			30.03	764.7	67.5	19.7	87	S	7	3.1		5cs	0	W		0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer
Virginia City, M. T.	24.14	613.1	29.62	752.3	35	1.7	70	Calm	0	0		3c	0	S		0.26	6.6	Fair	
Washington, D. C.			29.73	755.1	55	12.8	73	Calm	0	0			10ks		W	0	0	Cloudy	
Wilmington, N. C			29.98	761.5	65	18.3	78	SW	12	5.4		0	0			0	0	Clear	
Wood's Holl, Mass			29.72	754.9	45	7.2	92	S	21	9.4			10n			0.09	2.5	Light rain	
Wytheville, Va	27.51	698.7	29.61	752.1	56	13.3	74	W	8	3.6		8k	0	W		0	0	Cloudy	
Yankton, Dakota	28.74	730.0	30.06	763.5	38	3.3	45	E	15	6.7			10s		NW	0	0	Cloudy	
Yuma, Arizona			29.89	759.2	80	26.7		W				10c	0	W		0	0	Cloudy	
Sub Series.																			
Bridgetown, B'b'dos, W. I.			30.03	762.7	83	28.3	64	NE	5	2.2		5ck	5ks	NE	NE	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.98	761.5	80	26.7	78	E				5c	5c			0	0	Fair	L. V. Bigard.
St. Thomas, S. T., W. I																			W. S. Cameron.
Kingston, Jamaica, W. I.			30.16	766.1	79	26.1	78	Calm	0	0		5c	8s			0.01	0.3		James Gall.
Santiago de Cuba, W. I.			29.78	756.4	79	26.1	74	NW	1.2	0.5		4ck	4s	N		0.09	2.3	Fair	Robert Mason.
Havana, Cuba, W. I.			30.05	763.3	78	25.6	86	Calm	0	0		10c	0			0	0	Fair	Charles Hasselbrink
St. Georges, Bermudas			30.04	763.0	70.5	21.4	80	SW	19.5	8.7			8pk			0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa W. I.																			
Clifton, Jamaica W. I	27.19	690.6	30.08	764.0	67	19.4	84	NE	2.0	0.9		2c	0	NE		0.08	2.0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.			30.02	762.5	79	26.1	87	E			2		7ks			0.450	11.43	Rainy	C. J. Hering.
Batavia, Dutch Guiana, S. A			30.04	763.0	80.6	27										0.079	2.00		Dr. H. Groot.
Medellin, Colombia, S. A.	25.18	639.6			66.0	18.9	75		2	0.9		8k	2s			0.24	6.1	Cloudy	Thomas Herran.
St. John's, Newfoundland			30.00	762.0	44.0	6.7	86	SW					1n			0	0	Fair	John Delaney.
York Factory, B. A.			30.32	770.1	15	−9.4	91	W	1	0.4			9s			0.03	0.8		J. Fortescue.
Honolulu, Oahu, H. I.			30.05	763.3	72	22.2	90	NE			5					0.18	4.6		E. P. Church.
Makawao, Maui, H. I.	27.83	706.9	30.00	762.0	60	15.6	82	Calm	0	0						0	0		F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Hibernian, N. 44° 39′, W. 63° 34′.	At Halifax.		29.85	758.2	40	4.4		SSE			3		Haze					Clearing	Lieut F. Archer, R.N.R.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below −40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude 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.; Colorado Springs, 6,032.1 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 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 4,268.8 ft., or 1,301.1 m.; Santa Fè, 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.; Wytheville, 2,291 8 ft., or 699.4 m; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.04 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The direction of the wind is given by Medellin in an unknown cypher.

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* of clouds, 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.