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BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 1, 1876.

MAR 16 1951
WEATHER BUREAU

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.

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1876
(July-Aug.)

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National Oceanic & Atmospheric Administration
U.S. Dept. of Commerce

ALGERIAN SERIES.

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

Stations.	Barometer. Inches.	Barometer. Millimeters.	Barometer. Inches. (Reduced to 32° Fahr. and sea level.)	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.
Nemours			30.09	764.2	75.2	24.0	69	NW			4		8			0	0	Cloudy	Charnot.
Algiers			30.08	764.0	77.0	25.0	80	N			2		2			0	0	Clear	Peter.
La Calle																			Kuntz.
Tunis			30.05	763.3	80.0	30.0	30	NW			4		5			0	0	Fair	Jacques.
Sfax			30.09	764.2	80.8	27.1	65	NE			4		2			0	0	Clear	Chauvey.
Salda			30.12	765.0	83.3	28.5	21	NW			3		1			0	0	Clear	Millot.
Tebessa			30.09	764.2	90.0	32.2		E			1		1			0	0	Clear	Colin.
Geriville			30.08	764.1	94.3	34.6	17	SW			4		2			0	0	Clear	Buard.
Laghouat			30.11	764.8	95.0	35.0		NW			3		1			0	0	Clear	Guyot.
Biskra			30.08	764.0	89.6	32.0	41	NE			1		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. Inches.	Barometer. Millimeters.	Barometer. Inches. (Reduced to 32° Fahr. and sea level.)	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.
Agram			29.89	759.3	54.0	12.2	62	SW			1		9			0.063	1.6	Raining	Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.85	758.3	69.1	20.6	73	W			3		10			0	0		Dr. Wierzbiski.
Eperies			29.78	756.4	70.2	21.2	62	NW			3		9			0	0		Julius Mikolik.
Gratz	28.66	728.0	29.83	757.7	69.6	20.9	53	NW			6		5			0	0		Andreas Rospini.
Hermannstadt	28.36	720.4	29.71	754.6	75.2	24.0	51	S			2		5			0	0		Prof. Reissenberger.
Kremsmünster	28.71	729.2	30.04	763.1	55.0	12.8	80	SW			3		10			0	0		Prof. C. Wagner.
Lemberg			29.68	753.8	76.1	24.5	79	NW			1		4			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.91	759.8	71.4	21.9	76	W			2		4ks			0.843	21.41		I.R.Hydrographic Office.
Szegedin			29.76	755.9	68.0	20.0	69	Calm			0		10			0.341	8.65		Karl Stancel.
Trieste			29.92	760.0	80.1	26.7	59	Calm			0		9			0.079	2.0	Drizzling	Prof. V. Farolfi.
Vienna			29.89	759.3	68.5	20.3	54	NNW			3		4			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Inches.	Barometer. Millimeters.	Barometer. Inches. (Reduced to 32° Fahr. and sea level.)	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.
Brussels			29.94	760.5	68.0	20.0	68	W			3		10		W	0.001	0.10	Sprinkling	Royal Observatory.

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

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BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.53	750.0	59.6	15.3		SSW	14	6.3			7			0.060	2.29	*D. clouds	William Boswell.
Ardrossan			29.72	754.9	57	13.9		S			2		8					Raining	William McNeil.
Armagh, Observatory			29.76	755.9	60.0	15.6		SSW	14	6.3			10					Squally	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.84	757.9	61.9	16.6		SSW			1-2		10					Drizzling	J. Dreyer.
Bradford			29.83	757.7	63.0	17.2		SW			0		10			0.03	0.8	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	83.0	28.3		NE			1		8					Overcast	Sergt. J. F. Halanen. A.
Cambridge, Observatory			29.91	759.7	69.0	20.6		SW			2		10			Blank	Blank	Overcast	H. Todd. [H. C.
Cardington			29.93	760.2	68.6	20.3		W			1		10					Overcast	John McLaren.
Carlisle			29.76	755.9	61	16.1		SW			4		10			0.14	3.6	Showery	T. Bel, for J. Car mell.
Chatham. School M. E			29.93	760.2	69.2	20.7		SW			2		9					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.64	727.4	30.12	765.0	60.0	15.6		W			5		10					Foggy	R. E. Power.
Donaghadee			29.74	755.4	65	18.3		SW			4		8					*D. clouds	J. Mac Gowan.
Dover			29.96	761.0	64	17.8		WSW			3		5					½ clouded	J. Costello.
Eccles, (near Manchester.)			29.83	757.7	66.3	19.1		SW	7.4	3.3			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			30.04	763.0	66.6	19.2		WSW			5		10					Overcast	The Staff.
Fort Napier, (Natal)	27.64	702.0	29.87	758.7	60.1	15.6		SE			2		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.07	763.8	83	28.3		N			3		5					*D. clouds	
Galway, Queen's College			29.82	757.4	61	16.1		SW			6		10					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.06	763.5	72.0	22.2		E			4		2					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			29.69	754.1	57.9	14.4		SW			2		10					Overcast	Lewis Stuart.
Great Yarmouth			29.90	759.4	69	20.6		W			2		8					Misty	G. T. Watson.
Greenwich, Royal Obs'y			29.96	761.0	68.7	20.4		WSW			2		10					Overcast	The Staff, for G. B. Airy.
Guernsey			30.08	764.0	62	16.7		WSW			3		8					*D. clouds	Dr. S. E. Hoskins.
Helston			30.02	762.5	66	18.9		SW			4		10			0.4	10.2	Misty	M. P. Moyle.
Holyhead			29.85	758.2	61	16.1		SSW			5		4					Misty	John Tilston.
Kew, Observatory			29.96	761.0	67.0	19.4		SW	15	6.7			10					Threatening	The Staff.
Kingstown			29.82	757.4	70	21.1		W			4		9					Overcast	George Mitchell.
Leicester Museum			29.90	759.4	66.4	19.1		W			3		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)			29.97	761.2	80.2	26.8		NE			1		0					Blue sky	Corp'l F. Fraser, A. M. C.
Nairn			29.56	750.8	60	15.6		SW			1		2					¼ clouded	W. D. Penny.
Nassau, (Bahamas)			30.12	765.0	83.6	28.7		NE			5		7					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.88	758.9	68.7	20.4		S			2		10k,d		WNW	0	0	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.88	758.9	67.1	19.5		SW			4		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.92	760.0	67	19.4		WSW			3		10					Overcast	J. Lucas.
Plymouth			30.02	762.5	66.5	19.2		W			4		10					Gloomy	John Merrifield.
Roche's Point			29.96	761.0	59	15.0		WSW			4		8					Cloudy	W. Kennedy.
Saint Ann's Head			29.95	760.7	61	16.1		WSW			2		10					Overcast	John C. Walker.
Saint Helier, (Jersey)			30.10	764.5	65.0	18.3		W			4		10					Overcast	A. P. Amy.
Sandwick Manse, (Orkneys)			29.53	750.0	60.3	15.7		SSW	13	5.8			10					Misty	Rev. C. Clouston, LL. D.
Scarborough			29.82	757.4	62.1	16.7		WSW			1		10					Raining	F. Shaw.
Scutari Cemetery, (Turkey			29.72	754.9	83.0	28.3		NE			2		2					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.86	758.4	66.7	19.3		SW			2		8					Overcast	W. F. Cooper.
Silloth Rectory			29.76	755.9	59.2	15.1	90	SW			2		10			0.002	0.05	Overcast	Rev. Francis Redford.
Stonyhurst, Observatory					64.1	17.8		W			2		10			0.092	2.34	Overcast	Rev. S. J. Perry.
Stornoway, Lewis C. (Hebr.)			29.48	748.8	57	13.9		SW			6		10			Blank	Blank		John Smith.
Stratfield Turgiss			29.97	761.2	66.8	19.3		W			2		10					Overcast	Rev. Charles H. Griffith.
Thurso			29.51	749.5	59	15.0		SSE			2		9					Raining	John Trotter.
Truro, Royal Institution			30.03	762.7	67	19.4		W			6		10					Gloomy	W. Newcombe.
Valencia, Observatory			29.91	759.7	57.8	14.3		SW	28	12.5			10					Overcast	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man					56	13.3		S			4		10						Thomas Dawson.
Cape Good Hope, Obs'y																			The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.32	744.7	55.0	12.8	80	N			2		6k						Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.72	754.9	60.0	15.6		W			4		10k			0	0	Cloudy	Andrew Gibb.
Mauritius, Observatory			30.15	765.8				ESE	15.1	6.8						0.29	7.4		C. Meldrum
Melbourne, Observatory			30.23	767.8	52.0	11.1	68	NW	17	7.6			10			0.015	0.38	Fine, dull	R. L. J. Ellery.
Monach Lt-house, Hebrides			29.52	749.8	53	11.7		SSW			4		10			0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.54	750.3	54	12.2		S			7		10			0.4	10.2		Robert Burnet.
																Blank	Blank		

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,409 feet, or 426.7 meters; Fort Napier, 2,250 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			29.84	757.8	63.9	17.7	61	WNW			2		4						
Fanöe			29.86	758.5	62.6	17.0	71	W			4		4						
Godthaab, (Greenland)			29.55	750.6	36.5	2.5	91	SSW			6		10					Rain & snow	
Stykkisholm, (Iceland)			28.85	732.7	49.1	9.5	87	S			4		10					Raining	
Thorshavn, (Faröe)			29.32	744.6	54.3	12.4	89	S			2		10						
Vestervig			29.84	757.8	64.8	18.2	63	NW			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. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	764.5	69.8	21	72	NW			4		10cu		NW	0	0	Covered	Normal School.
Amiens			30.01	762.3	72.0	22.2	66	N			3		10			0	0	Covered	Normal School.
Avignon			30.05	763.2	76.5	24.7	38	NNW			3		0			0	0	Very clear	Normal School.
Bar-sur-Seine			30.10	764.4	69.3	20.7	57	W			2		8		NW	0	0	Very cloudy	G. Saillard.
Beaumette, (near Angers)			30.12	765.0	73.0	22.8	50	SW	5.8	2.6			10		SW	0	0	Covered	Beaumette Observatory.
Beauvais			30.07	763.8	71.4	21.9	58	WSW			3		8		W	0	0	Very cloudy	Normal School.
Besançon			30.11	764.8	71.6	22	58	S			3		5		SW	0.04	1.	Cloudy	Normal School.
Bourg en Bresse			30.22	767.6	73.4	23	77	N			2		1k		S			Clear	Normal School.
Bourges			30.11	764.9	67.3	19.6	77	NW			4		5		SE	0	0	Cloudy	Normal School.
Brest			30.08	763.9	64.9	18.3	72	WSW			4		10		WSW	0	0	Misty	Naval Observatory.
Carcassonne			30.10	764.5	70.2	21.2	55	W			1		2		E	0	0	Slightly cl'dy	Normal School.
Caen			30.55?	775.9?	69.4	20.8	80	WSW			2		10		E	0	0	Covered	Normal School.
Chartres			30.00	762.0	72.1	22.3	48	W			4		10			0	0	Covered	Normal School.
Clermont			30.10	764.5	68.2	20.1	61	NW			1		5		N	0	0		Puy de Dome Obs'y.
Commercy			30.09	764.2	65.1	18.4	66	WNW			6		8kn		WNW	0.028	0.7	Very cloudy	Normal School.
Commune de Greasque*			30.08	763.9	75.2	24.0	40	NW			4		0			0	0		M. King.
Grenoble			30.07	763.8	66.0	18.9	74	NNW			4		2k		SW	0.39	10.	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.15	765.8	75.9	24.4	59	W			1		5		N	0	0	Cloudy	Normal School.
Le Mans			30.11	764.7	73.0	22.8	54	W			4		2		W	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier			30.01	762.2	73.0	23.1	50	NW			4		10		E	Blank	Blank	Covered	Normal School.
Mâcon			30.32	770.1	69.1	20.6	69	ESE			2		5		W	0	0	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			30.07	763.8	68.5	20.3	75	NNW			2		2		SSW	0	0	Slightly cl'dy	Normal School.
Nismes			30.04	762.9	79.2	26.2	33	NW			4		0			0	0	Clear	Normal School.
Orleans			30.07	763.8	74.1	23.4	40	S			1		5		W	0	0	Cloudy	Normal School.
Paris, Observatory			30.07	763.7	71.1	21.7	54	W			3		10k		W	0	0	Covered	National Observatory.
Parthenay			30.15	765.9	70.7	21.5	65	W			2		8		SE	0	0	Very cloudy	Normal School.
Privas			29.93	760.1	72.0	22.2		NW			2		2		NW	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.17	766.4	69.3	20.7	86	W			3		5		E	0	0	½ covered	Naval Observatory.
Rouen			30.07	763.8	65.1	18.4	78	WSW			2		10		W	0	0	Covered	Normal School.
Saint Lo			29.83	757.7	64.4	18	83	NW			1		10		W	0	0		Normal School.
Tarbes	29.02	738.9	30.16	766.0	65.3	18.5		WNW			2		10			0	0	Covered	Normal School
Villefranche			30.12	765.0	77.0	25	63	NNW			1		8		N	0.12	3.	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.89	759.3	82.8	28.2													L'Abbé Marchesi.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.31	769.9	62.1	16.7	64	ESE	9.3	4.17			2		NW	0	0		—. Falguère.
Montsouris, Paris			30.07	763.7	70.0	21.1	57	W			2		10		WSW	Inap.	Inap.		Montsouris Observatory.
Perpignan			30.11	764.7	74.8	23.8	68	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)			30.07	763.8	71.1	21.7	56	SW			1		10			0	0	Covered	E. Renou.
Toulouse			30.23	767.6	67.0	19.8	57	NW			1		0			0	0		Toulouse Observatory.
Tours																			C. Marquet.
Versailles, (near Paris)			30.08	764.0	70.9	21.6	62	W			1		10			0	0	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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			29.88	759.0	66.7	19.3	63	SW			4		7	SW		1.268	32.2	Thunder-storm	Prof. T. Hoh.
Berlin			29.92	759.9	65.8	18.8	56	W			3		10			0.138	3.5		Prof. Arndt.
Breslau			29.97	761.3	66.4	19.1	56	WNW			5		9			0.118	3.0		Dr. P. Neugebauer.
Carlsruhe			30.00	761.9	69.4	20.8	54	NW			3		10			0.063	1.6		A. Senz.
Cassel			29.92	760.0	64.6	18.1	72	SE			2		8	SW		0.232	5.9		Dr. H. Möhl.
Emden			29.87	758.8	68.2	20.1	61	NW			2		3			0.004	0.1		Prof. Prestel.
Frankfort on the Main			29.98	761.5	72.5	22.5	47	WSW			3		9			0.024	0.6		Physical Society.
Friedrichshafen			30.03	762.8	68.0	20.0	70	SW			6		10			0.496	12.6	Rainy	M. Wilhelm.
Hamburg			29.87	758.8	63.7	17.6	62	NNW			3		4k,s	NW		0.047	1.2		Captain F. Hegemann.
Kiel			29.86	758.5	62.2	16.8	69	W			2		5			0.08	2.2		Prof. G. Karsten.
Königsberg, (Prussia.)			29.80	757.0	68.9	20.5	65	NW			5		5			0.016	0.4	Thunder-storm	Prof. E. Luther.
Köslin			29.91	759.6	65.8	18.8		NW			4		2			0	0		H. Müller.
Leipsic			29.94	760.5	56.5	13.6	94	NE			1		8			0.406	10.3		Prof. Bruhns.
Memel			29.82	757.4	66.9	19.4	71	NW			3		3ks			Inap	Inap.		Reinbrecht & Skalweit.
Münster			29.92	760.0	65.1	18.4	72	NW			4		10			0.626	15.9		Prof. E. Heis.
Neufahrwasser			29.87	758.6	62.2	16.8	81	WNW			3		10			0.587	14.9	Light rain	A. Lothes.
Posen			29.94	760.5	69.4	20.8	51	WNW			4		5			0.087	2.2		Dr. Magener.
Strassburg, (in Alsace)			30.05	763.3	71.1	21.7	42	SW			2		9	SW		0.236	6.0		Dr. Schur.
Stuttgart			29.99	761.8	69.3	20.7	48	W			2		8			Blank	Blank		Prof. Schoder.
Thorn			29.86	758.4	61.7	16.5	88	WNW			4		8			0.055	1.4		Dr. Hasenbalg.
Treves, (Trier)			29.99	761.8	62.8	17.1	82	W			5		10			0.256	6.5		Prof. Flesch.
Wustrow, Naval School			29.96	760.9	62.8	17.1	68	WSW			4		2			0.047	1.2		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	755.8	90.5	32.5		SW					..k					Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.90	759.5	76.1	24.5	47	NW	1.3	0.6			7			0.055	1.4		
Padua			29.91	759.6	76.1	24.5	42	SW	2.5	1.1			9			0	0		
Vicenza			29.91	759.6	78.8	26.0	41	SE	1.3	0.6			3	W		0	0		
Verona			29.92	760.0	77.0	25.0	68	E			2		5			0	0		
Bergamo	28.60	726.5	29.86	758.4	75.2	24.0	60	S			1		4			0	0		
Domodossola	28.90	734.1	29.89	759.1	75.2	24.0	52	Calm			0		4			0	0		
Milan			29.92	760.0	84.4	29.1	51	SE			1		1	SE		0	0		
Pavia			29.93	760.1	77.5	25.3	45	NE			1		2	NE		0	0		
Moncalieri			29.93	760.3	75.4	24.1	47	E	4.3	1.9			1			0	0		
Mondovi	28.09	713.4	29.90	759.5	72.5	22.5	49	NNW			4		0			0	0		
Porto Maurizio			30.00	761.9	75.6	24.2	64	E			6		1			0	0		
Genoa			29.97	761.2	73.6	23.1	66	SW	1.3	0.6			2	E		0	0		
Piacenza			29.94	760.5	75.6	24.2	56	N	3.1	1.4			6	N		0	0		
Parma			29.93	760.1	78.4	25.8	57	W			4		5			0	0		
Bologna			29.93	760.2	77.9	25.5	39	NE			6		5	S		0	0		
Florence			29.96	760.9	80.6	27.0	45	W			2		9	W		0	0		
Leghorn			29.95	760.8	76.6	24.8	59	W	33.6	15.0			5			0	0		
Siena	28.75	730.3	29.91	759.7	76.1	24.5	50	S	1.3	0.6			6			0.425	10.8	Showery	
Urbino	28.45	722.5	29.95	760.6	70.0	21.1	61	NE			2		5			0	0		
Pesaro																			
Ancona			29.94	760.4	74.1	23.4	61	N			4		4			0	0		
Grosseto			29.99	761.7	80.6	27.0	55	SSW			4		2	SE		0	0		
Rome			29.95	760.6	80.8	27.1	47	NW	2.5	1.1			3	W		0	0		
Naples, O. U.			29.97	761.1	79.7	26.5	56	SSW			4		4	S		0	0		
Lecce			29.89	759.3	74.3	23.5	58	NE	7.4	3.3			6			0	0		
Cosenza			29.97	761.1	84.2	29.0	67	NE	0.7	0.3			5			0	0		
Riposto, (Sicily)			29.96	760.9	78.1	25.6	64	E			2		2	SW		0	0		
Palermo			29.94	760.4	77.2	25.1	58	NE	4.9	2.2			0			0	0		
Caltanissetta	28.01	711.5	29.87	758.8	79.7	26.5	33	WNW			4		4	ESE		0	0		
Sub-Series.																			
Naples, S. R.			29.98	761.6	77.2	25.1	62	SW	1.8	0.8			7	W		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather 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 1,871.6 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	761.6	66.2	19.0		WNW			4								
Groningen					67.1	19.5		SW			1								
Helder			29.90	759.4	64.4	18.0		SW			4								
Utrecht			29.89	759.2	63.9	17.7	90	W			3		10					Full	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.75	755.7	65.5	18.6	69	SSW	16.6	7.4			3			0.012	0.3		
Brönö			29.74	755.5	67.6	19.8	81	WNW	7	3			2			0	0		
Christiania			29.81	757.1	66.9	19.4	55	E	3.4	1.5			9			0	0		
Tromsö			29.73	755.2	64.4	18.0	57	NE	2	1			2			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 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,)			30.32	770.2	70.7	21.5	82	W	1.2	0.53			6			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.99	761.7	86.0	30.0	24	SSW	5.8	2.58			7	E		0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.19	766.9	69.8	21.0	57	SW	5.8	2.58			5			0	0		Capt. D. A. da Cunha.
Lisbon			30.06	763.4	79.3	26.3	42	NNW	7.4	3.3			1			0	0		The Observatory.

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

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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	755.9	75.4	24.1	57	W	20	9			4						Astronomical Obs.
Wilna			29.76	756.0	79.7	26.5	42	Calm	0	0			6						Astronomical Obs.
Dorpat			29.83	757.6	75.0	23.9	41	ENE	7	3			0						Physical Cabinet.
St. Petersburg			29.80	758.5	68.0	20.0	31	ENE	9	4			5						Central Physical Obs.
Kuopio			29.87	758.6	57.2	14.0	96	SW	7	3			10						Ch. Forsten.
Kieff			29.69	754.1	72.5	22.5	45	N	9	4			3						Physical Cabinet.
Nikolaiev			29.73	755.1	67.6	19.8	61	N	11	5			9					Thunder-storm...	Kurdakof.
Kertch			29.70	754.4	76.3	21.6	57	W	9	4			7						Lagorio.
Moscow			29.76	755.8	59.2	15.1	52	NNW	11	5			6						Meteorological Obs.
Lugan			29.52	749.9	69.1	20.6	51	N	34	15			6						Meteorological Obs.
Archangel			29.82	757.3	66.0	18.9	35	NE	22	10			0						Ogorodnikof.
Tiflis	28.28	718.4	29.61	752.2	78.8	26.0	29	N	13	6			4						Physical Observatory.
Astrakhan			29.68	753.9	75.2	24.0	58	S	18	8			8					Light rain...	Sebastianof.
Kasan			29.49	749.1	66.0	18.9	74	N	4	2			7						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.57	725.6	29.47	748.5	67.8	19.9	87	NNW	9	4			10						Meteorological Obs.
Nukuss			29.47	748.4	93.0	33.9	37	ENE	11	5			9						
Kasaly																			Bobrof.
Tashkend	27.99	711.0	29.53	750.0	96.4	25.8	49	Calm	0	0			1						Michelson.
Barnaul			29.61	752.2	75.7	24.3	57	SE	2	1			10						Meteorological Obs.
Yeniseisk			29.56	750.9	84.2	29.0	49	WNW	2	1			1						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.85	758.1	82.0	27.8	54	ESE	9	4			5						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.92	759.9	59.7	15.4	90	Calm	0	0			4						
Nikolaievsk, on the Amoor					51.3	10.7	98	ESE	18	8			10						

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 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			30.02	762.5	81.0	27.2	34	SE	2.2	1.00		0	6			Inap.	Inap.	Cloudy..	Royal Observatory.
San Fernando			30.04	763.1	82.2	27.9	34	ESE	29.1	13.0		6	1	ESE	ESE				The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			29.89	759.2	70.2	21.2	48	S			2		10			0	0		
Umea			29.84	757.9	67.6	19.8	61	SSW			2		0			0	0		
Hernosand			29.80	757.0	70.7	21.5	43	S			4		0			0	0		
Stockholm			29.78	756.4	75.9	24.4	44	SE			2		2			0	0		
Wisby			29.85	758.3	63.3	17.4	86	N			4		10					Raining	
Sub-Series.																			
Upsala			29.78	756.3	75.9	24.4	35	SE	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; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. 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	28.68	728.4	30.07	763.6	68.4	20.2	55	NNE			2		8			0.004	0.1	Covered	The Observatory.
Zurich	28.47	723.0	30.07	763.6	66.4	19.1	63	W			1		5			0.213	5.4	Bright	The Observatory.

NOTE—For Geneva the corresponding departures from the normal values are: Barometer, +1.2 mm; Thermometer, —1.8 cent.; Relative Humidity, +1 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

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.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. 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			29.79	756.6	74.8	23.8	50	NE	10	4.5			3		W	0	0		
Fao, (Persian Gulf)			29.69	754.0	100.4	38.0		NW			3		0						
Salonica			29.82	757.3	82.9	28.3		NW			1		5					Stormy	
Valona			29.90	759.4	77.5	25.3		NW			2		2						
Varna			29.80	757.0	86.0	30.0		N			2		8						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.68	753.8	90.0	32.2	60	SW			4		0			0	0	Clear	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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. 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			30.11	764.8	69	20.6		SW	1	0.4		2c	0	W		0	0	Fair	W. R. Bigg.
*Chatham, N. B.			29.93	760.2	60	15.6	91	NW	7	3.1			10ks		NW	0.10	2.5	Cloudy	G. A. Blair.
Charlottetown, P. E. Island.			29.91	759.7	62	16.7	88	W	3	1.3			10n			0.09	2.3	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.03	762.7	75.2	24.0	65	SE			1	3c	0			Inap.	Inap.	Bright	James Smith, M. A.
Dalhousie, N. B.			29.94	760.5	59.0	15.0	88	W			3					1.16	29.5		H. A. Johnson.
Esquimault, B. C.																			Wm. Bewis.
Fredericton, N. B.			29.96	761.0	67.0	19.4	69	NW	10	4.5		2c	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.94	760.5	53	11.7	93	W	4	1.8		2c	2ks	W	W	0	0	Fair	James Stewart.
Goderich, Ontario			29.92	760.0	68.6	20.3	67	NE			2		10n			0.089	2.26	Threatenin.	H. J. Strang, M. A.
Granton, Ontario	28.89	733.8	29.97	761.2	59	15.0		E			1		10n			Blank	Blank	Raining	James Grant.
*Halifax, N. S.			29.94	760.5	59	15.0	94	NW	3	1.3			8n			0.10	2.5	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.08	764.0	66	18.9	74	Calm	0	0		5c	0			0	0	Fair	S. Woods, M. A.
Little Glace Bay, N. S.			29.88	758.9	61.2	16.2	93	S	2	0.9		8k	0	SW		0.08	2.0	Cloudy	C. H. Rigby.
*Montreal, Quebec			30.04	763.0	71	21.7	64	W	4	1.8		0	0			0.28	7.1	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.04	763.0	63	17.2	72	Calm	0	0		2c	0			0.04	1.0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.04	763.0	63	17.2	75	S	3	1.3		2cs	0	S		0	0	Fair	Rev. R. Mosley.
*Port Dover, Ontario			30.01	762.2	60	15.6	88	NE	9	4.0		10k	0	SW		0	0	Cloudy	H. Morgan.
Port Hastings, N. S.			29.92	760.0	58.3	14.6		W	3	1.3						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			29.98	761.5	60	15.6	88	E	6	2.7			10n		S	0.04	1.0	Light rain	M. Payne.
*Quebec, Quebec			30.03	762.7	66	18.9	69	S	2	0.9		0	0			0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.			29.99	761.7	57	13.9	94	S	6	2.7			10s			0	0	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario			29.97	761.2	61	16.1	71	Calm	0	0		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario			29.95	760.7	70	21.1	65	SE	3	1.3		8c	0	S		0	0	Cloudy	R. J. Cole.
Stratford, Ontario	28.72	729.5	29.97	761.2	59.7	15.4	81	SE	6	2.7			10s			0	0	Cloudy	C. J. Macoregor, M. A.
*Sydney, C. B.			29.91	759.7	58	14.4	96	E	2	0.9			10n		W	0.07	1.8	Cloudy	T. C. Hill.
*Toronto, Ontario			30.04	763.0	63	17.2	71	NE	3	1.3		5k	5ks	W	W	0.07	1.8	Cloudy	Magnetic Observatory.
Woodstock, Ontario			29.97	761.2	59.4	15.2	93	E	9	4.0			10s			1.20	30.5	Raining	J. Montgomery.
Sub-Series.																			
St. John's, Newfoundland			30.18	766.6	48	8.9	92	SE					10n			0	0	Light fog	John Delaney.

NOTE.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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	71	21.7	62	Calm	0	0		2c	5k		SW	0	0	Fair	
Alpena, Mich.			29.95	760.7	66	18.9	71	E	5	2.2		2c	0	NW		0	0	Fair	
Atlantic City, N. J.			30.07	763.8	71	21.7	75	N	4	1.8		8cs	Haze	W		0.04	1.0	Cloudy	
Augusta, Ga.			30.09	764.3	83	28.3	75	S	5	2.2		5cs	0	S		0	0	Fair	
Baltimore, Md.			30.07	763.8	78	25.6	69	W	2	0.9		8cs	Sm'u	W		0	0	Fair	
Barnegat, N. J.			30.08	764.0	76	24.4	64	E	9	4.0		8cs	Haze			0	0	Fair	
Benton, Montana	27.21	691.1	30.01	762.2	58	14.4	76	Calm	0	0		2c	0			0	0	Fair	
Bismarck, Dakota	28.21	716.5	29.83	757.7	52	11.1	53	NW	2	0.9		0	0			0	0	Clear	
Boston, Mass.			30.02	762.5	75	23.9	56	NW	7	3.1		5cs	Haze	W		0	0	Hazy	
Breckenridge, Minn.			29.94	760.5	54	12.2	93	N	6	2.7			10s			0.36	9.1	Cloudy	
Buffalo, N. Y.			29.98	761.5	63	17.2	67	E	7	3.1			10ks		W	0	0	Cloudy	
Burlington, Vt.			30.05	763.3	62	16.7	69	Calm	0	0		0	2s			0	0	Fair	
Cairo, Ill.			29.91	759.7	74	22.2	85	S	6	2.7		8k	0	W		0.38	9.7	Fair	
Cape Hatteras, N. C.			30.05	763.3	85	29.4	87	SW	2	0.9		2k	5ks	W	SW	0.01	0.3	Cloudy	
Cape Henry, Va.			30.06	763.5	79	26.1	78	S	4	1.8		5c	0			0	0	Fair	
Cape Lookout, N. C.			30.13	765.3	81	27.2	91	S	16	7.2		5k	2ks	SW	SW	0.01	0.3	Fair	
Cape May, N. J.			30.08	764.0	76	24.4	81	Calm	0	0		5c	Haze	W		0	0	Fair	
Charleston, S. C.			30.11	764.8	85	29.4	79	SW	6	2.7		0	5ks		SW	0.15	3.8	Fair	
Cheyenne, Wyoming	24.16	613.6	30.10	764.5	47	8.3	77	N	16	7.2		0	0			0	0	Clear	
Chicago, Ill.			29.72	754.9	68	17.2	94	NE	8	3.6			10s			0.06	1.5	Cloudy	
Cincinnati, Ohio			29.83	757.7	79	26.1	69	SW	10	4.5		2c	0			0.05	1.3	Clear	
Cleveland, Ohio			29.90	759.4	63.4	17.4	87	SE	16	7.2			10n		SW	0.17	4.3	Heavy rain	
Colorado Springs, Col.	24.21	614.9	30.08	764.0	50	10.0	71	NE	20	8.9		1k	0			0.31	7.9	Clear	
Corsicana, Tex.			29.88	758.9	75.4	24.1	90	S	5	2.2			10s		S	0	0	Cloudy	
Davenport, Iowa			29.81	757.0	63	17.2	72	NE	4	1.8			10n			Inap.	Inap.	Light rain	
Denison, Tex.			29.87	758.7	75	23.9	85	S	18	8.0			10s		S	0	0	Cloudy	
Denver, Col.	24.95	633.7	30.17	766.3	51	10.6	72	SE	3	1.3			8s		NW	0.44	11.2	Clearing	
Detroit, Mich.			29.84	757.9	64	17.8	91	E	8	3.6			10n			1.41	35.8	Heavy rain	
Dodge City, Kan.	27.34	694.4	29.56	750.8	59	15.0	76	W	22	9.8		5cs	2s	W		2.43	61.7	Clearing	
Dubuque, Iowa			29.82	757.4	63	17.2	72	NE	4	1.8			10s			0	0	Cloudy	
Duluth, Minn.			29.97	761.2	53	11.7	79	NE	1	0.4			10s			0	0	Cloudy	
Eastport, Me.			29.97	761.2	62	16.7	88	Calm	0	0		0	0			0	0	Clear	
Erie, Pa.			29.95	760.7	68	20.0	74	SE	4	1.8			10n			Inap.	Inap.	Light rain	
Escanaba, Mich.			29.94	760.5	59	15.0	76	NE	8	3.6		8c	0	NW		0	0	Fair	
Fort Gibson, Indian Ter.			29.75	755.6	75	23.9	81	S	12	5.4			10s		S	0.02	0.5	Cloudy	
Ft. St. Michael, Alaska			29.69	754.1	53	11.7	100	SW			3		10n			0.49	12.4	Cloudy	
Fort Sill, Indian T.	28.66	728.0	29.74	755.4	66	18.9	94	NE	12	5.4			10n			1.82	46.2	Light rain	
Fort Sully, Dakota	28.29	718.6	29.92	760.0	55	12.8	93	N	15	6.7			10s		NE	1.55	39.4	Cloudy	
Galveston, Tex.			29.94	760.5	82	27.8	78	SE	12	5.4		8ck	2ks	S	S	0.05	1.3	Cloudy	
Grand Haven, Mich.			29.83	757.7	62	16.7	88	E	10	4.5			10s		E	0	0	Cloudy	
Indianapolis, Ind.			29.81	757.2	73	22.8	90	SW	9	4.0			10s		SW	1.39	35.3	Cloudy	
Indianola, Tex.			29.91	759.7	78	25.6	86	S	8	3.6			10s			1.65	41.9	Cloudy	
Jacksonville, Fla.			30.14	765.5	83	28.3	70	S	8	3.6		0	0			0	0	Cloudy	
Keokuk, Iowa			29.75	755.6	68	20.0	93	E	4	1.8			10s		E	0	0	Cloudy	
Key West, Fla.			30.08	764.0	82.6	28.1	74	E	12	5.4		0	5ks		E	0	0	Fair	
Kittyhawk, N. C.			30.11	764.8	78	25.6	86	SW	12	5.4		5k	0	SW		0.07	1.8	Fair	
Knoxville, Tenn.			30.09	762.5	74	23.3	85	Calm	0	0		10k	0	SW		Inap.	Inap.	Clear	
La Crosse, Wis.			29.87	758.7	60	15.6	76	NE	6	2.7		8c	0	E		0	0	Fair	
Leavenworth, Kan.			29.69	754.1	70	21.1	90	S	2	0.9			10n		S	0.70	17.8	Light rain	
Lexington, Ky.	28.85	732.8	29.90	759.4	75	23.9	85	S	16	7.2		2c	0			0.24	6.1	Clear	
Long Branch, N. J.			30.10	764.5	74	23.3	67	Calm	0	0		0	5s			0	0	Fair	
Louisville, Ky.			29.88	758.9	80	26.7	70	S	12	5.4		0	0			0.18	4.6	Clear	
Lynchburg, Va.			30.02	762.5	84	28.9	64	E	2	0.9		0	0			0	0	Clear	
Malone, N. Y.			30.00	762.0	69	20.6	60	S	6	2.7		5c	0	NW		0	0	Fair	
Manhattan, Kan.	28.63	727.2	29.73	755.1	65	18.3	100	SW	16	7.2			10n			1.40	35.6	Light rain	
Marquette, Mich.			29.98	761.5	54	12.2	86	Calm	0	0			8s			0	0	Cloudy	
Memphis, Tenn.			29.95	760.7	70	20.1	73	SW	10	4.5		2ck	0			0	0	Fair	
Milwaukee, Wis.			29.85	758.2	59	15.0	81	NE	12	5.4			10ks		SE	0	0	Cloudy	
Mobile, Ala.			30.04	763.0	83	28.3	74	S	4	1.8		2c	2s			0	0	Fair	
Montgomery, Ala.			30.06	763.5	82	27.8	78	S	5	2.2		0	0			0	0	Clear	
Morgantown, W. Va.	28.94	735.1	29.95	760.7	72	22.2	85	Calm	0	0		8c	2s	W	NW	0	0	Cloudy	
Mt. Washington, N. H.	23.92	607.6	30.28	769.1	46	7.8	92	NW	30	13.4		2c	2s	NW	NW	0	0	Fair	
Nashville, Tenn.			29.94	760.5	83	28.3	60	SW	6	2.7		5ck	0	SW		0	0	Fair	
New Haven, Conn.			30.06	763.5	77	25.0	46	N	5	2.2		8c	Haze	NW		0	0	Fair	
New London, Conn.			30.06	763.5	74	23.3	47	N	2	0.9		2c	2ck	W	W	0	0	Fair	
New Orleans, La.			30.02	762.5	81	27.2	80	SE	2	0.9		5cs	2ck			0.17	4.3	Fair	
Newport, R. I.			30.05	763.3	74	23.3	55	NW	8	3.6		8ck	0	SW		0	0	Cloudy	
New York, N. Y.			30.09	764.3	76	24.4	41	NE	7	3.1		5k	Fog	W		0	0	Foggy	
Norfolk, Va.			30.08	764.0	84	28.9	71	SW	9	4.0		5c	Haze			Inap.	Inap.	Fair	
North Platte, Neb.	27.00	685.8	29.46	748.3	57	13.9	75	NW	38	17.0			10s		NW	0	0	Cloudy	
Omaha, Neb.	28.64	727.4	29.65	753.1	62	16.7	97	NW	8	3.6			10n			0.62	15.7	Heavy rain	
Oswego, N. Y.			30.07	763.8	66.5	19.2	70	SW	3	1.3		10cs	0	NW		0	0	Cloudy	
Pembina, Dakota			29.89	759.2	56	13.3	80	Calm	0	0		0	0			0.05	1.3	Clear	
Philadelphia, Penn.			30.09	764.3	76	24.4	56	E	6	2.7		8ck	Haze			0	0	Fair	
Pike's Peak, Colorado	17.88	454.1	30.09	764.3	20	-6.7	83	N	8	3.6		0	5k			0.16	4.1	Clear	
Pittsburgh, Penn.			29.92	760.0	73	22.8	71	E	4	1.8		2c	8ks	W		0	0	Cloudy	
Port Huron, Mich.			29.88	758.9	58	14.4	93	E	9	4.0			10n		SE	0.08	2.0	Light rain	
Portland, Me.			30.02	762.5	70	21.1	75	W	4	1.8		2c	Haze	W		0	0	Fair	
Portland, Oregon			29.96	761.0	60	15.6	88	Calm	0	0		0	0			0	0	Clear	
Punta Rassa, Fla.			30.10	764.5	81.0	27.2	78	E	10	4.5		Haze	2ks		SE	0	0	Hazy	
Rochester, N. Y.			30.02	762.5	66	18.9	68	SW	2	0.9		5c	2s	W	SW	6	0	Fair, smoky	
Salt Lake City, Utah	25.66	651.8	29.99	761.7	66	18.9	27	E	2	0.9		0	0			0	0	Clear	
Sandy Hook, N. J.			30.07	763.8	75	23.9	52	NE	3	1.3		2c	5ks			0	0	Fair	
San Diego, Cal.			29.81	757.2	65	18.3	83	NW	4	1.8			10s		NW	0	0	Cloudy	
San Francisco, Cal.			29.78	756.4	53	11.7	93	SW	8	3.6			Fog		SW	0	0	Foggy	
Santa Fé, N. M.	23.28	591.3	29.82	757.4	55	12.8	80	Calm	0	0		5k	5s			0	0	Cloudy	
Savannah, Ga.			30.13	765.3	87	30.6	66	SW	2	0.9		5cs	Haze			0.25	6.3	Fair	
Shreveport, La.			29.99	761.7	76.5	24.7	84	W	5	2.2		10ck	0	SW		0.07	1.8	Cloudy	
Smithville, N. C.			30.13	765.3	82	27.8	78	SW	12	5.4		5ck	2ks	W	SW	1.93	49.0	Cloudy	
Springfield, Mass.			30.06	763.5	72.5	22.5	54	N	4	1.8		8ck,sm'	0	SW		0	0	Fair	
St. Louis, Mo.			29.84	757.9	69	20.6	95	SW	8	3.6			10s			2.50	63.5	Cloudy	
St. Marks, Fla.			30.11	764.8	77	25.0	90	SE	6	2.7		5cs	5n		SE	0.90	22.9	Light rain	
St. Paul, Minn.			29.86	758.4	59	15.0	91	N	4	1.8			10n		E	0.16	4.1	Light rain	
St. Paul's Island, Alaska			29.75	755.6	35	1.7	90	E	5	2.2			Fog			0.06	1.5	Foggy	
Thatcher's Island, Mass.			30.02	762.5	67	19.4	79	N	4	1.8		5c	0	NW		0	0	Fair	
Toledo, Ohio			29.78	756.4	65	18.3	94	Calm	0	0			10n		E	1.02	25.9	Light rain	
Tucson, Arizona	27.37	695.2	29.96	761.0	81	27.2		SE				0	0			0	0	Clear	
Tybee Island, Ga.			30.11	764.8	82	27.8	74	SW	4	1.8		2ck	2ks	W	SW	0	0	Fair	
Vicksburg, Miss.			30.03	762.7	79.5	26.4	80	S	6	2.7		8ck	0	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.
Virginia City, M. T.	24.34	618.2	29.82	757.4	50	10.0	71	Calm	0	0		0	0			0	0	Clear	
Washington, D. C.			30.06	763.5	78	25.6	73	E	2	0.9		5ck	5s, sm'e			0	0	Cloudy	
Wilmington, N. C.			30.12	765.0	80	26.7	91	SW	6	2.7		5cs	2ks	W	SW	7.03	178.6	Cloudy	
Wood's Holl, Mass.			30.04	763.0	73	22.8	63	NW	7	3.1		5k	0	SW		0	0	Fair	
Wytheville, Va.	27.77	705.4	29.85	758.2	68	20.0	84	Calm	0	0		2c	0	W		0.20	5.1	Clear	
Yankton, Dakota	28.46	722.9	29.69	754.1	60	15.6	91	W	1	0.4			10s			1.03	26.2	Cloudy	
Yuma, Arizona			29.70	754.4	90	32.2		SW				2c	0			0	0	Fair	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.05	763.3	81	27.2	87	E	4	1.8		5ck	5ks	E		0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.99	761.7	82	27.8	79	E				5k	5ks			0.29	7.4	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.			30.17	766.3	78	25.6	90	Calm	0	0		5c	0			0.06	1.5		James Gall.
St. Georges, Bermudas			30.26	768.6	77.5	25.3	84	SW	8.0	3.6		2fk	2k	SW		0.055	1.40	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	30.12	765.0	68	20.0	79	SW	1.0	0.4		0	0			0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.05	763.3	82	27.8	83	E			2	6k	5k	E		0.070	1.78	Fair	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.8			85.6	29.8		S								0.187	4.75		Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1			63.5	17.5	81	Calm	0	0		7k	3s			0.05	1.3	Cloudy	Thomas Herran.
York Factory, B. A.			29.88	757.7	41.5	5.3	100	E	4	1.8		0	6s		E	0	0		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.			30.07	763.8	77	25.0	90	NE			6					0.25	6.3	Fine	Daniel Smith.
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.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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 added 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the Secretary of the Navy.

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

Note.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

Collated at the Office of the CHIEF SIGNAL OFFICER OF THE ARMY, Washington, D. C.

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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.
1:18 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			30.13	765.2	73.0	22.8	72	N			1		10			0	0	Hidden	Charnot.
Algiers			30.08	764.0	75.2	24.0	85	NE			3		2			0	0	Clear	Peter.
La Calle																			Kunts.
Tunis			30.04	763.0	78.8	31.0	33	E			4		0			0	0	Clear	Jacques.
Sfax			30.11	767.7	82.4	28.0	57	NE			4		1			0	0	Clear	Chauvey.
Saida			30.15	765.9	80.6	27.0	49	NNW			2		1			0	0	Clear	Millot.
Tebessa			30.08	764.0	93.2	34.0		SSW			1		1			0	0	Clear	Colin.
Geriville			30.14	765.6	89.6	32.0	21	S			4		1			0	0	Clear	Buard.
Laghouat			30.11	764.8	100.4	38.0		NW			2		0			0	0	Clear	Guyot.
Biskra			30.10	764.5	91.0	32.8	32	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			29.86	758.5	71.6	22.0	64	Calm			0		10			0.520	13.2		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.77	756.1	74.7	23.7	51	ENE			1		2			0	0		Dr. Wierzbiski.
Eperies			29.76	755.8	72.5	22.5	60	Calm			0		9			0	0		Julius Mikolik.
Gratz	28.62	727.0	29.80	756.8	67.3	19.6	68	SSW			2		10			0.079	2.0		Andreas Rospini.
Hermannstadt	28.37	720.6	29.72	754.8	74.5	23.6	50	WSW			3		5			0.130	3.30	Rainy	Prof. Reissenberger.
Kremsmünster	28.61	726.7	29.93	760.2	60.1	15.6	66	ENE			3		1			0	0		Prof. C. Wagner.
Lemberg			29.71	754.7	66.7	19.3	93	NW			1		8			0.268	6.8		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.91	759.6	75.4	24.1	69	S			1		10c8			0	0		I.R.Hydrographic Office.
Szegedin			29.78	756.5	74.5	23.6	55	SE			3		5			0.057	1.45		Karl Stancel.
Trieste			29.91	759.7	75.2	24.0	75	Calm			0		10			0.031	0.8		Prof. V. Farolfi.
Vienna			29.84	757.9	59.2	15.1	88	W			3		10			0.157	4.0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.02	762.5	61.0	16.6	90	W			1		10		WNW	0.104	2.65	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh; 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.
Aberdeen			29.75	755.6	61.2	16.2		SE	11	4.9			3			0.010	0.25	Blue sky	William Boswell.
Ardrossan																			William McNeil.
Armagh, Observatory			30.02	762.5	65.5	18.6		W	8	3.6									S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.04	763.0	65.2	18.4		SW			1		2					*D. clouds	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	84.0	28.9		NE			2		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.98	761.5	77.0	25.0		SW			2		7					*D. clouds	H. Todd. [H. C.
Cardington			30.02	762.5	74.0	23.9		W			1		10					Overcast	John McLaren.
Carlisle			29.98	761.5	63.9	17.7		W			4		7			0.11	2.8	*D. clouds	T. Bell, for J. Carmell.
Chatham, School M. E			30.02	762.5	74.0	23.3		SW			2		9					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.71	729.2	30.19	766.8	60.6	15.9		W			2		10					Overcast	R. E. Power.
Donaghadee			29.98	761.5	65	18.3		NNW			4		5					*D. clouds	J. Mac Gowan.
Dover			30.03	762.7	64	17.8		WSW			3		7					¾ clouded	J. Costello.
Eccles, (near Manchester.)			30.00	762.0	61.8	16.6		SW	5.0	2.2			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			30.12	765.0	65.2	18.4		WSW			3		10					Overcast	The Staff.
Fort Napier, (Natal)	27.84	707.1	30.08	764.0	61.5	16.4		E			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.06	763.5	83	28.3		N			2		6					*D. clouds	
Galway, Queen's College			29.86	758.4	66	18.9		SW			2		8					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.10	764.5	79.0	26.1		SE			3		0					Blue sky	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			29.94	760.5	59.1	15.1		W			2		8					*D. clouds	Lewis Stuart.
Great Yarmouth			29.92	761.7	65	18.3		ESE			2		4					*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y			30.03	762.7	74.6	23.7		W			1		9					Cloudy	The Staff, for G. B. Airy
Guernsey			30.13	765.3	63.5	17.5		WSW			3		8					Misty	Dr. S. E. Hoskins.
Helston			30.08	764.0	67	19.4		SW			4		10			0	0	*D. clouds	M. P. Moyle.
Holyhead			30.04	763.0	62	16.7		WNW			2		1					Blue sky	John Tinston.
Kew, Observatory			30.03	762.7	72.7	22.6		W	10	4.5			9					Threatening	The Staff.
Kingstown			30.02	762.5	64	17.8		WNW			4		4					*D. clouds	George Mitchell.
Leicester Museum			30.02	762.5	66.4	19.1		W			1		10					Threatening	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)			29.98	761.5	81.4	27.4		NW			1		0					Blue sky	Corp'l F. Fraser, A. M. C.
Nairn			29.76	755.9	60	15.6		SW			2		8					¾ clouded	W. D. Penny.
Nassau, (Bahamas)			30.17	766.3	84.0	28.9		NE			6		7					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.03	762.7	65.6	18.7		NW			3		10k. d		WSW	0	0	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.02	762.5	66.6	19.2		WSW			2-3		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.00	762.0	74	23.3		SW			2		8					Overcast	J. Lucas.
Plymouth			30.09	764 3	66.5	19.2		W			2		10					Gloomy	John Merrifield.
Roche's Point			30.06	763.5	66	18.9		SW			3		5					Fine	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			30.14	765.5	65.5	18.6		W			3		8					¾ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.76	755.9	56.2	13.4		WSW	25	11.2			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey			29.73	755.1	84.6	29.2		NE			2		2					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.00	762.0	68.7	20.4		W			2		6			0	0	Overcast	W. F. Cooper.
Silloth Rectory			30.06	763.5	70.9	21.6	57	SW			1		2			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.00	762.0	61.9	16.6		W			2		5			Blank	Blank		Rev. S. J. Perry.
Stornoway, Lews C. (Hebr.			29.80	756.9	58	14.4		W			6		8					*D. clouds	John Smith.
Stratfield Turgiss			30.04	763.0	72.8	22.7		W			1		8					*D. clouds	Rev. Charles H. Griffith.
Thurso			29.76	755.9	60	15.6		WNW			4		6					*D. clouds	John Trotter.
Truro, Royal Institution			30.10	764.5	70	21.1		NW			6		8					Gloomy	W. Newcombe.
Valencia, Observatory			30.08	764.0	59.5	15.3		NW	12	5.4			2					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man					59	15.0		W			1		0						Thomas Dawson.
Cape Good Hope, Obs'y																			The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.14	765.5	56.0	13.3	80	W			1		7k			0.07	1.8		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.82	757.4	59.0	15.0		W			3		9k			0.15	3.8	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.18	766.6				ESE	14.1	6.3						0.03	0.8		C. Meldrum
Melbourne, Observatory			30.29	769.4	53.9	12.2	80	NNW	17	7.6			10			0.01	0.3	Fine, dull	R. L. J. Ellery.
Monach Lt-house, Hebrides			29.88	758.9	56	13.3		WSW			4	5	5	W		0.2	5.1		J. Youngclause.
North Unst, (Shetland Is.)			29.68	753.9	52	11.1		SW			6	0	2						Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,220 ft., or 270.6 m. *Detached clouds. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; lbs. per square foot for Greenwich and Hobart Town.

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. Fahrenheit.	Temperature. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—6.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Copenhagen			29.93	760.2	69.4	20.8	51	NE			2		4						
Fanöe			29.93	760.3	65.5	18.6	73	WSW			2		10						
Godthaab, (Greenland)			29.59	751.6	39.0	3.9	82	SSW			2		10					Snowing	
Stykkisholm, (Iceland)			29.15	740.5	47.8	8.8	95	W			6		8						
Thorshavn, (Faröe)			29.48	748.8	53.2	11.8	81	WSW			7		10						
Vestervig			29.87	758.6	58.3	14.6	83	SW			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			30.10	764.4	69.8	21	53	NE			2		8nk		NE	0	0	Very cloudy	Normal School.
Amiens			30.03	762.7	73.0	22.8	63	N			3		2		N	0	0	Slightly cl'dy	Normal School.
Avignon			30.02	762.4	78.8	26	42	N			4		0			0	0	Very clear	Normal School.
Bar-sur-Seine			30.08	764.0	72.3	22.4	55	N			2		5		NW	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)			30.13	765.3	66.7	19.3	66	W	2.7	1.2					NW	0	0		Beaumette Observatory.
Beauvais			30.09	764.3	73.4	23	54	WNW			3		8		WNW	0.030	0.75	Very cloudy	Normal School.
Besançon			30.11	764.8	70.2	21.2	67	S			2		8		SW	0.031	0.8	Very cloudy	Normal School.
Bourg en Bresse			30.23	767.7	73.4	23	77	W			1		5kn		S			Cloudy	Normal School.
Bourges			30.47?	773.8?	70.7	21.5	65	S			2		5		S	0	0	Cloudy	Normal School.
Brest			30.11	764.8	65.3	18.5	80	WSW			3		10		WSW	0.010	0.25	Misty	Naval Observatory.
Carcassonne			30.07	763.8	70.7	21.5	43	W			1		2		E	0	0	Slightly cl'dy	Normal School
Caen			30.12	765.0	70.7	21.5	82	W			4		10		E	0	0	Covered	Normal School.
Chartres			30.00	762.1	77.2	25.1	65	NW			4		3		S	0	0		Normal School.
Clermont			30.07	763.8	75.2	24.0	58	NE			2		5		NW	0	0		Puy de Dome Obs'y.
Commercy			30.08	764.0	63.5	17.5	80	WNW			4		10p		WNW	0.008	0.2	Covered	Normal School.
Commune de Greasque*			30.04	763.0	77.4	25.2	35	NW			4		2		NW	0	0		M. Kina.
Grenoble			30.00	762.1	73.6	23.1	56	NNW			4		5ck		SW	0	0	Cloudy	Normal School.
La Roche-sur-Yon			30.13	765.2	69.4	20.8	72	W			2		8		E	0	0	Very cloudy	Normal School.
Le Mans			30.13	765.3	66.4	19.1	75	W			2		8		W	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier			30.12	765.0	70.7	21.5	65	W			1		10			0	0	Covered	Normal School.
Mâcon			30.36	771.1	69.8	21	57	NW			2		5			0	0	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			30.02	762.4	65.5	18.6	75	WNW			1		10		E	0.04	1.	Covered	Normal School.
Nismes			30.03	762.7	80.6	27	38	N			6		0			0	0	Clear	Normal School.
Orleans			30.06	763.5	76.8	24.6	43	SW			1		2		SW	0	0	Slightly cl'dy	Normal School.
Paris, Observatory			30.08	764.1	72.5	22.5	53	W			2		4k		W	0.015	0.38	Cloudy	National Observatory.
Parthenay			30.12	765.1	79.5	26.4	56	NW			2		5		SE	0	0	Cloudy	Normal School.
Privas			30.03	762.7	76.3	24.6		NE			2		2		NE	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.21	767.2	77.0	25.5	47	WSW			3		2		SE	0	0	¼ covered	Naval Observatory.
Rouen			30.11	764.7	67.5	19.7	67	W			2		10		W	0	0	Covered	Normal School.
Saint Lo			29.86	758.4	71.6	22	66	W			1		10		NW	0.20	5.		Normal School.
Tarbes	29.04	737.6	30.09	764.3	69.8	21		S			1		0			0	0	Clear	Normal School
Villefranche			30.13	765.3	75.6	24.2	53	NW			1		5		N	0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.93	760.3	79.5	26.4													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.32	770.1	64.4	18.0	75	ESE	16.8	7.50			2		NW	0	0		—, Falguère.
Montsouris, Paris			30.[illegible]8	764.0	71.6	22.0	54	NW			3		7		NW	0.024	0.6		Montsouris Observ'tory.
Perpignan			30.07	763.6	79.0	26.6	33	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)			30.08	764.1	75.9	24.4	52	NW			1		4			0.020	0.5	Fair	E. Renou.
Toulouse			30.19	766.8	74.8	23.8	46	NW			2		0			0	0		Toulouse Observatory.
Tours																			C. Marquet.
Versailles, (near Paris)			30.10	764.5	73.0	22.8	58	WNW			3		6			0.010	0.25	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Leo, S. J.

NOTE.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. *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			29.89	759.2	64.0	17.8	70	W			4		8	W		0.984	25.0		Prof. T. Hoh.
Berlin			29.93	760.3	67.3	19.6	49	N			1		3			0	0		Prof. Arndt.
Breslau			29.89	759.2	57.9	14.4	100	W			5		10			0.390	9.9	Raining	Dr. P. Neugebauer.
Carlsrune			30.03	762.7	62.2	16.8	91	SW			2		10			0.839	21.3		A. Sens.
Cassel			29.97	761.2	73.0	22.8	55	NNE			2		2	NW		0.447	11.3		Dr. H. Möhl.
Emden			29.92	760.0	73.8	23.2	64	WSW			2		2			0.043	1.1		Prof. Prestel.
Frankfort on the Main			30.04	762.9	63.1	17.3	80	WNW			1		10			0.429	10.9	Raining	Physical Society.
Friedrichshafen			30.07	763.8	61.2	16.2	88	W			7		10			0.512	13.0	Raining	M. Wilhelm.
Hamburg			29.95	760.8	69.6	20.9	58	SE			1		4k			0	0		Captain F. Hegemann.
Kiel			29.95	760.8	67.1	19.5	59	NNE			1		5			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			29.85	758.3	70.0	21.1	62	NW			2		5			0.214	6.2		Prof. E. Luther.
Köslin			29.90	759.4	69.6	20.9		N			6		0			0.094	2.4		H. Müller.
Leipsic			29.95	760.8	68.0	20.0	51	NW			2		7			0.181	4.6		Prof. Bruhns.
Memel			29.90	759.5	64.0	17.8	87	WNW			3		1ks			0	0		Reinbrecht & Skalweit.
Münster			30.04	763.0	71.4	21.9	53	NW			3		0			0	0		Prof. E. Heis.
Neufahrwasser			29.91	759.7	65.7	18.7	72	NNE			2		3			0.004	0.1		A. Lothes.
Posen			29.94	760.4	69.8	21.0	59	N			1		10			0.087	2.2		Dr. Magener.
Strassburg, (in Alsace)			30.08	763.9	63.7	17.6	88	SW			1		10	W		0.031	0.8	Raining	Dr. Schur.
Stuttgart			30.03	762.7	61.5	16.4	83	W			2		10			0.25	6.4		Prof. Schoder.
Thorn			29.85	758.3	75.2	24.0	39	NE			3		3			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.01	762.2	63.3	17.4	79	W			4		10			0.161	4.1		Prof. Flesch.
Wustrow, Naval School			29.98	761.4	64.9	18.3	66	NW			3		4			0	0		E. F. Schütz.

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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			29.80	757.0	75.4	24.1		S										Cloudy	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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	70.7	21.5	62	Calm	0	0			10			0	0		
Padua			29.85	758.3	75.4	24.1	64	SE	6.3	2.8			10	NW		0	0		
Vicenza			29.85	758.3	78.3	25.7	53	SW	1.8	0.8			6	W		0	0		
Verona			29.85	758.1	81.3	27.4	61	E			1		0			0	0		
Bergamo	28.54	724.9	29.80	756.8	77.9	25.5	64	SW			4		3			0	0		
Domodossola	28.87	733.2	29.85	758.2	77.0	25.0	55	S			2		4			0	0		
Milan			29.87	758.6	82.0	27.8	53	NW			1		8	NW		0	0		
Pavia			29.93	760.2	81.7	27.6	41	W			2		1			0	0		
Moncalieri			29.88	758.9	78.6	25.9	49	ESE	1.3	0.6			1			0	0		
Mondovi	28.04	712.1	29.85	758.2	77.9	25.5	40	NW			4		2	W		0	0		
Porto Maurizio			29.98	761.6	76.3	24.6	74	E	1.3	0.6			1			0	0		
Genoa			29.96	760.9	74.3	23.5	66	SW	1.3	0.6			2	E		0	0		
Piacenza			29.88	758.9	78.6	25.9	51	N	9.4	4.2			5			0	0		
Parma			29.86	758.4	81.7	27.6	46	N			2		1			0	0		
Bologna			29.86	758.4	81.5	27.5	44	NW			1		4	E		0	0		
Florence			29.93	760.3	79.7	26.5	47	NW			2		5	W		0	0		
Leghorn			29.95	760.8	77.0	25.0	59	W	4.9	2.2			7			0	0		
Siena	28.74	729.9	29.89	759.3	76.6	24.8	50	S	0	0			4	W		0	0		
Urbino	28.42	721.9	29.92	760.0	77.7	25.4	44	SW			2		9			0	0		
Pesaro																			
Ancona			29.89	759.3	77.4	25.2	60	SE			4		7			0	0		
Grosseto			29.99	761.7	79.9	26.6	55	NNW			4		3	S		0	0		
Rome			29.95	760.8	81.7	27.6	52	SW	4.3	1.9			1			0	0		
Naples, O. U			29.99	761.8	78.8	26.0	56	SW			4		5	NW		0	0		
Lecce			29.93	760.3	76.6	24.8	54	N	7.4	3.3			6			0	0		
Cosenza			29.97	761.3	83.8	28.8	64	SW	3.1	1.4			4			0	0		
Riposto, (Sicily)			29.95	760.8	78.8	26.0	65	NE			2		0			0	0		
Palermo			29.95	760.6	79.3	26.3	50	NE	4.3	1.9			0			0	0		
Caltanissetta	28.02	711.6	29.88	758.9	81.9	27.7	27	NNW			4		0			0	0		
Sub-Series.																			
Naples, S. R			30.00	762.0	77.2	25.1	61	SSW	3.1	1.4			0	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			30.07	763.6	64.8	18.2		WNW			3								
Groningen			29.91	759.6	68.0	20.0		SE			2								
Helder			29.97	761.3	62.8	17.1		W			2								
Utrecht			29.97	761.2	66.7	19.3	81	W			1		8					Very cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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			29.75	755.7	57.6	14.2	90	S	19.7	8.8			10			0.532	13.5	Raining	
Brönö			29.65	753.2	74.5	23.6	41	Calm	0	0			3			0	0		
Christiania			29.83	757.6	73.9	23.3	31	SSW	14.8	6.6			2			0	0		
Tromsö			29.69	754.0	75.9	24.4	32	SE	9	4			0			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 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,)			30.40	772.2	70.0	21.1	87	WSW	7.0	3.12			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.05	763.3	80.9	31.5	25	SSW	8.1	3.61			7	SSW		0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.28	769.2	69.8	21.0	55		1.6	0.72			9			0	0		Capt. D. A. da Cunha.
Lisbon			30.15	765.8	75.6	24.2	52	NNW	12.5	5.6			2			0	0		The Observatory.

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

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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	756.8	70.5	21.4	65	NE	10	7			6						Astronomical Obs.
Wilna			29.86	756.0	77.9	25.5	37	NW	13	6			8						Astronomical Obs.
Dorpat			29.84	758.0	69.8	21.0	41	WNW	4	2			4						Physical Cabinet.
St. Petersburg			29.82	757.4	66.9	19.4	33	NNE	11	5			3						Central Physical Obs.
Kuopio			29.87	758.7	68.4	20.2	64	Calm	0	0			3					Raining	Ch. Forsten.
Kieff			29.74	755.4	70.9	21.6	38	NE	4	2			3						Physical Cabinet.
Nikolaiev			29.83	757.6	76.6	24.8	46	NE	11	5			2						Kurdukof.
Kertch			29.76	755.0	74.5	23.6	67	NE	7	3			6						Lagorio.
Moscow			29.69	754.1	66.0	18.9	43	NNW	4	2			7						Meteorological Obs.
Lugan			29.69	754.1	68.2	20.1	42	NNE	13	6			5						Meteorological Obs.
Archangel			29.74	755.4	67.3	19.6	89	NNE	29	13			9						Ogorodnikof.
Tiflis	28.34	719.5	29.67	753.6	77.5	25.3	41	S	11	5			7						Physical Observatory.
Astrakhan			29.80	757.0	80.6	27.0	37	SW	2	1			5						Sebastianof.
Kasan			29.49	749.1	67.6	19.8	69	W	4	2			8						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.72	729.5	29.61	752.1	77.0	25.0	50	SW	7	3			7						Meteorological Obs.
Nukuss			29.56	750.7	89.8	32.1	35	W	18	8			2						
Kasaly																			Bobrof.
Tashkend	28.00	711.2	29.54	750.2	96.3	35.7	60	Calm	0	0			0						Michelson.
Barnaul			29.69	754.1	71.6	22.0	72	Calm	0	0			9						Meteorological Obs.
Yeniseisk			29.67	753.7	78.1	25.6	53	NW	4	2			0						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.80	758.2	70.9	21.6	65	Calm	0	0			2			Blank	Blank		Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.99	761.8	57.6	14.2	83	SE	4	2			10						
Nikolaievsk, on the Amoor					59.0	15.0	97	E	11	5			1						

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 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			30.09	764.2	75.4	24.1	55	SW	6.0	2.67		0	8			Inap.	Inap.	Almost cov'd	Royal Observatory.
San Fernando			30.12	765.0	80.8	27.1	49	SSE	9.2	4.1		0	0						The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			29.91	759.8	71.2	21.8	58	SW			2		0			0	0		
Umea			29.90	759.5	72.9	22.7	44	S			2		0			0	0		
Hernosand			29.82	757.5	72.7	22.6	45	ESE			2		0			0	0		
Stockholm			29.81	757.1	81.0	27.2	40	S			2		6			0	0		
Wisby			29.88	758.9	62.2	16.8	92	N			2		5			0	0		
Sub-Series.																			
Upsala			29.81	757.1	78.4	25.8	42	S	8.9	4.0			2		SW	0	0		Dr. Hildebrandsson.

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

SWISS SERIES.

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

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	28.70	728.9	30.08	764.1	68.0	20.0	60	NNE			3		9			0	0	Covered	The Observatory.
Zurich	28.49	723.6	30.11	764.7	60.4	15.8	86	W			1		10			0.685	17.4	Raining	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +1.7 mm.; Thermometer, —2.1 cent.; Relative Humidity, +6 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

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			29.78	756.4	76.6	24.8	49	NNE	17	7.5			4		ESE	0	0		
Fao, (Persian Gulf)			29.72	755.0	100.4	38.0		NW			1		0						
Salonica			29.85	758.3	79.2	26.2		W			2		10					Raining	
Valona			29.91	759.6	79.0	26.1		NW			2		2					Stormy	
Varna			29.80	756.8	69.8	21.0		NW			2		10					Thunder-storm	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.71	754.6	85.6	29.8	62	SW			4		7ks		SW	0.08	2.0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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			29.92	760.0	65	18.3		SW	1	0.4			10s		SW	0.09	2.3	Cloudy	W. R. Bigg.
*Chatham, N. B.			29.90	759.4	60	15.6	91	SW	4	1.8		5k	5ks	W	W	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			29.97	761.2	61	16.1	78	S	8	3.6			8s			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.84	757.9	64.7	18.2	93	NE			1		10n			0.455	11.56	Rainy	James Smith, M. A.
Dalhousie, N. B.																			H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			30.06	763.5	60.0	15.6	89	SE	2	0.9			10n			Inap.	Inap.	Raining	Prof. Harrison.
*Fort Garry, Manitoba			29.54	750.3	61	16.1	82	SW	16	7.2		2k	2s	SW	SW	0	0	Fair	James Stewart.
Goderich, Ontario			29.80	756.9	66.3	19.1	96	Calm			0		10n					Rainy	H. J. Strang, M. A.
Granton, Ontario	28.75	730.2	29.80	756.9	67	19.4		SE			1		10n			0.55	14.0	Cloudy	James Grant.
*Halifax, N. S.			29.99	761.7	56	13.3	95	SE	1	0.4			Fog			0	0	Foggy	F. Allison, M. A.
*Kingston, Ontario			29.91	759.7	65	18.3	98	Calm	0	0			10s		NW	0.04	1.0	Cloudy	S. Woods, M. A.
Little Glace Bay, N. S.			29.98	761.5	61.5	16.4	80	E	2	0.9		8k	0	SW		0	0	Cloudy	C. H. Rigby.
*Montreal, Quebec			29.84	757.9	65	18.3	94	SW	5	2.2			10n		W	0.29	7.4	Light rain	C. H. McLeod, C. E.
*Ottawa, Ontario			29.87	758.7	64	17.8	84	NW	1	0.4			10n		N	0.20	5.1	Light rain	J. B. Haney.
*Parry Sound, Ontario			29.86	758.4	60	15.6	97	E	4	1.8			10n		E	0.18	4.6	Light rain	Rev. R. Mosley.
*Port Dover, Ontario			29.86	758.4	65	18.3	100	S	4	1.8			Fog		S	0.83	21.1	Foggy	H. Morgan.
Port Hastings, N. S.			29.99	761.7	60.0	15.6		Calm	0	0						0.28	7.1	Fine	Peter Grant.
*Port Stanley, Ontario			29.85	758.2	69	20.6	97	E	4	1.8			8ks		W	0.67	17.0	Fair	M. Payne.
*Quebec, Quebec			29.86	758.4	63	17.2	100	Calm	0	0			10n			0.14	3.6	Heavy rain	Capt. Ashe, R. N.
St. John, N. B.			29.97	761.2	56	13.3	97	S	3	1.3			10ks			0	0	Cloudy	G. Murdoch, C. E.
*Saugeen, Ontario			29.81	757.2	61	16.1	91	E	2	0.9			10ks		E	0.18	4.6	Heavy rain	R. Stewart.
Stayner, Ontario																Inap.	Inap.		R. J. Cole.
Stratford, Ontario	28.57	725.7	29.79	756.7	68.6	20.3	95	SW	10	4.5			10n			0.458	11.63	Cloudy	C. J. Macgregor, M. A.
*Sydney, C. B.			30.01	762.2	65	18.3	60	S	2	0.9		8ck	0	W		0	0	Fair	T. C. Hill.
*Toronto, Ontario			29.86	758.4	65	18.3	97	SE	5	2.2			10n			0.06	1.5	Foggy	Magnetic Observatory.
Woodstock, Ontario			29.82	757.4	71.4	21.9	93	S	10	4.5			10s			0.02	0.5	Cloudy	J. Montgomery
Sub-Series.																			
St. John's, Newfoundland			30.08	764.0	53	11.7		SE					10n			0.30	7.6	Cloudy	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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.			29.87	758.7	80	26.7	70	SE	2	0.9		10k	0	S		0	0	Cloudy	
Alpena, Mich.			29.81	757.2	57	13.9	87	E	5	2.2			10n			0.23	5.8	Light rain	
Atlantic City, N. J.			30.00	762.0	74	23.3	90	SW	8	3.6		2cs	Haze	W		0	0	Fair	
Augusta, Ga.			30.14	765.5	81	27.2	74	S	2	0.9		8k	0	SE		0.02	0.5	Cloudy	
Baltimore, Md.			30.01	762.2	81	27.2	74	SW	4	1.8		5c	Sm'e			Inap.	Inap.	Fair	
Barnegat, N. J.			29.99	761.7	78	25.6	77	SW	11	4.9		5k	0	W		0	0	Fair	
Benton, Montana	27.16	689.8	29.96	761.0	65	18.3	57	SW	1	0.4		0	0			0	0	Clear	
Bismarck, Dakota	27.80	706.1	29.34	745.2	64	17.8	57	S	8	3.6		1k	Haze	S		0	0	Fair	
Boston, Mass.			29.91	759.7	76	24.4	90	SW	12	5.4		10s	Haze	SW		0	0	Threatening	
Breckenridge, Minn.			29.68	753.9	53	11.7	59	SE	8	3.6		0	0			0	0	Clear	
Buffalo, N. Y.			29.83	757.7	71.5	21.9	92	SW	4	1.8			10ks		SW	0.89	22.6	Cloudy	
Burlington, Vt.			29.82	757.4	70	21.1	70	W	5	2.2			10s		W	0.11	2.8	Cloudy	
Cairo, Ill.			29.93	760.2	73	22.8	85	SW	12	5.4			10n		W	0.30	7.6	Light rain	
Cape Hatteras, N. C.			30.09	764.3	82	27.8	83	SW	16	7.2		2ck	Haze			0	0	Fair	
Cape Henry, Va.			30.06	763.5	81	27.2	78	SW	16	7.2		5c	0	W		0.02	0.5	Fair	
Cape Lookout, N. C.			30.17	766.3	82	27.8	83	SW	20	8.9		2ck	5n	SW	SW	0.47	11.9	Light rain	
Cape May, N. J.			30.01	762.2	75	23.9	85	SW	6	2.7		2c	0	W		0	0	Fair	
Charleston, S. C.			30.17	766.3	85	29.4	71	SW	9	4.0		0	2ks		SW	0	0	Fair	
Cheyenne, Wyoming	23.96	608.6	29.90	759.4	66	18.9	18	W	20	8.9		0	0			0	0	Clear	
Chicago, Ill.			29.70	754.4	70	21.1	90	SW	7	3.1			10s			0.12	3.0	Cloudy	
Cincinnati, Ohio			29.84	757.9	81	27.2	66	SW	8	3.6		5ck	0	SW		0.03	0.8	Fair	
Cleveland, Ohio			29.85	758.2	76.4	24.7	73	SE	8	3.6		5k	2ks	SW	SW	0.27	6.9	Fair	
Colorado Springs, Col.	24.09	611.9	29.96	761.0	52	11.1	59	N	3	1.3		0	0			0	0	Clear	
Corsicana, Tex.			29.97	761.2	73	22.8	100	S	1	0.4			10s			1.36	34.5	Threatening	
Davenport, Iowa			29.60	754.1	68	20.0	84	S	12	5.4		5cs	5s		S	0.31	7.9	Fair	
Denison, Tex.			29.99	761.7	77	25.0	81	SW	8	3.6		1c	1s	S		0.82	20.8	Clear	
Denver, Col.	24.74	628.4	29.96	761.0	57	13.9	63	S	9	4.0		0	0			0	0	Clear	
Detroit, Mich.			29.77	756.1	72	22.2	90	SW	9	4.0		5ck	0	W		0.20	5.1	Fair	
Dodge City, Kan.	27.31	693.7	29.51	749.5	63	17.2	83	S	2	0.9		0	0			0	0	Clear	
Dubuque, Iowa			29.65	753.1	67	19.4	90	Calm	0	0			10s			0.90	22.9	Cloudy	
Duluth, Minn.			29.78	756.4	49	9.4	77	Calm	0	0			10s			0	0	Cloudy	
Eastport, Me.			29.93	760.2	52	11.1	93	Calm	0	0			Fog			0.06	1.5	Foggy	
Erie, Pa.			29.84	757.9	76	24.4	81	S	10	4.5		4ck	4ks	SW	SW	0.48	12.2	Fair	
Escanaba, Mich.			29.78	756.4	60	15.6	76	NE	4	1.8			10s		NE	0	0	Cloudy	
Fort Gibson, Indian Ter.			29.90	759.4	73	22.8	71	SW	2	0.9		0	0			1.23	31.2	Clear	
Ft. St. Michael, Alaska			29.66	753.4	51.5	10.8	100	NE			2		10n			Inap.	Inap.	Light rain	
Fort Sill, Indian T.	28.76	730.5	29.82	757.4	71	21.7	75	S	4	1.8		0	0			0.05	1.3	Clear	
Fort Sully, Dakota	27.98	710.7	29.57	751.1	59	15.0	82	S	16	7.2		0	0			0	0	Clear	
Galveston, Tex.			30.00	762.0	83	28.3	74	SE	3	1.3		1c	8k	N	S	0.01	0.3	Cloudy	
Grand Haven, Mich.			29.71	754.6	67	19.4	92	SW	12	5.4			10s		SW	0.89	22.6	Cloudy	
Indianapolis, Ind.			29.82	757.4	75	23.9	81	S	10	4.5		2cs	8s		SW	0.31	7.9	Cloudy	
Indianola, Tex.			29.98	761.5	79	26.1	82	SE	4	1.8		5ck	5s	S		0.35	8.9	Cloudy	
Jacksonville, Fla.			30.16	766.1	84	28.9	70	SE	10	4.5		0	0			0	0	Clear	
Keokuk, Iowa			29.67	753.6	68	20.0	84	SW	9	4.0		5k	0	SW		0.38	9.7	Fair	
Key West, Fla.			30.10	764.5	81.5	27.5	78	SE	12	5.4		2k	2ks	SE		0.02	0.5	Fair	
Kittyhawk, N. C.			30.11	764.8	81	27.2	78	W	17	7.6		5k	0	W		0.58	14.7	Fair	
Knoxville, Tenn.			30.04	763.0	73	22.8	95	SW	1	0.4		2c	0	SW		0.64	16.3	Fair	
La Crosse, Wis.			29.67	753.6	62	16.7	88	NE	7	3.1			10s		NE	0	0	Threatening	
Leavenworth, Kan.			29.71	754.6	64	17.8	88	SW	10	4.5			10s		W	0.09	2.3	Cloudy	
Lexington, Ky.	28.87	733.3	29.91	759.7	79	26.1	77	S	16	7.2		2c	0	SW		0	0	Fair	
Long Branch, N. J.			29.96	761.0	84	28.9	75	SW	12	5.4		5c	0	SW		0	0	Fair	
Louisville, Ky.			29.88	758.9	81	27.2	74	S	5	2.2		0	2ks		S	0	0	Clear	
Lynchburg, Va.			30.02	762.5	81	27.2	70	SW	4	1.8		5ck	0	SW		0	0	Fair	
Malone, N. Y.			29.82	757.4	64	17.8	100	W	6	2.7			10n		W	0.50	12.7	Light rain	
Manhattan, Kan.	28.65	727.7	29.75	755.6	63	17.2	83	S	2	0.9		0	0			0.10	2.5	Clear	
Marquette, Mich.			29.82	757.4	54	12.2	56	E	2	0.9		5cs	0	SW		0.05	1.3	Fair	
Memphis, Tenn.			29.98	761.5	78	25.6	78	SW	6	2.7			10ks		SW	0	0	Cloudy	
Milwaukee, Wis.			29.72	754.9	59	15.0	100	N	2	0.9			Fog			0.80	20.3	Dense fog	
Mobile, Ala.			30.07	763.8	85	29.4	75	S	6	2.7		5k	10	S		0	0	Fair	
Montgomery, Ala.			30.11	764.8	80	26.7	86	S	4	1.8		2ck	0	S		Inap.	Inap.	Clear	
Morgantown, W. Va.			29.94	760.5	78	25.6	77	S	11	4.9		0	0			0.48	12.2	Clear	
Mt. Washington, N. H.	28.95	735.3	30.15	765.8	58	14.4	100	NW	54	24.1			Fog			1.50	38.1	Foggy	
Nashville, Tenn.	23.79	604.3	29.95	760.7	81	27.2	74	S	7	3.1		10k	0	S		0	0	Cloudy	
New Haven, Conn.			29.93	760.2	79	26.1	82	S	5	2.2			10s, fog			0	0	Cloudy	
New London, Conn.			29.97	761.2	74	23.3	90	SW	7	3.1			10s			0	0	Cloudy	
New Orleans, La.			30.05	763.3	82	27.8	76	S	8	3.6		0	0			0.43	10.9	Clear	
Newport, R. I.			29.96	761.0	71	21.7	100	S	8	3.6			Fog			0	0	Foggy	
New York, N. Y.			29.96	761.0	77	25.0	82	SW	8	3.6		8cs	0			0	0	Fair	
Norfolk, Va.			30.00	762.0	83	28.3	67	SW	13	5.8		5ck	2ks	SW	SW	0	0	Fair	
North Platte, Neb.			30.17	766.3	40	4.4	63	NW	16	7.2		0	0			0	0	Clear	
Omaha, Neb.	26.94	684.3	29.87	758.9	60	15.6	70	Calm	0	0			Fog		N	0.28	7.1	Foggy	
Oswego, N. Y.	28.65	727.7	29.68	753.9	61	16.1	100	N	12	5.4			10s		W	0.87	22.1	Threatening	
Pembina, Dakota			29.80	756.2	68.5	20.3	87	W	4	1.8		0	0			0	0	Clear	
Philadelphia, Penn.			29.52	749.8	62	16.7	71	S	8	3.6		5ck	Fog			0	0	Fair	
Pike's Peak, Colorado			30.08	764.0	83	28.3	62	W	8	3.6		0	0			0	0	Clear	
Pittsburgh, Penn.	17.96	456.2	30.17	766.3	40	4.4	63	NW	16	7.2		1c	5ks	NW	W	0.41	10.4	Fair	
Port Huron, Mich.			29.92	760.0	77	25.0	82	W	5	2.2			10s		SW	0.29	7.4	Cloudy	
Portland, Me.			29.75	755.6	70	21.1	95	S	8	3.6			10s	W		0.17	4.3	Cloudy	
Portland, Oregon			29.88	758.9	69	20.6	79	W	5	2.2		5k	5s			0	0	Clear	
Punta Rassa, Fla.			30.02	762.5	55	12.8	74	N	3	1.3		0	0			0.01	0.3	Hazy	
Rochester, N. Y.			30.12	765.0	81.5	27.5	82	E	10	4.5		Haze	2ks		SE	0.90	22.9	Cloudy, fog	
Salt Lake City, Utah			29.86	758.4	68	20.0	94	NW	1	0.4			10s		NW	0	0	Clear	
Sandy Hook, N. J.	25.58	649.7	29.91	759.7	62	16.7	36	SE	1	0.4		0	0			0	0	Fair	
San Diego, Cal.			29.95	760.7	84	28.9	75	SW	10	4.5		5cs	Haze	SW		0	0	Cloudy	
San Francisco, Cal.			29.83	757.7	65	18.3	90	NW	4	1.8			10s		NW	0	0	Foggy	
Santa Fé, N. M.			29.79	756.7	56	13.3	87	W	8	3.6			Fog		W	0	0	Clear	
Savannah, Ga.	23.33	592.6	29.87	758.7	55	12.8	74	NE	8	3.6		0	0			0	0	Clear	
Shreveport, La.			30.17	766.3	89	31.7	66	SW	4	1.8		2ks	0	E		0	0	Cloudy	
Smithville, N. C.			30.04	763.0	76.5	24.7	88	S	2	0.9		10ck	0	W		0.02	0.5	Cloudy	
Springfield, Mass.			30.18	766.6	80	26.7	78	SW	11	4.9		0	8ks		SW	0	0	Cloudy	
St. Louis, Mo.			29.90	759.4	80.5	26.9	78	S	8	3.6		2ck	5ks		SW	1.16	29.5	Cloudy	
St. Marks, Fla.			29.81	757.2	70	21.1	79	S	12	5.4			1s		SE	0.05	1.3	Fair	
St. Paul, Minn.			30.14	765.5	80	26.7	82	E	4	1.8		2c	2ks			0.24	6.1	Fair	
St. Paul's Island, Alaska			29.68	753.9	62	16.7	83	N	1	0.4		8c,cs	0	S		Inap.	Inap.	Fair	
Thatcher's Island, Mass.			29.91	759.7	40	4.4	82	N	6	2.7		10ck	0	NE		0	0	Cloudy	
Toledo, Ohio			29.91	759.7	69	20.6	90	SW	10	4.5		2c	8s	W	W	0.21	6.1	Clear	
Tucson, Arizona			29.76	755.9	77	25.0	77	SW	16	7.2		2c	0	SW		0	0	Clear	
Tybee Island, Ga.	27.43	696.7	30.02	762.5	83	28.3		E				2c	0	S		0	0	Fair	
Vicksburg, Miss.			30.15	765.8	84	28.9	79	S	6	2.7		5c	2k	SW	S	Inap.	Inap.	Fair	
			30.05	763.3	81	27.2	78	S	4	1.8		2cs	2k	SW					

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.	24.24	615.7	29.72	754.9	56	13.3	51	Calm	0	0		0	0			0	0	Clear	
Washington, D. C.			30.01	762.2	83	28.3	73	SW	8	3 6		1c	2s	W	SW	Inap.	Inap.	Fair	
Wilmington, N. C			30.17	766.3	81	27.2	78	SW	11	4.9		2cs	2ks		SW	0.12	3.0	Fair	
Wood's Holl, Mass.			29.97	761.2	72	22.2	90	SW	12	5.4			10s		SW	0	0	Cloudy	
Wytheville, Va.	27.78	705.6	29.86	758.4	70	21.7	90	Calm	0	0			10s		W	0.19	4.8	Cloudy	
Yankton, Dakota	28.53	724.6	29.78	756.4	58	14.4	87	Calm	0	0		0	0			0.09	2.3	Clear	
Yuma, Arizona			29.72	754.9	85	29.4		E				0	Haze			0	0	Clear	
Sub-Series.																			
Pointe-a-Pitre, G'd'loupe, do			30.04	763.0	81	27.2	82	E				10pc	5ks			0.16	4.1	Cloudy	L. V. Bigard.
Kingston, Jamaica, W. I.			30.16	766.1	80	26.7	74	Calm	0	0		10c	8b			0	0		James Hall.
St. Georges, Bermudas			30.30	769.6	78.5	25.8	86	SSW	5	2.2		5k	0	SSW		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	29.98	761.5	70	21.1	90	SE	1	0.4		2c	8k	SE		0	0	Dull	C. Partridge.
Paramaribo, D. Guiana, S.A			30.03	762.7	79	26.1	87	E			2	5c	4c?			0.120	3.05	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.7			85.6	29.8		SW								0.059	1.50		Dr. H. Groot.
Medellin, Colombia, S. A.	25.18	639.6			63.5	17.5	83	Calm	0	0		2ck	1s			1.13	28.7	Fair	Thomas Herran.
York Factory, B. A.			29.39	746.5	58	14.4	73	Calm	0	0		4k	3s	S		0	0		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.			30.05	763.3	77	25.0	90	NE			4					0.02	0.5	Clear	Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Leipzig. N, 49° 49′. W, 6° 24′.	W		30.03	764.3	62.4	16.9		W			2		Fog			Long swells	W.	Misty	Capt. R. Hoffmann.

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 2,832 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.; Morgantown, 1,027.9 ft., or 313. 3 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, 4,202.2 ft., or 1,299.2 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 698.4 m; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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.
1:18 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			30.11	764.9	77.9	25.5	60	NNW			1		0			0	0	Clear	Charnot.
Algiers			30.11	764.9	77.0	25.0	71	N			1		4			0	0	Fair	Peter.
La Calle																			Kunts.
Tunis			30.05	763.3	89.8	32.1	23	N			3		3			0	0	Fair	Jacques.
Stax			30.10	764.6	84.2	29.0	46	E			2		1			0	0	Clear	Chauvey.
Saida			30.17	766.2	81.5	27.5	30	NNW			1		1			0	0	Clear	Millot.
Tebessa			30.07	763.6	89.6	32.0		W			1		0			0	0	Clear	Colin.
Geriville			30.17	766.4	84.7	29.3	26	NNW			1		1			0	0	Clear	Buard.
Laghouat			30.05	763.4	95.0	35.0		NW			3		0			0	0	Clear	Guyot.
Biskra			30.07	764.7	93.2	34.0	27	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			30.00	762.0	63.3	17.4	77	NE			3		10			0.087	2.2	Raining	Prof. Ivan Stosir.
Cracow, I. R. Observatory			29.95	760.8	72.7	22.6	51	W			2		4			0.435	11.05		Dr. Wierzbiski.
Eperies			29.88	758.9	73.4	23.0	65	Calm			0		6			0.075	1.90		Julius Mikolik.
Gratz	28.72	729.6	29.89	759.3	68.9	20.5	59	NW			6		2			0.020	0.5		Andreas Rospini.
Hermannstadt	28.43	722.0	29.79	756.7	67.8	19.9	70	S			1		0			0.469	11.90		Prof. Reissenberger.
Kremsmünster	28.57	725.6	29.85	758.3	70.2	21.2	44	WNW			2		0			0	0		Prof. C. Wagner.
Lemberg			29.79	756.7	72.3	22.4	93	NE			1		8			0.016	0.4		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.99	761.8	74.5	23.6	67	WNW			2		7ks			0.064	1.62		I.R.Hydrographic Office.
Szegedin			29.89	759.3	77.4	25.2	62	SW			1		8			0.205	5.20	Raining	Karl Stancel.
Trieste			30.00	762.0	70.2	26.2	59	WSW			1		2			0	0		Prof. V. Farolfi.
Vienna			30.00	761.0	67.1	19.5	69	W			4		5			0.126	3.2		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.12	765.0	66.2	19.0	83	W			0		10		NNW	0.581	14.75	Covered	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			30.02	762.5	56.7	13.7		SSE	17	7.6			9			0	0	*D. clouds	William Boswell.
Ardrossan			30.00	762.0	64	17.8		SSE			2		4					*D. clouds	William McNeil.
Armagh, Observatory			29.96	761.0	69.0	20.6		SSW	13	5.8			9					Squally	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.94	760.5	70.9	21.1		SSW			1–3		9					*D. clouds	J. Dreyer.
Bradford			30.05	763.3	71.8	22.1		S			0		6			0.05	1.3	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.11	764.8	84.0	28.9		NE			2		7					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.11	764.8	75.5	24 2		SW			1		10					Overcast	H. Todd. [H. C.
Cardington			30.13	765.3	78.0	25.6		W			1		7					Overcast	John McLaren.
Carlisle			29.98	761.5	71.1	21.7		S			3		9			0	0	*D. clouds	T. Bell, for J. Carmell.
Chatham, School M. E			30.13	765.3	73.2	22.9		NE			1		7					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.71	729.2	30.20	767.1	61.8	16.6		W			1		10					Foggy	R. E. Power.
Donaghadee			29.95	760.7	65	18.3		S			4		8					*D. clouds	J. Mac Gowan.
Dover			30.13	765.3	66	18.9		SW			1		4					½ clouded	J. Costello.
Eccles, (near Manchester.)			30.07	763.8	71.6	22.0		SW	8.0	3.6			3					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.16	766.1	66.6	19.2		WSW			4		10					Overcast	The Staff.
Fort Napier, (Natal)	27.69	703.3	29.92	760.0	66.1	18.9		E			1		1					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.05	763.3	80	26.7		N			3		7					*D. clouds	
Galway, Queen's College			29.86	758.4	62	16.7		SW			0		10					Misty	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.09	764.3	76.5	24.7		SSW			0		0					Blue sky	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			29.96	761.0	65.9	18.8		S			4		10					Threatening	Lewis Stuart.
Great Yarmouth			30.14	765.5	61	16.1		NE			1		8					Foggy	G. T. Watson.
Greenwich, Royal Obs'y			30.12	765.0	73.7	23.2		WNW			1		8					Cloudy	The Staff, for G. B. Airy
Guernsey			30.19	766.8	62.5	16.9		WSW			1		8					Drizzling	Dr. S. E. Hoskins.
Helston			30.12	765.0	67	19.4		SW			4		8			0	0	Misty	M. P. Moyle.
Holyhead			30.03	762.7	64	17.8		SSW			4		10					Misty	John Tilston.
Kew, Observatory			30.12	765.0	72.8	22.7		SSW	8	3.6			10					Threatening	The Staff.
Kingstown			30.00	762.0	66	18.9		SSE			4		4					*D. clouds	George Mitchell.
Leicester Museum			30.12	765.0	68.0	20.0		SW			1		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)			29.94	760.5	82.4	28.0		NW			1		0					Blue sky	Corp'l F. Fraser, A. M. C.
Nairn			29.92	760.0	63	17.2		SSW			2		8					¾ clouded	W. D. Penny.
Nassau, (Bahamas)			30.20	767.1	80.2	26.8		NE			6		10					Raining	Surg. Maj. Henry.
Nottingham, Observatory			30.11	764.8	75.0	23.9		S			3		10k		S	0	0	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.10	764.5	66.0	18.9		SE			2		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.09	764.3	72	22.2		S			1		10					Gloomy	J. Lucas.
Plymouth			30.15	765.8	65.5	18.6		S			2		10					Overcast	John Merrifield.
Roche's Point			30.03	762.7	65	18.3		SW			3		5					Foggy	W. Kennedy.
Saint Ann's Head			30.10	764.5	63	17.2		S			2		5					*D. clouds	John C. Walker.
Saint Helier, Jersey			30.21	767.3	67.8	19.9		W			3		8					¾ clouded	A. P. Amy.
Sandwick Manse, Orkneys)			29.96	761.0	57.4	14.1		SSE	24	10.7			10					Threatening	Rev. C. Clouston, LL. D.
Scarborough			30.11	764.8	58.5	14.7		SSE			3		5					Blue sky	F. Shaw.
Scutari Cemetery (Turkey)			29.76	755.9	83.4	28.6		NE			2		5					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.08	764.0	72.7	22.6		SW			2		8			0	0	Overcast	W. F. Cooper.
Silloth Rectory			30.02	762.5	69.1	20.6	57	SW			1		6			0.132	3.35	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.06	763.5	68.6	20.3		S			2		9						Rev. S. J. Perry.
Stornoway, Lews C. (Hebr.			29.89	759.2	57	13.9		SSW			3		10					Overcast	John Smith.
Strathfield Turgiss			30.11	764.8	69.0	20.6		W			1		9					*D. clouds	Rev. Charles H. Griffith.
Thurso			29.93	760.2	60	15.6		SSW			2		7					*D. clouds	John Trotter.
Truro, Royal Institution			30.14	765.5	68	20.0		SW			4		8					Gloomy	W. Newcombe.
Valencia, Observatory			29.98	761.5	61.2	16.2		S	21	9.4			10					Misty	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					53	11.7		W			3		10						Thomas Dawson.
Cape Good Hope, Obs'y			30.04	763.0	57.4	14.1	81	NW	21	9.4		5	5						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.94	760.5	59.0	15.0	82	NE			2		8k			0.01	0.3	Hazy l't rain	Francis Abbott, F.R.A.S.
Leith, Restaurig Park			30.02	762.5	61.2	16.2		NE			2		10k			0	0	Cloudy	Andrew Gibb.
Mauritius, Observatory			30.19	766.8				ESE	16.5	7.4						0.01	0.3		C. Meldrum
Melbourne, Observatory			30.19	766.8	52.6	11.4	70	N	14	6.3			10			0	0	Fine, dull	R. L. J. Ellery.
Monach Lt-house, Hebrides			29.79	756.7	55	12.8		SSW			6		10			0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.90	759.4	53	11.7		SW			4		10			Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,220 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	66.0	18.9	48	NNW			6		4						
Fanöe			30.10	764.5	63.0	17.2	68	WNW			6		5						
Godthaab, Greenland			29.64	752.8	41.0	5.0	74	NE			4		0						
Stykkisholm, (Iceland)			29.10	746.7	53.4	11.9	72	S			4		2					Raining	
Thorshavn, (Faröe)			29.84	757.8	53.2	11.8	76	SW			4		10						
Vestervig			30.04	762.9	61.5	16.4	66	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			30.13	765.2	69.8	21	75	W			1		8s cn		W	0	0	Very cloudy	Normal School.
Amiens			30.09	764.2	79.5	26.4	69	NW			3		2		NW	0	0	Slightly cl'dy	Normal School.
Avignon			29.99	761.7	73.8	23.2	63	N			1		10			Inap.	Inap.	Light rain	Normal School.
Bar-sur-Seine			30.17	766.4	70.5	21.4	70	N			2		8		N	0.091	2.3	Very cloudy	C. Saillard.
Beaumette, (near Angers)			30.17	766.2	73.5	23.2	52	NW	4.3	1.9			10		W	0	0	Covered	Beaumette Observatory.
Beauvais			30.15	765.8	77.0	25	62	W			3		8			0.102	2.6	Very cloudy	Normal School.
Besançon			30.10	764.5	75.9	24.4	55	NNE			2		2		N	0.031	0.8	Slightly cl'dy	Normal School.
Bourg en Bresse			30.19	766.9	74.3	23.5	67	N			3		1ck		S			Partly clear.	Normal School.
Bourges			30.44?	773.1?	70.7	21.5	81	NNW			2		5		S	0	0	Cloudy	Normal School.
Brest			30.15	765.7	70.0	21.1	68	WSW			2		8k		WSW	0	0		Naval Observatory.
Carcassonne			30.10	764.5	71.6	22	42	NNW			3		0			0	0	Clear	Normal School
Caen			30.17	766.3	71.6	22	84	WSW			2		..k		1 SE	0	0		Normal School.
Chartres			30.08	764.1	79.3	26.3	62	NW			4		10			0	0	Covered	Normal School.
Clermont			30.10	764.6	68.4	20.2	81	N			2		10		N	0	0	Misty	Puy de Dome Obs'y.
Commercy			30.14	765.6	68.4	20.2	74	NW			4		8kn		NW	0.16	4.	Very cloudy	Normal School.
Commune de Greasque*			30.04	763.0	78.4	25.8	49	NE			1		8		NE	0.024	0.6		M. Kina.
Grenoble			30.02	762.5	74.1	23.4	63	NNW			4		10n		N	0	0	Covered	Normal School.
La Roche-sur-Yon			30.19	766.8	74.8	23.8	68	WNW			2		2		E	0	0	Slightly cl'dy	Normal School.
Le Mans			30.14	765.6	72.5	22.5	72	WNW			2		2		W	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier			30.08	764.0	75.4	24.1	53	N			6		10			0	0	Covered	Normal School.
Mâcon			30.31	769.9	73.4	23	74	N			2		10		NE	0	0	Covered	Normal School.
Metz																			M. Schuster.
Mirecourt			30.04	763.0	71.2	21.8	66	N			1		5		SE	0.12	3.	Cloudy	Normal School.
Nismes			29.98	761.6	77.7	25.4	60	N			6		10		NE	0	0	Covered	Normal School.
Orleans			30.19	766.9	77.0	25	45	NW			1		2		NW	0	0	Slightly cl'dy	Normal School.
Paris, Observatory			30.13	765.2	70.9	21.6	69	NW			2		8k,cs		NW	0	0	Very cloudy	National Observatory.
Parthenay			30.12	765.0	82.4	28	57	NW			2		8		E	0	0	Very cloudy	Normal School.
Privas			29.98	761.4	73.8	23.2		SW			2		10		SW	0	0	Covered	Normal School.
Rochefort, Observatory			30.21	767.4	79.0	26.1	53	W			3		8		E	0	0	¾ Covered	Naval Observatory.
Rouen			30.17	766.2	70.3	21.3	72	WSW			2		10		S	0	0	Covered	Normal School.
Saint Lo			29.90	759.5	76.6	24.8	69	NW			2		5		W	0	0		Normal School.
Tarbes	29.98	738.6	30.14	765.5	68.0	20		WNW			4		5		E	0	0	Cloudy	Normal School
Villefranche			30.11	764.8	79.9	26.6	61	WNW			3		5		N	0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.97	761.1	81.0	27.2													L'Abbé Marchésl.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.32	770.1	63.0	17.2	65	NNW	22.4	10.00			1		W	0	0		—. Falguère.
Montsouris, Paris			30.14	765.6	73.0	22.8	64	NNW			2		9		NW	0	0		Montsouris Obsery'tory.
Perpignan			30.07	763.6	81.0	27.2	40	NW	22.4	10.00			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)			30.15	765.8	72.7	22.6	69	NW			1		9			0	0	Covered	E. Renou.
Toulouse			30.21	767.3	73.6	23.1	57	NW			3		3			0	0		Toulouse Observatory.
Tours																			C. Marquet.
Versailles, (near Paris)			30.16	766.0	73.0	22.8	63	NW			1		8			0	0	Almost cov'd	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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			30.05	763.3	70.3	21.3	58	W			3		4	W		0	0		Prof. T. Hoh.
Berlin			30.07	763.6	67.5	19.7	77	W			3		9			0.012	0.3		Prof. Arndt.
Breslau			30.09	764.2	71.8	22.1	45	NW			6		6			0	0		Dr. P. Neugebauer.
Carlsruhe			30.10	764.6	72.0	22.2	66	NW			1		4			0	0		A. Senz.
Cassel			30.12	765.0	71.8	22.1	70	NNW			5		9	NW		0.020	0.5		Dr. H. Möhl.
Emden			30.10	764.4	65.7	18.7	45	N			3		0			0	0		Prof. Prestel.
Frankfort on the Main			30.19	766.7	69.4	20.8	71	WSW			1		10			0.039	1.0	Raining	Physical Society.
Friedrichshafen			30.09	764.2	70.2	21.2	61	NE			4		6			0	0	Misty	M. Wilhelm.
Hamburg			30.10	764.6	66.7	19.3	57	NW			5		7k			0.028	0.7	Cloudy	Captain F. Hegemann.
Kiel			30.07	763.7	67.8	19.9	47	NW			4		5			0.020	0.5		Prof. G. Karsten.
Königsberg, (Prussia.)			29.91	759.6	71.6	22.0	55	W			2		2			0	0		Prof. E. Luther.
Köslin			30.07	763.6	70.7	21.5		WNW			6		10			0	0		H. Müller.
Leipsic			30.11	764.8	63.1	17.3	95	WNW			2		10	W				Rainy	Prof. Bruhns.
Memel			29.91	759.7	68.4	20.2	83	WNW			3		1cs			0.008	0.2		Reinbrecht & Skalweit.
Münster			30.15	765.9	72.1	22.3	67	SW			3		0			0	0		Prof. E. Heis.
Neufahrwasser			29.95	760.8	74.5	23.6	48	WNW			3		8			0	0		A. Lothes.
Posen			30.05	763.3	73.4	23.0	42	WNW			2		2			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.11	764.8	73.8	23.2	56	Calm			0		10			0.020	0.5		Dr. Schur.
Stuttgart			30.11	764.9	69.8	21.0	66	NE			2		6			0	0		Prof. Schoder.
Thorn			29.96	761.0	79.7	26.5	39	N			2		4			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.09	764.3	71.2	21.8	68	NNE			2		10			0.028	0.7		Prof. Flesch.
Wustrow, Naval School			30.11	764.8	65.5	18.6	62	W			2		8			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	82.4	28.0		SW					k					Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	79.2	26.2	25	NE	0.7	0.3			1			0.177	4.5		
Padua			29.98	761.4	77.2	25.1	42	SE	4.3	1.9			0			0	0		
Vicenza			29.96	761.0	80.6	27.0	46	SE	0.7	0.3			1	W		0	0		
Verona			29.96	761.0	82.0	27.8	49	E			1		0			0	0		
Bergamo	28.65	727.8	29.91	759.7	77.7	25.4	47	SE			2		2			0	0		
Domodossola	28.96	735.5	29.94	760.5	77.0	25.5	64	SW			6		3			0	0		
Milan			29.96	761.0	88.0	31.1	42	ESE			2		1	S		0	0		
Pavia			29.95	760.6	80.2	26.8	52	NE			6		1	NE		0	0		
Moncalieri			29.95	760.7	80.6	27.0	54	ENE	7.4	3.3			8	NE		0	0		
Mondovi	28.10	713.7	29.91	759.8	78.4	25.8	43	NNE			4		2	NNW		0	0		
Porto Maurizio			30.00	762.1	76.5	24.7	74	E			4		3			0	0		
Genoa			29.97	761.3	74.7	23.7	68	S	1.3	0.6			0			0	0		
Piacenza			29.97	761.2	79.2	26.2	43	E	18.1	8.1			2	SSE		0	0		
Parma			29.95	760.7	81.3	27.4	52	WSW			2		1			0	0		
Bologna			29.98	761.4	81.5	27.5	44	E			6		4	W		0	0		
Florence			29.97	761.3	82.4	28.0	22	NE			4		0			0	0		
Leghorn			29.96	760.9	77.4	25.2	61	W	9.4	4.2			6			0	0		
Siena	28.77	730.8	29.93	760.2	77.0	25.0	32	NE	4.3	1.9			3	N		0	0		
Urbino	28.51	724.2	30.01	762.3	70.9	21.6	34	NE			4		0			0.169	4.3		
Pesaro																			
Ancona			30.02	762.5	76.3	24.6	42	N			4		1			0	0		
Grosseto			29.97	761.2	83.8	28.8	34	ENE			4		4	NE		0	0		
Rome			29.94	760.4	79.9	26.6	56	WSW	6.3	2.8			5	NNW		0	0		
Naples, O. U			29.95	760.6	83.8	28.8	40	SSW			2		7	NE		0	0		
Lecce			29.78	756.5	75.2	24.0	53	NNW	15.4	6.9			9			0.024	0.6		
Cosenza			29.91	759.7	82.9	28.3	68	SW	2.5	1.1			6			0	0		
Riposto, (Sicily)			29.91	759.8	83.1	28.4	53	S			2		0			0	0		
Palermo			29.93	760.1	82.2	27.9	38	WNW	11.2	5.0			0			0	0		
Caltanissetta	28.04	712.2	29.90	759.5	79.2	26.2	33	WNW			4		0			0	0		
Sub-Series.																			
Naples, S. R			29.97	761.1	79.2	26.2	59	SE	7.4	3.3			5	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.

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			30.16	766.1	68.7	20.4		NW			1								
Groningen			30.09	764.2	65.7	18.7		NW			2								
Helder			30.14	765.6	64.6	18.1		NE			2								
Utrecht			30.09	764.3	72.9	22.7	72	WSW			3		5					Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	57.2	14.0	69	WNW	9.4	4.2			4			0	0		
Brône			29.91	759.7	55.0	12.8	87	SSW	7	3			10			0.575	14.6	Light rain	
Christiania			29.84	757.8	70.0	21.1	43	NE	2.0	0.9			6			0.102	2.6		
Tromsö			29.77	756.1	64.6	18.1	61	SW	0	0			4			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The 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,)			30.45	773.3	72.1	22.3	76	W	9.4	4.20			4			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.07	763.8	86.7	30.4	28	WSW	5.4	2.42			6	SSW		0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.31	769.8	68.7	20.4	70	SW	8.4	3.75			3			0	0		Capt. D. A. da Cunha.
Lisbon			30.20	767.0	75.0	23.9	39	N	18.6	8.3			0			0	0		The Observatory.

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

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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			29.91	759.7	71.8	22.1	56	NW	20	9			3						Astronomical Obs.
Wilna			29.82	757.3	73.6	23.1	50	W	13	6			6						Astronomical Obs.
Dorpat			29.78	756.4	72.1	22.3	43	NW	4	2			6						Physical Cabinet.
St. Petersburg			29.76	755.8	66.6	19.2	39	ENE	9	4			7						Central Physical Obs.
Kuopio			29.78	756.4	67.6	19.8	64	E	13	6			10						Ch. Forsten.
Kieff			29.74	755.3	75.0	23.9	45	N	2	1			10						Physical Cabinet.
Nikolaiev			29.86	758.5	83.1	28.4	34	SSW	4	2			4						Kurdakof.
Kertch			29.85	758.1	76.6	24.8	55	NNE	4	2			1						Lagorio.
Moscow			29.76	756.0	55.0	12.8	89	N	9	4			8					Light rain	Meteorological Obs.
Lugan			29.53	750.0	77.0	25.0	36	SSE	4	2			3						Meteorological Obs.
Archangel			29.78	756.5	68.0	20.0	48	E	22	10			8						Ogorodnikof.
Tiflis	28.38	720.9	29.73	755.1	75.2	24.0	50	S	9	4			7						Physical Observatory.
Astrakhan			29.83	757.7	79.3	26.3	50	SSE	4	2			10			Blank	Blank		Sebastianoi.
Kasan			29.71	754.5	62.8	17.1	63	W	4	2			7						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.77	730.7	29.69	754.2	59.5	15.3	97	NE	2	1			10					Thunder-storm	Meteorological Obs.
Nukuss			29.55	750.5	84.0	28.9	50	W	13	6			9						
Kasaly																			Robrof.
Tashkend	27.98	710.7	29.52	749.9	94.3	34.6	62	Calm	0	0			0						Michelson.
Barnaul			29.61	752.1	78.6	25.9	61	N	0	0			10						Meteorological Obs.
Yeniseisk			29.61	752.2	86.2	26.8	45	Calm	0	0			0						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.74	755.5	67.8	19.9	74	NW	9	4			9			Blank	Blank		Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.91	759.7	55.0	12.8	96	SE	18	8			10						
Nikolaievsk, on the Amoor					60.3	15.7	98	E	7	3			8						

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 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	762.8	83.8	28.8	30	NW	7.4	3.33		0	2			0	0		Royal Observatory.
San Fernando			30.19	766.7	73.2	24.9	69	WSW	9.6	4.3		0	3		WSW				The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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																			
Umea			29.76	756.0	73.0	22.8	44	SE			6		5			0	0		
Hernosand			29.72	754.9	64.8	18.2	68	ENE			2		10			0	0		
Stockholm			29.77	756.2	73.6	23.1	45	W			2		8			0	0		
Wisby			29.93	760.3	68.7	20.4	74	NNW			2		7			0	0		
Sub-Series.																			
Upsala			29.76	756.0	70.2	21.2	55	WSW	9.2	4.1			7		W	0.010	0.26		Dr. Hildebrandsson.

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

SWISS SERIES.

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

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	28.68	728.4	30.06	763.5	69.4	20.8	60	N			4		6			0	0	Cloudy	The Observatory.
Zurich	28.50	724.0	30.09	764.2	71.1	21.7	64	NE			1		2			0.079	2.0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +1.1 mm.; Thermometer, —1.3 cent.; Relative Humidity, +7 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

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	757.1	76.8	24.9	48	ENE	7	3.0			10		NE	0	0		
Fao, (Persian Gulf)			29.79	756.7	96.8	36.0		NW			4		0			Blank	Blank		
Salonica			29.83	757.6	82.4	28.0		W			2		10						
Valona			29.88	759.0	69.8	21.0		W			1		10						
Varna			29.84	758 0	75.2	24.0		E			2		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.80	756.8	87.8	31	52	SW			2		2k		SW	0.01	1.0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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	66.1	18.9	88	E	6	2.7			10			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			29.74	755.4	73	21.7		SW	5	2.2			8s		SW	0.14	3.6	Cloudy	W. R. Bigg.
*Chatham, N. B.			29.89	759.2	59	15.0	97	SW	1	0.4			Fog			0.03	0.8	Foggy	G. A. Blair.
Charlottetown, P. E. Island			29.94	760.5	60	15.6	95	S	5	2.2			10n			0.27	6.9	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.65	753.1	75.7	24.3	83	SW			4	8k	0			0.035	0.89	Clearing	James Smith, M. A.
Dalhousie, N. B.					59	15.0	88	W			1					0	0		H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			29.90	759.4	65.9	18.8	82	SE	4	1.8			9s			0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			29.52	749.8	58	14.4	82	W	15	6.7		0	0			0.33	8.4	Clear	James Stewart.
Goderich, Ontario			29.75	755.6	64.4	18.0	93	SW			3		10n			0.866	21.99	Threatenin,	H. J. Strang, M. A.
Granton, Ontario	28.70	729.0	29.76	755.9	65.6	18.7		E			1		10n			0.58	14.7	Cloudy	James Grant.
*Halifax, N. S.			29.90	759.4	62	16.7	93	SE	1	0.4			5ks			0.062	1.57	Clearing	F. Allison, M. A.
*Kingston, Ontario			29.75	755.6	68	20.0	91	SW	9	4.0		8ks	2s	W	W	0.30	7.6	Cloudy	S. Woods, M. A.
Little Glace Bay, N. S.			29.94	760.5	59.5	15.3	93	SW	3	1.3		3k	0	SW		0.22	5.6	Foggy	C. H. Rigby.
*Montreal, Quebec			29.65	753.1	70	21.1	96	S	12	5.4			10n			0.59	15.0	Heavy rain	C. H. McLeod, C. E.
*Ottawa, Ontario			29.61	752.1	71	21.7	81	S	22	9.8		8k	0	W		0.34	8.6	Cloudy	J. B. Haney.
*Parry Sound, Ontario			29.62	752.3	64	17.8	94	SW	22	9.8			10n		SW	0.43	10.9	Light rain	Rev. R. Mosley.
*Port Dover, Ontario			29.79	756.7	68	20.0	79	SW	16	7.2		5k	0	SW		0.05	1.3	Fair	H. Morgan.
Port Hastings, N. S.			29.96	761.0	57.5	14.2		Calm	0	0						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			29.81	757.2	68	20.0	84	W	12	5.4		2k	0	W		0.03	0.8	Clear	M. Payne.
*Quebec, Quebec			29.71	754.6	64	17.8	100	NE	7	3.1			10n		NE	0.24	6.1	Heavy rain	Capt. Ashe, R. N.
St. John, N. B.			29.93	760.2			88	E	1	0.4		4ck	0			0.47	11.9	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario			29.63	752.6	64	17.8	88	SW	12	5.4			10n		W	0.54	13.7	Cloudy	K. Stewart.
Stayner, Ontario			29.63	752.6	70	21.1	75	W	9	4.0		2k	5n	NW	W	1.25	31.7	Threatening	R. J. Cole.
Stratford, Ontario	28.50	723.9	29.72	754.9	64.9	18.3	90	SW	15	6.7			10n			1.050	26.67	Cloudy	C. J. Macgregor, M. A.
*Sydney, C. B.			29.95	760.7	67	18.9	79	S	2	0.9		5k	5ks	SE	SE	0.18	4.6	Fair	T. C. Hill.
*Toronto, Ontario			29.74	755.4	71	21.7	82	SW	14	6.3		2ck	5ks	W	W	0.37	9.4	Threatening	Magnetic Observatory.
Woodstock, Ontario			29.77	756.1	65.3	18.5	98	SW	11	4.9		3ck	6ks	W		1.17	29.7	Fine	J. Montgomery
Sub-Series.																			
St. John's, Newfoundland			30.01	762.2	69	20.6		E				0	5ks			0	0	Fair	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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.	.....	.....	29.81	757.2	78	25.6	77	S	5	2.2	.....	5k	0	W	.....	0.37	9.4	Fair	
Alpena, Mich.	.....	.....	29.58	751.3	64	17.8	83	SW	10	4.5	.....	0	5s	.....	SW	0.14	3.6	Fair	
Atlantic City, N. J.	.....	.....	29.95	760.7	71	21.7	90	SW	8	3.6	.....	0	8s	.....	.....	0	0	Cloudy	
Augusta, Ga.	.....	.....	30.17	766.3	79	26.1	82	S	3	1.3	.....	5ek	0	SW	.....	0.38	9.7	Fair	
Baltimore, Md.	.....	.....	29.91	761.7	82	27.8	67	SW	12	5.4	.....	2ek	0	SW	.....	0	0	Clear	
Barnegat, N. J.	.....	.....	29.94	760.5	78	25.6	86	W	11	4.9	.....	.....	10s	.....	W	0	0	Cloudy	
Benton, Montana	27.18	690.4	29.98	761.5	61	16.1	40	SW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.04	712.2	29.61	752.1	62	16.7	61	NW	7	3.1	.....	1c	Haze	N	.....	0	0	Fair	
Boston, Mass.	.....	.....	29.80	756.9	80	26.7	75	S	10	4.5	.....	10ds	Haze	SW	.....	0.34	8.6	Cloudy	
Breckenridge, Minn.	.....	.....	29.65	753.1	68	20.0	63	W	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	29.76	755.9	69	20.6	79	SW	18	8.0	.....	.....	10ks	.....	SW	0.24	6.1	Cloudy	
Burlington, Vt.	.....	.....	29.72	754.9	73	22.8	81	S	9	4.0	.....	.....	10s	.....	.....	0.08	2.0	Cloudy	
Cairo, Ill.	.....	.....	30.06	763.5	75	23.9	85	S	5	2.2	.....	0	0	.....	.....	0.70	17.8	Clear	
Cape Hatteras, N. C.	.....	.....	30.11	764.8	81	27.2	82	SW	17	7.6	.....	2c	2ks,hz	NE	SW	0	0	Fair	
Cape Henry, Va.	.....	.....	30.03	763.5	80	26.7	78	SW	14	6.3	.....	5ek	2s	SW	SW	0	0	Fair	
Cape Lookout, N. C.	.....	.....	30.17	766.3	82	27.8	83	SW	22	9.8	.....	0	5ks	.....	SW	0	0	Fair	
Cape May, N. J.	.....	.....	29.98	761.5	75	23.9	85	SW	16	7.2	.....	5k	2s	W	W	0	0	Fair	
Charleston, S. C.	.....	.....	30.23	767.1	85	29.4	71	SW	12	5.4	.....	0	5ks	.....	SW	0.10	2.5	Fair	
Cheyenne, Wyoming	23.97	608.8	29.91	759.7	65	18.3	26	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	29.70	756.7	73	22.8	71	SW	10	4.5	.....	0	0	.....	.....	0.02	0.5	Clear	
Cincinnati, Ohio	.....	.....	29.94	760.5	75	23.9	76	SW	10	4.5	.....	5k	0	W	.....	1.40	35.6	Fair	
Cleveland, Ohio	.....	.....	29.86	758.4	70.3	21.3	73	S	18	8.0	.....	2k	0	W	.....	0.61	15.5	Clear	
Colorado Springs, Col.	24.09	611.9	29.96	761.0	63	17.2	61	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Corsicana, Tex.	.....	.....	30.03	762.7	76.6	24.8	95	SE	6	2.7	.....	2ek	8s	.....	.....	0	0	Cloudy	
Davenport, Iowa	.....	.....	29.80	756.9	71	21.7	85	SW	12	5.4	.....	1ek	0	.....	.....	Inap.	Inap.	Clear	
Denison, Tex.	.....	.....	30.05	763.3	77	25.0	90	S	15	6.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Denver, Col.	24.74	628.4	29.96	761.0	62	16.7	45	S	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	29.78	756.4	69	20.6	79	SW	14	6.3	.....	5k	0	W	.....	0.80	20.3	Fair	
Dodge City, Kan.	27.27	692.6	29.42	747.3	73	22.8	76	S	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	29.76	755.9	69	20.6	70	W	4	1.8	.....	2k	0	W	.....	0	0	Fair	
Duluth, Minn.	.....	.....	29.53	750.0	65	18.3	58	SW	7	3.1	.....	0	0	.....	.....	0.01	0.3	Clear	
Eastport, Me.	.....	.....	29.88	758.9	59	15.0	87	Calm	0	0	.....	5c	Fog	W	.....	Inap.	Inap.	Cloudy	
Erie, Pa.	.....	.....	29.81	757.2	72	22.2	71	SW	12	5.4	.....	0	8ks	.....	W	0.09	2.3	Clearing	
Escanaba, Mich.	.....	.....	29.57	751.1	64	17.8	78	W	11	4.9	.....	0	0	.....	.....	0.10	2.5	Clear	
Fort Gibson, Indian Ter.	.....	.....	29.97	761.2	78	25.6	82	S	6	2.7	.....	8k	0	S	.....	0	0	Fair	
Ft. St. Michael, Alaska	.....	.....	29.86	758.4	45	7.2	10	NE	.....	.....	1	.....	10ks	.....	.....	0.37	9.4	Cloudy	
Fort Sill, Indian T.	28.78	731.0	29.84	757.9	78	25.6	82	SW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.10	713.7	29.98	759.9	65	18.3	63	SE	4	1.8	.....	2k	2ks	.....	.....	0	0	Fair	
Galveston, Tex.	.....	.....	30.09	764.3	84	28.9	71	SE	5	2.2	.....	2c	1k	.....	S	0.02	0.5	Fair	
Grand Haven, Mich.	.....	.....	29.76	755.9	67	19.4	78	SW	24	10.7	.....	1k	0	SW	.....	0.03	0.8	Clear	
Indianapolis, Ind.	.....	.....	29.93	760.2	75	23.9	81	SW	8	3.6	.....	2k	0	SW	.....	0.28	7.1	Fair	
Indianola, Tex.	.....	.....	30.06	763.5	81	27.2	82	SE	13	5.8	.....	.....	10ks	.....	S	0.35	8.9	Cloudy	
Jacksonville, Fla.	.....	.....	30.22	767.6	84	28.9	75	S	8	3.6	.....	2k	2s	.....	SW	0	0	Fair	
Keokuk, Iowa	.....	.....	29.79	756.7	75	23.9	76	W	12	5.4	.....	0	0	.....	.....	0.07	1.8	Clear	
Key West, Fla.	.....	.....	30.13	765.3	81.0	27.2	82	E	13	5.8	.....	.....	8s	.....	.....	0.10	2.5	Cloudy	
Kittyhawk, N. C.	.....	.....	30.12	765.0	80	26.7	78	W	18	8.0	.....	5c	0	W	W	0	0	Fair	
Knoxville, Tenn.	.....	.....	30.14	765.5	71	21.7	95	W	8	3.6	.....	.....	10n	.....	.....	0.78	19.8	Light rain	
La Crosse, Wis.	.....	.....	29.71	754.6	65	18.3	80	SW	4	1.8	.....	0	0	.....	.....	0.03	0.8	Clear	
Leavenworth, Kan.	.....	.....	29.79	756.7	74	23.3	81	S	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Lexington, Ky.	28.08	730.1	30.03	762.7	74	23.3	81	SW	4	1.8	.....	0	0	.....	.....	0.45	11.4	Clear	
Long Branch, N. J.	.....	.....	29.92	760.0	79	26.1	73	S	12	5.4	.....	.....	10s	.....	SW	0	0	Cloudy	
Louisville, Ky.	.....	.....	30.01	762.2	77	25.0	73	SW	12	5.4	.....	0	0	.....	.....	0.31	7.9	Clear	
Lynchburg, Va.	.....	.....	30.04	763.0	80	26.7	74	SW	4	1.8	.....	5k	0	W	.....	Inap.	Inap.	Fair	
Malone, N. Y.	.....	.....	29.94	752.8	71	21.7	84	S	12	5.4	.....	.....	10ks	.....	W	0.70	17.8	Cloudy	
Manhattan, Kan.	28.67	728.2	29.76	755.9	70	21.1	84	S	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Marquette, Mich.	.....	.....	29.50	749.3	65	18.3	78	SW	16	7.2	.....	0	0	.....	.....	0.32	8.1	Clear	
Memphis, Tenn.	.....	.....	30.07	763.8	83	28.3	74	S	3	1.3	.....	5k	0	SW	.....	0.08	2.0	Fair	
Milwaukee, Wis.	.....	.....	29.75	755.6	69	20.6	79	SW	16	7.2	.....	2k	0	SW	.....	0	0	Clear	
Mobile, Ala.	.....	.....	30.16	766.1	84	28.9	79	Calm	0	0	.....	0c	5k	.....	.....	0.29	7.4	Cloudy	
Montgomery, Ala.	.....	.....	30.18	766.6	81	27.2	82	SE	4	1.8	.....	2ek	5s	.....	.....	0.06	1.5	Cloudy	
Morgantown, W. Va.	28.98	736.1	29.98	761.5	73	22.8	81	S	12	5.4	.....	.....	10s	.....	SW	0.65	16.5	Cloudy	
Mt. Washington, N. H.	23.78	604.0	30.14	765.5	55	12.8	100	NW	40	17.9	.....	.....	Fog	.....	.....	1.60	40.6	Foggy	
Nashville, Tenn.	.....	.....	30.07	763.8	83	28.3	70	SW	5	2.2	.....	2k	0	SW	.....	0.35	8.9	Fair	
New Haven, Conn.	.....	.....	29.86	758.4	80	26.7	82	SW	5	2.2	.....	8k	2n	SW	SW	0.02	0.5	Light rain	
New London, Conn.	.....	.....	29.88	758.9	77	25.0	86	SW	10	4.5	.....	2ek	5ks	SW	SW	Inap.	Inap.	Cloudy	
New Orleans, La.	.....	.....	30.13	765.3	80	26.7	84	Calm	0	0	.....	2k	5ks	SW	SE	0.20	5.1	Threatening	
Newport, R. I.	.....	.....	29.87	758.7	72	22.2	90	SW	12	5.4	.....	5es	5d	W	SW	0.04	1.0	Clear	
New York, N. Y.	.....	.....	29.91	759.7	76	24.4	76	SW	10	4.5	.....	0	8ks	.....	W	0	0	Fair	
Norfolk, Va.	.....	.....	30.09	764.3	82	27.8	74	SW	14	6.3	.....	2ek	5k	SW	SW	0	0	Fair	
North Platte, Neb.	26.90	683.2	29.32	744.7	68	20.0	79	NE	8	3.6	.....	5k	0	NE	.....	0	0	Fair	
Omaha, Neb.	28.81	731.8	29.84	757.9	71	21.7	85	Calm	0	0	.....	5ek	2s	W	W	0	0	Fair	
Oswego, N. Y.	.....	.....	29.76	755.9	76	24.4	72	SW	10	4.5	.....	Haze	5ks	.....	W	0.28	7.1	Fair	
Pembina, Dakota	.....	.....	29.55	750.6	60	15.6	67	W	8	3.6	.....	0	0	W	.....	0.14	3.6	Clear	
Philadelphia, Penn.	.....	.....	29.95	760.7	81	27.2	63	W	10	4.5	.....	2ek	0	.....	.....	0	0	Fair	
Pike's Peak, Colorado	18.02	457.7	30.23	767.8	40	4.4	39	W	22	9.8	.....	0	0	.....	.....	0	0	Clear	
Pittsburgh, Penn.	.....	.....	29.91	759.7	74	23.3	72	W	11	4.9	.....	2k	5ks	W	W	0.59	15.0	Fair	
Port Huron, Mich.	.....	.....	29.73	755.1	67	19.4	90	SW	13	5.8	.....	.....	10s	.....	SW	0.87	22.1	Threatening	
Portland, Me.	.....	.....	29.84	757.9	63	17.2	89	E	4	1.8	.....	.....	Fog	.....	.....	0.02	0.5	Foggy	
Portland, Oregon	.....	.....	30.09	764.3	56	13.3	80	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Punta Rassa, Fla.	.....	.....	30.17	766.3	80	26.7	74	E	10	4.5	.....	5es	Haze	NE	.....	0.48	12.2	Hazy	
Rochester, N. Y.	.....	.....	29.73	755.1	74	23.3	68	W	20	8.9	.....	5k	2s	W	W	0.56	14.2	Fair	
Salt Lake City, Utah	25.54	648.7	29.87	758.7	70	21.1	32	NE	1	0.4	.....	5c	0	SW	.....	0	0	Fair	
Sandy Hook, N. J.	.....	.....	29.90	759.4	79	26.1	74	SW	15	6.7	.....	0	8ks	.....	SW	Inap.	Inap.	Cloudy	
San Diego, Cal.	.....	.....	29.80	756.9	66	18.9	84	S	8	3.6	.....	.....	10s	.....	S	0	0	Cloudy	
San Francisco, Cal.	.....	.....	29.83	757.7	56	13.3	87	W	12	5.4	.....	.....	Fog	.....	W	0	0	Foggy	
Santa Fé, N. M.	.....	.....	29.86	758.4	61	16.1	66	SW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	23.32	592.3	30.20	767.1	86	30.0	72	SW	3	1.3	.....	Haze	2ks	.....	SE	0	0	Fair	
Shreveport, La.	.....	.....	30.13	765.3	76.5	24.7	93	Calm	0	0	.....	10c	0	W	.....	0.04	1.0	Fair	
Smithville, N. C.	.....	.....	30.20	767.1	82	27.8	74	SW	10	4.5	.....	2k	0	SW	.....	0.01	0.3	Fair	
Springfield, Mass.	.....	.....	29.84	757.9	77.5	25.3	86	S	8	3.6	.....	.....	10n	.....	SW	0.08	2.0	Light rain	
St. Louis, Mo.	.....	.....	29.97	761.2	75	23.9	72	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.18	766.6	80	26.7	82	E	2	0.9	.....	2k	0	S	.....	0	0	Fair	
St. Paul, Minn.	.....	.....	29.67	753.6	67	19.4	68	SW	9	4.0	.....	2c	0	NW	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	29.90	759.4	38	3.3	91	W	17	7.6	.....	.....	10n	.....	.....	0.06	1.5	Light rain	
Thatcher's Island, Mass.	.....	.....	29.82	757.4	68	20.0	90	SW	7	3.1	.....	2ek	8s	W	W	0.01	0.3	Foggy	
Toledo, Ohio	.....	.....	29.80	756.9	70	21.1	90	SW	14	6.3	.....	5k	0	SW	.....	0.37	9.4	Fair	
Tucson, Arizona	27.47	697.7	30.06	763.5	81	27.2	.....	NE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30.20	767.1	80	26.7	91	SW	4	1.8	.....	.....	10ks	.....	W	0.05	1.3	Cloudy	
Vicksburg, Miss.	.....	.....	30.15	765.8	82	27.8	78	S	1	0.4	.....	8ek	2k	S	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
Virginia City, M. T.	24.31	617.5	29.79	756.7	52	11.1	34	E	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Washington, D. C.	.....	.....	29.99	761.7	82	27.8	65	SW	12	5.4	.....	Haze	2s	.....	W	Inap.	Inap.	Fair	
Wilmington, N. C.	.....	.....	30.19	766.8	81	27.2	82	SW	14	6.3	.....	0	5ks	.....	SW	0	0	Fair	
Wood's Holl, Mass.	.....	.....	29.89	759.2	73	22.8	95	SW	12	5.4	.....	.....	10s	.....	SW	0	0	Cloudy	
Wytheville, Va.	27.81	706.4	29.88	758.9	72	22.2	85	W	4	1.8	.....	.....	10ks	.....	W	0.18	4.6	Cloudy	
Yankton, Dakota	28.60	726.4	29.84	757.9	64	17.8	83	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Yuma, Arizona	.....	.....	29.78	756.4	87	30.6	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub Series.																			
Pointe-a-Pitre, G'd'loupe, do	.....	.....	30.05	763.3	82	27.8	83	E	.....	.....	.....	10k	5n	.....	.....	0	0	Hazy	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.16	766.1	82	27.8	79	SE	3	1.3	.....	2c	8n	SE	SE	0.03	0.8	.....	James Hall.
St. Georges, Bermudas	.....	.....	30.29	769.4	79.5	26.4	76	W	8	3.6	.....	2c	2k	W	.....	0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica, W. I.	27.25	692.1	30.04	763.0	68	20.0	90	SE	1.0	0.4	.....	.....	10k	.....	.....	0	0	Dull	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.11	764.8	80	26.7	82	SE	.....	.....	2	4k	6k	E	.....	0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.11	764.7	.....	.....	83.8	28.8	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640.6	.....	.....	61.5	16.4	82	S	1	0.4	.....	3c	2s	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	29.11	739.4	42	5.6	100	N	46	20.6	.....	.....	10n	.....	.....	1.30	33.0	Raining	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.04	763.0	77	25.0	90	NE	.....	.....	3	.....	.....	.....	.....	0.03	0.8	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Leipzig. N, 49° 49′. W, 13° 14′.	383W	.....	29.95	760.7	59.0	15.0	.....	SW	.....	.....	4	.....	..d	.....	.....	Short sea.	.....	Raining	Capt. R. Hoffmann.

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.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; 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 Fe, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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.
1:18 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			30.06	763.4	77.9	25.5	67	NW			1		0			0	0	Clear	Charnot.
Algiers			30.12	765.0	77.0	25.0	82	N			1		5			0	0	Fair	Peter.
La Calle																			Kunts.
Tunis			30.06	763.4	84.4	29.1	41	NW			5		7			0	0	Cloudy	Jacques.
Sfax			30.10	764.4	86.0	30.0	45	NE			4		2			0	0	Clear	Chauvey.
Saida			30.12	765.1	86.9	30.5		NNE			2		1			0	0	Clear	Millot.
Tébessa			30.07	763.8	78.8	26.0		NW			1		0			0	0	Clear	Colin.
Geriville			30.12	765.1	85.5	29.7	27	ENE			1		1			0	0	Clear	Buard.
Laghouat			30.02	762.4	93.2	34.0		NW			2		0			0	0	Clear	Guyot.
Biskra			30.09	764.3	92.7	33.7	28	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			29.98	761.6	75.7	24.3	49	NE			1		6			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.02	762.6	62.6	17.0	88	W			1		10			0.030	0.75		Dr. Wierzbiski.
Eperies			29.89	759.2	75.9	24.4	69	N			1		2			0.030	0.75		Julius Mikolik.
Gratz	28.71	729.9	29.89	759.2	75.0	23.9	46	NW			5		6			0	0		Andreas Rospini.
Hermannstadt	28.46	722.9	29.82	757.5	73.0	22.8	55	NNE			1		5			0	0		Prof. Reissenberger.
Kremsmünster	28.68	728.5	29.97	761.2	72.7	22.6	54	W			2		7			0	0		Prof. C. Wagner.
Lemberg			29.85	758.2	65.7	18.7	90	NW			1		5			0.043	1.1		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.02	762.4	75.7	24.3	66	WNW			2		8ks			0	0		I.R.Hydrographic Office.
Szegedin			29.89	759.1	77.7	25.4	39	E			2		6			0	0		Karl Stancel.
Trieste			30.02	762.6	82.6	28.1	52	WSW			1		8			0	0		Prof. V. Farolfi.
Vienna			29.99	761.7	76.3	24.6	49	NNW			2		7			0.012	0.3		I. R. Central Met. Obs'y.

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

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.13	765.2	70.7	21.5	70	WSW			4		9		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.84	757.9	64.2	17.9		W	20	8.9			5			0	0	Blue sky	William Boswell.
Ardrossan			29.98	761.5	57	13.9		NW			3		4?					Overcast?	William McNeil.
Armagh, Observatory			30.02	762.5	59.8	15.4		W	3	1.3			10					Gloomy	S. Cull, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.01	762.2	59.7	15.4		SE			1		10					Overcast	J. Dreyer.
Bradford			29.99	761.7	64.2	17.9		W			1		6			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	77.5	25.3		NE			1		10					Raining	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.02	762.5	69.5	20.8		SW			1		10					Raining	H. Todd. [H. C.
Cardington			30.04	763.0	69.0	20.6		W			1		9					Overcast	John McLaren.
Carlisle			29.96	761.0	62.3	16.8		SW			4		9			0	0	*D. clouds	T. Bel, for J. Carmell.
Chatham, School M. E			30.05	763.3	72.5	22.5		SW			2		8					Gloomy	Capt. J. Fellowes, R.E.
Dartmoor	23.70	729.0	30.19	766.8	58.6	14.8		SW			4		10					Foggy	R. E. Power.
Donaghadee			29.99	761.7	62	16.7		SW			3		5					*D. clouds	J. Mac Gowan.
Dover			30.08	764.0	62	16.7		WSW			4		7					¾ clouded	J. Costello.
Eccles, (near Manchester.)			30.04	763.0	65.0	18.3		WNW	6.6	3.0			6					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.09	764.3	64.3	17.9		SW			5		10					Foggy	The Staff.
Fort Napier, (Natal)	27.51	699.5	29.77	756.1	82.4	28.0		NE			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.07	763.8	82	27.8		N			4		5					*D. clouds	
Galway, Queen's College			29.91	759.7	63	17.2		W			1		0					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.05	763.5	78.5	25.8		SE			1		0					Blue sky	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			29.92	760.0	59.0	15.0		WSW			2		8					*D. clouds	Lewis Stuart.
Great Yarmouth			30.02	762.5	69	20.6		W			3		4					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			30.06	763.5	73.5	23.1		WSW			1		10					Overcast	The Staff, for G. B. Airy.
Guernsey			30.15	765.8	65	18.3		SSW			1		8					Drizzling	Dr. S. E. Hoskins.
Helston			30.07	763.8	66	18.9		S			2		10			0	0	Misty	M. P. Moyle.
Holyhead			30.03	762.7	60	15.6		WNW			1		4					*D. clouds	John Tiston.
Kew, Observatory			30.05	763.3	70.8	21.6		SW	13	5.8			10					Raining	The Staff.
Kingstown			30.04	763.0	59	15.0		N			3		9					Overcast	George Mitchell.
Leicester Museum			30.01	762.2	71.0	21.7		SW			2		8					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)			29.95	760.7	80.0	26.7		NW			1		0					Blue sky	Corp'l F. Fraser, A. M. C.
Nairn			29.83	757.7	63	17.2		SSW			4		5					½ clouded	W. D. Penny.
Nassau, (Bahamas)			30.20	767.1	80.2	26.8		NE			6		10					Raining	Surg. Maj. Henry.
Nottingham, Observatory			30.00	762.0	75.3	24.1		WSW			3		7c,k,ks		WNW	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.98	761.5	74.0	23.3		SSW			3–1		9					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.02	762.5	68	20.0		W			1		10					Gloomy	J. Lucas.
Plymouth			30.10	764.5	65	18.3		SW			2		10					Gloomy	John Merrifield.
Roche's Point			30.03	762.7	66	18.9		S			3		5					Cloudy	W. Kennedy.
Saint Ann's Head			30.04	763.0	67	19.4		Calm			0		10					Overcast	John C. Walker.
Saint Helier, Jersey			30.17	766.3	67.6	19.8		SSW			4		8					¾ clouded	A. P. Amy.
Sandwick Manse, Orkneys)			29.74	755.4	53.2	11.8		W	32	14.3			10					Drizzling	Rev. C. Clouston, LL. D.
Scarborough			29.96	761.0	67.5	19.7		WNW			3		2					Blue sky	F. Shaw.
Scutari Cemetery (Turkey			29.70	754.4	81.4	27.4		NE			2		6			Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.00	762.0	69.8	21.0		W			2		7			0	0	*D. clouds	W. F. Cooper.
Silloth Rectory			29.98	761.5	61.3	16.3	70	SW			1		7			0.380	9.65	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.00	762.0	60.4	15.8		W			2		10			Blank	Blank	Threatening	Rev. S. J. Perry.
Stornoway, Lewis C., Hebr.			29.86	758.4	57	13.9		W			4		8					*D. clouds	John Smith.
Strathfield Turgiss			30.06	763.5	67.9	19.9		W			1		10					Overcast	Rev. Charles H. Griffith.
Thurso			29.77	756.1	55	12.8		W			6		10					Overcast	John Trotter.
Truro, Royal Institution			30.11	764.8	68	20.0		SW			4		10					Raining	W. Newcombe.
Valencia, Observatory			29.98	761.5	61.7	16.5		SE	15	6.7			6					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					55	12.8		W			3		0						Thomas Dawson.
Cape Good Hope, Obs'y			29.83	757.7	55.0	12.8	82	W	15	6.7		5	5					Hazy	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.15	765.8	57.0	13.9	81	SW			2		9kn					Light rain	Francis Abbott, F.R.A.S.
Leith, Restaurig Park			29.93	760.2	60.5	15.8		W			4		5ck			0	0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.15	765.8				E	23.1	10.3						0	0		C. Meldrum
Melbourne, Observatory			30.23	767.8	46.8	8.2	95	Calm	0	0			10			0.11	2.8	Foggy	R. L. J. Ellery.
Monach Lt-house, Hebrides			29.74	755.4	55	12.8		SW			4	5	5	S		0	0		J. Youngehuse.
North Unst, (Shetland Is.)			29.61	752.1	54	12.2		S			2		10			Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,290 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			29.95	760.6	66.6	19.2	51	NW			2		9						
Fanoe			29.93	760.3	63.1	17.3	84	SW			4		10						
Godthaab, (Greenland)			29.61	752.1	38.1	3.4		NNW			4		8						
Stykkisholm, (Iceland)			29.61	752.0	54.1	12.3	77	S			6		8						
Thorshavn, (Faröe)			29.65	753.2	57.0	13.9	78	NNE			2		10						
Vestervig			29.87	758.7	60.1	15.6	85	SW			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			30.15	765.8	69.8	21	58	WSW			1	..e	8nk		WSW	0	0	Very cloudy	Normal School.
Amiens			30.05	763.3	77.4	25.2	69	NW			3		5		NW	0	0	Cloudy	Normal School.
Avignon			30.04	762.9	84.2	29	46	N			2		2		N	0	0	Slightly cl'dy	Normal School.
Bar-sur-Seine			30.12	765.0	75.9	24.4	64	N			2		5		NW	Inap.	Inap.	Cloudy	C. Saillard.
Beaumette, (near Angers)			30.11	764.9	74.3	23.5	50	W	3.8	1.7			10		WSW	0	0	Covered	Beaumette Observatory.
Beauvais			30.17	766.4	72.1	22.3	55	WNW			3		8		WNW	0	0	Very cloudy	Normal School.
Besançon			30.12	765.0	78.1	25.6	50	E			2		0			0	0	Clear	Normal School.
Bourg en Bresse			30.18	766.6	79.9	26.6	67	N			2	1c		S				Clear	Normal School.
Bourges			30.52?	775.2?	73.4	23	76	NNE			2		2		N	0	0	Slightly cl'dy	Normal School.
Brest			30.13	765.2	68.5	20.3	77	WSW			3		10		WSW	0	0	Misty	Naval Observatory.
Carcassonne			30.14	765.6	71.4	21.9	65	W			2		5		E	0	0	Cloudy	Normal School.
Caen			30.17	766.2	71.6	22	79	WSW			2		10		E.	0	0	Covered	Normal School.
Chartres			30.10	764.6	80.4	26.9	68	W			2		5		SE	0	0		Normal School.
Clermont			30.13	765.3	78.3	25.7	57	NE			1		5		N	0	0		Puy de Dome Obs'y.
Commercy			30.13	765.3	72.1	22.3	71	NW			4		5k		NW	0	0	Cloudy	Normal School.
Commune de Greasque*			30.12	765.0	83.8	28.8	39	SW			2		5		SW	0	0		M. Kina.
Grenoble			30.04	763.0	76.1	24.5	58	NW			4		2k		NE	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.17	766.4	76.3	24.6	63	NW			2		0			0	0	Clear	Normal School.
Le Mans			30.14	765.6	73.8	23.2	68	SW			2		5		SW	0	0	Cloudy	Normal School.
Lons-Le-Saulnier			30.11	764.8	76.6	24.8	56	N			2		0			0	0	Clear	Normal School.
Mâcon			30.26	768.7	77.0	25	62	N			2		10		NNE	0	0	Covered	Normal School.
Metz																			M. Schuster.
Mirecourt			30.06	763.5	72.3	22.4	66	N			2		5		E	0	0	Cloudy	Normal School.
Nismes			30.01	762.2	85.8	29.6	36	N			6		0			0	0	Clear	Normal School.
Orleans			30.27	768.9	77.4	25.2	42	NW			1		5		W	0	0	Cloudy	Normal School.
Paris, Observatory			30.14	765.6	73.9	23.3	51	NW			2		8k		WNW	0	0	Very cloudy	National Observatory.
Parthenay			30.16	766.0	76.6	24.8	69	NW			1		5		E	0	0	Cloudy	Normal School.
Privas			30.07	763.7	79.0	26.1		ENE			1		2		ENE	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.19	766.9	80.2	26.8	56	W			1		5		NE	0	0	½ covered	Naval Observatory.
Rouen			30.17	766.4	69.3	20.7	59	W			2		10		S	0	0	Covered	Normal School.
Saint Lo			29.87	758.8	76.6	24.8	57	NW			1		8		W	0	0		Normal School.
Tarbes	29.10	739.2	30.16	766.1	68.0	20		N			1		5		E	0	0	Cloudy	Normal School
Villefranche			30.15	765.9	82.9	28.3	72	NW			1		5		N	0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			30.04	763.1	80.6	27													L'Abbé Marchesi.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.30	771.2	63.1	17.3	74	NNW	19.8	8.83			3		W	0	0		—. Faiguère.
Montsouris, Paris			30.14	765.5	73.9	23.3	54	NW			2		8		SW	0	0		Montsouris Observ'tory.
Perpignan			30.09	764.2	80.4	26.9	53	N	18.0	8.83			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)			30.11	765.6	75.4	24.1	53	SW			1		10			0	0	Cloudy	E. Renou.
Toulouse			30.23	767.9	72.0	22.2	70	NW			2		6			0	0		Toulouse Observatory.
Tours																			C. Marquet.
Versailles, (near Paris)			30.15	765.9	74.8	23.8	56	NW			2		8			0	0	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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			30.07	763.6	72.9	22.7	61	WNW			3		9	W		0.118	3.0		Prof. T. Hoh.
Berlin			30.03	762.7	71.4	21.9	49	SW			3		7			0	0		Prof. Arndt.
Breslau			30.09	764.3	69.8	21.0	41	WNW			4		10			0.008	0.2		Dr. P. Neugebauer.
Carlsruhe			30.07	763.8	75.6	24.2	67	SE			1		9			0	0		A. Senz.
Cassel			30.05	763.3	77.5	25.3	55	NNW			2		8	NW		0	0		Dr. H. Möhl.
Emden			29.94	760.4	73.4	23.0	68	NW			7		9			0	0		Prof. Prestel.
Frankfort on the Main			30.13	765.4	76.1	24.5	54	S			1		6			0.039	1.0		Physical Society.
Friedrichshafen			30.10	764.5	73.0	22.8	67	W			1		5			0	0		M. Wilhelm.
Hamburg			30.01	762.2	70.0	21.1	62	SW			1		8sk			0	0	Cloudy	Captain F. Hegemann.
Kiel			29.97	761.3	69.4	20.8	61	WSW			4		10			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			29.87	758.6	66.0	18.9	67	W			5		5			0	0		Prof. E. Luther.
Köslin			30.07	763.8	61.0	16.1		W			5		10			0	0		H. Müller.
Leipsic			30.06	763.5	74.8	23.8	55	WNW			1		8	W		0.031	0.8		Prof. Bruhns.
Memel			29.86	758.4	63.9	17.7	88	WNW			3-4		1k			0.020	0.5		Reinbrecht & Skalweit.
Münster			30.09	764.3	74.8	23.8	66	W			3		0			0	0		Prof. E. Heis.
Neufahrwasser			29.94	760.4	68.5	20.3	55	W			6		7	NW		0	0		A. Lothes.
Posen			30.08	763.9	69.8	21.0	44	W			4		10			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.10	764.5	78.1	25.6	56	SW			1		8	SW		0	0		Dr. Schur.
Stuttgart			30.11	764.8	74.1	23.4	56	NE			2		2			0.008	0.2		Prof. Schoder.
Thorn			29.98	761.4	70.3	21.3	42	NW			4		9			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.04	763.0	76.6	24.8	65	SW			5		6			0.004	0.1		Prof. Flesch.
Wustrow, Naval School			30.10	764.5	63.7	17.6	60	WSW			2		10			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	79.3	26.3		SE					k					Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.99	761.7	79.7	26.5	37	W	0.7	0.3			3			0	0		
Padua			30.02	762.4	78.8	26.0	44	W	2.5	1.1			5	NE		0	0		
Vicenza			30.01	762.3	80.2	26.8	33	S	1.8	0.8			3	N		0	0		
Verona			30.01	762.2	80.0	30.0	38	E			1		0			0	0		
Bergamo	28.69	728.6	29.94	760.5	80.6	27.0	37	SE			1		0			0	0		
Domodossola	28.93	734.9	29.92	759.9	78.8	26.0	61	S			2		6			0	0		
Milan			29.97	761.1	85.1	29.5	35	E			1		4	NNE		0	0		
Pavia			30.03	762.8	81.3	27.4	40	E			1		0			0	0		
Moncalieri			29.98	761.6	79.9	26.6	54	SW	1.3	0.6			5	N		0	0		
Mondovi	28.15	715.0	29.97	761.1	79.0	26.1	40	NW			4		1	NW		1.772	45.0		
Porto Maurizio			30.08	764.0	78.8	25.0	71	E			2		2			0	0		
Genoa			30.04	763.1	78.6	25.9	37	SW	1.3	0.6			0			0	0		
Piacenza			30.02	762.4	79.2	26.2	44	NW	2.5	1.1			0			0	0		
Parma			29.99	761.8	82.9	28.3	51	SSE			2		0			0	0		
Bologna			30.02	762.6	84.0	28.9	45	SE			6		4	N		0	0		
Florence			30.02	762.6	84.2	29.0	26	E			2		4	SW		0	0		
Leghorn			30.02	762.6	76.6	24.8	59	NNW	5.6	2.5			5			0	0		
Siena	28.83	732.2	29.98	761.6	77.7	25.4	36	NE	1.8	0.8			6	NE		0	0		
Urbino	28.55	725.2	30.05	763.3	72.0	22.2	44	NE			4		4			0	0		
Pesaro																			
Ancona			30.03	762.7	79.5	26.4	43	NNW			4		2			0	0		
Grosseto			30.01	762.2	83.1	28.4	31	NNE			4		4	NW		0	0		
Rome			29.97	761.1	81.1	27.3	43	W	5.6	2.5			4	NE		0	0		
Naples, O. U.			29.95	760.7	83.5	28.6	37	ESE			4		5	NE		0	0		
Lecce			29.90	759.5	74.5	23.6	46	NNW	21.0	9.4			2			0	0		
Cosenza			29.92	760.0	82.2	27.9	64	NW	3.1	1.4			5			0	0		
Riposto, (Sicily)			29.95	760.6	79.3	26.3	77	ESE			2		8	W		0	0		
Palermo			29.91	759.7	77.7	25.4	58	N	11.9	5.3			5			0	0		
Caltanissetta	27.97	710.5	29.83	757.8	77.9	25.5	36	NW			2		1	SE		0	0		
Sub-Series.																			
Naples, S. R.			29.98	761.4	81.1	27.3	47	NW	10.5	4.7			5	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			30.13	765.2	65.5	18.6		W			4								
Groningen			29.96	761.0	70.0	21.1		WSW			5								
Helder			30.02	762.6	65.1	18.4		SW			4								
Utrecht			30.04	763.0	68.0	20.0	78	SW			3		10					Full	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	56.1	13.4	89	S	16.6	7.4			10			0.165	4.2	Raining	
Brönö			29.81	757.2	59.0	15.0	72	N	9	4			7			0	0		
Christiania			29.83	757.7	69.4	20.8	44	SSW	0.9	0.4			4			0	0		
Tromsö			29.95	760.6	60.8	16.0	67	NNE	13	6			5			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 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,)			30.39	772.0	74.5	23.6	77	W	6.5	2.92			3			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.98	761.6	92.8	33.8	20	E	2.4	1.08			7	E		0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.28	769.0	71.1	21.7	65	SW	5.4	2.42			9			0	0		Capt. D. A. da Cunha.
Lisbon			30.10	764.4	79.5	26.4	44	NNW	9.8	4.4			0			0	0		The Observatory.

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

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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			29.93	760.3	68.2	20.1	47	W	25	11			9						Astronomical Obs.
Wilna			29.80	756.9	68.0	20.0	50	WSW	9	4			9						Astronomical Obs.
Dorpat			29.74	755.4	60.4	15.8	94	WNW	2	1			10					Thunder-storm	Physical Cabinet.
St. Petersburg			29.74	755.5	66.2	19.0	68	ENE	4	2			10						Central Physical Obs.
Kuopio			29.79	756.7	70.5	21.4	74	E	18	8			8						Ch. Forsten.
Kieff			29.77	756.2	75.2	24.0	43	NNE	4	2			2						Physical Cabinet.
Nikolaiev			29.88	758.9	82.0	27.8	33	W	11	5			5						Kurdakof.
Kertch			29.86	758.4	80.2	26.8	61	S	4	2			1						Lagorio.
Moscow			29.74	755.5	70.0	21.1	45	NNE	9	4			7						Meteorological Obs.
Lugan			29.74	755.5	69.8	21.0	67	Calm	0	0			8			Blank	Blank		Meteorological Obs.
Archangel			29.78	755.6	68.0	20.0	47	E	13	6			10						Ogorodnikof.
Tiflis	28.42	721.9	29.76	755.8	80.6	27.0	31	NW	13	6			1						Physical Observatory.
Astrakhan			29.87	758.7	72.3	22.4	68	NNE	13	6			7			Blank	Blank		Sebastianof.
Kasan			29.68	753.8	64.8	18.2	75	WSW	4	2			5						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.84	732.5	29.74	755.5	69.4	20.8	58	WSW	13	6			5						Meteorological Obs.
Nukuss			29.63	752.5	92.3	33.5	31	N	9	4			0						
Kasaly																			Bobrof.
Tashkend	28.01	711.5	29.55	750.5	96.8	36.0	56	Calm	0	0			0						Michelson.
Barnaul			29.53	750.0	76.8	24.9	73	S	4	2			9						Meteorological Obs.
Yeniseisk			29.32	744.7	82.6	28.1	51	WSW	2	1			1						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.78	756.3	79.9	26.6	64	Calm	0	0			2						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.91	759.8	58.8	14.9	91	SE	4	2			10			Blank	Blank		
Nikolaievsk, on the Amoor					59.0	15.0	96	ESE	22	10			8						

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 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			30.01	762.2	87.4	30.8	26	E	4.5	2.00		0	2			0	0		Royal Observatory.
San Fernando			30.11	764.9	73.2	22.9	69	SSW	13.0	5.8		2	1	SSW	SSW				The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			29.92	760.0	68.4	20.2	48	SE			2		0			0	0		
Umea			29.83	757.7	69.4	20.8	51	SE			7		6			0	0		
Bernosand			29.82	757.5	66.4	19.1	55	ENE			4		2			0.150	3.8		
Stockholm			29.78	756.5	68.9	20.5	52	NNW			2		7			0	0		
Wisby			29.90	759.4	64.4	18.0	71	NNW			6		3			0.024	0.6		
Sub-Series.																			
Upsala			29.80	757.0	65.8	18.8	63	NNW	4.3	1.9			10		N	0.001	0.02		Dr. Hildebrandsson.

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

SWISS SERIES.

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

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	28.70	729.0	30.07	763.7	75.6	24.2	47	NNW			2		5			0	0	Vapory	The Observatory.
Zurich	28.52	724.5	30.10	764.4	73.9	23.3	66	W			1		8			0	0	Cloudy	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +1.7 mm.; Thermometer, +2.0 cent.; Relative Humidity, —6 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

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			29.76	755.8	76.3	24.6	59	NNE	16	7.0			8		WNW	0	0		
Fao, (Persian Gulf)			29.72	754.9	96.8	36.0		NW			4		0						
Salonica			29.89	759.1	81.0	27.2		NW			2		5					Raining	
Valona			29.84	758.0	74.8	23.8		NW			3		8						
Varna			29.84	758.0	77.0	25.0		NW			3		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.82	757.4	84.9	29.4	56	W			1		4k	E	W	0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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			29.66	753.4	72.0	22.2	80	SW	5	2.2			6			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			29.92	760.0	68	20.0		SW	6	2.7			10s		SW	0	0	Cloudy	W. R Bigg.
*Chatham, N. B			29.74	755.4	71	21.7	82	SW	8	3.6		10ck	0	SW		1.60	25.4	Fair	G. A. Blair.
Charlottetown, P. E. Island			29.80	756.9	72	22.2	72	W	15	6.7		2cs	0			0.34	8.6	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			29.81	757.2	72.7	22.6	82	S			2	10k	0			0.066	1.68	Unsettled	James Smith, M. A.
Dalhousie, N. B					77	25.0	73	W			1					0.42	10.7		H. A. Johnson.
Esquimault, B. C																			W. H. Bevis.
Fredericton, N. B			29.85	758.2	79.3	26.3	46	NW	10	4.5		0	2ks			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.74	755.4	52	11.1	91	W	9	4 0		0	0			0.02	0.5	Clear	James Stewart.
Goderich, Ontario			29.91	759.7	64.9	18.3	95	Calm			0		10n			0.115	2.92	Threatening	H. J. Strang, M. A.
Granton, Ontario	28.82	732.0	29.87	758.7	68	20.0		S			1		10n		N	Inap.	Inap.	Cloudy	James Grant.
*Halifax, N. S.			29.85	758.2	73	22.8	80	SW	5	2.2		0	0			0.054	1.37	Clear	F. Allison, M. A.
*Kingston, Ontario			29.92	760.0	64	17.8	90	W	6	2.7			10ks		W	0.47	11.9	Cloudy	S. Woods, M. A.
Little Glace Bay, N. S.			29.77	756.1	76.0	24.4	77	W	6	2.7		4c	0	W		0.03	0.8	Fair	C. H. Rigby.
*Montreal, Quebec			29.82	757.4	72	22.2	81	SW	11	4.9		5ck	2ks	W	E	0.23	5.8	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.82	757.4	72	22.2	62	S	8	3.6		5cs	0	SW		0	0	Fair	J. B. Haney.
*Parry Sound, Ontario			29.85	758.2	67	19.4	68	SW	8	3.6		2cs	2ks	SW	SW	0.05	1.3	Fair	Rev. R. Mosley.
*Port Dover, Ontario			29.93	760.2	64	17.8	100	SW	8	3.6			10n		SW	0.59	15.0	Heavy rain	H. Morgan.
Port Hastings, N. S.			29.80	756.9	73.6	23.1		NW	16	7.2						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			29.91	759.7	67	19.4	95	W	4	1.8		10k	0	W		0.10	2.5	Cloudy	M. Payne.
*Quebec, Quebec			29.78	756.4	72	22.2	90	W	18	8.0		5k	0	SW		0.60	15.2	Fair	Capt. Ashe, R. N.
St. John, N. B			29.88	758.9			94	SE	5	2.2		0	0			0	0	Fair	G. Murdoch, C. E.
*Saugeen, Ontario			29.83	757.7	66	18.9	80	SW	6	2.7		5k	2s		W	0	0	Cloudy	K. Stewart.
Stayner, Ontario			29.84	757.9	70	21.1	75	W	4	1.8		10k	0	W		0	0	Cloudy	R. J. Cole.
Stratford, Ontario	28.63	727.2	29.86	758.4	67.0	19.4	94	SW	7	3.1			10s			0.299	7.60	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B			29.77	756.1	76	24.4	79	SW	8	3.6		2c	0	W		0.04	1.0	Fair	T. C. Hill.
*Toronto, Ontario			29.89	759.2	66	18.9	88	W	3	1.3			8ks		W	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			29.90	759.4	68.6	20.3	90	SW	5	2.2			10s			0.19	4.8	Gloomy	J. Montgomery.
Sub-Series.																			
St. John's, Newfoundland			29.89	759.2	51	10.6		E					10n			0.07	1.8	Rain and fog	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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	78	25.6	65	S	5	2.2		2c	2k	S	S	0	0	Fair	
Alpena, Mich.			29.78	756.4	62	16.7	71	SW	6	2.7			10s		SW	Inap.	Inap.	Cloudy	
Atlantic City, N. J.			30.06	763.5	72	22.2	85	S	4	1.8		1c	Haze	W		0	0	Clear	
Augusta, Ga.			30.23	767.8	78	25.6	80	S	4	1.8		2k	0	S		0.09	2.3	Fair	
Baltimore, Md.			30.08	764.0	80	26.7	66	SW	2	0.9		2c	Haze			0	0	Fair	
Barnegat, N. J.			30.05	763.3	76	24.4	69	SW	8	3.6		1cs	0			0	0	Clear	
Benton, Montana	27.31	693.7	30.11	764.8	58	14.4	53	W	2	0.9		2c	5s			0	0	Fair	
Bismarck, Dakota	28.12	714.2	29.74	755.4	51	10.6	78	N	7	3.1			10n		N	0.19	4.8	Light rain	
Boston, Mass.			29.97	761.2	83	28.3	60	SW	4	1.8		5c	1k	W	W	0.21	5.3	Fair	
Breckenridge, Minn.			29.81	757.2	54	12.2	73	W	4	1.8		0	8ks			0	0	Cloudy	
Buffalo, N. Y.			29.89	759.2	70	21.1	85	SW	12	5.4			10ks		SW	0.13	3.3	Threatening	
Burlington, Vt.			29.86	758.4	75	23.9	68	S	10	4.5		2k	5s			0	0	Cloudy	
Cairo, Ill.			30.01	762.2	78	25.6	82	S	12	5.4		5k	0	W		0	0	Fair	
Cape Hatteras, N. C.			30.15	765.8	81	27.2	82	SW	13	5.8		2k	2k	SW		Inap.	Inap.	Fair	
Cape Henry, Va.			30.11	764.8	81	27.2	70	SW	16	7.2		5c	0	W		0	0	Fair	
Cape Lookout, N. C.			30.22	767.6	81	27.2	87	SW	20	8.9		0	5ks		SW	0.32	8.1	Fair	
Cape May, N. J.			30.07	763.8	76	24.4	76	S	12	5.4		2c	0	W		0	0	Fair	
Charleston, S. C.			30.23	767.8	85	29.4	71	SW	8	3.6		0	2k		SW	0	0	Fair	
Cheyenne, Wyoming	24.02	610.1	29.96	761.0	68	17.2	13	NW	12	5.4		0	0			0	0	Clear	
Chicago, Ill.			29.83	757.7	67	19.4	90	NW	6	2.7			10s			0.35	8.9	Cloudy	
Cincinnati, Ohio			29.91	759.7	80	26.7	74	SW	12	5.4		5k	0	W		0	0	Fair	
Cleveland, Ohio			29.90	759.4	73.4	23.0	76	SE	12	5.1			10n		S	0.05	1.3	Light rain	
Colorado Springs, Col.	24.10	612.1	29.97	761.2	63	17.2	44	N	4	1.8		0	0			0	0	Clear	
Corsicana, Tex.			30.05	763.3	77	25.0	90	S	6	2.7		5cs	0			0	0	Fair	
Davenport, Iowa			29.89	759.2	65	18.3	89	N	4	1.8		7cs	0	NW		1.13	28.7	Fair	
Denison, Tex.			30.04	763.0	77	25.0	85	SW	16	7.2			10s			0	0	Cloudy	
Denver, Col.	24.77	629.2	29.99	761.7	60	15.6	44	S	5	2.2		0	0			0.15	3.8	Clear	
Detroit, Mich.			29.86	758.4	69	20.6	90	SW	5	2.2			10n		SW	0.37	9.4	Light rain	
Dodge City, Kan.	27.22	691.4	29.37	746.0	73	22.8	81	SE	16	7.2		5c	0	W		0.28	7.1	Fair	
Dubuque, Iowa			29.86	758.4	65	18.3	83	Calm	0	0		10k	0	NW		0.30	7.6	Cloudy	
Duluth, Minn.			29.78	756.4	57	13.9	74	Calm	0	0		0	0			0	0	Clear	
Eastport, Me.			29.88	758.9	74	23.3	63	SW	3	1.3		0	0			0.37	9.4	Clear	
Erie, Pa.			29.90	759.4	75	23.9	90	W	12	5.4			10n			Inap.	Inap.	Light rain	
Escanaba, Mich.			29.76	755.9	61	16.1	66	E	6	2.7			10s		E	0	0	Cloudy	
Fort Gibson, Indian Ter.			29.93	760.2	80	26.7	78	SE	8	3.6		5k	0			0	0	Fair	
Fort St. Michael, Alaska			29.91	759.7	48	8.9	92	NE			4		10ks			0	0	Cloudy	
Fort Sill, Indian T.	28.75	730.2	29.79	756.7	79	26.1	78	SW	20	8.9		5k	0	S		0	0	Fair	
Fort Sully, Dakota	28.12	714.2	29.71	754.6	61	16.1	82	SE	12	5.4		5ck	0	NW		0	0	Fair	
Galveston, Tex.			30.11	764.8	83	28.3	74	SE	4	1.8		8c	1k		S	0	0	Cloudy	
Grand Haven, Mich.			29.86	758.4	63	17.2	94	SW	10	4.5		0	9s		W	0.66	1.5	Cloudy	
Indianapolis, Ind.			29.99	759.4	73	22.8	90	W	6	2.7			10s		W	0.30	7.6	Threatening	
Indianola, Tex.			30.09	764.3	80	26.7	86	SE	5	2.2		5ck	0			0	0	Fair	
Jacksonville, Fla.			30.22	767.6	84	28.9	75	SE	4	1.8		0	0			0.33	8.4	Clear	
Keokuk, Iowa			29.79	756.7	65	18.3	93	W	8	3.6			10s		W	2.25	57.1	Cloudy	
Key West, Fla.			30.13	765.3	79.0	26.1	78	E	17	7.6		5cs	2s	E	E	0.01	0.3	Cloudy	
Kittyhawk, N. C.			30.18	766.9	81	27.2	74	W	16	7.2		2ck	0	W		0	0	Clear	
Knoxville, Tenn.			30.15	765.8	73	22.8	90	SW	4	1.8		1ck	0	SW		0.08	2.0	Clear	
La Crosse, Wis.			29.82	757.4	65	18.3	84	S	8	3.6		0	0			0.03	0.8	Clear	
Leavenworth, Kan.			29.78	756.4	78	25.6	82	S	2	0.9			10s		SW	0	0	Cloudy	
Lexington, Ky.	28.97	735.8	30.02	762.5	77	25.0	77	S	20	8.9		2c	0	SW		0	0	Clear	
Long Branch, N. J.			30.05	763.3	87	30.6	55	SW	8	3.6		0	0			0	0	Clear	
Louisville, Ky.			29.99	761.7	77	25.0	82	S	12	5.4		0	5n		SW	0.14	3.6	Light rain	
Lynchburg, Va.			30.11	764.8	81	27.2	67	S	2	0.9		10c	0	S		0	0	Cloudy	
Malone, N. Y.			29.72	754.9	73	22.8	76	S	12	5.4		2k	8ks	NW	SW	0.08	2.0	Fair	
Manhattan, Kan.	28.65	727.7	29.73	755.1	75	23.9	85	S	20	8.9		0	0			0	0	Clear	
Marquette, Mich.			29.79	756.7	56	13.3	75	Calm	0	0		0	0			0	0	Clear	
Memphis, Tenn.			30.07	763.8	82	27.8	74	S	7	3.1		0	0			Inap.	Inap.	Clear	
Milwaukee, Wis.			29.86	758.4	65	18.3	83	W	10	4.5		0	5s		W	0.01	0.3	Fair	
Mobile, Ala.			30.18	766.6	79	26.1	90	S	4	1.8			10s		W	1.34	34.0	Cloudy	
Montgomery, Ala.			30.22	767.6	78	25.6	86	E	3	1.3		5c	0			0.01	0.3	Fair	
Morgantown, W. Va.	29.99	734.6	30.00	762.0	78	25.6	65	S	9	4.0		0	0			0	0	Clear	
Mt. Washington, N. H.	23.86	606.0	30.22	767.6	50	10.0	100	NW	40	17.9			Fog			0.35	8.9	Foggy	
Nashville, Tenn.			30.07	763.8	83	28.3	67	SW	6	2.7		2k	0	SW		0	0	Clear	
New Haven, Conn.			29.98	761.5	86	30.0	55	SW	7	3.1		Haze	Fog			Inap.	Inap.	Fair	
New London, Conn.			30.03	762.7	81	27.2	58	W	7	3.1		2c	Haze	W		Inap.	Inap.	Clear	
New Orleans, La.			30.14	765.5	83.5	28.6	77	SE	3	1.3		1k	0	SE		0.01	0.3	Clear	
Newport, R. I.			30.02	762.5	72	22.2	80	SW	6	2.7		0	0			0	0	Clear	
New York, N. Y.			30.06	763.5	75	23.9	72	W	8	3.6		0	0			0	0	Clear	
Norfolk, Va.			30.14	765.5	84	28.9	67	SW	13	5.8		2c	Haze			Inap.	Inap.	Fair	
North Platte, Neb.	26.93	684.0	29.37	746.0	65	18.3	78	E	1	0.4		2k	0			0	0	Clear	
Omaha, Neb.	28.78	731.0	29.82	757.4	63	17.2	94	N	8	3.6			10s		N	0.30	7.6	Cloudy	
Oswego, N. Y.			29.92	760.0	72	22.2	82	SW	4	1.8			10s		W	0.15	3.8	Cloudy	
Pembina, Dakota			29.70	754.4	56	13.3	80	W	4	1.8		8k	0	SW		0	0	Cloudy	
Philadelphia, Penn.			30.06	763.5	80	26.7	70	SW	7	3.1		2cs	Fog	W		0	0	Clear	
Pike's Peak, Colorado	18.03	458.0	30.24	768.1	40	4.4	48	W	20	8.9		0	0			0.01	0.3	Clear	
Pittsburgh, Penn.			29.96	761.0	70	26.1	66	S	9	4.0		5c	1k	W	W	0	0	Fair	
Port Huron, Mich.			29.84	757.9	68	20.0	90	SW	8	3.6			10s		W	0.03	0.8	Cloudy	
Portland, Me.			29.95	760.7	77	25.0	69	W	7	3.1		2c	Haze	W		0.51	13.0	Fair	
Portland, Oregon			30.18	766.9	57	13.9	81	N	6	2.7		0	0			0	0	Clear	
Punta Rassa, Fla.			30.16	766.1	82	27.8	78	NE	11	4.9		Haze	0			Inap.	Inap.	Clear	
Rochester, N. Y.			29.87	758.7	75	23.9	76	W	12	5.4		2c	5s	W	W	0.17	4.3	Fair	
Salt Lake City, Utah	25.61	650.5	29.94	760.5	68	20.0	34	Calm	0	0		0	0			0	0	Clear	
Sandy Hook, N. J.			30.03	762.7	85	29.4	61	SW	2	0.9		1cs	Haze			0	0	Clear	
San Diego, Cal.			29.91	759.7	65	18.3	83	Calm	0	0			10s			0	0	Cloudy	
San Francisco, Cal.			29.86	758.4	55	12.8	93	W	10	4.5			10s			0	0	Cloudy	
Santa Fé, N. M.	23.33	592.6	29.87	758.7	63	17.2	72	E	5	2.2		0	0			0	0	Clear	
Savannah, Ga.			30.23	767.8	90	32.2	57	SW	2	0.9		2 8	Haze			0	0	Fair	
Shreveport, La.			30.12	765.0	79.5	26.4	86	S	2	0.9		2c	0	SW		0	0	Fair	
Smithville, N. C.			30.24	768.1	81	27.2	78	SW	12	5.4		2ck	0	SW		0.01	1.0	Fair	
Springfield, Mass.			29.97	761.2	80.5	26.9	66	S	8	3.6		9ck	0			0.02	0.5	Fair	
St. Louis, Mo.			30.01	762.2	66	18.9	89	E	12	5.4			10n			0.51	13.0	Light rain	
St. Marks, Fla.			30.20	767.1	81	27.2	78	SE	6	2.7		2c	2ks	E	S	0	0	Fair	
St. Paul, Minn.			29.79	756.7	67	19.4	60	W	1	0.4		0	0			0	0	Clear	
St. Paul's Island, Alaska			29.99	761.7	40	4.4	82	SW	12	5.4			10s			Inap.	Inap.	Cloudy	
Thatcher's Island, Mass.			29.98	761.5	69	20.6	79	SW	6	2.7		0	0			0.55	14.0	Clear	
Toledo, Ohio			29.88	758.9	69	20.6	90	SW	6	2.7			10s		SW	1.01	25.7	Cloudy	
Tucson, Arizona	27.46	697.5	30.05	763.3	81	27.2		N				0	0			0	0	Clear	
Tybee Island, Ga.			30.21	767.3	83	28.3	79	SW	4	1.8		2c	5ks	W	SW	0	0	Cloudy	
Vicksburg, Miss.			30.10	766.1	82.5	28.1	76	S	3	1.3		2c	2ks			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.	24.35	618.5	29.83	757.7	51	10.6	39	Calm	0	0		0	0			0	0	Clear	
Washington, D. C.			30.08	764.0	83	28.3	65	SW	4	1.8		2c	1s	W	W	0	0	Fair	
Wilmington, N. C			30.22	767.6	82	27.8	83	SW	10	4.5		0	8ks		SW	0.31	7.9	Cloudy	
Wood's Holl, Mass.			30.04	763.0	73	22.8	80	SW	9	4.0		0	0			0	0	Clear	
Wytheville, Va.	27.87	707.9	29.95	760.7	71	21.7	85	W	4	1.8			10ks		W	0	0	Cloudy	
Yankton, Dakota	28.58	725.9	29.82	757.4	62	16.7	83	E	7	3.1		0	0			0	0	Clear	
Yuma, Arizona			29.80	756.9	90	32.2		SE				0	0			0	0	Clear	
Sub-Series.																			
Pointe-a-Pitre, G'd'loupe, do			30.08	761.0	79	26.1	90	E					10n			0.38	9.7	Hazy	L. V. Bigard.
Kingston, Jamaica, W. I.			30.21	767.3	83	28.3	75	SE	6	2.7		5c	2s			0	0		James Gall.
St. Georges, Bermudas			30.42	772.7	79.5	26.4	78	S	4	1.8		2k	2k	S				Showery	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.27	692.6	30.04	763.0	72	22.2	84	SE	4.0	1.8		2c	0	SE		0	0	Fine, clear	C. Partridge.
Paramaribo, D. Guiana, S.A			30.11	764.8	82	27.8	83	E			2	5k	5k	E		0.120	3.05	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.12	765.0			86 0	30		E								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.25	641.3			65 5	18.6	71	S	2	0.9		2c	3s			0	0	Fair	Thomas Herran.
York Factory, B. A.			29.43	747.5	47	8.3	71	S	8	3.6		1c	0	S		0.50	12.7		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.04	763.0	77	25.0	90	NE	2	0.9						0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Leipzig. N, 49° 41′. W, 19° 40′.	S82 W		29.48	748.8	60.1	15.6		SE			6		d			Heavy sea.		Raining	Capt. R. Hoffmann.

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.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the Secretary of the Navy.

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

Note.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

Collated at the Office of the CHIEF SIGNAL OFFICER OF THE ARMY, Washington, D. C.

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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			30.03	762.7	75.2	24.0	77	NNW			1		8			0.012	0.3	Cloudy	Charnot.
Algiers			30.06	763.6	77.0	25.0	76	NE			2		4			0	0	Fair	Peter.
La Calle																			Kunts.
Tunis			30.09	764.2	85.3	29.6	42	NNW			3		5			0	0	Fair	Jacques.
Sfax			30.14	765.5	85.3	29.6	45	E			4		1			0	0	Clear	Chauvey.
Saida			30.10	764.0	89.6	32.0		SE			2		2			0	0	Clear	Millot.
Tebessa			30.08	764.0	80.4	26.9		NW			3		0			0	0	Clear	Colin.
Geriville			30.09	764.3	82.9	28.3	27	SSE			4		3			0	0	Fair	Buard.
Laghouat			30.03	762.7	93.2	34.0	45	N			2		2			0	0	Clear	Guyot.
Biskra			30.13	765.3	88.2	31.2	28	Calm			0		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			29.95	760.7	78.1	25.6	60	SW			2		4			0.016	0.4	Raining	Prof. Ivan Stosir.
Cracow, I. R. Observatory			29.91	759.6	68.4	20.2	69	W			1		10			0.089	2.26		Dr. Wierzbiski.
Eperies			29.83	757.6	72.3	22.4	62	NW			2		9			0	0		Julius Mikolik.
Gratz	28.78	731.1	29.94	760.5	74.1	23.4	52	WSW			2		9			0.079	2.0		Andreas Rospini.
Hermannstadt	28.45	722.5	29.81	757.2	68.4	20.2	64	N			3		7			0	0		Prof. Reissenberger.
Kremsmünster	28.76	730.6	30.06	763.4	72.0	22.2	58	NNE			1		2			0	0		Prof. C. Wagner.
Lemberg			29.80	756.8	70.3	21.3	78	NW			1		5			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			29.97	761.3	78.4	25.8	71	WNW			2		8cks			0	0		I.R.Hydrographic Office.
Szegedin			29.87	758.8	75.6	24.2	50	NW			1		8			0	0		Karl Stancel.
Trieste			29.98	761.6	82.6	28.1	66	Calm			0		4			0	0		Prof. V. Farolfi.
Vienna			29.94	760.4	69.1	20.6	73	W			1		9			0.035	0.9		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.02	762.4	69.8	21.0	75	W			2		10		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.56	750.8	65.0	18.3		S	27	12.1			7			0	0	*D. clouds	William Boswell.
Ardrossan			29.71	754.6	61	16.1		WNW			4		4					*D. clouds	William McNeil.
Armagh, Observatory			29.75	755.6	61.5	16.4		SW	15	6.7			10					Squally	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.83	757.7	61.3	16.3		SW			2-4		7					*D. clouds	J. Dreyer.
Bradford			29.79	756.7	70.4	21.3		W			3		4			0.05	1.3	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.11	764.8	80.0	26.7		NE			2		7					Overcast	Sergt. J. F. Balanen, A.
Cambridge, Observatory			29.94	760.5	69.8	21.0		SW			2		10					Raining	H. Todd. [H. C.
Cardington			29.93	760.2	73.0	22.8		SW			3		10					Overcast	John McLaren.
Carlisle			29.64	752.8	65.5	18.6		SW			6		6			0.14	3.6	*D. clouds	T. Bel, for J. Carmell.
Chatham, School M. E			29.97	761.2	70.2	21.2		SW			2		8					Gloomy	Capt. J. Fellowes, R.E.
Dartmoor	28.59	726.2	30.07	763.8	58.4	14.7		SW			4		10					Foggy	R. L. Power.
Donaghadee			29.72	754.9	64	17.8		WSW			6		9					Overcast	J. Mac Gowan.
Dover			30.00	762.0	63	17.2		SW			4		5					½ cloudy	J. Costello.
Eccles, (near Manchester.)			29.84	756.9	70.8	21.6		SW	8.6	3.6			5					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			29.97	761.2	64.3	17.9		SW			4		10					Foggy	The Staff.
Fort Napier, (Natal)	27.50	698.5	29.74	755.4	66.7	19.3		E			2		1					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.04	763.0	84	28.9		N			1		4					*D. clouds	
Galway, Queen's College			29.86	758.4	65	18.3		W			1		3					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.05	763.3	77.0	25.0		SE			4		8					Overcast	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			29.65	753.1	61.1	16.2		W			6		9					Squally	Lewis Stuart.
Great Yarmouth			29.91	759.7	72	22.2		WSW			3		7					*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y			29.97	761.2	68.3	20.2		SW			4		10					Overcast	The Staff, for G. B. Airy.
Guernsey			30.03	762.7	66.5	19.2		SSW			1		8					*D. clouds	Dr. S. E. Hoskins.
Helston			29.92	760.0	65	18.3		SW			2		10			0.26	6.6	Misty	M. P. Moyle.
Holyhead			29.83	757.7	62	16.7		SSW			5		10					Misty	John Tilston.
Kew, Observatory			29.97	761.2	66.7	19.3		SW	19	8.5			10					Threatening	The Staff.
Kingstown			29.81	757.2	65	18.3		W			4		7					*D. clouds	George Mitchell.
Leicester Museum			29.87	758.7	71.3	21.8		SW			4		4					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)			29.95	761.0	77.6	25.3		NE			1		6					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			29.61	751.8	65	18.3		SSW			4		5					½ clouded	W. D. Penny.
Nassau, (Bahamas)			30.17	766.3	82.6	28.1		NE			4		10					Overcast	Surg. Maj. Henry.
Nottingham, Observatory			29.88	758.9	70.0	21.1		SSW			3		10k. d		SSW	0.060	1.52	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.86	758.4	66.9	19.4		SSW			4		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.91	759.7	68	20.0		SW			3		10					Gloomy	J. Lucas.
Plymouth			29.98	761.5	63	17.2		SSW			3		10					Misty	John Merrifield.
Roche's Point			29.86	758.4	64	17.8		W			5		5					Fine	W. Kennedy.
Saint Ann's Head			29.90	759.4	63	17.2		W			2		10					Overcast	John C. Walker.
Saint Helier, Jersey)			30.06	763.5	69.3	20.7		S			3		10					Overcast	A. P. Amy.
Sandwick Manse, Orkneys)			29.40	746.7	61.0	16.1		S	38	17.0			5					*D. clouds	Rev. C. Clouston, LL.D.
Scarborough			29.77	756.1	72.0	22.2		W			4		6					Blue sky	F. Shaw.
Scutari Cemetery (Turkey			29.74	755.4	65.6	18.7		NNE			2		9					Showery	Sergt. W. H. Lyne.
Sheffield			29.32	757.7	73.0	22.8		SW			4		7			0	0	Overcast	W. F. Cooper.
Silloth Rectory			30.82	757.4	69.4	20.8	59	SW			4		2			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.81	756.9	63.3	17.4		SW			4		10			Blank	Blank	Threatening	Rev. S. J. Perry.
Stornoway, Lews C. (Hebr.			29.29	744.0	57	13.9		SSW			8		10					Drizzling	John Smith.
Stratfield Turgiss			29.97	761.2	64.2	17.9		SW			2		10					Overcast	Rev. Charles H. Griffith.
Thurso			29.39	746.5	67	19.4		SSW			6		4					*D. clouds	John Trotter.
Truro, Royal Institution			29.98	761.5	66	18.9		W			2		10					Gloomy	W. Newcombe.
Valencia, Observatory			30.00	762.0	59.1	15.1		WSW	24	10.7			7					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					56	13.3		S			4		10			0.20	5.1		Thomas Dawson.
Cape Good Hope, Obs'y			30.25	768.5	52.0	11.1	80	SSW	12	5.4		3	4						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.34	763.0	56.5	13.6	93	NW			3		8k			0.01	0.3		Francis Abbott, F.R.A.S.
Leith, Restaurig Park			29.98	753.9	64.4	18.0		SW			4		9k			0.03	0.8	Cloudy	Andrew Gibb.
Mauritius, Observatory			30.12	765.0				ESE	11.9	5.3						0.03	0.8		C. Meldrum
Melbourne, Observatory			30.19	766.8	45.1	7.3	96	S	2	0.9			5			0.03	0.8	Fine, foggy	R. L. J. Ellery.
Monach Lighthouse, Hebrides			29.22	742.2	55	12.8		WSW			7		10			0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.51	749.5	55	12.8		SE			7		10						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. *The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in* lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. *The altitude of Dartmoor is 1,400 feet, or 426.7 meters;* Fort Napier, 2,290 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			29.84	758.9	64.9	18.3	61	NNW			2		10						
Fanöe			29.91	759.7	64.9	18.3	67	W			4		5						
Godthaab, (Greenland)			29.57	751.1															
Stykkisholm, (Iceland)			29.52	749.9	53.4	11.9	84	E			2		8						
Thorshavn, (Faröe)			29.40	746.7	51.8	11.0	90	S			2		10					Rain and fog	
Vestervig			29.86	758.4	63.3	17.4	68	WSW			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. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.00	764.2	69.8	21	45	SW			2	2c		SW		0	0	Slightly cl'dy	Normal School.
Amiens			30.03	762.7	79.5	26.4	57	NW			3		0			0	0	Clear	Normal School.
Avignon			30.01	762.3	86.0	30	47	N			2		0			0	0	Very clear	Normal School.
Bar-sur-Seine			30.04	763.1	78.4	25.8	48	N			2		5		W	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)			30.04	763.1	78.4	25.8	40	W	3.1	1.4			5		SW	0	0	Cloudy	Beaumette Observatory.
Beauvais			30.06	763.4	78.4	25.8	47	WSW			2		8		WSW	0	0	Very cloudy	Normal School.
Besançon			30.07	763.7	80.2	26.8	50	SSE			2		2		S	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse			30.13	765.3	82.4	28	51	NW			2		1k		SE			Clear	Normal School.
Bourges			30.487	774.22	74.3	23.5	69	W			2		5		NE	0	0	Cloudy	Normal School.
Brest			29.99	761.8	63.1	17.3	85	SW			4		10		SW			Raining	Naval Observatory.
Carcassonne			30.03	762.7	77.5	25.3	47	W			1		5		E	0	0	Cloudy	Normal School.
Caen			30.07	763.7	70.9	21.6	56	WSW			2	..c		NE		0	0		Normal School.
Chartres			30.00	762.0	81.5	27.5	69	SW			2		1		SW	0	0		Normal School.
Clermont			29.96	761.0	78.3	25.7	50	N			1		8			0	0		Puy de Dome Obs'y.
Commercy			30.07	763.8	72.1	22.3	66	NW			2		5kn		NW	0.094	2.4	Cloudy	Normal School.
Commune de Greasque*			30.10	764.4	81.3	27.4	42	SW			2		5		E	0	0		M. Kina.
Grenoble			30.02	762.6	80.8	27.1	64	NNW			4		2k		E	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.09	764.3	77.4	25.2	57	NW			1		0			0	0	Clear	Normal School.
Le Mans			30.04	763.1	75.2	24	65	WSW			3		2		WSW	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier			30.09	764.2	78.1	25.6	51	N			1		0			0	0	Clear	Normal School.
Mâcon			30.30	769.6	78.6	25.9	63	N			2		0			0	0	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			30.04	762.9	73.9	23.3	64	N			1		5		E	0	0	Cloudy	Normal School.
Nismes			30.00	762.1	83.1	28.4	55	N			2		2		S	0	0	Slightly cl'dy	Normal School.
Orleans			30.02	762.4	82.4	28	18	3W			2		2		W	0	0	Slightly cl'dy	Normal School.
Paris, Observatory			30.04	763.1	80.2	26.8	43	WSW			2		6k		W	0	0	Cloudy	National Observatory.
Parthenay			30.13	765.4	81.5	27.5	66	N			2		5		N	0	0	Cloudy	Normal School.
Privas			30.03	762.8	82.9	28.3		ENE			2		2		ENE	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.10	764.5	82.0	27.8	56	WNW			2		0			0	0	Blue sky	Naval Observatory.
Rouen			30.04	762.9	76.6	24.8	61	W			2		2		S	0	0	Slightly cl'dy	Normal School.
Saint Lo			29.70	754.4	72.0	22.2	72	NW			3		10		W	0	0		Normal School.
Tarbes	28.99	736.4	30.04	763.0	71.6	22		ESE			1		0			0	0	Clear	Normal School
Villefranche			30.08	764.0	80.6	27	80	NNE			1		5			0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			30.00	762.0	78.8	26													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.30	769.5	68.5	20.3	72	SE	14.9	6.66			3		NW	0	0		—. Falguère.
Montsouris, Paris			30.05	763.3	82.8	28.2	44	W			1		7		SW	0	0		Montsouris Observ'tory.
Perpignan			30.02	762.6	83.8	28.8	59	S	9.3	4.17			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)			30.05	763.8	81.0	27.2	45	Var.			1		5			0	0	Cloudy	E. Renou.
Toulouse			30.12	765.0	77.9	25.5	57	NW			1		3			0	0		Toulouse Observatory.
Tours			30.06	763.5	80.6	27.0	43	W			3		3		WNW	0	0		C. Marquet.
Versailles, (near Paris)			30.06	763.4	79.2	26.2	46	W			2		7			0	0	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shaughai)																			H. Le Leo, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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			29.99	761.8	74.1	23.4	59	W			5		8	W		0	0		Prof. T. Hoh.
Berlin			29.94	760.5	73.2	22.9	47	SW			3		4			0.035	0.9		Prof. Arndt.
Breslau			29.98	761.6	69.4	20.8	64	NW			7		9			0.035	0.9		Dr. P. Neugebauer.
Carlsruhe			30.00	762.1	76.6	24.8	56	SW			4		7			0.031	0.8		A. Senz.
Cassel			30.00	762.0	75.4	24.1	62	NW			4		8	NW		0	0		Dr. H. Möhl.
Emden			29.87	758.8	74.8	23.8	64	WSW			7		2			0	0		Prof. Prestel.
Frankfort on the Main			30.07	763.8	76.8	24.9	52	WSW			1		4			Inap.	Inap.		Physical Society.
Friedrichshafen			30.00	762.1	75.0	23.9	78	SW			2		9			0	0		M. Wilhelm.
Hamburg			29.94	760.5	72.1	22.3	67	WSW			2		8k			0.051	1.3		Captain F. Hegemann.
Kiel			29.92	759.9	69.3	20.7	65	W			3		10			0.012	0.3		Prof. G. Karston.
Königsberg, (Prussia.)			29.82	757.3	68.9	20.5	60	W			5		4			0	0		Prof. E. Luther.
Köslin			29.91	759.8	67.3	19.6		NNW			5		10			0.102	2.6		H. Müller.
Leipsic			29.98	761.6	73.0	22.8	63	W			3		8	WNW		0.012	0.3	Misty	Prof. Bruhns.
Memel			29.85	758.3	63.9	17.7	78	WNW			2		1k			0	0		Reinbrecht & Skalweit.
Münster			30.05	763.2	68.5	20.3	74	SW			5		4			0	0		Prof. E. Heis.
Neufahrwasser			29.87	758.7	67.6	19.8	69	NNE			1		4			0	0		A. Lothes.
Posen			29.94	760.4	83.5	28.6	62	NW			1		9			0.043	1.1		Dr. Magener.
Strassburg, (in Alsace)			30.04	763.1	76.6	24.8	48	NNW			2		10			0	0		Dr. Schur.
Stuttgart			30.02	762.6	76.1	24.5	53	N			1		2			0	0		Prof. Schoder.
Thorn			29.87	758.6	76.3	24.6	44	N			3		7			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.00	761.9	76.1	24.5	49	W			5		4			0	0		Prof. Flesch.
Wustrow, Naval School			30.00	762.1	66.4	19.1	59	W			3		3			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	757.9	78.4	25.8		NW					k					Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	81.3	27.4	46	W	0.7	0.3			7			0	0		
Padua			29.95	760.8	81.1	27.3	36	W	6.3	2.8			5			0	0		
Vicenza			29.95	760.7	83.5	28.6	36	SW	6.3	2.8			3	W		0	0		
Verona			29.97	761.1	80.0	30.0	54	E			1		0			0	0		
Bergamo	28.65	727.6	29.90	759.5	83.1	28.4	43	SW			2		3			0	0		
Domodossola	28.95	735.3	29.93	760.3	79.7	26.5	61	S			2		6			0	0		
Milan			29.95	760.6	87.4	30.8	47	W			2		2	NW		0	0		
Pavia			29.99	761.8	83.5	28.6	40	W			4		0			0	0		
Moncalieri			29.96	760.9	81.0	27.2	57	SW	2.5	1.1			3	NE		0	0		
Mondovi	28.12	714.2	29.94	760.4	77.9	25.5	50	ENE			2		1	NNW		0	0		
Porto Maurizio			30.06	763.4	78.8	26.0	67	SE			2		3			0	0		
Genoa			29.98	761.6	77.0	25.0	65	SW	1.3	0.6			0			0	0		
Piacenza			29.98	761.4	81.7	27.6	42	NE	2.5	1.1			3	NE		0	0		
Parma			29.96	760.9	85.1	29.5	48	SE			2		2			0	0		
Bologna			30.01	762.2	85.3	29.6	43	SE			6		2	W		0	0		
Florence			30.00	762.0	83.8	28.8	27	W			2		0			0	0		
Leghorn			30.01	762.3	78.1	25.6	54	WNW	2.5	1.1			4			0	0		
Siena	28.80	731.5	29.96	760.9	81.0	27.2	34	SE	0	0			4	NE		0	0		
Urbino	28.52	724.4	30.02	762.5	75.0	23.9	38	NE			4		3			0	0		
Pesaro																			
Ancona			30.00	761.9	78.8	26.0	56	NNE			4		1			0	0		
Grosseto			30.00	762.1	85.3	29.6	31	NNW			4		5	NW		0	0		
Rome			29.97	761.3	82.9	28.3	44	SW	7.4	3.3			3			0	0		
Naples, O. U.			29.98	761.4	84.9	29.4	38	SW			2		2	NE		0	0		
Lecce			29.93	760.3	78.8	26.0	40	NNE	12.5	5.6			3			0	0		
Cosenza			29.94	760.4	85.6	29.8	61	NW	1.8	0.8			7			0	0		
Riposto, (Sicily)			29.99	761.7	82.8	28.2	63	ESE			2		5	SW		0	0		
Palermo			29.95	760.6	77.7	25.4	63	ENE	9.8	4.4			9			0	0		
Caltanissetta	28.02	711.8	29.89	759.1	76.6	24.8	32	NE			4		6	SW		0	0		
Sub-Series.																			
Naples, S. R.			29.99	761.7	82.0	27.8	41	WSW	0	0			3	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			30.04	763.1	66.4	19.1		WNW			4								
Groningen			29.89	759.1	72.5	22.5		SW			4								
Helder			29.94	760.5	67.5	19.7		SW			4								
Utrecht			29.96	761.0	69.3	20.7	76	WSW			3		10					Dull	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.77	756.1	61.7	16.5	78	SSW	12.1	5.4			5			0.087	2.2		
Brönö			29.70	754.4	71.6	22.0	50	Calm	0	0			7			0	0		
Christiania			29.76	755.9	68.2	20.1	69	SE	2.0	0.9			10			0.240	6.1		
Tromsö			29.74	755.3	65.1	18.4	59	Calm	0	0			0			0.209	5.3		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 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,)			30.26	768.5	73.2	22.9	86	W	16.4	7.33			7			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.00	762.1	87.4	30.8	32	SSW	6.9	3.09			5	E		0.066	1.67		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.23	767.8	71.2	21.8	67	SW	4.1	1.78			10			0	0		Capt. D. A. da Cunha.
Lisbon			30.11	764.8	72.3	22.4	56	N	12.5	5.6			1	E		0	0		The Observatory.

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

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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	757.6	73.0	23.8	42	WSW	9	4			6						Astronomical Obs.
Wilna			29.77	756.1	63.5	17.8	74	W	4	2			9						Astronomical Obs.
Dorpat			29.72	754.8	71.6	22.0	52	N	7	3			4						Physical Cabinet.
St. Petersburg			29.70	754.4	70.3	21.3	54	N	7	3			7						Central Physical Obs.
Kuopio			29.74	755.5	69.1	20.6	67	NE	13	6			10						Ch. Forsten.
Kieff			29.71	754.7	70.9	21.6	41	WNW	9	4			5						Physical Cabinet.
Nikolaiev			29.79	756.6	83.5	28.6	47	SW	12	5			7					Thunder-storm	Kurdakof.
Kertch			29.78	756.4	82.6	28.1	50	ENE	2	1			1						Lagorio.
Moscow			29.66	753.3	72.1	22.3	53	SSW	9	4			6						Meteorological Obs.
Lugan			29.67	753.5	83.3	28.5	39	SW	13	6			6						Meteorological Obs.
Archangel			29.71	754.6	73.8	23.2	28	NE	18	8			8						Ogorodnikof.
Tiflis	28.43	722.2	29.75	755.7	86.0	30.0	37	E	12	5			5						Physical Observatory.
Astrakhan			29.87	758.8	84.6	29.2	36	ESE	7	3			3						Sebastianof.
Kasan			29.63	752.7	66.6	19.2	64	Calm	0	0			7						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.79	731.2	29.71	754.6	61.3	16.3	93	ENE	4	2			10					Raining	Meteorological Obs.
Nukuss			29.60	751.7	93.9	34.4	22	NNE	13	6			1						
Kasaly																			Bobrof.
Tashkend	27.98	710.8	29.53	750.0	94.5	34.7	31	Calm	0	0			0						Michelson.
Barnaul			29.50	750.7	73.9	23.3	57	NW	9	4			9						Meteorological Obs.
Yeniseisk			29.17	740.8	68.5	20.3	82	SSW	4	2			4			Blank	Blank		Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.89	759.1	81.9	29.4	53	Calm	0	0			3						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.89	759.3	59.0	15.0	99	Calm	0	0			10			Blank	Blank		
Nikolalevsk, on the Amoor					51.8	11.0	90	N	4	2			9						

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 300.4? m., or 1,005.2? ft.; Tashkend, 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			29.93	760.3	87.6	30.9	27	NE	2.2	1.00		0	4			0	0	Cloudy	Royal Observatory.
San Fernando			30.08	764.1	73.4	23.0	65	WSW	8.1	3.6		2	2	W	WSW				The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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	71.2	21.8	43	SW			2		0			0	0		
Umea			29.80	756.9	70.9	21.6	48	S			4		5			0	0		
Hernosand			29.77	756.1	70.0	21.1	60	E			2		2			0	0		
Stockholm			29.75	755.7	75.2	24.0	50	SE			2		6			0	0		
Wisby			29.80	758.5	66.2	19.0	83	NNW			4		0			0	0		
Sub-Series.																			
Upsala			29.75	755.7	70.7	21.5	54	WNW	5.4	2.4			8		SW	0	0		Dr. Hildebrandsson.

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

SWISS SERIES.

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

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	727.8	30.02	762.4	76 1	24.5	49	NNE			2		3			0	0	Clouds	The Observatory.
Zurich	28.45	722.6	30.00	762.1	79.3	26.3	55	NW			1		4			0	0	Cloudy	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +0.5 mm; Thermometer, +2.3 cent.; Relative Humidity, —4 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

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.	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From —	Miles per hour.	Meters per second.	0–10.	Up'er 0—10.	Low'r 0—10.	Upper. From —	Lower. From —	Inches.	Mill meters.	Weather.	Observer.
Constantinople			29.78	756.5	66.2	19.0	88	NNE	13	6.0			10		SE	1.890	48.0	Thunder-storm	
Fao, (Persian Gulf)			29.69	754.0	86.0	30.0		NW			4		0					Dusty	
Salonica			29.90	759.5	78.1	25.6		W			1		2			Blank	Blank		
Valona			29.88	759.0	77.4	25.2		NW			3		5						
Varna			29.84	758 0	75.2	24.0		W			2		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.80	756.9	89.1	31.7	52	WSW			1		3k		SW	0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

Station.	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From —	Miles per hour.	Meters per second.	0–10.	Up'er 0—10.	Low'r 0—10.	Upper. From —	Lower. From —	Inches.	Mill meters.	Weather.	Observer.
Bathurst, N. B			29.80	756.9	71.0	21.7	62	NW	7	3.1			2			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			29.94	760.5	63	17.2		SW	5	2.2			10s		SW	0	0	Cloudy	W. R Bigg.
*Chatham, N. B			29.83	757.7	71	21.7	72	NW	5	2.2		0	0			0.05	1.3	Clear	G. A. Blair.
Charlottetown, P. E. Island			29.80	756.9	69	20.6	68	W	16	7.2		0	0			0.09	2.3	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			29.93	760.2	76.7	24.8	70	S			3	0	Haze			0	0	Clearing	James Smith, M. A.
Dalhousie, N. B					66	18.9	74	W			5					0	0		H. A. Johnson.
Esquimault, B. C																			W. H. Bevis.
Fredericton, N. B			29.89	759.2	70.4	21.3	72	NW	7	3.1		7c	0			0.405	10.29	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.72	754.9	50	10.0	93	W	4	1.8		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			29.78	756.4	69.4	20.8	83	SE			2		8n			0	0	Threatening	H. J. Strang, M. A.
Granton, Ontario	28.81	731.8	29.86	758.4	67.2	19.6		SE			1	2cs	0	N		0.11	2.8	Clear	James Grant.
*Halifax, N. S.			29.80	756.9	66	18.9	94	NW	5	2.2			5ks		NW	0.439	11.15	Fair	F. Allison, M. A.
*Kingston, Ontario			30.02	762.5	62	16.7	100	SW	2	0.9			Fog		SW	0.03	0.8	Foggy	S. Woods, M. A.
Little Glace Bay, N. S.			29.69	754.1	72.2	22.3	82	SW	8	3.6		6k	0	SW		0.02	0.5	Fair	C. H. Rigby.
*Montreal, Quebec			29.94	760.5	67	19.4	83	SW	11	4.9		2c	2k	W	SW	0.09	2.3	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			29.82	757.4	67	19.4	64	S	3	1.3		2c	0	SW		0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			29.86	758.4	66	18.9	89	E	8	3.6		2ck	5ks	S	S	0	0	Fair	Rev. R. Mosley.
*Port Dover, Ontario			29.95	760.7	65	18.3	94	SE	2	0.9		10k	0	SW		0.29	7.4	Fair	H. Morgan.
Port Hastings, N. S.			29.80	756.9	69.8	21.0		NW	12	5.4						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			29.90	759.4	69	20.6	96	E	8	3.6		10cs	0	SW		0.27	6.9	Cloudy	M. Payne.
*Quebec, Quebec			29.94	760.5	71	21.7	90	Calm	0	0		5c	0			0	0	Fair	Capt. Aslie, R. N.
St. John, N. B.			29.89	759.2	62	16.7	88	Calm	0	0		7c	0			0.10	2.5	Rain and fog	G. Murdoch, C. E.
*Saugeen, Ontario			29.80	756.7	67	19.4	86	SE	6	2 7			10ks			0	0	Cloudy	K. Stewart.
Stayner, Ontario			29.87	758.7	68	20.0	89	SE	4	1.8			Haze			0	0	Hazy	R. J. Cole.
Stratford, Ontario	28.63	727.2	29.86	758.4	65.8	18.8	93	S	8	3.6		7cs	0			0.070	1.93	Fair	C. J. MacGregor, M. A.
*Sydney, C. B			29.74	755.4	67	19.4	92	W	8	3.6		8k	8ks		W	0.02	0.5	Fair	T. C. Hill.
*Toronto, Ontario			29.95	760.7	63	17.2	100	SE	2	0.9			Fog			0.20	5.1	Foggy	Magnetic Observatory
Woodstock, Ontario			29.90	759.4	68.7	20.4	90	SE	7	3.1			9s			0.17	4.3	Fine	J. Montgomery
Sub-Series.																			
St. John's, Newfoundland			29.82	757.4	69	20.6		S					10n			0	0	Cloudy	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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.			30.00	762.0	69	20.6	75	Calm	0	0		5c	Haze	NW		0.04	1.0	Fair	
Alpena, Mich			29.71	754.6	63	17.2	94	SE	4	1.8			10s		SW	0.54	13.7	Cloudy	
Atlantic City, N. J			30.04	763.0	73	22.8	85	SW	2	0.9		1cs	Haze	NW		0.08	2.0	Clear	
Augusta, Ga.			30.20	767.1	79	26.1	78	S	3	1.3		0	0			0.03	0.8	Clear	
Baltimore, Md.			30.04	763.0	80	26.7	66	SW	4	1.8		5ck	Sm'e			0.22	5.6	Fair	
Barnegat, N. J.			30.03	762.7	84	28.9	71	W	9	4.0		2c	0	W		0.11	2.8	Fair	
Benton, Montana	26.99	685.5	29.79	756.7	65	18.3	26	SW	6	2.7		5c	5s	NE	SW	0	0	Cloudy	
Bismarck, Dakota	28.00	713.5	29.68	753.9	59	15.0	58	Calm	0	0		5c	Haze	N		0.14	3.6	Fair	
Boston, Mass			29.96	761.0	78	25.6	65	W	11	4.9		8c	1k	W	W	0	0	Fair	
Breckenridge, Minn			29.82	757.4	52	11.1	86	S	8	3.6		0	5s			0.60	15.2	Fair	
Buffalo, N. Y.			29.92	760.0	68	20.0	81	S	2	0.9		5c	0	W		0.19	4.8	Fair	
Burlington, Vt.			29.98	761.5	69	20.6	70	W	4	1.8		2c	2s			0.17	4.3	Fair	
Cairo, Ill.			30.03	762.7	76	24.4	86	SW	3	1.3		8ck	0	W		0	0	Fair	
Cape Hatteras, N. C.			30.13	765.3	82	27.8	78	SW	16	7.2		2ck	2ks			0	0	Fair	
Cape Henry, Va.			30.09	764.3	81	27.2	74	SW	14	6.3		5c	0	SW		0	0	Fair	
Cape Lookout, N. C.			30.20	767.1	82	27.8	74	SW	17	7.6		5k	0	SW		0	0	Fair	
Cape May, N. J.			30.04	763.0	74	23.3	85	S	12	5.4		2c	Haze	W		0.51	13.0	Fair	
Charleston, S. C.			30.21	767.3	85	29.4	71	SW	5	2.2		0	2ks		SW	0	0	Fair	
Cheyenne, Wyoming	24.10	612.1	30.01	763.0	54	12.2	73	S	12	5.4		0	0			0	0	Clear	
Chicago, Ill.			29.55	750.6	70	21.1	71	NW	24	10.7		2cs	5s	W	NW	0.25	6.3	Fair	
Cincinnati, Ohio			29.88	758.9	70	26.1	69	SW	12	5.4		5c	0			0.01	0.3	Fair	
Cleveland, Ohio			29.87	758.7	72.7	22.6	83	S	14	6.3			10n		SW	0.18	4.6	Light rain	
Colorado Springs, Col.	24.18	614.2	30.05	763.3	56	13.3	81	N	8	3.6		0	0			0	0	Clear	
Columbia, Tex.			30.01	762.2	75	23.9	95	S	4	1.8		8cs	0			0.37	9.4	Cloudy	
Davenport, Iowa			29.86	758.4	66	18.9	84	W	12	5.4		5cs	5ks	W	W	0.65	16.5	Fair	
Denison, Tex.			30.01	762.2	81	27.2	74	SW	12	5.4		0	0			0	0	Clear	
Denver, Col.	24.87	631.7	30.09	764.3	58	14.4	53	Calm	0	0		0	0			0	0	Clear	
Detroit, Mich			29.73	755.1	69	20.6	90	S	10	4.5		2cs	8s		SW	0.33	8.4	Clearing	
Dodge City, Kan.	27.38	695.4	29.57	751.1	67	19.4	90	N	14	6.3			10ks			Inap.	Inap.	Threatening	
Dubuque, Iowa			29.79	756.7	67	19.4	84	SW	9	4.0		5c	0	SW		0.55	14.0	Fair	
Duluth, Minn.			29.78	756.4	58	14.4	57	SW	1	0.4		0	0			0.25	6.3	Clear	
Eastport, Me.			29.80	759.2	72	22.2	67	NW	5	2.2		8c	0			0.07	1.8	Fair	
Erie, Pa.			29.91	759.7	72	22.2	85	S	8	3.6		4ck	4ks	SW	SW	0.35	8.9	Fair	
Escanaba, Mich			29.73	755.1	60	15.6	88	N	12	5.4			10s		N	0.06	1.5	Cloudy	
Fort Gibson, Indian Ter.			29.94	760.5	85	29.4	71	W	10	4.5		0	0			0	0	Clear	
Fort St. Michael, Alaska			30.05	763.3	42	5.6	91	S			4		10ks			0.09	2.3	Cloudy	
Fort Sill, Indian T.	28.76	730.5	29.81	757.2	80	26.7	78	S	8	3.6		0	0			0	0	Clear	
Fort Sully, Dakota	28.23	717.0	29.84	757.9	62	16.7	83	SE	4	1.8		1c	0			0	0	Clear	
Galveston, Tex.			30.05	763.3	83	28.3	74	S	4	1.8		5k	0	S		0	0	Fair	
Grand Haven, Mich			29.55	750.6	66	18.9	97	E	8	3.6			10n		S	1.67	27.2	Light rain	
Indianapolis, Ind.			29.82	757.4	74	23.3	81	S	13	5.8			10s			0.67	17.0	Cloudy	
Indianola, Tex.			30.02	762.5	81	27.2	82	Calm	0	0		2k	0			0	0	Fair	
Jacksonville, Fla.			30.20	767.1	80	26.7	82	SE	4	1.8		10k	0	SE		0	0	Cloudy	
Keokuk, Iowa			29.84	757.9	68	20.0	91	SW	2	0.9			10s		SW	3.06	77.7	Cloudy	
Key West, Fla.			30.11	764.8	81.0	27.2	78	SE	13	5.8		8cs	1ks	S		0	0	Cloudy	
Kittyhawk, N. C.			30.16	766.1	81	27.2	74	W	18	8.0		5k	0	W		0	0	Fair	
Knoxville, Tenn			30.13	765.3	71	21.7	90	SW	4	1.8			10ks		SW	0	0	Cloudy	
La Crosse, Wis.			29.76	755.9	66	18.9	90	N	8	3.6		2k	0	N		0.26	6.6	Fair	
Leavenworth, Kan			29.76	755.9	76	24.4	81	SE	2	0.9		0	5s		W	0	0	Fair	
Lexington, Ky.	28.94	735.1	30.00	762.0	73	22.8	80	S	16	7.2		8k	0	SW		0	0	Cloudy	
Long Branch, N. J.			30.04	762.7	85	29.4	61	W	2	0.9		5c	0	W		0	0	Fair	
Louisville, Ky.			29.97	761.2	79	26.1	70	S	16	7.2		0	2ks		S	0	0	Clear	
Lynchburg, Va.			30.01	763.5	81	27.2	70	W	4	1.8		2ck	0	SW		0.07	1.8	Clear	
Malone, N. Y.			29.91	759.7	70	21.1	71	SW	4	1.8		5c	0	NW		0	0	Fair	
Manhattan, Kan.	28.74	730.0	29.83	757.7	70	21.1	84	SW	8	3.6		2cs	0			0	0	Clear	
Marquette, Mich.			29.75	755.6	61	16.1	82	NW	4	1.8		5cs	0	SW		0	0	Fair	
Memphis, Tenn			30.05	763.3	82	27.8	70	SW	8	3.6		0	0			0	0	Clear	
Milwaukee, Wis.			29.57	751.1	61	16.1	94	N	20	8.9			10s		N	2.10	53.3	Cloudy	
Mobile, Ala.			30.15	765.8	82	27.8	82	SE	4	1.8		5c	0			0	0	Fair	
Montgomery, Ala.			30.14	765.5	74	23.3	85	E	4	1.8		5ck	0			0	0	Fair	
Morgantown, W. Va.	28.09	736.3	29.99	761.7	76	24.4	72	S	7	3.1		8c	0	W		0.47	11.9	Fair	
Mt. Washington, N. H.	23.89	606.8	30.25	768.3	45	7.2	92	NW	40	17.9		8c	2s	NW	NW	1.50	38.1	Fair	
Nashville, Tenn			30.14	765.0	81	27.2	70	S	6	2.7		2c	0	SW		0.03	0.8	Clear	
New Haven, Conn			30.01	762.2	82	27.8	58	NW	4	1.8		8k	Haze	SW		0	0	Cloudy	
New London, Conn			30.02	762.5	80	26.7	61	SW	3	1.3		5c	2k	W	N	0	0	Fair	
New Orleans, La			30.10	764.5	82	27.8	76	SE	4	1.8		2c	0	W		Inap.	Inap.	Clear	
Newport, R. I.			30.00	762.0	77	25.0	69	SW	4	1.8		10cs	0	SW		0	0	Cloudy	
New York, N. Y.			30.02	762.5	78	25.6	65	NW	5	2.2		2c	Haze			0	0	Fair	
Norfolk, Va.			30.12	765.0	86	30.0	65	SW	14	6.3		8c	0	SE		0	0	Fair	
North Platte, Neb.			29.58	751.3	60	15.6	65	E	8	3.6		5k	0	W		0	0	Fair	
Omaha, Neb.	27.09	688.1	29.84	757.9	67	19.4	90	N	1	0.4		0	5s		N	0.72	18.3	Fair	
Oswego, N. Y.	28.81	731.8	29.99	761.7	67	19.4	90	SE	4	1.8		8cs	2s		S	0.43	10.9	Cloudy	
Pembina, Dakota			29.71	754.6	56	13.3	80	SW	4	1.8		0	0			0	0	Clear	
Philadelphia, Penn			30.03	762.7	79	26.1	69	N	2	0.9		2ck	Fog	NW		0.03	0.8	Foggy	
Pike's Peak, Colorado	18.01	457.4	30.22	767.6	38	3.3	54	SW	16	7.2		0	0			0	0	Clear	
Pittsburgh, Penn			29.97	761.2	73	22.8	85	SW	12	5.4			10s		SW	0.38	9.7	Cloudy	
Port Huron, Mich			29.77	756.1	67	19.4	90	S	12	5.4			10n		S	0.06	1.5	Light rain	
Portland, Me.			29.96	761.0	73	22.8	72	N	6	2.7		5c	Haze			1.02	25.9	Fair	
Portland, Oregon			30.09	764.3	57	13.9	81	Calm	0	0		0	0			0	0	Clear	
Punta Rassa, Fla.			30.15	765.8	79	26.1	78	E	12	5.4		5k	5s	SE	SE	Inap.	Inap.	Cloudy	
Rochester, N. Y.			29.95	760.7	68	20.0	79	SW	4	1.8		8c	Haze	W		0.12	3.0	Fair	
Salt Lake City, Utah	25.60	653.2	29.93	760.2	66	18.9	32	Calm	0	0		0	0			0	0	Clear	
Sandy Hook, N. J.			30.01	762.2	78	25.6	78	W	7	3.1		8c	Haze	SW		0	0	Fair	
San Diego, Cal.			29.87	758.7	65	18.3	83	NW	4	1.8			10s		NW	0	0	Cloudy	
San Francisco, Cal.			29.82	757.4	56	13.3	87	SW	8	3.6			10s			0	0	Cloudy	
Santa Fe, N. M.			29.82	757.4	61	16.1	60	NE	1	0.4		2k	0	SW		0	0	Fair	
Savannah, Ga.	23.28	591.3	30.20	767.1	89	31.7	66	Calm	0	0		2k	0			0	0	Clear	
Shreveport, La.			30.09	764.3	77	25.0	86	S	2	0.9		5c	0	W		0	0	Fair	
Smithville, N. C.			30.21	767.3	82	27.8	74	SW	8	3.6		2k	0	SW		0	0	Fair	
Springfield, Mass.			29.99	761.7	79	26.1	57	NW	4	1.8		8cs	0	SW		0.02	0.5	Fair	
St. Louis, Mo.			29.98	761.5	70	21.1	84	W	12	5.4			10n			0.35	8.9	Light rain	
St. Marks, Fla			30.17	766.3	80	26.7	78	E	5	2.2		2cs	2ks		SE	0	0	Fair	
St. Paul, Minn.			29.80	756.9	63	17.2	75	N	2	0.9		0	0			0.11	2.8	Clear	
St. Paul's Island, Alaska			30.17	766.3	42	5.6	83	SE	5	2.2			10s		SE	0	0	Cloudy	
Thatcher's Island, Mass.			29.96	761.0	70	21.1	45	NW	7	3.1		8c	0	NW		0	0	Fair	
Toledo, Ohio			29.75	755.6	71	21.7	95	Calm	0	0			10ks		S	0.23	5.8	Cloudy	
Tucson, Arizona	27.42	696.5	30.01	762.2	85	29.4		NE				8k	0	E		0	0	Fair	
Tybee Island, Ga.			30.19	766.8	84	28.9	73	S	6	2.7		5k	0	S		0	0	Fair	
Vicksburg, Miss.			30.13	765.3	78	25.6	86	S	6	2.7		2cs	0	S		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
Virginia City, M. T.	24.20	614.7	29.68	753.9	55	12.8	44	Calm	0	0		0	0			0	0	Clear	
Washington, D. C.			30.05	763.3	79	26.1	76	SW	4	1.8		2ck	2s	W	W	0.31	7.9	Fair	
Wilmington, N. C.			30.20	767.1	80	26.7	82	SW	8	3.6		2cs	2ks		SW	0	0	Fair	
Wood's Holl, Mass.			30.00	762.0	76	24.4	76	SW	4	1.8		2c	0	SW		0	0	Clear	
Wytheville, Va.	27.83	706.9	29.92	760.0	68	20.0	90	Calm	0	0			10ks		W	0.04	1.0	Cloudy	
Yankton, Dakota	28.65	727.7	29.91	759.7	57	13.9	87	NW	8	3.6		0	2s		NW	0.22	5.6	Fair	
Yuma, Arizona			29.78	756.4	85	29.4		SE				0	Haze			0	0	Clear	
Sub Series.																			
P'nte-a-Pitre, G'd'Tpe. W. I.			30.10	764.5	81	27.2	82	E				0	8ks			0.39	9.9	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.			30.22	767.6	83	28.3	74	SE	5	2.2		8c	2s		NE	0	0		James Gall.
St. Georges, Bermudas			30.30	769.6	77.5	25.3	82	S	3	1.3		5, k	2pk	E		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.	27.28	692.9	30.06	763.5	71	21.7	84												C. Partridge.
Paramaribo, D. Guiana, S. A.			30.13	765.3	80	26.7	82	E			1	6ks ?	6ks	E		0.160	4.06	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.11	764.8			84.2	29		E								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640.6			64.0	17.8	69	S	2	0.9		3k	2s			0	0	Fair	Thomas Herran.
York Factory, B. A.			29.45	748.0	50	10.0	82	N	8	3.6		2c	0	N		1.80	45.7		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.			30.05	763.3	77	25.0	90	NE			3					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Sch'ner Addie Fuller at Damariscotta, Me.			30.01	762.2	76	24.4		SW			6	5c						Fair	Capt. James Jorgensen.
Steamer Leipzig. N, 49° 36′. W, 25° 35′.	370 W		29.87	758.7	59.0	15.0		SW			3		..k			Smooth		Overcast	Capt. R. Hoffmann.

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, 6,012.4 ft., or 1,833.7 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, 1,109 (?) 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.; Morgantown, 1,027.9 ft., or 313.3 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, 1,051.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,262.2 ft., or 1,299.2 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 added 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

Brig. Gen. (Brt. Assg'd.) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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			30.07	763.7	76.6	24.8	71	NNW			2		7			0.020	0.5	Cloudy	Charnot.
Algiers			30.07	763.7	78.4	25.8	76	N			1		9			0	0	Hidden	Peter.
La Calle																			
Tunis			30.13	765.4	86.0	30.0	42	E			3		0			0	0	Clear	Jacques.
Sfax			30.19	766.9	84.2	29.0	48	E			3		1			0	0	Clear	Chauvey.
Gafsa			30.13	765.4	80.6	27.0	43	NW			2		6			0.256	6.5	Fair	Millot.
Tebessa			30.12	765.1	84.7	29.3		N			2		0			0	0	Clear	Colin.
Geriville					84.9	29.4	15	SSE			4		3			0	0	Fair	Buard.
Laghouat			30.08	763.9	91.4	33.0		N			3		1			0	0	Clear	Guyot.
Biskra			30.15	765.8	88.3	31.3	28	NE			4		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			30.01	762.3	81.3	27.4	53	SW			2		7			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.03	762.7	73.0	22.8	54	W			2		8			0	0		Dr. Wierzbiski.
Eperies			29.86	758.5	77.9	25.5	60	NE			2		3			0	0		Julius Mikolik.
Gratz	28.81	731.8	29.97	761.2	75.0	23.9	59	SW			2		4			0.118	3.0		Andreas Rospini.
Hermannstadt	28.52	724.5	29.89	759.1	73.4	23.0	48	NW			2		5			0	0		Prof. Reissenberger.
Kremsmünster	28.72	729.5	30.00	762.0	77.0	25.0	48	E			1		1			0	0		Prof. C. Wagner.
Lemberg			29.89	759.3	70.5	21.4	85	NW			2		4			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.05	763.2	81.7	27.6	54	WNW			1		3ks			0	0		I.R. Hydrographic Office.
Szegedin			29.96	761.0	79.0	26.1	49	SE			2		6			0	0		Karl Stancel.
Trieste			30.04	763.1	80.6	27.0	68	W			1		2			0	0		Prof. V. Farolfi.
Vienna			30.04	762.9	80.1	26.7	46	NNW			2		3			0.083	2.1		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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	73.4	23.0	70	W			0		10		SW	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.84	757.9	64.5	18.1		SW	24	10.7			2			0	0	Blue sky	William Boswell.
Ardrossan			29.96	761.0	60	15.6		SSW			3		2					*D. clouds	William McNeil.
Armagh, Observatory			29.96	761.0	63.8	17.7		SW	5	2.2			8					*D. clouds	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.92	760.0	66.4	19.1		SSW			1		9					Hazy	J. Dreyer.
Bradford			29.97	761.2	69.2	20.7		W			0		6			0	0	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.09	764.3	82.5	28.1		E			1		8					*D. clouds	Sergt. J. F. Halauen, A.
Cambridge, Observatory			29.99	761.7	77.0	25.0		WSW			1		7			Blank	Blank	*D. clouds	H. Todd. [H. O.
Cardington			30.01	762.2	75.0	23.9		SW			1		3					Blue sky	John McLaren.
Carlisle			29.94	760.5	67.6	19.8		SW			3		3			0	0	*D. clouds	T. Bel, for J. Car mell.
Chatham, School M. E			30.02	762.5	69.0	20.6		SW			1		9			Blank	Blank	*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	24.60	726.4	30.08	764.0	61.0	16.1		SE			3		10					Rain and fog	R. E. Power.
Donaghadee			29.94	760.5	62	16.7		SSE			4		8					*D. clouds	J. Mac Gowan.
Dover			30.05	763.3	63	17.2		WSW			2		10					Foggy	J. Costello.
Eccles, (near Manchester.)			29.95	760.7	73.0	22.8		S	2.4	1.1			5					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			29.97	761.2	61.7	16.5		S			4		10					Foggy	The Staff.
Fort Napier, (Natal)	27.85	707.4	30.06	763.5	59.1	15.1		SW			4		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.04	763.0	84	28.9		W			2		5					*D. clouds	
Galway, Queen's College			29.81	757.2	65	18.3		SW			2		2					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.05	763.3	80.0	26.7		E			4		1					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			29.90	759.4	59.0	15.0		WSW			1		8					*D. clouds	Lewis Stuart.
Great Yarmouth			30.03	762.7	65	18.3		SE			2		3					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			30.04	763.0	69.2	20.7		SW			1		10					Overcast	The Staff, for G. B. Airy.
Guernsey			30.00	762.0	67	19.4		SE			1		7					*D. clouds	Dr. S. L. Hoskins.
Helston			29.92	760.0	66	18.9		S			6		10			0.4	10.2	Misty	M. P. Moyle.
Holyhead			29.95	761.0	67	19.4		WSW			2		4					*D. clouds	John Tinston.
Kew, Observatory			30.02	762.5	69.5	20.8		S	8	3.6			10					Raining	The Staff.
Kingstown			29.99	761.7	63	17.2		SSE			4		7					*D. clouds	George Mitchell.
Leicester Museum			30.01	762.2	70.7	21.5		SE			1		3					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)			30.06	763.5	78.0	25.6		NW			1		0						Corp'l F. Fraser, A. M. C.
Nairn			29.81	757.2	64	17.8		SSW			4		5					½ clouded	W. D. Penny.
Nassau, (Bahamas)			30.20	767.1	81.3	29.1		NE			5		7					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.99	761.7	78.0	25.6		S			2		2c		SW	0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.98	761.5	69.6	20.9		S			3		9					Hazy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.94	761.5	71	21.7		SSW			1		10					Overcast ?	J. Lucas.
Plymouth			29.98	761.5	62.7	17.1		SE			1		10					Misty	John Merrifield.
Roche's Point			29.93	760.2	59	15.0		SE			4		10					Dull	W. Kennedy.
Saint Ann's Head			29.95	760.7	66	18.9		SE			1		8					Misty	John C. Walker.
Saint Helier, Jersey)			30.03	762.7	69.4	20.8		S			2		8					¾ clouded	A. P. Amy.
Sandwick Manse, Orkneys)			29.74	755.4	55.8	13.2		WSW	30	13.4			4					*D. clouds	Rev. C. Clouston, LL.D.
Scarborough			29.98	761.5	70.0	21.1		SW			2		3					Blue sky	F. Shaw.
Scutari Cemetery, Turkey			29.82	757.4	81.2	27.3		NNE			2		7			Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.98	761.5	72.0	22.2		SSW			2		2			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			29.95	761.0	68.2	20.1	66	SW			2		1			0.200	5.08	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.96	761.0	66.1	18.9		W			1		3					*D. clouds	Rev. S. J. Perry.
Stornoway, Lews C. (Hebr.			29.71	754.6	57	13.9		WSW			7		5					*D. clouds	John Smith.
Stratfield Turgiss			29.94	760.5	66.3	19.1		S			1		10					Raining	Rev. Charles H. Griffith.
Thurso			29.73	755.1	63	17.2		WSW			5		5					*D. clouds	John Trotter.
Truro, Royal Institution			29.97	761.2	68	20.0		SW			6		8					Gloomy	W. Newcombe.
Valencia, Observatory			29.88	758.9	64.9	17.7		SE	11	4.9			9					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man					57	13.9		W			3		0						Thomas Dawson.
Cape Good Hope, Obs'y			30.15	773.4	57.0	13.9	78	W	5	2.2		4	4						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.05	763.3	58.0	14.4	81	NW			3		2k			0.04	1.0	Fine	Francis Abbott, F.R.A.S.
Leith, Restaurig Park			29.92	760.0	60.0	15.6		W			4		3k			0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.15	765.8				E	14.9	6.7						0.01	0.3		C. Meldrum
Melbourne, Observatory			30.17	766.3	46.5	8.3	88	NNE	4	1.8			7			0	0	Fine, hazy	R. L. J. Ellery.
Monach Lt-house, Hebrides			29.77	756.1	55	12.8		SW			6	5	5	SW		0.4	10.2		J. Youngehanse.
North Unst, (Shetland Is.)			29.56	750.8	52	11.1		SW			7		10			Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,320 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			29.96	760.9	71.2	21.8	59	NNW			2		6						
Fanöe			30.01	762.3	65.8	18.8	71	W			4		6						
Godthaab, (Greenland)			29.59	751.5															
Stykkisholm, (Iceland)			29.45	748.1	47.7	8.7	89	NE			6		8						
Thorshavn, (Faröe)			29.21	741.9	51.3	10.7	91	W			7		10					Raining	
Vestervig			29.93	760.1	64.4	18.0	71	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			30.02	762.5	71.6	22	53	SW			3		5cs,u		SW	0	0	Cloudy	Normal School.
Amiens			30.04	763.1	78.8	26.0	67	NW			3		5		NW	0	0	Cloudy	Normal School.
Avignon			30.04	763.1	90.0	32.2	37	N			1		0			0	0	Very clear	Normal School.
Bar-sur-Seine			30.06	763.4	83.5	28.6	30	S			2		5		SW	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.99	761.7	82.8	28.2	45	SW	4.9	2 2			10		SW	0	0	Covered	Beaumette Observatory.
Beauvais			30.03	763.5	76.5	24.7	55	SSE			1		8		SSW	0	0	Very cloudy	Normal School.
Besançon			30.05	763.3	82.4	28	51	E			2		2		NW	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse			30.17	766.4	85.5	29.7	42	N			2	1c		S				Clear	Normal School.
Bourges			30.54?	775.7?	79.3	26.3	63	S			2		2		S	0	0	Slightly cl'dy	Normal School.
Brest			29.95	760.7	63.9	17.7	88	SSW			3		10		SSW	0.128	3.25	Raining	Naval Observatory.
Carcassonne			30.05	763.2	70.2	21.2	51	W			1		0			0	0	Clear	Normal School.
Caen			30.06	763.5	72.9	22.7	70	SSW			4		10		N	0.059	1.5	Covered	Normal School.
Chartres			29.96	760.9	82.8	28.2	87	SW			2		6		W	0	0		Normal School.
Clermont			29.99	761.7	82.4	28.0	55	SW			3		5		SW	0	0		Puy de Dome Obs'y.
Commercy			30.06	763.5	75.4	24.1	60	WNW			2		2k		SW	0	0	Slightly cl'dy	Normal School.
Commune de Greasque*			30.12	765.0	84.2	29.0	39	SW			2		2		SW	0	0		M. Kina.
Grenoble			30.04	763.9	82.4	28	66	NNE			2		2k		S	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.07	763.6	78.4	25.8	58	W			6		0			0	0	Clear	Normal School.
Le Mans			30.09	764.3	76.3	24.6	79	SSW			3		5		SSW	0	0	Cloudy	Normal School.
Lons-Le-Saulnier			30.04	763.1	80.4	26.9	47	NW			1		0			0	0	Clear	Normal School.
Mâcon			30.30	769.6	81.3	27.4	56	N			2		0			0	0	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			29.99	761.7	76.6	24.8	55	SW			1		0			0	0	Clear	Normal School.
Nismes			30.02	762.6	96.4	35.8	35	SW			2		2		NW	0	0	Slightly cl'dy	Normal School.
Orleans			29.98	761.6	83.1	28.4	41	S			1		5		S	0	0	Cloudy	Normal School.
Paris, Observatory			30.04	763.0	75.2	24.0	59	N			2		10ck		S	0	0	Covered	National Observatory.
Parthenay			30.03	762.7	81.3	27.4	74	SW			2		5		NE	0	0	Cloudy	Normal School.
Privas			30.03	762.7	86.2	30.1		NE			1		0			0	0	Clear	Normal School.
Rochefort, Observatory			30.05	763.2	82.9	28.3	55	Calm			0		5			0	0	½ covered	Naval Observatory.
Rouen			30.04	762.9	77.2	25.1	54	WNW			2		8		N	0	0	Very cloudy	Normal School.
Saint Lo			29.74	755.4	82.4	28	65	SW			1		8		W	0	0		Normal School.
Tarbes	28.95	735.4	30.08	764.0	71.6	22		S			1		0			0	0	Clear	Normal School
Villefranche			30.10	764.6	86.7	30.4	84	N			1		5			0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.98	761.6	80.6	27													L'Abbé Marchésl.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.32	770.1	70.2	21.2	67	E	13.0	5.83			4		NE	0	0		—. Falguère.
Montsouris, Paris			30.04	763.1	75.2	24.0	61	N			2		10			0	0		Montsouris Observ'tory.
Perpignan			30.04	762.9	85.8	29.9	48	SE	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)			30.04	763.0	78.4	25.8	60	N			1		10			0	0	Cloudy	E. Renou.
Toulouse			30.10	764.6	86.5	30.3	40	SE			1		0			0	0		Toulouse Observatory.
Tours			30.02	762.6	83.1	28.4	38	W			1		5		SW	0	0		C. Marquet.
Versailles, (near Paris)			30.07	763.6	78.4	25.8	57	N			1		0			0	0	Lightly cov'd	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

NOTE.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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			30.03	762.7	76.1	24.5	55	NW			3		4	NW		0	0		Prof. T. Hoh.
Berlin			30.05	763.2	76.1	24.5	61	NW			4		8			0	0		Prof. Arndt.
Breslau			30.10	764.6	75.9	24.4	55	NW			5		7			0	0		Dr. P. Neugebauer.
Carlsruhe			30.03	762.7	81.7	27.6	56	SE			3		3			0	0		A. Senz.
Cassel			30.04	763.1	79.9	26.6	51	ESE			5		8	WNW		0	0		Dr. H. Möhl.
Emden			29.99	761.7	70.2	21.2	73	NW			3		10			0	0		Prof. Prestel.
Frankfort on the Main			30.11	764.8	70.3	26.3	42	W			1		3			0	0		Physical Society.
Friedrichshafen			30.07	763.6	74.8	23.8	73	SW			2		2			0	0		M. Wilhelm.
Hamburg			30.04	762.2	74.5	23.6	73	NW			3		10			0.031	0.8	Raining	Captain F. Hegemann.
Kiel			30.01	762.2	71.4	21.9	77	SW			3		7			0.013	0.3		Prof. G. Karston.
Königsberg, (Prussia.)			29.98	761.5	71.2	21.8	58	W			5		4			0	0		Prof. E. Luther.
Köslin			30.04	763.0	70.3	21.3		WNW			1		2			0	0		H. Müller.
Leipsic			30.08	764.0	79.3	26.3	49	WSW			2		9	W		0.012	0.3		Prof. Bruhns.
Meinel			29.99	761.8	69.1	20.6	77	WSW			2		4cs			0.004	0.1		Reinbrecht & Skalweit.
Münster			30.11	764.7	77.5	25.3	61	SE			4		0			0	0		Prof. E. Heis.
Neufahrwasser			30.02	762.6	68.4	20.2	67	E			2		6			0	0		A. Lothes.
Posen			30.03	762.7	77.4	25.2	51	NW			2		6			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.06	763.5	81.0	27.2	46	NE			1		4	NE		0	0		Dr. Schur.
Stuttgart			30.05	763.2	80.2	26.8	43	E			1		1			0	0		Prof. Schoder.
Thorn			30.01	762.3	75.2	24.0	36	N			2		5			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.02	762.6	80.2	26.8	53	SE			4		3			0	0		Prof. Flesch.
Wustrow, Naval School			30.05	763.3	70.3	21.3	71	WSW			2		10			0	0		E. F. Schütz.

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	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.
Athens			29.89	759.3	84.4	29.1		NE					k					Clear	

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

ITALIAN SERIES.

Furnished by the 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'r 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			30.01	762.3	84.0	28.9	44	SW	0.7	0.3			4			0.213	5.4		
Padua			30.00	762.1	82.8	28.2	54	E	4.9	2.2			3			0	0		
Vicenza			30.00	762.0	84.2	29.0	46	S	1.3	0.6			1	W		0	0		
Verona			29.97	761.3	86.0	30.0	52	E			1		0			0	0		
Bergamo	28.69	728.8	29.95	760.7	85.3	29.6	45	SW			2		1			0	0		
Domodossola	29.00	736.5	29.98	761.5	82.8	28.2	55	S			4		4			0	0		
Milan			30.00	762.1	94.6	34.8	36	NNW			1		3	N		0	0		
Pavia			30.02	762.6	84.2	29.0	50	NE			1		0			0	0		
Moncalieri			30.00	761.9	84.6	29.2	57	WSW	1.8	0.8			3	E		0	0		
Mondovi	28.17	715.4	29.98	761.5	81.9	27.7	43	ESE			4		1			0	0		
Porto Maurizio			30.10	764.6	79.7	26.5	70	SSE			2		2			0	0		
Genoa			30.07	763.8	78.1	25.6	60	SW	0.7	0.3			0			0	0		
Piacenza			30.02	762.4	84.2	29.0	46	E	1.3	0.6			1			0	0		
Parma			29.98	761.6	87.6	30.9	46	SE			4		1			0	0		
Bologna			29.99	761.7	86.0	30.0	46	N			1		2	NE		0	0		
Florence			30.07	763.6	86.0	30.0	48	NW			2		9			0	0		
Leghorn			30.09	764.2	78.6	25.9	64	W	3.8	1.7			6			0	0		
Siena	28.87	733.2	30.02	762.6	83.5	28.6	43	WNW	0.7	0.3			7	W		0	0		
Urbino	28.56	725.5	30.07	763.6	80.2	26.8	32	ENE			2		1			0	0		
Pesaro																			
Ancona			30.07	763.7	83.1	28.4	42	ESE			4		1			0	0		
Grosseto			30.05	763.2	87.4	30.8	41	WNW			4		3	NW		0	0		
Rome			30.04	763.0	86.4	30.2	41	SW	6.3	2.8			2			0	0		
Naples, O. U.			30.05	763.2	85.5	29.7	48	W			4		2	NE		0	0		
Lecce			29.99	761.7	79.3	26.3	33	W	15.0	6.7			5			0	0		
Cosenza			30.02	762.6	85.6	29.8	61	NW	0.7	0.3			6			0	0		
Riposto, (Sicily)			30.03	762.8	81.0	27.2	73	E			2		4	SW		0	0		
Palermo			30.00	762.1	77.9	25.5	58	NE	3.8	1.7			1			0	0		
Caltanissetta	28.08	713.3	29.95	760.6	78.4	25.8	30	SW			2		2	NE		0	0		
Sub-Series.																			
Naples, S. R.			30.07	763.8	84.9	29.4	43	W	0	0			4	WSW		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'r 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall. Inches.	Rain-fall. 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'r 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			30.09	764.2	67.6	19.8		NW			2								
Groningen			30.00	762.1	68.5	20.3		NW			2								
Helder			30.04	763.1	69.1	20.6		WSW			1								
Utrecht			30.04	762.9	67.5	19.7	86	SW			2		10					Dull	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	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. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Bergen			29.78	756.3	62.6	17.0	80	SSW	19.7	8.8			6			0	0		
Brönö			29.70	754.4	57.2	14.0	95	SSW	9	4			10			0.528	13.4	Raining	
Christiania			29.72	754.9	75.9	24.4	31	SSW	10.7	4.8			2			0.047	1.2		
Tromsö			29.65	753.2	66.4	19.2	55	NE	2	1			2			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 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	71.8	22.1	94	WSW	9.8	4.39			8			0.016	0.4		Dr. J. A. N. Sampaio.
Campo Major			30.04	762.9	89.4	31.9	24	ESE	5.0	2.25			3	ESE		0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.24	768.0	71.4	21.9	64	SW	4.0	1.78			5			0	0		Capt. D. A. da Cunha.
Lisbon			30.12	765.1	75.6	24.2	52	NW	13.7	6.1			4	N		0	0	Solar halo	The Observatory.

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

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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			29.98	761.5	73.8	23.2	49	W	20	9			4						Astronomical Obs.
Wilna			29.89	759.3	73.6	23.1	42	W	7	3			5						Astronomical Obs.
Dorpat			29.83	757.6	74.8	23.8	51	W	7	3			5						Physical Cabinet.
St. Petersburg			29.81	757.1	69.1	20.6	61	NNE	4	2			8						Central Physical Obs.
Kuopio			29.78	756.4	72.9	22.7	66	ENE	13	6			2						Ch. Forsten.
Kieff			29.80	756.9	71.6	22.0	45	NW	9	4			7						Physical Cabinet.
Nikolaiev			29.89	759.1	82.4	28.0	37	NNW	12	5			4						Kurdakof.
Kertch			29.78	755.8	82.9	28.3	52	N	13	6			3						Lagorio.
Moscow			29.77	756.2	60.3	15.7	91	N	4	2			10					Raining	Meteorological Obs.
Lugan			29.69	754.2	81.5	27.5	46	WNW	18	8			8			Blank	Blank		Meteorological Obs.
Archangel			29.70	756.7	71.6	22.0	39	NNE	9	4			8						Ogorodnikof.
Tiflis	28.38	720.9	29.71	754.5	84.9	29.4	41	SW	4	2			4						Physical Observatory.
Astrakhan			29.93	760.3	84.6	29.2	29	SSE	9	4			3						Sebastianof.
Kasan			29.72	755.0	68.4	20.2	81	W	4	2			10					Raining	Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.82	731.9	29.74	755.4	59.7	15.4	90	ESE	7	3			10						Meteorological Obs.
Nukuss			29.77	756.2	85.1	29.5	39	W	13	6			0						
Kasaly																			Bobrof.
Tashkend	28.03	712.0	29.58	751.2	95.4	35.2	24	Calm	0	0			0						Michelson.
Barnaul			29.49	749.0	63.9	17.7	68	Calm	0	0			0						Meteorological Obs.
Yeniseisk			29.35	745.5	58.3	14.6	85	W	9	4			10						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.95	760.7	84.7	29.3	57	SSW	0	4			6						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.86	758.5	68.4	20.2	74	Calm	0	0			1						
Nikolaievsk, on the Amoor					61.2	16.2	89	NE	7	3			7						

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 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	760.9	92.8	33.8	30	SW	6.7	3.00		0	4			0	0	Cloudy	Royal Observatory.
San Fernando			30.08	764.1	83.1	28.4	49	W	5.8	2.6		0	1		W				The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			29.84	758.0	71.6	22.0	53	S			4		0			0	0		
Umea			29.76	755.9	70.9	21.6	48	S			2		9			0	0		
Hernosand			29.75	755.6	61.9	16.6	75	S			2		7			0	0		
Stockholm			29.80	756.8	75.2	24.0	34	SW			4		5			0	0		
Wisby			29.93	760.3	69.1	20.6	66	NNW			4		3			0	0		
Sub-Series.																			
Upsala			29.80	756.9	70.9	21.6	47	WSW	11.6	5.2			9	WNW	SW	0	0		Dr. Hildebrandsson

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

SWISS SERIES.

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

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	28.67	728.3	30.03	762.8	77.7	25.4	45	NNE			3		1			0	0	Clear	The Observatory.
Zurich	28.48	723.5	30.04	763.0	80.1	26.7	55	NW			1		1			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +0.9 mm.; Thermometer, +3.1 cent.; Relative Humidity, —8 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

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			29.86	758.5	72.7	22.6	71	NNE	10	4.5			7		NE	0.457	11.6		
Fao, (Persian Gulf)			29.72	755.0	82.4	28.0		NW			4		10					Dusty	
Salonica			29.93	760.2	78.8	26.0		N			6		2						
Valona			29.98	761.4	76.6	24.8		W			2		2						
Varna			29.94	760.5	68.0	20.0		W			2		10			Blank	Blank		
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.80	756.9	86.7	30.4	52	WSW			2		3k		SW	0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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			29.64	752.8	54.9	12.7	93	NE	16	7.2			10			0	0	Stormy	Hon. J. Ferguson.
Brockville, Ontario			30.03	762.7	70	21.1		N	1	0.4		0	28		N	0.19	4.8	Fair	W. R. Bigg.
*Chatham, N. B			29.65	753.1	55	12.8	100	NE	15	6.7			10s		NE	0.35	8.9	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			29.66	753.4	64	17.8	91	SE	10	4.5			10n			0.13	3.3	Heavy rain	H. J. Cundall, C. E.
Cornwall, Ontario			29.89	759.2	74.9	23.8	54	NW			5	0	3ks			0.143	3.64	Clearing	James Smith, M. A.
Dalhousie, N. B					51	10.6	100	E			2					0.47	11.9		H. A. Johnson.
Esquimault, B. C																			W. H. Bevis.
Fredericton, N. B			29.51	749.5	62.0	16.7	94	NE	7	3.1			10n			0.79	20.1	Raining	Prof. Harrison.
*Fort Garry, Manitoba			29.47	748.5	64	17.8	89	SW	10	4.5		2c	2ks	W	W	0.06	1.5	Fair	James Stewart.
Goderich, Ontario			30.03	762.7	67.9	19.9	89	NW			1	0	0			0.051	1.30	Fine	H. J. Strang, M. A.
Granton, Ontario	28.95	735.3	30.02	762.5	62.7	17.1		Calm			0	0	0			0.02	0.5	Foggy	James Grant.
*Halifax, N. S			29.98	753.9	67	19.4	99	S	3	1.3			10n			0.003	0.08	Heavy rain	F. Allison, M. A.
*Kingston, Ontario			30.03	762.7	68	20.0	76	NW	6	2.7		2k	0	NW		0.34	8.6	Fair	S. Woods, M. A.
Little Glace Bay, N. S			29.77	756.1	63.6	17.6	88	SW	8	3.6		5k	0	SW		0	0	Cloudy	C. H. Rigby.
*Montreal, Quebec			29.87	758.7	67	19.4	78	W	16	7.2		5k	2ks	N	E	0.59	15.0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.96	761.0	65	18.3	82	W	10	4.5		8k	0	W		1.70	43.2	Fair	J. B. Haney.
*Parry Sound, Ontario			30.02	762.5	62	16.7	84	W	4	1.8		0	0			2.13	54.1	Clear	Rev. R. Mosley.
*Port Dover, Ontario			30.05	763.3	63	17.2	89	Calm	0	0		2k	0	S		0	0	Fair	H. Morgan.
Port Hastings, N. S			29.70	754.4	60.5	15.8		SE	16	7.2						0	0	Foggy	Peter Grant.
*Port Stanley, Ontario			30.03	762.7	66	18.9	93	SE	2	0.9		0	0			0.12	3.0	Clear	M. Payne.
*Quebec, Quebec			29.78	756.4	65	18.3	94	Calm	0	0		8k	7n	NW	NW	0.63	16.0	Fair	Capt. Ashe, R. N.
St. John, N. B			29.56	750.8	60	15.6	97	S	6	2.7			Fog			0.50	12.7	Raining	G. Murdoch, C. E.
*Saugeen, Ontario			30.00	762.0	66	18.9	81	SW	5	2.2		2ks	0			1.17	29.7	Clear	K. Stewart.
Stayner, Ontario			29.99	761.7	67	19.4	74	Calm	0	0		0	0			0.44	11.2	Clear	R. J. Cole.
Stratford, Ontario	28.76	730.5	30.02	762.5	59.4	15.2	99	Calm	0	0			Fog			0.064	1.63	Foggy	C. J. MacGregor, M. A.
*Sydney, C. B			29.79	756.7	64	17.8	88	SW	6	2.7		8c	5n		SW	0	0	Fair	T. C. Hill.
*Toronto, Ontario			30.05	763.3	62	16.7	83	SW	4	1.8		0	0			0.42	10.7	Clear	Magnetic Observatory.
Woodstock, Ontario			30.05	763.3	63.1	17.3	96	S	1	0.4			10s			0	0	Cloudy	J. Montgomery
Sub-Series.																			
St. John's, Newfoundland			29.91	759.7	65	18.3		S				10c	2cs			0.34	8.6	Fair	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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.	.....	.....	29.90	759.4	60	20.6	69	NW	25	11.2	.....	0	0	.....	.....	0.10	2.5	Clear	
Alpena, Mich.	.....	.....	29.96	761.0	62	16.7	83	Calm	0	0	.....	5c	Haze	W	.....	1.50	39.6	Fair	
Atlantic City, N. J.	.....	.....	30.02	762.5	76	24.4	64	NW	14	6.3	.....	1c	0	W	.....	Inap	Inap.	Clear	
Augusta, Ga.	.....	.....	30.17	766.3	82	27.8	72	SE	3	1.3	.....	1ck	0	.....	.....	0	0	Clear	
Baltimore, Md.	.....	.....	30.07	763.8	78	25.6	61	NW	8	3.6	.....	2cs	0	W	.....	0.15	3.8	Clear	
Barnegat, N. J.	.....	.....	30.01	762.2	76	24.4	60	NW	20	8.9	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Benton, Montana	26.93	684.0	29.73	755.1	51	10.6	64	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Bismarck, Dakota	27.81	706.4	29.36	745.7	60	15.6	54	NW	2	0.9	.....	Haze	Haze	.....	.....	0.01	1.0	Hazy	
Boston, Mass.	.....	.....	29.74	755.4	75	23.9	56	W	29	13.0	.....	5cs	Haze	W	.....	0	0	Fair	
Breckenridge, Minn.	.....	.....	29.45	748.0	67	19.4	84	SE	24	10.7	.....	5k	0	S	.....	0	0	Fair	
Buffalo, N. Y.	.....	.....	30.02	762.5	67.5	19.7	74	SW	4	1.8	.....	0	1ks	.....	W	0.01	0.3	Clear	
Burlington, Vt.	.....	.....	29.88	758.9	66	18.9	73	N	7	3.1	.....	2k	5s	N	N	0.11	2.8	Cloudy	
Cairo, Ill.	.....	.....	30.08	764.0	75	23.9	85	S	5	2.2	.....	0	0	.....	.....	0.18	4.6	Clear	
Cape Hatteras, N. C.	.....	.....	30.06	763.5	80	26.7	86	SW	16	7.2	.....	2k	0	.....	.....	0	0	Clear	
Cape Henry, Va.	.....	.....	30.06	763.5	82	27.8	75	W	10	4.5	.....	5c	2s	W	.....	0	0	Fair	
Cape Lookout, N. C.	.....	.....	30.15	765.8	82	27.8	78	W	20	8.9	.....	2k	0	W	.....	0	0	Clear	
Cape May, N. J.	.....	.....	30.04	763.0	73	22.8	85	W	17	7.6	.....	2c	0	NW	.....	0.04	1.0	Clear	
Charleston, S. C.	.....	.....	30.19	766.8	85	29.4	68	SW	8	3.6	.....	0	2ks	.....	SW	0	0	Fair	
Cheyenne, Wyoming	23.92	607.6	29.86	758.4	58	14.4	23	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	29.90	759.4	73	22.8	81	S	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Cincinnati, Ohio	.....	.....	29.99	761.7	77	25.0	77	S	6	2.7	.....	.....	8ks	.....	W	0.04	1.0	Cloudy	
Cleveland, Ohio	.....	.....	30.04	763.0	68	20.0	77	SE	5	2.2	.....	1c	Sm'e	SW	SE	0.01	0.3	Clear	
Colorado Springs, Col.	24.01	609.8	29.88	758.9	60	15.6	44	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Corsicana, Tex.	.....	.....	30.01	762.2	74.5	23.6	93	SE	4	1.8	.....	5cs	0	.....	.....	0	0	Fair	
Davenport, Iowa	.....	.....	29.89	759.2	73	22.8	90	SW	4	1.8	.....	.....	10s	.....	SW	0	0	Cloudy	
Denison, Tex.	.....	.....	30.02	762.5	77	25.0	85	SW	15	6.7	.....	2cs	5s	S	.....	0	0	Cloudy	
Denver, Col.	24.06	626.4	29.88	758.9	65	18.3	30	S	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.00	762.0	68	20.0	90	SW	4	1.8	.....	0	0	.....	.....	0.03	0.8	Clear	
Dodge City, Kan.	27.23	692.9	29.43	747.5	74	23.3	72	SE	20	8.9	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	29.86	758.4	71	21.7	90	S	4	1.8	.....	10k	0	S	.....	0	0	Cloudy	
Duluth, Minn.	.....	.....	29.74	755.4	58	14.4	81	Calm	0	0	.....	5c	0	.....	.....	0	0	Fair	
Eastport, Me.	.....	.....	29.50	749.3	65	18.3	89	SW	10	4.5	.....	0	8s	.....	W	0.56	14.0	Clearing	
Erie, Pa.	.....	.....	30.02	762.5	71	21.7	75	SW	4	1.8	.....	1c	Haze	W	.....	0	0	Clear	
Escanaba, Mich.	.....	.....	29.90	759.4	66	18.9	84	S	5	2.2	.....	5k	0	S	.....	0	0	Fair	
Fort Gibson, Indian Ter.	.....	.....	29.94	760.5	82	27.8	70	E	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	30.04	763.0	45	7.2	92	NE	.....	.....	1	.....	10ks	.....	.....	0	0	Cloudy	
Fort Sill, Indian T.	28.76	730.5	29.81	757.2	82	27.8	70	S	8	3.6	.....	2cs	0	S	.....	0	0	Clear	
Fort Sully, Dakota	27.81	706.4	29.44	745.2	70	21.1	80	Calm	0	0	.....	1c	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.00	762.0	83	28.3	74	SE	4	1.8	.....	2k	0	SE	.....	0	0	Fair	
Grand Haven, Mich.	.....	.....	29.93	760.2	75	23.9	79	SE	3	1.3	.....	4ck	2s	SW	SW	0.49	12.4	Fair	
Indianapolis, Ind.	.....	.....	29.98	761.5	75	23.9	85	SW	4	1.8	.....	.....	10s	.....	SW	0.44	11.2	Threatening	
Indianola, Tex.	.....	.....	29.98	761.5	80	30.0	72	SE	4	1.8	.....	5k	0	SE	.....	0	0	Fair	
Jacksonville, Fla.	.....	.....	30.17	766.3	82	27.8	74	E	4	1.8	.....	9k	0	SE	.....	0	0	Cloudy	
Keokuk, Iowa	.....	.....	29.85	758.2	78	25.6	77	SW	9	4.0	.....	0	0	.....	.....	0.22	5.6	Clear	
Key West, Fla.	.....	.....	30.13	765.3	78.0	25.6	86	SE	5	2.2	.....	.....	8s,h	.....	SE	0.88	22.4	Light rain	
Kittyhawk, N. C.	.....	.....	30.09	764.3	89	31.7	78	W	16	7.2	.....	2cs	0	W	.....	0	0	Fair	
Knoxville, Tenn.	.....	.....	30.16	766.1	70	21.1	95	Calm	0	0	.....	.....	Fog	.....	.....	0.27	6.9	Dense fog	
La Crosse, Wis.	.....	.....	29.82	757.4	70	21.1	84	S	8	3.6	.....	.....	10s	.....	S	0	0	Cloudy	
Leavenworth, Kan.	.....	.....	29.83	757.7	78	25.6	82	S	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Lexington, Ky.	28.99	736.3	30.05	763.3	75	23.9	76	SW	8	3.6	.....	5c	0	SW	.....	0	0	Fair	
Long Branch, N. J.	.....	.....	29.99	761.7	77	25.0	53	NW	22	9.8	.....	1k	0	NW	.....	Inap.	Inap.	Clear	
Louisville, Ky.	.....	.....	30.04	763.0	77	25.0	69	SW	12	5.4	.....	5c	0	S	.....	Inap.	Inap.	Fair	
Lynchburg, Va.	.....	.....	30.08	764.0	83	28.3	60	W	1	0.4	.....	2ck	0	W	.....	0	0	Clear	
Malone, N. Y.	.....	.....	29.90	759.4	62	16.7	90	NW	12	5.4	.....	.....	10ks	.....	W	0.45	11.4	Clearing	
Manhattan, Kan.	28.74	730.0	29.82	757.4	76	24.4	86	S	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Marquette, Mich.	.....	.....	29.84	757.9	68	20.0	65	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn.	.....	.....	30.11	764.8	81	27.2	70	S	6	2.7	.....	0	0	.....	.....	0.23	5.8	Clear	
Milwaukee, Wis.	.....	.....	29.94	760.5	67	19.4	90	SE	1	0.4	.....	10ks	Fog	SW	.....	0	0	Cloudy	
Mobile, Ala.	.....	.....	30.13	765.3	81	27.2	78	E	8	3.6	.....	2k	0	.....	.....	0.66	16.8	Fair	
Montgomery, Ala.	.....	.....	30.18	766.6	77	25.0	82	NE	2	0.9	.....	2c	0	.....	.....	0	0	Clear	
Morgantown, W. Va.	29.06	738.1	30.07	763.8	71	21.7	90	Calm	0	0	.....	.....	10s	.....	SW	0.46	11.7	Threatening	
Mt. Washington, N. H.	23.55	598.2	29.91	759.7	45	7.2	100	NW	80	35.7	.....	.....	10n	.....	NW	0.97	24.6	Light rain	
Nashville, Tenn.	.....	.....	30.10	764.5	74	23.3	76	SE	2	0.9	.....	.....	10s	.....	.....	0.24	6.1	Cloudy	
New Haven, Conn.	.....	.....	29.90	759.4	77	25.0	52	NW	16	7.2	.....	0	0	.....	.....	0.10	2.5	Clear	
New London, Conn.	.....	.....	29.87	758.7	76	24.4	56	NW	17	7.6	.....	2ck	0	SW	.....	0	0	Fair	
New Orleans, La.	.....	.....	30.06	763.5	81	27.2	78	E	6	2.7	.....	4k	0	E	.....	0	0	Fair	
Newport, R. I.	.....	.....	29.84	757.9	74	23.3	59	W	18	8.0	.....	2ck	0	SW	.....	0	0	Fair	
New York, N. Y.	.....	.....	30.00	762.0	71	21.7	71	W	24	10.7	.....	0	0	.....	.....	0	0	Clear	
Norfolk, Va.	.....	.....	30.09	764.3	84	28.9	71	W	8	3.6	.....	8ck	0	S	.....	Inap.	Inap.	Fair	
North Platte, Neb.	26.81	681.0	29.15	740.4	80	26.7	51	S	30	13.4	.....	2k	0	SW	.....	0	0	Clear	
Omaha, Neb.	28.68	728.5	29.78	753.9	77	25.0	77	S	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	30.03	762.7	59	15.0	87	W	8	3.6	.....	2cs	Haze	NW	.....	0.29	7.4	Fair	
Pembina, Dakota	.....	.....	29.46	748.3	63	17.2	83	S	4	1.8	.....	5k	0	SW	.....	0	0	Fair	
Philadelphia, Penn.	.....	.....	30.04	763.0	75	23.9	51	N	18	8.0	.....	2ck	Sm'e	.....	.....	0	0	Clear	
Pike's Peak, Colorado	17.97	456.4	30.18	766.6	43	6.1	35	NW	19	8.5	.....	0	Haze	.....	.....	0	0	Clear	
Pittsburgh, Penn.	.....	.....	30.06	763.5	68	20.0	90	SW	1	0.4	.....	5c	5ks	NW	W	0.01	0.3	Cloudy	
Port Huron, Mich.	.....	.....	30.00	762.0	67	19.4	79	Calm	0	0	.....	0	1s	.....	.....	0.03	0.8	Clear	
Portland, Me.	.....	.....	29.94	760.5	76	24.4	60	W	16	7.2	.....	2k	0	W	.....	0	0	Fair	
Portland, Oregon	.....	.....	29.64	752.8	54	12.2	55	N	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy	
Punta Rassa, Fla.	.....	.....	29.84	757.9	76.5	24.7	90	SE	8	3.6	.....	.....	10s	.....	SE	0.08	2.0	Cloudy	
Rochester, N. Y.	.....	.....	30.15	765.8	66	18.9	68	W	7	3.1	.....	0	0	.....	.....	0.12	3.0	Clear	
Salt Lake City, Utah	25.29	642.4	30.01	762.2	76	24.4	20	NE	5	2.2	.....	2c	Haze	.....	.....	0	0	Fair	
Sandy Hook, N. J.	.....	.....	29.62	752.3	73	22.8	63	NW	30	13.4	.....	1cs	1ks	W	NW	0	0	Clear	
San Diego, Cal.	.....	.....	29.98	761.5	64	17.8	88	S	8	3.6	.....	.....	10s	.....	S	0	0	Cloudy	
San Francisco, Cal.	.....	.....	29.86	758.4	55	12.8	80	SW	12	5.4	.....	2c	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23.26	590.8	29.75	755.6	64	17.8	67	E	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	29.89	759.0	88	31.1	66	SW	3	1.3	.....	2cs	Sm'e	.....	.....	0	0	Clear	
Shreveport, La.	.....	.....	30.19	766.8	76	24.4	91	SE	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Smithville, N. C.	.....	.....	30.07	763.8	81	27.2	74	SW	12	5.4	.....	5k	0	SW	.....	0	0	Fair	
Springfield, Mass.	.....	.....	30.18	766.6	75.5	24.2	59	NW	12	5.4	.....	8k	0	N	.....	Inap.	Inap.	Cloudy	
St. Louis, Mo.	.....	.....	29.88	758.9	81	27.2	74	SW	8	3.6	.....	0	0	.....	.....	0.87	22.1	Clear	
St. Marks, Fla.	.....	.....	29.98	761.5	81	27.2	78	SE	8	3.6	.....	0	2ks	.....	SE	0.40	10.2	Fair	
St. Paul, Minn.	.....	.....	30.14	765.5	69	20.6	87	SE	8	3.6	.....	.....	10s	.....	SW	0	0	Cloudy	
St. Paul's Island, Alaska	.....	.....	29.68	753.9	39	3.9	82	W	4	1.8	.....	.....	10s	.....	W	0	0	Cloudy	
Thatcher's Island, Mass.	.....	.....	30.28	769.1	73	22.8	58	W	35	15.6	.....	2c	0	W	.....	0	0	Fair	
Toledo, Ohio	.....	.....	29.71	754.6	72	22.2	75	S	1	0.4	.....	5k	Sm'e	SW	.....	0	0	Fair	
Tucson, Arizona	27.42	696.5	29.97	761.2	80	26.7	.....	S	.....	.....	.....	8k	0	E	.....	0.05	1.3	Fair	
Tybee Island, Ga.	.....	.....	30.01	762.2	81	27.2	82	Calm	0	0	.....	5ck	0	W	.....	0	0	Fair	
Vicksburg, Miss.	.....	.....	30.17	766.3	78	25.6	84	SE	4	1.8	.....	1cs	0	.....	.....	0.11	2.8	Clear	
	.....	.....	30.12	765.0															

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.	23.94	608.1	29.42	747.3	62	16.7	41	W	4	1.8		9k	0	W		0	0	Cloudy	
Washington, D. C.			30.09	764.3	77	25.0	67	NW	8	3.6		2c	1s			0.01	0.3	Fair	
Wilmington, N. C.			30.16	766.1	82	27.8	74	W	12	5.4		0	0			0	0	Clear	
Wood's Holl, Mass.			29.82	757.4	75	23.9	64	NW	20	8.9		5c	0	SW		0	0	Fair	
Wytheville, Va.	27.86	707.6	29.95	760.7	70	21.1	79	W	4	1.8		1ck	8ks	W	W	0.08	2.0	Cloudy	
Yankton, Dakota	28.34	719.8	29.53	750.0	78	25.6	65	SW	12	5.4		0	0			0	0	Clear	
Yuma, Arizona			29.74	755.4	85	29.4		E				2c	0	E		0	0	Fair	
Sub-Series.																			
P'nte-a-Pitre, G'd'l'pe, W. I.			30.08	764.0	83	28.3	74	E				5k	5ks			0.03	0.8	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.			30.23	767.8	81	27.2	70	Calm	0	0		5c	0			0	0		James Hall.
St. Georges, Bermudas			30.29	769.4	79.0	26.1	76	SW	8	3.6		1k	8k	S		0.12	3.0	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.28	692.9	30.06	763.5	72	22.2	84	SE	1.0	0.4		2c	0	SE		0	0	Fine, clear	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.12	765.0	81	27.2	78	NE			2	7ks?	7ks	NE		0.300	7.62	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.8			84.2	29		E								1.024	26.00		Dr. H. Groot.
Medellin, Colombia, S. A.	25.23	640.8			60.0	15.4	69	Calm	0	0		3ck	2s			0	0	Fair	Thomas Herran
York Factory, B. A.			29.53	750.0	47	8.3	96	S	12	5.4			9s			0.50	12.7		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.11	764.8	76	24.4	95	NE			4					0	0	Fine	Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Sch'ner Addie Fuller at Damariscotta, Me.			29.64	752.8	78	25.6		WNW			7	5c		WNW				Fair	Capt. James Jorgensen.
Steamer Leipzig. N, 48° 45′ W, 31° 56′.	361W		29.36	745.7	57.9	14.4		WNW			5		..ck			Rough			Capt. R. Hoffmann.
Steamer Nova Scotian N, 37° 22′ W, 74° 20′.	ENE	11½	30.11	764.8	75	23.9		NW			3		..ck		N	Light swells	W8W	Fair	Capt. Ritche.

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.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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 added 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	79.2	26.2	67	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.10	764.6	81.3	27.4	60	NE			1		5			Inap.	Inap.	Fair	Peter.
La Calle																			Kunts.
Tunis			30.16	766.0	88.3	31.3	35	E			3		1			0	0	Clear	Jacques.
Sfax			30.20	767.1	85.3	29.6	53	SE			3		1			0	0	Clear	Chauvey.
Saïda			30.13	765.3	77.0	25.0	47	NE			1		3			1.106	28.1	Fair	Millot.
Tebessa			30.14	765.6	89.6	32.0		SW			4		7			0	0	Cloudy	Colin.
Geriville					81.9	27.7	24	SE			6		3			0.030	1.0	Fair	Buard.
Laghouat			30.06	763.5	86.0	30.0	16	N			3		6			0.276	7.0	Fair	Guyot.
Biskra			30.14	765.6	96.4	35.8	23	NE			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.	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.	Weather.	Observer.
Agram			30.06	763.4	82.6	28.1	53	SW			3		0			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.10	764.4	70.9	21.6	87	W			2		10			0.261	6.63		Dr. Wierzbiski.
Eperies			29.84	757.8	72.0	22.2	85	N			2		10			0	0		Julius Mikolik.
Gratz	28.81	731.8	29.96	760.9	78.1	25.6	60	SW			2		2			0	0		Andreas Rospini.
Hermannstadt	28.65	727.8	30.00	762.1	76.6	24.8	48	NNW			3		3			0	0		Prof. Reissenberger.
Kremsmünster	28.61	726.8	29.88	759.0	78.4	25.8	50	E			1		2			0	0		Prof. C. Wagner.
Lemberg			30.02	762.4	72.1	22.3	88	W			1		6			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.10	764.5	81.5	27.5	63	SSW			1		3cks			0	0		I.R.Hydrographic Office.
Szegedin			30.06	763.4	81.1	27.3	49	S			2		0			0	0		Karl Stancel.
Trieste			30.11	764.8	82.8	28.2	58	Calm			0		0			0	0	Clear	Prof. V. Farolfi.
Vienna			30.03	762.8	79.7	26.5	50	SE			2		2			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	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.	Weather.	Observer.
Brussels			29.88	759.0	68.7	20.4	61	SW			3		10		SW	0	0	Covered	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.72	754.9	75.6	24.2		ENE	8	3.6			9			0.020	0.51	*D. clouds	William Boswell.
Ardrossan			29.67	753.6	63	17.2		E			2		4?					Overcast?	William McNeil.
Armagh, Observatory			29.67	753.6	63.6	17.6		S	8	3.6			10					Gloomy	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.61	752.1	64.0	17.8		SSE			1		10					Threatening	J. Dreyer.
Bradford			29.71	754.6	66.4	19.1		SW			1		10			0.32	8.1	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	83.0	28.3		NE			2		7					Overcast	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.79	756.7	76.0	24.4		WSW			2		2					Sprinkling	H. Todd. [H. C.
Cardington			29.81	757.2	75.4	24.1		SW			2		2					Blue sky	John McLaren.
Carlisle			29.66	753.4	62.3	16.8		Calm			0		10			0.20	5.1	Drizzling	T. Bell, for J. Carmell.
Chatham, School M. E			29.83	757.7	73.0	22.8		SW			3		6					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.43	722.1	29.0	759.4	52.2	11.2		S			2		10					Rain and fog	R. E. Power.
Donaghadee			29.66	753.4	60	15.6		SSE			3		10					Misty	J. Mac Gowan.
Dover			29.88	758.9	62	16.7		W			3		8					¾ Covered	J. Costello.
Eccles, (near Manchester.)			29.69	754.1	71.0	21.7		SW	6.2	2.8			5					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			29.82	757.4	65.7	18.7		SW			5		9					Overcast	The Staff.
Fort Napier, (Natal)	28.16	715.3	30.39	771.9	62.3	16.8		S			3		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	83	28.3		W			3		6					D. clouds	
Galway, Queen's College			29.55	750.6	64	17.8		S			4		10					Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.10	764.5	82.0	27.8		E			4		0					Blue sky	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			29.67	753.6	61.1	16.2		NE			2		10					Overcast	Lewis Stuart.
Great Yarmouth			29.80	756.9	72	22.2		WSW			3		4					*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y			29.83	757.7	75.0	23.9		SW			2		9			Blank	Blank	Cloudy	The Staff, for G. B. Airy
Guernsey			29.88	758.9	69	20.6		SSW			3		5			Blank	Blank	*D. clouds	Dr. S. E. Hoskins.
Helston			29.77	756.1	66	18.9		SW			4		8			0.51	13.0	Misty	M. P. Moyle.
Holyhead			29.71	754.6	63	17.2		SSW			3		4					Misty	John Tinston.
Kew, Observatory			29.82	757.4	71.1	21.7		SSW	21	9.4			5						The Staff.
Kingstown			29.68	753.9	63	17.2		SSE			4		9					Overcast	George Mitchell.
Leicester Museum			29.77	756.1	70.0	21.1		SW			4		3					Showery	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)			30.10	764.5	82.6	28.1		NW			1		0						Corp'l F. Fraser, A. M. C.
Nairn			29.69	754.1	65	18.3		Calm			0		10					Overcast	W. D. Penny.
Nassau, (Bahamas			30.18	766.6	85.2	29.6		SE			5		6					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.75	755.6	75.0	23.9		S			5		5k,d		S	0.382	9.70	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.75	755.6	71.0	21.7		SSW			4		8					Hazy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.79	756.7	73	22.8		WSW			1		5					*D. clouds	J. Lucas.
Plymouth			29.83	757.7	61.5	16.4		SW			1		10					Drizzling	John Merrifield.
Roche's Point			29.66	753.4	60	15.6		SW			4		10					Raining	W. Kennedy.
Saint Ann's Head			29.73	755.1	59	15.0		S			3		4					Foggy	John C. Walker.
Saint Heller, Jersey			29.90	759.4	68.5	20.3		SSW			4		10					Overcast	A. P. Amy.
Sandwick Manse, (Orkneys)			29.74	755.4	59.1	15.1		SE	16	7.2			4					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough			29.68	753.9	69.0	20.6		SW			3		9					Overcast	F. Shaw.
Scutari Cemetery Turkey			29.93	760.2	78.0	25.6		NNE			2		6			Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.71	754.6	74.8	23.8		WSW			4		7			0.475	12.07	*D. clouds	W. F. Cooper.
Silloth Rectory			29.68	753.9	66.7	19.3	84	SW			1		8			0.070	1.78	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.70	754.4	65.9	18.8		SW			2		10			Blank	Blank	Threatening	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			29.68	753.9	58	14.4		E			1		2					Blue sky	John Smith.
Strathfield Turgiss			29.83	757.7	72.6	22.6		SW			2		5					Squally	Rev. Charles H. Griffith.
Thurso			29.70	754.4	65	18.3		ESE			2		4					*D. clouds	John Trotter.
Truro, Royal Institution			29.84	757.9	68	20.0		SW			5		9					Gloomy	W. Newcombe.
Valencia, Observatory			29.60	751.8	60.6	15.9		SSW	29	13.0			10					Misty	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man					57	13.9		S			1		10						Thomas Dawson.
Cape Good Hope, Obs'y			30.38	771.6	63.8	17.7	61	SE	7	3.1		3	3						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.04	763.0	58.5	14.7	81	NW			2		10kn			0	0	Hazy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.72	754.9	58.0	14.4		E			2		10s			0.04	1.0	Overcast	Andrew Gibb.
Mauritius, Observatory			30.17	766.3				E	9.5	4.2						0.01	0.3		C. Meldrum
Melbourne, Observatory			30.30	769.6	43.7	6.5	87	NNE	7	3.1			0			0	0	Fine, clear.	R. L. J. Ellery.
Monach Lt-house, Hebrides			29.69	754.1	54	12.2		SE			3		10			0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.80	756.9	58	14.4		W			2		10						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in Unst, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,220 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.
Copenhagen			29.91	759.7	70.3	21.3	64	SSE			4		6					
Fanöe			29.83	757.6	70.3	21.3	92	SW			4		9					
Godthaab, (Greenland			29.67	753.5														
Stykkisholm, (Iceland)			29.51	749.6	49.8	9.9	79	E			6		8					
Thorshavn, (Faröe)			29.67	753.6	53.8	12.1	71	WSW			5		5					
Vestervig			29.80	756.8	57.6	14.2	96	SE			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			29.98	761.5	71.6	22	82	SW			3		10cs n		SW	0	0	Covered	Normal School.
Amiens			29.95	760.6	77.7	25.4	68	NW			3		0			0	0	Clear	Normal School.
Avignon			30.11	764.7	87.1	30.6	43	SSW			2		0			0	0	Very clear	Normal School.
Bar-sur-Seine			30.05	763.3	80.2	26.8	45	S			3		8		W	0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)			29.98	761.4	73.6	23.1	74	SW	18.3	8.2			10		SW	0	0	Covered	Beaumette Observatory.
Beauvais			29.96	761.0	79.3	26.3	59	WSW			3		8		WSW	0	0	Very cloudy	Normal School.
Besançon			30.05	763.5	84.2	29	51	S			2		2		SW	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse			30.20	767.1	85.5	29.7	53	S			1		5cn		NE			Cloudy	Normal School.
Bourges			30.50?	774.7?	77.0	25	66	SW			2		2		E	0	0	Slightly cl'dy	Normal School.
Brest			29.85	758.2	65.3	18.5	86	SW			4		10		SW	0.157	4.00	Misty	Naval Observatory.
Carcassonne			30.05	763.2	81.0	27.2	48	SE			1		2		NW	0	0	Slightly cl'dy	Normal School
Caen			30.03	762.8	72.5	22.5	100	S			4		10		NE	0.47	12.	Covered	Normal School.
Chartres			29.94	760.5	77.2	25.1	78	SW			2		7		W	0	0		Normal School.
Clermont			29.99	761.8	86.9	30.5	42	SE			3		5		SW	0	0		Puy de Dome Obs'y.
Commercy			30.00	761.9	78.8	26	49	WSW			6		5k,c		WSW	0	0	Cloudy	Normal School.
Commune de Greasque*			30.20	767.1	84.2	29.0	36	SW			2		2		SW	0	0		M. Kina.
Grenoble			30.04	763.1	84.4	29.1	60	NNE			6		2k		NW	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.04	763.0	72.0	22.2	72	SW			6		2		NE	0	0	Slightly cl'dy	Normal School.
Le Mans			29.98	761.5	73.8	23.2	78	SSW			6		8		SSW	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier			30.08	763.9	79.9	26.6	73	S			1		10			0	0	Covered	Normal School.
Mâcon			30.30	769.6	78.8	26	70	Calm			0		10			0.071	1.8	Covered	Normal School.
Metz																			M. Schuster.
Mirecourt			29.99	761.7	78.1	25.6	60	SSW			4		1			0	0	Partly clear.	Normal School.
Nismes			30.09	764.3	90.0	32.2	35	SW			2		0			0	0	Clear	Normal School.
Orleans			29.96	761.0	78.4	25.8	50	S			2		8		W	0	0	Very cloudy	Normal School.
Paris, Observatory			29.98	761.6	77.0	25.0	60	SW			3		10k		SW	0	0	Stormy	National Observatory.
Parthenay			30.04	762.8	74.1	23.4	85	SW			2		8		NE	0	0	Very cloudy	Normal School.
Privas			30.07	763.6	86.2	30.1		NNE			2		2		NNW	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.07	763.7	82.4	28.0	53	SW			3		5			0	0	½ covered	Naval Observatory.
Rouen			29.95	760.7	76.5	24.7	61	S			2		10		S	0	0	Covered	Normal School.
Saint Lo			29.63	752.7	70.2	21.2	98	W			3		10		W	0.110	2.8		Normal School.
Tarbes	28.98	736.1	30.02	762.4	77.0	25		W			1		5		E	0	0	Cloudy	Normal School
Villefranche			30.07	763.7	90.9	32.7	61	SE			1		2		N	0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.92	760.0	81.0	27.2													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.37	771.4	70.9	21.6	61	NE	5.6	2.50			4		NW	0.008	0.2		—. Falguère.
Montsouris, Paris			29.98	761.6	78.8	26.0	56	SW			4		9		SW	Inap.	Inap.		Montsouris Observ'tory.
Perpignan			30.09	764.3	81.0	27.2	65	SE	7.4	3.33			0			0	0		Dr. Pines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			29.99	761.8	75.2	24.0	63	S			2		10			0	0	Very cloudy	E. Renou.
Toulouse			30.11	764.8	88.3	31.3	47	S			1		4			0	0		Toulouse Observatory.
Tours			30.04	762.9	73.4	23.0	77	W			3		10		W	0.098	2.5		C. Marquet.
Versailles, (near Paris)			30.00	762.0	75.6	24.2	67	SW			3		10			0	0	Covered	Dr. A. Bérigny.
Zi-Ka Wei, (near Shanghai)																			H. Le Lee, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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	762.5	79.3	26.3	54	SW			3		6	SW		0	0		Prof. T. Hoh.
Berlin			29.97	761.2	84.9	29.4	41	S			4		4			0	0		Prof. Arndt.
Breslau			30.12	765.0	80.6	27.0	52	SE			3		6			0	0		Dr. P. Neugebauer.
Carlsrune			29.98	761.4	80.6	27.0	57	SW			2		10					Thunder-storm	A. Senz.
Cassel			29.87	758.6	82.0	27.8	56	S			5		8	SW		0	0		Dr. H. Möhl.
Emden			29.78	756.4	76.1	24.5	72	W			7		2			0.402	10.2		Prof. Prestel.
Frankfort on the Main			30.04	762.9	72.1	22.3	79	W			1		8			0.165	4.2		Physical Society.
Friedrichshafen			30.04	763.0	77.4	25.2	72	W			4		6			0	0		M. Wilhelm.
Hamburg			29.94	760.4	70.9	21.6	76	WNW			3		10			0.579	14.7	Thunder-storm	Captain F. Hegemann.
Kiel			29.87	758.8	69.8	21.0	83	S			2		6			0.020	0.5		Prof. G. Karston.
Königsberg, (Prussia.)			30.06	763.5	76.6	24.8	45	E			2		2			0	0		Prof. E. Luther.
Köslin			30.12	765.1	81.1	27.3		SW			3		5			0	0		H. Müller.
Leipsic			29.97	761.3	87.6	30.9	40	S			3		4	SW		0	0		Prof. Bruhns.
Memel			30.09	764.3	66.9	19.4	69	WNW			2		0			0	0		Reinbrecht & Skalweit.
Münster			29.95	760.6	77.5	25.3	60	SW			3		6			0.287	7.3	Thunder-storm	Prof. E. Heis.
Neufahrwasser			30.00	763.4	71.8	22.1	58	SE			3		2			0	0		A. Lothes.
Posen			30.07	763.6	83.1	28.4	54	SE			1		4			0.031	0.8		Dr. Magener.
Strassburg, (in Alsace)			29.99	761.8	85.5	29.7	47	SW			1		10	W		0	0		Dr. Schur.
Stuttgart			29.95	760.8	83.7	28.7	45	E			1		5			0.244	6.2		Prof. Schoder.
Thorn			30.06	763.4	84.7	29.3	40	NW			1		3			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.91	759.7	84.7	29.3	48	W			7		5			Blank	Blank		Prof. Flesch.
Wustrow, Naval School			30.02	762.4	80.6	27.0	63	SSE			2		10			0.37	9.6		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	82.4	28.0		SW					k					Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.07	763.7	83.5	28.6	40	SW	0.7	0.6			3			0	0		
Padua			30.06	763.4	83.3	28.5	53	SE	5.6	2.5			0			0	0		
Vicenza			30.05	763.3	85.1	29.5	43	SE	0	0			1			0	0		
Verona			30.02	762.6	86.4	30.2	53	E			1		0			0	0		
Bergamo	28.75	730.2	30.01	762.2	83.5	28.6	50	S			2		2			0	0		
Domodossola	29.06	738.2	30.05	763.2	81.5	27.5	61	SW			4		8			0	0		
Milan			30.07	763.7	92.5	33.6	47	ENE			1		3	ENE		0	0		
Pavia			30.10	764.4	82.4	28.0	56	NE			1		1	SW		0	0		
Moncalieri			30.07	763.7	82.4	28.0	57	WNW	1.3	0.6			5	E		0	0		
Mondovi	28.24	717.2	30.05	763.2	79.9	26.6	58	NW			2		1			0	0		
Porto Maurizio			30.16	766.1	80.4	26.9	70	ESE			2		2	SW		0	0		
Genoa			30.13	765.2	78.4	25.8	65	SW	1.3	0.6			0			0	0		
Piacenza			30.08	763.9	84.0	28.9	55	NNW	3.8	1.7			1	W		0	0		
Parma			30.04	763.0	89.1	31.7	44	SE			2		2			0	0		
Bologna			30.11	764.7	86.7	30.4	44	NE			1		0			0	0		
Florence			30.11	764.9	85.6	29.8	46	W			2		1			0	0		
Leghorn			30.13	765.2	80.2	26.8	67	WSW	5.6	2.5			1			0	0		
Siena	28.93	734.8	30.09	764.2	82.6	28.1	47	NW	1.3	0.6			4	W		0	0		
Urbino	28.61	726.7	30.11	764.8	84.0	28.9	33	SW			2		3			0	0		
Pesaro																			
Ancona			30.10	764.6	83.8	28.8	47	SE			4		1			0	0		
Grosseto			30.15	765.7	88.9	31.6	44	SSW			2		3	NW		0	0		
Rome			30.11	764.7	88.9	31.6	41	W	8.1	3.6			2			0	0		
Naples, O. U.			30.14	765.6	84.9	29.4	50	SW			2		1			0	0		
Lecce			30.08	764.0	80.2	26.8	40	NNW	15.4	6.9			0			0	0		
Cosenza			30.08	764.0	88.3	31.3	61	SW	1.8	0.8			4			0	0		
Riposto, (Sicily)			30.11	764.7	81.3	27.4	64	ENE			2		2	NW		0	0		
Palermo			30.09	764.2	79.5	26.4	56	NE	3.8	1.7			0			0	0		
Caltanissetta	28.17	715.5	30.03	762.8	83.7	28.7	27	N			2		2			0	0		
Sub-Series.																			
Naples, S. R			30.15	765.9	86.4	30.2	46	SW	0	0			2	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			29.93	760.1	68.4	20.2		WNW			4								
Groningen			29.80	756.9	73.6	23.1		S			4								
Helder			29.85	758.1	69.3	20.7		SW			4								
Utrecht			29.84	757.9	77.2	25.1	68	WSW			3		5					Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	757.8	67.1	19.5	90	SSW	12.5	5.6			5			0.020	0.5		
Brône			29.87	758.8	55.4	13.0	73	W	11	5			6			0	0		
Christiania			29.89	759.2	66.7	19.3	39	SSW	10.7	4.8			10			0	0		
Tromsö			29.77	756.0	52.3	11.3	96	NW	2	1			10			0.701	17.8	Raining	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 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	768.1	73.6	23.1	91	WSW	9.8	4.39			7			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.04	763.0	91.0	32.8	16	SW	6.2	2.75			1			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.25	768.3	71.6	22.0	73	SW	3.6	1.61			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.15	765.9	77.9	25.5	61	NW	9.8	4.4			0			0	0		The Observatory.

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

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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			30.06	763.5	77.0	25.0	52	Calm	0	0			8						Astronomical Obs.
Wilna			30.04	763.1	74.7	23.7	38	WSW	4	2			3						Astronomical Obs.
Dorpat			29.96	761.0	77.0	25.0	42	W	7	3			2						Physical Cabinet.
St. Petersburg			29.91	759.6	71.6	22.0	58	NW	16	7			2						Central Physical Obs.
Kuopio			29.77	756.1	72.5	22.5	65	SW	18	8			10					Thunder-storm	Ch. Forsten.
Kieff			29.95	760.8	75.2	24.0	43	NNE	7	3			5						Physical Cabinet.
Nikolaiev			30.00	761.9	81.0	27.2	36	NW	13	6			3						Kurdakof.
Kertch			29.86	758.4	81.5	27.5	51	NNW	13	6			3						Lagorio.
Moscow			29.94	760.5	75.4	24.1	50	N	0	0			6						Meteorological Obs.
Lugan			29.75	755.7	77.2	25.1	52	SSW	18	8			10			Blank	Blank		Meteorological Obs.
Archangel			29.82	757.5	68.0	20.0	57	NW	22	10			6						Ogorodnikof.
Tiflis	28.33	719.6	29.62	752.4	93.9	34.4	31	S	9	4			3						Physical Observatory.
Astrakhan			29.92	759.9	83.3	28.5	60	ESE	22	10			4			Blank	Blank		Sebastianof.
Kasan			29.82	757.4	72.1	22.3	68	W	4	2			7						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.89	733.8	29.80	757.0	68.0	20.0	75	W	2	1			8						Meteorological Obs.
Nukuss			29.78	756.3	89.8	32.1	31	W	9	4			0						
Kasaly																			Bobrof.
Tashkend	28.10	713.6	29.65	753.1	93.6	34.2	21	NW	4	2			0						Michelson.
Barnaul			29.64	752.9	67.5	19.7	51	N	4	2			10						Meteorological Obs.
Yeniseisk			29.56	750.8	60.3	15.7	78	NW	2	1			7						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.90	759.4	80.6	27.0	62	SE	9	4			7			Blank	Blank		Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.89	759.1	73.9	23.3	69	Calm	0	0			1						
Nikolaievsk, on the Amoor					64.8	18.2	98	E	9	4			10						

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 300.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, or 1,651.3? 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	94.3	34.6	24	S	4.5	2.00		0	2			0	0	Partly cloudy	Royal Observatory.
San Fernando			30.10	764.5	80.2	26.8	52	WNW	13.0	5.8		0	1		N				The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			29.76	756.0	65.8	18.8	77	S			4		7			0	0		
Umea			29.76	755.8	72.0	22.2	51	NW			4		9			0	0		
Hernosand			29.82	757.4	70.2	21.2	50	SSW			4		5			0	0		
Stockholm			29.86	758.4	77.0	25.0	36	WSW			2		3			0	0		
Wisby			30.02	762.5	68.4	20.2	53	NW			2		3			0	0		
Sub-Series.																			
Upsala			29.85	758.1	76.3	24.6	33	WSW	12.3	5.5			3	W		0.000	0.01		Dr. Hildebrandsson.

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

SWISS SERIES.

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

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	28.69	728.8	30.03	762.8	85.6	29.8	41	WSW			3		8			0	0	Cl'dy. vapory	The Observatory.
Zurich	28.50	723.9	30.06	763.5	78.4	25.8	59	W			2		8			0	0	Cloudy	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +1.4 mm.; Thermometer, +7.5 cent.; Relative Humidity, —12 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

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	74.8	23.8	70	NNE	12	5.5			10		N	0.463	11.5	Thunder-storm	
Fao, (Persian Gulf)			29.66	753.3	100.4	38.0		NW			4		10						
Salonica			30.07	763.6	82.9	28.3		E			1		5						
Valona			30.09	764.3	79.2	26.2		W			1		0						
Varna			30.00	762 0	82.4	28.0		S			2		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			29.82	757.4	84.2	29.0	55	W			1		2k		W	0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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.			29.86	758.4	70.2	21.2	73	Calm	0	0			2			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.12	765.0	72	22.2		SW	5	2.2		0	2s		SW	0	0	Fair	W. R Bigg.
*Chatham, N. B.			29.94	760.5	65	18.3	86	W	7	3.1		0	0			0.42	10.7	Clear	G. A. Blair.
Charlottetown, P. E. Island.			29.96	761.0	64	17.8	89	W	5	2.2		2cs	0			0.65	16.5	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			30.03	762.7	73.2	22.9	70	SW			1	9cs	0			0	0	Fair	James Smith, M. A.
Dalhousie, N. B.					65	18.3	86	W			1					1.03	26.2		H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			30.03	762.7	62.0	16.7	74	NW	4	1.8		0	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.51	749.5	66	18.9	58	NE	14	6.3		2cs	2n	SW	SW	0	0	Threatening	James Stewart.
Goderich, Ontario			30.01	762.2	71.2	21.8	87	SW			3		10n			0	0	Threatening	H. J. Strang, M. A.
Granton, Ontario	28.96	735.6	30.01	762.2	72	22.2		SW			1	2cs	0	N		0	0	Clear	James Grant.
*Halifax, N. S.			29.98	761.5	63	17.2	68	NW	8	3.6		8cs	0			0.597	15.17	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.10	764.5	65	18.3	93	SW	7	3.1		10c	0			0	0	Fair	S. Woods, M. A.
Little Glace Bay, N. S.			29.89	759.2	64.8	18.2	61	E	8	3.6		2c	0	E		0.80	20.3	Fair	C. H. Rigby.
*Montreal, Quebec			30.04	763.0	71	21.7	76	SW	7	3.1		2c	0	N		0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.05	763.3	68	20.0	70	Calm	0	0		5c	0			0	0	Fair	J. B. Haney.
*Parry Sound, Ontario			29.97	761.2	64	17.8	89	S	8	3.6		5k	5ks	W	SW	0	0	Threatening	Rev. R. Mosley.
*Port Dover, Ontario			30.06	763.5	68	20.0	95	S	3	1.3		Haze	Haze		S	0	0	Hazy	H. Morgan.
Port Hastings, N. S.			29.93	760.2	60.0	15.6		NW	12	5.4						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.05	763.3	70	21.1	90	W	4	1.8		8k	0	NW		0	0	Cloudy	M. Payne.
*Quebec, Quebec			30.01	762.2	65	18.3	94	SW	5	2.2			10n		SW	0.02	0.5	Cloudy	Capt. Ashe, R. N.
St. John, N. B.			30.00	762.0	67	19.4	55	E	1	0.4		0	0			0	0	Fair	G. Murdoch, C. E.
*Saugeen, Ontario			29.94	760.5	72	22.2	79	SW	10	4.5			10n		W	0	0	Threatening	K. Stewart.
Stayner, Ontario			29.97	761.2	72	22.2	83	W	6	2.7			10n		W	0	0	Threatening	R. J. Cole.
Stratford, Ontario	28.77	730.7	30.00	762.0	70.3	21.3	92	W	6	2.7		5ck	2s	W		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			29.90	759.4	65	18.3	65	NW	7	3.1		0	0			0.96	24.4	Clear	T. C. Hill.
*Toronto, Ontario			30.05	763.3	65	18.3	86	SE	4	1.8			8ks		W	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.02	762.5	74.0	23.3	84	S	5	2.2		4cs	3ks	W		0	0	Fine	J. Montgomery
Sub-Series.																			
St. John's, Newfoundland			29.69	754.1	48	8.9		S					10n			1.44	36.6	Heavy rain.	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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.			30.08	764.0	68	20.0	79	Calm	0	0		Haze	Haze			0	0	Hazy	
Alpena, Mich.			29.89	759.2	68	20.0	94	S	7	3.1			10s		S	0.05	1.3	Cloudy	
Atlantic City, N. J.			30.08	764.0	75	23.9	72	N	4	1.8		0	0			0	0	Clear	
Augusta, Ga.			30.14	765.5	81	27.2	78	S	3	1.3		0	0			0	0	Clear	
Baltimore, Md.			30.11	764.8	79	26.1	78	NW	3	1.3		2c	Sm'e			0.16	4.1	Fair	
Barnegat, N. J.			30.09	764.3	71	21.7	75	N	6	2.7		1k	0			0	0	Clear	
Benton, Montana	27.00	685.8	29.80	756.9	50	10.0	79	N	1	0.4			10s			0.10	2.5	Cloudy	
Bismarck, Dakota	27.77	705.4	29.30	744.2	66	18.9	49	N	8	3.6		5k	Haze	N		0	0	Fair	
Boston, Mass.			30.07	763.8	75	23.9	59	NW	4	1.8		2cs	Haze	NW		0	0	Hazy	
Breckenridge, Minn.			29.39	746.5	77	25.0	72	S	28	12.5		0	1s			0	0	Clear	
Buffalo, N. Y.			30.04	763.0	71	21.7	71	SW	4	1.8		2c	8ks		SW	0	0	Cloudy	
Burlington, Vt.			30.08	764.0	71	21.7	71	S	1	0.4		2k	5s	W		0	0	Cloudy	
Cairo, Ill.			30.10	764.5	79	26.1	78	S	4	1.8		0	0			0	0	Clear	
Cape Hatteras, N. C.			30.01	762.2	82	27.8	78	W	3	1.3		1ok	0			1.71	43.4	Clear	
Cape Henry, Va.			30.04	763.0	84	28.9	71	W	8	3.6		5c	0	W		0	0	Fair	
Cape Lookout, N. C.			30.10	764.5	80	26.7	74	W	20	8.9		5cs	0			Inap.	Inap.	Fair	
Cape May, N. J.			30.08	764.0	76	24.4	81	SW	5	2.2		2cs	Fog	W		0	0	Foggy	
Charleston, S. C.			30.16	766.1	82	27.8	74	W	5	2.2		0	0			0	0	Clear	
Cheyenne, Wyoming	23.84	605.1	29.78	756.4	68	20.0	32	W	2	0.9		0	1s			0	0	Clear	
Chicago, Ill.			29.98	761.5	83	28.3	67	SW	6	2.7		0	0			0	0	Clear	
Cincinnati, Ohio			30.10	764.5	76	24.4	72	SE	6	2.7		0	0			1.02	25.9	Clear	
Cleveland, Ohio			30.09	764.3	72.8	22.7	77	W	4	1.8			10ks		W	0.07	1.8	Threatening	
Colorado Springs, Col.	23.94	608.1	29.81	757.2	63	17.2	57	Calm	0	0		5c	0			0	0	Fair	
Corsicana, Tex.			29.94	760.5	74	23.3	90	SE	5	2.2		2cs	2ks		S	0	0	Fair	
Davenport, Iowa			29.97	761.2	80	26.1	78	SW	8	3.6		0	0			0	0	Clear	
Denison, Tex.			29.99	761.7	77	25.0	85	SE	12	5.4			10s			Inap.	Inap.	Cloudy	
Denver, Col.	24.57	624.1	29.79	756.7	69	20.6	35	S	6	2.7		0	0			0	0	Clear	
Detroit, Mich.			30.01	762.2	73	22.8	85	SW	5	2.2		5cs	0	SW		0.70	17.8	Fair	
Dodge City, Kan.	27.29	693.2	29.44	747.8	74	23.3	81	SE	24	10.7		0	0			0	0	Clear	
Dubuque, Iowa			29.90	759.4	80	26.7	78	S	8	3.6		0	0			0	0	Clear	
Duluth, Minn.			29.70	754.4	56	13.3	93	Calm	0	0			Fog			0.10	2.5	Foggy	
Eastport, Me.			30.04	763.0	67	19.4	60	SW	5	2.2		0	0			0	0	Fair	
Erie, Pa.			30.03	762.7	78	25.6	65	W	10	4.5		4c	4k		SW	0	0	Clear	
Escanaba, Mich.			29.80	756.9	79	26.1	73	W	12	5.4		0	0			0	0	Clear	
Fort Gibson, Indian Ter.			29.94	760.5	82	27.8	63	SE	7	3.1		0	0			0	0	Clear	
Ft. St. Michael, Alaska			29.96	761.0	49	9.4	93	SW			2	0	5ks			0	0	Fair	
Fort Sill, Indian T.	28.74	730.0	29.78	756.4	78	25.6	82	S	16	7.2		2ck	2cs	S	S	0	0	Fair	
Fort Sully, Dakota	27.73	704.3	29.21	741.9	81	27.2	63	S	25	11.2		8c	0			0	0	Fair	
Galveston, Tex.			29.91	759.7	79	26.1	86	SE	12	5.4			10n			0.79	20.1	Light rain	
Grand Haven, Mich.			29.97	761.2	72	22.2	90	SW	18	8.0		0	9s		W	0	0	Cloudy	
Indianapolis, Ind.			30.06	763.5	79	26.1	73	SW	4	1.8		0	0			0.10	2.5	Clear	
Indianola, Tex.			29.88	758.9	77	25.0	95	NE	4	1.8			10s			0.26	6.6	Cloudy	
Jacksonville, Fla.			30.16	766.1	83	28.3	70	SE	4	1.8		0	0			0	0	Clear	
Keokuk, Iowa			29.93	760.2	82	27.8	74	E	13	5.8		0	0			0	0	Clear	
Key West, Fla.			30.13	765.3	81.8	27.7	83	SE	9	4.0		0	5k		E	0.12	3.0	Fair	
Kittyhawk, N. C.			30.06	763.5	80	26.7	86	W	6	2.7		2cs	Haze	W		0.11	2.8	Fair	
Knoxville, Tenn.			30.17	766.3	73	22.8	85	NE	6	2.7		1cs	0	NE		0	0	Clear	
La Crosse, Wis.			29.83	757.7	78	25.6	82	S	12	5.4		0	0			0.10	2.5	Clear	
Leavenworth, Kan.			29.88	758.9	79	26.1	78	S	12	5.4		0	0			0	0	Clear	
Lexington, Ky.	29.06	738.1	30.12	765.0	73	22.8	90	SE	3	1.3		2c	0			0.90	22.9	Clear	
Long Branch, N. J.			30.10	764.5	72	22.2	67	NW	5	2.2		1c	0	NW		0	0	Clear	
Louisville, Ky.			30.12	765.0	81	27.2	66	S	2	0.9		0	0			0.17	4.3	Clear	
Lynchburg, Va.			30.09	764.3	83	28.3	58	NW	6	2.7		5c	0	SW		0.11	2.8	Fair	
Malone, N. Y.			30.06	763.5	70	21.1	52	SW	6	2.7		8c	0	W		0	0	Fair	
Manhattan, Kan.	28.74	730.0	29.82	757.4	75	23.9	90	S	20	8.9		2ck	0	S		0	0	Clear	
Marquette, Mich.			29.77	756.1	70	21.1	84	NE	4	1.8		0	0			0.15	3.8	Clear	
Memphis, Tenn.			30.09	764.3	83	28.3	70	SE	2	0.9		0	Haze			0	0	Clear	
Milwaukee, Wis.			29.96	761.0	78	25.6	86	SW	9	4.0		2c	0	SW		0	0	Clear	
Mobile, Ala.			30.13	765.3	81	27.2	78	SE	6	2.7		5k	5s	S	SE	1.16	29.5	Cloudy	
Montgomery, Ala.			30.16	766.1	81	27.2	74	SE	4	1.8		0	0			0.07	1.8	Clear	
Morgantown, W. Va.	29.10	739.1	30.10	764.5	76	24.4	72	SW	5	2.2		1c	0	W		0	0	Clear	
Mt. Washington, N. H.	23.98	609.1	30.31	770.6	46	7.8	100	NW	28	12.5			Fog			0.20	5.1	Foggy	
Nashville, Tenn.			30.09	764.3	82	27.8	70	Calm	0	0		0	Haze			0	0	Clear	
New Haven, Conn.			30.10	764.5	76	24.4	60	N	10	4.5		0	0			0	0	Clear	
New London, Conn.			30.09	764.3	75	23.9	59	N	4	1.8		0	Haze			0	0	Clear	
New Orleans, La.			30.07	763.8	82	27.8	78	SE	10	4.5		4c	0	W		0.15	3.8	Fair	
Newport, R. I.			30.08	764.0	74	23.3	59	NW	6	2.7		0	0			0	0	Clear	
New York, N. Y.			30.10	764.5	76	24.4	52	NW	4	1.8		1k	Haze			0	0	Fair	
Norfolk, Va.			30.07	763.8	81	27.2	74	NW	5	2.2		5c	Haze	NW		Inap.	Inap.	Fair	
North Platte, Neb.	26.78	680.2	29.13	739.9	77	25.0	57	S	32	14.3		0	Haze			0	0	Clear	
Omaha, Neb.	28.76	730.5	29.77	756.1	78	25.6	77	S	15	6.7		0	0			0	0	Clear	
Oswego, N. Y.			30.09	764.3	68.1	20.1	77	SE	4	1.8		Haze	2s	SW		0	0	Cloudy	
Pembina, Dakota			29.42	747.3	64	17.8	88	NE	8	3.6			10s		SE	0	0	Cloudy	
Philadelphia, Penn.			30.10	764.5	76	24.4	60	E	7	3.1		2ck	2s			0	0	Fair	
Pike's Peak, Colorado	17.89	454.4	30.10	764.5	39	3.9	63	SW	20	8.9		1c	Haze			0	0	Clear	
Pittsburgh, Penn.			30.08	764.0	75	23.9	81	W	4	1.8		9c	0	NW		0	0	Cloudy	
Port Huron, Mich.			29.99	761.7	73	22.8	85	S	8	3.6		8c	1s			0	0	Cloudy	
Portland, Me.			30.09	764.3	69	20.6	65	Calm	0	0		5c	Haze			0	0	Fair	
Portland, Oregon			29.81	757.9	54	12.2	86	Calm	0	0			10s			0	0	Cloudy	
Punta Rassa, Fla.			30.15	765.8	79	26.1	86	NE	4	1.8		5cs	0	W		Inap.	Inap.	Fair	
Rochester, N. Y.			30.06	763.5	69	20.6	75	SW	8	3.6		8c	Sm'e	W		0	0	Fair	
Salt Lake City, Utah	25.29	642.4	29.62	752.3	65	18.3	68	Calm	0	0		5k	5s	SW	SE	0.06	1.5	Cloudy	
Sandy Hook, N. J.			30.09	764.3	75	23.9	69	N	5	2.2		1cs	Haze			0	0	Hazy	
San Diego, Cal.			29.87	758.7	63	17.2	88	S	12	5.4			10s		S	Inap.	Inap.	Cloudy	
San Francisco, Cal.			29.83	757.7	54	12.2	73	W	12	5.4		0	0			0.01	0.3	Clear	
Santa Fé, N. M.	23.23	590.0	29.77	756.1	55	12.8	87	E	4	1.8		0	0			0.27	6.9	Clear	
Savannah, Ga.			30.16	766.1	87	30.6	66	SW	2	0.9		0	Sm'e			0	0	Clear	
Shreveport, La.			30.05	763.3	77	25.0	86	E	3	1.3		2c	0	W		0	0	Fair	
Smithville, N. C.			30.12	765.0	81	27.2	70	W	6	2.7		0	0			0	0	Clear	
Springfield, Mass.			30.09	764.3	75	23.9	68	NW	4	1.8		Haze	0			0	0	Clear	
St. Louis, Mo.			30.05	763.3	81	27.2	71	S	8	3.6		0	0			0	0	Clear	
St. Marks, Fla.			30.16	766.1	80	26.7	78	SE	5	2.2		2c	2ks	NW	SE	0	0	Fair	
St. Paul, Minn.			29.96	753.4	81	27.2	70	S	24	10.7		0	0			0	0	Clear	
St. Paul's Island, Alaska			29.25	768.3	40	4.4	82	W	11	4.9			10s			0	0	Cloudy	
Thatcher's Island, Mass.			30.09	764.3	62	16.7	83	N	4	1.8		5c	0	NW		0	0	Hazy	
Toledo, Ohio			30.03	762.7	76	24.4	81	SW	6	2.7		5cs	Haze	SW		0	0	Fair	
Tucson, Arizona	27.39	695.7	30.08	764.0	75	23.9		S					10n		E	2.37	60.2	Heavy rain	
Tybee Island, Ga.			30.16	766.1	83	28.3	79	SW	4	1.8		0	0			0	0	Clear	
Vicksburg, Miss.			30.09	764.3	78	25.6	82	SE	6	2.7		2c	2ck		S	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.	23.98	609.1	29.46	748.3	54	12.2	73	N	4	1.8			10ks		W	0.31	7.9	Cloudy	
Washington, D. C.			30.10	764.5	80	26.7	72	NW	4	1.8		Haze	Haze			0	0	Hazy	
Wilmington, N. C.			30.11	764.8	79	26.1	78	NW	7	3.1		0	0			0.63	16.0	Clear	
Wood's Holl, Mass.			30.06	763.5	77	25.0	60	NW	4	1.8		2c	0	N		0	0	Clear	
Wytheville, Va.	27.89	708.4	29.99	761.7	68	20.0	84	W	4	1.8		5c	1s	W	W	Inap.	Inap.	Fair	
Yankton, Dakota	28.40	721.3	29.59	751.6	78	25.6	69	S	18	8.0		0	0			0	0	Clear	
Yuma, Arizona			29.77	756.1	86	30.0		E				5cs	0	E		0	0	Clear	
Sub-Series.																			
P'nte-a-Pitre, G'd'l'pe, W. I.			30.00	762.0	83	28.3	70	E				5k	5ks			0	0	Cloudy	L. V. Bigard.
Kingston, Jamaica, W. I.																			James Gall.
St. Georges, Bermudas			30.12	765.0	77.0	25.0	82	WSW	18	8.0			10fk			0	0	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.28	692.9	30.05	763.3	74	23.3	75	NE	1.0	0.4		2c	0	NE		0	0	Fine, clear	C. Partridge.
Paramaribo, D. Guiana, S.A.			30.04	763.0	81	27.2	87	E			2	5k	5k	E		0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.8			84.2	29		N								0.413	10.50		Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1			64.5	18.1	74	Calm	0	0		1c	2s			0	0	Fair	Thomas Herran.
York Factory, B. A.			29.76	755.9	52.5	11.4	86	S	9	4.0		3c	0	NE		0.20	5.1		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.12	765.0	76	24.4	95	NE			2					0.19*	4.8*	Cloudy	Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	Weather.
Sch'ner Addie Fuller at Damariscotta, Me.					Clear
Steamer Leipzig. N, 47° 22′ W, 36° 4′.	S60W		Smooth		Overcast
Steamer Nova Scotian N, 39° 25′ W, 69° 27′.	ENE	11½	Light	SW	Fair

Marine Series.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer
Sch'ner Addie Fuller at Damariscotta, Me.			30.14	765.5	71	21.7		SE			2	1c						Clear	Capt. James Jorgensen.
Steamer Leipzig. N, 47° 22′ W, 36° 4′.			29.86	758.4	57.9	14.4		W			2		..k					Overcast	Capt. R. Hoffmann.
Steamer Nova Scotian N, 39° 25′ W, 69° 27′.			30.09	764.3	79	26.1		NNW			2							Fair	Capt. Ritche.

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.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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 added 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

*Rain-fall from 1 A. M. until 6 A. M. of the 7th.

UNITED STATES (NAVAL) SERIES.

By authority of the Secretary of the Navy.

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

Note.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

Collated at the Office of the CHIEF SIGNAL OFFICER OF THE ARMY, Washington, D. C.

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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			30.04	763.0	80.2	26.8	66	NNW			1		1			0	0	Clear	Charnot.
Algiers			30.11	764.7	89.6	32.0	60	NNW			1		1			0	0	Clear	Peter.
La Calle																			Kunts.
Tunis			30.09	764.2	90.3	32.4	37	E			3		2			0	0	Clear	Jacques.
Sfax			30.15	765.7	86.0	30.0	47	SE			2		1			0	0	Clear	Chauvey.
Saida			30.08	764.0	82.4	28.0	22	NNE			1		1			0.157	4.0	Clear	Millot.
Tebessa			30.10	764.4	87.6	30.9		W			2		4			0.079	2.0	Fair	Colin.
Geriville					78.8	26.0	42	SW			1		3			0	0	Fair	Buard.
Laghouat			30.02	762.6	82.4	28.0	17	NE			2		9			0.315	8.0	Hidden	Guyot.
Biskra			30.09	764.3	90.1	32.3	28	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			29.96	760.9	84.6	29.2	52	SW			3		3			0.028	0.7		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.96	760.9	83.5	28.6	51	NE			1		7			0	0		Dr. Wierzbiski.
Eperies			29.95	760.8	82.8	28.2	64	Calm			0		7			0.138	3.50		Julius Mikolik.
Grats	28.70	731.3	29.94	760.4	79.0	26.1	68	ENE			2		7			0.063	1.6		Andreas Rospini.
Hermannstadt	28.00	720.5	29.95	760.6	78.8	26.0	41	NW			3		2			0	0		Prof. Reissenberger.
Kremsmünster	28.47	723.2	29.74	755.4	77.0	25.0	59	WNW			1		3			0	0		Prof. C. Wagner.
Lemberg			29.95	760.8	78.8	26.0	80	S			1		4			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzauda Daniel.
Pola			30.01	762.2	82.0	27.8	65	SW			1		4cks			0	0		I.R.Hydrographic Office.
Szegedin			29.97	761.3	80.8	27.1	86	S			1		5			0	0		Karl Stancel.
Trieste			30.01	762.3	82.6	28.1	61	Calm			0		1			0	0		Prof. V. Farolfi.
Vienna			29.94	760.5	72.0	22.2	70	WSW			3		4			0.173	4.4		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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	757.4	69.4	20.8	73	SW			2	2	4	SW	SW	0.532	13.50		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.61	752.1	64.5	18.1		SSE	7	3.1			4			0.010	0.25	Blue sky	William Boswell.
Ardrossan			29.70	754.4	65	18.3		SW			2		2					*D. clouds	William McNeil.
Armagh, Observatory			29.74	754.4	66.7	19.3		W	7	3.1			6					*D. clouds	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.80	756.9	64.3	17.9		SW			1-2		10					Gloomy	J. Dreyer.
Bradford			29.70	754.4	68.9	20.5		W			1		5			0.04	1.0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	82.5	28.1		E			1		4					*D. clouds	Sergt. J. F. Halanen, A. C.
Cambridge, Observatory			29.72	754.9	73.0	22.8		W			2		10			Blank	Blank	Overcast	H. Todd.
Cardington			29.74	755.4	75.0	23.9		SW			1		6					*D. clouds	John McLaren.
Carlisle			29.66	753.4	70	21.1		SW			3		3			0.10	2.5	*D. clouds	T. Bell, for J. Carmell.
Chatham, School M. E			29.77	756.1	70.5	21.4		W			4		8			Blank	Blank	*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.43	722.1	29.91	759.7	57.4	14.1		NW			2		9					Raining	R. E. Power.
Donaghadee			29.70	754.4	63	17.2		S			2		8					*D. clouds	J. Mac Gowan.
Dover			29.79	756.7	63	17.2		WSW			4		5					½ clouded	J. Costello.
Eccles, (near Manchester.)			29.70	754.4	68.8	20.4		WNW	6.4	2.9			5					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			29.87	758.7	63.4	17.4		WNW			6		10					Squally	The Staff.
Fort Napier, (Natal)	28.11	714.0	30.35	770.9	63.1	17.3		E			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.07	763.8	79	26.1		Calm?			5?		9			Blank	Blank	Overcast	
Galway, Queen's College			29.76	755.9	66	18.9		S			2		2					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.10	764.5	81.0	27.2		S			1		1					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			29.64	752.8	66.2	19.0		W			2		7					Fine	Lewis Stuart.
Great Yarmouth			29.73	755.1	66	18.9		S			3		7			Blank	Blank	*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y			29.77	756.1	71.2	21.8		WSW			4		10					Overcast	The Staff, for G. B. Airy
Guernsey			29.89	759.2	63	17.2		SW			4		7			Blank	Blank	*D. clouds	Dr. S. E. Hoskins.
Helston			29.85	758.2	65	18.3		S			4		10			0.11	2.8	Gloomy	M. P. Moyle.
Holyhead			29.76	755.9	65	18.3		WSW			3		0					Blue sky	John Tinston.
Kew, Observatory			29.79	756.7	65.8	18.8		SSW	17	7.6			10					Threatening	The Staff.
Kingstown			29.77	756.1	66	18.9		WNW			4		6					*D. clouds	George Mitchell.
Leicester Museum			29.74	755.4	68.0	20.0		W			1		8					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)			30.06	763.5	80.8	27.1		NW			1		0						Corp'l F. Fraser, A. M. C.
Nairn			29.58	751.3	63	17.2		SW			1		8					¾ clouded	W. D. Penny.
Nassau, (Bahamas)			30.15	765.8	82.0	27.8		NE			3		4					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.73	755.1	73.0	22.8		SW			2		7k		SW	0.015	0.38	D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.73	755.1	66.0	18.9		SSW			2		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.74	755.4	63	17.2		SW			1		10					Raining	J. Lucas.
Plymouth			29.82	757.4	65.5	18.6		W			5		10					Gloomy	John Merrifield.
Roche's Point			29.80	756.9	63	17.2		NW			5		8					Cloudy	W. Kennedy.
Saint Ann's Head			29.78	756.4	59	15.0		NW			2		5					*D. clouds	John C. Walker.
Saint Helier, Jersey			29.91	759.7	66.0	18.9		W			6		8					¾ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.64	752.8	54.9	12.7		E	13	5.8			10					Misty	Rev. C. Clouston, LL. D.
Scarborough			29.66	753.4	69.0	20.6		SW			2		6					Overcast	F. Shaw.
Scutari Cemetery, Turkey			29.95	760.7	84.0	28.9		NE			1		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.69	754.1	72.0	22.2		W			2		7			0	0	*D. clouds	W. F. Cooper.
Silloth Rectory			29.69	754.1	70.9	21.6	67	SW			1		2			0.038	0.97	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.70	754.4	61.5	16.4		W			2		10			Blank	Blank	Threatening	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			29.59	751.6	61	16.1		SE			1		8					*D. clouds	John Smith.
Strathfield Turgiss			29.77	756.1	67.8	19.9		W			1		10					Raining	Rev. Charles H. Griffith.
Thurso			29.60	751.8	57	13.9		ENE			1		10					Overcast	John Trotter.
Truro, Royal Institution			29.92	760.0	65	18.3		W			7		9					Gloomy	W. Newcombe.
Valencia, Observatory			29.89	759.2	58.4	14.7		WNW	17	7.6			10					Drizzling	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man					58	14.4		W			3		0						Thomas Dawson.
Cape Good Hope, Obs'y			30.27	768.8	69.8	21.0	44	NW	5	2.2		0	0						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			31.13?	790.7?	58.0	14.4	87	NW			2		8ks			0	0		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.66	753.4	67.8	19.9		W			3		3k			0.16	4.1	Fine	Andrew Gibb.
Mauritius, Observatory			30.16	766.1	71.6	22.0	62	ESE	9.9	4.4						0.315	8.00		C. Meldrum
Melbourne, Observatory			30.23	767.8	44.7	7.1	81	NE	3	1.3			10			0	0	Threatening	R. L. J. Ellery.
Monach Lighthouse, Hebrides			29.61	752.1	56	13.3		SE			3		Fog			0	0	Foggy	J. Youngclause.
North Unst, (Shetland Is.)			29.71	754.6	55	12.8		NE			3		10			Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,250 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			29.82	757.4	70.5	21.4	71	S			2		10						
Fanöe			29.78	756.3	70.2	21.2	83	WSW			4		6						
Godthaab, (Greenland)			29.69	754.2	43.3	6.3		NNE			2		0						
Stykkisholm, (Iceland)			29.56	750.7	50.9	10.5	80	E			2		5						
Thorshavn, (Faröe)			29.69	754.1	53.1	11.7	85	Calm			0		5						
Vestervig			29.74	755.3	66.2	19.0	87	SW			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			29.95	760.6	71.6	22	44	SW			4		8cn		SW	0.126	3.2	Very cloudy	Normal School.
Amiens			29.85	758.2	78.8	26.0	66	NW			3		5		NW	0	0	Cloudy	Normal School.
Avignon			30.07	763.8	83.3	28.5	32	S			2		2		SW	0	0	Slightly cl'dy	Normal School.
Bar-sur-Seine			29.96	760.9	72.5	22.5	67	S			3		5		SW	0.295	7.5	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.94	760.4	67.5	19.7	81	SW	21.0	9.4			10		SW	0.114	2.9	Raining	Beaumette Observatory.
Beauvais			29.9	759.4	70.7	21.5	72	W			3		8		WSW	0.144	3.65	Very cloudy	Normal School.
Besançon			30.04	763.0	70.2	21.2	80	S			2		8		SW	0	0	Very cloudy	Normal School.
Bourg en Bresse			30.16	766.1	67.6	19.8	92	S			1		10n		NE			Raining	Normal School.
Bourges			30.39?	771.9?	74.1	23.4	89	SW			4		1		E	0.39	10.	Clear	Normal School.
Brest			29.93	760.1	66.7	19.3	75	W			4		5n		NW	0.256	6.50	Cloudy	Naval Observatory.
Carcassonne			30.10	764.4	73.8	23.2	75	W			3		10		E	0	0	Covered	Normal School
Caen			29.80	756.1	73.6	23.1	55	W			6		10		ENE	0.138	3.5	Covered	Normal School.
Chartres			29.93	760.1	72.3	22.4	70	W			2		9		W	0.098	2.5	Cloudy	Normal School.
Clermont			30.06	763.4	69.6	20.9	85	NW			3		10		W	0.283	7.2		Puy de Dome Obs'y.
Commercy			30.02	762.4	69.3	20.7	78	WSW			4		5kn		WSW	0.16	4.	Cloudy	Normal School.
Commune de Greasque*			30.11	764.9	82.4	28.0	38	SE			4		2		SE	0.12	3.		M. Kina.
Grenoble			30.04	763.0	79.5	26.4	44	NW			6		8kn		NW	0	0	Very cloudy	Normal School.
La Roche-sur-Yon			30.04	763.0	68.4	20.2	68	W			0		5		E	0	0	Cloudy	Normal School.
Le Mans			29.92	760.0	73.8	23.2	62	W			6		5		W	0.102	2.6	Cloudy	Normal School.
Lons-Le-Saulnier			30.05	764.3	68.9	20.5	91	S			2		10			0.55	14.	Covered	Normal School.
Mâcon			30.36	771.2	70.2	21.2	85	S			4		10			0.157	4.0	Covered	Normal School.
Metz																			M. Schuster.
Mirecourt			29.94	760.4	69.3	20.7	82	NW			4		10		E	0.335	8.5	Covered	Normal School.
Nîmes			30.08	763.9	80.6	27	63	SW			2		5		SW	0.059	1.5	Cloudy	Normal School.
Orleans			29.93	760.1	68.7	20.4	83	SW			3		5		W	0.008	0.2	Cloudy	Normal School.
Paris, Observatory			29.89	759.2	73.8	23.2	63	SW			3		9kn		SW	0	0	Almost cov'd	National Observatory.
Parthenay			30.02	762.6	76.6	24.8	69	W			4		5		E	0.094	2.40	Cloudy	Normal School.
Privas			30.11	764.8	77.0	25.5		SW			2		10		SSW	0	0	Covered	Normal School.
Rochefort, Observatory			30.11	764.8	77.4	25.2	53	W			5		8		ENE	0	0	¾ Covered	Naval Observatory.
Rouen			29.90	759.4	73.0	22.8	53	WSW			2		5		SW	0.047	1.2	Cloudy	Normal School.
Saint Lo			29.67	753.5	68.0	20	98	W			3		8		W	0	0		Normal School.
Tarbes	29.03	737.3	30.07	763.8	73.4	23		E			1		10			0	0	Covered	Normal School
Villefranche			30.18	766.5	69.8	21	94	SE			1		8		N	0.08	2.	Very cloudy	Normal School.
Sub-Series.																			
Fort-de-France, Martinique			29.90	759.5	78.8	26													L'Abbé Marchesi.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.32	770.2	66.2	19.0	81	SW	5.6	2.50			4		W	0	0		—. Faiguère.
Montsouris, Paris			29.89	759.3	73.8	23.2	66	SSW			3		10		SSW	Inap.	Inap.		Montsouris Observatory.
Perpignan			30.08	763.9	80.4	26.9	58	SE	7.4	3.33			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)			29.90	759.5	73.0	22.8	62	SSW			2		10			0	0	Covered	E. Renou.
Toulouse			30.19	766.7	71.5	23.6	64	WNW			1		9			0	0		Toulouse Observatory.
Tours			29.97	761.3	76.5	24.7	40	W			4		3		WSW	0	0		C. Marquet.
Versailles, (near Paris)			29.91	759.6	73.8	23.2	72	W			3		8			0	0	Fair	Dr. A. Bérigny.
Zi-Ka Wei, (near Shanghai)																			H. Le Leo, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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			29.87	758.6	80.1	26.7	56	SW			4		3	SW		0	0		Prof. T. Hoh.
Berlin			29.83	757.7	86.0	30.0	43	S			4		4			0.035	0.9		Prof. Arndt.
Breslau			29.97	761.3	84.0	29.4	30	SW			5		1			0	0		Dr. P. Neugebauer.
Carlsruhe			29.95	760.9	72.0	22.2	74	SSW			2		10			0.177	4.5		A. Senz.
Cassel			29.85	758.1	70.7	26.5	59	SSE			7		9	SSW		0.488	12.4		Dr. H. Möhl.
Emden			29.72	754.8	73.0	22.8	72	W			3		8			0.102	2.6		Prof. Prestel.
Frankfort on the Main			29.97	761.1	66.0	18.9	80	W			1		10			0.370	9.4	Thunder-storm	Physical Society.
Friedrichshafen			29.98	761.5	78.4	25.8	76	W			3		7			0.110	2.8	Raining	M. Wilhelm.
Hamburg			29.81	757.2	73.8	23.2	78	Calm			0		10			0.11	2.9	Showery	Captain F. Hegemann.
Kiel			29.78	756.4	76.1	24.5	70	SW			2		10			0.047	1.2		Prof. G. Karsten.
Königsberg, (Prussia.)			29.92	759.9	85.5	29.7	39	S			5		5			0	0		Prof. E. Luther.
Köslin			29.87	758.7	83.5	28.6		SW			4		5			0.055	1.4		H. Müller.
Leipsic			29.86	758.4	86.0	30.0	47	SW			3		7			0	0		Prof. Bruhns.
Meiningen			29.97	761.2	79.9	26.6	47	SSW			3		8			0	0		Reinbrecht & Skalweit.
Münster			29.76	756.0	73.6	23.1	43	SW			3		10			0.669	17.0	Thunder-storm	Prof. E. Heis.
Neufahrwasser			29.90	759.4	76.8	24.9	90	NNE			1		10			0.390	9.9	Thunder-storm	A. Lothes.
Posen			29.93	760.3	86.0	30.0	56	S			1		4			0.055	1.4		Dr. Magener.
Strasburg, (in Alsace)			30.00	761.9	72.7	22.6	83	SW			2		10	SW		lank	Blank		Dr. Schur.
Stuttgart			29.98	761.5	75.7	24.3	56	W			2		10			0.25	6.4		Prof. Schoder.
Thorn			29.9	759.4	87.4	30.8	40	SW			4		3			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.89	759.1	71.6	22.0	72	SW			5		10			0.795	20.2		Prof. Flesch.
Wustrow, Naval School			29.90	759.4	77.2	25.1	72	WNW			1		10			0.161	4.1		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 417.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	81.2	29.0		E										Very clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	84.0	28.9	44	SW	1.3	0.6			5			0	0		
Padua			29.97	761.2	81.1	27.3	55	SE	5.6	2.5			10			0.322	8.2		
Vicenza			29.96	760.9	82.4	28.0	59	NW	0.7	0.3			5	W		0	0		
Verona			29.97	761.1	94.3	34.6	58	E			1		0			0	0		
Bergamo	28.65	727.7	29.91	759.6	86.0	30.0	50	S			2		6			0	0		
Domodossola	29.01	736.9	30.03	761.9	76.6	24.8	75	Calm			0		8			0	0		
Milan			29.95	760.6	87.8	31.0	60	E			2		3	S		0	0		
Pavia			29.96	761.0	87.8	31.0	47	S			2		7	SW		0	0		
Moncalieri			29.95	760.7	82.0	27.8	55	WNW	8.1	3.6			9	SE		2.807	71.3	Hail-showers	
Mondovi	28.12	714.1	29.93	760.2	80.4	26.9	57	ENE			2		10			0	0		
Porto Maurizio			30.07	763.7	79.7	26.5	72	ESE			2		3			0	0		
Genoa			30.06	763.4	77.0	25.0	64	SW	2.5	1.1			4	SE		0	0		
Piacenza			29.97	761.1	84.6	29.2	56	ESE	3.1	1.4			7	SSW		0	0		
Parma			30.00	762.1	88.7	31.5	40	W			2		3			0	0		
Bologna			30.02	762.5	88.5	31.4	41	NE			1		4	S		0	0		
Florence			30.04	763.1	86.0	30.0	41	NW			2		4			0	0		
Leghorn			30.03	762.7	79.3	26.3	64	W	4.9	2.2			3			0	0		
Siena	28.85	732.9	30.01	762.3	84.4	29.1	36	W	2.5	1.1			4	SW		0	0		
Urbino	28.56	725.3	30.06	763.4	84.9	29.4	36	SW			2		7			0	0		
Pesaro																			
Ancona			30.03	762.8	83.8	28.8	64	E			2		2			0	0		
Grosseto			30.08	763.9	86.4	30.2	39	NNW			4		3	SE		0	0		
Rome			30.04	763.1	87.1	30.6	43	W	10.5	4.7			1			0	0		
Naples, O. U.			30.07	763.8	82.4	28.0	69	SW			4		2	NW		0	0		
Lecce			30.07	763.7	82.0	27.8	35	NNW	4.9	2.2			1			0	0		
Cosenza			30.04	763.0	88.7	31.5	61	SW	1.3	0.6			4			0	0		
Riposto, (Sicily)			30.03	762.7	80.6	27.0	60	NE			2		2			0	0		
Palermo			30.04	763.0	80.4	26.9	64	NE	5.6	2.5			2			0	0		
Caltanissetta	28.12	714.1	29.98	761.4	82.6	28.1	26	E			4		2	W		0	0		
Sub-Series.																			
Naples, S. R			30.09	764.3	81.7	27.6	68	SSW	3.8	1.7			6	SE		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	68.0	20.0		WNW			2								
Groningen			29.74	755.5	69.3	20.7		WSW			3								
Helder			29.78	756.4	67.8	19.9		SW			4							Dull	
Utrecht			29.78	756.3	73.8	23.2	68	WSW			2		10						

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.66	753.3	63.3	17.4	86	SSW	9.2	4.1			10			1.752	44.5		
Brönö								ENE	9	4			1			0	0		
Christiania			29.75	755.7	64.2	17.9	72	SSW	0.7	0.3			10			0.201	5.1		
Tromsö			29.78	756.5	56.3	13.5	68	NNE	2	1			5			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 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'or 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)			30.41	772.3	75.6	24.2	87	W	7.3	3.28			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.06	763.4	90.5	32.5	32	WNW	9.3	4.17			4	NE		0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.28	769.1	73.6	23.1	74	SW	7.6	3.39			0			0	0		Capt D. A. da Cunha.
Lisbon			30.19	766.9	77.9	25.5	59	N	15.0	6.7			4	NW		0	0		The Observatory.

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

RUSSIAN SERIES.

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

Stations.	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.	Weather.	Observer.
Warsaw			29.94	760.4	83.1	28.4	44	SSE	11	5			0						Astronomical Obs.
Wilna			30.04	763.0	81.1	27.3	37	SSW	16	7			7						Astronomical Obs.
Dorpat			30.00	761.9	76.1	24.5	53	SSW	2	1			3						Physical Cabinet.
St. Petersburg			29.96	761.0	70.2	21.2	49	NW	11	5			4						Central Physical Obs.
Kuopio			29.87	758.6	73.8	23.2	62	WSW	7	3			10						Ch. Forsten.
Kieff			29.97	761.2	79.2	26.2	39	NNE	9	4			5						Physical Cabinet.
Nikolaiev			29.98	761.4	78.1	25.6	52	NNW	18	8			8						Kurdukof.
Kertch			29.89	759.1	81.1	27.3	56	N	7	3			1						Lagorio.
Moscow			30.07	763.7	74.8	23.8	46	WNW	4	2			5						Meteorological Obs.
Lugan			29.78	756.3	77.9	25.5	53	NE	22	10			5			Blank	Blank		Meteorological Obs.
Archangel			29.82	757.5	67.6	19.8	70	SSW	9	4			9						Ogorodnikof.
Tiflis	28.40	721.4	29.73	755.2	81.7	27.6	47	N	20	9			6						Physical Observatory.
Astrakhan			29.83	757.7	84.6	29.2	50	E	9	4			10						Sebastianof.
Kasan			29.88	759.0	77.2	25.1	47	W	4	2			3						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.98	736.0	29.90	759.5	62.2	16.8	87	NW	2	1			8						Meteorological Obs.
Nukuss			29.71	754.6	93.0	33.9	25	NNE	9	4			0						
Kasaly																			Bobrof.
Tashkend	28.10	713.6	29.65	753.1	93.7	34.3	42	Calm	0	0			0						Michelson.
Barnaul			29.76	755.8	70.7	21.5	37	N	4	2			8						Meteorological Obs.
Yeniseisk			29.64	752.9	72.9	22.7	46	NW	2	1			1						Marks.
Irkutsk																			Usolzef.
Gorga																			Mossin.
Peking, (China)			29.71	754.5	71.1	21.7	98	Calm	0	0			10			Blank	Blank		Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.87	758.8	62.6	17.0	94	SE	16	7			1						
Nikolaievsk, on the Amoor					62.1	16.7	98	E	13	6			8						

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 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.	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.	Weather.	Observer.
Madrid			29.96	760.9	92.8	33.8	31	W	8.9	4.00		0	2			0	0		Royal Observatory.
San Fernando			30.11	764.8	82.4	28.0	55	WNW	16.3	7.3		0	7		WNW				The Naval Observatory.

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

SWEDISH SERIES.

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

Stations.	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.	Weather.	Observer.
Haparanda			29.86	759.0	66.6	19.2	55	S			4		0			0	0		
Umea			29.88	758.9	66.7	19.3	61	SSE			2		10			0	0		
Hernosand			29.80	756.8	66.2	19.0	72	SE			2		8			0.012	0.3		
Stockholm			29.78	756.5	77.4	25.2	60	WSW			1		7			0.028	0.7		
Wisby			29.88	758.9	77.0	25.0	70	S			4		5			0.031	0.8		
Sub-Series.																			
Upsala			29.78	756.3	76.0	24.8	60	S	9.8	4.4			6	W	SW	0.041	1.05		Dr. Hildebrandsson.

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

SWISS SERIES.

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

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	28.67	728.3	30.05	763.2	73.0	22.8	59	SSW			5		10			0	0	Covered	The Observatory.
Zurich	28.46	722.8	30.05	763.2	68.0	20.0	77	W			1		10			0.012	0.3	Raining	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +0.9 mm.; Thermometer, +0.4 cent.; Relative Humidity, +3 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

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	762.5	76.5	24.7	55	NNE	16	7.0			4		NE	0	0		
Fao, (Persian Gulf)			29.65	753.0	101.1	38.4		NW			4		10					Dusty	
Salonica			30.07	763.6	82.8	28.2		S			4		0						
Valona			30.04	763.0	79.0	26.1		W			1		0						
Varna			30.04	763.0	71.6	22.0		NW			3		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			29.79	756.6	82.8	28.2	61	W			1		2k		W	0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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.			29.71	754.6	69.9	21.1	76	NW	12	5.4			5			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			29.99	761.7	75	23.9		SW	5	2.2		2c	0	W		0	0	Fair	W. R. Bigg.
*Chatham, N. B.			29.71	754.6	70	21.1	75	NW	12	5.4		10k	0	NW		0.13	3.3	Fair	G. A. Blair.
Charlottetown, P. E. Island.			29.71	754.6	61	16.1	91	W	5	2.2			10n			0.47	11.9	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.91	759.7	81.2	27.3	76	SE			1	7c	0			0	0	Fair	James Smith, M. A.
Dalhousie, N. B.					68.5	20.3	95	W			1					0.28	7.1		H. A. Johnson.
Esquimault, B. C.																			W. H. Davis.
Fredericton, N. B.			29.77	756.1	72.1	22.3	71	NW	12	5.4		0	2ks			0.02	0.5	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.51	749.5	54	12.2	94	N	9	4.0			10n			0	0	Cloudy	James Stewart.
Goderich, Ontario			30.04	763.0	77.6	25.3	86	W			1	0	0			0	0	Bright	H. J. Strang, M. A.
Granton, Ontario	28.98	736.1	30.01	762.2	81	27.2		NW			1	0	0			0	0	Clear	James Grant.
*Halifax, N. S.			29.80	756.9	55	12.8	97	SW	7	3.1			8n		W	0.283	7.19	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.02	762.5	71	21.7	92	SW	3	1.3		2c	8m'c		SW	0	0	Fair	S. Woods, M. A.
Little Glace Bay, N. S.			29.74	755.4	55.0	12.8	100	S	14	6.3			10n			0.50	12.7	Overcast	C. H. Rigby.
*Montreal, Quebec			29.90	759.4	75	23.9	82	W	9	4.0		2c	2ks	NW	N	0	0	Fair	C. H. McLeod, C. E.
*Ottawa, Ontario			29.91	759.7	78	25.6	66	W	6	2.7		2c	0	W		0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			29.99	761.7	70	21.1	95	S	4	1.8		2cs	2ks	W	W	0.32	8.1	Fair	Rev. R. Mosley.
*Port Dover, Ontario			30.04	763.0	79	26.1	82	NW	8	3.6		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.			29.75	755.6	57.2	14.0		SW	12	5.4						0.36	9.1	Raining	Peter Grant.
*Port Stanley, Ontario			30.06	763.5	71	21.7	92	W	4	1.8			Fog		SW	0	0	Foggy	M. Payne.
*Quebec, Quebec			29.90	759.4	68	20.0	95	NW	14	6.3			10n		NW	0	0	Cloudy	Capt. Ashe, R. N.
St. John, N. B.			29.82	757.4	58	14.4	87	S	5	2.2		0?	0?			0.10	2.5	Cloudy?	G. Murdoch, C. E.
*Saugeen, Ontario			29.99	761.7	76	24.4	84	SW	8	3.6		0	0			0.05	1.3	Clear	K. Stewart.
Stayner, Ontario			29.96	761.0	81	27.2	76	NW	6	2.7		5ck	0	W		0.12	3.0	Fair	R. J. Cole.
Stratford, Ontario	28.78	731.0	29.99	761.7	76.8	24.9	87	NW	10	4.5		0	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.77	756.1	54	12.2	97	SW	17	7.6			10s		W	0.61	15.5	Clearing	T. C. Hill.
*Toronto, Ontario			30.02	762.5	72	22.2	85	S	3	1.3		5c	Haz'e	W		0.30	7.6	Fair	Magnetic Observatory.
Woodstock, Ontario			30.02	762.5	78.9	26.1	86	W	2	0.9		0	2s			0	0	Fine	J. Montgomery.
Sub-Series.																			
St. John's, Newfoundland.			30.03	762.7	66	18.9		SE				3c	0			0.07	1.8	Clear	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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.			29.91	759.7	76	24.4	76	Calm	0	0		5k	0	W		0	0	Fair	
Alpena, Mich			29.95	760.7	72	22.2	85	SE	3	1.3		0	0			0	0	Clear	
Atlantic City, N. J			30.00	762.0	81	27.2	78	W	4	1.8		2cs	0	N		0	0	Fair	
Augusta, Ga.			30.09	764.3	80	26.7	82	NW	3	1.3		0	0			0.07	1.8	Clear	
Baltimore, Md			30.03	762.7	83	28.3	67	NW	8	3.6		5c,cs	0	W		Inap.	Inap.	Fair	
Barnegat, N. J			29.99	761.7	84	28.9	62	NW	7	3.1		5cs	Haze			0	0	Fair	
Benton, Montana	26.96	684.8	29.76	755.9	57	13.9	100	Calm	0	0			10n			0.51	13.0	Light rain	
Bismarck, Dakota	27.72	704.1	29.24	742.7	65	18.3	73	NE	2	0.9		5k	0	NE		0	0	Fair	
Boston, Mass			29.90	759.4	76	24.4	60	NW	10	4.5		2cs	Haze	NW		0	0	Hazy	
Breckenridge, Minn			29.52	749.9	78	25.6	72	S	18	8.0		0	0			0	0	Clear	
Buffalo, N. Y			30.01	762.2	71.5	21.9	92	SW	6	2.7		Haze	Haze		SW	0	0	Hazy	
Burlington, Vt			29.92	760.0	75	23.9	64	Calm	0	0		2k	0			0	0	Fair	
Cairo, Ill			30.07	763.8	78	25.6	82	S	5	2.2		0	0			0	0	Clear	
Cape Hatteras, N. C			29.97	761.2	80	26.7	82	NE	6	2.7		2cs	Haze			0	0	Fair	
Cape Henry, Va			30.03	762.7	84	28.9	71	W	5	2.2		Haze	0			0	0	Clear	
Cape Lookout, N. C			30.07	763.8	81	27.2	82	N	12	5.4		8c	0	N		0.04	1.0	Fair	
Cape May, N. J			30.02	762.5	74	23.3	85	SW	8	3.6		5cs	0	NW		0	0	Fair	
Charleston, S. C			30.08	764.0	81	27.2	74	NW	7	3.1		2c	2cs			0	0	Fair	
Cheyenne, Wyoming	23.86	606.0	29.80	756.9	62	16.7	44	W	20	8.9		2ck	8s	W		0	0	Cloudy	
Chicago, Ill			29.99	761.7	83	28.3	67	SW	5	2.2		0	0			0	0	Clear	
Cincinnati, Ohio			30.05	763.3	78	25.6	77	SE	3	1.3		0	0			1.41	35.8	Clear	
Cleveland, Ohio			30.06	763.5	77.7	25.4	78	W	6	2.7		5k	0	W		0	0	Fair	
Colorado Springs, Col	23.92	607.6	29.79	756.7	69.5	20.8	52	SE	3	1.3		0	1k			0	0	Clear	
Corsicana, Tex			29.89	759.2	74	23.3	100	S	8	3.6			10n		S	0.14	3.6	Light rain	
Davenport, Iowa			29.98	761.5	80	26.7	78	S	8	3.6		0	Sm'e			0	0	Clear	
Denison, Tex			29.93	760.2	76	24.4	95	SW	5	2.2			10s			0	0	Cloudy	
Denver, Col.	24.59	624.6	29.81	757.2	70	21.1	49	S	1	0.4		0	0			Inap.	Inap.	Cloudy	
Detroit, Mich			30.02	762.5	80	26.7	78	W	5	2.2		0	0			0	0	Clear	
Dodge City, Kan	27.23	691.6	29.38	746.2	72	22.2	90	SE	23	10.3		5k	0	SE		0	0	Fair	
Dubuque, Iowa			29.94	760.5	80	26.7	78	S	4	1.8		0	Haze			0	0	Clear	
Duluth, Minn			29.76	755.9	60	15.6	88	NE	1	0.4		5k	0	SW		0	0	Fair	
Eastport, Me			29.77	756.1	68	20.0	74	S	4	1.8		5c	Haze			0	0	Fair	
Erie, Pa			30.03	762.7	79	26.1	78	SW	10	4.5		2ck	Haze	W		0.03	0.8	Fair	
Escanaba, Mich			29.92	760.0	73	22.8	81	S	10	4.5		0	0			0	0	Clear	
Fort Gibson, Indian Ter			29.88	758.9	79	26.1	73	E	8	3.6			10s		E	0	0	Cloudy	
Ft. St. Michael, Alaska			30.01	762.2	50	10.0	100	SW			4		10s			0	0	Cloudy	
Fort Sill, Indian T	28.75	730.2	29.81	757.2	76	24.4	90	S	8	3.6		5k	0	S		0	0	Fair	
Fort Sully, Dakota	28.82	706.6	29.32	744.7	81	27.2	52	S	28	12.5		1c	0			0	0	Clear	
Galveston, Tex			30.01	762.2	82	27.8	83	S	12	5.4		2ck	8ks		S	0.94	23.9	Cloudy	
Grand Haven, Mich			30.01	762.2	79	26.1	78	SW	13	5.8		0	Sm e		SW	0	0	Clear	
Indianapolis, Ind			30.05	763.3	83	28.3	74	S	1	0.4		0	0			0	0	Clear	
Indianola, Tex			29.99	761.7	82	27.8	83	S	16	7.2		5cs	5ks			0.45	11.4	Cloudy	
Jacksonville, Fla			30.09	764.3	83	28.3	49	S	4	1.8		5ck	0		SW	0.10	2.5	Fair	
Keokuk, Iowa			29.91	759.7	81	27.2	78	S	6	2.7		0	0			0	0	Clear	
Key West, Fla			30.10	764.5	82.4	28.0	74	E	7	3.1		1c	1ks			0	0	Clear	
Kittyhawk, N. C			30.06	763.5	74	23.3	95	NE	1	0.4		Haze	Haze			0	0	Hazy	
Knoxville, Tenn			30.12	765.0	72	22.2	95	Calm	0	0			Fog			0	0	Dense fog	
La Crosse, Wis			29.87	758.7	79	26.1	82	S	12	5.4		0	0			0	0	Clear	
Leavenworth, Kan			29.85	758.2	79	26.1	78	S	8	3.6		0	0			0	0	Clear	
Lexington, Ky	29.03	737.3	30.08	764.0	80	26.7	82	SE	4	1.8		5c	0			0	0	Fair	
Long Branch, N. J			29.96	761.0	85	29.4	61	NW	10	4.5		2ck	0	SW		0.02	0.5	Clear	
Louisville, Ky			30.07	763.8	85	29.4	68	Calm	0	0		0	0			0	0	Clear	
Lynchburg, Va			30.06	763.5	82	27.8	64	NW	3	1.3		5c	0			0	0	Fair	
Malone, N. Y			29.89	759.2	74	23.3	81	W	3	1.3		5c	0	W		0	0	Fair	
Manhattan, Kan	28.80	731.5	29.89	759.2	75	23.9	85	SW	8	3.6		0	0			0	0	Clear	
Marquette, Mich			29.87	758.7	75	23.9	81	E	4	1.8		0	0			0	0	Clear	
Memphis, Tenn			30.10	764.5	79	26.1	78	S	5	2.2			10ks		S	0	0	Cloudy	
Milwaukee, Wis			30.00	762.0	80	26.7	78	SW	10	4.5		0	0			0	0	Clear	
Mobile, Ala			30.13	765.8	80	26.7	86	SE	4	1.8		8ck	2		S	0.09	2.3	Cloudy	
Montgomery, Ala			30.17	766.3	80	26.7	78	W	4	1.8		0	0			0	0	Clear	
Morgantown, W. Va	29.97	738.4	30.08	764.0	76	24.4	81	Calm	0	0		0	8s		SW	0	0	Fair	
Mt. Washington, N. H	23.86	606.0	30.22	767.6	53	11.7	100	NW	48	21.5			Fog			0	0	Foggy	
Nashville, Tenn			30.09	764.3	83	28.3	70	Calm	0	0		0	Haze			0.74	18.8	Clear	
New Haven, Conn			29.92	760.0	84	28.9	53	NW	5	2.2		Haze	Haze			0	0	Fair	
New London, Conn			29.93	760.2	81	27.2	58	Calm	0	0		0	Haze			0	0	Clear	
New Orleans, La			30.13	765.3	79	26.1	86	S	4	1.8			10s			0.01	23 1	Cloudy	
Newport, R. I			29.92	760.0	74	23.3	72	SW	6	2.7		0	0			0	0	Clear	
New York, N. Y			29.98	761.5	75	23.9	76	W	4	1.8		2cs	Haze			0	0	Fair	
Norfolk, Va			30.06	763.5	85	29.4	71	SW	3	1.3		5c	Haze			0	0	Fair	
North Platte, Neb	26.83	681.5	29.21	741.9	74	23.3	72	SE	16	7.2		2k	8s	SE	SE	0	0	Cloudy	
Omaha, Neb.	28.76	730.5	29.76	755.9	79	26.1	78	S	13	5.8		2ck	0	SW		0	0	Clear	
Oswego, N. Y			30.00	762.0	70	21.1	90	SW	8	3.6			Fog			0	0	Cloudy	
Pembina, Dakota			29.46	748.3	65	18.3	91	NW	1	0.4			10s		NW	0	0	Cloudy	
Philadelphia, Penn			29.99	761.7	81	27.2	70	N	14	6.3		8cs	Fog			0	0	Cloudy	
Pike's Peak, Colorado	17.81	452.1	30.02	762.5	33	0.6	69	W	44	19.7		0	2k		W	0	0	Fair	
Pittsburgh, Penn			30.06	763.5	77	25 0	77	NW	2	0.9		1k	0			0	0	Clear	
Port Huron, Mich			30.01	762.2	80	26.7	82	SW	4	1.8		0	0			0	0	Clear	
Portland, Me			29.89	759.2	73	22.8	72	NW	6	2.7		5c	Haze	N		0	0	Fair	
Portland, Oregon			29.96	761.0	55	12.8	80	S	8	3.6			10s		S	0	0	Cloudy	
Punta Rassa, Fla			30.13	765.3	80	26.7	84	E	7	3.1		0	0			2.02	51.3	Clear	
Rochester, N. Y			29.96	761.0	80	26.7	78	W	10	4.5		0	Sm'e			0.21	5.3	Clear	
Salt Lake City, Utah	25.53	648.4	29.86	758.4	54	12.2	73	Calm	0	0			10s		NW	0.45	11.4	Cloudy	
Sandy Hook, N. J			29.96	761.0	77	25.0	76	W	12	5.4		5c	Haze	NW		0	0	Fair	
San Diego, Cal.			29.97	761.2	64	17.8	94	Calm	0	0			Fog		W	0.03	0.8	Foggy	
San Francisco, Cal			29.98	761.5	53	11.7	79	SW	4	1.8		0	0			0	0	Clear	
Santa Fé, N. M	23.25	590.5	29.79	756.7	57	13.9	87	SW	4	1.8		10k	0			0.03	0.8	Cloudy	
Savannah, Ga.			30.08	764.0	83	28.3	70	Calm	0	0		0	Sm'e			0	0	Clear	
Shreveport, La			30.03	762.7	76.5	24.7	92	SE	7	3.1			10n		SE	0.07	1.8	Light rain	
Smithville, N. C			30.06	763.5	80	26.7	78	N	5	2.2		1ck	0	N		0.14	3.6	Fair	
Springfield, Mass.			29.92	760.0	80	26.7	62	SW	4	1.8		1ck	2s,hz			0	0	Fair	
St. Louis, Mo			30.02	762.5	80	26.7	78	S	8	3.6		0	0			0	0	Clear	
St. Marks, Fla			30.13	765.3	76	24.4	86	Calm	0	0		2cs	0	W		1.06	26.9	Fair	
St. Paul, Minn			29.76	755.9	82	27.8	75	S	12	5.4		0	0			0	0	Clear	
St. Paul's Island, Alaska			30.28	767.8	39	3.9	91	W	7	3.1			Fog			0	0	Foggy	
Thatcher's Island, Mass			29.89	759.2	72	22.2	87	NW	12	5.4		5c	0	NW		0	0	Hazy	
Toledo, Ohio			30.01	762.2	83	28.3	70	SW	4	1.8		0	Sm'e			Inap.	Inap.	Clear	
Tucson, Arizona	27.54	699.5	30.14	765.5	74	23.3		SE				2k	2ks	SW	SE	0.05	1.3	Fair	
Tybee Island, Ga			30.07	763.8	80	26.7	78	Calm	0	0		5c	Haze			0	0	Fair	
Vicksburg, Miss			30.12	765.0	75	23.9	90	S	8	3.6		8ck,cs	2k	S	S	0.09	2.3	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.	24.06	611.1	29.54	750.3	47	8.3	55	SW	4	1.8		5k	0	W		0.15	3.8	Cloudy	
Washington, D. C.			30.05	763.3	81	27.2	68	NW	12	5.4		4c,cs	Haze	W		0	0	Hazy	
Wilmington, N. C.			30.05	763.3	77	25.0	86	N	3	1.3		1cs	0	NE		0.39	9.9	Clear	
Wood's Holl, Mass.			29.92	760.0	77	25.0	69	SW	11	4.9		0	0			0	0	Clear	
Wytheville, Va.	27.84	707.1	29.92	760.0	71	21.7	85	W	4	1.8		1c	0	NE		0	0	Clear	
Yankton, Dakota	28.48	723.4	29.67	753.6	78	25.6	72	S	18	8.0		0	0			0	0	Clear	
Yuma, Arizona			29.89	759.2	77	25.0		W				0	0			0	0	Clear	
Sub-Series.																			
P'nte-a-Pitre, G'd'l'pe, W. I.			29.96	761.0	80	26.7	86	E				5k	5ks			0.08	2.0	Cloudy	L. V. Bigard.
Kingston, Jamaica, W. I.			30.20	767.1	80	26.7	74	Calm	0	0		2c	0			0	0		James Gall.
St. Georges, Bermudas			29.89	759.2	78.0	25.6	79	N	3	1.3			10n			0.36	9.1	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.25	692.1	30.04	763.0	71	21.7	81	NE	1.0	0.4		2c	0	NE		0	0	Fine, Clear	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.04	763.0	81	27.2	83	E			3	5k	6k	E		1.750	44.45		C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.8			83.8	28.8		N								0.827	21.00	Dry	Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640.6			65.5	18.6	73	S	1	0.4		1c	2ks			0	0	Fair	Thomas Herran.
York Factory, B. A.			29.91	759.7	55.5	13.1	84	E	5	2.2		4c	0	E		0	0		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.			30.10	764.5	77	25.0	90	NE			2					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Sch'ner Addie Fuller at Damariscotta, Me.			29.91	759.7	73	22.8		WSW			2		5ck		W			*D. clouds	Capt. James Jorgensen.
Steamer Leipzig. N, 45° 50′ W, 40°	S64W		30.13	765.3	63.5	17.5		NNW			3		..s			Long swells	WNW	Overcast	Capt. R. Hoffmann.
Steamer Nova Scotian N, 42° 16′ W, 65° 29′	NE¾E	11½	29.94	760.5	63	17.2		NE to SE			1-2					Light swells	SW	Fair	Capt. Ritche.

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.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. *D tached Clouds.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

Brig. Gen. (Brt. Assg'd) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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.
1:18 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			30.05	763.2	81.3	27.4	64	NNW			2		0			0	0	Clear	Charnot.
Algiers			30.11	764.7	81.3	27.4	74	N			2		5			0	0	Fair	Peter.
La Galle																			Kunts.
Tunis			30.04	762.9	87.1	30.6	63	SE			3		3			0	0	Fair	Jacques.
Sfax			30.11	764.7	87.1	30.6	33	SE			3		1			0.024	0.6	Clear	Chauvey.
Saïda			30.05	763.3	86.0	30.0	21	ENE			1		1			0	0	Clear	Millot.
Tebessa			30.08	763.9	78.3	25.7		W			2		7			0.394	10.0	Cloudy	Colin.
Geriville					81.7	27.6	25	ENE			1		1			0	0	Clear	Buard.
Laghouat			30.03	762.8	91.4	33.0		NE			2		1			0	0	Clear	Guyot.
Biskra			30.07	763.7	95.0	35.0	29	Calm			0		3			0	0	Fair	Latomer.

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			29.97	761.2	73.9	23.3	76	SW			2		6			0.504	12.8	Thunder-storm	Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.98	761.4	68.4	20.2	91	W			1		10			0	0		Dr. Wierzbiski.
Eperies			29.91	759.8	82.4	28.0	57	Calm			0		9			Blank	Blank		Julius Mikolik.
Gratz	28.80	731.4	29.97	761.3	66.0	18.9	91	W			2		10			0.236	6.0		Andreas Rospini.
Hermannstadt	28.55	725.1	29.80	759.1	81.3	27.4	36	E			3		2			0	0		Prof. Reissenberger.
Kremsmünster	28.33	719.6	29.60	751.8	74.8	23.8	61	ENE			2		3			0	0		Prof. C. Wagner.
Lemberg			29.89	759.2	81.3	27.4	72	SE			4		1			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.90	759.5	81.9	27.7	71	NW			1		9cks			0	0		I.R. Hydrographic Office.
Szegedin			29.89	759.2	86.4	30.2	42	SE			2		7			0	0		Karl Stancel.
Trieste			29.92	759.9	81.7	27.6	54	NNE			2		1			0.287	7.3		Prof. V. Farolfi.
Vienna			29.98	761.4	72.7	22.6	72	W			3		9			0.004	0.1		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.02	762.1	70.9	70.9	66	WSW			2		9		W	0.138	3.50		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.57	751.1	59.7	15.4		S	22	9.8			5			0.115	2.92	Blue sky	William Boswell.
Ardrossan																			William McNeil.
Armagh, Observatory			29.84	757.9	59.8	15.4		WNW	11	4.9									S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.94	760.5	62.8	17.1		WSW			4-5		8					*D. clouds	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	81.0	27.2		NE			2		5					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			29.95	760.7	70.0	21.1		WSW			2		7					*D. clouds	H. Todd.
Cardington			29.96	761.0	75.0	23.9		W			3		5					*D. clouds	John McLaren.
Carlisle			29.73	755.1	65	18.3		SW			6		9			0.03	0.8	*D. clouds	T. Bel, for J. Carmell.
Chatham, School M. E			29.98	761.5	73.0	22.8		W			3		5					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.66	728.0	30.15	765.8	56.0	13.7		NW			5		10					Gloomy	R. E. Power.
Donaghadee			29.76	755.9	63	17.2		W			6		7					*D. clouds	J. Mac Gowan.
Dover			30.02	762.5	64	17.8		WSW			4		4					½ cloudy	J. Costello.
Eccles (near Manchester.)			29.85	758.2	62.8	17.1		SW	9.2	4.1			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			30.09	764.3	61.0	16.1		SW			5		10					Rain and fog	The Staff.
Fort Napier, (Natal)	27.95	709.9	30.19	766.8	65.1	18.4		E			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.04	763.0	84	28.9		W			0		6					*D. clouds	
Galway, Queen's College			29.93	760.2	65	18.3		SW			3		2					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.04	763.0	78.0	25.6		E			3		1					Blue sky	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			29.63	752.6	58.0	14.4		W			2		8					*D. clouds	Lewis Stuart.
Great Yarmouth			29.94	760.5	70	21.1		WSW			3		1					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			30.00	762.0	75.3	24.1		WSW			1		6			Blank	Blank	*D. clouds	The Staff, for G. B. Airy
Guernsey			30.13	765.3	63.5	17.5		WSW			4		5					*D. clouds	Dr. S. E. Hoskins.
Helston			30.06	763.5	64	17.8		SW			4		10			0.2	5.1	Overcast	M. P. Moyle.
Holyhead			29.88	758.9	67	19.4		SSW			4		4					*D. clouds	John Tilston.
Kew, Observatory			29.99	761.7	70.4	21.3		SW	19	8.5			5					Hazy	The Staff.
Kingstown			29.87	758.7	65	18.3		W			5		5					*D. clouds	George Mitchell.
Leicester Museum			29.93	760.2	67.0	19.4		SW			5		6					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)			29.96	761.0	83.4	28.6		NW			1		0						Corp'l F. Fraser, A. M. C.
Nairn			29.41	747.8	63	17.2		SW			3		8					¾ clouded	W. D. Penny.
Nassau, (Bahamas			30.11	764.8	83.0	28.3		NE			4		7					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.89	759.2	72.7	22.6		SW			6		8ck.k		W	0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.94	760.5	64.6	18.1		SSW			4		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.98	761.5	69	20.6		W			3		8					Overcast	J. Lucas.
Plymouth			30.07	763.8	63	17.2		SW			3		10					Gloomy	John Merrifield.
Roche's Point			29.99	761.7	64	17.8		NW			4		2					Fine	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, Jersey																			A. P. Amy.
Sandwick Manse, Orkneys)			29.15	748.0	55.6	13.1		SE	15	6.7			10					Showery	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery Turkey			29.90	759.4	83.0	28.3		NE			2		1			Blank	Blank	Blue sky	Sergt. W. H. Lyne.
Sheffield			29.86	758.4	70.4	21.3		W			6		8			0	0	Overcast	W. F. Cooper.
Silloth Rectory			29.81	757.2	65.2	18.4	77	W			3		3			0.024	0.61	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.83	757.7	58.9	14.9		SW			3		10						Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			29.35	745.5	56	13.3		SSW			6		10					Raining	John Smith.
Strathfield Turgiss			30.01	762.2	70.8	21.6		W			1		4					Blue sky	Rev. Charles H. Griffith.
Thurso			29.40	746.7	61	16.1		SSW			5		8					Gloomy	John Trotter.
Truro, Royal Institution			30.10	764.5	66	18.9		W			4		10					Gloomy	W. Newcombe.
Valencia, Observatory			30.07	763.8	57.5	14.2		WNW	19	8.5			10					*D. clouds	The Staff.
Sub-Stations.																			
Calf of Man, Isle of Man					56	13.3		SW			4		5						Thomas Dawson.
Cape Good Hope, Obs'y			30.21	767.3	69.0	20.6	62	WNW	7	3.1		4	5						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			31.002	787.47	57.0	13.9	86	W			1		5k			0	0		Francis Abbott, F.R.A.S.
Leith, Restaurig Park			29.66	753.4	61.4	16.3		W			5		10k			0.05	1.3	Cloudy	Andrew Gibb.
Mauritius, Observatory			30.18	766.6	69.2	20.7	68	ESE	23.1	10.3			8		ESE	0.01	0.3	Squally	C. Meldrum
Melbourne, Observatory			30.16	766.1	45.2	7.3	87	NE	5	2.2			9			0	0	Fine, dull	R. L. J. Ellery.
Monach Lt-house, Hebrides			29.35	745.5	55	12.8		W			6		10			0.4	10.2		J. Youngclause.
North Unst, (Shetland Is.)			29.46	748.3	54	12.2		SW			4		10			Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. 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. Fahrenheit.	Temperature. Centigrade.	Relative Humidity.	Wind. Direction.	Wind. Velocity.	Wind. Force.	Clouds. Amount. Up'er	Clouds. Amount. Low'r	Clouds. Direction. Upper.	Clouds. Direction. Lower.	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Copenhagen			29.89	759.2	69.3	20.7	65	SSW		2		9						
Fanöe			29.87	758.8	67.6	19.8	84	SW		4		5						
Godthaab, Greenland			29.99	761.8	36.9	2.7		NNW		2		5						
Stykkisholm, Iceland			29.57	751.0	48.6	9.2	88	NE		6		7						
Thorshavn, (Faröe)			29.34	745.2	51.8	11.0	91	WSW		2		10					Rain and fog	
Vestervig			29.81	757.2	65.1	18.4	80	S		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			29.97	761.3	68.0	20	83	NW			2		10cn		NW	0	0	Covered	Normal School.
Amiens			30.01	762.3	78.1	25.6	67	W			3		5		W	0	0	Cloudy	Normal School.
Avignon			30.01	762.3	78.8	26	42	NNW			6		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.16	766.0	66.9	19.4	66	NW			1		10			0.500	12.7	Covered	C. Saillard.
Beaumette, (near Angers)			30.19	766.8	68.5	20.3	54	SW	3.8	1.7			10		SW	0	0	Covered	Beaumette Observatory.
Beauvais			30.13	765.3	73.2	22.9	48	WNW			3		10		WNW	0.132	3.35	Covered	Normal School.
Besançon			30.17	766.3	68.7	20.4	68	SW			2		8		S	0.772	19.6	Very cloudy	Normal School.
Bourg en Bresse			30.26	768.7	73.4	23	60	N			4		5k		SW			Cloudy	Normal School.
Bourges			30.52	775.1	72.5	22.5	72	WNW			4		5		E	0.08	2.	Cloudy	Normal School.
Brest			30.13	765.4	67.8	19.9	67	SW			4		9		WSW	0.049	1.25	Misty	Naval Observatory.
Carcassonne			30.20	767.0	70.5	21.4	62	W			4		2		E	0	0	Slightly cl'dy	Normal School.
Caen			29.92	760.0	71.6	22	87	SW			2		5		E	0	0	Cloudy	Normal School.
Chartres			30.13	765.4	66.2	19	78	W			4		10			0	0	Covered	Normal School.
Clermont			30.17	766.4	66.4	19.1	75	N			2		10		N	0	0		Puy de Dome Obs'y.
Commercy			30.15	765.9	66.4	19.1	68	W			4		10n		W	0.335	8.5	Covered	Normal School.
Commune de Greasque*			30.07	763.2	77.0	25.0	39	NW			6		0			0	0		M. Kina.
Grenoble			30.11	764.7	73.8	23.2	60	NW			2	2c		NW		0.148	3.75	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.19	766.8	66.9	19.4	68	WNW			2		8		E	0	0	Very cloudy	Normal School.
Le Mans			30.18	766.5	63.9	17.7	78	W			6		8		W	0.043	1.1	Very cloudy	Normal School.
Lons-Le-Saulnier			30.14	765.5	70.7	21.5	75	N			2		2			0.047	1.2	Slightly cl'dy	Normal School.
Mâcon			30.43	773.0	69.4	20.8	67	NW			4		8		NNW	0	0	Very cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			30.12	765.0	69.6	20.9	62	WSW			2		2		SE	0.08	2.	Slightly cl'dy	Normal School.
Nismes			30.04	763.0	79.5	26.4	30	N			8		0			0	0	Clear	Normal School.
Orleans			30.13	765.3	69.1	20.6	62	SW			2		10		W	0.252	6.4	Covered	Normal School.
Paris, Observatory			30.14	765.5	70.2	21.2	49	W			2		10k		W	0.165	4.20	Covered	National Observatory.
Parthenay			30.23	767.8	65.8	18.8	74	W			2		5		NE	0	0	Cloudy	Normal School.
Privas			30.00	762.0	73.4	23		NNW			6		2		N	0.08	2.	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.26	768.7	74.7	24.7	55	W			3		10		E	0	0	Covered	Naval Observatory.
Rouen			30.14	765.6	66.9	19.4	67	WSW			2		10		SW	0	0	Covered	Normal School.
Saint Lo			29.82	757.4	71.6	22	96	NW			2		8		W	0.08	2.		Normal School.
Tarbes	29.16	740.6	30.23	767.7	67.1	19.5		WNW			1		10			0	0	Covered	Normal School
Villefranche			30.17	766.2	74.7	23.7	66	NW			1		5			0.39	10.	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.8	80.6	27													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.35	771.0	63.3	17.4	51	NNW	14.9	6.66			1		NW	0.846	21.5		—. Faiguère.
Montsouris, Paris			30.13	765.3	70.9	21.6	51	WSW			3		10		W	0.067	1.7		Montsouris Observ'tory.
Perpignan			30.12	765.1	74.1	23.4	47	N	26.1	11.67			1		NW	0.138	3.5		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.14	765.6	70.9	21.6	51	WSW			1		10			0.102	2.6	Very cloudy	E. Renou.
Toulouse			30.29	769.3	69.3	20.7	51	NW			3		10			0	0		Toulouse Observatory.
Tours			30.21	767.2	67.6	19.8	64	WNW			2		10		W	0.020	0.5		C. Marquet.
Versailles, (near Paris)			30.15	765.8	70.5	21.4	55	W			2		8			0.094	2.38	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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			29.98	761.5	71.2	21.8	57	W			4		8	WNW		0.472	12.0		Prof. T. Hoh.
Berlin			29.95	760.8	77.5	25.3	58	S			4		8			0.299	7.6		Prof. Arndt.
Breslau			30.02	762.4	77.9	25.5	49	WNW			5		5			0	0		Dr. P. Neugebauer.
Carlsruhe			30.08	764.0	69.4	20.8	66	SW			3		9			0.307	7.8		A. Senz.
Cassel			30.04	762.9	73.4	23.0	53	S			2		6	SSW		0.315	8.0		Dr. H. Möhl.
Emden			29.89	759.1	74.8	23.2	63	SW			7		1			0	0		Prof. Prestel.
Frankfort on the Main			30.09	764.3	74.3	23.5	49	WSW			3		5			0.516	13.1		Physical Society.
Friedrichshafen			30.10	764.4	71.8	22.1	67	NW			7		7			0.083	2.1	Raining	M. Wilhelm.
Hamburg			29.95	760.7	72.5	22.5	70	WSW			4		6k			0.177	4.5	Fair	Captain F. Hegemann.
Kiel			29.91	759.8	71.4	21.9	67	W			3		5			0.299	7.6		Prof. G. Karsten.
Königsberg, (Prussia.)			29.85	758.1	81.3	27.4	59	S			2		5			0	0		Prof. E. Luther.
Köslin			29.94	760.5	71.4	21.9		NW			6		3			0.091	2.3		H. Müller.
Leipsic			30.02	762.4	74.3	23.5	57	W			4		8	W		0.028	0.7		Prof. Bruhns.
Memel			29.88	759.0	78.1	25.6	64	W			2		1ks			0.020	0.5		Reinbrecht & Skalweit.
Münster			30.04	763.1	68.5	20.3	75	SW			3		0			0	0		Prof. E. Heis.
Neufahrwasser			29.89	759.2	73.4	23.0	88	NNW			1		9			0.264	6.7	Showery	A. Lothes.
Posen			29.97	761.1	78.6	25.9	56	NW			1		6			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.13	765.3	70.0	21.1	59	W			1		10	SW		0.567	14.4		Dr. Schur.
Stuttgart			30.09	764.3	68.9	20.5	63	W			3		8			0.157	4.0		Prof. Schoder.
Thorn			29.91	759.8	85.8	29.9	47	W			3		4			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.06	763.4	70.0	21.1	68	SW			6		10			0.028	0.7		Prof. Flesch.
Wustrow, Naval School			30.01	762.3	69.6	20.9	71	WSW			3		4			0.098	2.5		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	759.9	86.5	30.3		NE					..k					Clear	

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

ITALIAN SERIES.

Furnished by the 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	763.3	75.2	24.0	67	NE	0.7	0.3			5			0.197	5.0		
Padua			29.93	760.1	75.7	24.3	72	E	5.6	2.5			10	W		0.783	19.9		
Vicenza			29.93	760.3	76.5	24.7	62	NW	0	0			9	E		0	0		
Verona			29.93	760.3	86.0	30.0	71	W			2		0			0.118	3.0		
Bergamo	28.61	726.6	29.86	758.5	75.2	24.0	53	E			2		9			0	0		
Domodossola	28.88	733.5	29.85	758.1	79.3	26.3	57	S			4		6			0	0		
Milan			29.92	759.9	83.1	28.4	57	S			2		6	S		0	0		
Pavia			29.93	760.3	82.4	28.0	54	E			2		8	NE		0	0		
Moncalieri			29.90	759.5	80.4	26.9	69	SE	1.3	0.6			6	N		0	0		
Mondovi	28.07	712.9	29.58	750.0	78.1	25.6	51	NNW			4		1			0	0		
Porto Maurizio			29.96	761.0	79.7	26.5	69	ESE			6		4	W		0	0		
Genoa			29.95	760.8	79.5	26.4	59	SE	6.3	2.8			2	SE		0	0		
Piacenza			29.93	760.1	79.3	26.3	57	E	3.1	1.4			3	S		0	0		
Parma			29.93	760.3	77.9	25.5	58	SE			2		5			0.102	2.6		
Bologna			29.98	761.4	79.7	26.5	49	N			1		5	S		0	0		
Florence			29.97	761.2	84.2	29.0	43	NW			2		8	SW		0	0		
Leghorn			29.97	761.2	79.9	26.6	59	WNW	3.8	1.7			10			0	0		
Siena	28.85	732.9	30.01	762.3	84.4	29.1	36	W	2.5	1.1			4	SW		0	0		
Urbino	28.47	723.0	29.97	761.1	81.7	27.6	36	SW			2		4			0	0		
Ancona			29.95	760.7	84.9	29.4	47	ESE			4		2			0	0		
Grosseto			29.95	760.6	85.6	29.8	40	WNW			4		5	NW		0	0		
Rome			29.95	760.8	85.3	29.6	33	SSW	7.4	3.3			2	SSW		0	0		
Naples, O. U			29.99	761.7	81.5	27.5	65	SW			4		1			0	0		
Lecce			29.94	760.5	85.3	29.6	33	SSW	11.2	5.0			3			0	0		
Cosenza			29.95	760.8	84.2	29.0	64	ESE	0	0			9			0	0		
Riposto, (Sicily)			30.04	763.1	79.9	26.6	64	NNE			2		4	S		0	0		
Palermo			29.93	760.2	79.5	26.4	67	NE	4.3	1.9			0			0	0		
Caltanissetta	28.00	711.3	29.87	758.6	82.4	28.0	31	W			2		6	E		0	0		
Sub-Series.																			
Naples, S. R			30.00	761.9	82.8	28.2	68	SSW	3.8	1.7			0			0	0		Prof. F Brioschi.
Pesaro			29.98	761.5	78.6	25.9	78	N	26.0	11.64			8c,ks	SW					L. Guidi.

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			30.06	763.4	68.0	20.0		W			4								
Groningen			29.89	759.1	72.5	22.5		SW			4								
Helder			29.95	760.8	66.6	19.2		SW			4								
Utrecht			29.96	760.9	72.3	22.4	67	WSW			3		5					Cloudy.	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	751.6	60.4	15.8	87	S	15.7	7.0			10			0.787	20.0		
Brönö			29.47	748.6	57.2	14.0	95	W	7	3			10			0.075	1.9		
Christiania			29.64	752.8	71.2	21.8	61	S	13.4	6.0			7			0.213	5.4		
Tromsö			29.56	750.9	65.1	18.4	62	SW	9	4			3			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 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,)			30.51	775.0	76.1	24.5	77	W	9.0	4.03			2			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.00	761.9	93.9	34.4	24	ESE	3.9	1.75			0			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.24	768.0	73.2	22.9	77	SW	10.0	4.47			4			0	0	Foggy	Capt. D. A. da Cunha.
Lisbon			30.10	764.4	76.5	24.7	45	N	17.4	7.8			0			0	0		The Observatory.

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

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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			29.87	758.8	84.0	29.2	57	SSE	2	1			5						Astronomical Obs.
Wilna			29.94	760.5	85.8	29.9	29	S	16	7			5						Astronomical Obs.
Dorpat			29.93	760.2	87.1	30.6	27	S	9	4			3						Physical Cabinet.
St. Petersburg			29.91	759.8	82.4	28.0	40	WSW	9	4			7						Central Physical Obs.
Kuopio			29.79	756.6	77.2	25.1	72	S	27	12			8					Raining	Ch. Forsten.
Kieff			29.93	760.2	80.6	27.0	37	N	9	4			3						Physical Cabinet.
Nikolaiev			29.93	760.9	77.7	25.4	60	N	11	5			0						Kurdakof.
Kertch			29.82	757.5	83.7	28.7	50	NNE	4	2			7						Lagorio.
Moscow			30.04	763.0	76.6	24.8	55	S	0	0			5						Meteorological Obs.
Lugan			29.77	756.1	69.3	20.7	77	NNE	29	13			10			Blank	Blank		Meteorological Obs.
Archangel			29.90	759.5	69.8	21.0	45	NW	18	8			2						Ogorodnikof.
Tiflis	28.43	722.2	29.70	756.6	73.4	23.0	60	N	18	8			9						Physical Observatory.
Astrakhan			29.73	755.2	84.7	29.3	53	WSW	2	1			10						Sebastianoi.
Kasan			29.71	754.5	75.6	24.2	53	N	4	2			1						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	27.96	735.5	29.87	758.8	66.9	19.4	52	NE	4	2			7						Meteorological Obs.
Nukuss			29.61	752.1	90.9	32.7	31	N	13	6			0						
Kasaly																			Bobrof.
Tashkend	27.96	710.1	29.51	749.5	92.8	33.8	41	Calm	0	0			0						Michelson.
Barnaul			29.68	753.8	71.8	22.1	49	S	2	1			9						Meteorological Obs.
Yeniseisk			29.63	752.7	70.9	21.6	62	NNE	2	1			8						Murks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.71	754.6	81.3	27.4	90	Calm	0	0			5						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.83	757.6	63.7	17.6	97	SE	4	2			10						
Nikolaievsk, on the Amoor					63.5	17.5	97	E	18	8			10						

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 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	761.8	89.6	32.0	33	N	3.0	1.33		0	1			0	0	Almost clear	Royal Observatory.
San Fernando			30.03	762.7	80.1	26.7	64	W	11.2	5.0		0	1		E				The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			29.71	754.6	64.4	18.0	90	S			4		10			0	0		
Umea			29.68	753.9	60.1	15.6	98	SW			2		10			0.319	8.1	Foggy	
Hernosand			29.65	753.2	61.0	16.6	90	S			2		10			0.031	0.8	Foggy	
Stockholm			29.70	754.4	75.6	24.2	76	SW			4		9			0	6		
Wisby			29.87	758.7	73.0	22.8	81	SW			4		5			0.413	10.5		
Sub-Series.																			
Upsala			29.69	754.2	69.4	20.8	83	WSW	8.3	3.7			10	SSE	WSW	0.091	2.31		Dr. Hildebrandsson.

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

SWISS SERIES.

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

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	729.4	30.10	764.4	71.1	21.7	47	N			2		2			0.051	1.3	Clear	The Observatory.
Zurich	28.53	724.6	30.12	765.0	68.4	20.2	72	S			1		5			0.071	1.8	Bright	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +2.0 mm.; Thermometer, —0.7 cent.; Relative Humidity, —6 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

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			29.96	761.0	78.1	25.6	51	NNE	10	4.5			2		NE	0	0		
Fao, (Persian Gulf)			29.54	750.3	96.8	36.0		NW			6		10					Dusty	
Salonica			29.98	761.4	83.5	28.6		S			6		0						
Valona			29.95	760 8	82.8	28.2		W			1		0						
Varna			30.08	764.0	78.8	26.0		E			2		10			Blank	Blank		
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.76	755.9	89.1	31.7	58	SW			2		1k		SW	0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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.																			Hon. J. Ferguson.
Brockville, Ontario			29.95	760.7	79	26.1		SW	8	3 6		2ck	0	W		0	0	Fair	W. R Bigg.
*Chatham, N. B.			29.92	760.0	65	18.3	86	NE	3	1.3		8ck	2ks	NE	NE	0.02	0.5	Fair	G. A. Blair.
Charlottetown, P. E. Island.			29.92	760.0	57	13.9	92	N	8	3.6			10s			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.84	757.9	87.7	30.9		S			1	10ck	0			Inap.	Inap.	Cloudy	James Smith, M. A.
Dalhousie, N. B.																			H. A. Johnson.
Esquimault, B. C																			W. H. Bevis.
Fredericton, N. B.			29.90	759.4	72.6	22.6	72	SE	3	1.3		7c	0	N		0.012	0.30	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.65	753.1	56	13.3	90	W	17	7.6		5k	5n	W	W	1.19	30.2	Clearing	James Stewart.
Goderich, Ontario			29.99	761.7	77.3	25.2	67	Calm			0	0	0			0	0	Clear	H. J. Strang, M. A.
Granton, Ontario	28.94	735.1	29.97	761.2	81.5	27.5		Calm			0	0	0			0	0	Clear	James Grant.
*Halifax, N. S.			29.85	758.2	63	17.2	83	NW	3	1.3			5ks		N	0.015	0.38	Fair	F. Allison, M. A.
*Kingston, Ontario			29.96	761.0	81	27.2	78	NW	3	1.3		2c	0			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			29.84	757.9	54.8	12.7	93	NE	10	4.5			10n			0.01	0.3	Overcast	C. H. Rigby.
*Montreal, Quebec			29.88	758.9	68	20.0	83	E	4	1.8		Haze	5ks	N		Inap.	Inap.	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.87	758.7	78	25.6	59	W	8	3.6		2ck	0	W		0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			29.96	761.0	74	23.3	81	S	7	3.1		0	0			0	0	Clear	Rev. R. Mosley.
*Port Dover, Ontario			30.01	762.2	75	23.9	86	Calm	0	0		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.			29.88	758.9	58.0	14.4		NW	12	5.4						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.01	762.2	75	23.9	87	W	1	0.4		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			29.90	759.4	69	20.6	95	Calm	0	0		0	0			0.02	0 5	Clear	Capt. Ashe, R. N.
St. John, N. B.			29.90	759.4	67	19.4	64	Calm	0	0		4ck	0			0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			29.93	760.2	79	26.1	77	Calm	0	0		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario																			R. J. Cole.
Stratford, Ontario	24.75	730.2	29.96	761.0	78.8	26.0	77	NW	5	2.2		0	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			29.86	758.4	57	13.9	87	NE	4	1.8		5k	5ks	N	N	0.06	1.5	Fair	T. C. Hill.
*Toronto, Ontario			29.98	761.5	81	27.2	70	NW	6	2.7		0	0			0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			29.98	761.5	80.2	26.8	86	W	1	0.4		0	0			Inap.	Inap.	Fine	J. Montgomery
Sub-Series.																			
St. John's, Newfoundland			29.97	761.2	54	12.2	87	SE					10p			0	0	Cloudy	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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.			29.85	758.2	82	27.8	70	NW	13	5.8		8c	0	W		0	0	Fair	
Alpena, Mich.			29.87	758.7	75	23.9	76	SE	1	0.4		0	0			0	0	Clear	
Atlantic City, N. J.			29.93	760.2	85	29.4	75	N	10	4.5		5cs	0	NW		0	0	Fair	
Augusta, Ga.			30.06	763.5	81	27.2	80	Calm	0	0		0	Haze			0.08	2.0	Clear	
Baltimore, Md.			30.02	762.5	56	30.0	58	NW	8	3.6		5c,ck	0			0	0	Fair	
Barnegat, N. J.			29.92	760.0	82	27.8	74	NW	8	3.6		10cs	0	NW		0	0	Cloudy	
Benton, Montana	27.26	692.4	30.09	763.5	58	14.4	53	W	1	0.4		0	0			0.97	24.6	Clear	
Bismarck, Dakota	28.05	712.5	29.64	752.8	56	13.3	51	NW	5	2.2		Haze	Haze			0.09	2.3	Hazy	
Boston, Mass.			29.78	756.4	83	28.3	67	NW	10	4.5		8cs	Haze	NW		0	0	Fair	
Breckenridge, Minn.			29.82	757.4	62	16.7	79	W	12	5.4		8c	0	SW		0.20	5.1	Cloudy	
Buffalo, N. Y.			29.97	761.2	73.5	23.1	88	SW	7	3.1		1k	0	W		0	0	Clear	
Burlington, Vt.			29.87	758.7	73	22.8	81	N	7	3.1			10s		N	0.39	9.9	Cloudy	
Cairo, Ill.			30.02	762.5	77	25.0	86	S	6	2.7		0	0			0.08	2.0	Clear	
Cape Hatteras, N. C.			29.96	761.0	81	27.2	82	SW	8	3.6		2c	Haze			0	0	Fair	
Cape Henry, Va.			29.97	761.2	86	30.0	70	W	8	3.6		5c	0	W		0	0	Fair	
Cape Lookout, N. C.			30.05	763.3	82	27.8	83	W	9	4.0		5k	0	W		0	0	Fair	
Cape May, N. J.			29.94	760.5	79	26.1	85	N	16	7.2		5c	Haze	NW		0	0	Fair	
Charleston, S. C.			30.06	763.5	83	28.3	74	NE	2	0.9		0	Haze			0.02	0.5	Clear	
Cheyenne, Wyoming	24.20	614.7	30.14	765.5	50	10.0	59	W	4	1.8		0	0			0	0	Clear	
Chicago, Ill.			29.90	759.4	83	28.3	67	SW	6	2.7		0	0			0	0	Clear	
Cincinnati, Ohio			30.01	762.2	79	26.1	82	S	1	0.4		0	0			0	0	Clear	
Cleveland, Ohio			30.01	762.2	81.9	27.7	70	S	1	0.4		0	Haze		S	0	0	Clear	
Colorado Springs, Col.	24.29	617.0	30.16	766.1	54	12.2	55	N	6	2.7		0	0			0	0	Clear	
Corsicana, Tex.			29.94	760.5	77	25.0	90	S	8	3.6		5cs	Haze			0.32	8.1	Fair	
Davenport, Iowa			29.86	758.4	79	26.1	78	S	12	5.4		5k	0	SW		0	0	Fair	
Denison, Tex.			29.95	760.7	76	24.4	95	SW	20	8.9			10s			1.68	42.7	Cloudy	
Denver, Col.	24.96	634.0	30.18	766.6	55	12.8	50	S	4	1.8		0	0			Inap.	Inap.	Clear	
Detroit, Mich.			29.97	761.2	78	25.6	86	SW	4	1.8		0	0			0	0	Clear	
Dodge City, Kan.	27.38	695.4	29.57	751.1	68	20.0	100	N	1	0.4		5k	0	N		1.15	29.2	Fair	
Dubuque, Iowa			29.83	757.7	78	25.6	77	S	8	3.6		10k	0	S		0	0	Cloudy	
Duluth, Minn.			29.69	754.1	69	20.6	90	SW	4	1.8		5k	0	SW		0.31	7.9	Fair	
Eastport, Me.			29.86	758.4	60	15.6	76	NE	12	5.4		8c	2k	N	NW	0	0	Cloudy	
Erie, Pa.			29.98	761.5	82	27.8	67	W	8	3.6		0	Sm			0	0	Clear	
Escanaba, Mich.			29.81	757.2	74	23.3	72	SW	13	5.8		0	0			0	0	Clear	
Fort Gibson, Indian Ter.			29.90	759.4	73	22.8	85	E	8	3.6			10n			2.07	52.6	Light rain	
Ft. St. Michael, Alaska			29.98	761.5	51	10.6	86	SW			4		10s			0	0	Cloudy	
Fort Sill, Indian T.	28.74	730.0	29.78	756.4	81	27.2	82	S	12	5.4		2ck	0	S		0	0	Clear	
Fort Sully, Dakota	28.29	718.6	29.90	759.4	62	16.7	72	NW	8	3.6		1c	0	NW		Inap.	Inap.	Clear	
Galveston, Tex.			30.06	763.5	81	27.2	78	S	12	5.4		2k	0	S		0	0	Fair	
Grand Haven, Mich.			29.92	760.0	81	27.2	74	S	18	8.0		0	0			0	0	Clear	
Indianapolis, Ind.			29.97	761.2	84	28.9	71	SE	5	2.2		0	0			0	0	Clear	
Indianola, Tex.			30.03	762.7	84	28.9	75	S	10	4.5		2k	0			0	0	Fair	
Jacksonville, Fla.			30.07	763.8	84	28.9	75	SW	3	1.3		0	0			0	0	Clear	
Keokuk, Iowa			29.82	757.4	75	23.9	85	S	10	4.5		8k	0	S		0	0	Fair	
Key West, Fla.			30.07	763.8	82.8	28.2	70	E	6	2.7		Haze	1ks			0	0	Clear	
Kittyhawk, N. C.			30.01	762.0	83	28.3	70	W	10	4.5		5cs	0	W		0	0	Fair	
Knoxville, Tenn.			30.08	764.0	73	22.8	95	E	2	0.9			Fog			0	0	Dense fog	
La Crosse, Wis.			29.80	756.9	79	26.1	82	S	11	4.9			10s		S	0	0	Cloudy	
Leavenworth, Kan.			29.82	757.4	72	22.2	85	NW	2	0.9		0	8s		NW	0.09	2.3	Fair	
Lexington, Ky.	28.04	736.1	30.02	762.5	81	27.2	74	SE	2	0.9		0	0			0.20	5.1	Clear	
Louisville, Ky.			30.01	762.2	85	29.4	68	Calm	0	0		0	0			0.09	2.3	Clear	
Lynchburg, Va.			30.03	762.7	85	29.4	64	SW	1	0.4		2ck	0	SW		0	0	Clear	
Malone, N. Y.			29.83	757.7	76	24.4	85	W	4	1.8		8k	0	N		0.04	1.0	Cloudy	
Manhattan, Kan.	28.75	730.2	29.84	757.9	70	21.1	90	Calm	0	0		8cs	0			0.20	5.1	Cloudy	
Marquette, Mich.			29.71	754.6	81	27.2	74	S	12	5.4		0	0			0	0	Clear	
Memphis, Tenn.			30.05	763.3	76	24.4	86	SE	2	0.9		5k	5s	SE	SW	0.03	0.8	Cloudy	
Milwaukee, Wis.			29.88	758.9	78	25.6	78	S	10	4.5		0	0			0	0	Clear	
Mobile, Ala.			30.11	764.8	80	26.7	86	W	4	1.8		5ck	5s			0	0	Cloudy	
Montgomery, Ala.			30.11	764.8	80	26.7	78	W	3	1.3		0	0			0	0	Clear	
Morgantown, W. Va.	29.04	737.6	30.02	762.5	85	29.4	71	Calm	0	0		0	0			0	0	Clear	
Mt. Washington, N. H.	23.85	605.8	30.21	767.3	55	12.8	100	NW	40	17.9			Fog			1.10	27.9	Foggy	
Nashville, Tenn.			30.05	763.3	84	28.9	67	Calm	0	0		0	0			0	0	Clear	
New Haven, Conn.			29.86	758.4	80	26.7	74	Calm	0	0			10s			0	0	Cloudy	
New London, Conn.			29.83	757.7	80	26.7	78	W	3	1.3		5ck	5s			0	0	Cloudy	
New Orleans, La.			30.10	764.5	80.5	26.9	78	W	1	0.4		5c	0	W		Ina.	Inap.	Fair	
Newport, R. I.			29.81	757.2	81	27.2	74	W	6	2.7		10ck	0	NW		0	0	Cloudy	
New York, N. Y.			29.92	760.0	81	27.2	70	NW	14	6.3			10ks		W	0	0	Cloudy	
Norfolk, Va.			30.00	762.0	85	29.4	68	NW	5	2.2		8c	0			0	0	Fair	
North Platte, Neb.	27.13	689.1	29.74	755.6	59	15.0	58	W	8	3.6		0	Haze			0.68	17.3	Clear	
Omaha, Neb.	28.80	731.5	29.82	757.4	71	21.7	90	Calm	0	0		5ck	2cs	W		0.28	7.1	Cloudy	
Oswego, N. Y.			29.95	760.7	68.5	20.3	92	SW	12	5.4			Fog		W	0	0	Foggy	
Pembina, Dakota			29.69	754.1	58	14.4	81	NW	12	5.4		2k	0	NW		0.06	1.5	Clear	
Philadelphia, Penn.			29.96	761.0	84	28.9	64	N	5	2.2		5cs	Sm'e			0	0	Fair	
Pike's Peak, Colorado	18.02	457.7	30.23	767.8	20	−1.7	100	SW	20	8.9			Fog			0	0	Foggy	
Pittsburgh, Penn.			30.02	762.5	79	26.1	86	Calm	0	0		0	Sm'e			0	0	Clear	
Port Huron, Mich.			29.96	761.0	80	26.7	82	SW	3	1.3		0	0			0	0	Clear	
Portland, Me.			29.86	758.4	66	18.9	79	NE	9	4.0			10s			0.01	0.3	Cloudy	
Portland, Oregon			29.97	761.2	55	12.8	87	Calm	0	0			10n			0.17	4.3	Light rain	
Punta Rassa, Fla.			30.08	764.0	81.0	27.2	76	NE	10	4.5		2cs	2k		NE	0	0	Fair	
Rochester, N. Y.			29.93	760.2	81	27.2	74	W	8	3.6		2c	Sm e			0	0	Fair	
Salt Lake City, Utah	25.66	651.8	29.99	761.7	57	13.9	46	Calm	0	0			0			0	0	Clear	
Sandy Hook, N. J.			29.91	759.7	78	25.6	78	W	18	8.0			10s		NW	0	0	Cloudy	
San Diego, Cal.			30.02	762.5	62	16.7	88	N	4	1.8		0	0			0	0	Clear	
San Francisco, Cal.			30.07	763.8	55	12.8	80	SW	2	0.9		0	0			0	0	Clear	
Santa Fe, N. M.	23.40	594.4	29.94	760.5	55	12.8	74	Calm	0	0		5k	0			0.07	1.8	Fair	
Savannah, Ga.			30.07	763.8	88	31.1	63	Calm	0	0		0	Haze			0.01	0.3	Hazy	
Shreveport, La.			30.06	763.5	78	25.6	91	S	10	4.5			10s		S	0.06	1.5	Cloudy	
Smithville, N. C.			30.05	763.3	82	27.8	83	SW	3	1.3		2k	0	N		1.10	27.9	Fair	
Springfield, Mass.			29.82	757.4	83.5	28.6	67	NW	8	3.6		8ck,cs	2s	N		0	0	Fair	
St. Louis, Mo.			29.95	760.7	77	25.0	85	S	8	3.6			10s			0.20	7.4	Cloudy	
St. Marks, Fla.			30.07	763.8	79	26.1	82	NW	3	1.3		0	2ks			0.11	2.8	Fair	
St. Paul, Minn.																			
St. Paul's Island, Alaska			30.08	764.0	38	3.3	91	NE	1	0.4			Fog			0.08	2.0	Foggy	
Thatcher's Island, Mass.			29.83	757.7	63	17.2	83	NE	5	2.2		2c	8s	NW	NW	0.01	0.3	Cloudy	
Toledo, Ohio			29.96	761.0	84	28.9	75	Calm	0	0		0	Haze			0	0	Clear	
Tucson, Arizona	27.61	701.3	30.20	767.1	78	25.6		SE				0	0			0	0	Clear	
Tybee Island, Ga.			30.05	763.3	81	26.7	74	Calm	0	0		0	0			0	0	Clear	
Vicksburg, Miss.			30.09	764.3	77	25.0	95	Calm	0	0			10s		SW	0.90	22.9	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.	24.30	617.2	29.78	756.4	44	6.7	67	Calm	0	0		5c	0	W		0.02	0.5	Cloudy	
Washington, D. C.			30.01	762.2	84	28.9	67	NW	8	3.6		8c	Haze			0	0	Fair	
Wilmington, N. C			30.05	763.3	82	20.8	78	SW	4	1.8		Haze	2ks		NE	0	0	Fair	
Wood's Holl, Mass.			29.82	757.4	79	26.1	78	NW	2	0.9		0	5s		NW	0	0	Fair	
Wytheville, Va.	27.82	706.6	29.89	759.2	73	22.8	85	NW	2	0.9		0	0			0	0	Clear	
Yankton, Dakota	28.64	727.4	29.87	758.7	68	20.0	95	NW	1	0.4		5cs	0	W		0.73	18.5	Fair	
Yuma, Arizona			29.94	760.5	79	26.1		SW				0	0			0	0	Clear	
Sub-Series.																			
P'nte-a-Pitre, G'd'l'pe, W. I.			29.97	761.2	83	28.3	79	E				2k	5ks			0.08	2.0	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.			30.18	766.6	80	26.7	86	Calm	0	0		8c	2n		NE	0.54	13.7		James Hall.
St. Georges, Bermudas			30.04	763.0	78.0	25.6	72	NNE	2.0	0.9			10n			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	30.02	762.5	67	19.4	90	NE	2.0	0.9		8c	0	NE		0	0	Dull	C. Partridge.
Paramaribo, D. Guiana, S. A			30.01	763.0	79	26.1	87	E			2	5k	5ks	E		1.740	44.2	Dry	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.05	763.2			83.8	28.8		N								0.187	4.75		Dr. H. Groot.
Medellin, Colombia, S. A.	25.25	641.3			64.0	17.8	81	Calm	0	0			10n			0.33	8.4	Cloudy	Thomas Herran.
York Factory, B. A.			29.16	740.7	48	8.9	96	E	12	5.4			10n						J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.09	764.3	77	25.0	90	NE			2					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Sch'ner Addie Fuller at Damariscotta, Me.			29.90	759.4	68	20.0		WNW			2		10k		NW			Drizzling	Capt. James Jorgensen.
Steamer Leipzig, N. 41° 0′ W, 41° 51′.	370W		29.95	760.7	65.8	18.8		SW			3		Fog			Smooth		Squally	Capt. R. Hoffmann.
Steamer Nova Scotian at Halifax, N. S.			29.89	759.2	61	16.1		NNE			2		k		NW			Fair	Capt. Ritche.

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, 6,132.4 ft., or 1,834.7 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.; Morgantown 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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			30.09	764.2	78.4	25.8	67	N			2		1			0	0	Clear	Charnot.
Algiers			30.13	765.3	77.7	25.4	69	NNE			2		1			0	0	Clear	Peter.
La Calle																			Kunts.
Tunis			30.09	764.3	83.8	28.8	60	NW			4		2			0	0	Clear	Jacques.
Sfax			30.15	765.7	84.9	29.4	44	E			3		1			0	0	Clear	Chauvey.
Saida			30.08	764.0	87.8	31.0	22	NNE			2		2			0	0	Clear	Millot.
Tebessa			30.13	765.3	78.1	25.6		NE			2		0			0	0	Clear	Colin.
Geriville					82.0	27.8	37	NW			1		2			0	0	Clear	Buard.
Laghouat			30.09	764.2	95.0	35.0		NE			1		0			0	0	Clear	Guyot.
Biskra			30.12	765.0	94.3	34.6	34	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			29.97	761.3	77.0	25.0	65	Calm			0		0			0.244	6.2	Thunder-storm	Prof. Ivan Stosir.
Cracow, I. R. Observatory			29.97	761.3	73.8	23.2	78	W			2		10			0.172	4.38		Dr. Wierzbiski.
Eperies			29.91	759.7	82.0	27.8	55	Calm			0		8			Blank	Blank		Julius Mikolik.
Gratz	28.83	732.3	29.99	761.8	71.8	22.1	64	SSW			2		6			0.126	3.2		Andreas Rospini.
Hermannstadt	28.56	725.3	29.88	759.0	83.7	28.7	39	ESE			3		1			0	0		Prof. Reissenberger.
Kremsmünster	28.30	718.8	29.58	751.2	71.2	21.8	67	ENE			3		5			0	0		Prof. C. Wagner.
Lemberg			29.88	758.9	82.4	28.0	77	SE			1		3			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.00	762.1	76.5	24.7	63	SE			1		2ks			0.235	5.98		I.R.Hydrographic Office.
Szegedin			29.93	760.2	78.8	26.0	60	Calm			0		8			0.579	14.70		Karl Stancel.
Trieste			30.01	762.2	79.0	26.1	76	W			1		2			0.118	3.0		Prof. V. Farolfi.
Vienna			30.00	762.0	73.9	23.3	63	W			3		2			0.008	0.2		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.02	762.4	68.9	20.5	54	W			5		5		SW	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.60	751.8	60.9	16.1		WSW	6	2.7			4			0	0	Blue sky	William Boswell.
Ardrossan			29.72	754.9	56	13.3		NW			4		10					Raining	William McNeil.
Armagh, Observatory			29.93	760.2	56.4	13.6		WNW	12	5.4			10					Showery	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.07	763.8	57.6	14.2		WSW			2–3		10					Misty	J. Dreyer.
Bradford			29.91	759.7	59.8	15.4		W			4		6			0.02	0.5	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	83.0	28.3		E			1		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.91	761.7	64.0	17.8		W			3		7					*D. clouds	H. Todd. [H. C.
Cardington			30.00	762.0	66.0	18.9		W			3		5					*D. clouds	John McLaren.
Carlisle			29.78	756.4	59.3	15.2		W			7		10			0.06	1.5	Showery	T. Bel, for J. Car mell.
Chatham, School M. E			30.02	762.5	65.5	18.6		SW			2		6					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.71	729.2	30.22	767.6	55.6	13.1		NNW			6		6					*D. clouds	R. E. Power.
Donaghadee			29.87	758.7	58	14.4		W			5		5					*D. clouds	J. Mac Gowan.
Dover			30.02	762.5	63	17.2		WSW			4		3					¼ clouded	J. Costello.
Eccles (near Manchester.)			29.92	760.0	61.7	16.5		W	15.0	6.7			5					Squally	Thomas Mackereth.
Falmouth, Observatory			30.18	766.6	60.0	15.6		WNW			5		8					Squally	The Staff.
Fort Napier, (Natal)	27.98	710.7	30.22	767.6	64.9	18.3		E			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	85	29.4		W			1		5					*D. clouds	
Galway, Queen's College			30.04	763.0	64	17.8		W			2		6					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.01	763.0	78.0	25.6		E			4		2					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			29.68	753.9	55.1	12.8		W			1		10					Overcast	Lewis Stuart.
Great Yarmouth			29.95	760.7	59	15.0		W			4		3					Blue sky	G. T. Watson.
Greenwich, Royal Ob'y			30.02	762.5	69.1	20.6		W			4		5					*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.16	766.1	61.5	16.4		WSW			3		5					*D. clouds	Dr. S. E. Hoskins.
Helston			30.14	765.5	64	17.8		SW			6		4			0	0	*D. clouds	M. P. Moyle.
Holyhead			29.99	761.7	61	16.1		WSW			5		4					*D clouds	John Tinston.
Kew, Observatory			30.02	762.5	64.8	18.2		WSW	16	7.2			4					*D. clouds	The Staff.
Kingstown																			George Mitchell.
Leicester Museum			29.99	761.7	62.0	16.7		W			3		7					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.96	761.0	82.8	28.2		NW			1		0						Corp'l F. Fraser, A. M. C.
Nairn			29.54	750.3	61	16.1		SW			2		8					¾ clouded	W. D. Penny.
Nassau, (Bahamas			30.05	763.3	82.0	27.8		N			3		4					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.98	761.5	64.0	17.8		WSW			4		7k,d		WSW	0.011	0.28	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.00	762.0	58.0	14.4		WSW			4–5		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Ob's'y			30.01	762.2	64	17.8		WNW			4		8					Overcast	J. Lucas.
Plymouth			29.14	765.5	65.5	18.6		W			4		7					*D. clouds	John Merrifield.
Roche's Point			30.13	765.3	59	15.0		NW			5		8					Cloudy	W. Kennedy.
Saint Ann's Head			30.08	764.0	57	13.9		WNW			4		2					Blue sky	John C. Walker.
Saint Helier, Jersey			30.17	766.3	60.2	15.7		NNW			2		10					Raining	A. P. Amy.
Sandwick Manse, Orkneys			29.58	751.3	53.6	12.0		W	22	9.8			3					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough			29.82	757.4	62.0	16.7		W			4		5					*D. clouds	F. Shaw.
Scutari Cemetery, Turkey			29.93	760.2	82.2	27.9		NE			2		2					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.92	760.0	62.0	16.7		W			6		7			0	0	*D. clouds	W. F. Cooper.
Silloth Rectory			29.81	757.2	55.1	12.8	87	SW			4		8			0.010	1.02	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.88	758.9	57.2	14.0		W			5		8					Raining	Rev. S. J. Perry.
Stornoway, Lewis C. Hobr.			29.61	752.1	56	13.3		WNW			3		5					*D. clouds	John Smith.
Strathfield Turgiss			30.04	763.0	63.2	17.4		NW			3		5					Squally	Rev. Charles H. Griffith.
Thurso			29.45	748.0	60	15.6		NW			4		4					*D clouds	John Trotter.
Truro, Royal Institution			30.17	766.3	65	18.3		NW			6		6					*D. clouds	W. Newcombe.
Valencia, Observatory			30.20	767.1	58.0	14.4		WNW	21	9.4			10					Misty	The Staff.
SUB-SERIES.																			
Calf of Man, Isle of Man					54	12.2		W			4		10						Thomas Dawson.
Cape Good Hope, Ob's'y			30.17	766.3	70.0	21.1	50	WNW	10	4.5		5	5						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			29.90	759.4	57.0	13.9	80	NW			2		9s			0	0		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.69	754.1	59.0	15.0		W			6		6k			0.18	4.6	Cloudy	Andrew Gibb.
Mauritius, Observatory			30.25	768.3	68.1	20.1	72	ESE	25.6	11.4			6		ESE	0	0	Squally	C. Meldrum
Melbourne, Observatory			29.91	759.7	45.3	7.4	93	NE	8	3.6			5			0	0	Fine	R. L. J. Ellery.
Monach Lt-house, Hebrides			29.69	754.1	53	11.7		NW			6		10			0.2	5.1		J. Youngclause.
North Unst, (Shetland Is.)			29.42	747.3	53	11.7		W			7		10			Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,250 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			29.83	757.6	65.5	18.6	63	SSW			4		10					Raining	
Fanöe			29.78	756.3	61.4	19.1	71	SW			6		5						
Godthaab, Greenland			29.97	761.1	36.5	2.5		Calm			0		10						
Stykkisholm, Iceland			29.94	760.4	49.5	9.7	92	N			2		0						
Thorshavn, Faröe			29.54	750.4	50.9	10.5	74	N			4		10					Raining	
Vestervig			29.71	754.6	56.8	13.8	82	W			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			30.13	765.4	68.0	20	55	SW			4		2cn		SW	0	0	Slightly cl'dy	Normal School.
Amiens			30.03	762.7	77.7	25.4	65	W			3		0			0	0	Clear	Normal School.
Avignon			30.06	763.5	80.6	27	44	NNW			4		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.11	764.7	70.3	21.3	59	SSW			2		8		W	0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)			30.13	765.3	69.6	20.9	62	SW	6.0	2.7			10		SW	0	0	Covered	Beaumette Observatory.
Beauvais			30.12	765.0	67.8	19.9	48	W			4		5		WSW	0	0	Cloudy	Normal School.
Besançon			30.13	765.2	72.5	22.5	56	S			2		5		S	0	0	Cloudy	Normal School.
Bourg en Bresse			30.26	768.5	72.5	22.5	60	N			1		5k		E			Cloudy	Normal School.
Bourges			30.45?	773.4?	70.9	21.6	85	SW			4		10		E	0	0	Covered	Normal School.
Brest			30.18	766.6	62.4	16.9	79	NNW			3		10		NW	0.050	0.50	Misty	Naval Observatory.
Carcassonne			30.16	766.0	73.2	22.9	47	W			1		0			0	0	Clear	Normal School.
Caen			30.11	764.7	69.8	21	54	W			2		10		E	0	0	Covered	Normal School.
Chartres			30.07	763.8	71.8	22.1	77	W			2		6		NE	0	0		Normal School.
Clermont			30.11	764.9	72.9	22.7	66	NE			2		5		NW	0	0		Puy de Dome Obs'y.
Commercy			30.11	764.8	69.3	20.7	61	W			2		5kn		W	0	0	Cloudy	Normal School.
Commune de Greasque*			30.11	764.7	85.1	29.5	33	NW			2		0			0	0		M. Kina.
Grenoble			30.12	765.0	73.0	22.8	76	NNW			2		2c		NW	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.19	766.7	70.9	21.6	72	SW			1		10			0	0	Covered	Normal School.
Le Mans			30.12	765.0	70.7	21.5	70	NW			2		2		NW	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier			30.13	765.2	72.7	22.6	59	W			1		2		E	0	0	Slightly cl'dy	Normal School.
Mâcon			30.39	771.9	71.4	21.9	63	NW			2		8		W	0	0	Very cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			30.10	764.5	70.9	21.6	69	NNW			2		5		ENE	0	0	Cloudy	Normal School.
Nismes			30.07	763.8	84.9	29.4	28	N			8		0			0	0	Clear	Normal School.
Orleans			30.08	763.9	74.8	23.8	35	SW			1		5		W	0	0	Cloudy	Normal School.
Paris, Observatory			30.08	764.1	72.0	22.2	52	WNW			2		c	k	W	0	0	Cloudy	National Observatory.
Parthenay			30.17	766.4	68.0	20	76	W			2		8		SE	0	0	Very cloudy	Normal School.
Privas			30.10	764.4	77.0	25		N			2		0			0	0	Clear	Normal School.
Rochefort, Observatory			30.23	767.8	75.6	24.2	59	W			3		10		E	0	0	Covered	Naval Observatory.
Rouen			30.13	765.3	65.8	18.8	53	WSW			3		5		SW	0	0	Cloudy	Normal School.
Saint Lo			29.83	757.6	68.0	20	66	NW			1		7		NW	0	0		Normal School.
Tarbes	29.12	739.6	30.17	766.4	69.8	21		E			2		2		E	0	0	Slightly cl'dy	Normal School
Villefranche			30.24	768.2	76.1	24.5	60	NE			2		5		N	0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.8	81.0	27.2													L'Abbé Marchesi.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.36	771.1	46.0	7.8	67	WSW	4	2			8			0	0		—. Falguère.
Montsouris, Paris			30.08	764.1	72.1	22.3	51	WNW			2		10		W	0	0		Montsouris Observatory.
Perpignan			30.09	764.3	78.1	25.6	46	N	11.2	5.0			0			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.09	764.2	72.1	22.3	55	WSW			2–3		9			0	0	Cloudy	E. Renou.
Toulouse			30.23	767.9	73.8	23.2	52	NW			3		2			0	0		Toulouse Observatory.
Tours			30.14	765.6	70.2	21.2	65	WSW			2		8		W	0	0		C. Marquet.
Versailles, (near Paris)			30.10	764.4	73.0	22.8	54	NW			3		8			0	0	Fair	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

NOTE.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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			29.99	761.8	74.3	23.5	52	W			3		6	W		0.008	0.2		Prof. T. Roh.
Berlin			29.95	760.8	77.4	25.2	54	S			1		3			0.102	2.6		Prof. Arndt.
Breslau			30.05	763.3	76.6	24.8	49	W			4		8			Inap.	Inap.		Dr. P. Neugebauer.
Carlsruhe			30.05	763.3	72.7	22.6	56	SW			5		10			0.016	0.4		A. Sens.
Cassel			30.03	762.7	73.9	23.3	49	SSW			4		8	SSW		0.037	0.9		Dr. H. Möhl.
Emden			29.85	758.1	68.5	20.3	66	W			9		5			0	0		Prof. Prestel.
Frankfort on the Main			30.10	764.5	73.2	22.9	50	WSW			1		8			Inap.	Inap.		Physical Society.
Friedrichshafen			30.07	763.6	72.7	22.6	64	W			4		5			0	0		M. Wilhelm.
Hamburg			29.93	760.3	66.4	19.1	79	SW			5		10kn	SW		0	0	Misty	Captain F. Hegemann.
Kiel			29.86	758.4	69.4	20.8	68	SW			5		6			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			29.95	760.8	78.3	25.7	36	W			2		2			0.008	0.2		Prof. E. Luther.
Köslin			29.95	760.7	72.3	22.4		SSW			1		5			0.177	4.5		H. Müller.
Leipsic			30.01	762.2	79.5	26.4	47	SW			3		7	SW		0	0		Prof. Bruhns.
Memel			29.98	761.4	72.5	22.5	77	W			1		2ck,8	SSW		0	0		Reinbrecht & Skalweit.
Münster			30.01	762.3	69.8	21.0	60	SW			6		8			0	0		Prof. E. Heis.
Neufahrwasser			29.96	761.0	72.1	22.3	80	NE			2		10			0	0		A. Lothes.
Posen			30.03	762.7	83.3	28.5	53	NW			1		4			0.016	0.4		Dr. Magener.
Strassburg, (in Alsace)			30.08	764.1	75.7	24.3	55	SW			2		7	W		0	0		Dr. Schur.
Stuttgart			30.07	763.6	72.1	22.3	57	NE			1		5			0	0		Prof. Schoder.
Thorn			29.96	760.9	81.1	27.3	55	WSW			1		6			0.043	1.1		Dr. Hasenbalg.
Treves, (Trier)			30.02	762.5	71.6	22.0	58	SW			6		9			0.055	1.4		Prof. Flesch.
Wustrow, Naval School			29.98	761.6	69.8	21.0	68	WSW			4		10			0	0		E. F. Schütz.

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	86.5	30.3		NE										Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.99	761.8	74.8	23.8	57	Calm	0	0			4			0.012	0.3		
Padua			29.98	761.5	77.2	25.1	57	NW	1.3	0.6			3	W		0	0		
Vicenza			29.98	761.6	78.8	26.0	54	E	0.7	0.3			3	S		0	0		
Verona			29.91	759.6	93.6	34.2	49	E			1		0			0	0		
Bergamo	28.66	728.0	29.92	760.0	81.3	27.4	43	SW			2		1			0	0		
Domodossola	29.01	736.8	29.99	761.8	78.6	25.9	60	S			4		4			0	0		
Milan			29.97	761.3	87.3	30.7	44	S			1		3	S		0	0		
Pavia			29.99	761.7	81.9	27.7	43	SE			1		1	SW		0	0		
Moncalieri			29.99	761.7	79.0	26.1	58	NW	0.7	0.3			2	NE		0	0		
Mondovi	28.15	715.0	29.97	761.1	77.0	25.0	51	NW			2		0			0	0		
Porto Maurizio			30.04	763.1	78.4	25.8	72	WSW			2		1			0	0		
Genoa			30.00	761.9	82.4	28.0	41	S	2.5	1.1			0			0	0		
Piacenza			30.00	761.9	79.7	26.5	47	SE	2.5	1.1			1			0	0		
Parma			29.98	761.4	83.5	28.6	53	N			2		1			0	0		
Bologna			30.02	762.4	83.1	28.4	45	NW			1		4	E		0	0		
Florence			29.98	761.5	86.9	30.5	34	W			2		2			0	0		
Leghorn			29.98	761.6	80.6	27.0	67	W	6.3	2.8			3			0	0		
Siena	28.80	731.5	29.96	760.9	81.7	27.3	32	SW	0.7	0.3			4	SW		0	0		
Urbino	28.53	724.7	30.03	762.8	75.2	24.0	60	NE			4		7			0.156	3.8		
Ancona			30.02	762.6	79.2	26.2	72	N			2		2			0	0		
Grosseto			30.01	762.2	82.4	28.0	82	ENE			4		3	NW		0	0		
Rome			29.99	761.7	84.7	29.3	42	W	9.4	4.2			1			0	0		
Naples, O. U			30.09	762.0	85.6	29.8	51	SSW			4		4	NE		0	0		
Lecce			29.96	760.9	83.8	28.8	36	ENE	9.4	4.2			3			0	0		
Cosenza			29.98	761.4	86.7	30.4	63	SW	1.3	0.6			10			0	0		
Riposto, (Sicily)			30.00	761.9	78.8	26.0	73	NE			2		7	NW		0	0		
Palermo			29.95	760.8	77.9	25.5	69	E	3.8	1.7			10	WSW		0	0		
Caltanissetta	28.04	712.1	29.90	759.4	83.3	28.5	79	E			2		10	W		0	0		
Sub-Series.																			
Naples, S. R			30.00	762.1	85.3	29.6	51	SW	0	0			3	S		0	0		Prof. F. Brioschi.
Pesaro			30.09	764.2	76.8	24.9	73	NE	22.8	10.17			6k	SW		Blank	Blank		L. Guidi.

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			30.06	763.4	64.8	18.2		W			4								
Groningen			29.86	758.5	66.7	19.3		SSW			5								
Helder			29.95	760.7	63.3	17.4		WSW			4								
Utrecht			29.95	760.6	68.9	20.5	55	WSW			5		5					Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.54	750.4	51.8	11.0	87	SSW	10.7	4.8			10			0.827	21.0	Raining	
Brono			29.50	749.3	57.2	14.0	75	NW	9	4			8			0.205	5.2		
Christiania			29.58	751.2	65.7	18.7	50	SSE	18.1	8.1			10			0	0		
Tromsö			29.39	746.4	65.1	18.4	79	Calm	0	0			4			0.079	2.0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 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,)			30.47	773.8	74.1	23.4	85	W	7.3	3.28			6			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.79	756.7	66.0	37.2	29	ESE	5.0	2.25			1			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.13	765.3	72.1	22.3	69	SW	8.8	3.92			9			0	0		Capt. D. A. da Cunha.
Lisbon			30.02	762.4	82.8	28.2	39	SW	11.2	5.0			0			0	0		The Observatory.

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

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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			29.93	760.2	77.4	25.2	79	SSW	7	3			8						Astronomical Obs.
Wilna			29.94	760.4	81.1	27.3	57	S	11	5			10					Thunder-storm	Astronomical Obs.
Dorpat			29.89	759.3	77.4	25.2	58	NW	7	3			3						Physical Cabinet.
St. Petersburg			29.84	758.0	73.4	23.0	81	NW	13	6			10					Raining	Central Physical Obs.
Knopio			29.74	755.3	75.2	24.0	64	SW	18	8			2					Raining	Ch. Forsten.
Kieff			29.91	759.8	81.7	27.6	31	NNE	4	2			4						Physical Cabinet.
Nikolaiev			29.92	760.0	84.9	29.4	37	NNE	18	8			4						Kurdakof.
Kertch			29.81	757.1	78.3	25.7	66	S	2	1			7						Lagorio.
Moscow			29.99	761.7	81.7	27.6	37	NNW	4	2			3						Meteorological Obs.
Lugan			29.76	755.8	67.1	19.5	87	NE	13	6			10			Blank	Blank		Meteorological Obs.
Archangel			29.69	754.0	69.8	21.0	83	SW	9	4			10						Ogorodnikof.
Tiflis	23.37	720.6	29.71	754.7	77.7	25.4	54	N	13	6			7						Physical Observatory.
Astrakhan			29.70	754.3	93.2	34.0	37	SW	2	1			3			Blank	Blank		Sebastianof.
Kasan			29.85	758.3	77.7	25.4	57	Calm	0	0			6						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.95	735.2	29.86	758.4	67.3	19.6	53	NW	2	1			7						Meteorological Obs.
Nukuss			29.57	751.1	96.4	35.8	29	N	9	4			0						
Kasaly																			Bobrof.
Tashkend	27.90	708.7	29.46	748.2	91.4	33.0	56	Calm	0	0			0						Michelson.
Barnaul			29.54	750.3	68.5	20.3	68	NW	0	0			9						Meteorological Obs.
Yeniseisk			29.48	748.9	71.4	21.9	64	NNE	2	1			6						Marks.
Irkutsk																			Usolsef.
Oorga																			Mossin.
Peking, (China)			29.64	752.9	75.4	24.1	92	Calm	0	0			10			Blank	Blank		Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.73	755.2	65.8	18.8	98	SE	7	3			10						
Nikolaievsk, on the Amoor					49.5	9.7	98	NE	2	1			10						

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 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	92.8	33.8	23	NW	5.2	2.33		0	0			0	0	Clear	Royal Observatory.
San Fernando			30.00	762.1	88.9	31.6	30	ESE	18.8	8.4		0	2		N				The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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.
Saparanda			29.78	756.4	64.0	17.8	82	S			6		7			0.157	4.0		
Umea			29.60	751.7	67.1	19.5	70	SW			8		1			0	0		
Hernosand			29.60	751.7	69.1	20.6	64	SSW			6		8			0	0		
Stockholm			29.72	755.0	77.5	25.3	50	SW			4		7			0.001	0.1		
Wisby			29.87	758.8	71.6	22.0	80	WSW			4		3			0	0		
SUB-SERIES.																			
Upsala			29.71	754.5	75.2	24.0	49	SSW	15.9	7.1			9	SW	SSW	0.050	1.28		Dr. Hildebrandsson.

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

SWISS SERIES.

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

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	28.70	729.0	30.07	763.8	75.7	24.3	43	S			3		0			0	0	Clear	The Observatory.
Zurich	28.49	723.7	30.07	763.7	73.2	22.9	60	W			1		2			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +1.5 mm; Thermometer, +1.8 cent.; Relative Humidity, —10 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

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			29.98	761.6	76.6	24.8	57	ENE	11	5.0			4		NE	0	0		
Fao, (Persian Gulf)			29.57	751.0	102.2	39.0		NW			4		10					Dusty	
Salonica			30.01	762.2	80.2	26.8		S			2		0						
Valona			29.99	761.8	81.1	27.3		W			1		5					Stormy	
Varna			29.96	761.0	86.0	30.0		N			2		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.77	756.2	89.1	31.7	59	WSW			2		2k		SW	0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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	62.6	17.0	83	SW	15	6.7			9			0	0	Dark	Hon. J. Ferguson.
Brockville, Ontario			29.93	760.2	78	25.6		S	8	3.6		2c	2s	W	W	0	0	Fair	W. R. Bigg.
*Chatham, N. B			29.95	760.7	59	15.0	87	S	1	0.4		2k	8ks	S	S	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			30.00	762.0	59	15.0	73	Calm	0	0		8k	0			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.84	757.9	80.7	27.1		W			1	10ck	0			0	0	Fair	James Smith, M. A.
Dalhousie, N. B					58	14.4	97	E			1					0	0		H. A. Johnson.
Esquimault, B. C																			W. H. Bevis.
Fredericton, N. B			29.96	761.0	68.2	20.1	73	SE	8	3.6		7ck	0			0.040	1.02	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.94	760.5	55	12.8	89	SW	7	3.1		2ck	2ks	W	W	0	0	Fair	James Stewart.
Goderich, Ontario			29.97	761.2	74.5	23.6	86	Calm			0	0	0			0.013	0.33	Clear	H. J. Strang, M. A.
Granton, Ontario	28.91	734.3	29.94	760.5	77	25.0		Calm			0	0	0			0	0	Clear	James Grant.
*Halifax, N. S.			29.98	761.5	59	15.0	72	NE	1	0.4			8n			0	0	Threatening	F. Allison, M. A.
*Kingston, Ontario			29.96	761.0	73	22.8	91	S	2	0.9		5k	8n'e	W	S	0	0	Fair	S. Woods, M. A.
Little Glace Bay, N. S.			29.97	761.2	56.3	13.5	74	N	4	1.8		4ck	0	N		0	0	Fair	C. H. Rigby.
*Montreal, Quebec			29.82	757.4	78	25.6	82	SW	12	5.4		8ck	2ks	NW	SW	0.41	10.4	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.84	757.9	80	26.7	59	W	12	5.4		2c	0	W		0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			29.96	761.0	72	22.2	89	W	4	1.8		2ck	2ks	W	W	0	0	Fair	Rev. R. Mosley.
*Port Dover, Ontario			29.97	761.2	76	24.4	82	S	3	1.3		2ck	0	S		0	0	Fair	H. Morgan.
Port Hastings, N. S.			29.99	761.7	59.6	15.3		Calm	0	0						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			29.97	761.2	76	24.4	87	W?	0?	0?		5k		W		0	0	Fair	M. Payne.
*Quebec, Quebec			29.77	756.1	66	18.9	95	Calm	0	0			10n			0	0	Cloudy	Capt. Ashe, R. N.
St. John, N. B.			29.99	761.7	65	18.3	73	S	6	2.7		1c	0			0.29	7.4	Fair	G. Murdoch, C. E.
*Saugeen, Ontario			29.95	760.7	69	20.6	89	Calm	0	0		2cs	2ks		N	0	0	Fair	R. Stewart.
Stayner, Ontario			29.93	760.2	76	24.4	70	N	3	1.3		2c	0	NW		0	0	Fair	R. J. Cole.
Stratford, Ontario	28.71	729.2	29.92	760.0	76.8	24.9	87	NW	5	2.2		2ck	0	NW		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			30.01	762.2	58	14.4	78	NW	5	2.2		2k	0			0	0	Clear	T. C. Hill.
*Toronto, Ontario			29.94	760.5	81	27.2	72	NW	7	3.1		2c	2cs	W		0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			29.95	760.7	80.8	27.1	83	W	2	0.9		1ck	2k	W		Inap.	Inap.	Fine	J. Montgomery.
Sub-Series.																			
St. John's, Newfoundland			29.98	761.5	47	8.3	85	NE					10n			0	0	Cloudy	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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	79	26.1	69	S	2	0.9		5k	0	W		0	0	Fair	
Alpena, Mich.			29.97	761.2	67	19.4	74	NW	8	3.6			10s		NW	0.17	4.3	Cloudy	
Atlantic City, N. J.			29.98	761.5	72	22.2	90	NE	12	5.4		0	Haze			0	0	Clear	
Augusta, Ga.			30.02	762.5	81	27.2	70	Calm	0	0		0	0			Inap.	Inap.	Clear	
Baltimore, Md.			30.00	762.0	88	31.1	82	NW	2	0.9		Haze	0			0	0	Clear	
Barnegat, N. J.			29.99	761.7	76	24.4	86	E	6	2.7			10s		E	0	0	Cloudy	
Benton, Montana	27.23	691.6	30.03	762.7	58	14.4	78	SW	12	5.4			10n		SW	0.08	2.0	Light rain	
Bismarck, Dakota	28.10	713.7	29.66	753.4	67	19.4	64	S	11	4.9		5k	0	S		0	0	Fair	
Boston, Mass.			29.97	761.2	71	21.7	75	S	6	2.7		8cs	Haze	W		0	0	Fair	
Breckenridge, Minn.			30.04	763.0	57	13.9	81	SE	8	3.6		0	0			0	0	Clear	
Buffalo, N. Y.			29.93	760.2	75.5	24.2	84	SW	5	2.2		0	1ks			0	0	Clear	
Burlington, Vt.			29.86	758.4	81	27.2	66	S	8	3.6		5k	2s			0	0	Cloudy	
Cairo, Ill.			29.96	761.0	77	25.0	82	S	7	3.1		8k	0	S		0.12	3.0	Fair	
Cape Hatteras, N. C.			29.92	760.0	85	29.4	79	W	4	1.8		5c	Haze			0	0	Fair	
Cape Henry, Va.			29.96	761.0	91	32.8	70	NW	4	1.8		2c	Fog			0	0	Fair	
Cape Lookout, N. C.			29.99	761.7	83	28.3	83	W	10	4.5		2c	Haze	W		0	0	Fair	
Cape May, N. J.			29.97	761.2	78	25.6	90	E	11	4.9			10s		E	0	0	Cloudy	
Charleston, S. C.			30.01	762.2	84	28.9	71	W	8	3.6		0	Haze			0	0	Clear	
Cheyenne, Wyoming	24.16	613.6	30.10	764.5	55	12.8	38	SW	2	0.9		0				0	0	Clear	
Chicago, Ill.			29.95	760.7	65	18.3	100	N	7	3.1			10n			0.51	13.0	Heavy rain	
Cincinnati, Ohio			29.94	760.5	81	27.2	78	SW	1	0.4		0	Sm'e			0.95	24.1	Clear	
Cleveland, Ohio			29.97	761.2	79.4	26.3	73	SW	2	0.9		2ck	0	SW		0.35	8.9	Clear	
Colorado Springs, Col.	24.27	616.4	30.14	765.5	53	11.7	53	NW	5	2.2		0	0			0	0	Clear	
Corsicana, Tex.			29.98	761.5	76	24.4	90	S	3	1.3		8ks	2s			0	0	Cloudy	
Davenport, Iowa			29.93	761.7	67	19.4	84	N	4	1.8		5cs	0	SW		1.05	26.7	Fair	
Denison, Tex.			30.00	762.0	74	23.3	95	W	4	1.8			10s		W	0.17	4.3	Cloudy	
Denver, Col.	24.91	632.7	30.13	765.3	60	15.6	44	Calm	0	0		0	0			0.04	1.0	Clear	
Detroit, Mich.			29.93	760.2	80	26.7	78	W	2	0.9		1k	0	W		0	0	Clear	
Dodge City, Kan.	27.50	698.5	29.69	754.1	72	22.2	90	E	1	0.4		0	0			0	0	Clear	
Dubuque, Iowa			29.99	761.7	68	20.0	79	N	4	1.8		0	0			0.75	19.1	Clear	
Duluth, Minn.			30.09	764.3	61	16.1	77	Calm	0	0		0	0			0	0	Clear	
Eastport, Me.			29.97	761.2	62	16.7	70	S	8	3.6		5ck	0	NW		0	0	Fair	
Erie, Pa.			29.94	760.5	83	28.3	67	W	6	2.7		4ck	Haze			0	0	Fair	
Escanaba, Mich.			30.07	763.8	63	17.2	67	N	20	8.9		5c	0	N		1.26	32.0	Fair	
Fort Gibson, Indian Ter.			29.94	760.2	76	24.4	90	SW	2	0.9			10s		SW	0.30	7.6	Cloudy	
Ft. St. Michael, Alaska			29.95	760.7	53	11.7	93	SW			1	0	5s			0	0	Fair	
Fort Sill, Indian T.	29.91	736.8	30.09	764.8	73	22.8	95	SW	1	0.4			10s		S	1.07	27.2	Cloudy	
Fort Sully, Dakota	28.24	717.3	29.82	757.4	71	21.7	41	S	30	13.4		1c	0			0	0	Clear	
Galveston, Tex.			30.05	763.3	81	27.2	78	SW	3	1.3		10ck	0			0	0	Cloudy	
Grand Haven, Mich.			29.94	760.5	70	21.1	87	NE	12	5.4			1n		E	0.03	0.8	Light rain	
Indianapolis, Ind.			29.93	760.2	83	28.3	70	SW	1	0.4		0	0			0	0	Clear	
Indianola, Tex.			30.03	762.7	80	26.7	86	S	7	3.1		2c	0			0	0	Fair	
Jacksonville, Fla.			30.14	765.0	81	27.2	82	Calm	0	0		0	0			0	0	Clear	
Keokuk, Iowa			29.93	760.2	69	20.6	79	N	8	3.6		5c	0	N		0.13	3.3	Fair	
Key West, Fla.			30.03	762.7	83.0	28.3	70	E	4	1.8		2cs	1ks	SE	E	0	0	Fair	
Kittyhawk, N. C.			29.97	761.2	80	26.7	86	Calm	0	0		2c	Haze			0	0	Fair	
Knoxville, Tenn.			30.02	762.5	76	24.4	81	Calm	0	0		0	0			0	0	Clear	
La Crosse, Wis.			30.05	763.3	65	18.3	78	N	4	1.8		0	0			0.21	5.3	Clear	
Leavenworth, Kan.			30.00	762.0	70	21.1	71	N	2	0.9		0	0			Inap.	Inap.	Clear	
Lexington, Ky.	28.93	734.8	29.97	761.2	83	28.3	71	SW	4	1.8		0	0			0.25	6.3	Clear	
Louisville, Ky.			29.98	761.5	83	28.3	71	Calm	0	0		0	Haze			0	0	Clear	
Lynchburg, Va.			29.97	761.2	85	29.4	64	N	2	0.9		0	0			0	0	Clear	
Malone, N. Y.			29.80	756.9	81	27.2	74	SW	8	3.6		8k	0	NW		0	0	Cloudy	
Manhattan, Kan.	28.71	729.2	29.81	757.2	68	20.0	84	Calm	0	0		0	0			0	0	Clear	
Marquette, Mich.			30.07	763.8	65	18.3	62	NW	8	3.6		0	0			0.41	10.4	Clear	
Memphis, Tenn.			30.00	762.0	76	24.4	86	S	1	0.4			10ks		SW	1.06	26.9	Cloudy	
Milwaukee, Wis.			30.01	762.2	64	17.8	89	NE	15	6.7			10s		NE	0.90	22.9	Cloudy	
Mobile, Ala.			30.05	763.3	81	27.2	70	SE	4	1.8		2c	0			0	0	Fair	
Montgomery, Ala.			30.06	763.5	80	26.7	78	SE	2	0.9		0	0			0	0	Clear	
Morgantown, W. Va.	28.98	736.1	29.97	761.2	85	29.4	71	Calm	0	0		0	Haze			0	0	Clear	
Mt. Washington, N. H.	23.94	608.1	30.13	765.3	28	-2.2	100	N	40	17.9			Fog			0.46	11.7	Foggy	
Nashville, Tenn.			29.98	761.5	85	29.4	68	Calm	0	0		2k	Haze			0.01	0.3	Fair	
New Haven, Conn.			29.99	761.7	74	23.3	81	S	4	1.8			10s			0.30	7.6	Cloudy	
New London, Conn.			30.02	762.5	70	21.1	79	S	7	3.1		0	5s		S	0.60	15.2	Fair	
New Orleans, La.			30.05	763.3	83.5	28.6	72	N	6	2.7		5ck	0	W		0	0	Fair	
Newport, R. I.			30.01	762.2	71	21.7	75	S	3	1.3		8ck	0	NW		0	0	Cloudy	
New York, N. Y.			30.01	762.2	76	24.4	72	NE	5	2.2		Haze	Haze			0	0	Hazy	
Norfolk, Va.			29.98	761.5	90	32.2	66	SW	4	1.8		5c	0			0	0	Fair	
North Platte, Neb.	27.18	690.4	29.65	753.1	69	20.6	90	SE	20	8.9			10s		SE	0	0	Cloudy	
Omaha, Neb.	29.01	736.8	30.04	763.0	70	21.1	70	NE	5	2.2		0	0			0	0	Clear	
Oswego, N. Y.			29.92	760.0	79.5	26.4	76	SW	10	4.5		Haze	1s			0	0	Fair	
Pembina, Dakota			29.91	759.7	58	14.4	81	S	8	3.6		0	5ks		SW	0	0	Fair	
Philadelphia, Penn.			30.00	762.0	76	24.4	90	E	4	1.8		2ck	5s			0	0	Cloudy	
Pike's Peak, Colorado	18.09	459.5	30.30	769.6	35	1.7	70	NW	24	10.7		0	0			0	0	Clear	
Pittsburgh, Penn.			29.99	761.7	78	25.6	86	Calm	0	0		2k	Sm'e	W		0	0	Fair	
Port Huron, Mich.			29.93	760.2	77	25.0	86	SW	4	1.8		1c	2ks	SW	SW	0	0	Fair	
Portland, Me.			29.97	761.2	65	18.3	84	S	7	3.1		5k	2ks	W		0	0	Cloudy	
Portland, Oregon			30.15	765.8	56	13.3	74	S	8	3.6			10s		S	0.47	11.9	Cloudy	
Punta Rassa, Fla.			30.03	762.7	81.5	27.5	74	W	5	2.2		Haze	0			0	0	Clear	
Rochester, N. Y.			29.91	759.7	81	27.2	74	W	7	3.1		0	Sm'e			0	0	Clear	
Salt Lake City, Utah	25.62	650.7	29.95	760.7	67	19.4	32	SE	2	0.9		0	0			0	0	Clear	
Sandy Hook, N. J.			29.99	761.7	73	22.8	85	NE	5	2.2			10ks		NE	0	0	Cloudy	
San Diego, Cal.			30.01	762.2	62	16.7	83	N	4	1.8		0	0			0	0	Clear	
San Francisco, Cal.			30.09	764.8	56	13.3	80	SW	10	4.5		0	0			0	0	Clear	
Santa Fé, N. M.	23.44	595.4	29.98	761.5	58	14.4	75	E	6	2.7		8k	0			Inap.	Inap.	Fair	
Savannah, Ga.			30.03	762.7	80	31.7	63	W	4	1.8		0	Sm'e			0	0	Smoky	
Shreveport, La.			30.05	763.3	76	24.4	91	SW	3	1.3		5c	0	SW		0.10	2.5	Fair	
Smithville, N. C.			29.98	761.5	84	28.9	79	W	4	1.8		2c	0			0	0	Fair	
Springfield, Mass.			29.96	761.0	76	24.4	76	S	4	1.8		2k	0	SW		0.02	0.5	Clear	
St. Louis, Mo.			29.92	760.0	75	23.9	90	S	12	5.4			10s			0.03	0.8	Cloudy	
St. Marks, Fla.			30.04	763.0	79	26.1	82	N	5	2.2		0	0			0	0	Clear	
St. Paul, Minn.			30.08	764.0	64	17.8	73	NW	1	0.4		0	Haze			0	0	Clear	
St. Paul's Island, Alaska			30.02	762.5	42	5.6	83	SE	3	1.3			10s			0.01	0.3	Cloudy	
Thatcher's Island, Mass.			29.98	761.5	62	16.7	88	S	4	1.8			10s		NW	0	0	Cloudy	
Toledo, Ohio			29.92	760.0	84	28.9	71	SW	1	0.4		2cs	Haze			0	0	Clear	
Tucson, Arizona	27.58	700.5	30.17	766.3	77	25.0		SE				0	0			0	0	Clear	
Tybee Island, Ga.			30.00	762.0	82	27.8	78	NW	6	2.7		0	0			0	0	Clear	
Vicksburg, Miss.			30.06	763.5	78	25.6	88	SW	1	0.4			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
Virginia City, M. T.	24.20	614.7	29.68	753.9	56	13.3	51	SE	4	1.8		5k	0	W		0	0	Cloudy	
Washington, D. C.			29.98	761.5	86.5	30.3	67	N	4	1.8		Haze	Haze			0	0	Hazy	
Wilmington, N. C			29.98	761.5	83	28.3	79	SW	2	0.9		2c	0	NE		0	0	Fair	
Wood's Holl, Mass			30.01	762.2	69	20.6	79	SE	6	2.7		0	8s		SE	0	0	Fair	
Wytheville, Va	27.78	705.6	29.83	757.7	74	23.3	81	W	4	1.8		1cs	0			0	0	Clear	
Yankton, Dakota	28.82	732.0	30.06	763.5	68	20.0	79	SE	1	0.4		0	0			0	0	Clear	
Yuma, Arizona			29.94	760.5	82	27.8		N				0	0			0	0	Clear	
Sub-Series.																			
P'nte-a-Pitre, G'd'l'pe, W. I.			29.97	761.2	84	28.3	75	E				5k	5ks			0.28	7.1	Cloudy	L. V. Bigard.
Kingston, Jamaica, W. I.			30.26	768.6	78	25.6	79	Calm	0	0		2c	0			0.19	4.8		James Gall.
St. Georges, Bermudas			30.01	762.2	79.5	26.4	74	WSW	20.0	8.9			10ck?			0	0	Hazy	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	69	20.6	87	NE	0.5	0.2		0	0			0.53	13.5	Fine, clear	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.04	763.0	78	25.6	91	NE			3		10n		E	0.420	10.67	Raining	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.05	763.3			80.0	30		NE								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.18	639.6			66.0	18.9	82	Calm	0	0		2c	2s			0.50	12.7	Fair	Thomas Herran.
York Factory, B. A.			29.28	743.7	55	12.8	90	W	30	13.4		0	0			3.30	83.8		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.			30.07	763.8	77	25.0	90	NE			2					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	Barometer. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	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
Schooner Addie Fuller, Damariscotta river, Me.			30.00	762.0	68	20.0	S		4		10k		SW			Overcast	Capt. James Jorgensen.
Steamer Leipzig. N, 42° 35′ W, 50° 20′.	S79 W		29.73	755.1	52.2	11.2	NNE		2		..d			Tranq'l		Raining	Capt. R. Hoffmann.
Steamer Nova Scotian at Halifax, N. S.			30.04	763.0	58	14.4	Calm		0		..k		NNE			Cloudy	Capt. Ritche.

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, 6,012.4 ft., or 1,833.7 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.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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 added 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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			30.12	765.0	78.8	26.0	67	NW			3		0			0	0	Clear	Charnot.
Algiers			30.15	765.7	77.0	25.0	80	N			1		2			0	0	Clear	Peter.
La Calle																			Kunts.
Tunis			30.11	764.8	83.7	28.7	54	ESE			4		0			0	0	Clear	Jacques.
Sfax			30.17	766.2	84.2	29.0	46	E			3		1			0	0	Clear	Chauvey.
Saida			30.10	764.5	88.7	31.5	21	NNE			2		1			0	0	Clear	Millot.
Tebessa			30.15	765.8	86.0	30.0		SE			1		0			0	0	Clear	Colin.
Geriville					87.3	30.7	21	NNW			2		2			0	0	Clear	Buard.
Laghouat			30.12	765.0	96.8	36.0		NE			2		0			0	0	Clear	Guyot.
Biskra			30.13	765.4	93.2	34.0	33	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			30.02	762.4	74.1	23.4	65	NE			2		4			0.110	2.8		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.98	761.6	64.4	18.0	96	W			1		10			0.539	13.71		Dr. Wierzbiski.
Eperies			29.96	761.0	71.4	21.9	76	N			2		9			0.252	6.40	Threatening	Julius Mikolik.
Gratz	28.82	731.9	29.98	761.4	71.8	22.1	70	SW			2		7			0.236	6.0		Andreas Rospini.
Hermannstadt	28.53	724.7	29.87	758.7	80.8	27.1	45	SW			3		5			0.008	0.20		Prof. Reissenberger.
Kremsmünster	28.26	717.8	29.53	750.1	72.3	22.4	49	SE			3		5			0	0		Prof. C. Wagner.
Lemberg			29.81	757.8	83.5	28.6	72	S			2		7			0.201	5.1		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.02	762.6	79.0	26.6	59	W			1		1k			0	0		I.R.Hydrographic Office.
Szegedin			29.94	760.5	76.3	24.6	76	Calm			0		8			0.508	12.90		Karl Stancel.
Trieste			30.02	762.5	82.8	28.2	58	Calm			0		1			0.268	6.8		Prof. V. Farolfi.
Vienna			30.00	762.1	72.1	22.3	60	WNW			2		9			0.295	7.5		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.21	767.3	62.4	16.9	66	WNW			3		9		NW	0.051	1.30		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			30.09	764.3	57.6	14.2		NW	19	8.5			7			0.03	0.76	*D. clouds	William Boswell.
Ardrossan			30.28	769.1	59	15.0		WNW			2		3					*D. clouds	William McNeil.
Armagh, Observatory			30.32	770.1	59.7	15.4		W	5	2.2									S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.37	771.4	59.9	15.5		W			1		9					*D. clouds	J. Dreyer.
Bradford			30.24	768.1	59.2	15.1		W			1		10			0.05	1.3	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	81.5	27.5		NE			2		5					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.24	768.1	63.5	17.5		WNW			2		10					*D. clouds	H. Todd. [H. C.
Cardington			30.29	769.4	65.0	18.3		NW			2		10					Overcast	John McLaren.
Carlisle			30.25	768.3	61	16.1		NW			2		9			0.08	2.0	*D. clouds	T. Bell, for J. Carmell.
Chatham, School M. E			30.26	768.6	62.5	16.9		NW			1		10					Gloomy	Capt. J. Fellowes, R.E.
Dartmoor	28.82	732.0	30.45	772.9	55.6	13.1		NW			1		7					*D. clouds	R. L. Power.
Donaghadee			30.30	769.6	59	15.0		WNW			2		8					*D. clouds	J. Mac Gowan.
Dover			30.25	768.3	65	18.3		NNW			3		6					¾ clouded	J. Costello.
Eccles, (near Manchester.)			30.26	768.6	59.0	15.0		NW	6.6	3.0			8					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.34	771.6	63.0	17.2		NW			4		7					Overcast	The Staff.
Fort Napier, (Natal)	28.04	712.2	30.29	769.4	65.9	18.8		E			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	82	27.8		W			0		6					*D. clouds	
Galway, Queen's College			30.23	767.8	63	17.2		SW			1		10					Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.11	764.8	75.5	24.2		E			4		2					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			30.22	767.6	58.8	14.9		N			1		9					*D. clouds	Lewis Stuart.
Great Yarmouth			30.21	767.3	62	16.7		NW			3		4					*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y			30.27	768.8	63.7	17.6		NW			1		10					Overcast	The Staff, for G. B. Airy.
Guernsey			30.34	770.6	63	17.2		NW			1		3					*D. clouds	Dr. S. E. Hoskins.
Helston			30.36	771.1	66	18.9		N			2		2			0	0	*D. clouds	M. P. Moyle.
Holyhead			30.33	770.4	61	16.1		WNW			3		10					Overcast	John Tinston.
Kew, Observatory			30.28	769.1	62.7	17.1		NW	12	5.4			10					Threatening	The Staff.
Kingstown																			George Mitchell.
Leicester Museum			30.30	769.6	58.0	14.4		W			1		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			30.02	762.5	80.8	27.1		NW			1		0						Corp'l F. Fraser, A. M. C.
Nairn			30.20	767.1	61	16.1		WNW			2		8					¾ clouded	W. D. Penny.
Nassau, (Bahamas			30.07	763.8	83.0	28.3		S			3		5					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.26	768.6	60.8	16.0		NW			4		10k, d		NW	0	0	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.29	769.4	58.8	14.9		NW			3		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.27	768.8	61	16.1		NW			1		10					Overcast	J. Lucas.
Plymouth			30.35	770.9	64.3	17.9		N			3		10					Overcast	John Merrifield.
Roche's Point			30.35	770.9	64	17.8		SW			2		5					Fine	W. Kennedy.
Saint Ann's Head			30.36	771.1	58	14.4		WNW			1		4					*D. clouds	John C. Walker.
Saint Helier, Jersey			30.34	770.6	67.5	19.7		N			3		2					¼ clouded	A. P. Amy.
Sandwick Manse, Orkneys			30.16	766.1	53.2	11.8		NW	26	11.6			10					Overcast	Rev. C. Clouston, LL. D.
Scarborough			30.22	767.6	55.4	13.0		N			3		9					Overcast	F. Shaw.
Scutari Cemetery, Turkey			29.99	759.4	85.0	29.4		NE			1		1					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.25	768.3	61.0	16.1		WNW			2		8					Overcast	W. F. Cooper.
Silloth Rectory			30.25	768.3	65.3	18.5	65	NW			2		4			0.007	1.78	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.26	768.6	56.4	13.6		W			3		10			Blank	Blank	Threatening	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			30.21	767.3	57	13.9		NW			2		10					Overcast	John Smith.
Strathfield Turgiss			30.28	768.6	62.9	17.2		NW			2		6					*D. clouds	Rev. Charles H. Griffith.
Thurso			30.15	765.8	58	14.4		NW			5		7					D. clouds	John Trotter.
Truro, Royal Institution			30.39	771.9	67	19.4		NW			6		4					D. clouds	W. Newcombe.
Valencia, Observatory			30.38	771.6	59.9	15.5		SW	7	3.1			4					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, Isle of Man					57	13.9		NW			3		5						Thomas Dawson.
Cape Good Hope, Obs'y			30.18	766.6	71.6	22.0	49	WNW	8	3.6		5	5						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			30.22	767.6	55.0	12.8	93	SW			3		10n					Raining	Francis Abbott, F.R.A.S.
Leith, Restaurig Cars			30.23	767.8	61.3	16.3		E			2		9k			1.10	27.9	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.26	768.6				ESE	21.0	9.4						0	0		C. Meldrum
Melbourne, Observatory			30.05	763.3	48.0	8.9	94	S	2	0.9			10			0.06	1.5	Showery	R. L. J. Ellery.
Monach Lighthouse, Hebride			30.24	768.1	55	12.8		SW			3	5	5	SW		0.13	3.3		J. Youngclause.
North Unst, (Shetland Is.)			29.99	761.7	48	8.9		NW			7		10			0	0		Robert Burnet.
																Blank	Blank		

Note.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,2[illegible]0 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			29.95	760.8	66.2	19.0	55	SW			2		4						
Fanöe			30.00	762.1	62.8	17.1	63	NW			6		4						
Godthaab, (Greenland			29.74	755.4	35.8	2.1		Calm			0		10						
Stykkisholm, (Iceland			29.85	758.2	52.7	11.5	82	Calm			0		8						
Thorshavn, (Faröe)			30.10	764.4	50.7	10.4	60	N			4		3						
Vestervig			29.94	760.5	59.0	15.0	78	WNW			4		6						

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

FRENCH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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			30.00	764.3	66.2	19	42	NE			4		5s,cn		NE	0	0	Cloudy	Normal School.
Amiens			30.28	769.0	77.7	25.4	64	W			3		2		W	0	0	Slightly cl'dy	Normal School.
Avignon			30.10	764.5	81.0	27.2	41	NNW			6		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.26	768.7	67.3	19.6	45	N			2		8		N	0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)			30.29	769.4	72.0	22.2	34	N	3.6	1.6			5		N	0	0	Cloudy	Beaumette Observatory.
Beauvais			30.20	769.3	68.9	20.5	40	WNW			3		8		NW	0	0	Very cloudy	Normal School.
Besançon			30.21	767.3	68.0	20	62	NW			3		5		NW	0	0	Cloudy	Normal School.
Bourg en Bresse			30.32	770.2	69.3	20.7	64	N			4		5ck		SE			Cloudy	Normal School.
Bourges			30.50	774.8?	68.0	20	81	NNE			2		5		E	0	0	Cloudy	Normal School.
Brest			30.32	770.0	64.9	18.3	69	N			2		9k		N	0	0		Naval Observatory.
Carcassonne			30.21	767.4	72.5	22.5	55	W			2		5		E	0	0	Cloudy	Normal School.
Caen			30.30	769.6	70.7	21.5	76	NNW			3		2		SE	0	0	Slightly cl'dy	Normal School.
Chartres			30.25	768.3	71.2	21.8	62	W			4		9		NE	0	0		Normal School.
Clermont			30.23	767.7	64.9	18.3	65	N			2		10		N	0	0		Puy de Dome Obs'y.
Commercy			30.26	768.7	62.2	16.8	56	WNW			4		1n		WNW	0	0	Covered	Normal School.
Commune de Greasque*			30.12	765.1	83.3	28.5	33	NW			4		0			0	0		M. Kina.
Grenoble			30.14	765.6	76.1	24.5	72	NNW			2		2ck		N	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.34	770.7	67.3	19.6	55	NW			4		8		SE	0	0	Very cloudy	Normal School.
Le Mans			30.28	769.2	67.5	19.7	65	NNE			2		2		NNE	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier			30.20	767.1	68.2	20.1	59	N			1		5			0.024	0.6	Cloudy	Normal School.
Mâcon			30.45	773.4	67.1	19.5	70	N			2		8		NW	0	0	Very cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			30.22	767.6	66.6	19.2	46	N			4		2		S	0	0	Slightly cl'dy	Normal School.
Nismes			30.10	764.5	83.5	28.6	32	NW			0		0			0	0	Clear	Normal School.
Orleans			30.21	767.4	69.4	20.8	51	W			1		5		NW	0	0	Cloudy	Normal School.
Paris, Observatory			30.23	769.2	66.4	19.1	42	NNW			3		9k,ck		NW	0	0	Almost cov'd	National Observatory.
Parthenay			30.28	769.0	77.4	25.2	68	NE			2		5		S	0	0	Cloudy	Normal School.
Privas			30.15	765.9	75.6	24.2		WNW			2		2		WNW	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.34	770.6	75.9	24.4	32	NNW			3		10		SSW	0	0	Covered	Naval Observatory.
Rouen			30.29	769.4	70.2	21.2	45	WNW			2		5		W	0	0	Cloudy	Normal School.
Saint Lo			29.97	761.2	73.4	23	68	N			2		9		N	0	0		Normal School.
Tarbes	29.20	741.6	30.26	768.6	68.0	20		W			2		8		E	0	0	Very cloudy	Normal School
Villefranche			30.30	769.6	70.9	21.6	73	NNW			2		8			0	0	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.93	760.3	81.3	27.4													L'Abbé Marchésl.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.37	771.5	44.8	7.1	72	NNW	4	2			9			0	0		—. Falguère.
Montsouris, Paris			30.27	768.9	67.3	19.6	44	NW			2		10		NW	0	0		Montsouris Observ'tory.
Perpignan			30.18	766.6	76.5	24.7	54	NW	20.5	9.17			1		N	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.28	769.2	67.8	19.9	39	NW			2		9			0	0	Covered	E. Renou.
Toulouse			30.31	769.9	71.6	22.0	56	NW			4		7			0	0		Toulouse Observatory.
Tours			30.30	769.5	70.3	21.3	41	NNE			1		6		N	0	0		C. Marquet.
Versailles, (near Paris)			30.29	769.3	68.7	20.4	46	N			2		9			0	0	Almost cov'd	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Leo, S. J.

NOTE.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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	763.1	67.6	19.8	53	W			5		7	W		0	0		Prof. T. Hoh.
Berlin			30.08	764.1	68.5	20.3	58	W			1		8			0.008	0.2	Raining	Prof. Arndt.
Breslau			30.05	763.3	75.2	24.0	52	SW			3		10			0.134	3.4	Raining	Dr. P. Neugebauer.
Carlsruhe			30.15	765.9	69.1	20.6	48	SW			3		7			0	0		A. Senx.
Cassel			30.11	764.8	72.3	22.4	53	W			3		4	SW		0.02	0.5		Dr. H. Möhl.
Emden			30.07	763.8	64.6	18.1	67	NNW			7		5			0	0		Prof. Prestel.
Frankfort on the Main			30.23	767.8	69.8	21.0	42	W			2		8			0.213	5.4		Physical Society.
Friedrichshafen			30.12	765.0	71.8	22.1	63	W			1		8			0.020	0.5		M. Wilhelm.
Hamburg			30.07	763.8	61.3	16.3	77	W			3		10s k			0.063	1.6	Rainy	Captain F. Hegemann.
Kiel			30.05	763.3	66.2	19.0	56	SW			6		6			0.248	6.3		Prof. G. Karston.
Königsberg, (Prussia.)			29.98	761.6	71.2	21.8	62	NW			2		5			0.236	6.0		Prof. E. Luther.
Köslin			30.08	763.9	67.3	19.6		NW			1		2			0	0		H. Müller.
Leipsic			30.11	764.8	68.2	20.1	59	W			2		8	NNW		0.008	0.2		Prof. Bruhns.
Memel			30.00	762.1	68.4	20.2	66	NW			3		5c	SW		0	0		Reinbrecht & Skalweit.
Münster			30.19	766.8	64.9	18.3	54	SW			5		7			0.083	2.1		Prof. E. Heis.
Neufahrwasser			30.04	762.9	68.4	20.2	64	N			3		6	S		0	0		A. Lothes.
Posen			30.08	763.9	65.3	18.5	81	NW			1		10			Inap.	Inap.		Dr. Magener.
Strassburg, (in Alsace)			30.21	767.2	69.6	20.9	41	W			3		5	W		0	0		Dr. Schur.
Stuttgart			30.16	766.0	66.2	19.0	57	NW			4		4			Inap.	Inap.		Prof. Schoder.
Thorn			29.99	761.8	76.1	24.5	59	NNE			1		6			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.16	766.0	67.1	19.5	53	WSW			3		9			0	0		Prof. Flesch.
Wusirow, Naval School			30.15	765.7	67.8	19.9	58	WSW			3		10			0	0		E. F. Schütz.

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	760.2	87.1	30.6		NE										Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.99	761.8	81.1	27.3	39	NE	0.7	0.3			4			0	0		
Padua			29.99	761.8	80.1	26.7	55	E	8.1	3.6			4	W		0	0		
Vicenza			30.00	762.0	77.0	25.0	86	SE	0	0			10	W		0.111	2.9	Showery	
Verona			29.99	761.8	86.0	30.0	60	E			1		0			0	0		
Bergamo	28.67	728.2	29.93	760.2	84.9	29.4	43	SE			2		5			0	0		
Domodossola	29.05	737.8	30.03	762.8	78.8	26.0	56	S			4		7			0	0		
Milan			29.98	761.6	88.7	31.5	49	SSE			4		10	S		0.157	4.0	Showery	
Pavia			29.99	761.7	84.2	29.0	42	E			2		2	SW		0	0		
Moncalieri			29.99	761.8	80.2	26.8	65	W	0.7	0.3			8	SE		0	0		
Mondovi	28.15	714.9	29.99	761.8	77.7	25.4	59	NNE			2		8			0	0		
Porto Maurizio			30.08	763.9	79.5	26.4	70	ESE			2		1			0	0		
Genoa			30.04	763.0	79.5	26.4	61	SW	1.8	0.8			0			0	0		
Piacenza			29.99	761.7	82.8	28.0	51	E	4.9	2.2			2			0	0		
Parma			29.97	761.3	86.9	30.5	44	E			2		6			0	0		
Bologna			30.02	762.5	84.9	29.4	46	NNW			1		4	S		0	0		
Florence			30.02	762.5	85.0	29.8	44	W			2		2			0	0		
Leghorn			30.03	762.7	79.7	26.5	63	W	5.6	2.5			3			0	0		
Siena	28.84	732.4	30.00	761.9	86.0	30.0	38	SW	1.3	0.6			4	SW		0	0		
Urbino	28.54	725.0	30.06	763.5	77.7	25.4	55	NE			2		9			0	0		
Ancona			30.04	763.0	82.8	28.2	58	N			4		2			0	0		
Grosseto			30.05	763.2	84.9	29.4	48	SSW			4		2	NW		0	0		
Rome			30.04	763.0	84.9	29.4	47	W	7.1	3.3			1			0	0		
Naples, O. U			30.05	763.3	85.3	29.6	53	SW			4		2	W		0	0		
Lecce			30.04	762.9	81.7	27.6	57	NNE	10.5	4.7			1			0	0		
Cosenza			30.03	762.7	89.2	31.8	66	WNW	0.7	0.3			3			0	0		
Riposto, (Sicily)			30.04	762.9	81.7	27.6	67	NE			2		0			0	0		
Palermo			30.02	762.6	79.0	26.1	67	NE	4.3	1.9			1			0	0		
Caltanissetta	28.08	713.1	29.95	760.6	82.9	28.3	79	NNW			2		1	SSE		0	0		
Sub-Series.																			
Naples, S. R			30.06	763.5	83.7	28.7	49	SW	1.8	0.8			2	SW		0	0		Prof. F. Brioschi.
Pesaro			30.08	764.0	79.0	26.1	76	NE	19.5	8.72			1k	NE					L. Guidi.

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			30.26	768.7	62.1	16.7		NW			4								
Groningen			30.06	763.4	60.3	15.7		W			4								
Helder			30.15	765.7	60.4	15.8		W			4								
Utrecht			29.15	765.7	64.9	18.3	57	WNW			4		5					Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	51.1	10.6	85	NW	17.1	7.8			10			0.276	7.0	Raining	
Brönö			29.40	746.8	52.2	11.2	90	W	22	10			10			0.720	18.3	Raining	
Christiania			29.71	754.5	68.0	20.0	38	SSW	13.0	5.8			9			0	0		
Tromsö			29.28	743.7	62.8	17.1	81	SSE	7	3			5			0.138	3.5		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 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,)			30.38	771.7	74.5	23.6	81	E	11.4	5.11			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.98	761.4	69.5	37.5	18	SE	5.6	2.50			1			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.06	763.4	73.6	23.1	64	SW	4.6	2.06			5			0	0		Capt. D. A. da Cunha.
Lisbon			30.04	763.1	83.7	28.7	32	SW	16.1	7.2			0			0	0		The Observatory.

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

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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. Inches.	Rain-fall. Millimeters.	Weather	Observer.
Warsaw			29.94	760.5	71.6	22.0	72	NNE	7	3			10						Astronomical Obs.
Wilna			29.95	760.7	71.8	22.1	78	WNW	7	3			9						Astronomical Obs.
Dorpat			29.92	760.0	68.4	20.2	75	WNW	2	1			10						Physical Cabinet.
St. Petersburg			29.86	758.4	72.1	22.3	76	WNW	9	4			4						Central Physical Obs.
Kuopio			29.74	755.5	72.0	22.2	74	SW	34	15			10					Raining	Ch. Forsten.
Kieff			29.90	759.5	80.2	30.1	36	Calm	0	0			4						Physical Cabinet.
Nikolaiev			29.97	761.3	86.4	30.2	44	N	9	4			6						Kurdakof.
Kertch			29.86	758.4	79.7	26.5	65	NNE	4	2			6						Lagorio.
Moscow			29.94	760.4	84.7	29.3	39	NW	0	0			0						Meteorological Obs.
Lugan			29.76	755.9	82.2	27.9	46	ENE	22	10			3						Meteorological Obs.
Archangel			29.76	756.0	82.0	27.8	71	Calm	0	0			4						Ogorodnikof.
Tiflis	28.40	721.4	29.74	755.3	80.2	26.8	38	NW	18	8			1						Physical Observatory.
Astrakhan			29.71	754.5	74.1	23.4	73	WNW	4	2			9			Blank	Blank		Sebastianoi.
Kasan			29.85	758.1	80.1	26.7	58	NNW	9	4			7						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.00	734.0	29.81	757.2	68.4	20.2	56	W	7	3			7						Meteorological Obs.
Nukuss			29.53	750.1	101.3	38.5	33	NE	4	2			0						
Kasaly																			Bobrof.
Tashkend	27.98	710.8	29.54	750.2	93.4	34.1	52	Calm	0	0			0						Michelson.
Barnaul			29.51	749.6	64.0	17.8	77	NW	2	1			10						Meteorological Obs.
Yeniseisk			29.43	747.4	67.6	19.8	49	ENE	4	2			1						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.65	753.0	84.2	29.0	80	Calm	0	0			2						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.72	755.0	66.0	18.9	96	SE	13	6			10						
Nikolaievsk, on the Amoor					46.4	8.0	96	NE	7	3			3						

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 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. Inches.	Rain-fall. Millimeters.	Weather	Observer.
*Madrid																			Royal Observatory.
San Fernando			30.02	762.6	87.8	31.0	32	E	35.6	15.9		0	0						The Naval Observatory.

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour. *Observation not simultaneous.

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. Inches.	Rain-fall. Millimeters.	Weather	Observer.
Haparanda			29.61	752.2	60.4	15.8	64	S			6		2			0	0		
Umea			29.62	752.4	61.5	16.4	60	SW			8		1			0.012	0.3		
Hernosand			29.62	752.3	64.8	18.2	55	S			6		7			0.037	0.9		
Stockholm			29.81	757.1	70.5	21.4	35	WSW			6		4			0.020	0.5		
Wisby			29.98	761.4	66.0	18.9	60	W			6		5			0	0		
SUB-SERIES.																			
Upsala			29.79	756.7	65.3	18.5	42	SSW	16.8	7.5			8	SSW	WSW	0	0		Dr. Hildebrandsson.

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

SWISS SERIES.

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

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	28.76	730.5	30.13	765.4	72.9	22.7	50	WNW			6		9			0	0	Covered	The Observatory.
Zurich	28.55	725.1	30.13	765.2	71.4	21.9	58	NW			2		7			0	0	Cloudy	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +3.0 mm; Thermometer, +0.2 cent.; Relative Humidity, —3 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

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	761.1	81.0	27.2	45	ENE	11	5.0			2		NE	0	0		
Fao, (Persian Gulf)			29.55	750.5	98.6	37.0		NW			3		10					Dusty	
Salonica			29.98	761.6	85.5	29.7		NW			2		0						
Valona			30.02	762.5	82.0	27.8		W			1		0						
Varna			29.96	761.0	86.0	30.0		NW			2		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.78	756.3	90.5	32.5	57	SW			3		0			0	0	Clear	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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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			29.91	759.7	68.9	20.5	83	NE	5	2.2			0			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.07	763.8	72	22.2		Calm	0	0			10s		SW	1.38	35.1	Light rain	W. R. Bigg.
*Chatham, N. B			29.93	760.2	69	20.6	87	NW	6	2.7		2k	8ks	NW	NW	0.01	0.3	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			29.92	760.0	64	17.8	81	N	10	4.5			10ks		N	0.045	1.14	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.98	761.5	72.3	22.4		E			3		10s			0.078	1.98	Threatening	James Smith, M. A.
Dalhousie, N. B					66	18.9	84	W			1					0.29	7.4		H. A. Johnson.
Esquimault, B. C																			W. H. Bevis.
Fredericton, N. B			29.96	761.0	71.3	21.8	81	NW	5	2.2			10ks			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.81	757.2	54	12.2	98	N	1	0.4		0	2ks		SE	0.229	5.59	Fair	James Stewart.
Goderich, Ontario			29.99	761.7	69.9	21.1	78	Calm			0	0	0			0	0	Clear	H. J. Strang, M. A.
Granton, Ontario	28.97	735.8	30.03	762.7	67.2	19.6		N			1	1cs	0	E		0.45	11.4	Clear	James Grant.
*Halifax, N. S.			29.90	759.4	64	17.8	94	NW	6	2.7			10n			0.294	7.47	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.06	763.5	70	21.1	96	NE	4	1.8			10n		NE	0.12	3.0	Light rain	S. Woods, M. A.
Little Glace Bay, N. S.			29.80	756.9	64.8	18.2	87	SW	6	2.7		8k	0	SW		0.07	1.8	Cloudy	C. H. Rigby.
*Montreal, Quebec			30.01	762.2	75	23.9	66	NE	7	3.1		8ck	2s	NW	SW	0.03	0.8	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.02	762.5	74	23.3	72	N	4	1.8		2ck	2s	N	N	0	0	Clearing	J. B. Haney.
*Parry Sound, Ontario			30.01	762.2	72	22.2	71	N	4	1.8		0	0			0	0	Clear	Rev. R. Mosley.
*Port Dover, Ontario			30.02	762.5	69	20.6	95	Calm	0	0			10n		W	0.38	9.7	Light rain	H. Morgan.
Port Hastings, N. S.			29.88	758.9	63.3	17.4		NW	10	4.5						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.02	762.5	69	20.6	93	W	4	1.8		10k	0	W		0.34	8.6	Cloudy	M. Payne.
*Quebec, Quebec			30.03	762.7	71	21.7	95	Calm	0	0		0	0			0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.			29.97	761.2	61	16.1	91	Calm	0	0			10ks			0	0	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario			30.01	762.2	68	20.0	69	Calm	0	0		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.01	762.2	70	21.1	90	Calm	0	0		8ck	0			0.16	4.1	Cloudy	R. J. Cole.
Stratford, Ontario	28.77	730.7	30.01	762.2	66.4	19.1	97	NW	5	2.2		0	10s			0.140	3.56	Damp, cl'dy.	C. J. Macgregor, M. A.
*Sydney, C. B			29.84	757.9	64	17.8	87	SW	8	3.6		2cs	2n		NW	0.06	1.5	Fair	T. C. Hill.
*Toronto, Ontario			30.03	762.7	69	20.6	93	Calm	0	0			10n		E	0.92	23.4	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.02	762.5	70.2	21.2	94	NW	2	0.9			10s			0	0	Gloomy	J. Montgomery
Sub-Series.																			
St. John's, Newfoundland			30.0	762.0	59	15.0	65	S				0	0			0	0	Clear	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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	83	28.3	70	Calm	0	0		2k	Haze	W		1.22	31.0	Fair	
Alpena, Mich.			30.01	762.2	62	16.7	77	NW	3	1.3		0	0			0.03	0.8	Clear	
Atlantic City, N. J.			30.04	763.0	76	24.4	86	S	3	1.3		5cs	2s	NW		0	0	Cloudy	
Augusta, Ga.			30.05	763.5	85	29.4	70	S	2	0.9		0	Haze			0	0	Clear	
Baltimore, Md.			30.05	763.3	83	28.3	83	SE	4	1.8		2c	2s		S	0	0	Fair	
Barnegat, N. J.			30.04	763.0	77	25.0	86	SW	6	2.7		2ck	0	W		0.10	2.5	Fair	
Benton, Montana	27.35	694.7	30.15	765.8	55	12.8	66	SW	6	2.7			10s		SW	0.45	11.4	Cloudy	
Bismarck, Dakota	28.15	715.0	29.74	755.4	60	15.6	70	NW	4	1.8		8k	0	NW		0	0	Fair	
Boston, Mass.			29.97	761.2	80	26.7	76	W	7	3.1		1cs	Haze	W		0.08	2.0	Hazy	
Breckenridge, Minn.			29.74	755.4	68	20.0	74	SE	9	4.0		0	2ks			0	0	Clear	
Buffalo, N. Y.			29.95	761.7	68	20.0	92	NE	4	1.8			10n			0.12	3.0	Light rain	
Burlington, Vt.			29.48	761.5	73	22.8	72	Calm	0	0			10s			0.53	13.5	Cloudy	
Cairo, Ill.			30.00	762.0	77	25.0	90	S	4	1.8		5ck	0	N		0.10	2.5	Fair	
Cape Hatteras, N. C.			30.01	762.2	83	28.3	83	W	8	3.6		Haze	Haze			0	0	Hazy	
Cape Henry, Va.			30.02	762.5	82	27.8	83	S	4	1.8		5c	Haze			0	0	Fair	
Cape Lookout, N. C.			30.05	764.3	84	28.9	83	SW	12	5.4		8k	0	SW		0	0	Fair	
Cape May, N. J.			30.03	762.7	74	23.3	95	S	18	8.0		8ck	Fog	W		0	0	Foggy	
Charleston, S. C.			30.10	764.5	87	30.6	69	SW	8	3.6		2ks	5s	E	E	0	0	Fair	
Cheyenne, Wyoming	24.07	611.4	30.01	762.2	60	15.6	36	W	4	1.8		0	0			0	0	Clear	
Chicago, Ill.			29.94	760.5	68	20.0	94	NE	3	1.3			Fog			0.40	10.2	Foggy	
Cincinnati, Ohio			29.94	760.5	81	27.2	78	E	3	1.3		0	0			0.14	3.6	Clear	
Cleveland, Ohio			30.01	762.2	74.1	23.4	85	Calm	0	0			10ks		SW	0.10	2.5	Threatening	
Colorado Springs, Col.	24.15	613.4	30.02	762.5	64	17.8	48	N	8	3.6		0	0			0	0	Clear	
Corsicana, Tex.			29.97	761.2	77	25.0	90	S	7	3.1		2cs	8s			0.05	1.3	Cloudy	
Davenport, Iowa			29.96	761.0	70	21.1	79	E	4	1.8			10s			0	0	Cloudy	
Denison, Tex.			30.00	762.0	75	23.9	90	SE	3	1.3			10s			0.25	6.3	Threatening	
Denver, Col.	24.82	630.4	30.04	763.0	62	16.7	41	S	4	1.8		0	0			0	0	Clear	
Detroit, Mich.			30.02	762.5	66	18.9	90	NE	4	1.8			10s			1.68	42.7	Cloudy	
Dodge City, Kan.	27.40	696.0	29.58	751.3	71	21.7	80	E	8	3.6		0	0			0	0	Clear	
Dubuque, Iowa			29.96	761.0	68	20.0	64	SE	4	1.8		10k	0	SE		0	0	Cloudy	
Duluth, Minn.			29.91	759.7	67	19.9	74	Calm	0	0		5ck	0	W		0	0	Fair	
Eastport, Me.			29.94	760.5	65	18.3	83	SW	4	1.8		5ck	Fog	W		0	0	Fair	
Erie, Pa.			29.98	761.5	76	24.4	81	W	3	1.3		4cs	7ks	W	W	0.02	0.5	Cloudy	
Escanaba, Mich.			30.02	762.5	67	19.4	74	Calm	0	0		0	0			0	0	Clear	
Fort Gibson, Indian Ter.			29.90	759.4	77	25.0	90	SE	2	0.9		5ck	2ks	SE	SE	0	0	Fair	
Ft. St. Michael, Alaska			30.04	763.0	47	8.3	100	S			1		Fog			0	0	Foggy	
Fort Sill, Indian T.	28.96	735.6	30.02	762.5	80	26.7	91	SE	1	0.4		5k	0	S		0	0	Fair	
Fort Sully, Dakota	28.13	714.5	29.70	754.4	66	18.9	79	NW	10	4.5		5c	0	W		0.25	6.3	Fair	
Galveston, Tex.			30.04	763.0	81	27.2	78	W	5	2.2		2k	0			0	0	Fair	
Grand Haven, Mich.			29.98	761.5	71	21.7	87	SE	5	2.2			10s		SE	0.50	12.7	Cloudy	
Indianapolis, Ind.			29.95	760.7	77	25.0	90	S	3	1.3			10s			1.30	33.0	Cloudy	
Indianola, Tex.			30.03	762.7	84	28.9	74	S	4	1.8		0	1s			0	0	Clear	
Jacksonville, Fla.			30.09	764.3	83	28.3	70	SE	4	1.8		5c	5k		SE	0	0	Fair	
Keokuk, Iowa			29.90	759.4	72	22.2	95	E	7	3.1			Fog			0	0	Foggy	
Key West, Fla.			30.06	763.5	83.4	28.6	70	SE	6	2.7		5k	1ks	SE		0	0	Fair	
Kittyhawk, N. C.			30.05	763.3	84	28.9	79	SW	8	3.6		5c	0			0	0	Fair	
Knoxville, Tenn.			30.06	763.5	76	24.4	81	Calm	0	0		0	0			0	0	Clear	
La Crosse, Wis.			29.94	760.5	69	20.6	79	S	7	3.1		0	0			0	0	Clear	
Leavenworth, Kan.			29.99	759.4	72	22.2	81	Calm	0	0		0	0			0	0	Clear	
Lexington, Ky.	28.95	735.3	29.99	761.7	81	27.2	82	S	4	1.8		0	0			0	0	Clear	
Louisville, Ky.			29.99	761.7	84	28.9	68	S	2	0.9		0	0			0	0	Clear	
Lynchburg, Va.			30.02	762.5	84	28.9	64	NW	4	1.8		0	0			0	0	Clear	
Malone, N. Y.			29.96	761.0	72	22.2	75	Calm	0	0			10s		W	0.31	7.9	Cloudy	
Manhattan, Kan.	28.8	731.5	29.91	759.7	64	17.8	83	Calm	0	0		0	0			0	0	Clear	
Marquette, Mich.			29.94	760.5	69	20.6	51	SE	8	3.6		0	0			0	0	Clear	
Memphis, Tenn.			30.01	762.2	82	27.8	78	S	4	1.8		0	Haze			0	0	Clear	
Milwaukee, Wis.			30.02	762.5	65	18.3	89	NE	2	0.9			Fog			0	0	Foggy	
Mobile, Ala.			30.08	764.0	78	25.6	82	SW	5	2.2		0	0			0	0	Clear	
Montgomery, Ala.			30.09	764.3	81.5	27.5	74	N	2	0.9		0	Haze			0	0	Clear	
Morgantown, W. Va.			29.98	761.5	83	28.3	70	E	1	0.4		0	0			0.19	4.8	Clear	
Mt. Washington, N. H.	29.00	736.6	30.36	771.1	53	11.7	93	NW	30	13.4		2c	0	N		0.64	16.3	Fair	
Nashville, Tenn.	24.00	609.6	30.02	762.5	82	27.8	74	Calm	0	0		0	0			0	0	Clear	
New Haven, Conn.			30.00	762.0	80	30.0	69	Calm	0	0		10cs	Fog			Inap.	Inap.	Cloudy	
New London, Conn.			30.02	762.5	77	25.0	86	SW	4	1.8		0	Fog			0.01	0.3	Foggy	
New Orleans, La.			30.05	763.3	82	27.8	80	SE	2	0.9		5c	0			Inap.	Inap.	Fair	
Newport, R. I.			30.00	762.0	74	23.3	90	SW	4	1.8			Fog			Ina	Inap.	Foggy	
New York, N. Y.			30.02	762.5	79	26.1	73	SW	4	1.8		5ck	Haze	W		Inap.	Inap.	Fair	
Norfolk, Va.			30.05	763.3	89	31.7	69	S	5	2.2		5c	0	S		0	0	Fair	
North Platte, Neb.	27.01	686.0	29.12	747.3	73	22.8	67	SE	12	5.4		2k	0			0	0	Clear	
Omaha, Neb.	28.87	733.3	29.89	759.2	71	21.7	75	S	5	2.2		0	0			0	0	Clear	
Oswego, N. Y.			30.00	762.0	70.8	21.6	92	W	4	1.8			10s		W	Inap.	Inap.	Threatening	
Pembina, Dakota			29.77	756.4	57	13.3	87	Calm	0	0			0			1.90	48.3	Clear	
Philadelphia, Penn.			30.04	763.0	81	27.2	74	NW	3	1.3		2ck	Fog			1.64	41.7	Foggy	
Pike's Peak, Colorado	18.06	458.7	30.27	768.8	38	3.3	46	NW	9	4.0		0	0			0	0	Clear	
Pittsburgh, Penn.			29.99	761.7	75	23.9	86	SE	3	1.3		1c	Sm'e	W		1.12	28.4	Smoky	
Port Huron, Mich.			30.03	762.7	65	18.3	83	NE	7	3.1		0	1s			0.53	13.5	Clear	
Portland, Me.			29.97	761.2	70	21.1	74	NW	1	0.4		1k	Haze			0	0	Clear	
Portland, Oregon			30.35	770.0	52	11.1	93	Calm	0	0			10s		W	0.32	8.1	Cloudy	
Punta Rassa, Fla.			30.04	763.0	84.5	29.2	75	SE	9	4.0		Haze	0			Inap.	Inap.	Clear	
Rochester, N. Y.			29.99	761.7	69	20.6	90	NW	6	2.7			10n		N	0.60	15.2	Light rain	
Salt Lake City, Utah	25.70	652.8	30.33	762.7	58	14.4	53	N	4	1.8		0	0			0	0	Clear	
Sandy Hook, N. J.			30.01	762.2	80	26.7	78	S	6	2.7		5cs	5ks	SW	NW	0	0	Cloudy	
San Diego, Cal.			29.95	760.7	66	18.9	90	N	4	1.8			10s		N	0	0	Cloudy	
San Francisco, Cal.			29.98	761.5	59	15.0	81	S	1	0.4		0	0			0	0	Clear	
Santa Fé, N. M.	23.35	593.1	29.89	759.2	60	15.6	65	E	9	4.0		0	0			0.03	0.8	Clear	
Savannah, Ga.			30.10	764.5	85	29.4	75	SW	3	1.3		5k	Haze	E		0	0	Hazy	
Shreveport, La.			30.06	763.5	78	25.6	88	S	3	1.3		0	0			0	0	Clear	
Smithville, N. C.			30.09	764.3	84	28.9	75	SW	8	3.6		5k	0	SW		0	0	Fair	
Springfield, Mass.			30.00	762.0	77	25.0	88	Calm	0	0			Fog			1.06	26.9	Dense fog	
St. Louis, Mo.			29.96	761.0	79	26.1	82	SE	4	1.8			10s			0.01	0.3	Cloudy	
St. Marks, Fla.			30.05	763.3	83	28.3	83	NE	2	0.9		2c	0	E		0	0	Fair	
St. Paul, Minn.			29.88	758.9	71.5	21.9	73	SE	6	2.7		2cs	0	NW		0	0	Clear	
St. Paul's Island, Alaska			30.11	764.8	39	3.9	82	W	3	1.3			Fog			0	0	Foggy	
Thatcher's Island, Mass.			29.97	761.2	76	24.4	81	NW	4	1.8		2ck	0	NW		0.02	0.5	Hazy	
Toledo, Ohio			29.97	761.2	72	22.2	95	E	4	1.8			Fog		E	0.20	5.1	Foggy	
Tucson, Arizona	27.52	699.0	30.11	764.8	79	26.1		S				0	0			0	0	Clear	
Tybee Island, Ga.			30.08	764.0	83	29.4	75	S	8	3.6		2c	8ks		SW	0	0	Cloudy	
Vicksburg, Miss.			30.06	763.5	79	26.1	82	SE	1	0.4		2cs	2ck		S	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.	24.38	619.2	29.86	758.4	40	4.4	73	Calm	0	0		0	0			0	0	Clear	
Washington, D. C.			30.01	763.0	84	28.9	70	Calm	0	0		1c	Haze			Inap.	Inap.	Hazy	
Wilmington, N. C			30.08	764.0	84	28.9	83	SW	10	4.5		2c	2ks	NE	SW	0	0	Fair	
Wood's Holl, Mass.			30.02	762.5	73	22.8	95	SW	6	2.7			Fog		SW	0	0	Dense fog	
Wytheville, Va.	27.80	706.1	29.87	758.7	72	22.2	85	Calm	0	0		0	Haze			0	0	Clear	
Yankton, Dakota	28.60	726.4	29.82	757.4	73	22.8	67	SW	12	5.4		1cs	0	W		0	0	Clear	
Yuma, Arizona			29.87	758.7	86	30.0		SW				0	0			0	0	Clear	
Sub Series.																			
P'nte-a-Pitre, G'd'l'pe, W. I.			30.01	762.2	83	28.3	79	E				2k	6ks			0	0	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.			30.19	766.8	78	25.6	78	Calm	0	0		8c	2s			0.08	2.0		James Gall.
St. Georges, Bermudas			30.08	764.0	82.0	27.8	81	W	10	4.5		0	2k			0.08	2.0	Clear	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.24	691.9	30.04	763.0	69	20.6	84	Calm	0	0		2c	0			0.82	20.8	Fine	C. Partridge.
Paramaribo, D. Guiana S.A			30.05	763.3	79	26.1	82	E			2	6ks?	6ks	E		0.260	6.60	Dry	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.05	763.3			79.9	26.6		E								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640.6			64.0	17.8	81	Calm	0	0		4k	2s			0	0	Cloudy	Thomas Herran
York Factory, B. A.			29.56	750.8	52.5	11.4	96	W	25	11.2		4k	2s	N		0.20	5.1		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.08	764.0	77	25.0	90	Calm			0					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Addie Fuller, Damariscotta river, Me.			30.03	762.7	74	23.3		NW			2	1c		N				Blue sky	Capt. James Jorgensen.
Steamer Leipzig, N. 41° 50′, W. 56° 25′.	S84W		30.15	765.8	66.9	19.4		W			1					Tranq'l		Misty	Capt. R. Hoffmann.
Steamer Nova Scotian at Halifax, N. S.			30.08	764.0	57	13.9		Var.			2							Overcast	Capt. Ritche.

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 −10° 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.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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 added 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, 6.30 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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.
1:18 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			30.11	764.9	78.4	25.8	64	N			2		0			0	0	Clear	Charnot.
Algiers			30.14	765.6	78.1	25.6	71	NNE			2		1			0	0	Clear	Peter.
La Calle																			Kunta.
Tunis			30.07	763.7	84.4	29.1	56	ESE			4		0			0	0	Clear	Jacques.
Sfax			30.13	765.3	85.3	29.6	57	SE			2		1			0	0	Clear	Chauvey.
Salda			30.09	764.2	84.2	29.0	19	N			2		1			0	0	Clear	Millot.
Tebessa			30.12	765.1	86.9	30.5		NE			1		0			0	0	Clear	Colin.
Geriville			30.07	763.6	88.5	31.4	22	NW			3		2			0	0	Clear	Buard.
Laghouat			30.08	763.9	98.6	37.0		S			2		2			0	0	Clear	Guyot.
Biskra			30.09	764.3	93.6	34.2	59	S			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			30.13	765.2	64.0	17.8	84	NE			1		10			0.504	12.8	Raining	Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.13	765.4	68.0	20.0	57	W			2		10			0	0		Dr. Wierzbiski.
Eperies			30.04	763.1	69.8	21.0	54	N			2		9			0	0		Julius Mikolik.
Gratz	24.01	734.2	30.10	764.4	61.3	16.3	78	W			2		0			0.094	2.4		Andreas Rospini.
Hermannstadt	28.53	724.7	29.88	759.0	77.7	25.4	56	WNW			3		9			0.287	7.30	Thunder-storm	Prof. Reissenberger.
Kremsmünster	28.38	720.9	29.67	753.5	70.2	21.2	57	W			2		10			0	0		Prof. C. Wagner.
Lemberg			29.96	761.0	66.4	19.1	93	SW			3		9			0.051	1.3		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.01	762.2	61.2	16.2	88	ENE			5		10n.s			0.134	3.41		I.R.Hydrographic Office.
Szegedin			29.96	760.9	77.0	25.0	62	N			2		8			0.726	18.45		Karl Stancel.
Trieste			30.10	764.4	63.1	17.3	78	ENE			4		10			0.661	16.8	Drizzling	Prof. V. Farolfi.
Vienna			30.17	766.3	66.9	19.4	52	NW			2		10			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.39	772.0	64.0	18.3	46	N			3	3	3	NE	N	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

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.
Aberdeen			30.12	765.0	65.0	18.3		SSW	15	6.7			3			0	0	Blue sky	William Boswell.
Ardrossan			30.34	770.6	57	13.9		SW			3		4 ?					Overcast ?	William McNeil.
Armagh, Observatory			30.38	771.6	64.0	17.8		SW	8	3.6			10					Overcast	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown).			30.39	771.9	71.0	21.7		SSW			1		4					*D. clouds	J. Dreyer.
Bradford			30.38	771.6	63.6	17.6		W			0		10			0.01	0.3	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.05	763.3	80.0	26.7		NE			3		4					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			30.41	772.4	69.5	20.8		NW			1		7					*D. clouds	H. Todd.
Cardington			30.43	772.9	70.4	21.3		NW			1		7					*D. clouds	John McLaren.
Carlisle			30.35	770.9	62.1	16.7		SW			6		10			0	0	Overcast	T. Bell, for J. Carmell.
Chatham, School M. E			30.41	772.4	69.2	20.7		NW			1		2					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	29.02	737.1	30.51	774.9	64.6	18.1		E			1		3					Blue sky	R. F. Power.
Donaghadee			30.36	771.1	65	18.3		SSW			2		10					Overcast	J. Mac Gowan.
Dover			30.43	772.9	66	18.9		WSW			2		4					½ clouded	J. Costello.
Eccles, (near Manchester.)			30.39	771.9	66.5	19.2		SW	6.8	3.0			5					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.47	773.9	62.5	16.9		SE			3		1					*D. clouds	The Staff.
Fort Napier, (Natal)	27.97	710.4	30.20	767.1	70.9	21.6		N			3		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.06	763.5	81	27.2		W			2		8					Overcast	
Galway, Queen's College			30.23	767.8	66	18.9		SW			3		7					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean).			30.09	764.3	73.4	23.0		E			4		2					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			30.28	769.1	58.3	14.6		WSW			3		10					Overcast	Lewis Stuart.
Great Yarmouth			30.39	771.9	66	18.9		SSE			3		4					*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y			30.43	772.9	72.7	22.6		NW			1		2					Blue sky	The Staff, for G. B. Airy.
Guernsey			30.44	773.2	66	18.9		ENE			1		0					Blue sky	Dr. S. E. Hoskins.
Helston			30.41	772.4	67	19.4		S			2		2			0	0	*D. clouds	M. P. Moyle.
Holyhead			30.42	772.7	63	17.2		SSW			4		5					*D. clouds	John Tilston.
Kew, Observatory			30.44	773.2	67.8	19.9		NW	8	3.6			6					Hazy	The Staff.
Kingstown																			George Mitchell.
Leicester Museum			30.43	772.9	65.0	18.9		W			1		8					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.99	761.7	81.2	27.3		NW			1		0						Corp'l F. Fraser, A. M. C.
Nairn			30.07	763.8	70	21.1		W			3		8					¾ clouded	W. D. Penny.
Nassau, (Bahamas			30.16	766.1	84.5	29.2		SE			3		4					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.42	772.7	70.1	21.2		SSW			3		9ck,k	SW	W	0	0	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.41	772.4	62.8	17.1		WSW			2		8					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.41	772.4	69	20.6		W			1		7					*D. clouds	J. Lucas.
Plymouth			30.45	773.4	66	18.9		SW			2		0					Blue sky	John Merrifield.
Roche's Point			30.41	773.2	61	16.1		SW			2		8					Cloudy	W. Kennedy.
Saint Ann's Head			30.46	773.7	63	17.2		W			1		0					Hazy	John C. Walker.
Saint Helier, Jersey			30.43	772.9	71.2	21.8		SE			2		2					¼ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.97	761.2	55.8	13.2		WSW	28	12.5			10					Misty	Rev. C. Clouston, LL. D.
Scarborough			30.35	770.9	67.0	19.4		WSW			2		4					*D. clouds	F. Shaw.
Scutari Cemetery, Turkey			29.85	758.2	82.4	28.0		NE			2		1					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.38	771.6	67.7	19.8		WNW			2		6			0	0	*D. clouds	W. F. Cooper.
Silloth Rectory			30.36	771.1	67.2	19.6	60	NW			2		7			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.39	771.9	61.7	16.5		W			3		8						Rev. S. J. Perry.
Stornoway, Lews C. Hebr.			30.08	764.0	63	17.2		SW			6		8					*D. clouds	John Smith.
Stratfield Turgiss			30.43	772.9	69.4	20.8		NW			1		2					Blue sky	Rev. Charles H. Griffith.
Thurso			29.98	761.5	60	20.6		WSW			5		7					*D. clouds	John Trotter.
Truro, Royal Institution			30.45	773.4	73	22.8		N			4		3					*D. clouds	W. Newcombe.
Valencia, Observatory			30.42	772.7	66.2	19.0		SSE	20	8.9			7					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, Isle of Man					58	14.4		SW			2		2						Thomas Dawson.
Cape Good Hope, Obs'y			30.00	762.0	68.0	20.0	54	WNW	15	6.7		2	3						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			30.31	770.6	52.0	11.1	86	SW			1		0			0.03	0.8		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			30.26	768.6	62.3	16.8		W			5		9k			0	0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.23	767.8				ESE	23.7	10.6						0.10	2.5		C. Meldrum.
Melbourne, Observatory			30.27	768.8	44.8	7.1	87	SE	10	4.5			0			0.13	3.3	Fine, clear.	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.15	765.8	55	12.8		SW			4	10	5	W		0.1	2.5		J. Youngclause.
North Unst, (Shetland Is.)			29.73	755.1	49	9.4		SW			8		10			Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,220 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.	Corrected Inches	Millimeters	Reduced Inches	Millimeters	Fahrenheit	Centigrade	Per cent	Wind From—	Miles per hour	Meters per second	Force	Up'er	Low'r	Upper From—	Lower From—	Rain Inches	Millimeters	Weather	Observer
Copenhagen			30.11	764.7	62.4	16.9	59	WNW			4		7						
Fanöe			30.23	767.9	59.5	15.3	55	WNW			6		9						
Godthaab, Greenland			29.73	755.1	38.3	3.5		WSW			4		5						
Stykkisholm, Iceland			29.69	754.1	53.4	11.9	84	Calm			0		8						
Thorshavn, Faröe			29.58	751.4	53.6	12.0	99	WSW			6		10					Raining	
Westervig			30.15	765.8	57.6	14.2	65	NW			6		6						

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

FRENCH SERIES.

Furnished by the 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			30.39	771.9	66.2	19	39	NE			2		5n, k		NE	0	0.	Cloudy	Normal School.
Amiens			30.40	772.1	72.0	22.2	72	NW			3		8		NW	0	0	Very cloudy	Normal School.
Avignon			30.01	763.3	76.3	24.6	36	NNW			6		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.37	771.3	65.7	18.7	44	NE			4		5		NE	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)			30.36	771.2	71.4	21.9	41	NE	10.3	4.6			2		E	0	0	Slightly cl'dy	Beaumette Observatory.
Beauvais			30.43	772.8	68.4	20.2	49	NNE			3		8		NNE	0	0	Very cloudy	Normal School.
Besançon			30.27	768.9	71.6	22	48	NE			3		2		NE	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse			30.34	770.3	69.6	20.9	55	N			0		0					Clear	Normal School.
Bourges			30.50?	776.3?	68.0	20	61	NE			4		2		E	0	0	Slightly cl'dy	Normal School.
Brest			30.36	771.2	69.3	20.7	55	ENE			2		2k		ENE	0	0		Naval Observatory.
Carcassonne			30.22	767.6	71.6	22	56	W			1		0			0	0	Clear	Normal School.
Caen			30.39	772.0	68.4	20.2	81	ENE			3		1		ENE	0	0	Clear	Normal School.
Chartres			30.35	770.9	70.7	21.5	72	E			2		8		S	0	0		Normal School.
Clermont			30.27	768.9	65.7	18.7	41	N			4		8		N	0	0		Puy de Dome Obs'y.
Commercy			30.40	772.2	62.2	16.8	53	NNE			4		5kn		NNE	0	0	Cloudy	Normal School.
Commune de Greasque*			30.11	764.7	79.5	26.4	33	NW			4		2		NW	0	0		M. Kina.
Grenoble			30.16	766.1	71.1	21.7	59	NW			8		2ck		SW	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.43	772.9	74.5	23.6	46	NNE			4		2		SW	0	0	Slightly cl'dy	Normal School.
Le Mans			30.37	771.5	68.9	20.5	59	ENE			2		2		ENE	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier			30.25	768.3	67.8	19.9	47	NNE			8		0			0	0	Clear	Normal School.
Mâcon			30.45	773.3	68.0	20	50	N			8		5		N	0	0	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			30.12	765.1	64.4	18	47	NNE			2		5		SW	0	0	Partly cl'dy	Normal School.
Nismes			30.07	763.6	77.7	25.4	26	NW			8		0			0	0	Clear	Normal School.
Orleans			30.32	770.0	69.8	21	43	E			2		5		NE	0	0	Cloudy	Normal School.
Paris, Observatory			30.41	772.4	66.2	19.0	46	NE			2		8k		N	0	0	Very cloudy	National Observatory.
Parthenay			30.34	770.7	82.8	28.2	69	N			4		2		S	0	0	Slightly cl'dy	Normal School.
Privas			30.17	766.4	71.6	22		N			6		2		N	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.36	771.1	78.3	25.7	31	ENE			3		0			0	0	Blue sky	Naval Observatory.
Rouen			30.41	772.5	65.1	18.4	60	N			2		5		NW	0	0	Cloudy	Normal School.
Saint Lo			30.10	764.4	80.6	27	44	N			0		6		NE	0	0		Normal School.
Tarbes	29.14	740.2	30.20	767.1	68.0	20		WNW			2		10			0	0	Covered	Normal School
Villefranche			30.35	771.0	68.0	20	86	N			3		5		N	0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.95	760.8	81.3	27.4													L'Abbé Marbhésl.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.39	771.9	59.9	15.5	49	NW	2	1			0			0	0		—. Falguère.
Montsouris, Paris			30.40	772.2	66.6	19.2	51	NE			4		10		N	0	0		Montsouris Observ'tory.
Perpignan			30.14	765.3	76.0	24.8	35	NW	28.0	12.50			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)			30.41	772.4	68.2	20.1	39	NNE			2		10			0	0	Cloudy	E. Renou.
Toulouse			30.3[illegible]	769.6	71.2	21.8	44	NW			3		0			0	0		Toulouse Observatory.
Tours			30.37	771.3	72.7	22.6	35	ENE			3		3		ENE	0	0		C. Marquet.
Versailles, (near Paris)			30.42	772.6	68.0	20.0	45	NE			1		8			0	0	Almost cov'd	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Leo, S. J.

NOTE.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,580.40 meters, or 5,204.8 feet; Clermont, 388 m., or 1,272.9 ft; Commune de Grésasque, 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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			30.21	767.2	65.7	18.7	57	W			5		8	W		0	0		Prof. T. Hoh.
Berlin			30.26	768.7	65.3	18.5	46	W			2		6			0.026	0.5		Prof. Arndt.
Breslau			30.26	768.4	65.5	18.6	46	NW			7		9			0	0		Dr. P. Neugebauer.
Carlsruhe			30.33	770.3	66.2	19.0	54	NE			5		9			0	0		A. Sens.
Cassel			30.35	771.0	69.1	20.6	56	NW			4		7	W		0.008	0.2		Dr. H. Möhl.
Emden			30.34	770.7	69.8	16.0	56	NW			7		9			0	0		Prof. Prestel.
Frankfort on the Main			30.37	771.4	68.5	20.3	37	N			4		6			0.012	0.3		Physical Society.
Friedrichshafen			30.28	769.2	64.8	18.2	52	NE			7		4			0	0		M. Wilhelm.
Hamburg			30.29	769.3	62.1	16.7	60	WNW			4		8k			0.039	1.0		Captain F. Hegemann.
Kiel			30.23	768.3	61.5	16.4	48	NW			6		10			0.031	0.8		Prof. G. Karston.
Königsberg, (Prussia.)			30.04	763.1	63.7	17.6	79	W			2		9			0.098	2.5		Prof. E. Luther.
Koslin			30.18	766.5	59.2	15.1		NW			5		10			0.358	9.1		H. Müller.
Leipsic			30.31	769.8	63.5	17.5	48	WNW			3		9	W		0.024	0.6		Prof. Bruhns.
Memel			30.02	762.5	67.8	19.9	65	W			2		10s,k			0.024	0.6	Rainy	Reinbrecht & Skalweit.
Münster			30.37	771.5	68.5	17.5	62	SW			4		7			0	0		Prof. E. Heis.
Neufahrwasser			30.11	764.7	58.3	14.6	84	NNW			4		10			0.031	0.8	Light rain	A. Lothes.
Posen			30.17	766.3	65.8	18.8	51	NW			2		4			0.016	0.4		Dr. Magener.
Strassburg, (in Alsace)			30.34	770.7	65.8	18.8	52	NE			2		9	NE		0	0		Dr. Schür.
Stuttgart			30.31	769.8	64.2	17.9	53	W			4		2			0	0		Prof. Schoder.
Thorn			30.11	764.9	67.1	19.5	56	NW			4		7			0.134	3.4		Dr. Hasenbalg.
Treves, (Trier)			30.34	770.5	67.0	19.8	40	NE			5		6			0	0		Prof. Flesch.
Wustrow, Naval School			30.29	769.4	62.4	16.9	54	NW			6		7			0.236	6.0		E. F. Schütz.

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	87.8	31.0		W					.k					Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.09	764.3	63.9	17.7	71	SE	2.5	1.1			10			0.098	2.5		
Padua			30.09	764.3	61.0	16.1	83	NE	15.4	6.9			10			0.744	18.9		
Vicenza			30.10	764.4	64.0	17.8	82	SE	1.3	0.6			10	E		0.134	3.4		
Verona			30.07	763.6	83.3	28.5	76	E			1		6			0	0		
Bergamo	28.75	730.2	30.01	762.2	66.2	19.0	81	S			2		10			0.079	2.0		
Domodossola	28.99	736.3	29.97	761.3	76.1	24.5	54	NW			4		4			0	0		
Milan			30.07	763.7	79.3	26.3	52	ESE			6		7	E		0	0		
Pavia			30.07	763.7	70.0	21.1	69	E			4		7	E		0	0		
Moncalieri			30.06	763.5	70.3	21.3	66	E	2.5	1.1			9	NW		0.415	11.3	Showery	
Mondovi	28.19	716.0	30.04	762.9	63.3	17.4	88	NNW			4		10			0.759	19.2	Showery	
Porto Maurizio			30.00	762.1	75.9	21.4	59	ENE			4		10	E		0	0		
Genoa			29.99	761.7	76.3	24.6	53	N	1.3	0.6			8	W		0.252	6.4	Showery	
Piacenza			30.08	764.0	65.3	18.5	78	E	25.5	11.4			9	SE		0.10.	2.6		
Parma			30.00	764.3	64.2	17.9	87	E			2		10			0.362	9.2		
Bologna			30.05	763.3	62.1	16.7	66	E			1		10			1.299	33.0		
Florence			30.00	761.9	76.1	24.5	53	NE			8		10			0	0		
Leghorn			29.94	760.5	78.3	25.7	55	W	4.9	2.2			10			0	0		
Siena	28.75	730.2	29.91	759.7	77.0	25.0	55	SW	1.3	0.6			8	SW		0	0		
Urbino	28.48	723.4	30.00	761.9	72.3	22.4	63	NNW			2		10			0	0		
Ancona			29.96	760.9	78.4	25.8	73	SE			4		6			0.945	24.0	Showery	
Grosseto			29.96	761.0	81.7	27.6	50	ESE			4		7	SE		0	0		
Rome			29.97	761.3	82.4	28.0	54	SSW	12.5	5.6			2	W		0	0		
Naples, O. U.			30.00	762.1	81.9	27.7	63	SSW			2		2	W		0	0		
Lecce			29.95	760.7	83.5	28.6	37	NNW	12.5	5.6			1			0	0		
Cosenza			29.97	761.1	89.6	32.0	60	SE	1.3	0.6			2			0	0		
Riposto, (Sicily)			29.99	761.8	81.7	27.6	60	N			2		2			0	0		
Palermo			29.96	760.9	81.0	27.2	67	ENE	6.3	2.8			0			0	0		
Caltanissetta	28.01	712.2	29.91	759.7	82.2	27.9	25	W			1		0			0	0		
Sub-Series.																			
Naples, S. R			30.02	762.5	80.1	26.7	61	S	1.3	0.6			2	W		0	0		Prof. F. Brioschi.
Pesaro			30.04	763.1	73.6	23.1	74	NE	16.3	7.25			10k,n	NW					L. Guidi.

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			30.45	773.5	63.5	17.5		N			2								
Groningen					60.3	15.7		NW			4								
Helder			30.39	771.8	59.9	15.5		WNW			2								
Utrecht			30.36	771.2	65.7	18.7	50	NNW			3		5					Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	764.4	52.9	11.6	68	SSW	9.6	4.3			10			1.173	29.8		
Brönö			29.92	759.9	55.4	13.0	66	NW	18	8			6			0.38.	9.7		
Christiania			29.98	761.4	70.2	21.2	49	SSW	1.8	0.8			6			0	0		
Tromsö			29.65	753.0	50.0	10.0	92	SW	13	6			10			0.071	1.8		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 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,)			30.26	768.5	72.9	22.7	79	SSE	7.3	3.28			1			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.97	761.2	98.2	36.8	20	SSW	3.5	1.58			4	SW		0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.00	761.9	73.4	23.0	72	Calm	0	0			10			0	0		Capt. D. A. da Cunha.
Lisbon			30.03	762.7	82.8	28.2	39	SW	19.9	8.9			0			0	0		The Observatory.

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

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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			30.10	761.6	61.7	16.5	69	WNW	11	5			10						Astronomical Obs.
Wilna			29.93	760.3	62.1	16.7	80	NW	9	4			10						Astronomical Obs.
Dorpat			29.95	760.7	58.1	14.5	98	WNW	4	2			10					Raining	Physical Cabinet.
St. Petersburg			29.91	759.7	70.5	21.3	53	NNW	11	5			2						Central Physical Obs.
Kuopio			29.83	757.6	68.0	20.0	66	WSW	13	6			7						Ch. Forsten.
Kieff			29.84	757.9	86.0	30.0	29	E	2	1			3						Physical Cabinet.
Nikolaiev			29.92	760.0	90.3	32.4	41	SW	13	6			5						Kurdakof.
Kertch			29.84	757.9	85.3	29.6	54	N	9	4			2						Lagorio.
Moscow			29.91	759.8	87.3	30.7	44	NW	4	2			2						Meteorological Obs.
Lugan			29.77	756.1	83.7	28.7	40	E	13	6			5						Meteorological Obs.
Archangel			29.77	756.1	77.4	25.2	77	NNW	9	4			2						Ogorodnikof.
Tiflis	28.37	720.7	29.70	754.4	83.3	28.5	48	SSE	11	5			6						Physical Observatory.
Astrakhan			29.75	755.7	76.3	24.6	70	NW	4	2			8						Sebastianoi.
Kasan			29.75	755.6	78.6	25.9	62	SE	9	4			7					Thunder-storm	Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.80	731.6	29.72	754.8	66.2	19.0	82	Calm	0	0			7						Meteorological Obs.
Nukuss			29.48	748.9	93.4	34.1	45	N	4	2			4						
Kasaly																			Bobrof.
Tashkend	27.94	709.7	29.49	749.1	91.6	33.8	18	Calm	0	0			0						Michelson.
Barnaul			29.52	749.7	61.7	16.5	80	SW	2	1			10						Meteorological Obs.
Yeniseisk			29.36	745.7	71.1	21.7	62	NE	4	2			7						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.63	752.7	86.9	30.5	73	Calm	0	0			6						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.76	755.8	62.8	17.1	97	SE	20	9			10						
Nikolaievsk, on the Amoor					61.0	16.1	95	ENE	9	4			10						

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 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			29.95	760.6	95.4	35.2	26	E	2.6	1.17		0	0			0	0	Clear	Royal Observatory.
San Fernando			30.03	762.7	86.5	30.3	40	E	32.0	14.3		0	0						The Naval Observatory

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			29.80	757.0	62.2	16.8	63	SW			4		0			0	0		
Umea			29.80	758.4	67.6	19.8	35	NW			4		6			0	0		
Hernosand			29.91	759.6	65.8	18.8	31	WNW			6		3			0.138	3.5		
Stockholm			29.91	759.6	66.2	19.0	46	NE			6		7			0	0		
Visby			30.08	763.9	65.5	18.6	64	WNW			4		3			0	0		
Sub-Series.																			
Upsala			29.93	760.3	66.0	18.9	49	NNE	9.6	4.3			5	SW	N,NE	0.074	1.87		Dr. Hildebrandsson.

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

SWISS SERIES.

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

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	731.1	30.18	766.5	65.8	18.8	51	NNE			9		1			0	0	Clear	The Observatory.
Zurich	28.65	727.8	30.25	768.4	65.8	18.8	54	NE			2		4			0	0	Bright	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +3.6 mm; Thermometer, —3.7 cent.; Relative Humidity, —2 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

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			29.92	759.9	79.5	26.4	57	NNE	13	6.0			3		ENE	0	0		
Fao, (Persian Gulf)			29.54	750.3	98.6	37.0		NW			4		0						
Salonica			29.98	761.4	80.6	27.0		SE			2		5						
Valona			29.95	760 7	80.2	26.8		NW			1		0						
Varna			29.91	759.8	86.0	30.0		E			2		8						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.71	754.7	90.1	32.3	55	W			2		1s		SW	0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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			29.88	758.9	67.9	19.9	83	S	2	0.9			0			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.06	763.5	70	21.1		SW	5	2.2			8s		SW	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B			29.96	761.0	69	20.6	82	SW	3	1.3		0	0			0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island			30.00	762.0	67	19.4	87	SW	3	1.3		0	0			0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			29.98	761.5	74.7	23.7		S			2		Fog			0	0	Foggy	James Smith, M. A.
Dalhousie, N. B					63	17.2	83	W			1					0	0		H. A. Johnson.
Esquimault, B. C																			W. H. Boyle.
Fredericton, N. B			30.01	762.2	65.5	18.6	78	N	1	0.4		0	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			30.01	762.2	57	13.9	96	SW	4	1.8		2ck	2ks	W	W	0	0	Fair	James Stewart.
Goderich, Ontario			30.01	762.2	78.1	25.6	85	Calm			0	3ck	0	SW		0	0	Fine	H. J. Strang, M. A.
Granton, Ontario	28.96	735.6	30.01	762.2	75	23.9		Calm			0	0	0			0	0	Foggy	James Grant.
*Halifax, N. S.			30.01	762.2	63	17.2	97	S	2	0.9			Fog			0	0	Foggy	F. Allison, M. A.
*Kingston, Ontario			30.06	763.5	68	20.0	97	SW	4	1.8			Fog		SW	0.57	14.5	Foggy	S. Woods, M. A.
Little Glace Bay, N. S.			30.02	762.5	63.0	17.2	83	NE	2	0.9		3k	0	N		0	0	Fair	C. H. Rigby
*Montreal, Quebec			29.97	761.2	74	23.3	82	SW	5	2.2		0	0			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			29.98	761.5	79	26.1	89	S	8	3.6		2ck	0	S		0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			29.99	761.7	76	24.4	73	S	6	2.7		0	0			0	0	Clear	Rev. R. Mosley.
*Port Dover, Ontario			30.04	763.0	74	23.3	90	Calm	0	0		10k	0	SW		Inap.	Inap.	Fair	H. Morgan.
Port Hastings, N. S.			30.07	763.8	68.2	20.1		Calm	0	0						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.03	762.7	73	22.8	98	E	1	0.4			Fog			0	0	Foggy	M. Payne.
*Quebec, Quebec			29.97	761.2	74	23.3	90	SW	1	0.4		0	0			0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.			30.04	763.0	58	14.4	94	S	3	1.3			Fog			0	0	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario			29.97	761.2	78	25.6	84	SW	7	3.1		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario			29.99	761.7	76	24.4	81	Calm	0	0		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario	28.78	731.0	30.00	762.0	73.5	23.1	95	W	5	2.2		4ck	0	SW		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			30.04	763.0	69	20.6	75	SW	5	2.2		0	0			0	0	Clear	T. C. Hill.
*Toronto, Ontario			30.04	763.0	71	21.7	91	Calm	0	0		0	0			0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.01	762.2	75.9	24.4	94	S	5	2.2		2ck	3ks	S		0.57	14.5	Fine	J. Montgomery
Sub-Series.																			
St. John's, Newfoundland			30.03	764.0	72	22.2	67	S				0	2cs			0	0	Fair	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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.			30.01	762.2	73	22.8	90	Calm	0	0			10ks		W	1.43	36.3	Cloudy	
Alpena, Mich			29.94	760.5	76	24.4	64	N	4	1.8		0	0			0	0	Clear	
Atlantic City, N. J			30.05	763.3	76	24.4	90	W	4	1.8		8cs	0	N		0.15	3.8	Cloudy	
Augusta, Ga			30.16	766.1	82	27.8	75	SW	3	1.3		0	0			0	0	Clear	
Baltimore, Md			30.10	764.5	81	27.2	70	W	3	1.3		5ck	0			0.21	5.3	Fair	
Barnegat, N. J			30.05	763.3	84	28.9	75	W	9	4.0		2ck	0	W		0.18	4.6	Fair	
Benton, Montana	27.45	697.2	30.25	768.3	49	9.4	85	SW	1	0.4		0	0			0	0	Clear	
Bismarck, Dakota	28.37	720.6	29.98	761.5	62	16.7	66	SW	1	0.4		5k	2ks	SW	SW	0.30	7.6	Cloudy	
Boston, Mass			29.98	761.5	80	26.7	82	SW	2	0.9		5k	Fog	W		0.62	15.7	Foggy	
Breckenridge, Minn			29.98	761.5	60	15.6	88	N	8	3.6		8cs	0			0	0	Cloudy	
Buffalo, N. Y			30.02	762.5	75.5	24.2	83	SW	4	1.8			10ks		SW	0	0	Cloudy	
Burlington, Vt			30.01	762.2	76	24.4	73	Calm	0	0		2k	0			0.05	1.3	Fair	
Cairo, Ill			30.08	764.0	80	26.7	82	S	4	1.8		5k	0	S		0	0	Fair	
Cape Hatteras, N. C			30.08	764.0	81	27.2	82	SW	8	3.6		2c	2ks		W	0	0	Fair	
Cape Henry, Va			30.07	763.8	84	28.9	71	W	12	5.4		10c	Haze			0	0	Cloudy	
Cape Lookout, N. C			30.18	766.6	83	28.3	79	W	12	5.4		2c	Haze	W		0	0	Clear	
Cape May, N. J			30.00	763.5	76	24.4	91	NW	10	4.5		5cs	0	NW		0.38	9.7	Fair	
Charleston, S. C			30.16	766.1	86	30.0	68	SW	4	1.8		0	2ks		SW	0	0	Cloudy	
Cheyenne, Wyoming	24.18	614.2	30.12	765.0	59	15.0	66	NE	2	0.9		1c	0			0	0	Clear	
Chicago, Ill			30.02	762.5	70	21.1	75	NE	2	0.9			10s			0	0	Cloudy	
Cincinnati, Ohio			30.02	762.5	82	27.8	74	Calm	0	0		5k	0			0	0	Fair	
Cleveland, Ohio			30.04	763.0	73.5	23.1	85	S	4	1.8			10n		SW	0.01	0.3	Light rain	
Colorado Springs, Col	24.22	615.2	30.09	764.3	64	17.8	48	NW	10	4.5		0	0			0	0	Clear	
Corsicana, Tex			30.06	763.5	74	23.3	95	S	3	1.3		2cs	0			0	0	Clear	
Davenport, Iowa			30.04	763.0	74	23.3	81	NE	1	0.4		5ck	0	W		0	0	Fair	
Denison, Tex			30.09	764.3	76	24.4	90	SW	8	3.6		8ck	2s			0.13	3.3	Cloudy	
Denver, Col	24.92	633.0	30.14	765.5	65	18.3	58	NW	1	0.4		5k	0	SW		Inap.	Inap.	Fair	
Detroit, Mich			29.98	761.5	74	23.3	90	SW	3	1.3		0	8s		W	0	0	Fair	
Dodge City, Kan	27.45	697.2	29.93	760.6	73	22.8	90	E	4	1.8		5k	0			0	0	Fair	
Dubuque, Iowa			30.03	762.7	68	20.0	90	Calm	0	0			Fog			0	0	Foggy	
Duluth, Minn			29.99	761.7	63	17.2	94	Calm	0	0		5k	0	W		0.51	13.0	Fair	
Eastport, Me			30.01	762.2	61	16.1	82	N	3	1.3		0	Fog		N	0	0	Fair	
Erie, Pa			30.00	762.0	79	26.1	78	S	4	1.8		4c	1s	W		0	0	Fair	
Escanaba, Mich			30.00	762.0	69	20.6	75	N	13	5.8		1k	0	N		0	0	Clear	
Fort Gibson, Indian Ter			30.00	762.0	78	25.6	86	SE	3	1.3			10s		SE	0.29	7.4	Cloudy	
Ft. St. Michael, Alaska			30.16	766.1	52	11.1	86	SW			2		10s			0	0	Cloudy	
Fort Sill, Indian T	28.87	733.3	29.93	760.2	76	24.4	86	SE	8	3.6			10s		SE	0	0	Cloudy	
Fort Sully, Dakota	28.36	720.3	29.96	761.0	67	19.4	69	N	11	4.9		2c	0	NW		0	0	Fair	
Galveston, Tex			30.10	764.5	83	28.3	74	S	6	2.7		5k	0	S		0	0	Fair	
Grand Haven, Mich			30.00	762.0	78	25.6	73	NW	4	1.8		0	Sm'e		NW	0	0	Clear	
Indianapolis, Ind			30.02	762.5	79	26.1	82	SW	2	0.9			10n		SW	0.13	3.3	Light rain	
Indianola, Tex			30.08	764.0	85	29.4	75	SE	6	2.7		2k	0	SE		0	0	Fair	
Jacksonville, Fla			30.16	766.1	85	29.4	67	SW	4	1.8		0	0			0	0	Clear	
Keokuk, Iowa			29.96	761.0	75	23.9	95	Calm	0	0			Fog			0	0	Foggy	
Key West, Fla			30.17	766.3	81.8	27.7	74	Calm	0	0		0	5ks		E	0	0	Fair	
Kittyhawk, N. C			30.10	764.5	81	27.2	78	W	16	7.2		5cs	0	W		0	0	Fair	
Knoxville, Tenn			30.14	765.5	76	24.4	90	Calm	0	0			Fog			0	0	Fair	
La Crosse, Wis			29.97	761.2	72	22.2	85	S	6	2.7		5c	0			0	0	Fair	
Leavenworth, Kan			29.97	761.2	76	24.4	86	Calm	0	0			Fog			0	0	Foggy	
Lexington, Ky	29.02	737.1	30.07	763.8	80	26.7	78	S	8	3.6		5c	0			0	0	Fair	
Louisville, Ky			30.05	763.3	82	27.8	75	S	4	1.8		0	5ks		SW	0	0	Fair	
Lynchburg, Va			30.09	764.3	85	29.4	61	N	2	0.9		0	0			0	0	Clear	
Malone, N. Y			29.85	758.2	77	25.0	75	SW	7	3.1		2k	0	SW		0.05	1.3	Fair	
Manhattan, Kan	28.85	732.8	29.96	761.0	65	18.3	83	Calm	0	0		0	0			0	0	Clear	
Marquette, Mich			30.01	762.2	63	17.2	83	Calm	0	0		2c	0			0.08	2.0	Fair	
Memphis, Tenn			30.11	764.8	84	28.9	67	SE	6	2.7		0	2s			0	0	Clear	
Milwaukee, Wis			30.04	763.0	70	21.1	100	W	4	1.8			Fog			0	0	Dense fog	
Mobile, Ala			29.14	765.5	81	27.2	78	S	5	2.2		10cs	0			0	0	Cloudy	
Montgomery, Ala			30.16	766.1	79	26.1	82	SW	4	1.8		8cs	0			*1.00	*25.4	Fair	
Morgantown, W. Va	29.08	738.6	30.03	764.3	74	23.3	85	SE	2	0.9		5c	5s	W	SW	0.13	3.3	Cloudy	
Mt. Washington, N. H	24.03	610.4	30.36	771.9	57	13.9	93	NW	5	2.2			Fog			0	0	Foggy	
Nashville, Tenn			30.09	764.3	82	27.8	74	Calm	0	0		8ck	0	W		0	0	Fair	
New Haven, Conn			30.02	762.5	80	26.7	74	SW	5	2.2		5ck	Fog	W		0.45	11.4	Cloudy	
New London, Conn			30.03	762.7	77	25.0	82	W	2	0.9		0	8s		W	0.11	2.8	Fair	
New Orleans, La			30.13	765.3	82	27.8	78	Calm	0	0		5c	0			0	0	Fair	
Newport, R. I			30.00	762.0	75	23.9	83	SW	12	5.4			8ks		W	0.05	1.3	Cloudy	
New York, N. Y			30.04	763.0	75	23.9	85	W	5	2.2		5cs	Fog			1.97	50.0	Foggy	
Norfolk, Va			30.10	764.5	87	30.6	65	SW	7	3.1		8c	Haze			0	0	Fair	
North Platte, Neb	27.18	690.4	29.64	752.8	70	21.1	50	NE	7	3.1		5k	2s	SW	SW	0.28	7.1	Cloudy	
Omaha, Neb	28.91	735.1	29.96	761.0	75	23.9	81	S	5	2.2		5ck	0	W		0	0	Fair	
Oswego, N. Y			30.05	763.3	73	22.8	85	SW	2	0.9		0	Fog			0.31	7.9	Clear	
Pembina, Dakota			29.96	761.0	60	15.6	82	Calm	0	0		0	0			0	0	Clear	
Philadelphia, Penn			30.05	763.3	79	26.1	78	NW	3	1.3		2ck	Fog	NW		0.13	3.3	Fair	
Pike's Peak, Colorado	18.10	459.7	30.30	769.6	42	5.6	58	E	8	3.6		0	0		W	0	0	Clear	
Pittsburgh, Penn			30.07	763.8	75	23.9	80	W	4	1.8		2ks	8n			Inap.	Inap.	Light rain	
Port Huron, Mich			29.99	761.7	73	22.8	95	S	4	1.8			10s			0	0	Cloudy	
Portland, Me			30.01	762.2	72	22.2	85	Calm	0	0		5k	Fog	S		0	0	Foggy	
Portland, Oregon			30.20	767.2	51	10.6	93	E	1	0.4		0	0			0	0	Clear	
Punta Rassa, Fla			30.17	766.3	81.0	27.2	76	E	8	3.6		1c	0	NE		0.01	0.3	Clear	
Rochester, N. Y			30.02	762.5	75	23.9	81	SW	4	1.8		0	Sm'e			0.05	1.3	Clear	
Salt Lake City, Utah	25.65	651.5	29.98	761.5	56	13.3	62	Calm	0	0		0	0			0	0	Clear	
Sandy Hook, N. J			30.02	762.5	80	26.7	78	W	9	4.0		2ck	Haze	SW		0.28	7.1	Clear	
San Diego, Cal			29.98	761.5	66	18.9	90	S	4	1.8			10s		S	0	0	Cloudy	
San Francisco, Cal			29.92	760.0	54	12.2	86	SW	14	6.3		0	0			0	0	Clear	
Santa Fé, N. M	23.34	592.8	29.88	758.9	63	17.2	67	E	7	3.1		0	0			0	0	Clear	
Savannah, Ga			30.17	766.3	84	28.9	70	SW	1	0.4		0	Haze			Inap.	Inap.	Clear	
Shreveport, La			30.15	765.8	80.5	26.9	80	Calm	0	0		10k	0	S		0	0	Cloudy	
Smithville, N. C			30.18	766.6	83	28.3	70	SW	8	3.6		5k	0	SW		0	0	Fair	
Springfield, Mass			30.00	762.0	76	24.4	88	S	4	1.8			10ks			0.24	6.1	Cloudy	
St. Louis, Mo			30.03	762.7	78	25.6	86	S	8	3.6			10s			0.06	1.5	Cloudy	
St. Marks, Fla			30.16	766.1	82	27.8	88	Calm	0	0		0	2ks		SE	0	0	Fair	
St. Paul, Minn			29.93	760.2	72	22.2	83	Calm	0	0			10s		N	0	0	Threatening	
St. Paul's Island, Alaska			30.25	768.3	42	5.6	83	SE	4	1.8			10s			0	0	Cloudy	
Thatcher's Island, Mass			30.01	762.2	66	18.9	94	NE	3	1.3						0.40	10.2	Dense fog	
Toledo, Ohio			29.99	761.7	78	25.6	82	SW	6	2.7			10ks		SW	0.11	2.8	Cloudy	
Tucson, Arizona	27.44	697.0	30.03	762.7	81	26.7		Calm				5k	2ks	S	S	0	0	Cloudy	
Tybee Island, Ga			30.15	765.8	81	27.2	78	NW	4	1.8		1k	0			0	0	Clear	
Vicksburg, Miss			30.15	765.8	81	27.2	82	S	1	0.4		8ck	0	NE		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.
Virginia City, M. T.	24.46	621.3	29.94	760.5	44	6.7	44	SE	8	3.6		0	0			0	0	Clear	
Washington, D. C.			30.09	764.3	80	26.7	72	NW	4	1.8		1ck	1s	W	W	0	0	Fair	
Wilmington, N. C.			30.18	766.6	83	28.3	70	W	8	3.6		0	1ks			0	0	Fair	
Wood's Holl, Mass.			30.02	762.5	73	22.8	90	SW	6	2.7		0	5s		S	0.11	2.8	Fair	
Wytheville, Va.	27.86	707.6	29.94	760.5	73	22.8	85	Calm	0	0		2c	0	W		0	0	Clear	
Yankton, Dakota	28.68	728.5	29.89	759.2	77	25.0	77	SW	4	1.8		5s	5s	W	W	0	0	Fair	
Yuma, Arizona			29.90	759.4	86	30.0		SE				0	0			0	0	Clear	
Sub Series.																			
P'nte-a-Pitre, G'd'Tpe, W. I.			30.01	762.2	81	27.2	78	E				10k	5n			0.22	5.6	Hazy	L. V. Bigard.
Kingston, Jamaica, W. I.			30.23	767.8	80	26.7	78	Calm	0	0		2k	2s			0	0		James Gall.
St. Georges, Bermudas			30.16	766.1	78.0	25.6	98	Calm	0	0		1ck	1k	NW		0	0	Clear	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.30	693.4	30.07	763.8	74	23.3	84	NE	1.0	0.4		2c	0	NE		0.26	6.6	Fine, clear	C. Partridge.
Paramaribo, D. Guiana S.A.			30.02	762.5	77	25.0	86	SE			2	6k	5k	E		0	0	Dry	C. J. Hering.
Batavia, Dutch Guiana S.A.	30.06	763.4			80.6	27		E								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640.6			60.5	15.8	73	Calm	0	0		0	0			0	0	Clear	Thomas Herran.
York Factory, B. A.			29.81	757.2	52	11.1	90	N	12	5.4		2c	0	NW		0.10	2.5		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.			30.05	763.3	77	25.0	90	Calm			0					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Addie Fuller, Damariscotta river Me.			30.06	763.5	71	21.7		Calm			0	2c	8ck		SW			†D. clouds	Capt. James Jorgensen.
Steamer Leipzig. N, 41° 12′ W, 61° 38′.	S70 W		30.07	763.8	73.6	23.1		W			2		..d			Tranq'l		Raining	Capt. R. Hoffmann.
Steamer Nova Scotian N, 44° 59′, W, 58° 36′.	E by S	11	30.09	764.3	55	12.8		Calm			0					Tranq'l		Overcast	Capt. Ritche.

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, 6,042.1 ft., or 1,843.7 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.; Morgantown 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. * Approximated. † Detached clouds.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 13, 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			30.11	764.8	78.6	25.9	63	Calm			0		1			0	0	Clear	Charnot.
Algiers			30.16	766.0	78.8	26.0	69	NNE			2		1			0	0	Clear	Peter.
La Calle																			Kunts.
Tunis			30.06	763.4	86.4	30.2	35	NW			5		3			0	0	Fair	Jacques.
Sfax			30.13	765.3	81.2	29.0	52	SE			2		5			0	0	Fair	Chauvey.
Saida			30.18	764.1	87.8	31.0	27	NNW			2		1			0	0	Clear	Millot.
Tebessa			30.10	764.6	74.3	23.5		N			2		10			0	0	Hidden	Colin.
Geriville			30.07	763.6	88.5	31.4	23	NE			1		0			0	0	Clear	Buard.
Laghouat			30.08	763.9	93.2	34.0	22	SW			1		0			0	0	Clear	Guyot.
Biskra			30.08	764.1	91.4	33.0	32	Calm			0		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			30.21	767.3	62.6	17.0	64	NE			2		10			Inap.	Inap.	Raining	Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.20	767.0	66.6	19.2	51	W			1		9			0	0		Dr. Wierzbiski.
Eperies			30.15	765.8	68.7	20.4	54	NE			2		8			0	0		Julius Mikolik.
Gratz	28.91	734.9	30.10	764.6	68.9	20.5	53	SW			2		5			0.157	4.0		Andreas Rospini.
Hermannstadt	28.62	727.0	29.99	761.7	71.6	22.0	75	W			3		10			0.110	2.80	Raining	Prof. Reissenberger.
Kremsmünster	28.55	725.2	29.86	758.4	62.8	17.1	63	W			5		10			0.118	3.0		Prof. C. Wagner.
Lemberg			30.07	763.6	68.4	20.2	84	N			1		8			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.07	763.8	65.8	18.8	59	ENE			0		108			0.504	12.81		I.R.Hydrographic Office.
Szegedin			30.08	763.9	75.2	24.0	57	N			2		5			0	0		Karl Stancel.
Trieste			30.12	765.1	69.8	21.0	81	ENE			4		5			0	0		Prof. V. Farolfi.
Vienna			30.22	767.6	66.9	19.4	37	NW			2		4			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.35	770.8	74.3	23.5	55	NW			2		10		N	0	0	Covered	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			30.29	769.4	70.4	21.3		E	8	3.6			4			0	0	Blue sky	William Boswell.
Ardrossan			30.39	771.9	63	17.2		SSW			2		3					*D. clouds	William McNeil.
Armagh, Observatory			30.44	773.2	66.7	19.3		SW	4	1.8			7					*D. clouds	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.37	771.4	74.5	23.6		SW			1		2					*D. clouds	J. Dreyer.
Bradford			30.37	771.4	74.6	23.7		W			1		0			0	0	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.02	762.5	75.8	24.3		NE			1		10					Raining	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.35	771.6	81.0	27.2		NNW			1		1					Blue sky	H. Todd.
Cardington			30.40	772.1	82.0	27.8		NW			1		1					Blue sky	John McLaren.
Carlisle			30.37	771.4	72.9	22.7		SW			2		10			0	0	Overcast	T. Bell, for J. Carmell.
Chatham, School M. E			30.36	771.1	78.7	25.9		NW			1							Hazy	Capt. J. Fellowes, R.E.
Dartmoor	29.03	737.3	30.57	774.7	69.8	21.0		S			1		0					Blue sky	R. E. Power.
Donaghadee			30.40	772.1	61	16.1		SSE			2		8					*D. clouds	J. Mac Gowan.
Dover			30.40	772.1	66	18.9		WSW			1		0					Clear	J. Costello.
Eccles, (near Manchester.)			30.33	771.9	70.4	21.3		WNW	1 8	0.8			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			30.44	773.2	65.0	18.3		SE			3		0					Blue sky	The Staff.
Fort Napier, (Natal)	27.76	705.1	30.0	762.0	73.2	22.9		NE			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.06	763.5	76	24.4		W			1		10			Blank	Blank	Overcast	
Galway, Queen's College			30.23	767.8	75	23.9		W			1		4					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.08	764.0	75.5	24.2		E			4		3					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			30.34	770.6	66.5	19.2		WSW			1		10					Overcast	Lewis Stuart.
Great Yarmouth			30.38	771.6	70	21.1		NNE			2		0					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			30.40	772.1	81.5	27.5		W			1		5					Hazy	The Staff, for G. B. Airy
Guernsey			30.40	772.1	67	19.4		ENE			2		0					Blue sky	Dr. S. E. Hoskins.
Helston			30.38	771.6	69	20.6		E			2		0			0	0	Blue sky	M. P. Moyle.
Holyhead			30.42	772.7	68	20.0		SSW			3		0					Blue sky	John Tilston.
Kew, Observatory			30.39	771.9	75.4	24.1		WNW	6	2.7			1					Blue sky	The Staff.
Kingstown																			George Mitchell.
Leicester Museum			30.39	771.9	77.0	25.0		W			1		0					Blue sky	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.95	760.7	79.8	26.6		NW			1		4					*D. clouds	Corp'l F. Fraser, A.M.C.
Nairn			30.26	768.6	76	24.4		W			2		8					¾ covered	W. D. Penny.
Nassau, (Bahamas			30.15	765.8	84.0	28.9		NE			0		5					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.38	771.6	84.3	29.1		S			3		1c			0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.38	771.6	75.8	24.3		W			2		1					Hazy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.38	771.6	77	25 0		W			1		2					Blue sky	J. Lucas.
Plymouth			30.42	772 7	69.3	20.7		SSW			2		0					Blue sky	John Merrifield.
Roche's Point			30.42	772.7	67	19.4		SW			2		2					Fine	W. Kennedy.
Saint Ann's Head			30.43	772.9	63	17.2		Calm			0		2					Hazy	John C. Walker.
Saint Helier, Jersey			30.41	772.4	76.5	24.7		ENE			2		0					Clear	A. P. Amy.
Sandwick Manse, Orkneys			30.25	768.3	54.6	12.6		W	21	9.4			10					Drizzling	Rev. C. Clouston, LL. D.
Scarborough			30.36	771.1	71.7	22.1		SSW			1		2					Blue sky	F. Shaw.
Scutari Cemetery, Turkey			29.90	759.4	84.0	28.9		NE			2		2					Blue sky	Sergt. W. H. Lyne.
Sheffield			30.36	771.1	78.0	25.6		NW			1		3			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			30.39	771.9	74.9	23.8	67	Calm			0		4			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.40	768.3	69.2	20.7		W			2		7						Rev. S. J. Perry.
Stornoway, Lewis C. Harbr.			30.25	772.4	64	17.8		WSW			5		8					*D. clouds	John Smith.
Stratfield Turgiss			30.11	768.1	76.4	24.7		N			1		0					Blue sky	Rev. Charles H. Griffith.
Thurso			30.24	773.4	66	18.9		WNW			4		7					*D. clouds	John Trotter.
Truro, Royal Institution			30.45	772.1	75	23.9		SE			2		0					Blue sky	W. Newcombe.
Valencia, Observatory			30.40	772.1	65.2	18.4		S	14	6.3			2					*D. clouds	The Staff.
Sub-Stns.																			
Calf of Man, Isle of Man					58	14.4		SE			2		5						Thomas Dawson.
Cape Good Hope, Obs'y			30.08	764.0	59.5	15.3	92	WNW	16	7.6		4	5						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			30.52	775.2	55.0	12.8	86	NW			1		10kn			0	0	Cloudy	Francis Abbott, F.R.A.S.
Leith, Restaurig Cara			30.35	770.9	72.1	22.3		W			5					0	0	Cloudy	Andrew Gibb.
Mauritius, Observatory			30.25	768.3				E	20.6	9 2						0.04	1.5		C. Meldrum
Melbourne, Observatory			30.44	773.2	42.2	5.7	88	SE	5	2.2			0			0	0	Clear h'y dew	R. L. J. Ellery.
Monach Lighthouse, Hebride			30.26	768.6	56	13.3		SW			4		Fog			0	0	Dense fog	J. Youngclause.
North Unst, Shetland Is.			30.14	765.5	53	11.7		W			4		10						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,2 0 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			29.93	760.3	61.8	18.2	56	NW			7		5						
Fanoe			30.14	765.6	61.3	16.3	67	NW			6		5						
Godthaab, Greenland			29.53	750.1	41.0	5.0		Calm			0		8						
Stykkisholm, Iceland			29.48	748.7	51.1	12.3	91	SE			4		8						
Thorshavn, Faröe								WSW			5		8					Misty	
Vestervig			30.03	762.7	56.5	13.6	67	NW			7		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			30.39	772.0	68.0	20	35	NE			3	2c		NE		0	0	Slightly cl'dy	Normal School.
Amiens			30.35	770.8	80.2	26.8	48	NW			3		0			0	0	Clear	Normal School.
Avignon			30.08	764.1	78.8	26	36	N			4		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.35	770.8	69.8	21.0	41	N			3		2			0	0	Slightly cl'dy	C. Saillard.
Beaumotte, (near Angers)			30.38	771.6	75.6	24.2	33	NE	8.9	4 0			0			0	0	Clear	Beaumette Observatory.
Beauvais			30.39	771.8	72.9	22.7	39	NNE			1		0			0	0	Clear	Normal School.
Besançon			30.11	764.9	70.9	21.6	45	NE			6		0			Inap.	Inap.	Clear	Normal School.
Bourg en Bresse			30.32	770.0	71.1	21.7	53	N			4		0					Clear	Normal School.
Bourges			30.47?	773.8?	70 9	21.6	54	NE			4		0			0	0	Clear	Normal School.
Brest			30.30	769.7	78.3	25.7	54	SW			1		0			0	0	Clear	Naval Observatory.
Carcassonne			30.21	767.4	72.0	22.2	33	W			1		2		E	0	0	Slightly cl'dy	Normal School
Caen			30.41	772.3	69.6	20.9	70	NE			4		0			0	0	Clear	Normal School.
Chartres			30.37	771.3	77.7	25.4	56	E			4		0			0	0	Clear	Normal School.
Clermont			30.26	768.7	66.2	19.0	43	N			3		1		N	0	0		Puy de Dome Obs'y.
Commercy			30.39	771.8	66.0	18.9	49	NE			4	2c		NE		0	0	Slightly cl'dy	Normal School.
Commune de Greasque*			30.19	766.9	74.8	23.8	48	SW			4		5		NE	0	0		M. Kina.
Grenoble			30.19	766.7	70.3	21.3	62	NNE			1		8ck		SE	0	0	Very cloudy	Normal School.
La Roche-sur-Yon			30.41	772.3	80.6	27.0	50	NNE			4		2		SW	0	0	Slightly cl'dy	Normal School.
Le Mans			30.34	770.7	75.2	24	53	E			2		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			30.21	767.2	68.9	20.5	46	N			8		0			0	0	Clear	Normal School.
Mâcon			30.46	773.6	69.3	20.7	58	N			8		0			0	0	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			30.32	770.2	66.6	19.2	58	NE			2		0			0	0	Clear	Normal School.
Nismes			30.08	764.1	77.4	25.2	31	NW			8		0			0	0	Clear	Normal School.
Orleans			30.30	769.5	75.2	24	45	NE			2		0			0	0	Clear	Normal School.
Paris, Observatory			30.38	771.6	72.3	22.4	37	ENE			3		0			0	0	Clear	National Observatory.
Parthenay			30.34	770.6	87.1	30.6	55	NE			4		0			0	0	Clear	Normal School.
Privas			30.18	766.5	72.5	22.5		N			6		2		N	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.30	769.6	76.1	24.5	33	E			5		0			0	0	Blue sky	Naval Observatory.
Rouen			30.00	761.9	77.5	25.3	46	NW			2		0			0	0	Clear	Normal School.
Saint Lo			30.06	763.5	82.0	27.8	43	N			0		1			0	0		Normal School.
Tarbes	29.10	739.2	30.16	766.0	68.7	20.4		E			1		0			0	0	Clear	Normal School
Villefranche			30.25	768.3	73.2	22.9	63	N			4		2		N	0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.92	760.0	79.2	26.2													L'Abbé Marchesi.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.42	772.7	64.6	18.1	22	N	4	2			4			0	0		—. Falguère.
Montsouris, Paris			30.37	771.4	73.6	23.1	38	NE			2		0			0	0		Montsouris Observ'tory.
Perpignan			30.14	765.5	78.8	26.0	25	N	13.0	5.83			1		N	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.38	771.6	74.7	23.7	39	NE			1		0			0	0	Clear	E. Renou.
Toulouse			30.25	768.4	74.5	23.6	33	NW			2		1			0	0		Toulouse Observatory.
Tours			30.33	770.4	75.9	24.4	31	ENE			3		0			0	0	Clear	C. Marquet.
Versailles, (near Paris)			30.38	771.7	74.8	23.8	35	NE			3		0			0	0	Very clear	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

NOTE.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * 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			30.24	768.2	67.1	19.5	52	NW			5		7	W		0	0		Prof. T. Hoh.
Berlin			30.18	766.6	70.0	21.1	49	W			3		6			0.004	0.1		Prof. Arndt.
Breslau			30.27	768.9	65.5	18.6	40	W			8		6			0	0		Dr. P. Neugebauer.
Carlsruhe			30.33	770.4	68.0	20.0	49	SSE			1		9			0	0		A. Senz.
Cassel			30.33	770.3	73.8	23.2	51	WNW			4		4	WNW		0	0		Dr. H. Möhl.
Emden			30.28	769.0	67.5	19.7	68	NW			3		10			0	0		Prof. Prestel.
Frankfort on the Main			30.36	771.1	69.8	21.0	43	NW			1		3			0	0		Physical Society.
Friedrichshafen			30.28	769.2	67.1	19.5	48	NE			8		4			0	0		M. Wilhelm.
Hamburg			30.21	767.2	63.5	17.5	86	WNW			5		10			Inap.	Inap.	Showery	Captain F. Hegemann.
Kiel			30.13	765.3	66.2	19.0	62	NW			7		5			0.012	0.3		Prof. G. Karsten.
Königsberg, (Prussia.)			29.95	760.8	57.9	14.4	92	SW			7		10			0.228	5.8		Prof. E. Luther.
Köslin			30.16	766.0	56.5	13.6		SW			6		10			0.020	0.5		H. Müller.
Leipsic			29.89	759.1	69.1	20.6	44	W			2		7			0	0		Prof. Bruhns.
Memel			29 91	759.6	57.2	14.0	88	SW			8		10n			0.071	1.8	Raining	Reinbrecht & Skalweit.
Münster			30.38	771.7	68.5	20.3	72	NW			3		4			0	0		Prof. E. Heis.
Neufahrwasser			29.99	761.8	59.4	15.2	85	WSW			6		10			0.008	0.2	Rainy	A. Lothes.
Posen			30.18	766.5	70.7	21.5	56	W			7		9			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.35	770.9	68.0	20.0	40	NE			3		4			0	0		Dr. Schur.
Stuttgart			30.35	770.9	67.1	19.5	45	NE			1		2			0	0		Prof. Schoder.
Thorn			30.09	764.2	68.5	20.3	52	W			5		8			0.020	0.5		Dr. Hasenbalg.
Treves, (Trier)			30.32	770.1	71.4	21.9	48	S			3		2			0	0		Prof. Flesch.
Wustrow, Naval School			30.17	766.4	63.7	17.6	85	W			7		10			0.063	1.6		E. F. Schütz.

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.91	759.6	83.0	31.1		W					sk					Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	764.9	70.2	21.2	51	Calm	0	0			9			0	0		
Padua			30.12	765.1	70.0	21.1	51	NE	10.7	4.7			10			0	0		
Vicenza			30.12	765.0	71.8	22.1	48	ESE	0.7	0.3			5	E		0	0		
Verona			30.09	764.3	76.1	24.5	69	NE			1		0			0	0		
Bergamo	28.78	730.9	30.04	762.9	71.6	22.0	51	SSW			4		2			0	0		
Domodossola	29.03	737.3	30.01	762.3	75.2	24.0	62	S			4		2			0	0		
Milan			30.11	764.8	80.1	26.7	46	S			2		3	S		0	0		
Pavia			30.13	765.2	72.9	22.7	42	E			4		0			0	0		
Moncalieri			30.13	765.3	71.6	22.0	56	SSW	0.7	0.3			2	NE		0	0		
Mondovi	28.26	717.9	30.11	764.8	66.0	18.9	54	NW			4		1	NE		0	0		
Porto Maurizio			30.10	764.6	77.4	25.2	29	ENE			4		2	SW		0	0		
Genoa			30.08	764.0	78.1	25.6	28	N	1.3	0.6			2	NE		0	0		
Piacenza			30.13	765.4	70.9	21.6	48	SE	5.6	2.5			4	E		0	0		
Parma			30.12	765.0	71.8	22.1	66	NNE			6		7			0	0		
Bologna			30.17	766.4	69.1	20.6	50	SE			6		4	W		0.236	6.0		
Florence			30.07	763.7	72.1	22.3	44	NE			8		10			0	0		
Leghorn			30.04	762.9	71.1	21.7	43	NE	18.1	8.1			10			0	0		
Siena	28.81	731.8	29.97	761.3	67.5	19.7	51	NE	11.9	5.3			9	NE		0.012	0.3		
Urbino	28.58	725.8	30.09	764.3	58.8	14.9	88	NE			4		10			0.484	12.3		
Ancona			30.10	764.4	70.9	21.6	66	N			4		10			0.56	14.3	Showery	
Grosseto			29.97	761.3	73.4	23.0	50	NNE			6		5	NW		0.028	0.7		
Rome			29.91	759.8	71.4	21.9	63	NNW	8.1	3.6			7	E		0.087	2.2	Showery	
Naples, O. U.			29.91	759.6	82.9	28.3	54	SW			4		8	SW		0	0		
Lecce			29.93	760.1	85.1	29.5	51	NNE	12.5	5.6			4			0	0		
Cosenza			29.91	759.7	89.4	31.9	64	WNW	0	0			3			0	0		
Riposto, (Sicily)			29.93	760.1	81.3	27.4	67	ENE			2		3	NW		0	0		
Palermo			29.85	758.3	85.5	29.7	44	ENE	5.6	2.5			3			0	0		
Caltanissetta	27.98	710.7	29.85	758.2	80.2	26.8	41	W			4		1	E		0	0		
Sub-Series.																			
Naples, S. R.			29.93	760.1	80.1	26.7	59	WSW	3.8	1.7			6	NW		0	0		Prof. F. Brioschi.
Pesaro			30.16	766.1	66.7	19.3	68	NE	39.0	17.44			10n	NE				Light rain	L. Guidi.

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			30.42	772.6	70.7	21.5		N			2								
Groningen			30.26	768.5	63.7	17.6		NW			4								
Helder			30.33	770.4	63.0	17.2		WNW			4								
Utrecht			30.33	770.4	68.2	20.1	79	WNW			2		5					Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	54.0	12.2	74	NNW	21.0	9.4			8			0.031	0.8		
Brönö			29.76	755.9	51.1	10.6	70	W	18	8			10			Inap.	Inap.	Light rain	
Christiania			29.74	755.3	70.5	21.4	26	N	14.8	6.6			4			0.154	3.9		
Tromsö			29.66	753.4	53.2	11.8	65	SW	2	1			5			0.106	2.7		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 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	73.4	23.0	76	SSE	2.4	1.08			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.94	760.4	102.4	39.1	11	NNE	3.7	1.67			3			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			29.96	761.0	73.8	23.2	73	SW	2.6	1.17			10			0	0		Capt D. A. da Cunha.
Lisbon			30.02	762.6	83.8	28.8	43	SW	12.5	5.6			0			0	0		The Observatory.

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

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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	66.0	18.9	50	SSW	18	8			8						Astronomical Obs.
Wilna			29.96	760.9	67.3	19.6	47	SW	4	2			6						Astronomical Obs.
Dorpat			29.77	756.1	60.4	15.8	85	SSW	11	5			10					Raining	Physical Cabinet.
St. Petersburg			29.74	755.5	69.6	20.9	56	SW	13	6			7						Central Physical Obs.
Kuopio			29.59	751.6	64.8	18.2	84	SE	7	3			10					Thunder-storm	Ch. Forsten.
Kieff			29.97	761.1	71.1	21.7	63	NW	11	5			2						Physical Cabinet.
Nikolaiev			29.95	760.6	91.0	32.8	38	NNW	9	4			5						Kurdakof.
Kertch			29.89	759.1	86.9	30.5	49	N	7	3			2						Lagorio.
Moscow			29.87	758.6	84.7	29.3	45	SSW	4	2			2						Meteorological Obs.
Lugan			29.76	755.9	86.2	30.1	44	NE	13	6			5			Blank	Blank		Meteorological Obs.
Archangel			29.56	750.8	69.4	20.8	83	NW	18	8			9						Ogorodnikof.
Tiflis	28.19	723.7	29.85	758.1	75.9	24.4	65	S	9	4			6						Physical Observatory.
Astrakhan			29.85	758.3	77.2	25.1	48	N	7	3			10			Blank	Blank		Sebastianof.
Kasan			29.75	755.6	86.5	30.3	46	NE	9	4			4						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.81	732.4	29.73	755.1	76.3	24.6	42	W	4	2			5						Meteorological Obs.
Nukuss			29.56	750.8	88.3	31.3	42	N	4	2			0						
Kasaly																			Bobrof.
Tashkend	27.96	710.1	29.50	749.3	94.3	34.6	53	Calm	0	0			2						Michelson.
Barnaul			29.55	750.5	65.7	18.7	65	Calm	0	0			5						Meteorological Obs.
Yeniseisk			29.46	748.2	65.3	18.5	77	N	2	1			7			Blank	Blank		Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.71	754.5	88.9	31.6	71	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.67	753.7	65.1	18.4	98	SE	13	6			10						
Nikolaievsk, on the Amoor					50.9	10.5	96	ENE	9	4			10						

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 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			29.98	761.4	90.3	32.4	25	SE	3.0	1.33		0	0			0	0	Clear	Royal Observatory.
San Fernando			30.02	762.6	86.2	30.1	33	E	32.0	14.3		0	0						The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			29.64	752.9	65.1	18.4	40	S			2		5			0	0		
Umea			29.56	750.7	59.2	15.1	55	E			2		10			0	0		
Hernosand			29.43	747.6	51.8	11.0	95	E			4		10			0.276	7.0	Raining	
Stockholm			29.91	759.8	55.8	13.2	97	NW			4		7			0.024	0.6		
Wisby			29.67	753.5	62.6	17.0	76	WNW			7		10			0.004	0.1		
Sub-Series.																			
Upsala			29.51	749.5	57.0	13.9	79	NW	12.8	5.7			8		NW	0.234	5.94	Raining	Dr. Hildebrandsson.

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

SWISS SERIES.

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

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	28.79	731.2	30.18	766.5	66.2	19.0	48	NNE			10		1			0	0	Clear	The Observatory.
Zurich	28.67	728.3	30.26	768.6	69.3	20.7	54	NE			2		2			0	0	Clear	The Observatory.

NOTE—For Geneva the corresponding departures from the normal values are: Barometer, +3.7 mm.; Thermometer, —3.5 cent.; Relative Humidity, —5 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

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			29.96	760.9	77.9	25.5	63	NE	19	8.5			4		ENE	0	0		
Fao, (Persian Gulf)			29.57	751.0	96.8	36.0		NW			3		10					Dusty	
Salonica			30.03	762.8	93.6	34.2		SE			1		0						
Valona			29.96	761.0	81.0	27.2		W			1		0						
Varna			29.96	761 0	84.2	29.0		N			2		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.73	755.2	89.4	31.9	56	W			2		2s		SW	0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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			29.77	756.1	76.8	24.9	46	NW	8	3.6			0			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.02	762.5	81	27.2		SW	3	1.3		0	0			0	0	Clear	W. R Bigg.
*Chatham, N. B			29.81	757.2	77	25.0	69	NW	7	3.1		0	0			0	0	Clear	G. A. Blair.
Charlottetown. P. E. Island			29.81	757.2	73	22.8	77	NW	6	2.7		0	0			0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			29.93	760.2	83.7	28.7		S			2	0	0			0	0	Bright	James Smith, M. A.
Dalhousie, N. B					72.5	22.5	74	W			1					0.02	0.5		H. A. Johnson.
Esquimault, B. C																			W. H. Bevis.
Fredericton, N. B			29.86	758.4	77.3	25.2	69	NW	8	3.6		0	0			0.263	6.68	Fair	Prof. Harrison.
*Fort Garry, Manitoba			30.16	766.1	53	11.7	96	W	2	0.9		..k	2ks	W	W	0	0	Fair	James Stewart.
Goderich, Ontario			30.04	763.0	75.3	24.1	71	Calm			0	0	0			0	0	Clear	H. J. Strang, M. A.
Granton, Ontario	28.97	735.8	30.01	762.2	77	25.0		Calm			0	1cs	0			0	0	Clear	James Grant.
*Halifax, N. S.			29.82	757.4	63	17.2	93	SW	5	2.2			8n			0	0	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.01	762.2	77	25.0	83	W	3	1.3		0	0			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			29.74	755.4	73.0	22.8	74	SW	4	1.8		3k	0	SW		0	0	Fair	C. H. Rigby.
*Montreal, Quebec			29.92	760.0	76	24.4	83	SW	12	5.4		0	2ks		SW	0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			29.94	760.5	77	25.0	65	W	10	4.5		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.03	762.7	75	23.9	79	W	4	1.8		2c	0	W		0	0	Fair	Rev. R. Mosley.
*Port Dover, Ontario			30.03	762.7	75	23.9	95	Calm	0	0			Fog			0	0	Foggy	H. Morgan.
Port Hastings, N. S.			29.80	756.9	66.3	19.1		NW	6	2.7						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.02	762.5	76	24.4	95	E	2	0.9			Fog			0	0	Foggy	M. Payne.
*Quebec, Quebec			29.90	759.4	79	26.1	82	S	1	0.4		8k	0	S		0	0	Fair	Capt. Ashe, R. N.
St. John, N. B.			29.90	759.4	60	15.6	94	Calm	0	0		0	0			0	0	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario			30.02	762.5	76	24.4	73	Calm	0	0		2cs	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.01	762.2	76	24.4	64	N	5	2.2		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario	28.78	731.0	30.00	762.0	73.7	23.2	81	SW	3	1.3		7ck	0	NW		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			29.77	756.1	74	23.3	75	SW	7	3.1		2k	0	W		0	0	Fair	T. C. Hill.
*Toronto, Ontario			30.02	762.5	76	24.4	75	N	6	2.7		5k	5ks	W	W	0.42	10.7	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.02	762.5	75.3	24.1	97	E	1	0.4		5ck	3ks	W		0.73	18.5	Fine	J. Montgomery.
Sub-Series.																			
St. John's, Newfoundland			29.90	759.4	67	19.4	64	W				5c	0			0	0	Clear	John Delaney.

NOTE.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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	80	26.7	74	Calm	0	0		2cs	Haze	W		0	0	Hazy	
Alpena, Mich.			30.00	762.0	75	23.9	68	N	3	1.3		2ck	0	N		0	0	Fair	
Atlantic City, N. J.			30.00	762.0	81	27.2	78	NW	4	1.8		5cs	2s	NW		0	0	Cloudy	
Augusta, Ga.			30.12	765.0	83	28.3	75	S	2	0.9		0	0			0	0	Clear	
Baltimore, Md.			30.05	763.3	81	27.2	70	W	6	2.7		5ck	Haze			0.05	1.3	Fair	
Barnegat, N. J.			29.99	761.7	85	29.4	75	NW	5	2.2		2k	0	W		0	0	Fair	
Benton, Montana	27.47	697.7	30.27	768.8	51	10.6	64	NE	8	3.6			10s		NE	0	0	Cloudy	
Bismarck, Dakota	28.43	722.1	30.08	764.0	59	10.0	64	S	4	1.8			10ks		S	0	0	Cloudy	
Boston, Mass.			29.94	760.5	82	27.8	70	W	6	2.7		1cs	Haze	W		Inap.	Inap.	Hazy	
Breckenridge, Minn.			30.12	765.0	60	15.6	87	Calm	0	0		0	8ks			0	0	Cloudy	
Buffalo, N. Y.			30.00	762.0	76	24.4	90	W	7	3.1		0	5ks		W	0	0	Fair	
Burlington, Vt.			29.92	760.0	80	26.7	66	S	6	2.7		2c	0			0	0	Fair	
Cairo, Ill.			30.08	764.0	76	24.4	86	SW	6	2.7		2cs	5s		W	0.85	21.6	Fair	
Cape Hatteras, N. C.			30.04	763.0	80	26.7	82	W	11	4.9		5c	Haze			0	0	Fair	
Cape Henry, Va.			30.02	762.5	85	29.4	68	SW	5	2.2		5c	Haze			0	0	Fair	
Cape Lookout, N. C.			30.12	765.0	82	27.8	83	W	18	8.0		0	5s			0	0	Fair	
Cape May, N. J.			30.02	762.5	77	25.0	95	W	4	1.8			10s		NW	0.02	0.5	Cloudy	
Charleston, S. C.			30.13	765.3	87	30.6	72	SW	4	1.8		0	5k		SW	0	0	Fair	
Cheyenne, Wyoming	24.21	614.9	30.15	765.8	57	13.9	87	E	4	1.8			Fog			0	0	Foggy	
Chicago, Ill.			30.00	762.0	71	21.7	85	NE	2	0.9			Fog			0	0	Foggy	
Cincinnati, Ohio			30.03	762.7	78	25.6	88	S	2	0.9			10s			0.90	22.9	Cloudy	
Cleveland, Ohio			30.02	762.5	76.7	24.8	84	S	8	3.6		1ck	5ks	W	W	0	0	Fair	
Colorado Springs, Col.	24.22	615.2	30.09	764.3	65	18.3	58	N	11	4.9		8ck	0			Inap.	Inap.	Fair	
Corsicana, Tex.			30.09	764.3	75	23.9	90	S	4	1.8		2cs	0			0	0	Clear	
Davenport, Iowa			29.98	761.5	77	25.0	82	E	8	3.6		5ck	0	SW		0	0	Fair	
Denison, Tex.			30.10	764.5	82	27.8	78	S	8	3.6		0	0			0	0	Clear	
Denver, Col.	24.97	634.2	30.19	766.8	58	14.4	81	N	4	1.8			10s			0.04	1.0	Cloudy	
Detroit, Mich.			29.98	761.5	77	25.0	90	NW	3	1.3		1cs	Haze	SW		0	0	Clear	
Dodge City, Kan.	27.45	697.2	29.62	752.3	76	24.4	72	SE	10	4.5		0	0			0	0	Clear	
Dubuque, Iowa			30.00	762.0	72	22.2	85	E	1	0.4		2cs	0			0	0	Fair	
Duluth, Minn.			30.00	764.3	66	18.9	73	Calm	0	0			10s		W	0	0	Cloudy	
Eastport, Me.			29.85	758.2	64	17.8	78	Calm	0	0		0	Fog			0	0	Fair	
Erie, Pa.			30.00	762.0	79	26.1	78	S	4	1.8		4c	Sm'e	W		0	0	Fair	
Escanaba, Mich.			30.00	762.0	67	19.4	94	N	23	10.3			10n		N	0.18	4.6	Light rain	
Fort Gibson, Indian Ter.			30.00	762.0	78	25.6	86	SE	3	1.3			10s		SE	0.29	7.4	Cloudy	
Ft. St. Michael, Alaska			30.30	769.6	53	11.7	93	S			2		10s			0	0	Cloudy	
Fort Sill, Indian T.	28.85	732.8	29.90	759.4	80	26.7	78	S	4	1.8		0	0			0	0	Clear	
Fort Sully, Dakota	28.46	722.9	30.04	763.0	62	16.7	88	Calm	0	0		2c	0	NW		0.29	7.4	Clear	
Galveston, Tex.			30.15	765.8	83	28.3	74	SW	2	0.9		8ck	2ks			0	0	Cloudy	
Grand Haven, Mich.			30.01	762.2	78	25.6	75	NE	6	2.7		1c	Sm'e		NE	0	0	Clear	
Indianapolis, Ind.			30.02	762.5	76	24.4	90	S	3	1.3		2k	5s		SW	2.58	65.5	Fair	
Indianola, Tex.			30.13	765.3	80	26.7	82	S	8	3.6		8ck	0			0	0	Cloudy	
Jacksonville, Fla.			30.17	766.3	86	30.0	64	SW	5	2.2		0	0			0	0	Clear	
Keokuk, Iowa			29.95	760.7	78	25.6	82	E	4	1.8		8k,c	0	S		0.22	5.6	Fair	
Key West, Fla.			30.16	766.1	84.0	28.9	75	E	9	4.0		0	2s		E	0	0	Fair	
Kittyhawk, N. C.			30.07	763.8	81	27.2	78	W	8	3.6		10cs	Haze			0	0	Cloudy	
Knoxville, Tenn.			30.15	765.8	72	22.2	90	NW	1	0.4		2k	0	SW		0.22	5.6	Fair	
La Crosse, Wis.			29.95	760.7	76	24.4	85	NW	3	1.3		0	0			0	0	Clear	
Leavenworth, Kan.			29.97	761.2	81	26.7	78	Calm	0	0		5c	0			0	0	Fair	
Lexington, Ky.	29.02	737.1	30.08	764.0	77	25.0	77	SW	4	1.8		0	0			0.78	19.8	Clear	
Louisville, Ky.			30.06	763.5	78	25.6	82	Calm	0	0			8s		SW	0.19	4.8	Cloudy	
Lynchburg, Va.			30.04	763.0	85	29.4	61	W	2	0.9		2c	0	NE		0	0	Clear	
Malone, N. Y.			29.90	759.4	78	25.6	70	SW	6	2.7		0	0			0	0	Clear	
Manhattan, Kan.	28.72	729.5	29.81	757.2	72	22.2	85	S	2	0.9		0	0			0.45	11.4	Clear	
Marquette, Mich.			30.03	762.7	64	17.8	89	Calm	0	0		8ck	5ks	W	W	0	0	Cloudy	
Memphis, Tenn.			30.12	765.0	76	24.4	81	S	6	2.7		5ck	0			0.02	0.5	Fair	
Milwaukee, Wis.			30.03	762.7	78	25.6	77	SE	2	0.9		0	Fog			0	0	Foggy	
Mobile, Ala.			30.17	766.3	80	26.7	78	NW	2	0.9		0	0			0	0	Clear	
Montgomery, Ala.			30.15	765.8	78.5	25.8	80	Calm	0	0		0	Haze			0	0	Clear	
Morgantown, W. Va.	29.16	738.1	30.07	763.8	75	23.9	81	Calm	0	0			10s		SW	0.80	20.3	Cloudy	
Mt. Washington, N. H.	24.09	609.6	30.36	771.1	56	13.3	68	NW	20	8.9		0	0			0	0	Clear	
Nashville, Tenn.			30.10	764.5	79	26.1	73	Calm	0	0		2k	Haze	SW		1.06	26.9	Fair	
New Haven, Conn.			29.98	761.5	83	28.3	64	NW	2	0.9		5c	Haze	NW		0	0	Fair	
New London, Conn.			29.98	761.5	82	27.8	67	NW	3	1.3		5c,cs	0	W		0	0	Fair	
New Orleans, La.			30.16	766.1	82	27.8	72	SW	2	0.9		1k	Haze	W		Inap.	Inap.	Clear	
Newport, R. I.			29.96	761.0	81	27.2	62	Calm	0	0		5ck	0	NW		0	0	Fair	
New York, N. Y.			30.02	762.5	82	27.8	63	NW	5	2.2		5k	Haze			0	0	Fair	
Norfolk, Va.			30.06	763.5	84	28.9	71	SW	4	1.8		8c	0			0.15	3.8	Fair	
North Platte, Neb.	27.21	691.1	29.70	754.4	65	18.3	73	NE	6	2.7		5ck	2s	W	W	0.07	1.8	Fair	
Omaha, Neb.	28.97	735.8	30.00	762.0	72	22.2	75	N	11	4.9		5c	2cs			0	0	Fair	
Oswego, N. Y.			30.02	762.5	71.2	21.8	92	SW	8	3.6		5ck	5s	NW	W	0	0	Foggy	
Pembina, Dakota			30.11	764.8	56	13.3	87	NW	4	1.8		0	0			0	0	Clear	
Philadelphia, Penn.			30.00	762.0	83	28.3	74	N	5	2.2		2ck	Fog			0	0	Foggy	
Pike's Peak, Colorado	18.10	459.7	30.31	769.9	40	4.4	56	S	12	5.4		8ck	0	SW		0.02	0.5	Fair	
Pittsburgh, Penn.			30.05	763.3	74	23.3	90	SW	4	1.8			10s			0.12	3.0	Cloudy	
Port Huron, Mich.			29.99	761.7	71	21.7	90	N	4	1.8		1k	1s			0.64	16.3	Clear	
Portland, Me.			29.92	760.0	79	26.1	74	W	4	1.8		0	Haze			0	0	Clear	
Portland, Oregon			30.16	766.1	61	16.1	77	S	3	1.3		1cs	2ks			0	0	Fair	
Punta Rassa, Fla.			30.17	766.3	82.5	28.1	78	E	8	3.6		Haze	0			0	0	Clear	
Rochester, N. Y.			30.00	762.0	77	25.0	86	W	7	3.1		2k	Fog	W	W	0	0	Fair	
Salt Lake City, Utah	25.60	650.2	29.93	760.2	66	18.9	27	NE	4	1.8		0	0			0	0	Clear	
Sandy Hook, N. J.			30.00	762.0	81	27.2	74	NW	6	2.7		5ck	Fog	NW		0	0	Fair	
San Diego, Cal.			30.02	762.5	65	18.3	83	N	4	1.8			10s		N	0	0	Cloudy	
San Francisco, Cal.			30.00	762.0	55	12.8	80	SW	14	6.3		0	0			0	0	Clear	
Santa Fé, N. M.	23.38	593.8	29.92	760.0	63	17.2	67	E	6	2.7		0	0			Inap.	Inap.	Clear	
Savannah, Ga.			30.14	765.5	89	31.7	63	SW	4	1.8		0	Haze			0	0	Hazy	
Shreveport, La.			30.17	766.3	82	27.8	83	S	1	0.4		Haze	0			0	0	Clear	
Smithville, N. C.			30.13	765.3	82	27.8	74	SW	9	4.0		1k	0	SW		0	0	Clear	
Springfield, Mass.			29.96	761.0	83	28.3	65	NW	4	1.8		2cs	Haze			0	0	Fair	
St. Louis, Mo.			30.01	762.2	75	23.9	90	SW	8	3.6			10s			0.32	8.1	Cloudy	
St. Marks, Fla.			30.15	765.8	82	27.8	78	Calm	0	0		0	2ks			0	0	Fair	
St. Paul, Minn.			30.03	762.7	68	20.0	76	N	3	1.3		10cs	0	N		0.65	16.5	Cloudy	
St. Paul's Island, Alaska			30.22	767.6	42	5.6	83	SE	8	3.6			10s			0	0	Cloudy	
Thatcher's Island, Mass.			29.92	760.0	75	23.9	81	SW	3	1.3		1c	0	W		0	0	Hazy	
Toledo, Ohio			29.98	761.5	79	26.1	78	SW	6	2.7		2c	Sm'e	SW		0.70	17.8	Clear	
Tucson, Arizona	27.57	700.3	30.16	766.1	81	27.2		E				0	10ks		E	0	0	Cloudy	
Tybee Island, Ga.			30.13	765.3	84	28.9	75	W	4	1.8		0	0			0	0	Clear	
Vicksburg, Miss.			30.18	766.6	73	22.8	90	SE	3	1.3		2k	8s	NE		0.45	11.4	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.	24.37	619.0	29.85	758.2	52	11.1	34	SE	7	3.1		1c	0	W		0	0	Clear	
Washington, D. C.			30.04	763.0	79	26.1	76	W	4	1.8		1cs	8s		W	Inap.	Inap.	Cloudy	
Wilmington, N. C.			30.12	765.0	82	27.8	78	W	10	4.5		1cs	0			0	0	Clear	
Wood's Holl, Mass.			29.97	761.2	77	25.0	76	SW	4	1.8		2k	0	S		0	0	Clear	
Wytheville, Va.	27.81	707.1	29.96	759.4	74	23.3	81	W	4	1.8		5k	2s	W	W	0	0	Cloudy	
Yankton, Dakota	28.81	731.8	30.06	763.5	65	18.3	92	E	1	0.4			10s			1.50	38.1	Cloudy	
Yuma, Arizona			29.93	760.2	78	25.6		S				2c	0			0	0	Fair	
Sub-Series.																			
P'nte-a-Pitre, G'd'l'pe, W. I.			30.01	762.2	80	26.7	82	NE				2k	5ks			0.08	2.0	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.			30.21	767.3	80	26.7	78	Calm	0	0		2c	2n	E	E	0	0		James Hall.
St. Georges, Bermudas			30.04	763.0	79.5	26.4	80	NNW	10	4.5			10n			0	0	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.38	695.4	30.06	763.5	71	21.7	87	N	3.0	1.3		5c	0	N		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.03	762.7	79	26.1	82	E			2	5k	10ck	E		0	0	Dry	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.6			84.2	29		E								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1			66.0	18.9	75	S	2	0.9		3c	4s			0	0	Fair	Thomas Herran.
York Factory, B. A.			29.81	757.2	54.5	12.5	87	E	12	5.4			9s			Blank	Blank		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.			30.07	763.8	76	24.4	95	NE			2					0.28*	7.1*	Cloudy	Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Addie Fuller, Damariscotta river, Me.			29.98	761.5	78	25.6		NW			4		0					Blue sky	Capt. James Jorgensen.
Steamer Leipzig, N, 40° 6′ W, 66° 3′.	S70W		29.99	761.7	80.4	26.9		W			1		0			Tranq'l		Blue sky	Capt. R. Hoffmann.
Steamer Nova Scotian, N, 46° 28′, W, 53° 08′.	Various	10	30.08	764.0	58	14.4		SW			2					Light swells	W. W.	Foggy	Capt. Ritche.

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.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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 added 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. * Rain-fall from 1 a. m. until 6 a. m. of the 13th.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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			30.14	765.6	79.7	26.5	65	NE			1		1			0	0	Clear	Charnot.
Algiers			30.19	766.8	76.6	24.8	74	N			1		0			0	0	Clear	Peter.
La Calle																			Kunts.
Tunis			30.09	764.3	84.2	29.0	32	NW			5		4			0	0	Fair	Jacques.
Sfax			30.18	766.5	83.8	28.8	46	SE			3		2			0	0	Clear	Chauvey.
Gafsa			30.11	764.9	86.0	3[illegible].0	25	NNW			2		1			0	0	Clear	Millot.
Tebessa			30.11	764.9	75.2	24.0		W			2		2			0	0	Clear	Colin.
Geriville			30.11	764.7	84.2	29.0	20	N			3		1			0	0	Clear	Ruard.
Laghouat			30.14	765.5	95.0	35.0		SW			2		0			0	0	Clear	Guyot.
Biskra			30.14	765.6	91.4	33.0	34	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			30.19	766.8	74.7	23.7	57	Calm			0		7			0	0		Prof. Ivan Stosir.
Cracow, I. R. Observatory			30.19	766.8	69.4	20.8	49	W			2		6			0	0		Dr. Wierzbiski.
Eperies			30.15	765.9	70.2	21.2	64	NE			2		6			0	0		Julius Mikolik.
Gratz	29.07	738.4	30.23	767.9	72.1	22.3	44	NNW			2		8			0	0		Andreas Rospini.
Hermannstadt	28.68	728.5	30.05	763.2	75.4	24.1	58	NNE			1		9			0	0		Prof. Reissenberger.
Kremsmünster	28.68	728.4	29.98	761.6	64.8	18.2	65	W			2		5			0	0		Prof. C. Wagner.
Lemberg			30.05	763.2	67.6	19.8	87	W			4		5			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.13	765.2	72.9	22.7	46	E			6		8os			0	0		I.R.Hydrographic Office.
Szegedin			30.13	765.2	75.2	24.0	42	N			2		3			0	0		Karl Stancel.
Trieste			30.14	765.5	77.0	25.0	40	ENE			2		1			0	0		Prof. V. Farolfi.
Vienna			30.19	766.9	73.0	22.8	50	WNW			3		2			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.41	772.5	72.3	22.4	63	ENE			3		6		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			30.33	770.4	72.0	22.2		ESE	7	3.1			4			0	0	Blue sky	William Boswell.
Ardrossan			30.42	772.7	66	18.9		SSW			1		1					*D. clouds	William McNeil.
Armagh, Observatory			30.47	773.9	72.9	22.7		WSW	5	2.2			1					*D. clouds	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.41	772.4	76.5	24.7		SW			1		0					Blue sky	J. Dreyer.
Bradford			30.39	771.9	78.0	25.6		W			1		0			0	0	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	82.0	27.0		E			1		9					Overcast	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.40	772.1	87.5	30.8		SW			1		1					Blue sky	H. Todd. [H. C.
Cardington			30.41	772.4	88.0	31.1		SW			1		3					Blue sky	John McLaren.
Carlisle			30.38	771.6	75.9	24.4		W			1		0			0	0	Blue sky	T. Bell, for J. Carmell.
Chatham, School M. E			30.42	772.7	79.2	26.2		NE			1		0					Blue sky	Capt. J. Fellowes, R.E.
Dartmoor	29.05	737.9	30.40	774.4	79.6	26.4		Calm			0		0					Blue sky	R. E. Power.
Donaghadee			30.42	772.7	61	16.1		NNE			2		4					*D. clouds	J. Mac Gowan.
Dover			30.44	773.2	69	20.6		NE			3		1					¼ clouded	J. Costello.
Eccles, (near Manchester.)			30.40	772.1	79.6	26.4		W	3.8	1.7								Blue sky	Thomas Mackereth.
Falmouth, Observatory			30.43	772.9	68.4	20.2		ENE			3		0					Hazy	The Staff.
Fort Napier, (Natal)	27.82	706.6	30.06	763.5	73.8	23.2		NE			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	79	26.1		W			3		2?			Blank	Blank	Overcast?...	
Galway, Queen's College			30.25	768.3	86	30.0		W			1		1					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.01	763.5	81.0	27.2		E			4		3					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			30.38	771.6	67.9	19.9		W			1		7					Fine	Lewis Stuart.
Great Yarmouth			30.44	773.2	67	19.4		S			3		0					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			30.42	772.7	80.8	30.4		NE			1		0					Blue sky	The Staff, for G. B. Airy
Guernsey			30.40	772.1	70.5	21.4		NE			2		0					Blue sky	Dr. S. E. Hoskins.
Helston			30.35	770.9	62	16.7		E			2		0			0	0	Blue sky	M. P. Moyle.
Holyhead			30.44	773.2	63	17.2		W			1		0					Blue sky	John Tinston.
Kew, Observatory			30.41	772.4	82.0	27.8		N	4	1.8			1					Hazy	The Staff.
Kingstown																			George Mitchell.
Leicester Museum			30.40	772.1	82.9	28.3		W			1		1					Hazy	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			30.00	762.0	79.0	26.1		NW			1		4					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			30.31	769.9	70	21.1		W			1		5					½ clouded	W. D. Penny.
Nassau, (Bahamas			30.12	765.0	84.5	29.2		NE			4		6					Thunder-storm	Surg. Maj. Henry.
Nottingham, Observatory			30.40	772.1	88.3	31.3		WNW			2		0			0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.41	772.4	82.4	28.0		W			2		0					Blue sky	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.39	771.9	84	28.9		Calm			0		1					Blue sky	J. Lucas.
Plymouth			30.42	772.7	76	24.4		S			1		0					Blue sky	John Merrifield.
Roche's Point			30.41	772.4	68	20.0		SSE			2		2					Fine, foggy	W. Kennedy.
Saint Ann's Head			30.42	772.7	73	22.8		Calm			0		0					Blue sky	John C. Walker.
Saint Helier, Jersey			30.37	771.4	80.0	26.7		E			4		0					Clear	A. P. Amy.
Sandwick Manse, (Orkneys)			30.30	769.6	56.5	13.6		W	21	9.4			10					Misty	Rev. C. Clouston, LL.D.
Scarborough			30.39	771.9	68.3	20.2		SSE			1		1					Blue sky	F. Shaw.
Scutari Cemetery, Turkey			29.93	760.2	85.8	29.9		NE			2		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			30.38	771.6	83.0	28.3		WNW			1		2			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			30.45	773.4	75.0	23.9	55	SW			1		0			0	0	Blue sky	Rev. Francis Redford.
Stonyhurst, Observatory			30.40	772.1	73.9	23.3		W			1							Blue sky	Rev. S. J. Perry.
Stornoway, Lewis C. Hobr.			30.30	769.6	66	18.9		SW			3		10					Overcast	John Smith.
Strathfield Turgiss			30.42	772.7	83.8	28.8		NE			1		0					Blue sky	Rev. Charles H. Griffith.
Thurso			30.27	768.8	69	20.6		NW			4		7					*D. clouds	John Trotter.
Truro, Royal Institution			30.41	772.4	84	28.9		E			2		0					Blue sky	W. Newcombe.
Valencia, Observatory			30.40	772.1	70.5	21.4		SSW	7	3.1								Hazy	The Staff.
Sub-Series.																			
Calf of Man, Isle of Man					72	22.2		S			1		0						Thomas Dawson.
Cape Good Hope, Obs'y			30.26	768.6	62.4	16.9	77	WNW	7	3.1		2	3						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			30.61	777.5	54.5	12.5	86	SE			1		0			0	0		Francis Abbott, F.R.A.S.
Leith, Restaurig Park			30.38	771.6	73.2	22.9		W			3					0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.28	769.1				E	20.6	9.2						0.17	4.3		C. Meldrum
Melbourne, Observatory			30.15	773.4	43.0	6.1	85	E	2	0.9			0			0	0	Clear, h'y dew	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.30	769.6	57	13.9		SW			4		Fog			0.1	2.5	Dense Fog	J. Youngclause.
North Unst, Shetland Is.			30.16	766.1	53	11.7		W			6		10						Robert Burnett.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,220 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. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Copenhagen			30.26	768.5	65.7	18.7	46	WNW			6		0						
Fanöe			30.33	770.4	65.1	18.4	74	WNW			6		5						
Godthaab, Greenland			29.47	748.6	39.0	3.9		ENE			2		10					Raining	
Stykkisholm, Iceland			29.55	750.6	50.5	10.3	88	SW			7		8					Misty	
Thorshavn, (Faröe)			30.07	763.7	54.0	12.2	84	SW			7		9						
Vestervig			30.28	769.1	63.3	17.4	80	WNW			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			30.34	770.7	71.6	22	42	NE			2	2c		NE		0	0	Slightly cl'dy	Normal School.
Amiens			30.37	771.4	80.2	26.8	57	NW			3		0			0	0	Clear	Normal School.
Avignon			30.13	765.3	83.5	28.6	33	N			2		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.31	769.8	76.5	24.7	55	ENE			3		5		NE	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)			30.25	768.4	81.9	27.7	43	NE	11.0	4.9			2		E	0	0	Slightly cl'dy	Beaumette Observatory.
Beauvais			30.38	771.6	76.6	24.8	48	E			3		2		E	0	0	Slightly cl'dy	Normal School.
Besançon			30.26	768.5	76.3	24.6	54	ENE			6		0			0	0	Clear	Normal School.
Bourg en Bresse			30.28	769.0	78.3	25.7	55	N			6		0					Clear	Normal School.
Bourges			30.72	780.4?	77.4	25.2	39	NE			4		0			0	0	Clear	Normal School.
Brest			30.26	768.7	81.5	27.5	50	E			3		0			0	0	Clear	Naval Observatory.
Carcassonne			30.11	765.5	72.5	22.5	37	NW			1		0			0	0	Clear	Normal School
Caen			30.34	770.6	73.4	23	85	NNE			6		0			0	0	Clear	Normal School.
Chartres			30.30	769.6	81.7	27.6	66	N			1		0			0	0	Clear	Normal School.
Clermont			30.19	766.9	72.7	22.6	42	N			3		0			0	0		Puy de Dome Obs'y.
Commercy			30.36	771.2	71.2	21.8	59	NE			6		5k		NE	0	0	Cloudy	Normal School.
Commune de Greasque*			30.21	767.4	70.7	26.5	33	W			2		2		W	0	0		M. Kina.
Grenoble			30.17	766.2	74.1	23.4	64	NE			1		0			0	0	Clear	Normal School.
La Roche-sur-Yon			30.23	767.8	83.5	28.6	49	NE			4		0			0	0	Clear	Normal School.
Le Mans			30.29	769.4	78.6	25.9	73	ENE			6		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			30.19	766.8	75.0	23.9	51	NNE			6		0			0	0	Clear	Normal School.
Mâcon			30.30	771.9	74.3	23.5	54	NNE			6		0			0	0	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			30.29	769.4	72.0	22.2	91	NW			6		5		SW	0	0	Cloudy	Normal School.
Nîsmes			30.13	765.3	83.8	28.8	31	N			2		0			0	0	Clear	Normal School.
Orleans			30.20	767.1	80.6	27	38	NE			3		2		ENE	0	0	Slightly cl'dy	Normal School.
Paris, Observatory			30.35	770.8	77.9	25.5	49	NE			3		2k		NE	0	0	Slightly cl'dy	National Observatory.
Parthenay			30.20	767.1	91.4	33	44	NE			4		0			0	0	Clear	Normal School.
Privas			30.17	766.2	77.0	25		NNE			2		2		NNE	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.22	767.6	81.6	29.2	37	ENE			6		0			0	0	Blue sky	Naval Observatory.
Rouen			29.99	761.8	82.8	28.2	43	ENE			2		0			0	0	Clear	Normal School.
Saint Lo			30.03	762.7	88.2	31.2	59	NE			2		1			0	0		Normal School.
Tarbes	29.08	738.6	30.13	765.3	69.1	20.6		S			1		0			0	0	Clear	Normal School
Villefranche			30.12	765.0	78.1	25.6	61	NNW			3		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.88	758.9	79.2	26.2													L'Abbé Marchésl.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.39	771.8	64.2	17.9	60	ESE	2	1			2			0	0		—. Faïguère.
Montsouris, Paris			30.35	770.8	78.4	25.8	51	NE			2		2		NE	0	0		Montsouris Observ'tory.
Perpignan			30.16	766.0	79.2	26.2	37	S	5 6	2.50			1			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.35	770.8	79.7	26.5	51	NE			2–3		0			0	0	Clear	E. Renou.
Toulouse			30.21	767.3	77.7	25.4	31	NNE			1		4			0	0		Toulouse Observatory.
Tours			30.27	768.8	84.2	29.0	42	E			5		0			0	0	Clear	C. Marquet.
Versailles, (near Paris)			30.36	771.1	78.8	26.0	49	E			4		3			0	0	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Leo, S. J.

NOTE.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * 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			30.28	769.0	72.5	22.5	49	NW			5		3	NW		0	0		Prof. T. Hoh.
Berlin			30.27	768.9	72.1	22.3	53	W			2		2			0	0		Prof. Arndt.
Breslau			30.32	770.1	66.0	18.9	50	NW			8		4			0	0		Dr. P. Neugebauer.
Carlsruhe			30.33	770.3	73.0	22.8	58	N			3		10			0	0		A. Senz.
Cassel			30.38	771.6	77.5	25.3	53	NW			5		3	N		0	0		Dr. H. Möhl.
Emden			30.38	771.7	68.4	20.2	90	NNW			2		2			0	0		Prof. Prestel.
Frankfort on the Main			30.40	772.1	73.9	23.3	52	N			3		4			0	0		Physical Society.
Friedrichshafen			30.26	768.5	72.5	22.5	56	NE			7		2			0	0		M. Wilhelm.
Hamburg			30.37	771.4	70.3	21.3	70	WNW			4		5k	NW		0	0	Fine	Captain F. Hegemann.
Kiel			30.32	770.2	71.2	21.8	59	NW			4		2			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			30.11	764.9	63.0	17.2	57	NW			5		2			0.012	0.3		Prof. E. Luther
Köslin			30.26	768.5	65.3	18.5		NW			4		0			0	0		H. Müller.
Leipsic			30.36	771.1	70.9	21.6	47	N			4		2	NNW		0	0		Prof. Bruhns.
Memel			30.03	762.8	61.0	16.1	68	NW			8		1ck			0	0	Squally	Reinbrecht & Skalweit.
Münster			30.50	774.8	71.6	22.0	72	NE			3		0			0	0		Prof. E. Heis.
Neufahrwasser			30.17	766.2	65.5	18.6	46	NNW			4		1			0	0		A. Lothes.
Posen			30.25	768.4	70.3	21.3	52	NW			1		4			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.34	770.5	74.1	23.4	55	NE			2		7	E		0	0		Dr. Schur.
Stuttgart			30.33	770.4	73.4	23.0	53	N			2		6			0	0		Prof. Schoder.
Thorn			30.07	763.8	72.1	22.3	39	NW			4		3			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.35	770.9	73.0	23.1	53	E			5		8			0	0		Prof. Flesch.
Wustrow, Naval School			30.40	772.1	63.3	17.4	69	W			5		3			0	0		E. F. Schütz.

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	87.4	30.8		NE			Strong		..k					Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	765.5	77.0	25.0	36	Calm	0	0			2			0	0		
Padua			30.15	765.9	75.7	24.3	41	E	15.0	6.7			4	SE		0	0		
Vicenza			30.15	765.9	75.6	24.2	42	NE	1.3	0.6			1	E		0	0		
Verona			30.13	765.2	78.3	25.7	53	E			1		0			0	0		
Bergamo	28.84	732.4	30.10	764.4	77.0	25.0	46	SE			2		4			0	0		
Domodossola	29.1	739.0	30.08	764.0	76.3	24.6	70	NW			6		3			0	0		
Milan			30.17	766.2	85.1	29.5	44	S			1		2	S		0	0		
Pavia			30.18	766.5	76.1	24.5	40	NE			2		1	NE		0	0		
Moncalieri			30.17	766.4	75.2	24.0	57	SW	1.5	0.6			3	NE		0	0		
Mondovi	28.31	719.1	30.16	766.1	70.3	21.3	48	E			4		1	NE		0	0		
Porto Maurizio			30.13	765.2	82.0	27.8	21	NE			6		4	SW		0	0		
Genoa			30.10	764.5	81.3	27.4	30	NW	2.5	1.1			2	N		0	0		
Piacenza			30.18	766.6	74.7	23.7	46	E	4.3	1.9			4	E		0	0		
Parma			30.14	765.6	77.0	25.0	55	E			4		1			0	0		
Bologna			30.14	765.6	72.3	22.4	48	E			6		4	N		0	0		
Florence			30.12	765.1	75.2	24.0	39	NE			6		10			0	0		
Leghorn			30.07	763.6	76.6	24.8	38	ENE	11.9	5.3			9			0	0		
Siena	28.87	733.4	30.04	762.9	70.3	21.3	53	NE	13.0	5.8			10	E		0	0		
Urbino	28.62	727.0	30.14	765.5	65.8	18.8	71	ENE			4		10			0.118	3.0		
Ancona			30.11	764.7	72.0	22.2	71	E			4		6			0.03	1.0		
Grosseto			30.04	763.1	74.5	23.6	54	NNE			6		7	SE		0	0		
Rome			29.97	761.3	81.0	27.2	49	SW	3.1	1.4			4	E		0	0		
Naples, O. U			29.99	761.7	81.3	27.4	55	SW			1		9	SE		0.256	6.5	Showery	
Lecce			30.02	762.5	68.0	20.0	89	WNW	13.7	6.1			8			0.268	6.8	Showery	
Cosenza			29.97	761.3	82.4	28.0	69	NW	0.7	0.3			10			0.138	3.5		
Riposto, (Sicily)			29.95	760.7	79.5	26.4	66	NE			2		4	N		0	0		
Palermo			29.93	760.1	74.5	23.6	58	NNW	6.3	2.8			10			0.094	2.4		
Caltanissetta	28.02	711.7	29.89	759.2	76.1	24.5	39	SW			4		2	NE		0.012	0.3		
Sub-Series.																			
Naples, S. R			30.00	761.9	78.4	25.8	60	SW	6.3	2.8			10	NW		0.177	4.5		Prof. F. Brioschi.
Pesaro			30.18	766.6	72.7	22.7	59	E	19.5	8.72			10cs	E					L. Guidi.

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			30.47	773.9	74.1	23.4		ENE			2								
Groningen			30.39	772.0	69.8	21.0		NW			2								
Helder			30.44	773.2	68.5	20.3		WNW			1								
Utrecht			29.42	772.6	72.9	22.7	64	NE			2		5					Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	767.4	55.0	12.8	96	S	8.9	4.0			10			0.343	8.7	Raining	
Brönö			30.02	762.4	56.1	13.4	62	WSW	2	1			7			0	0		
Christiania			30.13	765.4	67.3	19.6	41	SSE	9.2	4.1			10			Inap	Inap.	Light rain	
Tromsö			29.96	761.0	54.3	12.4	82	WSW	2	1			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 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	72.9	22.7	81	WSW	3.7	1.64			8					Raining	Dr. J. A. N. Sampaio.
Campo Major			29.96	761.0	100.2	37.9	7	NW	5.8	2.58			1			0.022	0.55		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.02	762.4	73.9	23.3	65	SW	8.6	3.86			0			0	0		Capt D. A. da Cunha.
Lisbon			30.06	763.4	89.4	31.9	25	SW	13.7	6.1			2			0	0		The Observatory.

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

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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. Inches.	Rain-fall. Millimeters.	Weather	Observer.
Warsaw			30.10	764.5	68.4	20.2	52	NW	16	7			6						Astronomical Obs.
Wilna			29.89	759.2	63.1	17.3	50	W	40	18			10						Astronomical Obs.
Dorpat			29.48	748.9	63.1	17.3	68	WSW	9	4			10						Physical Cabinet.
St. Petersburg			29.55	750.5	61.5	16.4	67	SW	2	1			6						Central Physical Obs.
Kuoplo			29.61	752.0	56.7	13.7	98	NE	13	6			10					Raining	Ch. Forsten.
Kieff			29.93	760.1	75.0	23.9	42	WNW	7	3			10						Physical Cabinet.
Nikolaiev			30.02	762.6	83.5	28.6	49	NW	13	6			2						Kurdakof.
Kertch			29.93	760.3	90.5	32.5	40	N	4	2			1						Lagorio.
Moscow			29.79	756.7	74.1	23.4	40	SSW	9	4			5						Meteorological Obs.
Lugan			29.76	755.9	88.2	31.2	38	SW	13	6			2						Meteorological Obs.
Archangel			29.74	755.4	71.2	21.8	82	SSW	9	4			9						Ogorodnikof.
Tiflis	28.50	724.0	29.87	758.6	72.3	22.4	67	S	9	4			9						Physical Observatory.
Astrakhan			29.89	759.1	89.1	31.7	35	W	4	2			4						Sebastianoi.
Kasan			29.75	755.6	83.1	28.4	41	S	9	4			0						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.86	733.0	29.76	755.9	72.7	22.6	55	SW	4	2			6						Meteorological Obs.
Nukuss			29.68	753.9	87.3	30.7	30	N	9	4			1						
Kasaly																			Robrof.
Tashkend	28.11	714.0	29.68	753.9	89.2	31.8	54	Calm	0	0			0						Michelson.
Barnaul			29.60	751.7	70.7	21.5	57	SE	2	1			8						Meteorological Obs.
Yeniseisk			29.47	748.6	65.7	18.7	72	N	2	1			10						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.73	755.2	85.1	29.5	69	Calm	0	0			4			Blank	Blank		Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.77	756.2	72.7	22.6	90	Calm	0	0			0						
Nikolaievsk, on the Amoor					54.9	12.7	89	SE	4	2			9						

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 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. Inches.	Rain-fall. Millimeters.	Weather	Observer.
Madrid			29.97	761.3	90.9	32.7	27	NW	8.2	3.67		0	0			0	0	Clear	Royal Observatory.
San Fernando			30.04	763.1	87.8	31.0	31	E	27.5	12.3		0	0						The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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. Inches.	Rain-fall. Millimeters.	Weather	Observer.
Haparanda			29.89	759.2	66.2	19.0	41	N			4		0			0	0		
Umea			29.89	759.2	70.0	21.1	32	N			2		6			0	0		
Hernosand			29.94	760.5	67.1	19.5	42	N			4		3			0.827	21.0		
Stockholm			29.97	761.2	69.1	20.6	24	N			6		4			0.082	2.1		
Wisby			30.07	763.6	63.7	17.6	60	W			7		0			0	0		
Sub-Series.																			
Upsala			29.97	761.3	69.1	20.6	30	NNW	16.8	7.5			1		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; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

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	28.80	731.6	30.18	766.6	70.7	21.5	52	NNE			4		1			0	0	Clear	The Observatory.
Zurich	28.08	728.4	30.26	768.5	72.5	22.5	57	NE			2		2			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +4.0 mm; Thermometer, —1.1 cent.; Relative Humidity, —1 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

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	761.9	79.2	26.2	60	NNE	17	7.5			1		NE	0	0		
Fao, (Persian Gulf)																			
Salonica			30.01	762.2	85.3	29.6		NW			2		2						
Valona			30.00	761.9	81.1	27.3		W			1		5					Stormy	
Varna			30.00	762.0	86.0	30.0		NE			3		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.74	755.5	90.0	32.2	59	SW			3		1s		SW	0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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.			29.88	758.9	67.9	19.9	51	NE	5	2.2			0			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			29.94	760.5	80	26.7		SW	5	2.2		0	5s		SW	0	0	Fair	W. R. Bigg.
*Chatham, N. B.			29.94	760.5	65	18.3	67	NW	8	3.6		0	0			0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island.			29.87	758.7	70	21.1	70	NW	6	2.7		0	0			0.010	0.25	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			29.90	759.4	75.7	24.3		E			1	10k	0			0.081	2.13	Unsettled	James Smith, M. A.
Dalhousie, N. B.					68	20.0	53	W			1					0	0		H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			29.95	760.7	67.0	19.4	59	NW	2	0.9		0	0			0.055	1.4	Fair	Prof. Harrison.
*Fort Garry, Manitoba			30.12	765.0	57	13.9	98	W	2	0.9		2k	5ks	W	W	0	0	Cloudy	James Stewart.
Goderich, Ontario			29.95	760.7	73.9	23.3	64	NW			2	0	0			0	0	Clear	H. J. Strang, M. A.
Granton, Ontario	28.88	733.5	29.92	760.0	74	23.3		Calm			0	0	0			0.08	2.0	Clear	James Grant.
*Halifax, N. S.			29.86	758.4	74	23.3	57	NW	7	3.1		2c	2ks			0	0	Fair	F. Allison, M. A.
*Kingston, Ontario			29.92	760.0	72	22.2	77	Calm	0	0		8ck	0			0	0	Fair	S. Woods, M. A.
Little Glace Bay, N. S.			29.84	757.9	65.5	18.6	91	SW	3	1.3		2c	0	SW		0	0	Fair	C. H. Rigby.
*Montreal, Quebec			29.87	758.7	73	22.8	67	E	4	1.8		2ck	2ks	W	SW	0.03	0.8	Fair	C. H. McLeod, C. E.
*Ottawa, Ontario			29.90	759.4	72	22.2	70	E	6	2.7		5ck	0	W		0	0	Fair	J. B. Haney.
*Parry Sound, Ontario			29.95	760.7	72	22.2	62	NW	6	2.7		2cs	0	W		0	0	Fair	Rev. R. Mosley.
*Port Dover, Ontario			29.94	760.5	75	23.9	90	NW	4	1.8		Haze	Haze	NW	NW	0.61	15.5	Hazy	H. Morgan.
Port Hastings, N. S.			29.86	758.4	68.3	20.2		W	2	0.9						0.30	7.6	Fine	Peter Grant.
*Port Stanley, Ontario			29.95	760.7	76	24.4	93	W	2	0.9			10n			0.01	0.3	Cloudy	M. Payne.
*Quebec, Quebec			29.92	760.0	65	18.3	89	NE	5	2.2		0	0			0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.			29.94	760.5	70	21.1	57	Calm	0	0		4k	0			0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			29.95	760.7	65	18.3	83	Calm	0	0		2ks	0			0	0	Clear	K. Stewart.
Stayner, Ontario			29.91	759.7	74	23.3	57	N	3	1.3		8k	0	W		0	0	Cloudy	R. J. Cole.
Stratford, Ontario	28.69	728.7	29.92	760.0	70.5	21.4	92	NW	4	1.8		3cs	0	W		0.509	12.93	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.85	758.2	71	21.7	78	SW	2	0.9		2ck	2ks		S	0.22	5.6	Clear	T. C. Hill.
*Toronto, Ontario			29.93	760.2	75	23.9	67	NW	6	2.7		8cs	0	W		0.15	3.8	Cloudy	Magnetic Observatory.
Woodstock, Ontario			29.92	760.0	75.9	24.4	90	W	1	0.4		1cs	1ks	W		0	0	Fine	J. Montgomery.
Sub-Series.																			
St. John's, Newfoundland.			29.87	758.7	71	21.7	53	S				0	0			0	0	Clear	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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.			29.89	759.2	77	25.0	72	Calm	0	0		5k	0	W		0	0	Fair	
Alpena, Mich.			29.93	761.5	67	19.4	79	NW	6	2.7		0	0			0	0	Clear	
Atlantic City, N. J.			29.93	760.2	75	23.9	90	W	4	1.8			10s			0.20	5.1	Cloudy	
Augusta, Ga.			30.04	763.0	80	26.7	80	SW	2	0.9		0	0			Inap	Inap.	Clear	
Baltimore, Md.			29.93	761.5	79	26.1	78	NW	4	1.8		0	5k		NW	1.15	29.2	Fair	
Barnegat, N. J.			29.92	760.0	76	24.4	86	W	9	4.0			10s			0	0	Cloudy	
Benton, Montana	27.46	697.5	30.26	768.6	54	12.2	100	NE	2	0.9			10n			Inap	Inap.	Light rain	
Bismarck, Dakota	28.38	720.8	29.98	761.5	63	17.2	57	SE	5	2.2		2ck	Haze	SE		0.08	2.0	Fair	
Boston, Mass.			29.88	758.9	76	24.4	76	N	2	0.9		10cs	Haze	W		0	0	Hazy	
Breckenridge, Minn.			30.11	764.8	55	12.8	87	SE	14	6.3			10s			0	0	Cloudy	
Buffalo, N. Y.			29.90	759.4	74	23.3	85	W	8	3.6			10n		W	Inap.	Inap.	Light rain	
Burlington, Vt.			29.88	758.9	76	24.4	68	N	1	0.4		2c	5s			0	0	Cloudy	
Cairo, Ill.			30.01	762.2	76	24.4	86	Calm	0	0		0	0			0	0	Clear	
Cape Hatteras, N. C.			29.96	761.0	80	26.7	86	SW	12	5.4		9c	Haze			0	0	Cloudy	
Cape Henry, Va.			29.94	760.5	84	28.9	71	SW	6	2.7		2c	0			0.30	7.6	Clear	
Cape Lookout, N. C.			30.04	763.0	84	28.9	79	SW	18	8.0		1ck	Haze	SW		0	0	Fair	
Cape May, N. J.			29.95	760.7	75	23.9	90	W	12	5.4		2cs	5s	NW	NW	0.12	3.0	Fair	
Charleston, S. C.			30.06	763.5	85	29.4	68	W	6	2.7		1ck	Haze			0	0	Clear	
Cheyenne, Wyoming	24.17	613.9	30.11	764.8	57	13.9	81	N	16	7.2		2ck	8s	N	N	0.01	0.3	Cloudy	
Chicago, Ill.			29.95	760.7	70	21.1	79	N	12	5.4		2c	1k	W	N	0	0	Fair	
Cincinnati, Ohio			29.86	758.4	79	26.1	78	SW	8	3.6			8s			0.29	7.4	Cloudy	
Cleveland, Ohio			29.93	760.2	71.2	21.8	88	SE	1	0.4			10s		W	0	0	Cloudy	
Colorado Springs, Col.	24.21	614.9	30.08	764.0	59.5	15.3	91	E	2	0.9			10s			0.64	16.3	Cloudy	
Corsicana, Tex.			30.06	763.5	75	23.9	90	S	6	2.7		2cs	0			0	0	Clear	
Davenport, Iowa			30.00	762.0	74	23.3	81	E	8	3.6		7cs	0	SW		0.08	2.0	Fair	
Denison, Tex.			30.06	763.5	83	28.3	70	SW	8	3.6		0	0			0	0	Clear	
Denver, Col.	24.89	632.2	30.11	764.8	56	13.3	74	SW	2	0.9			8s		NW	Inap.	Inap.	Cloudy	
Detroit, Mich.			29.89	759.2	74	23.3	81	NE	6	2.7		3ck,k	0	SE		0	0	Fair	
Dodge City, Kan.	27.42	696.5	29.60	751.8	72	22.2	90	SE	13	5.8			10s			0	0	Cloudy	
Dubuque, Iowa			29.99	761.7	73	22.8	76	N	4	1.8		5c	0	N		0	0	Fair	
Duluth, Minn.			30.10	764.5	66	18.9	73	Calm	0	0		5c	0	SW		0	0	Fair	
Eastport, Me.			29.92	760.0	67	19.4	64	Calm	0	0		0	8s		SW	0	0	Fair	
Erie, Pa.			29.90	759.4	78	25.6	69	S	6	2.7		5c	Sm'e	W		0	0	Fair	
Escanaba, Mich.			30.06	763.5	65	18.3	68	N	6	2.7		0	0			0.02	0.5	Clear	
Fort Gibson, Indian Ter.			29.97	761.2	80	26.7	78	E	4	1.8		2k	0			0	0	Fair	
Ft. St. Michael, Alaska			29.99	761.7	55	12.8	87	NE			1		10ks			0	0	Cloudy	
Fort Sill, Indian T.	28.82	732.0	29.86	758.4	82	27.8	70	S	4	1.8		0	0			0	0	Clear	
Fort Sully, Dakota	28.40	721.3	30.02	762.5	64	17.8	78	N	4	1.8		0	10s			1.00	25.4	Cloudy	
Galveston, Tex.			30.12	765.0	82	27.8	74	Calm	0	0		2k	0	S		0	0	Fair	
Grand Haven, Mich.			29.93	760.2	77	25.0	71	NE	8	3.6		5c	0	NW		0	0	Fair	
Indianapolis, Ind.			29.87	758.7	76	24.4	90	NW	4	1.8		0	8s		NW	0.86	21.8	Cloudy	
Indianola, Tex.			30.12	765.0	82	27.8	78	S	4	1.8		5c	5s			0	0	Cloudy	
Jacksonville, Fla.			30.09	764.3	85	29.4	64	SW	10	4.5		0	0			0	0	Clear	
Keokuk, Iowa			29.92	760.0	75	23.9	90	E	3	1.3		8c	0	W		0.16	4.1	Fair	
Key West, Fla.			30.09	764.3	77.2	25.1	82	SE	12	5.4			8ks,n		E, S	0	0	Threatening	
Kittyhawk, N. C.			29.99	761.7	81	27.2	82	W	14	6.3		5ck	0	W		0	0	Fair	
Knoxville, Tenn.			30.04	763.0	76	24.4	86	SW	4	1.8		1k	0	SW		0	0	Clear	
La Crosse, Wis.			30.03	762.7	68	20.0	84	N	7	3.1		0	0			0	0	Clear	
Leavenworth, Kan.			29.95	760.7	73	22.8	95	Calm	0	0			10n		NW	0.97	24.6	Light rain	
Lexington, Ky.	28.99	736.3	30.04	763.0	77	25.0	86	SW	12	5.4		2k	0	W		0	0	Clear	
Louisville, Ky.			29.93	760.2	77	25.0	86	SW	10	4.5			10s			0.09	2.3	Cloudy	
Lynchburg, Va.			29.94	760.5	84	28.9	67	NE	1	0.4		0	0			0	0	Clear	
Malone, N. Y.			29.82	757.4	74	23.3	75	SW	6	2.7		2ck	0	SW		0.22	5.6	Fair	
Manhattan, Kan.	28.82	732.0	29.92	760.0	66	18.9	90	Calm	0	0		0	8ks			0.75	19.1	Cloudy	
Marquette, Mich.			30.02	762.5	68	20.0	55	NW	8	3.6		0	0			0	0	Clear	
Memphis, Tenn.			30.07	763.8	80	26.7	74	SW	5	2.2		2cs	0			Inap.	Inap.	Clear	
Milwaukee, Wis.			30.03	762.7	69	20.6	75	N	12	5.4		2c	0	NW		0	0	Clear	
Mobile, Ala.			30.11	764.8	78	25.6	82	S	5	2.2		0	0			0	0	Clear	
Montgomery, Ala.			30.10	764.5	81	26.7	80	W	6	2.7		0	Haze			0	0	Clear	
Morgantown, W. Va.	28.95	735.3	29.95	760.7	76	24.4	86	S	2	0.9			10s		SW	0	0	Threatening	
Mt. Washington, N. H.	23.94	608.1	30.30	769.6	56	13.3	80	SW	7	3.1		8k	0			0	0	Fair	
Nashville, Tenn.			30.00	762.0	84	28.9	67	SW	4	1.8		5k	0	SW		0	0	Fair	
New Haven, Conn.			29.87	758.7	82	27.8	67	N	5	2.2		10k	Haze			0	0	Cloudy	
New London, Conn.			29.89	759.2	83	28.3	70	Calm	0	0		5ck	2ks	W	W	0	0	Fair	
New Orleans, La.			30.11	764.8	81.5	27.5	72	W	4	1.8		4c	0	SE		0	0	Fair	
Newport, R. I.			29.89	759.2	80	26.7	70	N	4	1.8		10cs	0	NW		0	0	Cloudy	
New York, N. Y.			29.90	759.4	82	27.8	67	N	6	2.7		5k	5ks	W	W	0	0	Cloudy	
Norfolk, Va.			29.98	761.5	85	29.4	68	SW	7	3.1		Haze	0			1.73	43.9	Clear	
North Platte, Neb.	27.16	689.8	29.63	752.6	67	19.4	74	NW	10	4.5			10s		NW	0.05	1.3	Cloudy	
Omaha, Neb.	28.84	733.5	29.91	759.7	73	22.8	95	E	5	2.2			10n		SW	0.21	5.3	Light rain	
Oswego, N. Y.			29.91	759.7	75.2	24.0	81	SW	6	2.7			10s		NW	0	0	Cloudy	
Pembina, Dakota			30.07	763.8	59	15.0	81	Calm	0	0		5c	0			0	0	Fair	
Philadelphia, Penn.			29.93	760.2	77	25.0	82	NW	3	1.3			10s		NW	0.06	1.5	Cloudy	
Pike's Peak, Colorado			30.25	768.3	35	1.7	52	SW	20	8.9		1cs	2k			0.11	2.8	Clear	
Pittsburgh, Penn.	18.04	458.2	29.94	760.5	72	22.2	95	W	6	2.7		10ks	Fog			0.26	6.6	Cloudy	
Port Huron, Mich.			29.93	760.2	69	20.6	84	N	14	6.3		2c	1s	W		0	0	Fair	
Portland, Me.			29.91	759.7	74	23.3	76	NE	7	3.1		8cs,k	Haze	N		0	0	Cloudy	
Portland, Oregon			30.13	765.3	59	15.0	87	SE	3	1.3			10s			0	0	Cloudy	
Punta Rassa, Fla.			30.11	764.8	81.0	27.2	78	NE	6	2.7		Haze	0			0.64	16.3	Clear	
Rochester, N. Y.			29.89	759.2	76	24.4	81	W	8	3.6		2ck	2ks	W	W	0	0	Fair	
Salt Lake City, Utah	25.59	649.2	29.89	759.2	64	17.8	34	NE	2	0.9		0	0			0	0	Clear	
Sandy Hook, N. J.			29.88	758.9	80	26.7	82	SW	2	0.9		5ck	5ks	W	SW	0	0	Cloudy	
San Diego, Cal.			29.96	761.0	63	17.2	88	N	4	1.8			10s		N	0	0	Cloudy	
San Francisco, Cal.			29.98	761.5	52	11.1	86	W	12	5.4		0	0			0	0	Clear	
Santa Fé, N. M.	23.37	593.6	29.91	759.7	60	15.6	70	Calm	0	0		5k	2ck		SW	0.04	3.6	Fair	
Savannah, Ga.			30.07	763.8	87	30.6	66	Calm	0	0		0	Haze			0	0	Hazy	
Shreveport, La.			30.13	765.3	80	26.7	66	SW	3	1.3		2c	0	W		0.17	4.3	Fair	
Smithville, N. C.			30.04	763.0	83	28.3	79	SW	11	4.9		5k	0	W		0	0	Fair	
Springfield, Mass.			29.88	758.9	83	28.3	67	NW	4	1.8		2ck	5ks		SW	0	0	Fair	
St. Louis, Mo.			29.98	761.5	79	26.1	77	NW	4	1.8		0	0			0.12	3.0	Clear	
St. Marks, Fla.			30.11	764.8	80	26.7	86	SW	3	1.3		0	2ks			0.42	10.7	Fair	
St. Paul, Minn.			30.03	762.7	67.5	19.7	66	N	1	0.4		10c,cs	0			0	0	Cloudy	
St. Paul's Island, Alaska			29.51	749.5	42	5.6	100	SE	35	15.6			10n			0.34	8.6	Raining	
Thatcher's Island, Mass.			29.88	758.9	68	20.0	84	N	5	2.2		5ck	2s	NW	NW	0	0	Fair	
Toledo, Ohio			29.89	759.2	75	23.9	85	SW	3	1.3			10ks		W	0.22	5.6	Cloudy	
Tucson, Arizona	27.51	698.7	30.10	764.5	77	25.0		SE				5c	2ks	SW		0	0	Fair	
Tybee Island, Ga.			30.07	763.8	83	28.3	74	W	4	1.8		0	Sm'e			0	0	Clear	
Vicksburg, Miss.			30.12	765.0	80	26.7	82	SW	2	0.9		5c	0			0.05	1.3	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.
Virginia City, M. T.	24.38	619.2	29.86	758.4	49	9.4	77	E	6	2.7		3c	1ks	NE	E	Inap.	Inap.	Cloudy	
Washington, D. C.			29.97	761.2	76	24.4	88	E	4	1.8		Haze	8ks		NW	0.33	8.4	Fair	
Wilmington, N. C.			30.03	762.7	84	28.9	75	SW	10	4.5		5c	0	NE		0	0	Fair	
Wood's Holl, Mass.			29.91	759.7	75	23.9	90	Calm	0	0			10s		SW	0	0	Cloudy	
Wytheville, Va.	27.75	704.8	29.81	757.2	73	22.8	85	W	4	1.8			10ks		W	0.62	15.7	Threatening	
Yankton, Dakota	28.79	731.3	30.04	763.0	64	17.8	94	E	5	2.2			10n			0.33	8.4	Light rain	
Yuma, Arizona			29.84	757.9	85	29.4		SW				0	0			0	0	Clear	
Sub Series.																			
Pointe-a-Pitre, G'd'Tpe, W. I.			29.94	760.5	79	26.1	86	NE				10k	0			0.06	1.5	Hazy	L. V. Bigard.
Kingston, Jamaica, W. I.			30.19	766.8	78	25.6	78	Calm	0	0		5c	8s	E	E	0	0		James Hall.
St. Georges, Bermudas			30.10	764.5	82.5	28.1	56	SW	6	2.7		0	8k			0	0	Hazy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.26	692.4	30.06	763.5	70	21.1	84	N	2.0	0.9		2c	0	N		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.			30.05	763.3	80	26.7	82	E			2	6k	5k	E		0.470	11.94		C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.08	764.0			80.6	27		E								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.21	640.3			64.5	17.5	74	S	1	0.4		10c	0			0	0	Cloudy	Thomas Herran.
York Factory, B. A.			29.82	757.4	53	11.7	93	NW	12	5.4		3c	0	N		1.00	25.4		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.			30.08	764.0	76	24.4	95	NE			5					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Addie Fuller, at Richmond, Me.			29.95	760.7	75	23.9		NE			3		5ck		WNW			*D. clouds	Capt. James Jorgensen.
Steamer Leipzig, N, 38° 29′ W, 71° 45′.			29.93	760.2	78.1	25.6		W			2		..k			Smooth		Overcast	Capt. R. Hoffmann.
Steamer Nova Scotian, N, 48° 12′, W, 48° 36′.	E by S	11	29.89	759.2	55	12.8		SW to WSW			2–3		..ck		SW	Light swells	W	Clear	Capt. Ritche.

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, 6,012.4 ft., or 1,833.7 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.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. * Detached clouds.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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			30.16	766.1	77.5	25.3	74	NNE			2		4			0	0	Fair	Charnot.
Algiers			30.21	767.3	75.9	24.4	80	N			1		0			0	0	Clear	Peter.
La Calle																			Kunts.
Tunis			30.11	764.9	83.8	28.8	41	NW			4		7			0	0	Cloudy	Jacques.
Sfax			30.18	766.6	81.3	27.4	47	SE			3		2			0	0	Clear	Chauvey.
Saïda			30.13	765.2	84.2	29.0	24	N			3		1			0	0	Clear	Millot.
Tebessa			30.14	765.5	75.7	24.3		N			1		2			0	0	Clear	Colin.
Geriville			30.11	764.9	84.9	29.4	18	NNE			3		1			0	0	Clear	Buard.
Laghouat			30.16	766.1	93.2	34.0	22	N			2		0			0	0	Clear	Guyot.
Biskra			30.18	766.5	90.3	32.4	35	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			30.23	767.7	73.4	23.0	59	NE			1		4			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.20	767.0	72.0	22.2	60	W			2		9			0	0		Dr. Wierzbiski.
Eperies			30.13	765.3	73.2	22.9	41	N			3		1			0	0		Julius Mikolik.
Gratz	28.98	736.1	30.14	765.6	73.0	22.8	59	SW			1		6			0	0		Andreas Rospini.
Hermannstadt	28.70	729.0	30.09	764.2	67.5	19.7	65	SE			3		10			0	0		Prof. Reissenberger.
Kremsmünster	28.65	727.7	29.95	760.7	68.4	20.2	59	N			3		5			0	0		Prof. C. Wagner.
Lemberg			30.10	764.4	70.3	21.3	75	NW			2		2			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habasuda Daniel.
Pola			30.16	766.0	74.8	23.8	40	NE			4		8c8			0	0		I.R.Hydrographic Office.
Szegedin			30.12	765.1	77.0	25.0	36	E			3		5			0	0		Karl Stancel.
Trieste			30.17	766.3	80.2	26.8	40	Calm			0		0			0	0		Prof. V. Farolfi.
Vienna			30.22	767.5	76.3	24.6	39	NW			2		0			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.37	771.3	75.7	24.3	63	NNE			0		1		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			30.44	773.2	67.9	19.9		SSE	14	6.3			2			0	0	Blue sky	William Boswell.
Ardrossan			30.44	773.2	70	21.1		SW			1		0						William McNeil.
Armagh, Observatory			30.42	772.7	78.3	25.7		SSE	9	4.0			1					*D. clouds	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.37	771.4	85.7	29.8		SE			1		3					*D. clouds	J. Dreyer.
Bradford			30.41	772.4	78.6	25.9		NW			0		0			0	0	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.02	762.5	76.5	24.7		SE			6		10					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.40	772.1	89.5	31.9		N			1		0					Blue sky	H. Todd. [H. C.
Cardington			30.42	772.7	90.0	32.2		NE			1		1					Blue sky	John McLaren.
Carlisle			30.40	772.1	79	26.1		NW			1		0			0	0	Blue sky	T. Bell, for J. Carmichael.
Chatham, School M. E			30.40	772.1	84.2	29.0		Calm			0		2					Hazy	Capt. J. Fellowes, R.E.
Dartmoor	29.03	737.3	30.48	774.2	79.0	26.1		E			4		0					Blue sky	R. E. Power.
Donaghadee			30.44	773.2	68	20.0		E			2		0					Blue sky	J. Mac Gowan.
Dover			30.41	772.4	71	21.7		Calm			0		0					Clear	J. Costello.
Eccles (near Manchester.)			30.39	771.9	83.5	28.6		SW	1.8	0.8								Blue sky	Thomas Mackereth.
Falmouth, Observatory			30.41	772.4	72.7	22.6		E			4		0					Hazy	The Staff.
Fort Napier, (Natal)	28.00	711.2	30.24	768.1	64.2	17.9		NE			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.05	763.3	79	26.1		W			3		8			Blank	Blank	Overcast	
Galway, Queen's College			30.31	769.9	87	30.6		W			1		1					Blue sky	Prof. A. H. Curtis.
Gibraltar, (Mediterranean).			30.13	765.3	76.0	24.4		E			4		1					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			30.42	772.7	74.0	23.3		SW			1							Fine	Lewis Stuart.
Great Yarmouth			30.42	772.7	69	20.6		NNE			3		0					Blue sky	G. T. Watson.
Greenwich, Royal Ob'y			30.40	772.1	89.7	32.1		NE			1		1					Blue sky	The Staff, for G. B. Airy
Guernsey			30.36	771.1	70	21.1		NE			3		3					*D. clouds	Dr. S. E. Hoskins.
Helston			30.34	770.6	65	18.3		E			2		0			0	0	Blue sky	M. P. Moyle.
Holyhead			30.41	772.4	70	21.1		WNW			1		0					Blue sky	John Tilston.
Kew, Observatory			30.40	772.1				SSE	6	2.7			0					Hazy	The Staff.
Kingstown																			George Mitchell.
Leicester Museum			30.42	772.7	83.6	28.7		Calm			0		0					Hazy	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)			30.00	762.0	79.0	26.1		NW			1		4					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			30.40	772.1	71	21.7		WSW			1		0					Clear	W. D. Penny.
Nassau, (Bahamas			30.40	772.1	84.7	29.3		SE			5		7					*D. c., lightning	Surg. Maj. Henry.
Nottingham, Observatory			30.42	772.7	88.7	31.5		SE			2		0			0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.42	772.7	83.9	28.8		NE			2		0					Blue sky	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.38	771.6	86	30.0		Calm			0		1					Blue sky	J. Lucas.
Plymouth			30.39	771.9	80	26.7		ENE			2		0					Blue sky	John Merrifield.
Roche's Point			30.39	771.9	71	21.1		E			3		2					Fine	W. Kennedy.
Saint Ann's Head			30.40	772.1	76	24.4		ESE			1		0					Hazy	John C. Walker.
Saint Helier, Jersey			30.35	770.9	80.8	27.1		E			4		2					¼ clouded	A. P. Amy.
Sandwick Manse, Orkneys			30.42	772.7	57.2	14.0		W	15	6.7			10					Misty	Rev. C. Clouston, LL. D.
Scarborough			30.44	773.2	67.5	19.7		N			1		0					Blue sky	F. Shaw.
Scutari Cemetery Turkey			29.91	759.7	84.2	29.0		NE			3		3					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.41	772.4	79.3	26.3		E			2		0			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			30.43	772.9	84.3	29.1	42	Calm			0		0			0	0	Blue sky	Rev. Francis Redford.
Stonyhurst, Observatory			30.40	772.1	79.4	26.3		Calm			0							Blue sky	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			30.40	772.1	65	18.3		SE			2		5					*D. clouds	John Smith.
Strathfield Turgiss			30.41	772.4	85.3	29.6		E			1		1					Blue sky	Rev. Charles H. Griffith.
Thurso			30.39	771.9	64	17.8		WNW			1		10					Overcast	John Trotter.
Truro, Royal Institution			30.41	772.4	86	30.0		E			2		0					Blue sky	W. Newcombe.
Valencia, Observatory			30.33	770.4	76.8	24.9		SE	27	12.1			1					*D. clouds	The Staff.
Sub-Stations.																			
Calf of Man, Isle of Man					75	23.9		SE			1		5						Thomas Dawson.
Cape Good Hope Obs'y			30.13	765.3	67.3	19.6	62	NW	2	0.9		2	4						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			30.44	773.2	53.0	11.7	86	N			2		0			0	0		Francis Abbott, F.R.A.S.
Leith, Restaurig Park			30.41	772.4	76.5	24.7		N			2					0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.24	768.1				ESE	13.0	6.1			0			0.03	0.8		C. Meldrum
Melbourne, Observatory			30.33	770.4	37.7	3.2	94	NE	5	1.3			0			0	0	Clear h'y dew	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.38	771.6	56	13.3		S			3		Fog			0	0	Foggy	J. Youngclause.
North Unst, Shetland Is.			30.14	765.5	53	11.7		W			6		10			Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,270 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			30.16	766.1	68.4	20.2	57	WNW			4		0						
Faröe			30.33	770.3	64.0	17.8	72	NW			6		1						
Godthaab, (Greenland			29.53	750.1	45.7	7.6	86	NE			2		8					Raining	
Stykkisholm, (Iceland			29.75	755.7	53.8	12.1	89	SE			6		10					Raining	
Thorshavn, (Faröe)			30.25	768.4	54.0	12.2	89	SW			6		10					Misty	
Vestervig			30.25	768.3	60.8	16.0	75	SW			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			30.10	764.6	73.4	23	33	E			2	2c		NE		0	0	Slightly cl'dy	Normal School.
Amiens			30.34	770.6	86.4	30.2	47	N			3		0			0	0	Clear	Normal School.
Avignon			30.20	767.1	86.2	30.1	36	NW			1		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.28	769.0	83.1	28.4	31	E			3		0			0	0	Clear	C. Saillard.
Beaumette, (near Angers)			30.23	767.8	84.6	29.2	29	NE	12.5	5.6			0			0	0	Clear	Beaumette Observatory.
Beauvais			30.35	771.0	79.0	26.1	42	E			3		0			0	0	Clear	Normal School.
Besançon			30.25	768.4	78.8	26	50	NE			8		0			0	0	Clear	Normal School.
Bourg en Bresse			29.94	760.4	85.5	29.7	51	N			1		0					Clear	Normal School.
Bourges			30.75?	781.0?	78.1	25.6	55	NE			4		0			0	0	Clear	Normal School.
Brest			30.24	768.0	81.9	27.7	55	NE			3		0			0	0	Clear	Naval Observatory.
Carcassonne			30.17	766.4	77.2	25.1	42	NNE			1		0			0	0	Clear	Normal School.
Caen			30.34	770.7	76.5	24.7	81	NE			6		0			0	0	Clear	Normal School.
Chartres			30.29	769.3	85.6	29.8	65	NE			4		0			0	0	Clear	Normal School.
Clermont			30.20	767.0	77.2	25.1	55	NNE			2		0			0	0		Puy de Dome Obs'y.
Commercy			30.33	770.3	77.5	25.3	40	NNE			6		0			0	0	Clear	Normal School.
Commune de Greasque*			30.28	769.2	82.2	27.9	34	NW			2		2		NW	0	0		M. Kina.
Grenoble			30.17	766.3	79.2	26.2	64	NW			6		0			0	0	Clear	Normal School.
La Roche-sur-Yon			30.20	767.0	85.3	29.6	38	NE			6		0			0	0	Clear	Normal School.
Le Mans			30.26	768.7	84.0	28.9	57	E			6		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			30.22	767.6	78.3	25.7	55	N			2		0			0	0	Clear	Normal School.
Mâcon			30.43	773.0	77.4	25.2	67	NNE			2		0			0	0	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			30.26	768.6	77.0	25	46	NE			6		0			0	0	Clear	Normal School.
Nismes			30.18	766.5	93.6	34.2	36	SW			2		0			0	0	Clear	Normal School.
Orleans			30.24	768.2	84.6	29.2	35	E			3		0			0	0	Clear	Normal School.
Paris, Observatory			30.35	770.9	81.9	27.7	38	E			3		0			0	0	Clear	National Observatory.
Parthenay			30.20	767.0	92.5	33.6	42	NE			4		0			0	0	Clear	Normal School.
Privas			30.19	766.8	82.8	28.2		NNE			2		0			0	0	Clear	Normal School.
Rochefort, Observatory			30.22	767.5	80.4	26.9	36	ENE			5		0			0	0	Blue sky	Naval Observatory.
Rouen			29.97	761.1	86.7	30.4	38	NNE			1		0			0	0	Clear	Normal School.
Saint Lo			30.02	762.4	97.7	36.5	59	NE			1		0			0	0		Normal School.
Tarbes	29.06	738.2	30.10	764.6	75.2	24		E			1		0			0	0	Clear	Normal School
Villefranche			30.22	767.6	82.6	28.1	63	NE			2		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.8	80.6	27													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.45	773.5	68.2	20.1	65	ESE	2	1			2			0	0		—. Faiguère.
Montsouris, Paris			30.33	770.4	82.0	28.3	38	ENE			4					0	0		Montsouris Observ'tory.
Perpignan			30.21	767.4	78.3	25.7	43	SE	11.2	5.00			0			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.34	770.5	84.6	29.2	40	NE			2		0			0	0	Clear	E. Renou.
Toulouse			30.23	767.8	86.4	30.2	25	SSE			2		0			0	0		Toulouse Observatory.
Tours			30.24	768.2	87.8	31.0	34	NE			4		0			0	0	Clear	C. Marquet.
Versailles, (near Paris)			30.34	770.7	83.1	28.4	38	E			4		0			0	0	Very clear	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai																			H. Le Lec, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * 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			30.28	769.2	77.0	25.0	52	NW			4		6	NW		0	0		Prof. T. Heh.
Berlin			30.27	768.8	74.3	23.5	52	SW			3		2			0	0		Prof. Arndt.
Breslau			30.28	769.2	72.3	22.4	56	NW			6		8			0	0		Dr. P. Neugebauer.
Carlsruhe			30.29	769.3	78.1	25.6	54	N			2		0			0	0		A. Senz.
Cassel			30.35	770.8	80.1	26.7	53	NW			4		5	NNW		0	0		Dr. H. Möhl.
Emden			30.44	773.2	72.5	22.5	62	N			3		10			0	0		Prof. Prestel.
Frankfort on the Main			30.36	771.1	78.4	25.8	43	NNE			4		3			0	0		Physical Society.
Friedrichshafen			30.24	768.0	77.2	25.1	50	NE			6		0			0	0		M. Wilhelm.
Hamburg			30.31	770.0	70.2	21.2	68	WNW			4		9k			Inap.	Inap.		Captain F. Hegemann.
Kiel			30.29	769.4	70.2	21.2	59	NW			6		2			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			30.06	763.4	63.5	17.5	80	NW			5		9			0	0		Prof. E. Luther.
Köslin			30.32	770.2	63.1	17.3		SW			4		10			0	0		H. Müller.
Leipsic			30.34	770.6	75.2	24.0	52	NW			5		6	NW		0	0		Prof. Bruhns.
Memel			30.06	763.4	62.2	16.8	80	WNW			4		9k	NW		Inap.	Inap.		Reinbrecht & Skalweit.
Münster			30.43	772.9	79.3	26.3	53	NE			2		0			0	0		Prof. E. Heis.
Neufahrwasser			30.11	764.8	67.6	19.8	65	NW			6		10			Inap.	Inap	Light rain	A. Lothes.
Posen			30.24	768.0	74.1	23.4	52	NW			4		10			0	0		Dr. Magener.
Strassburg, (In Alsace)			30.30	769.5	79.3	26.3	45	NE			2		0			0	0		Dr. Schur.
Stuttgart			30.30	769.6	79.3	26.3	43	NE			3		0			0	0		Prof. Schoder.
Thorn			30.13	765.4	71.2	21.8	58	NW			3		9			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.32	770.0	79.7	26.5	46	NE			5		0			0	0		Prof. Flesch.
Wustrow, Naval School			30.32	770.0	67.1	19.5	73	NW			4		0			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 417.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.80	759.3	90.0	32.2		W					..k					Clear	

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

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture In lustry 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			30.14	765.5	77.2	25.1	54	SW	0.7	0.3			1			0	0		
Padua			30.15	765.9	77.4	25.2	47	SE	6.9	3.1			0			0	0		
Vicenza			30.15	765.7	78.8	26.0	50	SE	1.8	0.8			0			0	0		
Verona			30.12	765.1	80.2	26.8	42	E			2		0			0	0		
Bergamo	28.83	732.3	30.09	764.3	80.6	27.0	46	SW			1		0			0	0		
Domodossola	29.14	740.1	30.12	765.1	78.8	26.0	62	SW			4		1			0	0		
Milan			30.17	766.2	84.7	29.3	48	SSE			1		4	SSE		0	0		
Pavia			30.17	766.3	80.8	27.1	34	SE			1		0			0	0		
Moncalieri			30.18	766.5	79.2	26.2	47	SSE	4.3	1.9			2			0	0		
Mondovi	28.34	719.7	30.19	766.7	73.4	23.0	46	NW			4		4	NE		0	0		
Porto Maurizio			30.19	766.8	82.0	27.8	51	E			2		8			0	0		
Genoa			29.25	765.8	84.0	28.9	35	N	0.7	0.3			2	S		0	0		
Piacenza			30.17	766.4	79.3	26.3	46	E	1.8	0.8			0			0	0		
Parma			30.14	765.5	80.6	27.0	44	W			2		0			0	0		
Bologna			30.21	767.3	77.0	25.0	43	E			6		4	W		0	0		
Florence			30.16	766.0	81.0	27.2	30	NE			6		7	NE		0	0		
Leghorn			30.12	765.1	74.3	23.5	49	ENE	13.7	6.1			4			0	0		
Siena	28.92	734.6	30.08	764.1	77.4	25.2	34	ENE	9.4	4.2			4	E		0	0		
Urbino	28.67	728.1	30.18	766.6	69.6	20.9	57	NNE			4		5			0	0		
Ancona			30.15	765.8	75.2	24.0	57	N			6		0			0	0		
Grosseto			30.11	764.9	81.0	27..	32	ENE			6		5	NW		0	0		
Rome			30.06	763.5	82.4	28.0	40	NNW	8.1	3.6			4	E		0	0		
Naples, O. U			30.04	762.9	83.8	28.8	44	ESE			4		6	E		0.118	3.0		
Lecce			30.02	762.4	71.2	21.8	88	WNW	18.6	8.3			7			0.260	6.6		
Cosenza			29.97	761.2	81.3	27.4	68	WNW	3.1	1.4			10			0.016	0.4		
Riposto, (Sicily)			29.96	760.9	78.4	25.8	71	NE			2		7	WSW		0	0		
Palermo			29.96	761.0	75.6	24.2	65	WNW	8.1	3.6			7			0	0		
Caltanissetta	28.03	711.9	29.90	759.4	75.0	23.9	46	S			4		6	N		0	0		
Sub-Series.																			
Naples, S. R			30.07	763.7	81.0	27.2	45	NE	3.8	1.7			6	N		0.138	3.5		Prof. F. Brioschi.
Pesaro			30.22	767.6	74.3	23.5	53	NE	39.0	17.44			6c						L. Guidi.

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			30.43	773.0	72.3	22.4		NW			1								
Groningen			30.36	770.9	72.5	22.5		N			2								
Helder			30.45	773.3	68.7	20.4		NE			1								
Utrecht			30.36	771.2	78.8	26.0	62	NNE			2		8					Very cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.35	770.9	56.1	13.4	82	Calm	0	0			7			0.004	0.1		
Brönö			30.03	762.7	53.6	12.0	89	W	11	5			10			Inap.	Inap.	Light rain	
Christiania			30.13	765.4	73.4	23.1	35	WSW	2.0	0.9			4			0	0		
Tromsö			29.84	757.9	57.6	14.2	76	SW	2	1			10			0.118	3.0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the w 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	71.8	22.1	82	E	8.2	3.67			4			0.031	0.8		Dr. J. A. N. Sampaio.
Campo Major			30.00	762.0	99.5	37.5	10	ENE	6.7	3.00			0			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.10	764.5	72.9	22.7	74	SW	9.8	4.39			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.07	763.8	93.4	34.1	27	S	6.3	2.8			0			0	0		The Observatory.

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

RUSSIAN SERIES.

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

Warsaw			30.12	765.0	69.3	20.7	69	NW	11	5			10						Astronomical Obs.
Wilna			29.95	760.8	69.3	20.7	41	W	11	5			5						Astronomical Obs.
Dorpat			29.71	754.5	64.2	17.9	63	WNW	9	4			10					Raining	Physical Cabinet.
St. Petersburg			29.53	750.1	63.0	17.2	68	NNE	11	5			6						Central Physical Obs.
Kuopio			29.66	753.4	59.5	15.3	87	NE	22	10			10					Thunder-storm	Ch. Forsten.
Kieff			29.97	761.2	70.0	21.1	32	NNW	18	8			2						Physical Cabinet.
Nikolaiev			30.07	763.8	78.4	25.8	39	NNW	18	8			4						Kurdakof.
Kertch			29.96	761.0	84.0	28.9	42	N	9	4			0						Lagorio.
Moscow			29.73	755.1	64.9	17.7	67	SW	11	5			7						Meteorological Obs.
Lugan			29.80	757.0	81.0	27.2	37	W	34	15			4						Meteorological Obs.
Archangel			29.64	752.9	57.0	13.9	92	NW	22	10			10					Raining	Ogorodnikof.
Tiflis	28.51	724.1	29.83	757.7	85.3	29.6	40	S	9	4			1						Physical Observatory.
Astrakhan			29.86	758.4	94.5	34.7	41	NNE	4	2			4						Sebastianof.
Kasan			29.69	754.0	65.8	18.8	97	WNW					10					Thunder-storm	Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.84	732.5	29.73	755.1	79.2	26.2	41	S	2	1			5						Meteorological Obs.
Nukuss			29.73	755.2	80.5	30.3	38	NNE	4	2			8						
Kasaly																			Bobrof.
Tashkend	28.98	713.1	29.66	753.1	84.4	29.1	34	Calm	0	0			2						Michelson.
Barnaul			29.59	749.3	73.4	23.0	52	NNE	2	1			6						Meteorological Obs.
Yeniseisk			29.52	749.8	68.4	20.2	67	SE	7	3			3						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.76	755.8	82.0	27.8	83	Calm	0	0			6			Blank	Blank		Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.90	759.5	61.7	16.5	92	SE	11	5			10						
Nikolaievsk, on the Amoor					61.2	16.2	98	SE	4	2			10						

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2?. ft.; Tashkend, 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			30.04	763.0	88.9	31.6	28	S	6.0	2.67		0	0			0	0	Clear	Royal Observatory.
San Fernando			30.10	764.6	86.7	30.4	27	ESE	26.4	11.8		0	0						The Naval Observatory.

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

SWEDISH SERIES.

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

Haparanda			29.82	757.3	72.3	22.4	47	NW			2		0			0	0		
Umea			29.80	759.2	69.1	20.6	48	NNW			4		0			0	0		
Hernosand			29.97	761.1	65.8	18.8	37	NW			7		3			0	0		
Stockholm			30.00	762.0	67.3	19.6	42	NNW			2		0			0	0		
Wisby			30.07	763.6	64.0	17.8	80	N			4		3			0	0		
SUB-SERIES.																			
Upsala			30.02	762.5	65.3	18.5	47	NW	12.8	5.7			10		N	0	0		Dr. Hildebrandsson.

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

SWISS SERIES.

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

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	28.85	732.7	30.21	767.4	74.5	23.6	53	NNW			2		0			0	0	Clear	The Observatory.
Zurich	28.67	728.3	30.23	767.8	79.2	26.2	48	NE			2		0			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +5.0 mm.; Thermometer, +1.0 cent.; Relative Humidity, 0 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

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			29.94	760.5	80.2	26.8	67	NE	27	12.0			6		ENE	0	0		
Fao, (Persian Gulf)			29.61	752.0	98.6	37.0		NW			3		0						
Salonica			29.99	761.8	87.8	31.0		NE			2		2						
Valona			29.98	761.5	78.4	25.8		N			2		5					aining	
Varna			30.00	762 0	82.4	28.0		NE			8		8						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.75	755.7	90.5	32.5	57	WSW			2		1s		SW	0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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			29.73	755.1	66.1	18.9	90	NW	8	3.6		0	0			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.01	762.2	73	22.8		SW	1	0.4		0	2s		SW	0	0	Fair	W. R. Bigg.
*Chatham, N. B.			29.78	756.4	66	18.9	80	NW	11	4.9		2c	0	NW		0.31	8.6	Fair	G. A. Blair.
Charlottetown, P. E. Island			29.75	755.6	66	18.9	96	NW	10	4.5		2k	0	W		0.350	8.89	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			29.91	759.7	72.7	22.6		N			3	0	0			0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			29.79	756.7	61.4	16.3	82	W			1					0.17	4.3		H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			29.84	757.9	67.0	19.4	65	NW	8	3.6		0	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			30.07	763.8	58	14.4	100	S	3	1.3		Haze	Fog	W		0.380	9.65	Dense fog	James Stewart.
Goderich, Ontario			30.04	763.0	61.9	16.6	79	NW			2	0	0			0	0	Clear	H. J. Strang, M. A.
Granton, Ontario	28.94	735.1	30.01	762.2	63	17.2		N			1	0	0			0	0	Clear	James Grant.
*Halifax, N. S.			29.74	755.4	70	21.1	85	NW	7	3.1			5n		NW	Inap.	Inap.	Clearing	F. Allison, M. A.
*Kingston, Ontario			30.00	762.0	73	22.8	83	NE	5	2.2		2c	0			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.																*1.03	*26 2	Raining	C. H. Rigby.
*Montreal, Quebec			29.94	760.5	69	20.6	60	NE	11	4.9		0	2ks			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			29.98	761.5	70	21.1	70	NW	8	3.6		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.02	762.5	69	20.6	54	N	12	5.4		0	0			0	0	Clear	Rev. R. Mosley.
*Port Dover, Ontario			30.01	762.2	63	17.2	67	NW	7	3.1		0	0			1.31	33.3	Clear	H. Morgan.
Port Hastings, N. S.			29.74	755.4	67.5	19.7		W	2	0.9						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.03	762.7	66	18.9	67	W	7	3.1		0	0			0.28	7.1	Clear	M. Payne.
*Quebec, Quebec			29.94	760.5	64	17.8	89	Calm	0	0		0	0			0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.			29.83	757.7	67	19.4	69	NW	3	1.3		0	0			0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			30.01	762.2	68	20.0	75	NW	1	0.4		0	0			0	0	Clear	R. Stewart.
Stayner, Ontario			29.95	760.7	72	22.2	71	NW	1	0.4		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario	28.75	730.2	30.00	762.0	58.9	14.9	81	NW	4	1.8		0	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			29.76	755.9	62	16.7	97	SW	6	2.7			10n		W	1.11	28.2	Clearing	T. C. Hill.
*Toronto, Ontario			29.98	761.5	69	20.6	63	N	10	4.5		0	0			0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.01	762.2	63.3	17.4	73	NW	4	1.8		1cs	0			0	0	Fine	J. Montgomery
Sub-Series.																			
St. John's, Newfoundland			29.94	760.5	68	20.0	84	SW				Sm'c	5ks			0	0	Fair	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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. *Rain-fall until 10 a. m., of the 15th.

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.	.....	.....	29.90	759.4	72	22.2	71	Calm	0	0	.....	8k	0	W	.....	0	0	Fair	
Alpena, Mich.	.....	.....	30.03	762.7	67	19.4	54	NW	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Atlantic City, N. J.	.....	.....	29.88	758.9	78	25.6	73	N	3	1.3	.....	2cs	5s	NW	.....	0	0	Cloudy	
Augusta, Ga.	.....	.....	30.0[illegible]	762.0	82	27.8	79	S	2	0.9	.....	0	0	.....	.....	1.74	44.2	Clear	
Baltimore, Md.	.....	.....	29.9[illegible]	760.2	79	26.1	82	NW	3	1.3	.....	.....	10n	.....	.....	Inap.	Inap.	Light rain	
Barnegat, N. J.	.....	.....	29.88	758.9	77	25.0	77	W	6	2.7	.....	8k	2ks	W	.....	0	0	Cloudy	
Benton, Montana	27.18	690.4	29.98	761.5	57	13.9	51	SW	8	3.6	.....	0	0	.....	.....	0.15	3.8	Clear	
Bismarck, Dakota	28.27	718.0	29.86	758.4	65	18.3	63	SE	4	1.8	.....	5k	5s	S	SE	0	0	Cloudy	
Boston, Mass.	.....	.....	29.84	757.9	76	24.4	72	N	2	0.9	.....	5cs	Sm'e	W	.....	0.02	0.5	Smoky	
Breckenridge, Minn.	.....	.....	30.0[illegible]	764.3	56	13.3	87	SE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	29.94	760.5	68.5	20.3	62	NW	3	1.3	.....	1cs	0	NW	.....	0.03	0.8	Clear	
Burlington, Vt.	.....	.....	29.92	760.0	71	21.7	71	N	2	0.9	.....	2ck	0	.....	.....	0	0	Fair	
Cairo, Ill.	.....	.....	29.99	761.7	76	24.4	90	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Cape Hatteras, N. C.	.....	.....	29.89	759.2	79	26.1	90	SW	8	3.6	.....	2ck	5ks	SW	NW	0	0	Cloudy	
Cape Henry, Va.	.....	.....	29.88	758.9	83	28.3	71	W	4	1.8	.....	5c	0	.....	.....	0.31	7.9	Fair	
Cape Lookout, N. C.	.....	.....	29.96	761.0	83	28.3	83	W	20	8.9	.....	2c	Haze	W	.....	Inap.	Inap.	Fair	
Cape May, N. J.	.....	.....	29.98	761.5	78	25.6	82	W	8	3.6	.....	.....	10ks	.....	W	0	0	Cloudy	
Charleston, S. C.	.....	.....	30.02	762.5	82	27.8	65	SW	7	3.1	.....	0	Haze	.....	.....	0	0	Clear	
Cheyenne, Wyoming	24.12	612.6	30.05	763.5	57	13.9	81	S	4	1.8	.....	1ck	0	.....	.....	0.06	1.5	Clear	
Chicago, Ill.	.....	.....	30.00	762.0	69	20.6	75	NE	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Cincinnati, Ohio	.....	.....	29.95	760.7	77	25.0	69	E	5	2.2	.....	2c	0	.....	.....	0.33	8.4	Clear	
Cleveland, Ohio	.....	.....	30.01	762.2	72.2	22.3	46	N	9	4.0	.....	5ck	2s	W	.....	0	0	Fair	
Colorado Springs, Col.	24.28	616.7	30.15	765.8	55	12.8	57	Calm	0	0	.....	.....	10s	.....	.....	0.18	4.6	Cloudy	
Corsicana, Tex.	.....	.....	30.04	763.0	73	22.8	85	S	1	0.4	.....	2c	0	.....	.....	0	0	Clear	
Davenport, Iowa	.....	.....	30.03	762.7	68	20.0	74	E	8	3.6	.....	.....	10n	.....	.....	0.44	11.2	Light rain	
Denison, Tex.	.....	.....	30.02	762.5	81	27.2	74	S	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Denver, Col.	24.87	631.7	30.03	764.3	58	14.4	75	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.03	762.7	67	19.4	54	N	7	3.1	.....	2cs	0	.....	.....	0	0	Clear	
Dodge City, Kan.	27.43	696.7	29.62	752.3	71	21.7	85	Calm	0	0	.....	8cs	0	.....	.....	Inap.	Inap.	Fair	
Dubuque, Iowa	.....	.....	30.04	763.0	68	20.0	74	E	4	1.8	.....	.....	10s	.....	.....	0.30	7.6	Cloudy	
Duluth, Minn.	.....	.....	30.07	763.8	67	19.4	74	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	29.82	757.4	66	18.9	78	NW	5	2.2	.....	2c	Fog	SW	.....	0.04	1.0	Fair	
Erie, Pa.	.....	.....	29.97	761.2	72	22.2	54	NW	6	2.7	.....	1c	0	.....	.....	0	0	Clear	
Escanaba, Mich.	.....	.....	30.08	764.0	67	19.4	60	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Fort Gibson, Indian Ter.	.....	.....	29.94	760.5	84	28.9	75	SE	4	1.8	.....	2c	0	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	29.54	750.3	58	14.4	52	SE	.....	.....	7	.....	10ks	.....	.....	0	0	Cloudy	
Fort Sill, Indian T.	28.81	731.8	29.86	758.4	80	26.7	58	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.35	720.1	29.96	761.0	64	17.8	89	SE	14	6.3	.....	5k	0	S	.....	0	0	Fair	
Galveston, Tex.	.....	.....	30.09	764.3	82	27.8	78	Calm	0	0	.....	2ck	0	.....	.....	0	0	Fair	
Grand Haven, Mich.	.....	.....	30.06	763.5	73	22.8	46	E	9	4.0	.....	0	1s	.....	.....	0	0	Clear	
Indianapolis, Ind.	.....	.....	29.97	761.2	78	25.6	73	E	4	1.8	.....	5ck	0	.....	.....	0.04	1.0	Fair	
Indianola, Tex.	.....	.....	30.08	764.0	85	29.4	67	S	4	1.8	.....	5ck	0	.....	.....	0.01	0.3	Fair	
Jacksonville, Fla.	.....	.....	30.08	764.0	88	31.1	63	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Keokuk, Iowa	.....	.....	29.92	760.0	68	20.0	90	NE	10	4.5	.....	.....	10s	.....	NE	0	0	Cloudy	
Key West, Fla.	.....	.....	30.00	764.3	81.2	27.3	82	E	9	4.0	.....	1k	2ks	E	E	0.23	5.8	Fair	
Kittyhawk, N. C.	.....	.....	29.92	760.0	80	26.7	78	W	18	8.0	.....	2c	0	W	.....	0.03	0.8	Fair	
Knoxville, Tenn.	.....	.....	29.99	761.7	75	23.9	85	Calm	0	0	.....	0	2ks	.....	W	Ina.	Inap.	Clear	
La Crosse, Wis.	.....	.....	30.03	762.7	69	20.6	70	N	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan.	.....	.....	29.91	759.7	72	22.2	95	Calm	0	0	.....	.....	10s	.....	N	0.57	14.5	Cloudy	
Lexington, Ky.	29.02	737.1	30.07	763.8	77	25.0	86	N	12	5.4	.....	5k	0	SW	.....	0.03	0.8	Fair	
Louisville, Ky.	.....	.....	29.96	761.0	80	26.7	78	N	2	0.9	.....	2ck	0	.....	.....	0.01	0.3	Clear	
Lynchburg, Va.	.....	.....	29.87	758.7	84	28.9	67	W	2	0.9	.....	2ck	0	SW	.....	0.02	0.5	Clear	
Malone, N. Y.	.....	.....	29.91	759.7	70	21.1	60	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Manhattan, Kan.	28.75	730.2	29.88	758.9	71	21.7	100	NW	2	0.9	.....	.....	1s	.....	.....	0.20	5.1	Cloudy	
Marquette, Mich.	.....	.....	30.04	763.0	70	21.1	57	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn.	.....	.....	30.02	762.5	79	26.1	82	S	2	0.9	.....	5cs	0	.....	.....	0.44	11.2	Fair	
Milwaukee, Wis.	.....	.....	30.08	764.0	70	21.1	56	NE	7	3.1	.....	2ck	0	W	.....	0	0	Clear	
Mobile, Ala.	.....	.....	30.09	764.3	80	26.7	78	NW	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Montgomery, Ala.	.....	.....	30.05	763.3	79	26.1	82	NW	6	2.7	.....	8ck	Haze	E	.....	0	0	Fair	
Morgantown, W. Va.	28.92	734.6	29.93	760.2	73	22.8	90	N	3	1.3	.....	.....	10s	.....	N	0.82	20.8	Cloudy	
Mt. Washington, N. H.	24.83	605.3	30.19	766.8	46	7.8	61	N	25	11.2	.....	5s	0	NW	.....	0.30	7.6	Fair	
Nashville, Tenn.	.....	.....	29.97	761.2	82	27.8	70	W	4	1.8	.....	0	Haze	.....	.....	0	0	Clear	
New Haven, Conn.	.....	.....	29.84	757.9	81	27.2	52	N	12	5.4	.....	0	0	.....	.....	Inap.	Inap.	Clear	
New London, Conn.	.....	.....	29.85	758.2	80	26.7	61	N	4	1.8	.....	2cs	2ck	W	W	0.05	1.3	Fair	
New Orleans, La.	.....	.....	30.06	763.5	84	28.3	74	W	7	3.1	.....	5cs	0	.....	.....	0	0	Fair	
Newport, R. I.	.....	.....	29.83	757.7	79	26.1	65	N	6	2.7	.....	5ck	0	W	.....	0	0	Fair	
New York, N. Y.	.....	.....	29.90	759.4	78	25.6	65	NW	4	1.8	.....	5c	Haze	W	.....	0.01	0.3	Fair	
Norfolk, Va.	.....	.....	29.92	760.0	83	28.3	70	SW	5	2.2	.....	2c	0	.....	.....	0.40	10.2	Fair	
North Platte, Neb.	27.16	689.8	29.64	752.8	65	18.3	89	E	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Omaha, Neb.	28.92	734.6	29.95	760.7	70	21.1	95	N	5	2.2	.....	.....	10s	.....	.....	0.31	7.9	Cloudy	
Oswego, N. Y.	.....	.....	29.94	760.5	70.6	21.4	77	N	1	0.4	.....	1ck	Haze	NW	.....	0	0	Fair	
Pembina, Dakota	.....	.....	29.99	761.7	62	16.7	94	SE	10	4.5	.....	.....	8ks	.....	SW	0.05	1.3	Cloudy	
Philadelphia, Penn.	.....	.....	29.90	759.4	80	26.7	78	E	11	4.9	.....	2ck	5s	N	NW	0	0	Cloudy	
Pike's Peak, Colorado	18.04	458.2	30.25	768.3	36	2.2	80	W	2	0.9	.....	1c	2k	W	.....	0.32	8.1	Fair	
Pittsburgh, Penn.	.....	.....	29.93	760.2	72	22.2	85	NE	6	2.7	.....	1c	5k	.....	NE	Inap.	Inap.	Fair	
Port Huron, Mich.	.....	.....	30.13	765.3	64	17.8	67	N	9	4.0	.....	0	1s	.....	.....	0	0	Clear	
Portland, Me.	.....	.....	29.87	758.7	71	21.7	80	NW	1	0.4	.....	5k	Haze	NW	.....	0.05	1.3	Fair	
Portland, Oregon	.....	.....	30.12	765.0	58	14.4	87	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Punta Rassa, Fla.	.....	.....	30.1[illegible]	764.5	79.0	26.1	75	NE	8	3.6	.....	1c	0	NW	.....	1.10	27.9	Clear	
Rochester, N. Y.	.....	.....	29.92	760.0	70	21.1	66	W	6	2.7	.....	0	Sm'e	.....	.....	0	0	Clear	
Salt Lake City, Utah	25.59	650.0	29.92	760.0	63	17.2	51	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	29.88	758.9	77	25.0	82	NW	4	1.8	.....	8c	Haze	NW	.....	0	0	Cloudy	
San Diego, Cal.	.....	.....	29.95	760.7	64	17.8	83	S	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
San Francisco, Cal.	.....	.....	29.97	761.2	52	11.1	86	W	8	3.6	.....	2c	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23.41	594.6	29.95	760.7	58	14.4	87	SE	4	1.8	.....	5c	5s	SW	.....	1.13	28.7	Cloudy	
Savannah, Ga.	.....	.....	30.04	763.0	87	30.6	62	W	5	2.2	.....	0	Haze	.....	.....	0	0	Hazy	
Shreveport, La.	.....	.....	30.09	764.3	80	26.7	78	W	2	0.9	.....	0	0	.....	.....	0.05	1.3	Clear	
Smithville, N. C.	.....	.....	29.99	761.7	83	28.3	79	SW	18	8.0	.....	1ck,k	0	SW	.....	0	0	Clear	
Springfield, Mass.	.....	.....	29.86	758.4	81	27.2	58	N	4	1.8	.....	8cs	0	.....	.....	0	0	Fair	
St. Louis, Mo.	.....	.....	29.96	761.0	80	26.7	78	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.09	764.3	81	27.2	78	Calm	0	0	.....	0	2ks	.....	SE	6	0	Fair	
St. Paul, Minn.	.....	.....	30.04	763.0	67	19.4	60	N	1	0.4	.....	0	0	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	29.24	742.4	41	5.0	91	SE	25	11.2	.....	.....	10n	.....	.....	0.11	2.8	Light rain	
Thatcher's Island, Mass.	.....	.....	29.86	758.4	64	17.8	94	N	9	4.0	.....	.....	.....	.....	.....	0	0	Dense fog	
Toledo, Ohio	.....	.....	30.01	762.2	68	20.0	65	N	6	2.7	.....	5ck	0	W	.....	0	0	Fair	
Tucson, Arizona	27.56	700.0	29.15	765.8	79	26.1	.....	SE	.....	.....	.....	0	10ks	.....	SE	0	0	Threatening	
Tybee Island, Ga.	.....	.....	30.01	762.2	82	27.8	70	W	6	2.7	.....	1ck	Sm'e	W	.....	0	0	Fair	
Vicksburg, Miss.	.....	.....	30.06	763.5	81.5	27.5	82	SW	1	0.4	.....	1k	0	SW	.....	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
Virginia City, M. T.	24.28	616.7	29.76	755.9	50	10.0	64	Calm	0	0		2c	0	SW		0.03	0.18	Fair	
Washington, D. C.			29.91	759.7	78	25.6	82	N	4	1.8			10s		W	Inap.	Inap.	Threatening	
Wilmington, N. C			29.97	761.2	84	28.9	75	SW	10	4.5		1cs	0			0	0	Clear	
Wood's Holl, Mass			29.85	758.2	77	25.0	72	NW	4	1.8		2c	0	SW		0	0	Clear	
Wytheville, Va	27.70	703.6	29.74	755.4	74	23.3	81	W	4	1.8			10ks		W	0	0	Cloudy	
Yankton, Dakota	28.80	731.5	30.06	763.5	63	17.2	91	NE	3	1.3			10s			0.28	7.1	Cloudy	
Yuma, Arizona			29.87	758.7	87	30.6		SE				0	0			0	0	Clear	
Sub Series.																			
P'nte-a-Pitre, G'd'l'pe, W. I.			29.97	761.2	83	28.3	75	E				2k	5ks			0	0	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.			30.29	769.4	78	25.6	90	Calm	0	0		5c	0			0	0		James Gall.
St. Georges, Bermudas			30.03	764.0	82.0	27.8	81	SW	13	5.8		2k	2k	SW		Inap.	Inap	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	30.05	763.3	69	20.6	87	N	3.0	1.3		2c	2k	N		0.32	8.1	Fine	C. Partridge.
Paramaribo, D. Guiana S.A			30.01	762.2	81	27.2	78	E			2	5k	6k	E		0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.01	763.0			85.6	29.8		E								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.21	640.3			67.0	19.4	78	S	1	0.4		4c	3s			0	0	Fair	Thomas Herran.
York Factory, B. A.			29.79	756.7	50	10.0	96	NE	6	2.7			9s			0.30	7.6		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.			30.03	764.0	77	25.0	90	NE			5					0.20*	5.1*	Cloudy	Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Addie Fuller, at Gardener, Me.			29.95	760.7	78	25.6		W			2		5k		W			Fair	Capt. James Jorgensen.
Steamer Nova Scotian N, 49° 42′, W, 42° 14′.	E by S ½ S.	11	29.71	754.6	57	13.9		S			3-4		..s		S	Smooth		Blue sky	Capt. Ritche.

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, 6,012.1 ft., or 1,833.7 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 Still, 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.; Morgantown 1,027.9 ft., or 313. 3 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, 4,262.2 ft., or 1,299.2 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 added 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

* Rain-fall from P. M. of the 14th until 6 a. m. of the 15th.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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			30.13	765.2	77.2	25.1	71	N			2		1			0	0	Clear	Charnot.
Algiers			30.16	766.1	78.8	26.0	65	N			2		2			0	0	Clear	Peter.
La Calle			30.12	765.0	78.3	25.7	64	NW			3		2			0	0	Clear	Kunts.
Tunis			30.11	764.7	86.0	30.0	36	NW			4		5			0	0	Fair	Jacques.
Sfax			30.16	766.1	81.0	27.2	55	E			3		4			0	0	Fair	Chauvey.
Saïda			30.09	764.2	82.4	28.0	22	N			2		1			0	0	Clear	Millot.
Tebessa			30.12	765.1	75.0	23.9		E			1		1			0	0	Clear	Colin.
Geriville			30.08	764.0	85.3	29.6	27	NNW			2		1			0	0	Clear	Buard.
Laghouat			30.14	765.6	91.4	33.0	27	NE			1		0			0	0	Clear	Guyot.
Biskra			30.15	765.9	86.0	30.0	31	NE			2		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			30.07	763.6	78.3	25.7	47	NE			3		3			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.13	765.1	69.1	20.8	67	NE			1		10			0	0		Dr. Wierzbiski.
Eperies			30.05	763.2	69.8	21.0	51	N			3				S	0.143	3.63		Julius Mikolik.
Gratz	28.88	733.5	30.04	763.0	71.8	22.1	69	SW			2		6			0	0		Andreas Rospini.
Hermannstadt	28.56	725.4	29.92	759.9	75.9	24.4	52	ESE			3		5			0.022	0.56	Raining	Prof. Reissenberger.
Kremsmünster	28.81	732.4	30.13	765.3	71.2	21.8	64	WNW			2		7			0	0		Pr. C. Wagner.
Lemberg			29.98	761.4	66.4	19.1	85	NE			3		8			Blank	Blank		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.06	763.4	79.9	26.6	59	E			1		2cs			0	0		I.R. Hydrographic Office.
Szegedin			29.99	761.8	78.4	25.8	41	E			3		7			0	0		Karl Stancel.
Trieste			30.09	764.2	82.0	27.8	55	W			1		2			0.035	0.9		Prof. V. Faroli.
Vienna			30.11	764.7	72.3	22.4	49	NW			3		8			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.30	769.5	75.7	24.3	52	N			1		4		NNE	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			30.18	766.6	79.6	26.4		SSE	20	8.9			1			0	0	Blue sky	William Boswell.
Ardrossan																			William McNeil.
Armagh, Observatory			30.24	768.1	84.0	28.9		SSW	12	5.4									S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.26	768.6	84.0	28.9		SW			1		0					Blue sky	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			29.98	761.5	79.5	26.4		SE			6		10					Overcast	Sergt. J. F. Halahen, A. H. C.
Cambridge, Observatory			30.34	770.4	88.9	31.6		S			1		1					Blue sky	H. Todd.
Cardington			30.35	770.9	88.0	31.1		SE			1		1					Blue sky	John McLaren.
Carlisle			30.23	767.8	85.2	29.6		W			1		1			0	0	Blue sky	T. Bell, for J. Carmell.
Chatham, School M. E			30.35	770.9	77.5	25.3		NE			1		2					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	29.00	736.6	30.44	773.2	79.6	26.4		E			1		0					Blue sky	R. E. Power.
Donaghadee			30.24	768.1	78	25.6		SSE			2		5					*D. clouds	J. Mac Gowan.
Dover			30.35	770.9	64	17.8		NE			3		3					Foggy	J. Costello.
Eccles (near Manchester)			30.27	768.8	88.8	31.6		SW	1.0	0.4								Blue sky	Thomas Mackereth.
Falmouth, Observatory			30.48	774.2	72.3	22.4		ESE?			3		0					Hazy	The Staff.
Fort Napier, (Natal)	27.86	707.6	30.10	764.5	69.7	20.9		E			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone			30.05	763.3	82	27.8		W			3		6					*D. clouds	
Galway, Queen's College			30.25	768.3	75	23.9		W			6		3					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.14	765.3	77.0	25.0		E			4		1					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			30.24	768.1	79.6	26.4		W			2		1					Fine	Lewis Stuart.
Great Yarmouth			30.37	771.4	63	17.2		ESE			2		2					Foggy	G. T. Watson.
Greenwich, Royal Ob's'y			30.34	770.6	87.3	30.7		ESE			1		1					Blue sky	The Staff, for G. B. Airy
Guernsey			30.32	770.1	70	21.1		NE			2		0					Blue sky	Dr. S. E. Hoskins.
Helston			30.34	770.4	75	23.9		E			2		0			0	0	Blue sky	M. P. Moyle.
Holyhead			30.29	769.4	76	24.4		SW			2		0					Blue sky	John Tiston.
Kew, Observatory			30.35	770.9	82.5	28.1		E	7	3.1			1					Hazy	The Staff.
Kingstown																			George Mitchell.
Leicester Museum			30.32	770.1	85.2	29.6		S			1		0					Blue sky	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.97	761.2	79	26.1		N			1		2k					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			30.14	766.1	85	29.4		W			1		0					Clear	W. D. Penny.
Nassau, (Bahamas			30.18	766.6	85.1	29.5		SE			5		6					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.32	770.1	90.7	32.6		SSE			3		0					Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.32	770.1	86.8	30.4		S			2		10			Blank	Blank	Hazy	Rev. Stephen Whitty.
Oxford, Radcliffe Ob's'y			30.32	770.1	86	30.0		Calm			0		1					Blue sky	J. Lucas.
Plymouth			30.33	770.4	83.2	28.4		SE			3		0					Blue sky	John Merrifield.
Roche's Point			30.30	769.6	73	22.8		SE			2		2					Fine	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, Jersey			30.31	769.9	83.5	28.6		NNE			3		2					¼ clouded	A. P. Amy.
Sandwick Manse, Orkneys			30.14	765.5	69.5	20.8		S	16	7.2			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery Turkey			29.81	757.2	83.0	28.3		NE			3		3					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.29	769.4	85.2	29.6		SW			2		1			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			30.28	769.1	83.2	28.4	29	Calm			0		0			0	0	Blue sky	Rev. Francis Redford.
Stonyhurst, Observatory			30.26	768.6	83.7	28.7		W			1		1					Hazy	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			30.10	764.5	71	21.7		SW			5		5					*D. clouds	John Smith.
Strathfield Turgiss			30.34	770.6	85.5	29.7		E			1		2					Blue sky	Rev. Charles H. Griffith.
Thurso			30.10	764.5	85	29.4		SW			3		4					*D. clouds	John Trotter.
Truro, Royal Institution			30.36	771.1	83	28.3		SE			2		0					Blue sky	W. Newcombe.
Valencia, Observatory			30.29	769.4	69.0	20.6		SW	13	5.8			3					Hazy	The Staff.
Sub-Series.																			
Calf of Man, Isle of Man					68	20.0		S			2		0						Thomas Dawson.
Cape Good Hope, Ob's'y			30.14	765.5	62.1	16.7	81	NW	10	4.5		4	4						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			30.24	768.1	55.0	12.8	86	SW			1		7kn			0	0	Cloudy	Francis Abbott, F.R.A.S.
Leith, Restaurig Park			30.22	767.6	79.0	26.1		E			2	2ck		W		0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.23	767.8				ESE	19.1	8.5						0.01	0.3		C. Meldrum
Melbourne, Observatory			30.14	765.5	45.0	7.2	85	NE	6	2.7			0			0	0	Fine, clear	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.28	769.1	55	12.8		SW			3		Fog			0	0	Foggy	J. Youngehaus.
North Unst, (Shetland Is.)								S			4	0	0						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. 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	765.5	73.6	23.1	50	NW			2		4						
Faröe			30.26	768.5	62.1	16.7	75	NW			6		1						
Godthaab, Greenland			29.57	751.0	45.3	7.4	93	ENE			2		10					Raining	
Stykkisholm, Iceland			29.66	753.3	53.1	11.7	96	W			6		10						
Thorshavn, (Faröe)			29.97	761.1	56.1	13.4	82	W			6		7					Misty	
Vestervig			30.17	766.2	61.5	16.4	73	NW			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			30.24	768.1	75.2	24	36	E			2		2s,n		NE	0	0	Slightly cl'dy	Normal School.
Amiens			30.30	769.6	86.7	30.4	46	N			3		0			0	0	Clear	Normal School.
Avignon			30.11	764.8	87.8	31.0	39	NNE			1		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.23	767.7	80.1	26.7	38	N			3		2			0	0	Slightly cl'dy	C. Saillard.
Beaumette, (near Angers)			30.23	767.9	86.5	30.3	36	NE	4.0	1.8			0			0	0	Clear	Beaumette Observatory.
Beauvais			30.29	769.4	80.1	26.7	34	NNE			3		0			0	0	Clear	Normal School.
Besançon			30.19	766.8	81.7	27.6	49	NE			8		0			0	0	Clear	Normal School.
Bourg en Bresse			30.30	769.6	81.2	29	55	N			2		0					Clear	Normal School.
Bourges			30.79?	782.0?	82.0	27.8	39	NE			4		0			0	0	Clear	Normal School.
Brest			30.23	767.8	90.9	32.7	52	ESE			2		1			0	0	Clear	Naval Observatory.
Carcassonne			30.19	766.8	77.0	25	34	N			1		0			0	0	Clear	Normal School.
Caen			30.30	769.6	76.8	24.9	85	N			6		0			0	0	Clear	Normal School.
Chartres			30.28	769.0	76.3	24.6	56	NE			4		0			0	0	Clear	Normal School.
Clermont			30.14	765.6	81.3	27.4	48	N			3		0			0	0		Puy de Dome Obs'y.
Commercy			30.26	768.5	74.5	23.6	48	NE			4		2k		NE	0	0	Slightly cl'dy	Normal School.
Commune de Greasque*			30.19	766.8	85.8	29.9	27	SW			4		2		SW	0	0		M. Kina.
Grenoble			30.10	764.6	80.4	26.9	57	NNW			1		2k		SW	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.18	766.6	90.9	32.7	35	NE			2		6			0	0	Clear	Normal School.
Le Mans			30.23	767.7	83.8	28.8	70	NE			4		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			30.20	767.0	80.1	26.7	52	N			4		0			Blank	Blank	Clear	Normal School.
Mâcon			30.43	772.9	80.4	26.9	57	NNE			2		0			0	0	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			30.19	766.8	68.0	20	94	NNE			2		2		SW	0	0	Slightly cl'dy	Normal School.
Nismes			30.10	764.4	91.8	33.2	28	N			2		0			0	0	Clear	Normal School.
Orleans			30.28	769.1	84.9	29.4	32	NE			1		0			0	0	Clear	Normal School.
Paris, Observatory			30.27	768.8	81.3	27.4	36	NNE			3		0			0	0	Vapory	National Observatory.
Parthenay			30.17	766.2	96.8	36	85	NE			2		0			0	0	Clear	Normal School.
Privas			30.11	764.8	81.6	29.2		NNE			2		2		NNE	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.20	767.0	90.5	32.5	26	ENE			5		0			0	0	Blue sky	Naval Observatory.
Rouen			30.30	769.5	87.3	30.7	33	NNE			1		0			0	0	Clear	Normal School.
Saint Lo			29.94	766.4	94.6	34.8	50	NE			0		0			0	0		Normal School.
Tarbes	29.06	738.0	30.09	764.2	78.8	26		WNW			1		0			0	0	Clear	Normal School
Villefranche			30.15	765.7	85.8	29.9	66	NE			3		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.87	758.8	80.6	27													L'Abbé Marchésl.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.44	773.1	71.2	21.8	58	SE	7	3			2			0	0		—. Faiguère.
Montsouris, Paris			30.27	768.9	83.5	28.6	37	NE			2		2		NE	0	0		Montsouris Observ'tory.
Perpignan			30.11	764.7	82.8	28.2	47	S	11.2	5.00			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)			30.27	768.8	83.5	28.6	40	N			2		0			0	0	Clear	E. Renou.
Toulouse			30.20	767.1	87.8	31.0	28	NNW			3		0			0	0		Toulouse Observatory.
Tours			30.22	767.6	87.1	30.6	32	ENE			3		0			0	0	Clear	C. Marquet.
Versailles, (near Paris)			30.28	769.1	82.8	28.2	34	NE			4		0			0	0	Very clear.	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai																			H. Le Lec, S. J.

NOTE.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Bamberg			30.24	768.2	72.9	22.7	49	NW			6		5	NW		0	0		Prof. T. Hoh.
Berlin			30.24	768.2	72.1	22.3	55	S			3		4			0	0		Prof. Arndt.
Breslau			30.22	767.6	71.8	22.1	49	NW			6		8			0	0		Dr. P. Neugebauer.
Carlsrune			30.23	767.8	75.6	24.2	55	E			1		7			0	0		A. Senz.
Cassel			30.32	770.0	74.3	23.5	54	NW			4		1	NW		0	0		Dr. H. Möhl.
Emden			30.34	770.6	66.4	19.1	67	NW			3		5			0	0		Prof. Prestel.
Frankfort on the Main			30.28	769.2	76.6	24.8	50	NE			4		2			0	0		Physical Society.
Friedrichshafen			30.19	766.7	75.9	24.4	58	NE			4		2			0	0		M. Wilhelm.
Hamburg			30.28	769.1	64.6	18.1	75	WNW			4		10			Inap	Inap.		Captain F. Hegemann.
Kiel			30.23	767.7	69.3	20.7	63	NW			4		3			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			30.06	763.4	68.5	20.3	52	W			5		2			0	0		Prof. E. Luther.
Köslin			30.23	767.9	69.4	20.8		NW			1		0			0	0		H. Müller.
Leipsic			30.28	769.0	68.0	20.0	58	WNW			2		4	NNW		0	0		Prof. Bruhns.
Memel			30.07	763.6	64.0	17.8	61	NNW			4		4ks	NW		0	0		Reinbrecht & Skalweit.
Münster			30.36	771.2	72.5	22.5	59	NE			1		0			0	0		Prof. E. Heis.
Neufahrwasser			30.13	765.2	67.3	19.6	65	NNE			4		7	NNE		0	0		A. Lothes.
Posen			30.17	766.4	74.5	23.6	50	NW			2		10			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.24	768.1	76.5	24.7	47	NE			2		1			0	0		Dr. Schur.
Stuttgart			30.25	768.4	75.2	24.0	51	N			1		4			0	0		Prof. Schoder.
Thorn			30.11	764.8	75.4	24.1	45	NW			1		9			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.25	768.3	79.0	26.1	44	E			5		2			0	0		Prof. Flesch.
Wustrow, Naval School			30.32	770.1	64.6	18.1	73	WNW			4		7			0	0		E. F. Schütz.

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	757.4	86.9	30.5		W					..k					Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 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			30.06	763.4	80.2	26.8	49	SW	0.7	0.3			2			0	0		
Padua			30.08	763.9	8.3	25.7	51	SE	4.1	2.2			0			0	0		
Vicenza			30.07	763.7	81.0	27.2	46	SSE	6.9	3.1			1	W		0	0		
Verona			30.04	762.9	84.2	29.0	69	E			1		0			0	0		
Bergamo					82.4	28.0		SE			2		2			0	0		
Domodossola	29.05	737.9	30.01	762.9	98.2	36.8	64	S			4		1			0	0		
Milan			30.06	763.5	90.3	32.5	46	E			1		1	ESE		0	0		
Pavia			30.08	763.9	81.5	27.5	43	NE			1		0			0	0		
Moncalieri			30.08	764.0	81.1	27.3	52	SW	3.1	1.4			1			0	0		
Mondovi	28.23	717.1	30.08	764.0	76.1	24.5	51	NW			2		0			0	0		
Porto Maurizio			30.15	765.9	81.1	27.3	50	WSW			2		0			0	0		
Genoa			30.08	764.1	82.0	27.8	42	Calm	0	0			0			0	0		
Piacenza			30.09	764.2	82.0	27.8	44	NE	0	0			0			0	0		
Parma			30.08	764.1	83.1	28.4	41	E			2		0			0	0		
Bologna			30.11	764.8	79.7	26.5	37	E			6		4	N		0	0		
Florence			30.10	764.5	84.2	29.0	34	NE			4		4	NE		0	0		
Leghorn			30.09	764.3	81.5	27.5	44	WNW	6.1	2.8			3			0	0		
Siena	28.87	733.3	30.03	762.8	78.8	26.0	36	ENE	9.4	4.2			4	E		0	0		
Urbino	28.61	726.6	30.12	765.1	71.8	22.1	50	NE			4		2			0	0		
Ancona			30.08	764.1	77.4	25.2	65	NW			4		0			0	0		
Grosseto			30.06	763.4	83.8	28.8	31	NNE			4		3	NW		0	0		
Rome			30.00	761.9	83.8	28.8	41	W	9.4	4.2			3	ENE		0	0		
Naples, O. U.			30.00	762.0	84.7	29.3	50	NNW			2		8	SE		0	0		
Lecce			29.91	760.5	75.2	24.0	59	NW	21.7	9.7			2			0	0		
Cosenza			29.96	760.9	81.1	27.3	67	NW	1.3	0.6			7			0	0		
Riposto, (Sicily)			29.99	761.7	78.8	26.0	64	SW			2		6	E		0	0		
Palermo			29.97	761.3	86.0	30.0	30	W	3.1	1.4			6			0	0		
Caltanissetta	28.02	711.7	29.89	759.2	77.0	25.0	46	WNW			4		6	ESE		0	0		
Sub-Series.																			
Naples, S. R.			30.02	762.5	77.4	25.2	56	NNW	1.8	0.8			10	NW		0	0		Prof. F. Brioschi.
Pesaro			30.15	765.8	75.0	23.9	62	N	22.8	10.17			0						L. Guidi.

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. Inches.	Rain-fall. 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. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Flushing			30.37	771.5	74.1	23.4		NNE			2								
Groningen			30.29	769.3	65.3	18.5		SW			2								
Helder			30.35	770.9	66.7	19.3		W			1								
Utrecht			30.31	769.8	74.8	23.8	55	NNE			2		2					Light cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 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			30.26	768.5	60.1	15.6	73	Calm	0	0			9			0.691	2.3		
Brono			29.99	761.8	51.8	11.0	92	WSW	9	4			10			Inap.	Inap.	Light rain	
Christiania			30.04	762.8	76.1	24.5	35	SSE	3.4	1.5			3			0	0		
Tromsö			29.80	756.8	56.3	13.5	76	NNE	2	1			8			0.047	1.2		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 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	74.7	23.7	73	E	15.7	6.94			4			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.05	763.2	94.1	34.5	22	SE	5.0	2.50			0			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.14	764.6	75.7	24.3	79	Calm	0	0			0			0	0		Capt D. A. da Cunha.
Lisbon			30.13	765.3	79.3	26.3	50	SW	12.5	5.6			0			0	0		The Observatory.

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

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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	764.1	69.4	20.8	50	NW	9	4			10						Astronomical Obs.
Wilna			29.93	760.2	65.5	18.6	51	W	4	2			10						Astronomical Obs.
Dorpat			29.78	756.3	63.0	17.2	70	WNW	9	4			7						Physical Cabinet.
St. Petersburg			29.66	753.4	59.2	15.1	66	NNW	13	6			8						Central Physical Obs.
Kuopio			29.60	751.8	61.5	16.4	79	N	7	3			10					Thunder-storm	Ch. Forsten.
Kieff			29.86	758.5	64.8	18.2	69	WNW	7	3			10					Raining	Physical Cabinet.
Nikolaiev			30.01	762.2	81.3	27.4	37	NW	4	2			2						Kurdakof.
Kertch			29.93	760.1	80.2	26.8	40	NNE	13	6			0						Lagorio.
Moscow			29.74	755.4	62.1	16.7	77	S	4	2			8					Raining	Meteorological Obs.
Lugan			29.80	756.9	76.3	24.6	36	N	18	8			5						Meteorological Obs.
Archangel			29.51	749.6	73.8	23.2	85	SE	22	10			8					Raining	Ogorodnikof.
Tiflis	23.14	722.4	29.75	755.7	88.3	31.3	37	S	9	4			4						Physical Observatory.
Astrakhan			29.82	757.5	77.2	25.1	54	Calm	0	0			10			Blank	Blank		Sebastianof.
Kasan			29.68	753.8	78.3	24.7	48	W	18	8			3						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.81	731.8	29.72	754.8	70.3	21.3	66	NNE	2	1			6						Meteorological Obs.
Nukuss			29.76	755.8	89.8	32.1	30												
Kasaly																			Bobrof.
Tashkend	28.28	718.2	29.89	759.3	79.0	26.1	57	Calm	0	0			2						Michelson.
Barnaul			29.60	751.8	69.3	20.7	69	Calm	0	0			9						Meteorological Obs.
Yenisseisk			29.52	749.7	78.3	25.7	54	Calm	0	0			1						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.75	755.6	82.2	27.9	75	SW	2	4			4			Blank	Blank		Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostok			29.81	757.8	65.8	18.8	98	SE	11	5			10						
Nikolaievsk, on the Amoor					54.9	12.7	98	ESE	11	5			8					Thunder-storm	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 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			30.05	763.2	92.5	33.6	23	S	6.7	3.00		0	1			0	0	Almost clear	Royal Observatory.
San Fernando			30.10	764.4	88.2	31.2	27	ESE	19.5	8.7		0	0						The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			29.71	754.6	55.0	12.8	91	N			4		10			0	0		
Umea			29.77	756.2	68.7	20.4	45	NNW			7		7			0	0		
Hernosand			29.86	758.5	64.8	18.2	47	WNW			6		7			0	0		
Stockholm			29.96	760.9	68.0	20.0	43	WNW			4		9			0	0		
Wisby			30.09	764.3	63.7	17.6	72	WNW			4		7			0	0		
Sub-Series.																			
Upsala			29.97	761.3	64.8	18.2	50	NW	12.3	5.5			10		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; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

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	28.77	730.7	30.14	765.5	75.9	24.4	57	N			4		0			0	0	Clear	The Observatory.
Zurich	28.61	726.8	30.18	766.5	78.6	25.9	50	NE			2		1			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +3.1 mm.; Thermometer, +1.8 cent.; Relative Humidity, +4 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

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			29.89	759.2	77.5	25.3	65	ENE	27	12.0			5		NE	0	0		
Fao, (Persian Gulf)			29.61	752.0	98.6	37.0		NW			3		0						
Salonica			29.95	760.7	82.9	28.3		W			4		2						
Valona			29.91	759.8	80.2	26.8		NW			2		5					Stormy	
Varna			29.88	759.0	86.0	30.0		NE			6		2						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.73	755.2	90.7	32.6	56	SW			3		18		SW	0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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			30.19	766.8	80	26.7		SW	4	1.8		0	0			0	0	Clear	W. R Bigg.
*Chatham, N. B			29.89	759.2	67	19.4	69	NW	9	4.0		2ck	0	NW		0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island			29.90	759.4	68	20.0	74	W	10	4.5		5k	0	W		0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			30.07	763.8	77.2	25.1	58	W			2	0	0			0	0	Bright	James Smith, M. A.
Dalhousie, N. B																			H. A. Johnson.
Esquimault, B C																			W. H. Bevis.
Fredericton, N. B			29.98	761.5	66.1	18.9	64	NW	11	4.9		0	0			Inap.	Inap.	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.82	757.4	61	16.1	97	SW	6	2.7		2c	2s	SW	SW	0.41	10.41	Fair	James Stewart.
Goderich, Ontario			30.20	767.1	70.3	21.3	98	Calm			0	0	0			0	0	Fine	H. J. Strang, M. A.
Granton, Ontario	29.12	739.6	30.18	766.6	60.7	19.4		Calm			0	0	0			0	0	Clear	James Grant.
*Halifax, N. S.			29.92	760.0	69	20.6	63	NW	9	4.0		0	0			0	0	Clear	F. Allison, M. A.
*Kingston, Ontario			30.20	767.1	72	22.2	73	Calm	0	0		0	0			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.																			C. H. Rigby.
*Montreal, Quebec			30.08	764.0	70	21.1	66	W	9	4.0		0	0			0	0	Clear	C. H. McLeod, C E.
*Ottawa, Ontario			30.12	765.0	69	20.6	69	W	10	4.5		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.16	766.1	70	21.1	80	S	3	1.3		0	0			0	0	Clear	Rev. R. Mosley.
*Port Dover, Ontario			30.19	766.8	64	17.8	73	N	5	2.2		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.			29.90	759.4	69.0	20.6		NW	5	2.2		0	0			0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.20	767.1	65	18.3	81	NE	5	2.2		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			30.03	762.7	71	21.7	71	SW	10	4.5		0	0			0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.			29.99	761.7	69	20.6	58	NW	3	1.3		1k	0			0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			30.16	766.1	68	20.0	73	Calm	0	0		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario																			R. J. Cole.
Stratford, Ontario	24.93	734.8	30.18	766.6	63.9	17.7	73	Calm	0	0		0	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.86	758.4	67	19.4	69	W	9	4.0		0	0			0	0	Clear	T. C. Hill.
*Toronto, Ontario			30.19	766.8	68	20.0	69	S	3	1.3		0	0			0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.19	766.8	66.1	18.9	71	NE	2	0.9		0	0			0	0	Fine	J. Montgomery
Sub-Series.																			
St. John's, Newfoundland			29.80	756.9	69	20.6	65	W				0	0			0.30	7.6	Clear	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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. *Rain-fall until 10 a. m., of the 15th.

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.			30.14	765.5	72	22.2	63	Calm	0	0		0	0			0	0	Clear	
Alpena, Mich.			30.14	765.5	68	20.0	65	Calm	0	0		0	0			0	0	Clear	
Atlantic City, N. J.			30.01	764.3	78	25.6	86	NE	6	2.7		2cs	Haze	NE		0	0	Fair	
Augusta, Ga.			30.06	763.5	82	27.8	75	NW	2	0.9		0	0			0	0	Clear	
Baltimore, Md.			30.12	765.0	79	26.1	47	NE	8	3.6		0	Sm'e			0.01	0.3	Clear	
Barnegat, N. J.			30.09	764.3	81	27.2	74	E	15	6.7		2k	0	E		0	0	Clear	
Benton, Montana	27.16	689.8	29.94	761.0	60	15.6	48	W	4	1.8		0	0			0	0	Clear	
Bismarck, Dakota	28.06	712.7	29.60	751.8	70	21.1	61	E	4	1.8		5k	0			0.35	8.9	Fair	
Boston, Mass.			30.10	764.5	73	22.8	54	W	6	2.7		Haze	Haze			0	0	Hazy	
Breckenridge, Minn.			29.85	758.2	68	20.0	84	SE	14	6.3		0	0			0	0	Cloudy	
Buffalo, N. Y.			30.16	766.1	70	21.1	62	Calm	0	0		0	0			0	0	Clear	
Burlington, Vt.			30.12	765.0	71	21.7	66	S	1	0.4		0	0			0	0	Clear	
Cairo, Ill.			30.09	763.5	76	24.4	100	SE	3	1.3			10n		SE	0.44	11.2	Light rain	
Cape Hatteras, N. C.			29.92	760.0	80	26.7	86	NE	8	3.6			8ks		NE	0.75	19.1	Cloudy	
Cape Henry, Va.			30.03	762.7	80	26.7	71	NE	10	4.5		0	0			0.35	8.9	Clear	
Cape Lookout, N. C.			30.01	762.2	80	26.7	86	N	16	7.2		2k	2s	N	S	1.48	37.6	Fair	
Cape May, N. J.			30.08	764.0	76	24.4	81	NE	8	3.6		0	0			0.20	5.1	Clear	
Charleston, S. C.			30.03	763.3	85	29.4	68	W	7	3.1		0	Haze			Inap.	Inap.	Clear	
Cheyenne, Wyoming	24.04	610.6	29.98	761.5	65	18.3	41	NW	4	1.8		5k,cs	2s			0	0	Fair	
Chicago, Ill.			30.09	764.3	75	23.9	72	SE	6	2.7		2k	0	S		0	0	Fair	
Cincinnati, Ohio			30.08	764.0	74	23.3	63	SE	4	1.8		2c	0			0	0	Clear	
Cleveland, Ohio			30.16	766.1	67.4	19.7	75	E	1	0.4		0	0			0	0	Clear	
Colorado Springs, Col.	24.11	612.4	29.98	761.5	58	14.4	87	N	1	0.4		1ck	0			0	0	Clear	
Corsicana, Tex.			30.05	763.3	74	23.3	85	S	2	0.9		5cs	Haze			0	0	Fair	
Davenport, Iowa			30.05	763.3	70	21.1	84	E	8	3.6		10ck	0	SW		0.25	6.3	Cloudy	
Denison, Tex.			30.06	763.5	78	25.6	81	SW	4	1.8			10s		S	0	0	Cloudy	
Denver, Col.	24.82	630.4	30.06	763.3	60	15.6	55	S	4	1.8		0	0			0	0	Clear	
Detroit, Mich.			30.16	766.1	69	20.6	69	NE	6	2.7		0	0			0	0	Clear	
Dodge City, Kan.	27.40	696.0	29.56	750.8	75	23.9	68	SE	9	4.0		2c	0	NW		0	0	Fair	
Dubuque, Iowa			30.06	763.5	69	20.6	79	SE	4	1.8			10s			0	0	Cloudy	
Duluth, Minn.			30.01	762.2	62	16.7	82	NE	3	1.3		1ck	0			0	0	Clear	
Eastport, Me.			29.99	761.7	70	21.1	61	NW	6	2.7		0	0			0	0	Clear	
Erie, Pa.			30.14	765.5	74	23.3	56	E	4	1.8		0	Sm'e			0	0	Clear	
Escanaba, Mich.			30.13	765.3	74	23.3	68	S	5	2.2		0	0			0	0	Clear	
Fort Gibson, Indian Ter.			29.98	761.5	80	26.7	78	E	4	1.8		5ck	2s	SE		0	0	Fair	
Ft. St. Michael, Alaska																0.21	5.3		
Fort Sill, Indian T.	28.82	732.0	29.87	758.7	81	27.2	61	S	4	1.8		0	0			0	0	Clear	
Fort Sully, Dakota	28.08	713.2	29.63	752.6	72	22.2	90	SE	16	7.2		2c	0			0	0	Clear	
Galveston, Tex.			30.08	764.0	81	27.2	78	W	4	1.8		8cs	0	SE		0	0	Cloudy	
Grand Haven, Mich.			30.14	765.5	74	23.3	59	E	4	1.8		1cs	0			0	0	Clear	
Indianapolis, Ind.			30.08	764.0	75	23.9	56	E	2	0.9		0	2s			0	0	Fair	
Indianola, Tex.			30.08	764.0	84	28.9	75	E	1	0.4		5k	0			0	0	Fair	
Jacksonville, Fla.			30.12	765.0	89	31.7	63	SW	4	1.8		0	0			0	0	Clear	
Keokuk, Iowa			29.96	761.0	75	23.9	90	E	6	2.7			10s		E	0	0	Cloudy	
Key West, Fla.			30.12	765.0	83.2	28.4	67	SE	11	4.9		1cs	1ks			0	0	Clear	
Kittyhawk, N. C.			30.02	762.5	75	23.9	95	NE	10	4.5		10k		NE		1.83	46.5	Cloudy	
Knoxville, Tenn.			30.07	763.8	71	21.7	95	NE	1	0.4			Fog			1.18	30.0	Dense fog	
La Crosse, Wis.			30.03	762.7	71	21.7	62	S	4	1.8		10k	0			0	0	Cloudy	
Leavenworth, Kan.			29.92	760.0	78	25.6	82	S	1	0.4		0	5s		SW	0	0	Fair	
Lexington, Ky.	29.02	737.1	30.08	764.0	76	24.4	64	E	4	1.8		5c	0			0	0	Fair	
Louisville, Ky.			30.07	763.8	77	25.0	61	NE	6	2.7		Haze	0			0	0	Clear	
Lynchburg, Va.			30.09	764.3	82	27.8	64	NE	2	0.9		5ck	0	W		0.02	0.5	Fair	
Malone, N. Y.			30.07	763.8	71	21.7	62	SW	8	3.6		0	0			0	0	Clear	
Manhattan, Kan.	28.73	729.7	29.81	757.2	75	23.9	85	SW	6	2.7		5cs	0			0	0	Fair	
Marquette, Mich.			30.08	764.0	69	20.6	65	S	4	1.8		0	0			0	0	Clear	
Memphis, Tenn.			30.07	763.8	81	27.2	78	SW	4	1.8		2cs	0			0	0	Clear	
Milwaukee, Wis.			30.12	765.0	71	21.7	75	SE	6	2.7		5ck	0	W		0	0	Fair	
Mobile, Ala.			30.10	764.5	79	26.1	86	NW	4	1.8		0	0			0	0	Clear	
Montgomery, Ala.			30.11	764.8	79.5	26.4	82	SW	4	1.8		0	Haze			0.19	4.8	Clear	
Morgantown, W. Va.	29.90	738.9	30.12	765.0	65	18.3	83	N	1	0.4		0	0			0	0	Clear	
Mt. Washington, N. H.	23.96	608.6	30.32	770.1	45	7.2	76	NW	44	19.7		1k	0	NW		0	0	Clear	
Nashville, Tenn.			30.03	762.7	76	24.4	86	N	3	1.3		10k	0	SW		0.72	18.3	Cloudy	
New Haven, Conn.			30.12	765.0	78	25.6	46	NE	10	4.5		Haze	0			0	0	Clear	
New London, Conn.			30.14	765.5	77	25.0	49	N	3	1.3		0	0			0	0	Clear	
New Orleans, La.			30.10	764.5	80	26.7	78	W	1	0.4		0	Haze			0	0	Clear	
Newport, R. I.			30.12	765.0	75	23.9	52	N	4	1.8		0	0			Inap.	Inap.	Clear	
New York, N. Y.			30.13	765.3	75	23.9	64	NE	11	4.9		0	Haze			0	0	Clear	
Norfolk, Va.			30.05	763.3	81	27.2	87	N	5	2.2		2c	5ks		NE	0.60	15.2	Fair	
North Platte, Neb.			30.03	762.7	75	23.9	64	E	4	1.8		2cs	0			0	0	Fair	
Omaha, Neb.	26.98	685.3	29.38	746.2	73	22.8	97	SE	7	3.1			Fog			0	0	Foggy	
Oswego, N. Y.	28.89	733.8	29.92	760.0	73	22.8	97	SE	3	1.3		0	Haze			0	0	Clear	
Pembina, Dakota			30.17	766.3	68.5	20.3	77	S	4	1.8			8s		S	0.25	6.3	Cloudy	
Philadelphia, Penn.			29.79	754.4	69	20.6	94	S	12	5.4		0	Sm'e			0	0	Clear	
Pike's Peak, Colorado	18.00	457.2	30.12	765.0	76	24.4	64	E	9	4.0		1k	0			0.02	0.5	Clear	
Pittsburgh, Penn.			30.21	767.3	38	3.9	55	NE	2	0.9		0	Sm'e			0	0	Clear	
Port Huron, Mich.			30.13	765.3	66	18.9	84	N	4	1.8		0	0			0	0	Clear	
Portland, Me.			30.18	766.6	69	20.6	70	Calm	0	0		0	Haze			0	0	Clear	
Portland, Oregon			30.09	764.3	72	22.2	52	W	5	2.2			10n			Inap.	Inap.	Light rain	
Punta Rassa, Fla.			30.18	766.6	59	15.0	81	Calm	0	0		1cs	0	SE		0.77	19.6	Clear	
Rochester, N. Y.			30.14	765.5	80.5	26.9	80	E	8	3.6		0	Sm'e			0	0	Clear	
Salt Lake City, Utah	25.59	650.0	30.16	766.1	69	20.6	65	W	3	1.3		0	0			0	0	Clear	
Sandy Hook, N. J.			29.92	760.0	66	18.9	19	NE	1	0.4		2k	2ks	W	E	0	0	Fair	
San Diego, Cal.			30.11	764.8	76	24.4	76	NE	5	2.2			10s		N	0	0	Cloudy	
San Francisco, Cal.			29.98	761.5	63	17.2	83	N	4	1.8			10s		SW	0	0	Cloudy	
Santa Fé, N. M.	23.37	593.6	29.99	761.7	53	11.7	86	S	6	2.7		2c	0			2.50	63.5	Clear	
Savannah, Ga.			29.94	759.7	54	12.2	86	NE	7	3.1		0	Haze			0	0	Hazy	
Shreveport, La.			30.07	763.8	87	30.6	62	W	5	2.2			10ks		S	0.02	0.5	Threatening	
Smithville, N. C.			30.11	764.8	78	25.6	82	S	4	1.8		8k	0	N		0	0	Cloudy	
Springfield, Mass.			30.03	762.7	83	28.3	74	NW	4	1.8		0	0			0	0	Clear	
St. Louis, Mo.			30.13	765.3	76.5	24.7	56	NE	4	1.8		0	10s			Inap.	Inap.	Cloudy	
St. Marks, Fla.			30.02	762.5	76	24.4	90	SE	4	1.8		0	2ks			0	0	Fair	
St. Paul, Minn.			30.11	764.8	81	27.2	78	Calm	0	0		0	0			0	0	Clear	
St. Paul's Island, Alaska			29.96	761.0	70	21.1	75	SE	8	3.6			10s			0.05	1.3	Cloudy	
Thatcher's Island, Mass.			29.14	740.1	42	5.6	91	S	10	4.5		0	0			0	0	Clear	
Toledo, Ohio			30.10	764.5	69	20.6	65	NW	6	2.7		0	0			0	0	Clear	
Tucson, Arizona	27.58	700.5	30.12	765.0	68	20.0	74	N	5	2.2			10ks		S	0.32	8.1	Light rain	
Tybee Island, Ga.			30.17	766.3	75	23.9		SE				0	0			0	0	Clear	
Vicksburg, Miss.			30.06	763.5	84	28.9	70	NW	6	2.7			10s			0.51	13.0	Cloudy	
			30.11	764.8	75	23.9	95	Calm	0	0									

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	45	7.2	60	Calm	0	0		1c	0	SW		0	0	Clear	
Washington, D. C.			30.11	764.8	77	25.0	52	NE	8	3.6		0	Haze			0.11	2.8	Clear	
Wilmington, N. C.			30.03	762.7	80	26.7	82	N	9	4.0		2c	5k	NW	NE	0	0	Cloudy	
Wood's Holl, Mass.			30.11	764.8	78	25.6	50	NE	1	0.4		0	0			0	0	Clear	
Wytheville, Va.	27.83	706.9	29.91	759.7	70	21.1	90	Calm	0	0			10ks		SE	0	0	Threatening	
Yankton, Dakota	28.65	727.7	29.87	758.7	71	21.7	90	SE	12	5.4			10s			0	0	Cloudy	
Yuma, Arizona			29.91	759.7	77	25.0		NE				0	0			0	0	Clear	
Sub Series.																			
P'nte-a-Pitre, G'd'l'pe, W. I.			29.97	761.2	84	28.9	83	E				5fk	5ks			0	0	Hazy	L. V. Bigard.
Kingston, Jamaica, W. I.			30.19	766.8	80	26.7	74	Calm	0	0		2c	2s	E	E	0	0		James Gall.
St. Georges, Bermudas			30.09	764.3	83.5	28.6	75	SSW	17.0	7.6		2k	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.	27.35	694.7	30.03	762.7	68	20.0	87	N	2.0	0.9		8c	2k	N		0	0	Dull	C. Partridge.
Paramaribo, D. Guiana S.A.			30.02	762.5	81	27.2	83	E			2	4k	5k	E		0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.04	762.9			81.2	29		NE								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.18	639.6			65.5	18.6	75	Calm	0	0		5c	2s			0	0	Fair	Thomas Herran.
York Factory, B. A.			29.49	749.0	56	13.3	68	S	4	1.8		6ck	0	N		0	0		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.			30.08	764.0	77	25.0	90	NE			3					0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Addie Fuller, at Gardiner, Me.			30.10	764.5	74	23.3		NW			3		0					Blue sky	Capt. James Jorgensen. Capt. Ritche.
Steamer Nova Scotian N, 50° 56′, W, 35° 48′.	E by S ½ S.	10½	30.14	765.5	54	12.2		SSE			5–6					Rough	SSW	Overcast	

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, 5,942.4 ft., or 1,811.7 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.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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 added 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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			30.06	763.5	77.2	25.1	67	NNE			2		2			0	0	Clear	Charnot.
Algiers			30.05	763.3	78.4	25.8	78	N			1		0			0	0	Clear	Peter.
La Galle			30.06	764.2	82.0	27.8	58	NW			2		1			0	0	Clear	Kunts.
Tunis			30.07	763.8	87.1	30.6	40	ENE			3		4			0	0	Fair	Jacques.
Sfax			30.16	766.0	83.8	28.8	52	E			3		1			0	0	Clear	Chauvey.
Saida			30.02	762.6	83.3	28.5	18	N			1		1			0	0	Clear	Millot.
Teheraa			30.09	764.3	79.5	26.4		E			1		1			0	0	Clear	Colin.
Geriville			30.03	762.8	82.4	28.0	25	ESE			3		3			0.118	3.0	Fair	Ruard.
Laghouat			30.10	764.6	95.0	35.0	32	SW			1		3			0.039	1.0	Fair	Guyot.
Biskra			30.15	765.7	89.8	32.1	34	S			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			30.07	763.7	70.3	26.3	49	Calm			0		4			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.02	762.6	74.7	23.7	49	W			1		6			0	0		Dr. Wierzbiski.
Eperies			30.00	762.1	72.0	22.2	69	Calm			0					0.039	1.00		Julius Mikolik.
Gratz	28.89	733.9	30.04	763.1	77.5	25.3	66	NE			2		2			0	0		Andreas Rospini.
Hermannstadt	28.54	725.0	29.90	759.5	75.6	24.2	42	NNW			3		4			0	0		Prof. Reissenberger.
Kremsmünster	28.80	731.6	30.10	764.5	72.1	22.3	52	NNE			2		1			0	0		Prof. C. Wagner.
Lemberg			29.91	759.6	72.9	22.7	85	NW			4		6			0.083	2.1		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.04	763.1	80.1	26.7	38	NE			2		4ck			0	0		I.R.Hydrographic Of'ce.
Szegedin			30.01	762.3	76.6	24.8	40	NE			3		0			0	0		Karl Stancel.
Trieste			30.08	764.0	78.8	26.0	55	Calm			0		2			0	0		Prof. V. Farolfi.
Vienna			30.07	763.7	77.9	25.5	44	W			2		2			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.17	766.2	78.8	26.0	50	W			1		1k		N	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			30.24	768.1	65.0	18.3		WNW	19	8.5			2			0	0	Blue sky	William Boswell.
Ardrossan			30.32	770.1	62	16.7		NW			5		1					Blue sky	William McNeil.
Armagh, Observatory			30.41	772.4	63.9	17.7		NNW	6	2.7			5					*D. clouds	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.37	771.4	69.8	21.0		NNW			1		5					*D. clouds	J. Dreyer.
Bradford			30.25	768.3	74.6	23.7		W			1		9			0	0	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	78.0	25.6		SE			2		9					Raining	Sergt. J. F. Halanen, A. [H. C.
Cambridge, Observatory			30.21	767.3	81.0	28.9		N			1		3					*D. clouds	H. Todd.
Cardington			30.23	767.8	82.0	27.8		NE			1		1					Blue sky	John McLaren.
Carlisle			30.26	768.6	71	21.7		SW			2		2			0	0	*D. clouds	T. Bel, for J. Carmell.
Chatham, School M. E			30.19	766.8	86.0	30.0		Calm			0		1					Blue sky	Capt. J. Fellowes, R.E.
Dartmoor	28.91	734.3	30.45	770.9	78.6	25.9		NW			1		3					Blue sky	R. E. Power.
Donaghadee			30.37	771.4	60	15.6		NNE			5		3					Blue sky	J. Mac Gowan.
Dover			30.21	767.3	70	21.1		WSW			3		2					¼ clouded	J. Costello.
Eccles (near Manchester.)			30.27	768.8	69.1	20.6		WNW	7.4	3.3			4					Squally	Thomas Mackereth.
Falmouth, Observatory			30.28	769.1	78.3	25.7		SSE			2		3					*D. clouds	The Staff.
Fort Napier, (Natal)	27.76	705.1	30.00	762.0	73.4	23.0		Calm			0		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	79	26.1		W			4		8			Blank	Blank	Overcast	
Galway, Queen's College			30.35	770.9	70	21.1		NW			3		2					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.02	762.5	79.0	26.1		E			3		0					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			30.27	767.8	63.0	17.2		W			2		1					Fine	Lewis Stuart.
Great Yarmouth			30.22	767.6	67	19.4		N			4		2					Hazy	G. T. Watson.
Greenwich, Royal Obs'y			30.22	767.6	92.3	33.5		NW			1		3					Blue sky	The Staff, for G. B. Airy
Guernsey			30.23	767.8	77	25.0		NNE			1		0					Blue sky	Dr. S. E. Hoskins.
Helston			30.22	767.6	85	29.4		NE			1		0			0	0	Blue sky	M. P. Moyle.
Holyhead			30.35	770.9	58	14.4		NNW			4		3					Blue sky	John Tilston.
Kew, Observatory			30.22	767.6	84.1	28.9		WNW	14	6.3			2					*D. clouds	The Staff.
Kingstown																			George Mitchell.
Leicester Museum			30.26	768.6	73.4	23.0		NW			1		3					Blue sky	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.96	761.0	79.8	26.6		NW			1		0						Corp'l F. Fraser, A. M. C.
Nairn			30.26	768.6	66	18.9		W			4		8					¾ clouded	W. D. Penny.
Nassau, (Bahamas			30.16	766.1	87.4	30.8		NE			4		8					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.21	768.1	78.7	25.9		WSW			3		5ck		WNW			*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.26	768.6	70.0	21.1		NW			3		6					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.20	767.1	81	27.2		NW			1		7					*D. clouds	J. Lucas.
Plymouth			30.25	768.3	81.1	27.3		S			2		7					*D. clouds	John Merrifield.
Roche's Point			30.31	770.6	72	22.2		SSE			2		2					Fine	W. Kennedy.
Saint Ann's Head			30.31	769.9	65	18.3		NNE			3		3						John C. Walker.
Saint Helier, Jersey			30.25	768.3	85.0	29.4		E			2		2					¼ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			30.19	766.8	56.2	13.4		W	29	13.0			10					Misty	Rev. C. Clouston, LL. D.
Scarborough			30.28	769.1	61.5	16.4		NE			1		1					Blue sky	F. Shaw.
Scutari Cemetery Turkey			29.80	755.9	81.0	27.2		NE			2		5					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.21	768.1	75.9	24.4		NW			1		8			0.010	0.25	Overcast	W. F. Cooper.
Silloth Rectory			30.28	769.1	78.1	25.6	51	SW			1		0			0	0	Blue sky	Rev. Francis Redford.
Stonyhurst, Observatory			30.26	768.6	69.0	20.6		W			2		5					*D. clouds	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			30.26	768.6	54	12.2		WNW			4		10					Overcast	John Smith.
Strathfield Turgiss			30.23	767.8	85.0	29.4		NW			1		8					*D. clouds	Rev. Charles H. Griffith.
Thurso			30.22	767.6	57	13.9		WNW			5		10					Overcast	John Trotter.
Truro, Royal Institution			30.28	769.1	82	27.8		N			1		4					*D. clouds	W. Newcombe.
Valencia, Observatory			30.36	771.1	67.9	19.9		N	17	7.6			4					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					58	14.4		NW			4		5						Thomas Dawson.
Cape Good Hope, Obs'y			30.28	769.1	61.5	16.4	75	NW	7	3.1		5	2						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.98	761.5	59.0	15.0	87	NW			2		10kn			0	0	Covered	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			30.25	768.3	71.9	22.2		W			3					0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.23	767.8				ESE	12.9	5.8						0.015	0.38		C. Meldrum
Melbourne, Observatory			30.17	766.3	49.3	9.6	96	SSW	5	2.2			0			0	0	Clear, h'y dew	R. L. J. Ellery.
Monach Lighthouse, Hebrides			30.30	769.6	57	13.9		NW			4		10			0	0		J. Youngclause.
North Unst, (Shetland Is.)			30.01	762.2	52	11.1		W			6		10						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. 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.	Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0–10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Copenhagen			29.94	760.5	71.3	23.5	58	SW			4		0						
Fanoe			30.02	762.6	63.7	17.6	82	WNW			6		10						
Godthaab, (Greenland)			29.68	753.8	43.9	6.6	94	Calm			0		10					Foggy	
Stykkisholm, (Iceland)			29.97	761.1	52.7	11.5	88	W			2		8						
Thorshavn, (Faröe)			29.97	761.3	57.9	14.4	84	W			6		5					Rain and fog	
Vestervig			29.94	760.5	60.1	15.6	75	NW			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			30.19	766.7	77.0	25	37	NE			1		2k		NE	0	0	Slightly cl'dy	Normal School.
Amiens			30.14	765.2	85.6	29.8	54	N			3		0			0	0	Clear	Normal School.
Avignon			30.05	763.5	89.6	32	42	NNE			2		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.21	767.2	80.1	26.7	38	N			2		5		NW	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)			30.14	765.5	86.2	30.1	36	NE	4.3	1.9			0			0	0	Clear	Beaumette Observatory.
Beauvais			30.21	767.2	79.3	26.3	37	ENE			2		0			0	0	Clear	Normal School.
Besançon			30.14	765.6	81.3	27.4	47	NE			8		0			0	0	Clear	Normal School.
Bourg en Bresse			30.24	768.0	82.4	28	50	N			2	2c		S				Slightly cl'dy	Normal School.
Bourges			30.71	780.02	82.0	27.8	53	NE			4		0			0	0	Clear	Normal School.
Brest			30.17	766.3	91.6	33.1	52	E			1		0			0	0	Clear	Naval Observatory.
Carcassonne			29.99	761.8	78.8	26	36	N			1		1		E	0	0	Clear	Normal School.
Caen			30.21	767.3	77.5	25.3	73	NE			2		0			0	0	Clear	Normal School.
Chartres			30.21	767.2	74.5	23.6	63	E			4		0			0	0	Clear	Normal School.
Clermont			30.11	764.7	79.7	26.5	49	N			3		2			0	0		Puy de Dome Obs'y.
Commercy			30.20	767.0	74.8	23.8	46	NNE			4		2s		N	0	0	Slightly cl'dy	Normal School.
Commune de Greasque*			30.16	766.0	85.5	29.7	39	SW			2		2		SW	0	0		M. Kina.
Grenoble			30.06	763.4	81.0	27.2	55	NNW			1		0			0	0	Clear	Normal School.
La Roche-sur-Yon			30.10	764.6	88.5	31.4	37	NE			2		0			0	0	Clear	Normal School.
Le Mans			30.16	766.0	82.8	28.2	58	ENE			4		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			30.20	767.0	79.3	26.3	45	NNE			4		2			0	0	Slightly cl'dy	Normal School.
Mâcon			30.30	769.6	80.6	27	49	NNE			2		0			0	0	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			30.21	767.4	75.2	24	47	NNE			2		2		SSW	0	0	Slightly cl'dy	Normal School.
Nismes			30.07	763.8	92.1	33.4	34	SW			1		0			0	0	Clear	Normal School.
Orleans			30.25	768.4	83.8	28.8	33	NE			2		0			0	0	Clear	Normal School.
Paris, Observatory			30.20	767.0	82.8	28.2	34	NE			2		1cs			0	0	Clear	National Observatory.
Parthenay			30.13	765.2	95.0	35	68	NE			1		0			0	0	Clear	Normal School.
Privas			30.12	765.0	84.6	29.2		NNW			2		2		NNW	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.14	765.5	89.6	32.0	39	ENE			4		0			0	0	Blue sky	Naval Observatory.
Rouen			30.21	767.3	87.3	30.7	37	NNW			1		0			0	0	Clear	Normal School.
Saint Lo			29.87	758.7	85.1	29.5	39	E			1		0			0	0		Normal School.
Tarbes	29.02	737.1	30.03	763.4	77.0	25		WNW			2		0			0	0	Clear	Normal School
Villefranche			30.14	765.6	84.2	29	58	E			3		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.89	759.3	81.1	27.3													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.35	770.9	72.5	22.5	61	E	11	5			6			0.055	1.4	Raining	—. Falguère.
Montsouris, Paris			30.20	767.0	81.7	29.3	36	N			3		0			0	0		Montsouris Observ'tory.
Perpignan			30.07	763.6	83.1	28.4	49	SE	14.9	6.66			0			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.20	767.0	84.0	28.9	35	NE			1		0			0	0	Clear	E. Renou.
Toulouse			30.12	765.1	87.1	30.6	38	NNW			1		2			0	0		Toulouse Observatory.
Tours			30.16	766.1	87.3	30.7	29	ENE			3		0			0	0	Clear	C. Marquet.
Versailles, (near Paris)			30.21	767.3	85.6	29.8	31	E			2		0			0	0	Very clear	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai																			H. Le Lec, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont Louis is 1,586.40 meters, or 5,204.8 feet: 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * 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			30.15	765.9	74.8	23.8	55	NW			3		3	NW		0	0		Prof. T. Hoh.
Berlin			30.14	765.5	73.4	23.0	54	W			1		8			0	0		Prof. Arndt.
Breslau			30.14	765.5	73.8	23.2	47	NW			6		1			0	0		Dr. P. Neugebauer.
Carlsruhe			30.14	765.5	77.7	25.4	46	E			2		0			0	0		A. Senz.
Cassel			30.17	766.3	82.4	28.0	44	WNW			2		4	W		0.012	0.3		Dr. H. Möhl.
Emden			30.16	766.0	74.7	23.7	73	SW			3		5			0	0		Prof. Prestel.
Frankfort on the Main			30.18	766.6	77.7	25.4	45	N			1		1			0	0		Physical Society.
Friedrichshafen			30.11	764.9	76.3	24.6	56	W			4		1			0	0		M. Wilhelm.
Hamburg			30.11	764.8	71.8	22.1	64	WSW			3		9kn			Inap.	Inap.	Thunder-storm	Captain F. Hegemann.
Kiel			30.03	762.7	71.2	21.8	65	W			4		5			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			29.95	760.8	71.2	21.8	45	NW			5		2			0.102	2.6		Prof. E. Luther.
Köslin			30.07	763.7	65.3	18.5		NNW			6		5			0	0		H. Müller.
Leipsic			30.15	765.9	75.7	24.3	49	NW			2		4	NW		0	0		Prof. Bruhns.
Memel			29.95	760.8	64.8	18.2	75	WNW			3		0			Inap.	Inap.		Reinbrecht & Skalweit.
Münster			30.31	769.8	79.3	26.3	55	NE			1		6					Thunder-storm	Prof. E. Heis.
Neuhirwasser			30.00	762.0	70.2	21.2	68	ENE			2		3			0	0		A. Lothes.
Posen			30.11	764.8	70.0	21.1	54	NW			4		0			0	0		Dr. Magener.
Strassburg, (In Alsace)			30.16	766.1	77.5	25.3	35	NE			1		1			0	0		Dr. Schur.
Stuttgart			30.13	765.4	77.5	25.3	33	NW			1		0			0	0		Prof. Schoder.
Thorn			29.99	761.8	79.7	26.5	46	NW			2		3			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.15	765.7	78.4	25.8	47	ESE			4		0			0	0		Prof. Flesch.
Wustrow, Naval School			30.17	766.3	66.4	19.1	76	W			5		0			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	757.5	83.8	28.8		W					..k					Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.06	763.4	80.8	27.1	52	SW	0.7	0.3			5			0	0		
Padua			30.05	763.3	78.6	25.9	55	SE	6.3	2.8			3	W		0	0		
Vicenza			30.07	763.6	79.5	26.4	56	S	2.5	1.1			3	W		0	0		
Verona			30.03	762.7	84.2	29.0	45	E			1		0			0	0		
Bergamo	28.73	729.8	29.99	761.8	83.5	28.6	43	S			2		3			0	0		
Domodossola	29.02	737.1	30.00	762.1	82.2	27.9	55	W			4		1			0	0		
Milan			30.02	762.6	90.1	32.3	43	E			4		1	SE		0	0		
Pavia			30.04	763.0	82.4	28.0	52	E			1		0			0	0		
Moncalieri			30.04	763.0	83.5	28.6	52	SE	6.3	2.8			8	NW		0	0		
Mondovi	28.20	716.2	30.04	763.1	80.1	26.7	49	E			4		1	NW		0	0		
Porto Maurizio			30.10	764.6	81.7	27.6	47	S			2		2			0	0		
Genoa			30.07	763.8	82.6	28.1	34	Calm	0	0			0			0	0		
Piacenza			30.04	763.1	82.2	27.9	45	SE	5.6	2.5			1			0	0		
Parma			30.05	763.2	84.4	29.1	51	WSW			1		1			0	0		
Bologna			30.07	763.7	82.6	28.1	42	E			6		2	NW		0	0		
Florence			30.07	763.7	86.0	30.0	28	N			2		4			0	0		
Leghorn			30.08	764.0	79.7	26.5	53	NW	6.9	3.1			3			0	0		
Siena	28.89	733.9	30.06	763.4	81.3	27.4	32	ENE	0	0			7	NE		0	0		
Urbino	28.61	726.6	30.12	765.1	77.4	25.2	52	NE			4		1			0	0		
Ancona			30.11	764.8	78.3	25.7	60	NNW			4		0			0	0		
Grosseto			30.07	763.7	84.6	29.2	31	NNE			4		3	NE		0	0		
Rome			30.00	762.0	84.6	29.2	33	N	11.9	5.3			1			0	0		
Naples, O. U			30.01	762.2	86.0	30.0	38	WSW			4		5	NE		0	0		
Lecce			29.91	760.4	77.4	25.2	51	NNW	22.4	10.0			3			0	0		
Cosenza			29.93	760.3	80.4	26.9	69	NW	4.9	2.2			7			0	0		
Riposto, (Sicily)			30.02	762.4	79.2	26.2	65	WSW			2		5	W		0	0		
Palermo			29.97	761.1	80.4	26.9	45	NNW	5.6	2.5			3			0	0		
Caltanissetta	28.04	712.3	29.91	759.8	76.6	24.8	37	NNE			4		2			0	0		
Sub-Series.																			
Naples, S. R			30.03	762.7	82.0	27.8	40	WNW	9.4	4.2			3	W		0.028	0.7		Prof. F. Brioschi.
Pesaro			30.15	765.8	76.1	24.5	55	N	22.8	10.17			1k	N					L. Guidi.

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			30.23	767.8	71.4	21.9		NW			3								
Groningen			30.07	763.8	73.4	23.0		SW			4								
Helder			30.16	766.0	68.4	20.2		WSW			2								
Utrecht			30.15	765.7	80.8	27.1	49	WSW			2		5					Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Bergen			29.98	761.5	55.9	13.3	72	NNW	11.6	5.2			5			0.260	6.6		
Brono			29.67	753.6	52.9	11.6	98	SW	18	8			10			Inap.?	Inap.?	Raining	
Christiania			29.77	756.1	70.7	21.5	42	NW	6.3	2.8			10			Inap.	Inap.	Light rain	
Tromsö			29.61	752.0	55.8	13.2	87	NE	2	1			5			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 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	768.4	73.4	23.0	74	ENE	9.4	4.20			6			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.97	761.1	93.2	34.0	21	SSW	7.4	3.33			2			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.08	764.1	77.2	25.1	68	SW	6.2	2.78			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.03	762.7	88.7	31.5	21	NW	12.5	5.6			1			0	0		The Observatory.

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

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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	760.7	73.4	23.0	53	NW	11	5			9						Astronomical Obs.
Wilna			29.88	758.9	66.2	19.0	51	NW	11	5			8						Astronomical Obs.
Dorpat			29.77	756.2	63.5	17.5	55	WNW	4	2			10			Blank	Blank		Physical Cabinet.
St. Petersburg			29.69	754.1	64.6	18.1	76	WNW	16	7			5						Central Physical Obs.
Knopio			29.62	752.3	59.4	15.2	72	NW	13	6			10						Ch. Forsten.
Kieff			29.83	757.6	65.1	18.4	67	NNW	4	2			7						Physical Cabinet.
Nikolaiev			29.91	759.6	70.2	26.2	44	NNW	13	6			5						Kurdakof.
Kertch			29.82	757.4	82.9	28.3	42	N	9	4			2						Lagorio.
Moscow			29.76	755.8	64.5	17.5	71	NW	4	2			8					Raining	Meteorological Obs.
Lugan			29.65	753.1	82.2	27.9	31	S	18	8			5			Blank	Blank		Meteorological Obs.
Archangel			29.54	750.3	70.9	21.6	86	S	18	8			9						Ogorodnikof.
Tiflis	28.39	721.0	29.69	754.2	87.8	31.0	33	S	9	4			1						Physical Observatory.
Astrakhan			29.80	756.8	81.3	27.4	53	S	2	1			10						Sebastianof.
Kasan			29.60	754.0	76.5	24.7	50	W	13	6			7						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.77	730.7	29.66	753.1	74.5	23.6	48	Calm	0	0			7						Meteorological Obs.
Nukuss			29.76	755.9	90.5	32.5	35	N	4	2			0						
Kasaly																			Bobrof.
Tashkend	28.22	716.9	29.82	757.3	85.6	29.8	34	Calm	0	0			0						Michelson.
Barnaul			29.50	751.5	68.9	20.5	79	ENE	0	0			10						Meteorological Obs.
Yeniseisk			29.45	747.9	82.0	27.8	54	Calm	0	0			1						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.71	754.6	86.0	30.0	79	Calm	0	0			5						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.78	756.4	67.1	19.5	99	SE	7	3			10						
Nikolaievsk, on the Amoor					59.4	15.2	100	SE	4	2			10					Raining	

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 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			29.95	760.7	94.3	34.6	20	S	8.2	3.67		5	0	SE		0	0	Light clouds	Royal Observatory.
San Fernando			30.02	762.6	89.4	31.9	22	ESE	23.3	10.4		0	0						The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			29.63	752.5	61.5	16.4	56	N			2		7			0.197	5.0		
Umea			29.48	748.7	63.3	17.4	64	SW			2		10			0	0		
Hernosand			29.74	755.3	63.7	17.6	63	WNW			2		10			0.008	0.2		
Stockholm			29.76	756.0	75.9	24.4	34	W			2		1			0	0		
Wisby			29.90	759.5	70.5	21.4	51	WNW			4		0			0	0		
SUB-SERIES.																			
Upsala			29.76	755.8	77.0	25.0	38	SSW	6.9	3.1			1		NW	0.091	2.30		Dr. Hildebrandsson.

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

SWISS SERIES.

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

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	30.09	764.2	76.6	24.8	51	NNW			1		1			0	0	Clear	The Observatory.
Zurich	28.56	725.3	30.11	764.8	79 2	26.2	47	NW			2		1			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +2.0 mm.; Thermometer, +2.2 cent.; Relative Humidity, —2 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

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			29.86	758.4	77.4	25.2	64	ENE	22	10.0			7		ENE	0	0		
Fao, (Persian Gulf)																			
Salonica			29.94	760 4	81.1	27.3		NW			2		8						
Valona			29.88	759.0	80.8	27.1		NW			2		5						
Varna			29.96	761.0	75.2	24.0		N			3		10					Raining	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.72	755.0	91.0	32.8	55	SW			2		2k		SW	0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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.			30.04	763.0	65.9	18.8	73	Calm	0	0			0			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.19	766.8	76	24.4		SW	4	1.8		0	0			0	0	Clear	W. R Bigg.
*Chatham, N. B.			30.10	764.5	65	18.3	78	Calm	0	0		0	0			0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island.			30.12	765.0	65	18.3	80	SW	3	1.3		0	0			Inap.	Inap.	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			30.09	764.3	78.7	25.9	55	W			2	0	0			0	0	Bright.	J. mes Smith, M. A.
Dalhousie, N. B.			30.08	764.0	58	14.4	79	W			1					0	0	Cloudy..	H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			30.11	764.8	71.1	21.7	70	S	5	2.2		0	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.80	756.9	62	16.7	85	W	15	6.7		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.08	764.0	74.5	23.6	69	SW			2	0	0			Inap.	Inap.	Fine	H. J. Strang, M. A.
Granton, Ontario	29.04	737.6	30.10	764.5	73	22.8		Calm			0	0	0			0	0	Clear	James Grant.
*Halifax, N. S.			30.11	764.8	68	20.0	74	N	3	1.3		0	0			0	0	Clear	F. Allison, M. A.
*Kingston, Ontario			30.19	766.8	71	21.7	84	SW	2	0.9		0	0			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			30.07	763.8	65.4	18.6	61	W	8	3.6		0	0			0	0	Fair	C. H. Rigby.
*Montreal, Quebec			30.10	764.5	72	22.2	67	SW	11	4.9		5c	2ks	N		0	0	Fair	C. H. McLeod, C E.
*Ottawa, Ontario			30.11	764.8	72	22.2	67	SW	4	1.8		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.09	764.3	72	22.2	71	S	10	4.5		0	0			0	0	Clear	Rev. R. Mosley.
*Port Dover, Ontario			30.13	765.3	66	18.9	84	Calm	0	0		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.			30.08	764.0	69.6	20.9		Calm	0	0						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.12	765.0	70	21.1	92	E	4	1.8		2k	0			0	0	Clear	M. Payne.
*Quebec, Quebec			30.06	763.5	72	22.2	85	SW	3	1.3		8c	2ks	W	W	0	0	air	Capt. Ashe, R. N.
St. John, N. B.			30.14	765.5	69	20.6	61	SE	4	1.8		0	0			0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			30.05	763.3	73	22.8	60	SW	13	5.8		2ks	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.07	763.8	72	22.2	73	Calm	0	0		2c	0	NW		0	0	Fair	R. J. Cole.
Stratford, Ontario	28.86	733.0	30.10	764.5	66.8	19.3	87	W	4	1.8		0	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			30.10	764.5	64	17.8	67	NW	8	3.6		2k	0	N		0.05	1.3	Clear	T. C. Hill.
*Toronto, Ontario			30.14	765.5	69	20.6	77	Calm	0	0		2cs	Sm'c			0	0	Smoky	Magnetic Observatory.
Woodstock, Ontario			30.12	765.0	68.7	20.4	88	S	1	0.4		2cs	0			0	0	Fi .e	J. Montgomery
Sub-Series.																			
St. Johns, Newfoundland			29.96	761.0	63	17.2	57	W				0	0			0	0	Clear	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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 300.5 m. *Rain-fall until 10 a. m., of the 15th.

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	766.1	75	23.9	59	S	2	0.9		0	Haze			0	0	Clear	
Alpena, Mich.			29.95	760.7	74	23.3	68	SW	6	2.7		2c	0	W		0	0	Fair	
Atlantic City, N. J.			30.25	768.3	77	25.0	82	S	4	1.8		0	0			0	0	Clear	
Augusta, Ga.			30.18	766.6	82	27.8	75	SE	2	0.9		5k	0	SE		0	0	Fair	
Baltimore, Md.			30.25	768.3	78	25.6	77	SW	8	3.6		2k	Sm'e	SW		0	0	Fair	
Barnegat, N. J.			30.24	768.1	83	28.3	67	SW	5	2.2		0	0			0	0	Clear	
Benton, Montana	27.37	695.2	30.17	766.3	53	14.4	53	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.29	718.6	29.84	758.9	65	18.3	73	NW	3	1.3			10s		NW	0.08	2.0	Cloudy	
Boston, Mass.			30.17	766.3	82	27.8	52	SW	4	1.8		1cs	Haze	NW		0	0	Hazy	
Breckenridge, Minn.			29.86	758.4	69	20.6	90	NW	4	1.8		5k	0	N		0.70	17.8	Fair	
Buffalo, N. Y.			30.10	764.5	74.5	23.6	66	SW	3	1.3		0	0			0	0	Clear	
Burlington, Vt.			30.13	765.3	75	23.9	68	S	5	2.2		2c	0			0	0	Fair	
Cairo, Ill.			30.11	764.8	79	26.1	86	S	2	0.9		0	0			0.01	0.3	Clear	
Cape Hatteras, N. C.			30.14	765.5	80	26.7	70	NE	11	4.9		0	0			0	0	Clear	
Cape Henry, Va.			30.22	767.6	82	27.8	81	SE	6	2.7		0	0			0	0	Clear	
Cape Lookout, N. C.			30.20	767.1	81	27.2	78	NE	15	6.7		1k	0	NE		0	0	Clear	
Cape May, N. J.			30.25	768.3	75	23.9	85	S	4	1.8		0	0			0	0	Clear	
Charleston, S. C.			30.17	766.3	89	26.7	86	NE	8	3.6			10s		E	4.87	123.7	Cloudy	
Cheyenne, Wyoming	24.13	612.9	30.07	763.8	63	17.2	13	NW	12	5.4		1cs	0			0	0	Clear	
Chicago, Ill.			29.99	761.7	77	25.0	69	SW	8	3.6		2k	5s	SW		0	0	Fair	
Cincinnati, Ohio			30.06	763.5	77	25.0	72	NE	2	0.9		0	0			0	0	Clear	
Cleveland, Ohio			30.10	764.5	71.5	21.9	69	E	6	2.7		2c	Sm'e	W	E	0	0	Fair	
Colorado Springs, Col.	24.19	614.4	30.06	763.5	61	16.1	70	N	8	3.6		5ck	5ks	W	W	0.10	2.5	Cloudy	
Corsicana, Tex.			30.08	764.0	75	23.9	85	SE	6	2.7		5cs	0	SE		0	0	Fair	
Davenport, Iowa			29.98	761.5	77	25.0	86	SW	4	1.8		5cs	0	SW		0.11	2.8	Fair	
Denison, Tex.			30.00	764.3	76	24.4	85	S	4	1.8		2ck	2s			0.09	2.3	Fair	
Denver, Col.	24.86	631.4	30.08	764.0	63	17.2	57	S	4	1.8		5c	0			0	0	Fair	
Detroit, Mich.			30.07	763.8	72	22.2	85	SE	3	1.3		5c,k	0			0	0	Fair	
Dodge City, Kan.	27.42	696.5	29.88	751.3	77	25.0	60	SSE	12	5.4		2c	0			0	0	Fair	
Dubuque, Iowa			29.99	761.0	78	25.6	82	S	2	0.9		5k	0	SW		0	0	Fair	
Duluth, Minn.			29.81	757.2	69	20.6	84	SW	4	1.8			10s		SW	1.15	29.2	Cloudy	
Eastport, Me.			30.12	765.0	65	18.3	68	N	4	1.8		0	Sm'e			0	0	Clear	
Erie, Pa.			30.09	764.3	77	25.0	60	S	12	5.4		1c	0			0	0	Clear	
Escanaba, Mich.			29.89	759.2	70	21.1	90	NW	12	5.4			10n		NW	0.27	6.9	Light rain	
Fort Gibson, Indian Ter.			30.03	762.7	79	26.1	82	E	1	0.4		2c	0			0	0	Fair	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.85	732.8	29.99	759.4	78	25.6	78	S	8	3.6		5ck	2s	S	S	0	0	Clear	
Fort Sully, Dakota	28.36	720.3	29.98	761.5	63	17.2	94	NW	18	8.0			10n			0.10	2.5	Light rain	
Galveston, Tex.			30.11	764.8	82	27.8	78	Calm	0	0		2k	0			0	0	Fair	
Grand Haven, Mich.			30.01	762.0	77	25.0	71	S	11	4.9			10s		SW	Inap.	Inap.	Cloudy	
Indianapolis, Ind.			30.03	763.5	79	26.1	65	SE	2	0.9		0	2s			0	0	Fair	
Indianola, Tex.			30.10	764.5	80	26.7	78	SE	2	0.9		5c,k	0			0	0	Fair	
Jacksonville, Fla.			30.14	765.5	87	30.6	66	W	5	2.2		5k	0	NW		0	0	Fair	
Keokuk, Iowa			29.96	761.0	80	26.7	82	SW	8	3.6		8c,k	0	SW		0	0	Fair	
Key West, Fla.			30.16	766.1	84.0	28.9	71	E	9	4.0		1k	2ks	E	E	0	0	Fair	
Kittyhawk, N. C.			30.25	768.3	79	26.1	69	E	10	4.5		0	0			0	0	Clear	
Knoxville, Tenn.			30.14	765.5	76	24.4	90	NE	1	0.4		1k	0	NE		0	0	Clear	
La Crosse, Wis.			29.95	760.7	71	21.7	90	N	14	6.3		5k	2ks	N	N	0.31	7.9	Clearing	
Leavenworth, Kan.			29.97	761.2	76	24.4	86	Calm	0	0		2c	2s	SW	SW	0	0	Fair	
Lexington, Ky.	29.03	737.3	30.08	764.0	78	25.6	80	S	8	3.6		0	2cs		W	0	0	Clear	
Louisville, Ky.			30.09	764.3	82	27.8	63	S	8	3.6		0	Haze			0	0	Clear	
Lynchburg, Va.			30.24	768.1	81	27.2	67	S	4	1.8		5k	0	S		0	0	Fair	
Malone, N. Y.			30.09	764.3	75	23.9	51	SW	10	4.5		2c	0	NW		0	0	Fair	
Manhattan, Kan.	28.86	733.0	29.94	760.5	75	23.9	85	S	12	5.4		5cs	0			0	0	Fair	
Marquette, Mich.			29.81	757.9	68	20.0	90	Calm	0	0			10n			0.34	8.6	Light rain	
Memphis, Tenn.			30.12	765.0	84	28.9	75	SW	3	1.3		2ck	5ks		SW	0	0	Fair	
Milwaukee, Wis.			29.98	761.5	75	23.9	85	S	8	3.6		2k	0	W		0	0	Clear	
Mobile, Ala.			30.18	766.6	81	27.2	87	S	3	1.3		5k	0	S		0	0	Fair	
Montgomery, Ala.			30.19	766.8	80	26.7	78	SE	2	0.9		2c	Haze			0	0	Clear	
Morgantown, W. Va.	29.11	739.4	30.12	765.0	77	25.0	73	Calm	0	0		1c	Haze	SW		0	0	Clear	
Mt. Washington, N. H.	24.10	612.1	30.46	773.7	50	10.0	78	NW	20	8.9		0	0			0	0	Clear	
Nashville, Tenn.			30.10	764.5	84	28.9	75	Calm	0	0		2c	0	S		0	0	Clear	
New Haven, Conn.			30.21	767.3	83	28.3	52	SW	5	2.2		Haz	Sm'e			0	0	Clear	
New London, Conn.			30.23	767.8	75	23.9	68	S	6	2.7		0	0			0	0	Clear	
New Orleans, La.			30.14	765.5	82.5	28.1	76	Calm	0	0		1k	0	S		Inap.	Inap.	Clear	
Newport, R. I.			30.22	767.6	76	24.4	64	Calm	0	0			0			0	0	Clear	
New York, N. Y.			30.24	768.1	72	22.2	80	SW	6	2.7		0	Haze			0	0	Clear	
Norfolk, Va.			30.25	768.3	83	28.3	60	SE	5	2.2		0	0			0	0	Clear	
North Platte, Neb.	27.02	686.3	29.43	747.5	74	23.3	46	W	10	4.5		5k	0	W		0	0	Fair	
Omaha, Neb.	28.86	733.0	29.87	758.7	79	26.1	78	S	8	3.6		5ck	0	SW		0	0	Fair	
Oswego, N. Y.			30.15	765.8	72.1	22.3	71	SE	5	2.2		0	Haze			0	0	Clear	
Pembina, Dakota			29.80	756.9	63	17.2	83	NW	8	3.6		0	0			0	0	Clear	
Philadelphia, Penn.			30.24	768.1	76	24.4	81	W	9	4.0		0	Fog			0	0	Clear	
Pike's Peak, Colorado			30.25	768.3	35	1.7	80	NE	12	5.4		10ks	0	W		0.10	2.5	Cloudy	
Pittsburgh, Penn.	18.04	458.2	30.14	765.8	74	23.3	81	E	2	0.9		1c	Sm'e	W		0	0	Fair	
Port Huron, Mich.			30.08	764.0	68	20.0	79	SE	5	2.2		1c	0			0	0	Clear	
Portland, Me.			30.15	765.8	75	23.9	60	W	2	0.9		1c	Haze	NW		0	0	Clear	
Portland, Oregon			30.19	766.1	58	14.4	81	N	4	1.8			8s			Inap.	Inap.	Cloudy	
Punta Rassa, Fla.			30.17	766.3	83.0	28.3	77	W	4	1.8		1cs	0	E		0	0	Clear	
Rochester, N. Y.			30.12	765.0	73	22.8	63	SW	7	3.1		0	Haze			0	0	Clear	
Salt Lake City, Utah	25.68	652.3	30.01	762.2	62	16.7	26	Calm	0	0		0	0			0	0	Clear	
Sandy Hook, N. J.			30.22	767.6	80	26.7	74	SW	4	1.8		0	Haze			0	0	Clear	
San Diego, Cal.			30.04	763.0	63	17.2	83	N	4	1.8			10s		N	0	0	Cloudy	
San Francisco, Cal.			30.00	762.0	53	11.7	90	SW	4	1.8			Fog		SW	0	0	Foggy	
Santa Fe, N. M.	23.38	593.8	29.92	759.0	56	13.3	87	NE	4	1.8		5c	0			0	0	Fair	
Savannah, Ga.			30.17	766.3	80	26.7	100	Calm	0	0			10s			0.04	1.0	Cloudy	
Shreveport, La.			30.16	766.1	78	25.6	80	S	1	0.4		0	0			0.11	2.8	Clear	
Smithville, N. C.			30.20	767.1	79	26.1	82	N	8	3.6		2k	2ks	NE	NE	0	0	Fair	
Springfield, Mass.			30.20	767.1	75	23.9	68	S	4	1.8		0	Fog			0	0	Fair	
St. Louis, Mo.			30.00	763.5	80	26.7	73	W	8	3.6		2c	5s			0	0	Fair	
St. Marks, Fla.			30.18	766.6	81	27.2	82	N	3	1.3		2c	0	E		0	0	Fair	
St. Paul, Minn.			29.85	758.2	68	20.0	90	E	4	1.8			10n		W	0.63	16.0	Light rain	
St. Paul's Island, Alaska			29.36	745.7	41	5.0	91	SW	27	12.1			10n			0.30	7.6	Raining	
Thatcher's Island, Mass.			30.18	766.6	72	22.2	75	SW	3	1.3		0	0			0	0	Clear	
Toledo, Ohio			30.06	763.5	75	23.9	72	Calm	0	0		5cs	Haze			0	0	Fair	
Tucson, Arizona	27.59	700.8	30.18	766.6	71	21.7		Calm				2c	5ks		N	Inap.	Inap.	Fair	
Tybee Island, Ga.			30.15	765.8	81	27.2	82	NE	4	1.8			10s			1.30	33.0	Cloudy	
Vicksburg, Miss.			30.06	763.5	82	27.8	78	SW	1	0.4		1k	1s	S	S	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.	24.43	620.5	29.91	759.7	47	8.3	55	SE	11	4.9	.....	0	0	.....	.....	0	0	Clear	
Washington, D. C.	.....	.....	30.25	768.3	81	27.2	70	SW	8	3.6	.....	1k	Haze	S	.....	0	0	Hazy	
Wilmington, N. C.	.....	.....	30.21	767.3	80	26.7	82	E	6	2.7	.....	1k	0	.....	.....	0	0	Clear	
Wood's Holl, Mass.	.....	.....	30.23	767.8	75	23.9	72	SW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Wytheville, Va.	27.93	709.4	30.01	762.2	72	22.2	80	E	4	1.8	.....	.....	10ks	.....	SE	0	0	Threatening	
Yankton, Dakota	28.61	726.7	29.82	757.4	75	23.9	71	S	2	0.9	.....	8cs	0	SW	.....	0	0	Fair	
Yuma, Arizona	.....	.....	29.93	760.2	79	26.1	.....	E	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub Series.																			
P'nte-a-Pitre, G'd'l'pe, W. I.	.....	.....	29.95	760.7	83	28.3	87	E	.....	.....	.....	2k	5ks	.....	.....	0.64	16.3	Hazy	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.18	766.6	82	27.8	70	Calm	0	0	.....	2ck	2s	SE	SE	0	0	.....	James Gall.
St. Georges, Bermudas	.....	.....	30.10	764.5	77.5	25.3	88	W	18.0	8.0	.....	.....	10n	.....	.....	1.17	29.7	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	29.932	760.22	67	19.4	90	N	2.0	0.9	.....	5c	ck	N	.....	0.64	16.3	Dull	C. Partridge.
Paramaribo, D. Guiana S. A.	.....	.....	30.01	762.2	81	27.2	83	E	.....	.....	1	3c	4c?	E	.....	0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.08	763.9	.....	.....	84.2	29	.....	N	.....	.....	.....	.....	.....	.....	.....	0.324	8.2	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1	.....	.....	66.0	18.9	78	S	2	0.9	.....	4c	5ks	.....	.....	0	0	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	29.74	755.4	48	8.9	70	N	7	3.1	.....	3c	0	N	.....	1.00	25.4	.....	J. Fortescue, W. Woods.
Honolulu, Oahu, H. I.	.....	.....	30.03	764.0	76	24.4	95	NE	.....	.....	2	.....	.....	.....	.....	0.23*	5.8*	Cloudy	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—
Schooner Addie Fuller, at Gardiner, Me.	.....	.....	.....	.....
Steamer Nova Scotian N, 51° 30′, W, 28° 22′.	ESE	12	Rough.	.....

Marine Series.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer
Schooner Addie Fuller, at Gardiner, Me.	30.18	766.6	74	23.3	.....	S	.....	.....	1	.....	Haze	.....	.....	.....	.....	Clear	Capt. James Jorgensen.
Steamer Nova Scotian N, 51° 30′, W, 28° 22′.	30.16	766.1	58	14.4	.....	S	.....	.....	5	.....	Fog	.....	.....	.....	.....	Foggy	Capt. Ritche.

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, 6,012.1 ft., or 1,833.7 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.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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 added in correcting the barometric observations for altitude: Cheyenne, 5.91 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. *Rain fall from 12:30 a. m. until 5 a. m. of the 17th.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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			30.02	762.6	77.9	25.5	69	N			1		1			0	0	Clear	Charnot.
Algiers			30.02	762.5	78.8	26.0	73	NNE			2		2			0	0	Clear	Peter.
La Calle			30.04	762.9	76.8	24.9	65	NE			3		1			0	0	Clear	Kunts.
Tunis			30.04	763.1	83.1	28.4	55	ESE			4		0			0	0	Clear	Jacques.
Sfax			30.14	765.5	84.2	29.0	46	SE			2		1			0	0	Clear	Chauvey.
Saida			30.01	762.2	86.0	30.0	50	NW			3		2			0	0	Clear	Millot.
Tebessa			30.07	763.7	84.0	28.9		NNW			3		6			0	0	Fair	Colin.
Geriville			30.03	762.8	76.5	24.7	44	SSW			3		9			0.236	6.0	Hidden	Buard.
Laghouat			30.08	763.9	80.6	27.0	77	SW			2		7			0.315	8.0	Cloudy	Guyot.
Biskra			30.12	765.0	90.7	32.6	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			30.00	761.9	82.4	28.0	41	SW			1		3			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.93	760.1	76.3	24.6	52	W			2		10			0.067	1.7		Dr. Wierzbicki.
Eperies			29.85	758.3	78.8	26.0	52	S			3					Blank	Blank		Julius Mikolik.
Gratz	28.78	730.9	29.94	760.5	70.9	21.6	69	SW			3		5			0	0		Andreas Rospini.
Hermannstadt	28.56	725.5	29.91	760.5	68.2	20.1	58	NW			4		6			0	0		Prof. Reissenberger.
Kremsmünster	28.70	728.9	29.98	761.4	76.6	24.8	47	NW			3		3			0.197	5.0		Prof. C. Wagner.
Lemberg			29.84	758.0	76.6	24.8	78	NW			3		5			0.252	6.4		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.04	763.1	80.1	26.7	51	W			2		1k			0	0		I.R.Hydrographic Office.
Szegedin			29.92	760.0	75.2	24.0	45	Calm			0		2			0	0		Karl Stancel.
Trieste			30.05	763.2	80.6	27.0	62	E			1		0			0	0		Prof. V. Farolfi.
Vienna			29.97	761.3	74.8	23.8	54	W			2		6			0.051	1.3		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.18	766.6	67.8	19.9	54	N			2	2c	1k		N	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.98	761.5	56.7	13.7		S	8	3.6			10			0.120	3.05	Raining	William Boswell.
Ardrossan			30.19	766.8	58	14.4		WNW			1		8					Overcast	William McNeil.
Armagh, Observatory			30.28	769.1	65.0	18.3		WNW	8	3.6			9					Gloomy	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.39	769.6	67.9	19.9		NW			1		9					*D. clouds	J. Dreyer.
Bradford			30.18	766.6	67.6	19.8		W			1		10			0	0	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	81.0	27.2		NE			2		6					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			30.29	767.1	77.0	25.0		WSW			1		10					Hazy	H. Todd.
Cardington			30.22	767.6	79.0	26.1		NW			1		5					*D. clouds	John McLaren.
Carlisle			30.15	765.8	64.2	17.9		SW			5		10			0	0	Threatening	T. Bell, for J. Carmichael.
Chatham, School M. E			30.22	767.6	70.5	21.4		SW			1		2					Gloomy	Capt. J. Fellowes, R.E.
Dartmoor	28.83	733.5	30.31	770.4	72.6	22.6		NE			1		8					Hazy	R. E. Power.
Donaghadee			30.23	767.8	68	20.0		WSW			3		8					*D. clouds	J. Mac Gowan.
Dover			30.23	767.8	63	17.2		NE			3		3					¼ clouded	J. Costello.
Eccles (near Manchester)			30.21	767.3	65.8	18.8		SW	10.0	4.5			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			30.26	768.6	69.0	20.6		SSE			3		2					Hazy	The Staff.
Fort Napier, (Natal)	27.86	707.6	30.09	764.3	59.5	15.3		E			1		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	79	26.1		N			8		8			Blank	Blank	Overcast	
Galway, Queen's College			30.27	768.8	70	21.1		W			1		6					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.00	762.0	80.0	26.7		E			3		0					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			30.15	765.8	55.9	13.3		WSW			2		10					Overcast	Lewis Stuart.
Great Yarmouth			30.19	766.8	64	17.8		S			3		3					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			30.21	767.3	77.4	25.2		ENE			1		10					Overcast	The Staff, for G. B. Airy
Guernsey			30.24	767.8	65.5	18.6		NE			2		3					*D. clouds	Dr. S. E. Hoskins.
Helston			30.24	767.8	80	26.7		NW			2		0			0	0	Hazy	M. P. Moyle.
Holyhead			30.26	768.6	62	16.7		WSW			3		10					Misty	John Tinston.
Kew, Observatory			30.21	767.3	75.2	24.0		WNW	6	2.7								Hazy	The Staff.
Kingstown																			George Mitchell.
Leicester Museum			30.25	768.3	71.0	21.7		NW			1		6					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.99	761.7	82.8	28.2		NW			1		0						Corp'l F. Fraser, A. M. C.
Nairn			29.94	760.5	60	15.6		WNW			4		10					Overcast	W. D. Penny.
Nassau, (Bahamas			30.09	764.3	86.3	30.2		NE			3		6					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.19	766.8	77.3	25.2		SSW			4		7ck, k		NW			*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.19	766.8	74.2	23.4		SW			2		10					Misty	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.20	767.1	76	24.4		WSW			1		10					Solar halo	J. Lucas.
Plymouth			30.25	768.3	75.8	24.3		S			1		3					*D. clouds	John Merrifield.
Roche's Point			30.31	769.9	70	21.1		S			2		8					Cloudy	W. Kennedy.
Saint Ann's Head			30.27	768.8	61	16.1		NW			1		2					Blue sky	John C. Walker.
Saint Helier, Jersey			30.21	767.3	79.2	26.2		ENE			3		0					Clear	A. P. Amy.
Sandwick Manse, Orkneys			29.83	757.7	54	12.2		W	34	15.2			10			†0.94	†23.9	Rain & hail	Rev. C. Clouston, LL. D.
Scarborough			30.14	765.5	65.0	18.3		S			1		10					Overcast	F. Shaw.
Scutari Cemetery, Turkey			29.96	758.4	82.4	28.0		NE			2		4					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.17	766.3	73.9	23.3		NNW			3		7			0	0	*D. clouds	W. F. Cooper.
Silloth Rectory			30.18	766.6	64.0	17.8	71	SW			1		7			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.21	767.3	64.4	18.0		W			2		10					Gloomy	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			29.96	761.0	59	15.0		WSW			6		10					Raining	John Smith.
Strathfield Turgiss			30.24	768.1	76.6	24.8		N			2		9					Squally	Rev. Charles H. Griffith.
Thurso			29.86	758.4	59	15.0		WSW			5		10					Gloomy	John Trotter.
Truro, Royal Institution			30.27	768.8	80	26.7		N			2		0					Blue sky	W. Newcombe.
Valencia, Observatory			30.34	770.6	62.8	17.1		NNW	15	6.7			5					Blue sky	The Staff.
Sub-Series.																		*D. clouds	
Calf of Man, Isle of Man					60	15.6		W			4		0						Thomas Dawson.
Cape Good Hope, Obs'y			30.12	765.0	60.9	16.1	67	WNW	5	2.2		3	4						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			30.24	768.1	58.0	14.4	81	N			1		6k			0	0		Francis Abbott, F.R.A.S.
Leith, Restaurig Park			30.12	765.0	57.0	13.9		W			4		10ks			0	0	Overcast	Andrew Gibb.
Mauritius, Observatory			30.26	768.6				ENE	15.3	6.8						0.17	4.3		C. Meldrum
Melbourne, Observatory			30.39	771.9	50.1	10.1	66	SSE	7	3.1			10			0.02	0.5	Threatening	R. L. J. Ellery.
Monach Lighthouse, Hebrides			30.02	762.5	57	13.9		WSW			6		10			0	0		J. Youngclause.
North Unst, Shetland Isles			29.91	759.7	52	11.1		W			4		10						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 270.6 m. *Detached clouds. †"Rain-fall this day."

DANISH SERIES.

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

Copenhagen			29.85	758.1	63.1	17.3	58	NW			6		10						
Fanöe			30.00	761.9	59.5	51.3	77	WNW			6		9						
Godthaab, Greenland			29.69	751.9	39.9	4.4													
Stykkisholm, Iceland			29.75	755.6	55.6	13.1	85	Calm			0		5						
Thorshavn, Faröe			29.75	755.6	52.5	11.4	95	N			2		10					Rain and fog	
Vestervig			29.90	759.5	58.6	14.8	87	WNW			6		6						

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

FRENCH SERIES.

Furnished by the 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	78.8	26	42	NE			1		2k		NE	0	0	Slightly cl'dy	Normal School.
Amiens			30.13	765.3	82.4	28.0	44	N			3		0			0	0	Clear	Normal School.
Avignon			30.05	763.3	88.3	31.3	42	SW			1		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.10	764.6	81.3	27.4	43	N			2		8			0	0	Hazy	C. Saillard.
Beaumette, (near Angers)			30.10	764.4	88.2	31.2	40	N	3.6	1.6			5		N	0	0	Cloudy	Beaumette Observatory.
Beauvais			30.19	766.9	76.6	24.8	46	W			3		5			0	0	Cloudy	Normal School.
Besançon			30.10	764.4	81.2	29	39	ENE			4		0			0	0	Clear	Normal School.
Bourg en Bresse			30.13	765.2	84.9	29.4	46	N			2	2c		S				Slightly cl'dy	Normal School.
Bourges			30.69?	779.6?	83.5	28.6	36	NE			2		0			0	0	Clear	Normal School.
Brest			30.15	765.8	79.3	26.3	54	NE			3	1c		NE		0	0		Naval Observatory.
Carcassonne			30.03	762.8	79.7	26.5	46	N			1		1		E	0	0	Clear	Normal School
Caen			30.17	766.2	76.5	24.7	87	ESE			6		0			0	0	Clear	Normal School.
Chartres			30.17	766.3	75.2	24	59	N			4		0			0	0	Clear	Normal School.
Clermont			30.06	763.4	82.2	27.9	36	NNE			2		0			0	0		Puy de Dome Obs'y
Cognmercy			30.14	765.6	75.4	24.1	53	NNW			6		2ck		NW	0	0	Slightly cl'dy	Normal School.
Commune de Greasque*			30.14	765.5	77.4	25.2	77	NE			1		8		NE	0	0		M. Kina.
Grenoble			30.01	762.3	82.9	28.3	54	NW			4		2ck		NE	0.012	0.30	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.10	764.6	90.7	32.6	34	NE			2		0			0	0	Clear	Normal School.
Le Mans			30.08	764.1	83.8	28.8	65	NNE			2		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			30.18	766.5	80.4	26.9	44	NE			4		0			0	0	Clear	Normal School.
Mâcon			30.28	769.1	81.5	27.5	49	NNE			4		0			0	0	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			30.10	764.6	77.7	25.4	50	NNE			1		2		SSW	0	0	Slightly cl'dy	Normal School.
Nismes			30.03	762.8	91.8	33.2	30	E			2		2		SE	0	0	Slightly cl'dy	Normal School.
Orleans			30.15	765.8	82.8	28.2	31	NE			1		2		NE	0	0	Slightly cl'dy	Normal School.
Paris, Observatory			30.17	766.2	78.3	25.7	49	NW			2		0			0	0	Hazy	National Observatory.
Parthenay			30.07	763.7	98.6	37	38	NE			2		0			0	0	Clear	Normal School.
Privas			29.94	762.8	86.4	30.2		NNW			2		2		NNW	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.13	765.4	90.9	32.7	30	ENE			3		0			0	0	Blue sky	Naval Observatory.
Rouen			30.17	766.4	82.2	27.9	45	NNW			1		0			0	0	Clear	Normal School.
Saint Lo			29.85	758.3	84.6	29.2	51	NE			1		0			0	0		Normal School.
Tarbes	28.98	736.0	30.01	762.2	77.0	25		WNW			1		0			0	0	Clear	Normal School
Villefranche			30.13	765.3	86.0	30	80	E			1		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.7	82.4	28													L'Abbé Marchesi.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.41	772.4	59.4	15.2	83	NE	7	3			10			0.055	1.4	Raining	—. Faiguère.
Montsouris, Paris			30.17	766.3	79.5	26.4	47	NNW			2		0			0	0		Montsouris Observ'tory.
Perpignan			30.08	763.9	82.0	27.8	46	S	7.4	3.33			5		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.17	766.4	79.0	26.1	54	NE			1		0			0	0		E. Renou.
Toulouse			30.11	764.7	86.9	30.5	37	NW			1		1			0	0		Toulouse Observatory.
Tours			30.12	765.1	90.0	32.2	34	ENE			2		4		NNE	0	0		C. Marquet.
Versailles, (near Paris)			30.19	766.7	81.0	27.2	49	E			2		0			0	0	Very clear	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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			30.06	763.5	75.2	24.0	53	NW			5		7	NW		0	0		Prof. T. Hoh.
Berlin			30.05	763.2	61.4	18.0	49	SW			4		8			0	0		Prof. Arndt.
Breslau			30.02	762.4	71.4	21.9	53	NW			8		5			0	0		Dr. P. Neugebauer.
Carlsruhe			30.07	763.8	76.3	24.6	59	N			1		10			0	0		A. Senz.
Cassel			30.15	765.9	70.9	21.6	54	NW			6		5	NW		0	0		Dr. H. Möhl.
Emden			30.11	764.7	64.4	18.0	62	NW			3		5			0.114	2.9		Prof. Prestel.
Frankfort on the Main			30.12	765.1	76.3	24.6	42	N			2		2			0	0		Physical Society.
Friedrichshafen			30.07	763.7	75.2	24.0	65	W			3		2			0.024	0.6		M. Wilhelm.
Hamburg			30.08	763.9	62.2	16.8	70	NW			5		10			0.024	0.6	Showery	Captain F. Hegemann.
Kiel			30.04	762.1	62.1	16.7	68	W			6		7			0	0		Prof. G. Karston.
Königsberg, (Prussia,)			29.79	756.7	63.9	17.7	61	W			7		5			0	0		Prof. E. Luther.
Köslin			29.91	759.8	58.8	14.9		WNW			8		10			0.059	1.5		H. Müller.
Leipsic			30.10	764.5	66.9	19.4	53	NW			3		10			0	0		Prof. Bruhns.
Memel			29.75	755.7	62.8	17.1	76	WSW			5		10s,k	WSW		0	0	Squally	Reinbrecht & Skalweit.
Münster			30.23	767.8	68.0	20.0	48	NE			1		10			0.083	2.1		Prof. E. Heis.
Neufahrwasser			29.84	758.0	65.5	18.6	49	WNW			7		8			0.492	12.5	Stormy	A. Lothes.
Posen			30.01	762.2	67.3	19.6	49	NW			4		4			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.09	764.3	79.5	26.4	57	Calm			0		2	NW		0	0		Dr. Schur.
Stuttgart			30.10	764.4	72.0	22.2	72	N			2		2			0	0		Prof. Schoder.
Thorn			29.91	759.8	70.0	21.1	41	W			3		4			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.11	764.7	74.8	23.8	39	NE			5		2			0	0		Prof. Flesch.
Wustrow, Naval School			30.65	763.3	59.5	15.3	70	WNW			8		10			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.80	759.1	84.2	20.0		NE			Strong							Clear	

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

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	762.3	82.8	28.2	41	SW	2.5	1.1			2			0	0		
Padua			30.02	762.6	80.8	27.1	51	SW	3.8	1.7			5	W		0	0		
Vicenza			30.02	762.5	84.4	29.1	38	NNW	3.1	1.4			1	W		0	0		
Verona			29.95	760.8	86.0	30.0	43	E			1		0			0	0		
Bergamo	28.70	728.9	29.96	760.9	83.5	28.6	43	SE			1		1			0	0		
Domodossola	29.00	736.7	29.99	761.7	81.5	27.5	54	S			4		3			0	0		
Milan			30.04	763.0	87.3	30.7	44	ESE			4		3	N		0	0		
Pavia			30.04	762.9	82.4	28.0	42	E			1		0			0	0		
Moncalieri			30.04	762.9	81.7	27.8	61	SE	3.8	1.7			3			0	0		
Mondovi	28.19	716.0	30.04	762.9	79.2	26.2	49	NNW			4		1	NW		0	0		
Porto Maurizio			30.10	764.6	77.4	25.2	64	E			2		5			0	0		
Genoa			30.06	763.5	83.3	28.5	30	Calm	0	0			0			0	0		
Piacenza			30.04	762.9	83.5	28.6	37	E	3.8	1.7			1			0	0		
Parma			29.99	761.7	84.6	29.2	47	NNE			2		2			0	0		
Bologna			30.08	764.0	86.0	30.0	42	SW			1		2	W		0	0		
Florence			30.04	763.0	87.8	31.0	24	NE			4		0			0	0		
Leghorn			30.06	763.5	81.0	27.2	59	W	5.6	2.5			2			0	0		
Siena	28.84	732.5	30.00	762.0	81.5	27.5	29	NE	0.7	0.3			2	E		0	0		
Urbino	28.59	726.1	30.10	764.6	74.8	23.8	42	NE			4		0			0	0		
Ancona			30.04	763.0	76.8	24.9	61	NW			4		0			0	0		
Grosseto			30.03	762.7	87.1	30.6	25	N			4		1	NW		0	0		
Rome			30.01	762.2	86.0	30.0	31	W	3.8	1.7			2	E		0	0		
Naples, O. U.			30.02	762.5	84.6	29.2	40	SW			2		2			0	0		
Lecce			30.00	762.1	78.1	25.6	52	NW	24.8	11.1			1			0	0		
Cosenza			29.99	761.8	86.7	30.4	69	NW	4.9	2.2			6			0	0		
Riposto, (Sicily)			29.97	761.2	82.0	27.8	65	NE			2		0			0	0		
Palermo			29.97	761.3	79.0	26.1	54	NE	8.1	3.6			1			0	0		
Caltanissetta	28.06	712.8	29.93	760.3	77.9	25.5	36	S			4		6			0	0		
Sub-Series.																			
Naples, S. R			30.04	762.9	83.5	28.6	44	SSW	5.6	2.5			4	SW		0	0		Prof. F. Brioschi.
Pesaro			30.12	765.0	76.5	24.7	72	N	22.8	10.17			0						L. Guidi.

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			30.26	768.5	69.1	20.6		NNE			2								
Groningen					63.0	17.2		NW			4								
Helder			30.18	766.6	64.2	17.9		WSW			2								
Utrecht			30.17	766.3	68.5	20.3	54	NNW			2		5					Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	54.7	12.6	77	Calm	0	0			10			0.157	4.0	Raining	
Brono			29.61	752.0	52.9	11.6	96	SW	18	8			10			1.378	35.0		
Christiania			29.67	753.6	68.2	20.1	42	SSW	6.0	2.7			10			0	0		
Tromso			29.52	749.7	54.5	12.5	91	Calm	0	0			10			0.224	5.7		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 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	74.5	23.6	72	E	13.9	6.22			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.95	760.8	91.0	32.8	20	SE	7.4	3.33			2			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.02	762.4	81.1	27.3	42	SW	6.2	2.78			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.01	762.2	72.9	22.7	66	SW	15.0	6.7			0			0	0		The Observatory.

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

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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	757.6	72.0	22.2	54	W	20	9			4						Astronomical Obs.
Wilna			29.74	755.4	66.0	18.9	80	SW	4	2			10					Raining	Astronomical Obs.
Dorpat			29.62	752.3	68.0	20.0	74	SSW	7	3			2						Physical Cabinet.
St. Petersburg			29.66	753.4	70.3	21.3	45	SSW	11	5			8						Central Physical Obs.
Kuopio			29.59	751.6	63.3	17.4	80	S	18	8			10						Ch. Forsten.
Kieff			29.83	757.6	74.3	23.5	48	NW	7	3			9						Physical Cabinet.
Nikolaiev			29.91	760.4	80.2	26.8	42	NNW	11	5			5						Kurdakof.
Kertch			29.87	758.0	82.9	28.3	35	N	9	4			0						Lagorio.
Moscow			29.74	755.5	58.5	14.7	82	NW	9	4			8					Raining	Meteorological Obs.
Lugan			29.67	753.5	77.2	25.1	35	W	20	13			3						Meteorological Obs.
Archangel			29.72	754.8	70.2	21.2	89	SSW	18	8			8						Ogorodnikof.
Tiflis	28.37	720.5	29.69	754.2	83.1	28.4	44	NW	18	8			4						Physical Observatory.
Astrakhan			29.71	754.6	82.6	28.1	54	S	7	3			6			Blank	Blank		Sebastianof.
Kasan			29.66	753.4	76.1	24.5	47	S	9	4			7						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.74	729.9	29.93	752.7	73.4	23.0	59	NE	2	1			7						Meteorological Obs.
Nukuss			29.65	753.2	95.5	35.3	26	N	4	2			1						
Kasaly																			Bobrof.
Tashkend	28.14	714.8	29.73	755.1	85.3	29.6	44	Calm	0	0			0						Michelson.
Barnaul			29.59	751.6	67.5	19.7	82	Calm	0	0			10						Meteorological Obs.
Yeniseisk			29.46	748.2	78.6	25.9	55	NW	7	3			4						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.77	756.1	78.6	25.9	89	Calm	0	0			3			Blank	Blank		Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.72	755.0	67.8	19.9	96	SE	4	2			10						
Nikolaievsk, on the Amoor					64.8	18.2	100	SE	16	7			10						

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 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			29.94	760.4	93.0	33.9	25	S	6.0	2.67		0	2			0	0	Partly cloudy	Royal Observatory.
San Fernando			29.98	761.4	89.1	31.7	29	E	21.9	9.8		0	0						The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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.
Saparanda			29.53	750.1	59.9	15.5	86	SE			2		10			0	0		
Umea			29.54	750.3	62.4	16.9	63	SW			2		10			0	0		
Hernosand			29.56	750.8	62.6	17.0	59	NW			2		9			0.138	3.5		
Stockholm			29.58	751.2	67.1	19.5	55	NNW			4		5			0	0		
Wisby			29.70	754.4	61.5	16.4	71	NNW			7		7			0.102	2.6		
SUB-SERIES.																			
Upsala			29.60	751.9	65.5	18.6	42	NW	11.0	4.9			4		NNW	0.263	6.68		Dr. Hildebrandsson.

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

SWISS SERIES.

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

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	28.70	729.0	30.06	763.5	78.6	25.9	42	N			1		1			0	0	Clear	The Observatory.
Zurich	28.50	724.0	30.05	763.3	82.0	27.8	43	NW			1		2			0	0	Clear	The Observatory.

NOTE—For Geneva the corresponding departures from the normal values are: Barometer, +1.4 mm.; Thermometer, +3.3 cent.; Relative Humidity, —11 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

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			29.92	759.9	77.9	25.5	59	ENE	17	7.5			6		ENE	0	0		
Fao, (Persian Gulf)			29.60	751.8	100.4	38.0		NW			3		0						
Salonica			29.97	761.3	79.2	26.2		NW			1		2						
Valona			29.97	761.2	78.6	25.9		NW			2		2						
Varna			29.92	760.0	87.8	31.0		E			3		5						
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y			29.76	755.8	88.7	31.5	53	SW			2		1s		SW	0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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.			29.68	753.9	72.0	22.2	80	SW	8	3.6			8			0	0	Gloomy	Hon. J. Ferguson.
Brockville, Ontario			30.03	762.7	80	26.7		SW	5	2.2		0	5s		SW	0	0	Fair	W. R. Bigg.
*Chatham, N. B.			29.76	755.9	72	22.2	80	SW	8	3.6		1ck	0	SW		0.31	0.3	Fair	G. A. Blair.
Charlottetown, P. E. Island			29.85	758.2	69	20.6	75	SW	13	5.8		0	8ks			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.92	760.0	84.7	29.3	59	S			1	5ck	0			0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			29.72	754.9	72.3	22.4	84	W			1					0	0	Threatening	H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			29.84	757.9	72.0	22.2	76	W	3	1.3			10s			0.02	0.5	Fair	Prof. Harrison.
*Fort Garry, Manitoba			30.10	764.5	55	12.8	87	E	4	1.8		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.04	763.0	73.2	22.9	91	SW			2	4k	6n	SW		0	0	Threatening	H. J. Strang, M. A.
Granton, Ontario	28.96	735.6	30.00	762.0	77	25.0		Calm			0		10n			0	0	Cloudy	James Grant.
*Halifax, N. S.			29.93	760.2	69	20.6	69	SW	15	6.7		2ck	0			0	0	Fair	F. Allison, M. A.
*Kingston, Ontario			30.02	762.5	75	23.9	86	W	3	1.3		8ck	0	W		0	0	Fair	S. Woods, M. A.
Little Glace Bay, N. S.			29.87	758.7	65.0	18.3	71	SW	10	4.5		8ks	0	SW		0	0	Threatening	C. H. Rigby.
*Montreal, Quebec			29.89	759.2	77	25.0	72	SW	12	5.4		8ck	2ks	W	W	0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.93	760.2	76	24.4	72	W	10	4.5		10k	0	W		0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario			30.01	762.2	71	21.7	92	S	7	3.1		2k	5ks	SW		0	0	Fair	Rev. R. Mosley.
*Port Dover, Ontario			30.02	762.5	77	25.0	87	S	4	1.8		2ck	0	W		0	0	Fair	H. Morgan.
Port Hastings, N. S.			29.89	759.2	71.4	21.9		SW	12	5.4						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.02	762.5	77	25.0	89	SE	1	0.4		2k	0	SW		0	0	Clear	M. Payne.
*Quebec, Quebec			29.84	757.9	77	25.0	73	SW	7	3.1		5c	0	SW		Inap.	Inap.	Fair	Capt. Ashe, R. N.
St. John, N. B.			29.92	760.0	61	16.1	82	S	8	3.6		5k	0			0.06	1.5	Cloudy	G. Murdoch, C. E.
*Saugeen, Ontario			29.98	761.5	73	22.8	87	Calm	0	0			10n			Inap.	Inap.	Cloudy	K. Stewart.
Stayner, Ontario			29.98	761.5	76	24.4	81	Calm	0	0			10ks		W	0	0	Cloudy	R. J. Cole.
Stratford, Ontario	28.78	731.0	29.99	761.7	75.4	24.1	89	Calm	0	0		10cs	0	W		0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			29.90	759.4	65	18.3	86	SW	9	4.0		8cs	2ks	NW	W	0	0	Cloudy	T. C. Hill.
*Toronto, Ontario			30.03	762.7	77	25.0	77	W	4	1.8		5cs	0	W		0	0	Fair	Magnetic Observatory.
Woodstock, Ontario			30.00	762.0	78.4	25.8	87	W	6	2.7		5ck	2cs	W		0.10	2.5	Fine	J. Montgomery
SUB-SERIES.																			
St. Johns, Newfoundland			30.14	765.5	64	17.8	48	SW				0	5k			0	0	Fair	John Delaney.

NOTE.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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. *Rain-fall until 10 a. m., of the 15th.

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.			30.01	762.2	79	26.1	69	S	9	4.0		5k	Haze	SW		0	0	Fair	
Alpena, Mich.			29.96	761.0	72	22.2	85	NW	1	0.4		5ck	5s	W		0	0	Cloudy	
Atlantic City, N. J.			30.16	766.1	74	23.3	85	SW	10	4.5		5c	0	NW		0	0	Fair	
Augusta, Ga.			30.19	766.8	82	27.8	75	Calm	0	0		0	0			0	0	Clear	
Baltimore, Md.			30.15	765.8	77	25.0	65	SW	8	3.6		5cs,c	0	SW		0	0	Fair	
Barnegat, N. J.			30.14	765.5	82	27.8	63	SW	20	8.9		5c	0	W		0	0	Fair	
Benton, Montana	27.25	692.1	30.05	763.3	59	15.0	70	SW	3	1.3		0	0			0	0	Clear	
Bismarck, Dakota	28.31	719.1	29.90	759.4	64	17.8	73	E	2	0.9		5ck	0	SW		Inap.	Inap.	Fair	
Boston, Mass.			30.02	762.5	79	26.1	65	SW	16	7.2		5ck	1k	W	W	0	0	Fair	
Breckenridge, Minn.			30.04	763.5	62	16.7	83	E	4	1.8		0	0			0	0	Clear	
Buffalo, N. Y.			29.98	761.5	77.5	25.3	86	SW	4	1.8		0	1ks		W	0	0	Clear	
Burlington, Vt.			29.44	764.5	81	27.2	66	S	5	2.2		2k	5s			0	0	Cloudy	
Cairo, Ill.			30.14	765.5	82	27.8	83	S	2	0.9		0	0			0	0	Clear	
Cape Hatteras, N. C.			30.14	765.5	80	26.7	70	NE	7	3.1		2k	0	NE		0.01	0.3	Clear	
Cape Henry, Va.			30.19	766.8	78	25.6	76	SW	3	1.3		5c	0			0	0	Fair	
Cape Lookout, N. C.			30.19	766.8	79	26.1	74	NE	8	3.6		2k	0	NE		0	0	Clear	
Cape May, N. J.			30.16	766.1	72	22.2	85	S	12	5.4		2c	0	W		0	0	Fair	
Charleston, S. C.			30.18	766.6	80	26.7	74	NE	8	3.6		0	0			0	0	Clear	
Cheyenne, Wyoming	24.23	615.4	30.17	766.3	60	15.6	94	S	8	3.6			Fog			0	0	Foggy	
Chicago, Ill.			30.05	763.3	75	23.9	81	NW	2	0.9		0	8s			0.25	6.3	Fair	
Cincinnati, Ohio			30.05	763.3	83	28.3	79	SW	3	1.3		5ck	0			0	0	Fair	
Cleveland, Ohio			30.04	763.0	78.6	25.9	80	SW	8	3.6		2c	0	W		0	0	Clear	
Colorado Springs, Col.	24.32	617.7	30.19	766.8	59	15.0	57	N	4	1.8		0	0			Inap.	Inap.	Clear	
Cosicana, Tex.			30.15	765.8	73	22.8	85	SE	2	0.9		1cs	0			0	0	Clear	
Davenport, Iowa			30.06	763.5	75	23.9	81	W	8	3.6		1cs	5k		W	0.43	10.9	Fair	
Denison, Tex.			30.16	766.1	78	25.6	81	SE	4	1.8		0	0			0	0	Clear	
Denver, Col.	24.99	634.7	30.24	767.3	60	15.6	70	S	2	0.9		0	0			0.08	2.0	Clear	
Detroit, Mich.			30.00	762.0	76	24.4	90	SW	5	2.2		5k	2s	SW	SW	0	0	Fair	
Dodge City, Kan.	27.53	699.2	29.71	754.6	76	24.4	64	SE	11	4.9		8cs	0			0	0	Fair	
Dubuque, Iowa			30.06	763.5	72	22.2	90	SW	2	0.9			10s			0.80	20.3	Cloudy	
Duluth, Minn.			30.08	764.0	68	20.0	74	Calm	0	0		0	0			0	0	Clear	
Eastport, Me.			29.88	758.9	61	16.1	77	S	10	4.5			10s		W	0	0	Cloudy	
Erie, Pa.			30.01	762.2	81	27.2	74	SW	8	3.6		2c	Haze			0	0	Fair	
Escanaba, Mich.			30.04	763.0	68	20.0	69	N	8	3.6		5k	0	N		0.02	0.5	Fair	
Fort Gibson, Indian Ter.			30.09	764.3	82	27.8	70	E	2	0.9		0	0			0	0	Clear	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.92	734.6	29.97	761.2	80	26.7	70	S	8	3.6		0	0			0	0	Clear	
Fort Sully, Dakota	28.38	720.8	29.99	761.7	66	18.9	84	SE	8	3.6		0	0			Inap.	Inap.	Clear	
Galveston, Tex.			30.17	766.3	81	27.2	78	NW	1	0.4		2k	0	SE		0.15	3.8	Fair	
Grand Haven, Mich.			30.03	762.7	74	23.3	78	NW	8	3.6		0	9s		W	0.01	0.3	Cloudy	
Indianapolis, Ind.			30.07	763.8	81	27.2	82	Calm	0	0		8cs	0			0	0	Fair	
Indianola, Tex.			30.14	765.5	83	28.3	74	Calm	0	0		0	5ks			0.15	3.8	Fair	
Jacksonville, Fla.			30.15	765.8	82	27.8	74	NE	3	1.3		0	0			0.16	4.1	Clear	
Keokuk, Iowa			30.03	762.7	80	26.7	74	SE	6	2.7		5c	0			0	0	Fair	
Key West, Fla.			30.08	764.0	82.5	28.1	74	Calm	0	0		2ks	2s	NE	NE	0	0	Fair	
Kittyhawk, N. C.			30.20	767.1	79	26.1	82	SE	4	1.8		2cs	0			0	0	Fair	
Knoxville, Tenn.			30.18	766.6	75	23.9	90	Calm	0	0		10k	0	E		0	0	Cloudy	
La Crosse, Wis.			30.04	763.0	74	23.3	90	SW	4	1.8			10s		SW	0.10	2.5	Cloudy	
Leavenworth, Kan.			30.04	763.0	79	26.1	78	S	1	0.4		0	0			0	0	Clear	
Lexington, Ky.	29.04	737.6	30.08	764.0	81	27.2	66	SW	8	3.6			10n			0.18	4.6	Light rain	
Louisville, Ky.			30.09	764.3	81	27.2	74	SW	8	3.6		0	2ks		SW	0.08	2.0	Clear	
Lynchburg, Va.			30.15	765.8	79	26.1	61	S	2	0.9		10k	0	S		0	0	Cloudy	
Malone, N. Y.			29.88	758.9	79	26.1	61	SW	9	4.0		5c	0	NW		0	0	Fair	
Manhattan, Kan.	28.85	732.8	29.93	760.2	76	24.4	86	S	2	0.9		0	0			0	0	Clear	
Marquette, Mich.			30.10	764.5	62	16.7	83	N	4	1.8		0	8s		N	0.01	0.3	Cloudy	
Memphis, Tenn.			30.18	766.6	86	30.0	68	Calm	0	0		0	Haze			0	0	Clear	
Milwaukee, Wis.			30.07	763.8	74	23.3	85	W	5	2.2			8ks		W	0.13	3.3	Cloudy	
Mobile, Ala.			30.19	766.8	80	26.7	82	NW	6	2.7		5cs	0			0	0	Fair	
Montgomery, Ala.			30.18	766.6	80	26.7	80	E	6	2.7		10cs	Haze			0	0	Cloudy	
Morgantown, W. Va.	29.08	738.6	30.07	763.8	80	26.7	74	SW	6	2.7		8c	0	SW		0	0	Fair	
Mt. Washington, N. H.	23.91	607.0	30.26	768.6	56	13.3	100	NW	60	26.8			Fog			0	0	Foggy	
Nashville, Tenn.			30.14	765.5	80	26.7	82	Calm	0	0		5cs	0			0	0	Fair	
New Haven, Conn.			30.10	764.5	82	27.8	58	SW	15	6.7		Haze	Sm			0	0	Fair	
New London, Conn.			30.12	765.0	79	26.1	61	SW	12	5.4		2c	0	NW		0	0	Fair	
New Orleans, La.			30.19	766.8	82	27.8	74	S	3	1.3		5ck	0	SE		0.03	0.8	Fair	
Newport, R. I.			30.16	764.5	73	22.8	85	SW	22	9.8		5cs	0	W		0	0	Clear	
New York, N. Y.			30.12	765.0	75	24.9	72	SW	14	6.3		0	0			0	0	Fair	
Norfolk, Va.			30.21	767.3	79	26.1	73	S	3	1.3		5c	0			0	0	Fair	
North Platte, Neb.	27.21	691.1	29.68	753.9	70	21.1	79	NE	4	1.8		5c	0	W		0.01	0.3	Clearing	
Omaha, Neb.	29.01	736.8	30.05	763.3	71	21.7	95	S	4	1.8		0	8s		NW	0.59	15.0	Fair	
Oswego, N. Y.			30.00	762.0	78.5	25.8	67	SW	10	4.5		2cs	Haze	W		0	0	Clear	
Pembina, Dakota			30.03	762.7	58	14.4	87	E	4	1.8		2k	0	W		0	0	Cloudy	
Philadelphia, Penn.			30.14	765.5	78	25.6	69	W	12	5.4		2c	5ks		NW	0.03	0.8	Clear	
Pike's Peak, Colorado	18.10	459.7	30.31	769.9	36	2.2	62	NE	6	2.7		1cs	0			0.09	2.3	Cloudy	
Pittsburgh, Penn.			30.05	763.3	78	25.6	86	W	5	2.2		5k	5ks	W	W	Inap.	Inap.	Light rain	
Port Huron, Mich.			29.99	761.7	75	23.9	90	SW	4	1.8			10n		W	0	0	Fair	
Portland, Me.			29.95	760.7	78	25.6	65	SW	11	4.9		5ck	Haze	W		0	0	Clear	
Portland, Oregon			30.14	765.5	59	15.0	81	Calm	0	0		0	0			0.13	3.3	Fair	
Punta Rassa, Fla.			30.08	764.0	81.0	27.2	80	NE	7	3.1		8cs	0			0.01	0.3	Clear	
Rochester, N. Y.			29.98	761.5	78	25.6	73	W	8	3.6		1ck	Haze	W		0	0	Fair	
Salt Lake City, Utah	25.62	650.7	29.94	760.5	66	18.9	27	NE	2	0.9		5k	0	NE		0	0	Clear	
Sandy Hook, N. J.			30.11	764.8	81	27.2	70	SW	18	8.0		2ck	Haze	SW		0	0	Clear	
San Diego, Cal.			30.01	762.2	62	16.7	88	N	4	1.8		0	0			0	0	Cloudy	
San Francisco, Cal.			29.97	761.2	54	12.2	86	SW	8	3.6			10s			0	0	Cloudy	
Santa Fé, N. M.	23.45	595.6	29.99	761.7	58	14.4	87	S	2	0.9		10k	0			0.05	1.3	Cloudy	
Savannah, Ga.			30.19	766.8	82	27.8	78	NE	4	1.8		5c	Haze	NE		0.13	3.3	Fair	
Shreveport, La.			30.22	767.6	79.5	26.4	80	SW	1	0.4		0	0			0	0	Clear	
Smithville, N. C.			30.19	766.8	78	25.6	69	N	6	2.7		1ck	0			0	0	Clear	
Springfield, Mass.			30.05	763.3	78.5	25.8	73	S	8	3.6		5ck	Haze			0	0	Fair	
St. Louis, Mo.			30.08	764.0	81	27.2	78	S	2	0.9		0	0			1.11	28.2	Clear	
St. Marks, Fla.			30.16	766.1	78	25.6	86	NE	5	2.2		2cs	5s		NE	0.13	3.3	Fair	
St. Paul, Minn.			30.04	763.0	72.5	22.5	65	N	2	0.9		8c	0	W		0.02	0.5	Fair	
St. Paul's Island, Alaska			29.57	751.1	42	5.6	91	SW	32	14.3			10n			0.36	9.1	Heavy rain	
Thatcher's Island, Mass.			30.01	762.2	69	20.6	79	SW	20	8.9		5c	2k	NW	NW	0	0	Fair	
Toledo, Ohio			30.00	762.0	79	26.1	82	SW	7	3.1		5c	Haze	SW		0	0	Fair	
Tucson, Arizona	27.54	699.5	30.13	765.3	79	26.1		S				2k	5ks	SE	SE	0	0	Cloudy	
Tybee Island, Ga.			30.17	766.3	82	27.8	70	NE	14	6.3		2k	0	NE		0.15	3.8	Fair	
Vicksburg, Miss.			30.22	767.6	84	28.9	72	SW	3	1.3		2cs	2ks			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.	24.30	617.2	29.78	756.4	53	11.7	48	Calm	0	0		0	0			0	0	Clear	
Washington, D. C.			30.15	765.8	80	26.7	60	SW	8	3.6		3c,cs	Haze	NW		0	0	Fair	
Wilmington, N. C.			30.20	767.1	77	25.0	76	NE	5	2.2		1cs	0			0	0	Fair	
Wood's Holl, Mass.			30.10	764.5	75	23.9	81	SW	12	5.4		5c	0	SW		0	0	Fair	
Wytheville, Va.	27.89	708.4	29.98	761.5	72	22.2	90	W	3	1.3		2c	5ks	W	W	0.25	6.3	Cloudy	
Yankton, Dakota	28.80	731.5	30.04	763.0	70	21.1	95	Calm	0	0			10s			0.01	0.3	Cloudy	
Yuma, Arizona			29.88	758.9	82	27.8		NE				8ck	0	NW		0	0	Fair	
Sub Series.																			
P'nte-a-Pitre, G'd'l'pe, W. I.			29.08	761.5	83	28.3	83	E				10cs	5k			0.30	7.6	Cloudy	L. V. Bigard.
Kingston, Jamaica, W. I.			30.12	765.0	80	26.7	78	Calm	0	0		2k	2s	NE	NE	0.06	1.5		James Hall.
St. Georges, Bermudas			30.09	764.3	79.5	26.4	87	NE	18.0	8.0		0	5k			0.19	4.8	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	30.00	762.0	67	19.4	90	E	3.0	1.3		2c	8k	E		1.20	30.5	Dull	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.02	762.5	82	27.8	83	E			2	5k	5k	E		0.370	9.40	Fair	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.08	763.9			84.2	29		NE								0.295	7.50		Dr. H. Groot.
Medellin, Colombia, S. A.	25.18	639.6			67.0	19.4	76	Calm	0	0		2ck	3s			0	0	Fair	Thomas Herran.
York Factory, B. A.			29.85	758.2	51	10.6	93	W	5	2.2		7k	0	W		0.20	5.1		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.			30.09	764.3	77	25.0	95	NE			3					0	0		Daniel Smith.
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
Schooner Addie Fuller, at Gardiner, Me.					Overcast	Capt. James Jorgensen.

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 altitudes 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.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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 added 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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			30.04	762.9	79.5	26.4	69	Calm			0		1			0	0	Clear	Charnot.
Algiers			30.04	763.0	78.8	26.0	79	N			1		5			0	0	Fair	Peter.
La Calle			29.99	761.7	85.6	29.8	58	S			2		1			0	0	Clear	Kuntz.
Tunis			30.00	762.0	89.2	31.8	36	NE			3		0			0	0	Clear	Jacques.
Sfax			30.08	764.1	83.5	28.6	58	SE			3		1			0	0	Clear	Chauvey.
Saïda			30.04	762.9	87.8	31.0	22	SE			2		1			0	0	Clear	Millot.
Tebessa			30.04	763.1	80.8	27.1		NW			3		10			0	0	Hidden	Colin.
Geriville			30.05	763.3	85.5	29.7	27	SW			2		2			0.118	3.0	Clear	Buard.
Laghouat			30.07	763.6	84.2	29.0	31	SW			2		0			0	0	Clear	Guyot.
Biskra			30.07	763.6	90.0	32.2	33	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			29.88	759.0	60.1	15.6	93	NE			2		10			1.445	36.7	Raining	Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.74	755.3	66.6	19.2	56	W			2		10			0	0		Dr. Wierzbiski.
Eperies			29.75	755.6	61.5	17.5	87	Calm			0				S	0.041	1.05		Julius Mikolik.
Gratz	28.65	727.6	29.83	757.6	63.3	17.4	81	SW			3		10			0.252	6.4		Andreas Rospini.
Hermannstadt	28.37	720.5	29.73	755.1	70.5	21.4	71	WNW			1		5			1.254	31.85		Prof. Reissenberger.
Kremsmünster	28.55	725.2	29.87	758.6	60.8	16.0	83	WSW			3		10			0.465	11.8		Prof. C. Wagner.
Lemberg			29.69	754.2	60.6	15.9	96	SE			1		8			0.142	3.6		Dr. T. Stanecki.
Nyiregyhaza																			Habesuda Daniel.
Pola			29.83	757.7	82.0	27.8	51	SSE			2		10ks			0	0		I.R.Hydrographic Office.
Szegedin			29.80	756.8	67.3	19.6	60	N			1		4			0	0		Karl Stancel.
Trieste			29.82	757.4	82.9	28.3	62	NW			1		10			0	0		Prof. V. Farolfi.
Vienna			29.89	759.9	63.5	17.5	65	W			4		10			0.039	1.0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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	62.4	16.9	85	NW			5		10		NW	0.003	0.08	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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'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			30.12	765.0	62.0	16.7		NW	6	2.7			7			0.170	4.32	*D. clouds	William Boswell.
Ardrossan			30.20	767.1	65	18.3		NW			3		6					*D. clouds	William McNeil.
Armagh, Observatory			30.29	769.4	65.0	18.3		NW	5	2.2			10					Gloomy	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.32	770.1	69.2	20.7		NNW			1–2		10					*D. clouds	J. Dreyer.
Bradford			30.14	765.5	69.5	20.8		NW			1		10			0	0	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	82.5	28.1		NE			1		5					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			30.10	764.5	74.0	23.3		NNE			2		2					*D. clouds	H. Todd.
Cardington			30.13	765.3	76.0	24.4		NW			1		8					Overcast	John McLaren.
Carlisle			30.13	765.3	74.2	23.4		W			6		8			0	0	*D. clouds	T. Bell, for J. Carmichael.
Chatham, School M. E			30.08	764.0	72.0	22.2		NE			2		9					Gloomy	Capt. J. Fellowes, R.E.
Dartmoor	28.82	732.0	30.28	769.1	70.0	21.1		N			3		0					Blue sky	R. F. Power.
Donaghadee			30.25	768.3	65	18.3		NNW			4		5					*D. clouds	J. Mac Gowan.
Dover			30.08	764.0	71	21.7		N			4		5					½ clouded	J. Costello.
Eccles (near Manchester)			30.16	766.1	64.1	17.8		W	4.8	2.1			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			30.24	768.1	72.0	22.2		NNW			5		1					*D. clouds	The Staff.
Fort Napier, (Natal)	27.74	704.6	29.98	761.5	69.2	20.7		SE			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	83	28.3		N			1		6					*D. clouds	
Galway, Queen's College			30.24	768.1	70	21.1		W			2		1					Blue sky	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.01	762.2	77.0	25.0		E			4		1					*D. clouds	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			30.15	765.8	67.4	19.7		W			3		2					Fine	Lewis Stuart.
Great Yarmouth			30.08	764.0	65	18.3		N			4		5					*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y			30.11	764.8	78.1	25.6		N			1		7					*D. clouds	The Staff, for G. B. Airy
Guernsey			30.16	766.1	73.5	23.1		NNW			3		0					Blue sky	Dr. S. E. Hoskins.
Helston			30.19	766.8	75	23.9		N			2		0			0	0	Blue sky	M. P. Moyle.
Holyhead			30.26	768.6	64	17.8		NW			5		2					Blue sky	John Tilston.
Kew, Observatory			30.10	764.5	76.2	24.6		N	13	5.8			8					Hazy	The Staff.
Kingstown			30.28	769.1	68	20.0		N			3		5					*D. clouds	George Mitchell.
Leicester Museum			30.14	765.5	70.2	21.2		NW			3		9					Overcast	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)			29.95	760.7	81.8	27.7		NW			1		0						Corp'l F. Fraser, A. M. C.
Nairn			30.10	764.5	66	18.9		WNW			2		8					¾ clouded	W. D. Penny.
Nassau, (Bahamas			30.09	764.3	85.4	29.7		E			5		6					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.14	765.5	77.0	25.0		NW			4		10k		N			Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.16	766.1	65.1	18.4		NNW			4		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.12	765.0	73	22.8		NW			4		3					Blue sky	J. Lucas.
Plymouth			30.18	766.6	79.9	26.6		NNW			4		0					Blue sky	John Merrifield.
Roche's Point			30.28	769.1	71	21.7		S			3		2					Fine	W. Kennedy.
Saint Ann's Head			30.26	768.6	67	19.4		N			3		5					*D. clouds	John C. Walker.
Saint Helier, Jersey			30.16	766.1	77.6	25.3		NNW			3		0					Clear	A. P. Amy.
Sandwick Manse (Orkneys)			30.10	764.5	55.5	13.1		W	13	5.8			10					Misty	Rev. C. Clouston, LL.D.
Scarborough			30.12	765.0	61.2	16.2		N			4		7					*D. clouds	F. Shaw.
Scutari Cemetery, Turkey			29.76	755.9	82.6	28.1		NE			2		1					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.12	765.0	72.8	22.7		WNW			3		5			0	0	*D. clouds	W. F. Cooper.
Silloth Rectory			30.17	766.3	75.6	24.2	62	W			2		1			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.16	766.1	64.5	18.1		W			3		7						Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			30.11	764.8	64	17.8		W			1		10					Overcast	John Smith.
Stratfield Turgiss			30.11	764.8	79.5	26.4		N			3		5					Squally	Rev. Charles H. Griffith.
Thurso			30.07	763.8	57	13.9		NW			2		10					Overcast	John Trotter.
Truro, Royal Institution			30.25	768.3	74	23.3		N			4		0					Blue sky	W. Newcombe.
Valencia, Observatory			30.29	769.4	71.8	22.1		N	18	8.0			5					*D. clouds	The Staff.
Sub-Stations.																			
Calf of Man, Isle of Man					58	14.4		N			3		0						Thomas Dawson.
Cape Good Hope, Obs'y			30.10	764.5	56.0	13.3	94	NW	16	7.2		5	5						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.03	762.7	60.0	15.6	81	N			1		10kn			0	0	Cloudy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			30.15	765.8	65.6	18.7		E			2		6k			0	0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.25	768.3				E	19.1	8.5						0.03	0.8		C. Meldrum.
Melbourne, Observatory			30.36	771.1	48.3	9.1	76	WSW	8	3.6			10			0.04	1.0	Showery	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.17	766.3	57	13.9		NW			4		10			0.2	5.1		J. Youngehuse.
North Unst, Shetland Is.			29.98	761.5	51	10.6		SW			4		10						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,200 ft., or 670.6 m. *Detached clouds. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. lbs. per square foot for Greenwich and Hobart Town.

DANISH SERIES.

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

Copenhagen			29.61	752.1	62.8	17.1	65	N			7		5						
Fanoe			29.76	755.9	66.2	19.0	71	NW			7		5						
Godthaab, Greenland			29.72	755.0	36.9	2.7		S			6		10						
Stykkisholm, Iceland			29.34	745.3	49.8	9.9	95	S			6		10					Raining	
Thorshavn, Faröe			29.91	759.7	54.9	12.7	94	SW			2		10					Rain and fog	
Vestervig			29.81	757.2	65.8	18.8	45	NNW			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			30.06	763.5	77.0	25	35	N			3		0			0	0	Clear	Normal School.
Amiens			30.43	772.9	75.2	24.0	60	N			2		8		N	0	0	Very cloudy	Normal School.
Avignon			29.97	761.2	86.7	30.4	35	N			2		5		N	0	0	Cloudy	Normal School.
Bar-sur-Seine			30.0	761.9	80.8	27.1	28	N			2		8		N	0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)			30.06	763.4	85.5	29.7	18	N	4.3	1.9			0			0	0	Clear	Beaumette Observatory.
Beauvais			30.05	761.0	73.9	23.3	51	NNW.			3		2		NNW	0	0	Slightly cl'dy	Normal School.
Besançon			30.03	762.8	76.5	24.7	35	SW			4		5		SW	0	0	Cloudy	Normal School.
Bourg en Bresse			30.17	766.3	80.6	27	51	N			1		5c,n		S			Cloudy	Normal School.
Bourges			30.43	777.4?	80.6	27	49	W			2		2		W	0	0	Slightly cl'dy	Normal School.
Brest			30.15	765.7	75.4	24.1	58	NNE			3		1c			0	0		Naval Observatory.
Carcassonne			29.99	761.8	79.5	26.4	31	NW			1		2		SE	0	0	Slightly cl'dy	Normal School
Caen			30.15	765.7	74.7	23.7	84	NW			6		0			0	0	Clear	Normal School.
Chartres			30.05	763.2	75.9	24.4	56	N			4		0			0	0	Clear	Normal School.
Clermont			30.03	762.7	80.6	27.0	50	E			1		5			0	0		Puy de Dome Ob'y.
Commercy			30.00	761.9	73.4	23	40	WNW			6		2k		WNW	0	0	Slightly cl'dy	Normal School.
Commune de Greasque*			29.99	761.7	86.2	30.1	25	NW			6		5		NW	0.016	0.4		M. Kina.
Grenoble			30.00	762.0	79.5	26.4	46	NW			4		5ks		S	0	0	Cloudy	Normal School.
La Roche-sur-Yon			30.10	764.4	88.5	31.4	27	NE			2		0			0	0	Clear	Normal School.
Le Mans			30.06	763.5	81.1	27.3	97	NNE			4		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			30.03	762.7	74.7	23.7	45	NNE			1		2		N	0	0	Slightly cl'dy	Normal School.
Mâcon			30.22	767.6	80.6	27	45	NNE			2		5		NNW	0	0	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			29.96	761.0	75.0	23.9	44	W			4		10		E	0	0	Covered	Normal School.
Nismes			29.99	761.8	90.3	32.4	27	NW			4		5		W	0	0	Cloudy	Normal School.
Orleans			29.98	761.5	83.8	28.8	29	N			2		0			0	0	Clear	Normal School.
Paris, Observatory			30.05	763.2	76.6	24.8	47	NW			4		3ck		NW	0	0	Slightly cl'dy	National Observatory.
Parthenay			30.19	766.8	98.6	37	38	NW			2		5		NW	0	0	Cloudy	Normal School.
Privas			29.97	761.1	85.1	29.5		NNE			2		2		NNE	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.11	764.7	93.6	34.2	32	NE			3		2			0	0	¼ covered	Naval Observatory.
Rouen			30.10	764.6	77.2	25.1	51	NW			1		0			0	0	Clear	Normal School.
Saint Lo			29.78	756.5	84.2	29	51	NW			2		1		NW	0	0		Normal School.
Tarbes	29.06	738.0	30.09	764.2	78.8	26		WNW			1		0			0	0	Clear	Normal School
Villefranche			30.08	764.0	87.4	30.8	53	NNW			1		5		N	0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.92	760.0	79.5	26.4													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.35	770.9	68.2	20.1	68	NNW	0	0			6			0	0		—. Faiguère.
Montsouris, Paris			30.05	763.2	78.1	25.6	45	NW			4		2		NNW	0	0		Montsouris Observ'tory.
Perpignan			30.03	762.7	90.3	32.4	28	NE	14.9	6.66			2		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.04	763.1	79.0	26.1	46	NW			3		1			0	0		E. Renou.
Toulouse			30.11	764.8	86.4	30.2	35	NW			2		2			0	0		Toulouse Observatory.
Tours			30.07	763.8	86.4	30.2	24	ENE			3		0			0	0	Clear	C. Marquet.
Versailles, (near Paris)			30.07	763.6	78.8	26.0	48	N			4		3			0	0	Fair	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai																			H. Le Lec, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * 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			29.88	758.9	64.9	18.3	68	W			6		10	W		0.118	3.0		Prof. T. Hon.
Berlin			29.64	752.8	63.1	17.3	77	W			2		10			0.445	11.3		Prof. Arndt.
Breslau			29.76	756.0	59.7	15.4	78	WSW			2		10					Raining	Dr. P. Neugebauer.
Carlsruhe			29.89	759.1	70.7	21.5	56	SW			4		10			0	0		A. Sens.
Cassel			29.81	757.2	67.6	19.8	73	NW			6		6	NW		0	0		Dr. H. Möhl.
Emden			29.89	759.2	64.0	17.8	63	N			3		5			0.220	5.6		Prof. Prestel.
Frankfort on the Main			29.89	759.1	70.7	21.5	60	WNW			4		4			0.055	1.4		Physical Society.
Friedrichshafen			29.96	761.0	69.8	21.0	73	W			2		10			Inap.	Inap.		M. Wilhelm.
Hamburg			29.72	755.0	62.8	17.1	76	NNW			5		8k	NNW		0.319	8.1	Squally	Captain F. Hegemann.
Kiel			29.70	754.3	64.2	17.9	62	NNW			5		2			0.449	11.4		Prof. G. Karston.
Königsberg, (Prussia.)			29.60	751.9	66.2	19.0	61	W			2		4			0.302	7.7		Prof. E. Luther.
Köslin			29.63	752.6	55.9	13.3		N			2		10			0.425	10.8		H. Müller.
Leipsic			29.73	755.1	60.4	15.8	89	SW			3		10	WSW		0.043	1.1		Prof. Bruhns.
Memel			29.63	752.6	67.6	19.8	70	W			2		9k s	W		Inap.	Inap.		Reinbrecht & Skalweit.
Münster			29.87	758.7	65.1	18.4	76	SW			5		4			0.256	6.5		Prof. E. Heis.
Neufahrwasser			29.61	752.2	61.5	16.4	80	SW			2		10			0.673	17.1	Rainy	A. Lothes.
Posen			29.69	754.0	59.9	15.5	87	W			2		10			0.236	6.0		Dr. Magener.
Strassburg, (in Alsace)			29.95	760.6	74.1	23.4	41	W			2		10	W		0.008	0.2		Dr. Schür.
Stuttgart			29.80	759.2	72.1	22.3	42	W			4		8			0.059	1.5		Prof. Schoder.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.93	760.3	68.7	20.4	61	SW			7		9			0.134	3.4		Prof. Flesch.
Wustrow, Naval School			29.70	754.4	57.4	14.1	80	N			6		10			0.512	13.0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	86.9	30.5		N					k					Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	79.2	26.2	59	SW	0.7	0.3			10			0	0		
Padua			29.78	756.4	79.7	26.5	60	NE	3.1	1.4			10			0	0		
Vicenza			29.78	756.5	78.4	25.8	61	N	1.3	0.6			6			0	0		
Verona			29.81	757.2	86.7	30.4	41	E			1		0			0	0		
Bergamo	28.49	723.6	29.75	755.6	80.6	27.0	57	WSW			2		8			0	0		
Domodossola	28.97	735.7	29.95	760.7	80.2	26.8	29	N			6		8			0	0		
Milan			29.81	757.2	86.2	30.1	57	SW			4		7	WNW		0	0		
Pavia			29.82	757.5	82.8	28.2	52	W			4		9	W		0	0		
Moncalieri			29.84	757.8	81.1	27.3	47	SE	1.3	0.6			9	NW		0	0		
Mondovi	28.00	711.2	29.85	758.1	80.4	26.9	55	SE			2		9	N		0	0		
Porto Maurizio			29.93	760.1	79.2	26.2	66	ESE			2		6			0	0		
Genoa			29.91	759.6	78.1	25.6	67	SE	0.7	0.3			2	SE		0	0		
Piacenza			29.82	757.3	80.1	26.7	60	NW	13.0	5.8			10			0	0		
Parma			29.80	757.0	82.4	28.0	40	SW			8		9			0	0		
Bologna			29.85	758.3	86.4	30.2	40	N			1		4	S		0	0		
Florence			29.90	759.4	86.0	30.0	46	SW			6		9			0	0		
Leghorn			29.93	760.3	80.2	26.8	60	WSW	4.3	1.9			10			0	0		
Siena	28.72	729.4	29.88	758.9	83.3	28.5	32	WSW	3.1	1.4			9	W		0	0		
Urbino	28.39	721.0	29.90	759.5	81.5	27.5	36	NNE			2		8			0	0		
Ancona			29.81	758.0	82.0	27.8	44	SW			4		8			0	0		
Grosseto			29.93	760.3	87.4	30.8	35	NNW			4		6	S		0	0		
Rome			29.93	760.1	84.9	29.4	45	SW	8.7	3.9			2			0	0		
Naples, O. U.			29.97	761.1	82.0	27.8	65	WSW			4		1	NW		0	0		
Lecce			29.97	761.1	78.8	26.0	45	NW	12.5	5.6			1			0	0		
Cosenza			29.76	760.9	87.8	31.0	65	NW	8.1	3.6			4			0	0		
Riposto, (Sicily)			29.91	760.5	82.4	28.0	59	E			2		2			0	0		
Palermo			29.92	760.0	81.0	27.2	55	WNW	14.3	6.4			2			0	0		
Caltanissetta	28.02	711.7	29.89	759.2	80.6	27.0	35	WSW			2		1	ENE		0	0		
Sub-Series.																			
Naples, S. R			29.99	761.7	81.9	27.7	55	SW	2.5	1.1			0			0	0		Prof. F. Brioschi. L. Guidi.
Pesaro			29.88	758.9	81.9	27.7	55	NE	16.3	7.28			10c,cs,k	E					

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			30.06	763.5	64.0	17.8		NNW			5								
Groningen			29.82	757.4	61.7	16.5		NNW			5								
Helder			29.91	760.4	62.8	17.1		NW			5							Cloudy	
Utrecht			30.91	769.6	64.4	18.0	76	WNW			4		5						

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.87	758.6	58.6	14.8	76	NNW	21.7	9.7			3			0	0		
Brono			29.82	757.5	60.1	15.6	73	WNW	7	3			5			0.047	1.2		
Christiania			29.75	755.6	64.8	18.2	30	N	12.5	5.6			3			0	0		
Tromsö			29.77	756.1	55.9	13.3	88	Calm	0	0			9			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 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	766.8	73.9	23.3	74	NE	9.0	4.03			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.97	761.1	92.8	33.8	18	SE	5.2	2.33			1			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			29.98	761.5	76.3	24.6	75	SW	8.1	3.6			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.02	762.5	83.1	28.4	34	SSW	4.9	2.2			0			0	0		The Observatory.

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

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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			29.67	753.6	66.2	19.0	63	WSW	11	5			10						Astronomical Obs.
Wilna			29.63	752.7	68.5	20.3	51	SSW	4	2			5						Astronomical Obs.
Dorpat			29.61	752.1	66.4	19.1	52	N	4	2			4						Physical Cabinet.
St. Petersburg			29.60	751.9	61.9	16.6	85	S	4	2			10					Raining	Central Physical Obs.
Knoplo			29.58	751.2	69.8	21.0	65	SE	18	8			5						Ch. Forsten.
Kieff			29.66	753.3	77.7	25.4	43	NW	7	3			7					Smoke-haze	Physical Cabinet.
Nikolaiev			29.84	758.0	74.5	23.6	64	S	13	6			7						Kurdakof.
Kertch			29.82	757.5	86.0	30.0	39	E	4	2			2						Lagorio.
Moscow			29.63	752.7	72.1	22.3	49	NNW	4	2			7						Meteorological Obs.
Lugan			29.69	754.0	85.3	29.6	28	W	13	6			1						Meteorological Obs.
Archangel			29.74	755.5	70.2	26.2	85	E	9	4			5						Ogorodnikof.
Tiflis	23.46	722.8	29.82	757.5	69.4	20.8	86	N	4	2			10					Raining	Physical Observatory.
Astrakhan			29.79	756.6	82.9	28.3	39	NE	4	2			2						Sebastianoi.
Kasan			29.74	755.4	68.4	20.2	78	NW	4	2			7						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.74	729.4	29.63	752.5	66.7	19.3	71	Calm	0	0			8						Meteorological Obs.
Nukuss			29.59	751.6	96.3	35.7	35	NNE	4	2			0						
Kasaly																			Robrof.
Tashkend	28.07	713.0	29.64	752.9	88.9	31.1	54	Calm	0	0			0						Michelson.
Barnaul			29.67	753.5	71.1	21.7	67	SW	2	1			9						Meteorological Obs.
Yeniseisk			29.57	751.0	78.1	25.6	52	NW	4	2			3						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.72	754.9	84.9	29.4	74	SE	9	4			3						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.73	755.2	67.6	19.8	97	Calm	0	0			10			Blank	Blank		
Nikolaievsk, on the Amoor.					60.8	16.0	97	SE	7	3			10						

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 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			29.97	761.1	91.9	33.3	24	NE	1.5	0.67		0	0			0	0	Almost clear	Royal Observatory.
San Fernando			29.98	761.6	87.4	30.8	36	ESE	20.6	9.2		0	0						The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			29.67	753.6	72.0	22.2	52	E			2		2			0.197	5.0		
Umea			29.60	751.7	61.2	16.2	78	SE			2		9			0	0		
Hernosand			29.56	750.8	56.5	13.6	75	WNW			4		10			0.177	4.5		
Stockholm			29.62	752.4	56.7	13.7	92	E			2		10			0.004	0.1	Raining	
Wisby			29.62	752.4	58.6	14.8	74	NNE			4		10			0	0		
SUB-SERIES.																			
Upsala			29.63	752.7	62.1	16.7	56	NE	7.4	3.3			10		NE	0.014	0.35		Dr. Hildebrandsson.

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

SWISS SERIES.

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

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	28.64	727.5	30.09	762.1	76.6	24.8	38	WSW			1		10			0	0	Covered	The Observatory.
Zurich	28.41	721.6	30.00	762.1	66 7	19.3	66	W			1		8			Inap	Inap.	Cloudy	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, —0.2 mm.; Thermometer, +2.2 cent.; Relative Humidity, —14 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

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			29.84	757.8	75.6	24.2	58	N	16	7.0			2		NE	0	0		
Fao, (Persian Gulf)			29.60	751.7	102.2	39.0		NW			3		0						
Salonica			29.85	758.3	82.8	28.2		NW			2		0						
Valona			29.91	759.8	78.4	25.8		W			1		0						
Varna			29.92	760 0	78.8	26.0		S			2		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			29.74	755.3	90.9	32.7	49	W			1		4k	W	E	0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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			29.96	761.0	68.9	20.5	74	NE	16	7.2			0			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.06	763.5	80	26.7		SW	5	2.2		0	0			0	0	Clear	W. R Bigg.
*Chatham, N. B.			30.00	762.0	71	21.7	78	N	4	1.8		2k	0	N		0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island			29.95	760.7	70	21.1	85	Calm	0	0		0	0			0.230	5.8	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			29.98	761.5	78.2	25.7	77	S			1	6k	0			0	0	Fair	James Smith, M. A.
Dalhousie, N. B.			30.00	762.0	70.8	21.6	84	W			1					0	0	Bright.	H. A. Johnson.
Esquimault, B. C																			W. H. Bevis.
Fredericton, N. B.			30.00	762.0	72.3	22.4	66	NW	1	0 4		0	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.65	753.1	63	17.2	94	SW	13	5.8		5k	5n	W	W	0.230	5.84	Cloudy.	James Stewart.
Goderich, Ontario			30.06	763.5	74.2	23.4	78	Calm			0	0	0			0	0	Fine	H. J. Strang, M. A.
Granton, Ontario	28.99	736.3	30.04	763.0	75	23.9		S			1	0	0			0.08	2.0	Clear	James Grant.
*Halifax, N. S.			29.95	760.7	63	17.2	97	S	1	0.4			10n		W	0.025	0.63	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.11	764.8	71	21.7	90	Calm	0	0		0	0			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			29.94	760.5	69.5	20.8	88	Calm	0	0		7k	0	SW		0.01	0.3	Fair	C. H. Rigby.
*Montreal, Quebec			30.00	762.0	74	23.3	70	NE	3	1.3		5k	2ks	NE	NE	0	0	Fair	C. H. McLeod, C. E.
*Ottawa, Ontario			30.04	763 0	70	21.1	71	N	2	0.9		2k	0	W		0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.03	762.7	74	23.3	78	W	5	2.2		0	0			0	0	Clear	Rev. R. Mosley.
*Port Dover, Ontario			30.07	763.8	71	21.7	90	N	5	2.2		0	0			0.11	2.8	Clear	H. Morgan.
Port Hastings, N. S.			29.96	761.0	70.5	21.4		NW	2	0.9						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.07	763.8	71	21.7	97	N	1	0.4		0	0			0.16	4.1	Clear	M. Payne.
*Quebec, Quebec			30.04	763.0	68	20.0	74	Calm	0	0		0	0			0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.			29.99	761.7	69	20.6	79	Calm	0	0		0	10ks			0	0	Fine	G. Murdpch, C. E.
*Saugeen, Ontario			30.03	762.7	70	21.1	79	Calm	0	0		0	0			0.08	2.0	Clear	R. Stewart.
Stayner, Ontario			30.02	762.5	75	23.9	56	NW	1	0.4		0	0			Inap.	Inap.	Clear	R. J. Cole.
Stratford, Ontario	28.81	731.8	30.05	763.3	67.1	19.5	92	NW	2	0.9		0	0			0.089	2.26	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			29.95	760.7	75	23.9	79	SW	1	0.4		5k	5ks	W	SE	0	0	Fair	T. C. Hill.
*Toronto, Ontario			30.06	763.5	74	23.3	70	NW	2	0.9		0	0			0.02	0.5	Clear	Magnetic Observatory.
Woodstock, Ontario			30.06	763.5	69.4	20.8	92	S	1	0.4		0	0			0	0	Fine	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			30.20	767.1	69	20.6	75	S					1cn			0.11	2.8	Cloudy	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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 300.5 m. *Rain-fall until 10 a. m., of the 15th.

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.			30.09	764.3	78	25.6	73	Calm	0	0		0	Haze		S	0.12	3.0	Clear	
Alpena, Mich.			30.00	762.0	69	20.6	70	Calm	0	0		0	0			0	0	Clear	
Atlantic City, N. J.			30.05	763.3	72	22.2	85	SW	4	1.8		5cs	Haze	W		0	0	Fair	
Augusta, Ga.			30.07	763.8	82	27.8	69	SE	3	1.3		0	0			0	0	Clear	
Baltimore, Md.			30.04	763.0	81	27.2	74	NW	4	1.8		5c	Sm'e			0.15	3.8	Smoky	
Barnegat, N. J.			30.02	762.5	77	25.0	72	SW	11	4.9		5c	0			0	0	Fair	
Benton, Montana	27.33	694.2	30.13	765.3	58	14.4	53	SW	12	5.4		0	0			0	0	Clear	
Bismarck, Dakota	27.91	708.9	29.45	748.0	67	19.4	79	NW	56	25.0		8k	0	NW		0	0	Fair	
Boston, Mass.			29.97	761.2	79.5	26.4	68	NW	6	2.7		5cs	Haze	W		Inap.	Inap.	Hazy	
Breckenridge, Minn.			29.58	751.3	75	23.9	85	SE	18	8.0		5c	0	S		0	0	Fair	
Buffalo, N. Y.			30.03	762.7	73.5	23.1	88	E	1	0.4		0	2ks		NE	0.23	5.8	Fair	
Burlington, Vt.			30.01	762.2	76	24.4	68	Calm	0	0		2c	Sm'e			0	0	Fair	
Cairo, Ill.			30.07	763.8	83	28.3	87	Calm	0	0		5c	Haze			0	0	Fair	
Cape Hatteras, N. C.			30.03	762.7	83	28.3	74	S	12	5.4		10cs	0	SW		0	0	Cloudy	
Cape Henry, Va.			30.06	763.5	81	27.2	74	SW	9	4.0		8c,k	0	SW		0	0	Fair	
Cape Lookout, N. C.			30.11	764.8	82	27.8	83	SE	4	1.8		5k	2ks	SE	SE	0	0	Fair	
Cape May, N. J.			30.04	763.0	75	23.9	85	SW	10	4.5			10s		NW	0	0	Cloudy	
Charleston, S. C.			30.06	763.5	83	28.3	74	E	16	7.2		0	0			0	0	Clear	
Cheyenne, Wyoming	24.09	611.9	30.03	762.7	66	18.9	23	NW	16	7.2		0	0			0	0	Clear	
Chicago, Ill.			29.98	761.5	80	26.7	74	S	4	1.8		2k	Sm'e	S		0	0	Fair	
Cincinnati, Ohio			30.00	762.0	80	26.7	82	Calm	0	0		0	Fog			0.03	0.8	Foggy	
Cleveland, Ohio			30.01	763.0	74.7	23.7	89	Calm	0	0			Fog			Inap.	Inap.	Foggy	
Colorado Springs, Col.	24.17	613.9	30.04	763.0	64	17.8	78	N	4	1.8		2ck	0			0	0	Clear	
Corsicana, Tex.			30.09	764.3	74	23.3	90	Calm	0	0		0	0			0	0	Clear	
Davenport, Iowa			30.01	762.2	73	22.8	90	S	1	0.4			Fog		S	0.13	3.3	Foggy	
Denison, Tex.			30.10	764.5	82	27.8	74	SW	5	2.2		0	0			0	0	Clear	
Denver, Col.	24.85	631.2	30.07	763.8	66	18.9	53	Calm	0	0		0	0			0	0	Clear	
Detroit, Mich.			30.00	762.0	76	24.4	86	E	7	3.1		2k	Haze	E		0.01	0.3	Fair	
Dodge City, Kan.	27.47	697.7	29.65	753.1	73	22.8	85	S	10	4.5		0	0			0.19	4.8	Clear	
Dubuque, Iowa			29.98	761.5	72	22.2	90	S	4	1.8			10s			0.30	7.6	Cloudy	
Duluth, Minn.			29.86	758.4	57	13.9	87	NE	1	0.4		5k	5s	NE		0	0	Cloudy	
Eastport, Me.			29.97	761.2	66	18.9	68	N	2	0.9		0	Haze			0.17	4.3	Clear	
Erie, Pa.			30.03	762.7	78	25.6	77	E	2	0.9		5k	0	E		0	0	Fair	
Escanaba, Mich.			29.96	761.0	75	23.9	76	SW	10	4.5		5k	0	W		0	0	Fair	
Fort Gibson, Indian Ter.			30.03	762.7	79	26.1	82	E	2	0.9		0	0			0	0	Clear	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.86	733.0	29.91	759.7	79	26.1	74	Calm	0	0		0	0			0	0	Clear	
Fort Sully, Dakota	28.01	711.4	29.54	750.3	75	23.9	64	S	2	0.9		5ck	0	NW		0	0	Fair	
Galveston, Tex.			30.12	765.0	81	27.2	78	NW	10	4.5		0	0			0	0	Clear	
Grand Haven, Mich.			29.99	761.7	80	26.7	70	Calm	0	0		0	0			0	0	Clear	
Indianapolis, Ind.			30.03	762.7	81	27.2	82	Calm	0	0		0	0			0.03	0.8	Clear	
Indianola, Tex.			30.12	765.0	82	27.8	78	Calm	0	0		2k	0			0.25	6.3	Fair	
Jacksonville, Fla.			30.00	762.0	77	25.0	86	NW	4	1.8			10s			0.64	16.3	Cloudy	
Keokuk, Iowa			29.96	761.0	84	28.9	75	W	4	1.8		0	0			0	0	Clear	
Key West, Fla.			30.02	762.5	83.9	28.8	67	E	6	2.7		2k	0	E		0.02	0.5	Clear	
Kittyhawk, N. C.			30.09	764.3	81	27.2	82	SW	10	4.5		8k	0	SW		0	0	Fair	
Knoxville, Tenn.			30.07	763.8	77	25.0	86	NE	8	3.6		0	0			0	0	Clear	
La Crosse, Wis.			29.93	760.2	73	22.8	85	S	10	4.5		5c	0	SE		0	0	Fair	
Leavenworth, Kan.			29.98	761.5	80	26.7	74	S	1	0.4		0	0			0	0	Clear	
Lexington, Ky.	29.01	736.8	30.05	763.3	80	26.7	86	NW	8	3.6		5cs	0			0.09	2.3	Fair	
Louisville, Ky.			30.04	763.0	83	28.3	79	Calm	0	0		2c	0			0	0	Clear	
Lynchburg, Va.			30.02	762.5	84	28.9	64	SW	2	0.9		0	0			0	0	Clear	
Malone, N. Y.			29.95	760.7	77	25.0	72	SW	4	1.8		2k	0	SW		0	0	Fair	
Manhattan, Kan.	28.92	734.6	30.02	762.5	73	22.8	90	S	4	1.8		2cr	0			0	0	Clear	
Marquette, Mich.			29.88	758.9	72	22.2	71	SW	16	7.2		5cs	0	W		0	0	Fair	
Memphis, Tenn.			30.07	763.8	85	29.4	68	N	2	0.9		2cs	Sm'e	SE		0	0	Fair	
Milwaukee, Wis.			30.00	762.0	75	23.9	85	SE	2	0.9		2k	Sm'e	W		0	0	Clear	
Mobile, Ala.			30.05	763.3	80	26.7	86	NW	3	1.3		5cs	0			Inap.	Inap.	Fair	
Montgomery, Ala.			30.06	763.5	79	26.1	90	NE	2	0.9		8cs	Haze	E		0.33	8.4	Cloudy	
Morgantown, W. Va.	29.94	737.6	30.01	762.7	83	28.3	70	SW	1	0.4		2c	0	W		0	0	Fair	
Mt. Washington, N. H.	24.00	609.6	30.36	771.1	53	11.7	86	NW	18	8.0		2k	0	NW		0	0	Fair	
Nashville, Tenn.			30.01	763.0	85	29.4	75	Calm	0	0		2c	2s			0	0	Fair	
New Haven, Conn.			29.99	761.7	79	26.1	78	NW	4	1.8		8ks	Fog			0.08	2.0	Cloudy	
New London, Conn.			30.01	762.2	79	26.1	78	SW	3	1.3		5ck	2s	NW	SW	Inap.	Inap.	Fair	
New Orleans, La.			30.04	763.0	81	27.2	74	NE	6	2.7		5k	4s	NE		0	0	Threatening	
Newport, R. I.			29.98	761.5	75	23.9	81	SW	4	1.8		8ck	0	W		0.05	1.3	Cloudy	
New York, N. Y.			30.02	762.5	77	25.0	77	W	5	2.2		5cs	Haze	W		0.43	10.9	Fair	
Norfolk, Va.			30.09	764.3	82	27.8	74	SW	7	3.1		5c	2k	W	W	0	0	Fair	
North Platte, Neb.	26.98	685.3	29.37	746.0	77	25.0	57	S	24	10.7		2c	0			0	0	Clear	
Omaha, Neb.	28.86	733.0	29.86	758.4	70	26.1	78	S	8	3.6		0	0			0	0	Clear	
Oswego, N. Y.			30.06	763.5	73	22.8	85	SW	6	2.7			Fog		W	0.01	0.3	Cloudy	
Pembina, Dakota			29.57	751.1	61	16.1	100	SE	8	3.6			10s		SE	2.25+	57.1+	Cloudy	
Philadelphia, Penn.			30.04	763.0	78	25.6	77	NE	5	2.2		2c	Fog			0.07	1.8	Foggy	
Pike's Peak, Colorado	18.08	459.2	30.29	769.4	40	4.4	64	NE	4	1.8		8ck	0	W		0.32	8.1	Fair	
Pittsburgh, Penn.			30.03	762.7	75	23.9	95	NW	1	0.4		1c	Fog	NW		0.15	3.8	Foggy	
Port Huron, Mich.			30.02	762.5	74	23.3	85	Calm	0	0		0	0			0.01	0.3	Clear	
Portland, Me.			29.99	761.7	78	25.6	69	NE	4	1.8		0	Haze			0	0	Clear	
Portland, Oregon			30.05	763.3	59	15.0	81	Calm	0	0		0	0			0	0	Clear	
Punta Rassa, Fla.			30.04	763.0	80.0	26.7	76	NE	8	3.6		Haze	0			0.35	8.9	Clear	
Rochester, N. Y.			30.04	763.0	73	22.8	85	W	4	1.8		0	Sm'e			0.07	1.8	Clear	
Salt Lake City, Utah			30.01	762.2	68	20.0	21	NE	3	1.3		0	0			0	0	Clear	
Sandy Hook, N. J.	25.68	652.3	30.00	762.0	78	25.6	86	SW	12	5.4		8c	Haze	SW		0.27	6.9	Cloudy	
San Diego, Cal.			30.00	762.0	61	16.1	94	N	4	1.8		0	2s		N	0	0	Fair	
San Francisco, Cal.			30.02	762.5	55	12.8	87	W	6	2.7			10s			0	0	Cloudy	
Santa Fé, N. M.	23.45	595.6	29.99	761.7	54	12.2	86	S	3	1.3		2k	0			0.10	2.5	Clear	
Savannah, Ga.			30.04	763.0	82	27.8	78	NE	6	2.7		2k	2s	NE		0	0	Fair	
Shreveport, La.			30.12	765.0	82	27.8	83	Calm	0	0		0	0			0	0	Clear	
Smithville, N. C.			30.09	764.3	83	28.3	74	SE	12	5.4		2k	0	SE		0	0	Fair	
Springfield, Mass.			29.99	761.7	82	27.8	78	E	4	1.8		1ck	2ks			0.37	9.4	Fair	
St. Louis, Mo.			30.05	763.3	83	28.3	70	W	4	1.8		2c	0			0	0	Clear	
St. Marks, Fla.			30.05	763.3	78	25.6	69	NE	4	1.8		5cs	0	E		0	0	Fair	
St. Paul, Minn.			29.79	756.7	76.5	24.7	76	SE	13	5.8		2c	0	NW		0	0	Clear	
St. Paul's Island, Alaska			29.89	756.9	41	5.0	91	SW	19	8.5			10n			0.39	9.9	Heavy rain	
Thatcher's Island, Mass.			29.96	761.0	72	22.2	90	N	4	1.8		0	0			0.47	11.9	Hazy	
Toledo, Ohio			29.99	761.7	81	27.2	78	Calm	0	0		2c	0	SW		0.11	2.8	Clear	
Tucson, Arizona	27.58	700.5	30.17	766.3	78	25.6		SE				8ck	2ks	S	SE	0.01	0.3	Cloudy	
Tybee Island, Ga.			30.02	762.5	83	28.3	74	E	14	6.3		5k	0	E		0.30	7.6	Fair	
Vicksburg, Miss.			30.08	764.0	83	28.3	78	Calm	0	0		5ck	0	E		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.	24.43	620.5	29.91	759.7	47	8.3	41	SE	8	3.6		0	0			0	0	Clear	
Washington, D. C.			30.01	763.0	84	28.9	61	SW	8	3.6		2cs	Haze	NW		0	0	Fair	
Wilmington, N. C.			30.10	764.5	82	27.8	83	SE	5	2.2		1c	8ks		SE	0	0	Cloudy	
Wood's Holl, Mass.			30.00	762.0	75	23.9	85	SW	11	4.9		0	5s		SW	0.10	2.5	Fair	
Wytheville, Va.	27.81	706.4	29.87	758.7	74	23.3	85	Calm	0	0		5c	Haze	W		0.20	5.1	Fair	
Yankton, Dakota	28.56	725.4	29.75	755.6	79	26.1	66	SW	6	2.7		0	0			0	0	Clear	
Yuma, Arizona			29.90	759.4	84	28.9		E				8ck	0	W		0	0	Fair	
Sub Series.																			
P'nte-a-Pitre, G'd'l'pe, W. I.			29.98	761.5	83	28.3	79	E				5k	2k			0	0	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.			30.08	764.0	77	25.0	90	E	4	1.8			10n			0.86	21.8		James Hall.
St. Georges, Bermudas			30.08	761.0	81.5	27.5	81	E	6.0	2.7		0	5k			0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.													10k			2.26	57.4	Raining	C. Partridge.
Clifton, Jamaica, W. I.	27.10	688.3	29.88	758.9	66	18.9	90	S	15.0	6.7			6ks			0	0	Fair	C. J. Hering.
Paramaribo, D. Guiana, S. A.			30.01	762.2	82	27.8	79	SE			2	5k				0.394	10.00		Dr. H. Groot.
Batavia, Dutch Guiana, S. A.	30.01	762.9			86.0	30		E								0.05	1.3	Cloudy	Thomas Herran
Medellin, Colombia, S. A.	25.20	640.1			64.0	17.8	80	Calm	0	0		4c	5s			0	0		J. Fortescue, W. Wood
York Factory, B. A.			29.63	752.6	50.5	10.3	96	E	3	1.3			9s			0	0	Clear	Daniel Smith.
Honolulu, Oahu, H. I.			30.09	764.3	77	25.0	90	NE			5								F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Addie Fuller, at Gardiner, Me.			30.05	763.3	78	25.6		NE			3		Haze					Blue sky	Capt. James Jorgeneen.

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, 4,342.1 ft., or 1,323.7 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.; Morgantown, 1,027.9 ft., or 313.3 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 321.1 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,262.2 ft., or 1,299.2 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 added in correcting the barometric observations for altitude: Cheyenne, 5.91 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, 6.51 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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			30.02	762.6	79.7	26.5	66	N			1		0			0	0	Clear	Charnot.
Algiers			30.04	762.9	84.2	29.0	38	N			1		0			0	0	Clear	Peter.
La Calle			29.97	761.3	84.4	29.1	54	NW			2		1			0	0	Clear	Kunts.
Tunis			29.97	761.3	93.2	34.0	24	NW			4		3			0	0	Fair	Jacques.
Sfax			30.05	763.2	87.1	30.6	50	SE			4		1			0	0	Clear	Chauvey.
Saida			30.05	763.3	89.6	32.0		NNW			3		1			0	0	Clear	Millot.
Tebessa			30.04	763.0	81.5	27.5		NNW			2		0			0	0	Clear	Colin.
Geriville			30.06	763.5	85.6	29.8	23	NW			3		1			0	0	Clear	Buard.
Laghouat			30.08	764.0	96.8	36.0		SW			2		0			0	0	Clear	Guyot.
Biskra			30.05	763.2	96.3	35.7		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			29.91	759.6	69.8	21.0	45	NE			4		3			0.031	0.8		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.69	754.1	62.2	16.8	74	W			2		9			0.579	14.7		Dr. Wierzbiski.
Eperies			29.73	755.1	61.0	16.6	83	Calm			0				S	0.339	8.60		Julius Mikolik.
Gratz	28.65	727.6	29.82	757.5	65.8	18.8	48	NW			6		6			0.209	5.3		Andreas Rospini.
Hermannstadt	28.33	719.5	29.71	754.6	61.9	16.6	74	NW			3		10			0.205	5.20		Prof. Reissenberger.
Kremsmünster	28.72	729.6	30.05	763.3	58.6	14.8	72	W			3		7			0.118	3.0		Prof. C. Wagner.
Lemberg			29.61	752.1	64.4	18.0	95	SE			1		9			0.311	7.9		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			29.82	757.4	77.2	25.1	56	ESE			2		6ks			0.101	2.57		I.R.Hydrographic Office.
Szegedin			29.77	756.1	68.0	20.0	62	NE			4		8			0.039	1.00		Karl Stancel.
Trieste			29.80	759.2	80.6	27.0	69	E			1		3			0	0		Prof. V. Farolfi.
Vienna			29.93	760.2	62.8	17.1	45	NW			4		10			0.094	2.4		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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	67.1	19.5	58	N			4		2		N	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			30.21	767.3	60.1	15.6		SSE	16	7.2			2			0.010	0.25	Blue sky	William Boswell.
Ardrossan			30.25	768.3				WNW			8		3					Blue sky	William McNeil.
Armagh, Observatory			30.28	769.1	68.8	20.4		W	2	0.9			7					*D. clouds	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.24	768.1	76.2	24.6		WSW			1		5					*D clouds	J. Dreyer.
Bradford			30.21	767.3	72.4	22.4		W			1		1			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			29.99	761.7	82.0	27.8		NE			2		6					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			30.22	767.6	74.0	23.3		NNW			1		10					Overcast	H. Todd.
Cardington			30.22	767.6	76.0	24.4		NW			1		3					Blue sky	John McLaren.
Carlisle			30.22	767.6	72.3	22.4		W			1					0	0	Blue sky	T. Bell, for J. Carmell.
Chatham, School M. E			30.19	766.8	74.5	23.6		Calm			0		5					Hazy	Capt. J. Fellowes, R.E.
Dartmoor	28.90	734.0	30.35	770.9	76.0	24.4		NW			1		3					Blue sky	R. E. Power.
Donaghadee			30.28	769.1	58	14.4		NNE			2		5					*D. clouds	J. Mac Gowan.
Dover			30.22	767.6	68	20.0		WSW			2		3					¼ clouded	J. Costello.
Eccles, (near Manchester.)			30.23	767.8	68.8	20.4		WNW	5.6	2.5			2					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.26	768.6	71.0	21.7		SE			3		1					*D. clouds	The Staff.
Fort Napier, (Natal)	27.81	706.4	30.04	763.0	67.9	19.9		E			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	79	26.1		NW			8		8			Blank	Blank	Overcast	
Galway, Queen's College			30.11	764.8	71	21.7		W			1		1					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.0	762.0	83.0	28.3		E			2		1					*D clouds	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			30.20	767.1	62.8	17.1		NW			1		1					Fine	Lewis Stuart.
Great Yarmouth			30.22	767.6	66	18.9		SE			2		2					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			30.21	767.3	80.3	26.8		NNW			1		4					Hazy	The Staff, for G. B. Airy
Guernsey			30.22	767.6	73	22.8		ESE			1		0					Blue sky	Dr. S. E. Hoskins.
Helston			30.19	766.8	84	28.9		E			2		0			0	0	Blue sky	M. P. Moyle.
Holyhead			30.28	769.1	62	16.7		WNW			2		3					Blue sky	John Tilston.
Kew, Observatory			30.21	767.3	73.8	23.2		NW	9	4.0			1					Hazy	The Staff.
Kingstown			30.31	769.9	65	18.3		E			3		3					Blue sky	George Mitchell.
Leicester Museum			30.23	767.8	71.2	21.9		W			2		1					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.87	758.7	82	27.8		NW			1		2k					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			30.16	766.1	68	20.0		SW			1		2					¼ clouded	W. D. Penny.
Nassau, (Bahamas			30.09	764.3	86.6	30.3		E			5		6					*D clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.23	767.8	72.2	22.3		NW			2		5k		NNE			*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.24	768.1	67.7	19.8		NW			3		5					Hazy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.21	767.3	73	22.8		WNW			2		1					Blue sky	J. Lucas.
Plymouth			30.24	768.1	75	23.9		SSW			2		0					Blue sky	John Merrifield.
Roche's Point			30.28	769.1	74	23.3		SE			3		5					Cloudy	W. Kennedy.
Saint Ann's Head			30.25	768.3	71	21.7		N			2		2					Blue sky	John C. Walker.
Saint Helier, Jersey			30.24	768.1	76.8	24.9		E			2		2					¼ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			30.17	766.5	53.8	12.1		W	23	10.3			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough			30.21	767.3	62.8	17.1		NNW			1		0					Blue sky	F. Shaw.
Scutari Cemetery Turkey			29.97	754.6	81.8	27.7		SW			1		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			30.21	767.3	71.5	21.9		NW			2		5			0	0	*D. clouds	W. F. Cooper.
Silloth Rectory			30.22	767.6	73.1	22.8	69	WNW			2		0			0	0	Blue sky	Rev. Francis Redford.
Stonyhurst, Observatory			30.23	767.8	65.7	18.7		W			2		3					*D. clouds	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			30.17	766.3	60	15.6		W			3		5					*D clouds	John Smith.
Strathfield Turgiss			30.3	767.8	76.7	24.8		NW			2		2					Blue sky	Rev. Charles H. Griffith.
Thurso			30.15	765.8	60	15.6		NW			3		4					*D. clouds	John Trotter.
Truro, Royal Institution			30.25	768.3	82	27.8		SE			4		3					*D. clouds	W. Newcombe.
Valencia, Observatory			30.25	768.3	73.0	22.8		SSE	17	7.6			7					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, Isle of Man					62	16.7		W			2		10						Thomas Dawson.
Cape Good Hope, Obs'y			30.41	772.4	64.7	18.2	61	Calm?	2?	0.9?		4	3						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			30.02	762.5	59.0	15.0	76	SW			5		10n					Raining	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			30.20	767.1	70.0	21.1		W			2					0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.22	767.6				E	17.3	7.7						0	0		C. Meldrum
Melbourne, Observatory			30.35	770.9	44.8	7.1	78	W	17	7.6			4			0.06	1.5	Squally	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.19	766.8	56	13.3		W			4	5	5	SW		0	0		J. Youngehuse.
North Unst, Shetland Is.			30.07	763.8	52	11.1		W			6		10			Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,250 ft., or 270.6 m. *Detached clouds. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; lbs. per square foot for Greenwich and Hobart Town.

DANISH SERIES.

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

Stations.	Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	Direction. From—	Miles per hour.	Meters per second.	Force. 0—10.	Amount. Up'er 0—10.	Amount. Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Copenhagen			29.92	760.0	66.4	19.1	56	NNW			2		2						
Faröe			29.98	761.6	60.8	16.0	78	NW			6		10						
Godthaab, Greenland			29.79	756.7	36.1	2.3		S			4		10						
Stykkisholm, (Iceland			29.63	752.7	50.9	10.5	91	Calm			0		5						
Thorshavn, (Faröe)			29.91	759.7	51.8	11.0	90	SW			6		10					Rain and fog	
Vestervig			29.95	760.7	60.8	16.0	73	NW			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			30.15	765.8	75.2	24	46	N			2		0			0	0	Clear	Normal School.
Amiens			30.13	765.2	78.4	25.8	57	N			3		0			0	0	Clear	Normal School.
Avignon			29.96	760.9	81.3	27.4	40	N			6		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.19	766.8	70.2	21.2	45	E			2		0			0	0	Clear	C. Saillard.
Beaumette, (near Angers)			30.12	765.0	76.8	24.9	44	ENE	8.1	3.6			0			0	0	Clear	Beaumette Observatory.
Beauvais			30.23	767.8	73.1	22.3	48	NNE			3		2		NNE	0	0	Slightly cl'dy	Normal School.
Besançon			30.14	765.5	74.5	23.6	50	NE			3		0			0	0	Clear	Normal School.
Bourg en Bresse			30.21	767.4	75.2	24	50	NE			4	2c		S				Slightly cl'dy	Normal School.
Bourges			30.51?	775.0?	71.6	22	50	NNE			2		0			0	0	Clear	Normal School.
Brest			30.17	766.2	84.4	29.1	64	W			2		4		N	0	0	Light fog	Naval Observatory.
Carcassonne			30.00	762.1	79.2	26.2	35	W			3		1		E	0	0	Clear	Normal School
Caen			30.23	767.8	75.2	24	86	NE			6		0			0	0	Clear	Normal School.
Chartres			30.20	767.1	72.5	22.5	62	N			2		4		NE	0	0		Normal School.
Clermont			30.12	765.0	70.7	21.5	55	NE			3		2			0	0		Puy de Dome Obs'y.
Commercy			30.22	767.5	63.7	17.6	56	NE			4		2k		NE	0	0	Slightly cl'dy	Normal School.
Commune de Greasque*			29.97	761.1	80.1	31.7	30	SW			2		0			0	0		M. Kina.
Grenoble			30.00	762.0	75.0	23.9	51	NNW			8	2c		NE		0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.13	765.3	81.3	27.4	36	NE			2		0			0	0	Clear	Normal School.
Le Mans			30.18	766.5	74.5	23.6	64	ENE			6		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			30.11	764.9	71.8	22.1	48	N			4		0			0	0	Clear	Normal School.
Mâcon			30.32	770.1	71.6	22	58	N			6		5		NNW	0	0	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			30.19	766.9	57.2	14	80	N			4		1		S	0	0	Clear	Normal School.
Nismes			29.95	760.6	83.1	28.4	27	N			8		0			0	0	Clear	Normal School.
Orleans			30.02	762.6	75.6	24.2	33	NE			2		0			0	0	Clear	Normal School.
Paris, Observatory			30.23	767.7	70.2	21.2	45	N			2		0			0	0	Vapory	National Observatory.
Parthenay			30.11	764.9	86.0	30	78	NW			2		0			0	0	Clear	Normal School.
Privas			30.01	762.3	76.1	24.5		NNW			6		2		NNW	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.18	766.5	83.5	28.6	37	ENE			3		0			0	0	Blue sky	Naval Observatory.
Rouen			30.23	767.7	79.0	26.1	47	NNW			1		0			0	0	Clear	Normal School.
Saint Lo			29.88	758.9	88.5	31.4	49	NE			0		4		N	0	0		Normal School.
Tarbes	28.99	736.3	30.27	768.8	73.4	23		WSW			2		0			0	0	Clear	Normal School
Villefranche			30.16	766.0	76.3	24.6	70	N			3		5		N	0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.88	759.0	82.4	28													L'Abbé Marchesi.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.27	768.8	70.0	21.1	51	NE	4	2			0			0	0		—. Faiguère.
Montsouris, Paris			30.22	767.6	71.8	22.1	47	ENE			3		0			0	0		Montsouris Observ'tory.
Perpignan			29.92	760.0	90.1	32.3	28	NW	26.1	11.67			0			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.23	767.7	73.8	23.2	43	NNW			2		0			0	0	Clear	E. Renou.
Toulouse			30.11	764.8	82.2	27.9	30	NW			4		0			0	0		Toulouse Observatory.
Tours			30.19	766.8	78.3	25.7	34	ENE			2		0			0	0	Clear	C. Marquet.
Versailles, (near Paris)			30.23	767.9	72.0	22.2	49	NE			3		0			0	0	Very clear	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai																			H. Le Leo, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,580.40 meters, or 5,204.8 feet; Clermont 388 m., or 1,272.9 ft; Commune de Greasque, 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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	762.5	63.5	17.5	62	W			5		9	W		0.118	3.0		Prof. T. Hoh.
Berlin			29.99	761.7	68.0	20.0	54	W			1		6			0.287	7.3		Prof. Arndt.
Breslau			29.93	760.1	61.5	16.4	78	NW			8		10			0.602	15.3	Showery	Dr. P. Neugebauer.
Carlsruhe			30.15	765.8	69.1	20.6	47	NE			1		5			0	0		A. Senz.
Cassel			30.15	765.8	66.2	19.0	62	NW			4		8	WNW		0.146	3.7		Dr. H. Möhl.
Emden			30.23	767.8	65.7	18.7	87	NW			7		5			0	0		Prof. Prestel.
Frankfort on the Main			30.19	766.9	65.8	18.8	46	NW			2		8			Inap.	Inap.		Physical Society.
Friedrichshafen			30.13	765.4	68.0	20.0	65	SSW			4		2			0	0		M. Wilhelm.
Hamburg			30.07	763.6	60.8	16.0	76	NW			4		9k	NW		0.020	0.5	Showery	Captain F. Hegemann.
Kiel			30.02	762.6	61.2	16.2	66	NW			5		6			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			29.76	755.8	61.7	16.5	84	N			2		9			0.193	4.9		Prof. E. Luther.
Köslin			29.93	760.1	62.6	17.0		N			4		3			0.268	6.8		H. Müller.
Leipsic			30.07	763.7	67.3	19.6	50	NW			4		7	NW		0.098	2.5		Prof. Bruhns.
Memel			29.77	756.1	61.5	16.4	91	NNW			4		10kn	E		0.020	0.5	Thunder-storm.	Reinbrecht & Skalweit.
Münster			30.20	767.1	61.9	16.6	71	NW			2		4			0	0		Prof. E. Heis.
Neufahrwasser			29.84	757.8	60.1	15.6	85	N			5		10			Inap.	Inap.	Rainy	A. Lothes.
Posen			29.90	759.5	64.2	17.9	66	NW			5		10			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.18	766.6	66.9	19.4	52	NE			1		7	NW		0.012	0.3		Dr. Schur.
Stuttgart			30.15	765.8	65.3	18.5	55	NW			2		5			0.016	0.4		Prof. Schoder.
Thorn																0.559	14.2		Dr. Hasenbalg.
Treves, (Trier)			30.16	766.1	66.9	19.4	49	NW			5		8			0	0		Prof. Flesch.
Wustrow, Naval School			30.02	762.4	60.4	15.8	78	WNW			5		8			0.035	0.9		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	87.3	30.7		S										Clear	

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

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	80.1	26.7	48	SW	3.1	1.4			4			0	0		
Padua			29.83	757.7	79.5	26.4	61	ENE	6.9	3.1			6	SW		0	0		
Vicenza			29.83	757.7	79.9	26.6	51	E	2.5	1.1			4	W		0	0		
Verona			29.82	757.4	88.7	31.5	39	E			1		0			0	0		
Bergamo	28.52	724.5	29.78	756.5	83.1	28.4	39	E			2		0			0	0		
Domodossola	28.83	732.2	29.81	757.2	84.2	29.0	37	N			2		0			0	0		
Milan			29.82	757.5	91.4	33.0	40	S			2		1	ESE		0	0		
Pavia			29.84	757.9	82.8	28.2	34	E			4		0			0	0		
Moncalieri			29.85	758.3	82.9	28.3	43	SSW	2.5	1.1			1			0	0		
Mondovi	28.03	711.9	29.87	758.8	79.5	26.4	33	ENE			4		0			0	0		
Porto Maurizio			29.89	759.2	81.0	27.2	67	ESE			2		0			0	0		
Genoa			29.84	757.9	81.5	27.5	61	SE	5.6	2.5			0			0	0		
Piacenza			29.84	757.8	82.8	28.2	40	N	1.3	0.6			0			0	0		
Parma			29.84	757.9	86.9	30.5	44	NE			2		1	NW		0	0		
Bologna			29.87	758.8	82.4	28.0	46	NE			1		3	WSW		0	0		
Florence			29.83	757.7	86.9	30.5	24	NE			4		0			0	0		
Leghorn			29.82	757.5	79.7	26.5	63	WNW	4.3	1.9			0			0	0		
Siena	28.65	727.8	29.82	757.3	81.7	27.6	41	N	0.7	0.3			3	NE		0	0		
Urbino	28.36	720.4	29.88	758.9	75.9	24.4	68	NNE			4		4			0	0		
Ancona			29.88	759.0	79.5	26.4	63	SE			4		1			0	0		
Grosseto			29.84	758.0	85.6	29.8	50	SSE			4		3	S		0	0		
Rome			29.82	757.4	85.5	29.7	50	SW	6.3	2.8			4	ESE		0	0		
Naples, O. U			29.85	758.1	82.2	27.9	57	WSW			6		0			0	0		
Lecce			29.80	757.0	78.4	25.8	47	SSW	15.4	6.9			7			0	0		
Cosenza			29.82	757.3	86.5	30.3	69	NW	11.2	5.0			3			0	0		
Riposto, (Sicily)			29.82	757.5	82.8	28.2	55	E			2		2	N		0	0		
Palermo			29.82	757.5	82.6	28.1	55	ENE	4.9	2.2			2			0	0		
Caltanissetta	27.84	707.2	29.81	757.2	81.5	27.5	36	WSW			4		2	ENE		0	0		
Sub-Series.																			
Naples, S. R			29.83	757.6	82.4	28.0	52	SE	1.8	0.8			6	W		0	0		Prof. F. Brioschi.
Pesaro			29.91	759.6	76.1	24.5	76	NE	16.3	7.28			1k	NE					L. Guidi.

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, 559 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			30.26	768.7	63.9	17.7		WNW			2								
Groningen			30.10	764.6	63.1	17.3		NW			4								
Helder			30.19	766.9	62.4	16.9		NW			4								
Utrecht			30.17	766.4	63.9	17.7	77	WNW			2		8					Very cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	56.5	13.6	80	NNW	9.4	4.2			7			0	0		
Bróno			29.91	759.8	56.8	13.8	78	W	7	3			7			0	0		
Christiania			29.86	758.4	72.0	22.2	31	NNW	4.7	2.1			4			0	0		
Tromsö			29.82	757.5	54.0	12.2	94	NE	2	1			10			0.118	3.0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 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	72.7	22.6	76	S	2.4	1.08			6			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.96	760.9	98.6	37.0	10	SSE	4.3	1.92			1			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			29.97	761.3	74.7	23.7	70	SW	8.7	3.9						0	0		Capt D. A. da Cunha.
Lisbon			30.00	762.1	86.0	30.0	34	SSW	8.7	3.9			1			0	0		The Observatory.

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

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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			29.71	754.7	64.6	18.1	76	W	2	1			10						Astronomical Obs.
Wilna			29.68	753.9	70.3	21.3	52	Calm	0	0			10						Astronomical Obs.
Dorpat			29.72	755.0	69.8	21.0	49	N	4	2			4						Physical Cabinet.
St. Petersburg			29.70	754.3	71.1	21.7	61	N	7	3			5						Central Physical Obs.
Kuopio			29.70	754.3	70.3	21.3	77	NE	13	6			5						Ch. Forsten.
Kieff			29.61	752.0	75.4	24.1	60	S	7	3			9						Physical Cabinet.
Nikolaiev			29.76	755.8	81.3	27.4	50	SSE	20	9			5						Kurdakof.
Kertch			29.76	755.9	85.5	29.7	42	NNE	4	2			0						Lagorio.
Moscow			29.72	754.8	77.2	25.1	44	N	9	4			2						Meteorological Obs.
Lugan			29.66	753.4	85.3	29.6	32	E	13	6			1						Meteoro ogical Obs.
Archangel			29.71	754.6	67.3	19.6	94	NNE	18	8			10					Thunder-storm	Ogorodnikof.
Tiflis	28.37	720.5	29.69	754.2	82.0	27.8	58	Calm	0	0			7						Physical Observatory.
Astrakhan			29.82	757.3	84.4	29.1	39	SSW	9	4			4						Sebastianoi.
Kasan			29.53	750.0	71.4	21.9	67	Calm	0	0			4						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.68	728.4	29.58	751.4	68.7	20.4	75	NE	4	2			7						Meteorological Obs.
Nukuss			29.59	751.5	94.9	34.9	36	NE	7	3			0						
Kasaly																			Bobrof.
Tashkend	28.15	715.0	29.72	754.9	91.9	33.3	29	Calm	0	0			0						Michelson.
Barnaul			29.71	745.7	73.9	23.3	65	NE	2	1			9						Meteorological Obs.
Yeniseisk			29.82	757.3	71.6	22.0	42	S	2	1			0						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.72	754.9	82.7	31.5	64	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.65	753.0	69.6	20.9	98	Calm	0	0			10						
Nikolaievsk, on the Amoor					62.1	16.7	98	SE	4	2			3						

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, m. 464.2?, 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			29.94	760.4	93.7	34.3	22	N	8.2	3.67		0	0			0	0	Clear	Royal Observatory.
San Fernando.			29.98	761.6	93.7	34.3	26	ESE	24.4	10.9		0	0						The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			29.80	756.9	72.0	22.2	58	E			2		5			0	0		
Umea			29.78	756.4	64.4	18.0	75	SW			2		4			0	0		
Gernosand			29.79	756.7	61.9	16.6	69	SW			2		7			0	0		
Stockholm			29.80	757.0	64.9	18.3	56	NW			2		10			0.035	0.9		
Wisby			29.89	759.3	63.0	17.2	60	NNW			4		3			0.256	6.5		
Sub-Series.																			
Upsala			29.80	757.0	59.0	15.0	80	SSW	1.6	0.7			10		NW	0.044	1.12		Dr. Hildebrandsson.

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

SWISS SERIES.

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

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	28.68	728.5	30.06	763.4	72.5	22.5	46	NNE			5		0			0	0	Clear	The Observatory.
Zurich	28.53	724.6	30.11	764.9	69.3	20.7	57	E			1		2			0	0	Clear	The Observatory.

NOTE—For Geneva the corresponding departures from the normal values are: Barometer, +0.8 mm.; Thermometer, −0.1 cent.; Relative Humidity, −6 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

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	755.1	82.0	27.8	53	ENE	7	3.0			2		NE	0	0		
Fao, (Persian Gulf)			29.60	751.8	100.4	38.0		NW			4		0						
Salonica			29.73	755.2	82.9	28.3		NW			1		0			Blank	Blank		
Valona			29.82	757.4	83.3	28.5		SW			2		2						
Varna			29.69	754.0	68.0	20.0		NE			2		10					raining	
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y			29.75	755.7	89.2	31.8	52	SW			1		1ks		N	0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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			29.74	755.4	74.0	23.3	71	SW	16	7.2			8			0	0	Squally	Hon. J. Ferguson.
Brockville, Ontario			29.81	757.2	75	23.9		SW	11	4.9			8s		SW	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B			29.86	758.4	70	21.1	86	SW	3	1.3		5c	0	SW		0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island			29.96	761.0	71	21.7	82	S	8	3.6		0	0			Inap.	Inap.	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			29.72	754.9	81.0	27.2	65	SW			4		10k			0	0	Unsettled	James Smith, M. A.
Dalhousie, N. B			29.76	755.9	62.6	17.0	86	E			1					0	0	Dense fog	H. A. Johnson.
Esquimault, B. C																			W. H. Boyis.
Fredericton, N. B			29.90	759.4	77.2	25.1	69	SE	9	4.0		0	7ks			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			30.11	764.8	49	9.4	93	NW	7	3.1		2c	2ks	NW	NW	0.190	4.83	Fair	James Stewart.
Goderich, Ontario			29.72	754.9	73.4	23.0	91	SW			3	4k	4n	SW		0.108	2.74	Threatening	H. J. Strang, M. A.
Granton, Ontario	28.68	728.5	29.71	754.6	79	26.1		S			2	2cs	0	SE		0	0	Clear	James Grant.
*Halifax, N. S.			29.97	761.2	60	15.6	99	SE	5	2.2			Fog			0.022	0.56	Foggy	F. Allison, M. A.
*Kingston, Ontario			29.78	756.4	73	22.8	98	S	4	1.8		8cs	0	S		Inap.	Inap.	Fair	S. Woods, M. A.
Little Glace Bay, N. S.			30.00	762.0	63.5	17.5	96	S	2	0.9		0	0			0	0	Foggy	C. H. Rigby.
*Montreal, Quebec			29.71	754.6	77	25.0	63	S	14	6.3		5ck	5ks	W	SW	0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.68	753.9	74	23.3	79	S	14	6.3			10ks		S	Inap.	Inap.	Threatening	J. B. Haney.
*Parry Sound, Ontario			29.62	752.3	75	23.9	83	SW	13	5.8		5k	5ks	SW	SW	0	0	Cloudy	Rev. R. Mosley.
*Port Dover, Ontario			29.80	756.9	77	25.0	91	SW	14	6.3		0	0			0.07	1.8	Clear	H. Morgan.
Port Hastings, N. S.			30.02	762.5	61.3	16.3		SE	5	2.2						0	0	Foggy	Peter Grant.
*Port Stanley, Ontario			29.81	757.2	78	25.6	93	SW	14	6.3		2k	0	SW		0.12	3.0	Clear	M. Payne.
*Quebec, Quebec			29.74	755.4	80	26.7	78	Calm	0	0		5c	0	SW		0	0	Fair	Capt. Ashe, R. N.
St. John, N. B.			30.00	762.0	58	14.4	94	S	6	2.7			Fog			0	0	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario			29.64	752.8	74	23.3	83	SW	21	9.4			10n			0	0	Cloudy	R. Stewart.
Stayner, Ontario			29.62	752.3	80	26.7	78	W	10	4.5		5ck	2n	SW	W	0	0	Cloudy	R. J. Cole.
Stratford, Ontario	28.49	723.6	29.69	754.1	77.2	25.1	88	SW	15	6.7		5ck	1s	NW		0.802	20.37	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			30.01	762.2	72	22.2	87	SW	4	1.8		0	8s		S	0.91	23.1	Fair	T. C. Hill.
*Toronto, Ontario			29.75	755.6	75	23.9	87	SW	7	3.1		2cs	0	W		0.02	0.5	Fair	Magnetic Observatory.
Woodstock, Ontario			29.73	755.1	79.8	26.6	82	S	18	8.0		1ck	2ks	W		0.25	6.3	Fine	J. Montgomery.
SUB-SERIES.																			
St. Johns, Newfoundland			30.10	764.5	53	11.7	100	SE					10n			0.12	3.0	Foggy	John Delaney.

NOTE.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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 360.5 m. *Rain-fall until 10 a. m., of the 15th.

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.			29.88	758.9	80	26.7	69	S	4	1.8		10k	0	SW		0	0	Cloudy	
Alpena, Mich.			29.63	752.6	74	23.3	72	W	13	5.8		8k	0	W		0.04	1.0	Fair	
Atlantic City, N. J.			29.98	761.5	73	22.8	90	SW	6	2.7		1cs	Haze	SW	SW	0.01	0.3	Hazy	
Augusta, Ga.			30.08	764.0	82	27.8	79	E	4	1.8			10s		SE	0	0	Cloudy	
Baltimore, Md.			29.98	761.5	84	28.9	79	SE	1	0.4		5c	Sm'e			0	0	Smoky	
Barnegat, N. J.			29.96	761.0	73	22.8	81	SW	12	5.4		0	Fog			0	0	Clear	
Benton, Montana	27.34	694.9	30.16	766.1	62	16.7	70	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.38	720.8	30.00	762.0	58	14.4	87	NW	10	4.5		0	0			0	0	Clear	
Boston, Mass.			29.94	760.5	85	29.4	54	SW	10	4.5		1cs	Haze			Inap.	Inap.	Hazy	
Breckenridge, Minn.			30.01	762.2	60	15.6	88	W	8	3.6		2k	0			0	0	Clear	
Buffalo, N. Y.			29.76	755.9	80	26.7	80	SW	11	4.9		1c	8n	W	SW	0.08	2.0	Light rain	
Burlington, Vt.			29.80	756.9	81	27.2	70	S	11	4.9		5c	2s			0	0	Cloudy	
Cairo, Ill.			30.01	762.2	82	27.8	87	Calm	0	0		5c	Haze			0	0	Fair	
Cape Hatteras, N. C.			30.04	763.0	83	28.3	83	W	9	4.0		5c	0			0	0	Fair	
Cape Henry, Va.			30.01	762.2	85	29.4	68	SW	14	6.3		5c	0			0	0	Fair	
Cape Lookout, N. C.			30.11	764.8	84	28.9	75	W	3	1.3		5k	0	SW		0	0	Fair	
Cape May, N. J.			29.98	761.5	72	22.2	85	S	12	5.4		0	Haze			0	0	Hazy	
Charleston, S. C.			30.11	764.8	84	28.9	75	SW	6	2.7		0	2ks		SW	0	0	Fair	
Cheyenne, Wyoming	24.27	616.4	30.21	767.3	58	14.4	57	S	4	1.8		2c	0			0	0	Fair	
Chicago, Ill.			29.81	757.2	79	26.1	73	W	10	4.5		5cs	0	SW		0	0	Fair	
Cincinnati, Ohio			29.92	760.0	83	28.3	74	S	3	1.3		5c	0			0	0	Fair	
Cleveland, Ohio			29.84	757.9	82	27.8	70	SW	10	4.5		5c	0	W		0	0	Fair	
Colorado Springs, Col.	24.36	618.7	30.23	767.8	60	15.6	70	Calm	0	0		5ck	0	W		0	0	Fair	
Corsicana, Tex.			30.00	762.0	77	25.0	84	SE	1	0.4		1cs	8s		SE	0	0	Cloudy	
Davenport, Iowa			29.90	759.4	76	24.4	72	NW	4	1.8		5cs	5k		W	0	0	Fair	
Denison, Tex.			30.02	762.5	83	28.3	74	SW	4	1.8		0	0			0	0	Clear	
Denver, Col.	25.02	635.5	30.24	768.1	61	16.1	55	Calm	0	0		8c	0			0	0	Fair	
Detroit, Mich.			29.76	755.9	80	26.7	78	SW	10	4.5		0	0			0.03	0.8	Clear	
Dodge City, Kan.	27.43	696.7	29.60	751.8	74	23.3	81	Calm	0	0		5k	0	W		0	0	Fair	
Dubuque, Iowa			29.87	758.7	75	23.9	72	NW	8	3.6		10cs	0	W		0	0	Cloudy	
Duluth, Minn.			29.88	758.9	64	17.8	73	NW	14	6.3		0	0			0.04	1.0	Clear	
Eastport, Me.			29.94	760.5	58	14.4	87	S	8	3.6		0	Fog			0	0	Fair	
Erie, Pa.			29.80	756.9	84	28.9	68	W	12	5.4		2k	2s	W		0.04	1.0	Fair	
Escanaba, Mich.			29.77	756.1	60	20.0	65	W	16	7.2		5k	0	W		0.04	1.0	Fair	
Fort Gibson, Indian Ter.			29.96	761.0	79	26.1	82	E	3	1.3		0	0			0	0	Clear	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.79	731.3	29.85	758.2	78	25.6	78	S	2	0.9		0	0			0	0	Clear	
Fort Sully, Dakota	28.43	722.1	30.05	763.3	63	17.2	72	N	4	1.8		0	0			0	0	Clear	
Galveston, Tex.			30.04	763.0	78	25.6	73	NE	10	4.5		2c	0	SE		0.08	2.0	Fair	
Grand Haven, Mich.			29.78	756.4	72	22.2	88	W	7	3.1			10s		W	0.22	5.6	Cloudy	
Indianapolis, Ind.			29.90	759.4	83	28.3	79	SW	4	1.8		5cs	0			0	0	Fair	
Indianola, Tex.			30.03	762.7	80	26.7	78	NE	4	1.8			10s			0	0	Cloudy	
Jacksonville, Fla.			30.09	764.3	83	28.3	79	SE	4	1.8		0	4s		SW	0	0	Fair	
Keokuk, Iowa			29.88	758.9	78	25.6	82	NW	5	2.2			10s		NW	0	0	Cloudy	
Key West, Fla.			30.01	762.2	84.0	28.9	75	E	12	5.4		1cs	2ks	NE	E	0	0	Fair	
Kittyhawk, N. C.			30.06	763.5	80	26.7	82	W	16	7.2		5c	0	W		0	0	Fair	
Knoxville, Tenn.			30.05	763.3	77	25.0	95	SW	1	0.4		10k	0	SW		0	0	Cloudy	
La Crosse, Wis.			29.90	759.4	70	21.1	79	N	10	4.5		0	0			0.58	14.7	Clear	
Leavenworth, Kan.			29.98	761.5	73	22.8	76	Calm	0	0			10n			0.03	0.8	Light rain	
Lexington, Ky.	28.93	734.8	29.97	761.2	82	27.8	78	SW	4	1.8			5s		W	0	0	Fair	
Louisville, Ky.			29.95	760.7	85	29.4	72	S	5	2.2		2c	Haze			0	0	Fair	
Lynchburg, Va.			29.97	761.2	80	30.0	61	SW	2	0.9		5k	0			0.03	0.8	Fair	
Malone, N. Y.			29.69	754.1	79	26.1	61	SW	17	7.6		5cs	5ks	W	SW	0	0	Cloudy	
Manhattan, Kan.	28.86	733.0	29.94	760.5	75	23.9	100	Calm	0	0			1n			1.30	33.0	Light rain	
Marquette, Mich.			29.76	755.9	66	18.9	73	NW	20	8.9		2k	0	NW		0.68	17.3	Fair	
Memphis, Tenn.			30.02	762.5	85	29.4	75	N	1	0.4		1cs	Sm'e			0	0	Clear	
Milwaukee, Wis.			29.84	757.9	74	23.3	76	NW	12	5.4		5c	0	W		1.11	28.2	Fair	
Mobile, Ala.			30.03	762.7	82	27.8	78	SW	4	1.8		0	0			0	0	Clear	
Montgomery, Ala.			30.05	763.3	79.5	26.4	84	NE	3	1.3		10cs	Haze			0	0	Cloudy	
Morgantown, W. V.	28.94	735.1	29.93	760.2	81	27.2	74	SW	3	1.3		5c	0	W		0	0	Fair	
Mt. Washington, N. H.	23.91	607.3	30.27	768.8	57	13.9	76	NW	40	17.9		2k	0	NW		0	0	Fair	
Nashville, Tenn.			29.98	761.5	84	28.9	79	Calm	0	0		5c	Haze			0	0	Fair	
New Haven, Conn.			29.97	761.2	82	27.8	70	S	5	2.2		Haze	Sm'e			0	0	Fair	
New London, Conn.			29.99	761.7	72	22.2	95	S	4	1.8			Fog			0	0	Foggy	
New Orleans, La.			30.04	762.5	83	28.3	74	N	2	0.9		0	Sm'e			0.12	3.0	Clear	
Newport, R. I.			29.98	761.5	75	23.9	85	S	7	3.1		0	Haze			0	0	Clear	
New York, N. Y.			29.97	761.2	77	25.0	86	SW	3	1.3		5ck	Haze			0	0	Fair	
Norfolk, Va.			30.03	762.7	80	30.0	68	SW	8	3.6		5c	0			0	0	Fair	
North Platte, Neb.	27.25	692.1	29.76	755.9	63	17.2	61	Calm	0	0		5c	0	W		0	0	Fair	
Omaha, Neb.	28.98	736.1	30.01	762.2	72	22.2	75	Calm	0	0		0	0			0.43	10.9	Clear	
Oswego, N. Y.			29.81	757.2	77.5	25.3	75	S	8	3.6		5cs	5s	NW	SW	Inap.	Inap.	Cloudy	
Pembina, Dakota			30.07	763.8	52	11.1	86	N	12	5.4		0	0			0.26	6.6	Clear	
Philadelphia, Penn.			29.96	761.0	82	27.8	83	SW	4	1.8		0	Fog			0	0	Foggy	
Pike's Peak, Colorado	18.04	460.8	30.35	770.9	36	2.2	80	NE	12	5.4		5k	0			Inap.	Inap.	Fair	
Pittsburgh, Penn.			29.87	758.7	84	28.9	71	SW	12	5.4		2c	0	NW		0	0	Fair	
Port Huron, Mich.			29.70	754.4	80	26.7	78	SW	20	8.9		2c	1s	W		Inap.	Inap.	Fair	
Portland, Me.			29.93	760.2	73	22.8	81	SW	7	3.1		2c, hz	Haze			0	0	Fair	
Portland, Oregon			30.06	763.5	60	15.6	88	Calm	0	0		5cs	0	S		0	0	Fair	
Punta Rassa, Fla.			30.04	763.0	82.5	28.1	81	E	10	4.5		Haze	0			0.02	0.5	Clear	
Rochester, N. Y.			29.76	755.9	78	25.6	77	SW	10	4.5		1c	Haze	W		0.21	5.3	Clear	
Salt Lake City, Utah	25.73	653.5	30.06	763.5	66	18.9	23	Calm	0	0		Haze	Haze			0	0	Hazy	
Sandy Hook, N. J.			29.94	760.5	84	28.9	75	SW	1	0.4		Haze	Haze			0	0	Hazy	
San Diego, Cal.			30.01	762.2	62	16.7	88	N	4	1.8		0	2s		N	0	0	Fair	
San Francisco, Cal.			29.99	761.7	54	12.2	93	SW	8	3.6		5ck	Fog			0	0	Cloudy	
Santa Fé, N. M.	23.46	595.9	30.00	762.0	59	15.0	76	NE	5	2.2		5c	0			0.20	5.1	Fair	
Savannah, Ga.			30.10	764.5	85	29.4	71	Calm	0	0		5cs	5k	SW	SW	0.06	1.5	Cloudy	
Shreveport, La.			30.06	763.5	81	27.2	87	S	1	0.4		5ck,k	0	SE		0	0	Fair	
Smithville, N. C.			30.12	765.0	83	28.3	79	SW	5	2.2		1cs	2k	W	SW	0	0	Fair	
Springfield, Mass.			29.94	760.5	81	27.2	78	SW	6	2.7		2cs	Haze			0.01	0.3	Fair	
St. Louis, Mo.			29.97	761.2	83	28.3	70	W	8	3.6		0	0			0	0	Clear	
St. Marks, Fla.			30.06	763.5	81	27.2	78	Calm	0	0		0	2ks			0	0	Fair	
St. Paul, Minn.			29.94	760.5	67	19.4	74	NW	7	3.1		0	0			0.27	6.9	Clear	
St. Paul's Island, Alaska			29.52	749.8	41	5.0	91	NW	8	3.6			10n			0.37	9.4	Light rain	
Thatcher's Island, Mass.			29.95	760.7	72	22.2	85	SW	7	3.1		0	0			0	0	Hazy	
Toledo, Ohio			29.79	756.7	83	28.3	74	SW	14	6.3		5c	Haze	SW	SW	0	0	Fair	
Tucson, Arizona	27.56	700.0	30.15	765.8	74	23.3		SE				2c	0	SW		0	0	Fair	
Tybee Island, Ga.			30.09	764.3	84	28.9	79	S	4	1.8		2c	5ks		SW	0	0	Fair	
Vicksburg, Miss.			30.06	763.5	80.5	26.9	84	NW	1	0.4		2c	2k		NW	1.31	33.3	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
Virginia City, M. T.	24.45	621.0	29.93	760.2	53	11.7	36	SE	8	3.6		1c	0	W		0	0	Clear	
Washington, D. C.			30.04	763.0	83.5	28.6	81	SW	2	0.9		Haze	5s		W	0	0	Fair	
Wilmington, N. C.			30.11	764.8	82	27.8	78	SW	7	3.1		1cs	1ks		W	0	0	Fair	
Wood's Holl, Mass.			30.01	762.2	72	22.2	100	S	5	2.2			Fog			0	0	Dense fog	
Wytheville, Va.	27.78	705.6	29.84	757.9	73	22.8	85	W	3	1.3		0	5ks		W	0.09	2.3	Fair	
Yankton, Dakota	28.79	731.3	30.04	763.0	66	18.9	79	W	1	0.4		0	0			0	0	Clear	
Yuma, Arizona			29.90	759.4	87	30.6		S					10s		S	0	0	Cloudy	
Sub Series.																			
P'nte-a-Pitre, G'd'l'pe, W. I.			29.95	760.7	83	28.3	74	E				5c	2k			0	0	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.			30.14	765.5	81	27.2	82	SE				10c	8n		SE	2.88	73.2		James Hall.
St. Georges, Bermudas			30.17	766.3	81.5	27.5	79	SSE	7.0	3.1		1k	8s		S	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.	27.18	690.4	29.96	761.0	67	19.4	97	S	7.0	3.1			10k			3.74	95.0	Dull	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.01	762.2	82	27.8	83	E	2	0.9		5k	5k	E		0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.04	762.9			86.0	30		NE								0.610	15.50		Dr. H. Groot.
Medellin, Colombia, S. A.	25.21	640.3			64.5	18.1	78	Calm	0	0			10n			0.65	16.5	Cloudy	Thomas Herran
York Factory, B. A.			29.88	758.9	47.5	8.6	96	NW	8	3.6			8s			0.26	6.6		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.07	763.8	77	25.0	90	NE			2					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Addie Fuller, at Gardiner, Me.			30.00	762.0	77	25.0		SW			2		Haze					Blue sky	Capt. James Jorgensen.
Steamer Nova Scotian, 11 miles E of Salteesl ight-ship	E	11½	30.31	769.9	65	18.3		E			2		0			Smooth		Clear	Capt. Ritche.

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.; Morgantown 1,027.9 ft., or 313. 3 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, 4,262.2 ft., or 1,299.2 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 added 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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			29.97	761.3	83.5	28.6	62	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.02	762.6	84.2	29.0	40	N			1		0			0	0	Clear	Peter.
La Calle			30.01	762.2	85.1	29.5	64	NW			2		2			0	0	Clear	Kunts.
Tunis			30.02	762.5	86.0	30.0	36	NW			4		5			0	0	Fair	Jacques.
Sfax			30.00	761.2	84.2	29.0	52	NE			4		1			0	0	Clear	Chauvey.
Saïda			30.02	762.6	87.8	31.0	22	NNW			2		1			0	0	Clear	Millot.
Tebessa			30.08	763.9	84.2	29.0		NNE			2		0			0	0	Clear	Colin.
Geriville			30.00	763.5	83.7	28.7	31	N			1		1			0	0	Clear	Buard.
Laghouat			30.08	763.9	91.4	33.0	25	NE			1		0			0	0	Clear	Guyot.
Biskra			30.00	763.5	95.7	35.4		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.
Akram			30.02	762.4	70.7	21.5	60	Calm			0		6			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.94	760.4	61.9	16.6	79	W			3		7			0.228	5.8		Dr. Wierzbiski.
Kperies			29.85	758.2	65.8	18.8	56	NE			2				S	0.059	1.00		Julius Mikolik.
Gratz	28.79	731.2	29.96	760.9	69.1	20.6	55	NW			5		6			0	0		Andreas Rospini.
Hermannstadt	28.36	720.3	29.74	755.3	65.1	18.4	55	NW			3		6			0.392	9.95	Raining	Prof. Reissenberger.
Kremsmünster	28.78	730.9	30.10	764.5	61.9	16.6	64	NW			3		10			0	0		Prof. C. Wagner.
Lemberg			29.75	755.7	62.2	16.8	91	NE			3		8			0.417	10.6		Dr. T. Stanecki.
Nyirezyhaza																			Habzsuda Daniel.
Pola			30.02	762.5	75.9	24.4	60	SSW			2		2ks			0	0		I.R.Hydrographic Office.
Szegedin			29.85	758.1	69.8	21.0	52	NE			1		8			0	0		Karl Stancel.
Trieste			30.02	762.4	77.7	25.4	57	W			1		1			0.075	1.9		Prof. V. Farolfi.
Vienna			30.02	762.4	63.5	17.5	66	WNW			3		9			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.16	766.1	70.9	21.6	55	N			1		3		N	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			30.16	766.1	59.8	15.4		SE	7	3.1			5			0	0	Blue sky	William Boswell.
Ardrossan			30.15	765.8	67	19.4		SSW			2		3					Blue sky	William McNeil.
Armagh, Observatory			30.15	765.8	74.9	23.8		SSW	4	1.8			6					*D. clouds	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.10	764.5	79.0	26.1		SE			1		8					*D. clouds	J. Dreyer.
Bradford			30.14	765.5	74.1	23.4		NW			1		2			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	82.0	27.8		E			1		5					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			30.14	765.5	83.0	28.3		ESE			1		2					*D. clouds	H. Todd.
Cardington			30.16	766.1	82.4	28.0		E			1		1					Blue sky	John McLaren.
Carlisle			30.02	762.5	76.7	24.8		W			0		2			0	0	*D. clouds	T. Bell, for J. Carmell.
Chatham, School M. E			30.17	766.3	72.5	22.5		NE			2		0					Blue sky	Capt. J. Fellowes, R.E.
Dartmoor	28.78	731.0	30.24	767.8	76.6	24.8		Calm			0		0					Blue sky	R. F. Power.
Donaghadee			30.14	765.5	66	18.9		SE			3		3					*D. clouds	J. Mac Gowan.
Dover			30.17	766.3	68	20.0		ENE			1		2					¼ clouded	J. Costello.
Eccles (near Manchester)			30.12	765.0	77.0	25.0		WNW	1.6	0.7								Blue sky	Thomas Mackereth.
Falmouth, Observatory			30.15	765.8	72.6	22.6		ESE			3		1					*D. clouds	The Staff.
Fort Napier, (Natal)	27.98	710.7	30.22	767.6	63.2	17.3		NE			2		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.98	761.5	76	24.4		N			3		8			Blank	Blank	Overcast	
Galway, Queen's College			30.08	764.0	72	22.2		W			2		3					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.98	761.5	86.0	30.0		E			2		0					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			30.12	765.0	68.9	20.5		W			1		7					Fine	Lewis Stuart.
Great Yarmouth			30.21	767.3	66	18.9		SE			2		0					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			30.16	766.1	82.7	28.2		E			1		0					Blue sky	The Staff, for G. B. Airy
Guernsey			30.15	765.8	74	23.3		ESE			1		3					*D. clouds	Dr. S. E. Hoskins.
Helston			30.10	764.5	87	30.6		SE			2		0			0	0	Blue sky	M. P. Moyle.
Holyhead			30.15	765.8	70	21.1		NNE			3		1					Blue sky	John Tilston.
Kew, Observatory			30.13	765.3	79.1	26.2		S	6	2.7								Hazy	The Staff.
Kingstown			30.17	766.3	67	19.4		ESE			3		1					Blue sky	George Mitchell.
Leicester Museum			30.16	766.1	76.5	24.7		SW			1		7					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.97	761.2	79.4	26.3		NE			1		0					Blue sky	Corp'l F. Fraser, A.M.C.
Nairn			30.12	765.0	66	18.9		SW			1		2					¼ clouded	W. D. Lenny.
Nassau, (Bahamas			30.10	764.5	85.2	29.6		E			4		8					D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.15	765.8	82.9	28.3		NW			3		7ck, k		SW			*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.12	765.0	74.6	23.7		N			2		10					Hazy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.12	765.0	81	27.2		Calm			0		3					Blue sky	J. Lucas.
Plymouth			30.15	765.8	77.8	25.4		S			1		1					*D. clouds	John Merrifield.
Roche's Point			30.15	765.8	74	23.3		SE			2		2					Fine	W. Kennedy.
Saint Ann's Head			30.15	765.8	69	20.6		SE			1		0					Blue sky	John C. Walker.
Saint Helier, Jersey			30.14	765.5	80.0	26.7		SE			2		2					¼ clouded	A. P. Amy.
Sandwick Manse, Orkneys			30.14	765.5	59	15.0		SW	8	3.6			2					*D. clouds	Rev. C. Clouston, LL.D.
Scarborough			30.16	766.1	62.0	16.7		ESE			2		1					Blue sky	F. Shaw.
Scutari Cemetery, Turkey			29.75	755.6	80.0	26.7		NE			2		3					Blue sky	Sergt. W. H. Lyne.
Sheffield			30.12	765.0	76.6	24.8		SW			1		1			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			30.14	765.5	77.8	25.4	51	WNW			1		0			0	0	Blue sky	Rev. Francis Redford
Stonyhurst, Observatory			30.14	765.5	73.7	23.2		SE			2		5					*D. clouds	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			30.10	764.5	65	18.3		SW			1		10					Overcast	John Smith.
Strathfield Turgiss			30.13	765.3	81.5	27.5		NW			1		0					Blue sky	Rev. Charles H. Griffith.
Thurso			30.12	765.0	58	14.4		NNE			1		7					*D. clouds	John Trotter.
Truro, Royal Institution			30.17	766.3	81	27.2		SE			2		2					*D. clouds	W. Newcombe.
Valencia, Observatory			30.12	765.0	71.3	21.8		SSE	16	7.2			5					*D. clouds	The Staff.
Sub-Stations.																			
Calf of Man, Isle of Man					65	18.3		E			2		0						Thomas Dawson.
Cape Good Hope, Obs'y			30.20	767.1	62.4	16.9	65	SE	13	5.8		0	0						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.43	772.9	58.0	14.4	81	S			3		10m					Cloudy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			30.17	766.3	66.5	19.2		E			2		7k			0.50	12.7	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.19	766.8	71.2	21.8	70	E	17.3	7.7			8			0	0	*D. clouds	C. Meldrum
Melbourne, Observatory			30.55	776.0	40.1	4.5	82	SE	6	2.7			0			0.06	1.5	Fine, clear	R. L. J. Ellery.
Monach Lighthouse, Hebrides			30.08	764.0	58	14.4		SSW			3	3	0	S		0.18	4.6		J. Youngehuse.
North Unst, (Shetland Is.)			30.10	764.5	52	11.1		W			4		10			0	0		Robert Burnet.
																Blank	Blank		

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,250 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			30.05	763.3	69.6	20.9	59	WSW			2		1						
Fanoe			30.11	764.9	62.1	16.7	69	NW			6		2						
Godthaab, Greenland			29.16	740.6	40.8	4.9		ENE			4		10						
Stykkisholm, Iceland			29.71	754.7	48.7	9.3	88	Calm			0		8						
Thorshavn, Faröe			29.98	761.5	53.4	11.9	94	SW			5		10					Rain and fog	
Vestervig			30.06	763.5	64.8	18.2	69	WNW			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.
Alençon			30.13	765.2	77.0	25	33	SE			1		0			0	0	Clear	Normal School.
Amiens			30.19	766.7	82.0	27.8	56	N			3		0			0	0	Clear	Normal School.
Avignon			29.97	761.3	87.3	30.7	34	NNW			2		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.14	765.5	74.3	23.5	35	E			2		2			0	0	Slightly cl'dy	C. Saillard.
Beaumette, (near Angers)			30.21	767.2	78.6	25.9	39	E	6.0	2.7			0			0	0	Clear	Beaumette Observatory.
Beauvais			30.17	766.2	76.5	24.7	37	NNE			2		1		NE	0	0	Clear	Normal School.
Besançon			30.10	764.6	75.2	24	45	NE			6		0			0	0	Clear	Normal School.
Bourg en Bresse			30.19	766.8	78.1	25.6	45	W.			2		0					Clear	Normal School.
Bourges			30.467	773.77	71.6	22	74	NE			2		0			0	0	Clear	Normal School.
Brest			30.05	763.3	87.3	30.7	54	SW			1		0			0	0	Clear	Naval Observatory.
Carcassonne			29.92	759.9	80.2	26.8	25	W			1		1		E	0	0	Clear	Normal School
Caen			30.16	766.1	77.2	25.1	78	NNE			6		0			0	0	Clear	Normal School.
Chartres			30.17	766.3	71.6	22	57	NE			2		0			0	0	Clear	Normal School.
Clermont			30.05	763.3	75.6	24.2	46	N			3		0			0	0		Puy de Dome Obs'y.
Commercy			30.18	766.6	68.5	20.3	54	NNE			4		2ks		NNE	0	0	Slightly cl'dy	Normal School.
Commune de Greasque*			30.04	763.0	91.2	32.9	27	SW			2		2		SW	0	0		M. Kina.
Grenoble			30.04	763.1	85.1	29.5	50	NNW			4		2k		SW	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.05	763.2	73.9	23.3	62	NE			4		0			0	0	Clear	Normal School.
Le Mans			30.11	764.7	77.7	25.4	58	ENE			6		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			30.15	765.9	71.1	21.7	55	N			1		0			0	0	Clear	Normal School.
Mâcon			30.30	769.7	72.5	22.5	54	NNE			6		0			0	0	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			30.13	765.2	69.3	20.7	40	NNE			4		2			0	0	Slightly cl'dy	Normal School.
Nismes			29.97	761.1	91.0	32.8	26	N			1		0			0	0	Clear	Normal School.
Orleans			30.06	763.4	75.6	24.2	37	ENE			4		0			0	0	Clear	Normal School.
Paris, Observatory			30.17	766.2	75.2	24.0	39	ENE			2		2k		ENE	0	0	Slightly cl'dy	National Observatory.
Parthenay			30.04	763.1	93.2	34	72	NW			2		0			0	0	Clear	Normal School.
Privas			29.98	761.5	83.7	28.7		N			4		0			0	0	Clear	Normal School.
Rochefort, Observatory			30.07	763.8	84.9	29.4	28	ENE			5		0			0	0	Blue sky	Naval Observatory.
Rouen			30.15	765.9	81.3	27.4	41	SE			2		0			0	0	Clear	Normal School.
Saint Lo			29.79	756.6	90.3	32.4	43	E			1		1		NE	0	0		Normal School.
Tarbes	29.02	737.0	30.05	763.3	77.0	25		WNW			1		0			0	0	Clear	Normal School
Villefranche			30.10	764.5	83.7	28.7	64	N			1		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.87	758.8	81.3	27.4													L'Abbé Marchesi.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.24	768.2	73.4	23.0	36	ESE	0	0			2			0	0		—. Faiguère.
Montsouris, Paris			30.16	766.0	77.4	25.2	41	NE			3		1		NE	0	0		Montsouris Observ'tory.
Perpignan			29.98	761.5	84.7	29.3	37	SE	9.3	4.17			0			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																0	0		M. Laylac.
Pic du Midi, (Plantade)																0	0		General de Nansouty.
Saint Maur, (near Paris)			30.16	766.1	77.5	25.3	39	NNE			1-2		0			0	0	Clear	E. Renou.
Toulouse			30.06	763.4	85.5	29.7	32	NNW			1		0			0	0		Toulouse Observatory.
Tours			30.11	764.7	80.8	27.1	31	ENE			4		0			0	0	Clear	C. Marquet.
Versailles, (near Paris)			30.17	766.3	77.4	25.2	42	E			4		0			0	0	Very clear	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai																			H. Le Lee, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Bamberg			30.10	764.4	65.8	18.8	53	NW			5		7	NW		0	0		Prof. T. Hoh.
Berlin			30.11	764.8	68.5	20.3	45	SW			1		4			0	0		Prof. Arndt.
Breslau			30.10	764.5	54.0	12.2	92	NW			6		9			0.248	6.3	Raining.	Dr. P. Neugebauer.
Carlsruhe			30.13	765.2	70.5	21.4	50	NE			5		1			0	0		A. Senz.
Cassel			30.19	766.9	68.9	20.5	56	N			2		5	NNW		0	0		Dr. H. Möhl.
Emden			30.22	767.6	64.8	18.2	69	WNW			2		10			0	0		Prof. Prestel.
Frankfort on the Main			30.19	766.7	70.0	21.1	41	NE			2		3			0	0		Physical Society.
Friedrichshafen			30.13	765.4	68.4	20.2	56	WSW			3		4			0	0		M. Wilhelm.
Hamburg			30.16	766.1	63.3	17.4	71	WNW			3		9k			0	0	Very cloudy	Captain F. Hegemann
Kiel			30.11	764.7	67.5	19.7	62	WNW			2		5			0.008	0.2		Prof. G. Karston.
Königsberg, (Prussia.)			29.95	760.7	66.2	19.0	56	NW			5		2			0.252	6.4		Prof. E. Luther.
Köslin			30.06	763.4	65.3	18.5		N			4		0			0.020	0.5		H. Müller.
Leipsic			30.19	766.9	57.0	13.9	77	NW			3		10	NW		0.035	0.9		Prof. Bruhns.
Memel			29.95	760.8	63.7	17.6	75	NNW			4-5		1k			0.039	1.0		Reinbrecht & Skalweit.
Münster			30.27	768.8	66.2	19.0	62	NW			2		0			0.008	0.2		Prof. E. Heis.
Neufahrwasser			30.00	761.9	65.5	18.6	65	NE			1		1			Inap.	Inap.		A. Lothos.
Posen			30.07	763.7	58.6	14.8	99	NW			2		10			0.138	3.5		Dr. Magener.
Strassburg, (in Alsace)			30.16	766.1	70.5	21.4	45	Calm			0		2			0	0		Dr. Schur.
Stuttgart			30.13	765.4	69.1	20.6	55	NW			2		2			0	0		Prof. Schoder.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			30.13	765.4	73.0	22.8	45	SE			4		4			0	0		Prof. Flesch.
Wustrow, Naval School			30.23	767.7	62.6	17.0	71	WNW			3		0			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.77	756.2	81.1	27.3		S					..k					Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	761.2	76.1	24.5	48	S	1.3	0.6			6			0	0		
Padua			29.97	761.1	77.9	25.5	48	SE	8.1	3.6			3	N		0	0		
Vicenza			29.96	760.9	79.5	26.4	45	SE	8.1	3.6			4	W		0	0		
Verona			29.91	759.8	81.3	27.4	43	E			2		0			0	0		
Bergamo	28.64	727.4	29.89	759.3	82.8	28.2	39	S			2		4			0	0		
Domodossola	29.94	734.9	29.92	759.9	79.7	26.5	54	SW			4		1			0	0		
Milan			29.93	760.2	88.7	31.5	68	S			1		1	SW		0	0		
Pavia			29.96	761.0	81.5	27.5	49	S			4		0			0	0		
Moncalieri			29.96	761.0	79.7	26.5	59	SW	3.1	1.4			3			0	0		
Mondovi	28.11	713.9	29.95	760.6	75.2	24.0	58	NW			4		4			0	0		
Porto Maurizio			30.00	762.1	81.1	27.3	68	S			2		0			0	0		
Genoa			29.95	760.8	82.6	28.1	52	SW	3.1	1.4			0			0	0		
Piacenza			29.96	761.0	80.2	26.8	49	E	4.9	2.2			1			0	0		
Parma			29.93	760.1	82.6	28.1	53	ENE			4		1	NW		0	0		
Bologna			29.97	761.2	81.3	27.4	47	SE			1		3	SW		0	0		
Florence			29.96	760.9	86.0	30.0	33	W			2		1			0	0		
Leghorn			29.97	761.1	81.3	27.4	58	SSW	9.8	4.4			2			0	0		
Siena	28.10	713.7	29.92	760.0	77.9	25.5	54	SSW	0.7	0.3			3	N		0	0		
Urbino	28.50	723.9	29.99	761.7	76.1	24.5	63	SE			2		3			0	0		
Ancona			30.00	761.9	79.7	26.5	36	SE			4		1			0	0		
Grosseto			30.00	762.1	84.9	29.4	45	SE			4		3	NW		0	0		
Rome			30.01	762.3	80.2	26.8	47	SW	6.9	3.1			6	N		0	0		
Naples, O. U.			30.00	762.0	84.2	29.0	30	WSW			2		2	NW		0	0		
Lecce			29.98	761.4	75.4	24.1	37	NNE	18.6	8.3			1			0	0		
Cosenza			29.95	760.8	84.0	28.9	65	NW	37.4	16.7			3			0	0		
Riposto, (Sicily)			29.95	760.6	82.8	28.2	50	NW			2		3	N		0	0		
Palermo			29.91	759.8	80.1	26.7	67	ENE	8.1	3.6			2			0	0		
Caltanissetta	28.02	711.7	29.88	759.0	76.1	24.5	55	SSW			1		10	NNE		0	0		
Sub-Series.																			
Naples, S. R.			30.01	762.2	81.2	29.0	34	S	0	0			10	SE		0	0		Prof. F. Brioschi.
Pesaro			30.05	763.3	77.2	25.1	51	SE	19.5	8.72			1ck	SW, NW					L. Guidi.

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			30.23	767.7	68.4	20.2		WNW			1								
Groningen			30.15	765.7	63.5	17.5		NW			2								
Helder			30.21	767.4	63.0	17.2		NW			1								
Utrecht			30.17	766.2	69.8	21.0	55	NW			2		5					Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	764.5	56.5	13.6	80	Calm	0	0			10			0.008	0.2		
Brono			29.90	759.5	55.0	12.8	80	W	25	11			8			0.201	5.1		
Christiania			29.93	760.1	77.9	25.5	32	SSW	4.0	1.8			6			0	0		
Tromsö			29.69	754.0	57.6	14.2	94	SW	2	1			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 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	72.9	22.7	79	SW	3.2	1.44			7			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.89	759.1	100.9	38.3	8	SE	6.5	2.92			6	SSW		0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.01	763.0	75.2	24.0	65	SW	3.1	1.4			0			0	0		Capt D. A. da Cunha.
Lisbon			29.93	760.2	83.8	28.8	35	WSW	21.0	9.4			0			0	0		The Observatory.

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

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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	759.3	61.3	16.3	82	NW	11	5			8						Astronomical Obs.
Wilna			29.83	757.6	68.0	20.0	77	W	2	1			10						Astronomical Obs.
Dorpat			30.187	766.62	71.8	22.1	60	WNW	2	1			6						Physical Cabinet.
St. Petersburg			29.74	755.5	70.7	21.5	71	W	9	4			9						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kief			29.67	753.5	67.5	19.7	89	NNE	4	2			10						Physical Cabinet.
Nikolaiev			29.77	756.1	81.3	27.4	53	SW	18	8			2						Kurdakof.
Kertch			29.76	755.8	85.1	29.5	54	SSE	4	2			0						Lagorio.
Moscow			29.78	756.4	78.8	26.0	50	S	9	4			7						Meteorological Obs.
Lugan			29.70	754.3	88.5	31.4	28	ESE	34	15			5						Meteoro ogical Obs.
Archangel			29.71	754.6	70.2	26.2	99	SSE	9	4			5						Ogorodnikof.
Tiflis	28.42	721.8	29.72	754.9	90.3	32.4	38	S	11	5			1						Physical Observatory.
Astrakhan			29.85	758.3	89.8	32.1	32	SW	2	1			1						Sebastianof.
Kasan			29.74	755.3	78.3	25.7	55	W	9	4			5						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.63	727.3	29.54	750.3	68.5	20.3	71	Calm	0	0			8						Meteorological Obs
Nukuss			29.68	753.8	88.0	31.1	44	N	4	2			0						
Kasaly																			Bobrof.
Tashkend	28.01	712.2	29.60	751.7	92.8	33.8	50	Calm	0	0			1						Michelson.
Barnaul			29.61	752.4	81.0	27.2	45	NE	2	1			7						Meteorological Obs.
Yeniseisk			29.75	755.7	74.1	23.4	48	E	4	2			0						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.75	755.7	85.1	29.5	61	NE	9	4			9						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.69	754.2	75.4	24.1	89	Calm	0	0			0						
Nikolaievsk, on the Amoor					65.3	18.5	95	Calm	0	0			0						

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 300.4? 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			29.87	758.8	96.8	36.0	17	NW	1.5	0.67		0	0			0	0	Clear	Royal Observatory.
San Fernando			30.03	762.8	76.8	24.9	73	SW	10.3	4.6		4	2	SW	SW				The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			29.80	756.9	72.3	22.4	63	SW			4		2			0	0		
Umea			29.82	757.3	73.8	23.2	46	NW			2		2			0.071	1.8		
Hernosand			29.88	759.0	69.4	20.8	38	NW			4		6			0	0		
Stockholm			29.90	759.5	72.5	22.5	41	W			2		8			0	0		
Wisby			30.02	762.6	65.8	18.8	77	NW			2		0			0	0		
Sub-Series.																			
Upsala			29.91	759.7	70.9	21.6	39	NNW	4.0	1.8			6	NNW	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; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

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	28.69	728.6	30.06	763.5	72.0	22.2	52	NNE	.....	.....	2	.....	0	.....	.....	0	0	Clear	The Observatory.
Zurich	28.53	724.6	30.11	764.8	71.4	21.9	54	NE	.....	.....	1	.....	0	.....	.....	0	0	Clear	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note—For Geneva the corresponding departures from the normal values are Barometer, +0.9 mm.; Thermometer, —0.5 cent.; Relative Humidity, 0 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

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	757.1	74.1	23.4	63	N	22	10.0	.....	.....	2	.....	N	0	0	.....	
Fao, (Persian Gulf)	.....	.....	29.65	753.0	98.6	37.0	.....	NW	.....	.....	3	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.86	758.4	79.2	26.2	.....	NW	.....	.....	2	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	29.90	759.4	73.4	23.0	.....	NW	.....	.....	3	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	29.76	756.0	71.6	22.0	.....	E	.....	.....	3	.....	5	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.77	756.2	85.1	29.5	61	W	.....	.....	2	.....	2ks	.....	W	0	0	.....	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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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.	.....	.....	29.71	754.6	69.0	20.6	56	NW	7	3.1	.....	.....	0	.....	.....	0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.09	764.3	61	16.1	.....	N	4	1.8	.....	.....	8s	.....	.....	0.08	2.0	Cloudy	W. R. Bigg.
*Chatham, N. B.	.....	.....	29.74	755.4	69	20.6	65	NW	20	8.9	.....	0	0	.....	.....	0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island.	.....	.....	29.68	753.9	70	21.1	80	W	8	3.6	.....	.....	8ks	.....	.....	0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.92	760.0	63.4	17.4	69	NE	.....	.....	1	10k	0	.....	.....	0.148	3.76	Unsettled	James Smith, M. A.
Dalhousie, N. B.	.....	.....	29.74	755.4	64.6	18.1	82	W	.....	.....	1	.....	.....	.....	.....	0	0	Clear	H. A. Johnson.
Esquimault, B. C.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Bevis.
Fredericton, N. B.	.....	.....	29.76	755.9	72.1	22.3	50	NE	9	4.0	.....	0	0	.....	.....	0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.18	766.6	54	12.2	84	S	4	1.8	.....	5k	2ks	W	.....	0	0	Cloudy	James Stewart.
Goderich, Ontario	.....	.....	30.15	765.8	63.4	17.4	79	N	.....	.....	1	6k	0	N	.....	0	0	Fine	H. J. Strang, M. A.
Granton, Ontario	29.03	737.3	30.11	764.8	58.8	14.9	.....	N	.....	.....	2	6k	0	S	.....	0.08	2.0	Cloudy	James Grant.
*Halifax, N. S.	.....	.....	29.71	754.6	66	18.9	95	SW	4	1.8	.....	.....	10n	.....	.....	0.005	0.13	Cloudy	F. Allison, M. A.
*Kingston, Ontario	.....	.....	30.07	763.8	65	18.3	73	NE	6	2.7	.....	2ck	0	.....	.....	0.08	2.0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.	.....	.....	29.64	752.8	71.0	21.7	55	SW	10	4.5	.....	8k	0	SW	.....	0	0	Cloudy	C. H. Rigby.
*Montreal, Quebec	.....	.....	29.94	760.5	63	17.2	72	N	8	3.6	.....	8k	2ks	W	.....	0.05	1.3	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.01	762.2	61	16.1	74	NW	10	4.5	.....	2cs	0	NW	.....	0.10	2.5	Clear	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.12	765.0	60	15.6	71	N	12	5.4	.....	0	0	.....	.....	0.09	2.3	Clear	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	30.18	766.6	59	15.0	82	NW	8	3.6	.....	5k	0	N	.....	0.02	0.5	Fair	H. Morgan.
Port Hastings, N. S.	.....	.....	29.65	753.1	71.6	22.0	.....	Calm	0	0	.....	.....	.....	.....	.....	0.40	10.2	Fine	Peter Grant.
*Port Stanley, Ontario	.....	.....	30.10	764.5	63	17.2	77	W	8	3.6	.....	2k	0	N	.....	0.05	1.3	Clear	M. Payne.
*Quebec, Quebec	.....	.....	29.88	758.9	63	17.2	78	NW	7	3.1	.....	8k	5n	NW	NW	1.00	25.4	Cloudy	Capt. Ashe, R. N.
St. John, N. B.	.....	.....	29.76	755.9	58	14.4	94	S	1	0.4	.....	.....	10ks	.....	.....	0	0	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.10	764.5	64	17.8	69	NE	2	0.9	.....	2k	0	NE	.....	0.01	0.3	Clear	R. Stewart.
Stayner, Ontario	.....	.....	30.07	763.8	62	16.7	51	N	8	3.6	.....	0	0	.....	.....	Inap.	Inap	Clear	R. J. Cole.
Stratford, Ontario	28.84	732.5	30.10	764.5	58.6	14.8	88	NW	8	3.6	.....	6ck	.....	N	.....	0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.	.....	.....	29.69	754.1	74	23.3	81	SW	16	7.2	.....	8ck	2s	W	W	0	0	Fair	T. C. Hill.
*Toronto, Ontario	.....	.....	30.04	763.0	67	19.4	71	N	11	4.9	.....	2ck	0	NW	.....	Inap.	Inap.	Fair	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.10	764.5	69.3	15.7	85	NW	11	4.9	.....	1ks	9s	N	.....	0	0	Gloomy	J. Montgomery
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	29.96	761.0	69	20.6	80	SW	.....	.....	.....	.....	10n	.....	.....	0	0	Cloudy	John Delaney.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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 360.5 m. *Rain-fall until 10 a. m., of the 15th.

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.			29.89	759.2	71	21.7	75	NW	4	1.8		5k	0	W		0.19	4.8	Fair	
Alpena, Mich.			30.14	765.5	60	15.6	70	N	8	3.6		2k	0	N		0	0	Fair	
Atlantic City, N. J.			29.93	760.2	77	25.0	77	NW	8	3.6		5cs	0	SW		0.06	1.5	Fair	
Augusta, Ga.			30.04	763.0	83	28.3	73	S	1	0.4		0	Haze			0	0	Clear	
Baltimore, Md.			29.98	761.5	80	26.7	61	W	8	3.6		2ck	2s		SW	0.19	4.8	Fair	
Barnegat, N. J.			29.91	759.7	77	25.0	82	NW	11	4.9		5cs	0			0.24	6.1	Fair	
Benton, Montana	27.33	694.2	30.13	765.3	67	19.4	64	SW	4	1.8		0	0			0	0	Clear	
Bismarck, Dakota	28.24	717.3	29.84	757.9	58	14.4	69	E	10	4.5		0	0			0	0	Clear	
Boston, Mass.			29.81	757.2	76	24.4	76	W	6	2.7		8cs	2ks	W	W	0.06	1.5	Cloudy	
Breckenridge, Minn.			30.13	765.3	52	21.1	93	N	4	1.8			10n		N	0.09	2.3	Threatening	
Buffalo, N. Y.			30.02	762.5	61	16.1	70	W	6	2.7		0	2ks		NW	0.07	1.8	Fair	
Burlington, Vt.			29.94	760.5	67	19.4	69	N	12	5.4		5k	2s	N		0.37	9.4	Cloudy	
Cairo, Ill.			30.05	763.3	80	26.7	74	N	2	0.9		5c	0			0	0	Fair	
Cape Hatteras, N. C.			29.96	761.0	81	27.2	82	SW	15	6.7		9c	Haze			0	0	Cloudy	
Cape Henry, Va.			29.95	760.7	78	25.6	91	S	4	1.8			10s		SW	0.52	13.2	Cloudy	
Cape Lookout, N. C.			30.05	763.3	83	28.3	79	SW	20	8.9		2ck	5k	SW	SW	0	0	Fair	
Cape May, N. J.			29.94	760.5	75	23.9	76	N	16	7.2		8cs	0			Inap.	Inap.	Fair	
Charleston, S. C.			30.05	763.3	84	28.9	75	SW	6	2.7		2c	0			0	0	Fair	
Cheyenne, Wyoming	24.20	614.7	30.14	765.5	58	14.4	53	Calm	0	0		0	0			0	0	Clear	
Chicago, Ill.			30.15	765.8	70	21.1	52	E	12	5.4		0	0			0	0	Clear	
Cincinnati, Ohio			30.02	762.5	75	23.9	64	NE	8	3.6		2ck	0			Inap.	Inap.	Clear	
Cleveland, Ohio			30.11	764.8	67.6	19.8	57	NW	12	5.4		2k	0			0.21	5.3	Clear	
Colorado Springs, Col.	24.29	617.0	30.16	766.1	60	15.6	81	SE	3	1.3		2k	0			0	0	Clear	
Corsicana, Tex.			30.05	763.3	75	23.9	85	E	1	0.4		2cs	Haze			Inap.	Inap.	Fair	
Davenport, Iowa			30.15	765.8	71	21.7	67	NE	1	0.4		0	0			0	0	Clear	
Denison, Tex.			30.07	763.8	79	26.1	82	Calm	0	0		0	0			0	0	Clear	
Denver, Col.	24.97	634.2	30.19	766.8	61	16.1	60	Calm	0	0		0	0			0	0	Clear	
Detroit, Mich.			30.14	765.5	62	16.7	66	N	9	4.0		0	0			0.34	8.6	Clear	
Dodge City, Kan.	27.59	700.8	29.82	757.4	66	18.9	90	E	2	0.9			10s			0	0	Cloudy	
Dubuque, Iowa			30.14	765.5	68	20.0	74	NE	4	1.8		0	Haze			0	0	Clear	
Duluth, Minn.			30.18	766.6	57	13.9	69	N	1	0.4		5c	0			0	0	Fair	
Eastport, Me.			29.72	754.9	69	20.6	84	Calm	0	0			10s		W	0	0	Cloudy	
Erie, Pa.			30.06	763.5	64	17.8	73	NW	12	5.4		0	8ks		NW	Inap.	Inap.	Fair	
Escanaba, Mich.			30.24	768.1	56	13.3	68	N	4	1.8		0	0			0	0	Clear	
Fort Gibson, Indian Ter.			30.00	762.0	81	27.2	74	NE	1	0.4		5c	2k			0	0	Fair	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.88	733.5	29.93	760.2	80	26.7	70	SE	4	1.8		0	0			0	0	Clear	
Fort Sully, Dakota	28.29	718.6	29.87	758.7	70	21.1	66	SE	7	3.1		1k	0			0	0	Clear	
Galveston, Tex.			30.04	763.0	82	27.8	83	E	2	0.9			10ks		E	0.09	2.3	Cloudy	
Grand Haven, Mich.			30.18	766.6	67	19.3	57	NE	9	4.0		2k	0	NW		0	0	Clear	
Indianapolis, Ind.			30.08	764.0	71	21.7	75	NE	6	2.7		0	0			0.02	0.5	Clear	
Indianola, Tex.			30.01	762.2	80	26.7	86	E	15	6.7		5k	0	S		0.30	7.6	Fair	
Jacksonville, Fla.			30.06	763.5	83	28.3	79	SE	5	2.2		0	0			0	0	Clear	
Keokuk, Iowa			30.10	764.5	74	23.3	68	NE	5	2.2		0	0			0	0	Clear	
Key West, Fla.			30.05	763.3	80.1	26.7	86	S	3	1.3		0	2ks		SE	0.27	6.9	Fair	
Kittyhawk, N. C.			29.99	761.7	79	26.1	86	SW	6	2.7		10k	0			0.06	1.5	Cloudy	
Knoxville, Tenn.			30.01	762.2	75	23.9	90	NW	3	1.3		1ck	0	SW		0	0	Clear	
La Crosse, Wis.			30.14	765.5	65	18.3	83	S	1	0.4		5ck	0			0	0	Fair	
Leavenworth, Kan.			30.11	764.8	71	21.7	75	Calm	0	0		5c	0	NW		0.01	0.3	Fair	
Lexington, Ky.	28.97	735.8	30.03	762.7	75	23.9	76	N	12	5.4			8ks			0.07	1.8	Fair	
Louisville, Ky.			30.04	763.0	76	24.4	77	N	10	4.5		2k	0	N		0	0	Clear	
Lynchburg, Va.			29.96	761.0	81	27.2	70	NW	2	0.9		10k	0	NW		0.02	0.5	Cloudy	
Malone, N. Y.			29.95	760.7	62	16.7	71	NW	4	1.8		5ok	0	W		0.20	5.1	Fair	
Manhattan, Kan.	29.00	736.6	30.11	764.8	66	20.0	90	SW	8	3.6		0	0			0.05	1.3	Clear	
Marquette, Mich.			30.22	767.6	57	13.9	69	Calm	0	0		0	0			0	0	Clear	
Memphis, Tenn.			30.05	763.3	79	26.1	86	Calm	0	0		1cs	Haze	SW		0.01	0.3	Fair	
Milwaukee, Wis.			30.21	767.3	66	18.9	53	E	12	5.4		0	0			0	0	Clea	
Mobile, Ala.			30.07	763.8	81	27.2	78	S	2	0.9			10s			0	0	Cloudy	
Montgomery, Ala.			30.05	763.3	82	27.8	78	S	2	0.9		5ck	Haze			0	0	Fair	
Morgantown, W. Va.	29.02	737.1	30.03	762.7	70	21.1	70	N	7	3.1		2c	0	W		2.66	67.6	Fair	
Mt. Washington, N. H.	23.74	603.0	30.10	764.5	47	8.3	100	NW	50	22.4			Fog			1.78	45.2	Foggy	
Nashville, Tenn.			30.00	762.0	83	28.3	74	SE	1	0.4		2ck	5s	SW		0.03	0.8	Fair	
New Haven, Conn.			29.87	758.7	79	26.1	58	NW	10	4.5		5k	0	NW		0.45	11.4	Fair	
New London, Conn.			29.86	758.4	79	26.1	73	NW	6	2.7		2c	5k	W	W	0.12	3.0	Fair	
New Orleans, La.			30.06	763.5	83.5	28.6	71	S	1	0.4		4k	0	NW		0	0	Fair	
Newport, R. I.			29.84	757.9	76	24.4	86	SW	6	2.7		8ck	0	W		0	0	Cloudy	
New York, N. Y.			29.91	759.7	76	24.4	64	NW	10	4.5		5c	0	W		0.13	3.3	Fair	
Norfolk, Va.			29.98	761.5	82	27.8	78	S	8	3.6		2c	5k		S	Inap.	Inap.	Fair	
North Platte, Neb.	27.24	691.9	29.70	754.4	72	22.2	67	SE	24	10.7		2c	0			0	0	Clear	
Omaha, Neb.	29.06	738.1	30.09	764.3	73	22.8	76	Calm	0	0		0	0			0	0	Clear	
Oswego, N. Y.			30.00	762.0	68	20.0	81	NW	9	4.0			10s		NE	0	0	Cloudy	
Pembina, Dakota			30.10	764.5	53	11.7	89	E	4	1.8		5c	2s	SW		0	0	Cloudy	
Philadelphia, Penn.			29.95	760.7	77	25.0	69	N	14	6.3		2c	5ks	W	NW	1.09	27.7	Fair	
Pike's Peak, Colorado	18.12	460.2	30.33	770.4	36.5	2.5	85	W	4	1.8		1c	1k			0.09	2.3	Fair	
Pittsburgh, Penn.			30.04	763.0	70	21.1	61	NE	5	2.2		0	0			1.08	27.4	Clear	
Port Huron, Mich.			30.15	765.8	61	16.1	77	N	9	4.0		2k	0	N		0.01	0.3	Fair	
Portland, Me.			29.80	756.9	76	24.4	72	N	10	4.5		5k	2s	SW		1.18	30.0	Cloudy	
Portland, Oregon			29.94	760.5	62	16.7	94	Calm	0	0			10s		S	0	0	Cloudy	
Punta Rassa, Fla.			30.06	763.5	82.5	28.1	78	E	8	3.6		Haze	0			0.08	2.0	Clear	
Rochester, N. Y.			30.01	762.2	64	17.8	62	W	5	2.2			10s		N	Inap.	Inap.	Cloudy	
Salt Lake City, Utah	25.67	652.0	30.04	762.0	69	20.6	35	SE	2	0.9		2c	Haze			0	0	Fair	
Sandy Hook, N. J.			29.90	759.4	75	23.9	76	NW	10	4.5		5c	0	SW		0.31	7.9	Fair	
San Diego, Cal.			29.92	760.0	65	18.3	83	Calm	0	0		0	5s			0	0	Fair	
San Francisco, Cal.			29.95	760.7	54	12.2	93	W	12	5.4			10s			0	0	Cloudy	
Santa Fé, N. M.	23.49	596.6	30.03	762.7	60	15.6	82	Calm	0	0			10s			0.09	2.3	Cloudy	
Savannah, Ga.			30.06	763.5	88	31.1	66	SW	6	2.7		0	Haze			0	0	Hazy	
Shreveport, La.			30.09	764.3	77.5	25.3	84	Calm	0	0		0	0			0	0	Clear	
Smithville, N. C.			30.06	763.5	81	27.2	74	SW	14	6.3		2k	5ks	SW	SW	0	0	Cloudy	
Springfield, Mass.			29.87	758.7	77	25.0	69	NW	8	3.6		10ck,cs	0	SW		0.43	10.9	Fair	
St. Louis, Mo.			30.09	764.3	74	23.3	75	NE	12	5.4		0	0			0	0	Clear	
St. Marks, Fla.			30.06	763.5	82	27.8	78	Calm	0	0		2cs	2ks	NE		0	0	Fair	
St. Paul, Minn.			30.10	764.5	66.5	19.2	70	E	3	1.3		8c,ck	0	W		0	0	Fair	
St. Paul's Island, Alaska			29.93	760.2	42	5.6	91	SW	8	3.6			10s		SW	0.19	4.8	Cloudy	
Thatcher's Island, Mass.			29.80	756.9	73	22.8	85	W	9	4.0		2k	8s	NW	NW	0.05	1.3	Cloudy	
Toledo, Ohio			30.10	764.5	66	18.9	63	N	7	3.1		0	0			0.09	2.3	Clear	
Tucson, Arizona	27.58	700.5	30.17	766.3	77	25.0		S				2c	5ks		S	0	0	Fair	
Tybee Island, Ga.			30.04	763.0	84	28.9	83	SW	4	1.8		2c	2ks		SW	0	0	Fair	
Vicksburg, Miss.			30.08	764.0	79	26.1	89	Calm	0	0		0	0			0.02	0.5	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.
Virginia City, M. T.	24.40	619.8	29.88	758.9	58	14.4	31	E	6	2.7		0	0			0	0	Clear	
Washington, D. C.			29.99	761.7	78	25.4	69	N	8	3.6		2c8	5k	W	W	0	0	Fair	
Wilmington, N. C.			30.04	763.0	80	26.7	86	SW	6	2.7		5k	2k8	N	SW	0	0	Cloudy	
Wood's Holl, Mass.			29.83	757.7	77	25.0	77	W	12	5.4		5c	0	S		0	0	Fair	
Wytheville, Va.	27.74	704.6	29.78	756.4	75	23.9	85	W	4	1.8		2c8	2k8	W	W	0	0	Fair	
Yankton, Dakota	28.86	733.0	30.11	764.8	68	20.0	74	SE	1	0.4		0	0			0	0	Clear	
Yuma, Arizona			29.94	760.5	82	27.8		SE				2c	0	SW		Inap.	Inap.	Fair	
Sub-Series.																			
P'nte-a-Pitre, G'd'l'pe, W. I.			29.95	760.7	80	26.7	90	E					10n			0.03	0.8	Rainy	L. V. Bigard.
Kingston, Jamaica, W. I.			30.17	766.3	80	26.7	74	Calm	0	0		10c	8n			0	0		James Gall.
St. Georges, Bermudas			30.16	766.1	78.0	25.6	95	SSE	8.0	3.6		2c8	5k	W		0.30	7.6	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	68	20.0	87	S	6.0	2.7		2c	8k			1.64	41.7	Very dull	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.04	763.0	81	27.2	87	E			1	5k	5k	E		0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.7			84.2	29		SE								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1			65.5	18.6	78	Calm	0	0		2c	3k8			0	0	Fair	Thomas Herran.
York Factory, B. A.			30.04	763.0	48	8.9	82	NW	3	1.3		3k	2s			0.50	12.7		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.			30.07	763.8	77	25.0	90	NE			4					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Addie Fuller, at Bath, M.			29.85	758.2	75	23.9		N			4		2k		NW			*D. clouds	Capt. James Jorgeneen.
Steamer Nova Scotian, at Liverpool.			30.21	767.3	70	21.1		WNW			2							Fair	Capt. Ritche.

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, 6,012.4 ft., or 1,833.7 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.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. *Detached Clouds.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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'Eu leville, Com nandant 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			20.97	761.1	83.5	28.6	63	Calm			0		4			0	0	Fair	Charnot.
Algiers			30.04	763.1	84.2	29.0	46	NE			1		0			0	0	Clear	Peter.
La Calle			30.02	762.5	77.0	25.0	63	NE			3		0			0	0	Clear	Kunts.
Tunis			30.05	763.3	87.1	30.6	40	ENE			3		4			0	0	Fair	Jacques.
Sfax			30.14	765.6	84.2	29.0	64	SE			4		1			0	0	Clear	Chauvey.
Saida			30.00	762.0	91.4	33.0		NW			2		1			0	0	Clear	Millot.
Tebessa			30.10	764.6	88.5	31.4		NE			2		2			0	0	Clear	Colin.
Geriville			30.06	763.4	89.6	32.0	25	WSW			1		2			0	0	Clear	Buard.
Laghouat			30.10	764.4	98.6	37.0		NE			2		0			0	0	Clear	Guyot.
Biskra			30.08	764.1	93.2	34.0	28	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			30.06	763.4	75.2	24.0	57	Calm			0		5			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.01	762.2	69.1	20.6	56	W			3		4			0.028	0.7		Dr. Wierzbiski.
Eperies			29.91	759.7	69.1	20.6	52	N			3				S	0	0		Julius Mikolik.
Gratz	28.84	732.4	29.99	761.8	73.2	22.9	66	WSW			2		0			0	0		Andreas Rospini.
Hermannstadt	28.43	722.1	29.82	757.5	59.0	15.0	84	WNW			3		10			0.322	8.20	Raining	Prof. Reissenberger.
Kremsmunster	28.75	730.2	30.05	763.3	67.6	19.8	49	E			3		0			0	0		Prof. C. Wagner.
Lemberg			29.76	755.8	68.2	20.1	80	NE			4		5			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.08	764.0	77.9	25.5	42	SSE			2		1ks			0	0		I.R.Hydrographic Office.
Szegedin			29.95	760.8	70.2	21.2	59	NE			2		7			0	0		Karl Stancel.
Trieste			30.09	764.3	79.9	26.6	52	NW			1		2			0	0	Fine	Prof. V. Farolfi.
Vienna			30.05	763.2	71.1	21.7	54	W			2		6			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not 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 J. C. Houzeau, 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			30.03	762.8	73.8	23.2	45	ENE			1	1c	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.94	760.5	56.5	13.6		SE	6	2.7			10			0	0	Foggy	William Boswell.
Ardrossan			30.00	762.0	60	15.6		NW			3		7					Raining	William McNeil.
Armagh, Observatory			30.05	763.3	63.0	17.2		NW	4	1.8			10					Gloomy	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.06	763.5	67.3	19.6		NNW			1		8					*D. clouds	J. Dreyer.
Bradford			29.99	761.7	75.5	24.2		N			1		10			0	0	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.05	763.3	81.5	27.5		NE			2		7					Overcast	Sergt. J. F. Halanen. A. H. C.
Cambridge, Observatory			30.01	762.0	86.0	30.0		ESE			1		1					*D. clouds	H. Todd.
Cardington			30.01	762.2	86.0	30.0		S			1		3					*D. clouds	John McLaren.
Carlisle			29.95	760.7	71.1	21.7		W			1		10			0	0	Overcast	T. Bell, for J. Carmell.
Chatham, School M. E			30.03	762.7	78.7	25.9		Calm			0		0					Blue sky	Capt. J. Fellowes, R.E.
Dartmoor	28.75	730.2	30.19	766.8	76.6	24.8		Calm			0		3					Blue sky	R. F. Power.
Donaghadee			30.01	762.2	65	18.3		N			3		5					*D. clouds	J. Mac Gowan.
Dover			30.07	763.8	70	21.1		E			1		0					Clear	J. Costello.
Eccles (near Manchester.)			29.98	761.5	74.8	23.8		NW	12.0	5.4			10					Overcast	Thomas Mackereth.
Falmouth, Observatory			30.02	762.5	70.3	21.3		SE			3		9					Misty	The Staff.
Fort Napier, (Natal)	27.93	709.4	30.17	766.3	62.6	17.0		E			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.05	763.3	77	25.0		W			2		6					D clouds	
Galway, Queen's College			30.02	762.5	71	21.7		W			1		2					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.98	761.5	81.0	27.2		W			4		0					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.95	760.7	60.9	16.1		W			1		10					Wet	Lewis Stuart.
Great Yarmouth			30.07	763.8	67	19.4		SE			3		0					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			30.02	762.5	86.5	30.3		SSW			1		0					Blue sky	The Staff, for G. B. Airy
Guernsey			30.00	762.0	77	25.0		NNE			1		3					*D. clouds	Dr. S. E. Hoskins.
Helston			29.99	761.7	76	24.4		SE			2		0			0	0	Blue sky	M. P. Moyle.
Holyhead			30.03	762.7	64	17.8		NNW			1		10					Misty	John Tilston.
Kew, Observatory			30.01	762.2	84.1	28.9		S	7	3.1			1					Hazy	The Staff.
Kingstown			30.03	762.7	66	18.9		NW			4		8					Overcast	George Mitchell.
Leicester Museum			30.01	762.2	80.0	26.7		SW			1		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.95	760.7	79.8	26.6		NE			1		0						Corp'l F. Fraser, A. M. C.
Nairn			29.96	761.0	59	15.0		SW			1		10					Raining	W. D. Penny.
Nassau, (Bahamas			30.12	765.0	85.4	29.7		SE			4		8					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.98	761.5	83.3	28.5		NNW			3		9k.k8		SW	Blank	Blank	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.01	762.2	82.8	28.2		SSW			2		7					Hazy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.99	761.7	84	28.9		S			1		1					Blue sky	J. Lucas.
Plymouth			30.01	762.2	75.1	23.9		SSW			2		7					*D. clouds	John Merrifield.
Roche's Point			30.04	763.0	68	20.0		N			3		5					Cloudy	W. Kennedy.
Saint Ann's Head			30.01	762.2	74	23.3		Calm			0		4					Hazy	John C. Walker.
Saint Helier, Jersey			30.00	762.0	87.0	30.6		N			1		2					¼ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.98	761.5	58.8	14.9		WNW	8	3.6			10					Raining	Rev. C. Clouston, LL. D.
Scarborough			29.96	761.0	66.9	19.4		SSE			2		4					*D clouds	F. Shaw.
Scutari Cemetery, Turkey			29.80	756.9	75.6	24.2		NNE			2		9					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.05	763.3	81.5	27.5		SW			2		3			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			29.96	761.0	75.3	24.1	66	SW			1		3			0	0	*D clouds	Rev. Francis Redford
Stonyhurst, Observatory			30.00	762.0	71.3	21.8		W			2		10					Hazy	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			29.97	761.2	60	15.6		WNW			1		10					Overcast	John Smith.
Strathfield Turgiss			30.01	762.2	83.2	28.4		S			1		0					Blue sky	Rev. Charles H. Griffith.
Thurso			29.95	760.7	55	12.8		Calm			0		10					Raining	John Trotter.
Truro, Royal Institution			30.04	763.0	82	27.8		SE			2		4					*D. clouds	W. Newcombe.
Valencia, Observatory			30.09	764.3	64.0	17.8		NNW	19	8.5			5					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, Isle of Man					55	12.8		N			2		2						Thomas Dawson.
Cape Good Hope, Obs'y			30.01	762.2	75.1	23.9	42	NW	2	0.9		0	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			30.31	769.9	58.0	14.4	87	W			1		7n			0.03	0.8		Francis Abbott, F.R.A.S.
Leith, Restaurig Park			29.98	761.5	66.3	19.1		NE			1					0.08	2.0	Thunder-storm	Andrew Gibb.
Mauritius, Observatory			30.19	766.8				E	3.0	1.3						0	0		C. Meldrum
Melbourne, Observatory			30.43	772.9	46.4	8.0	81	SSE	4	1.8			8			0	0	Fine	R. L. J. Ellery.
Monach Lt-house, Hebrides			29.99	761.7	57	13.9		N			3	5	5	N		0	0		J. Youngclause.
North Unst, (Shetland Is.)			30.01	762.2	55	12.8		SW			4	7	5	W					Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. 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			30.08	763.9	64.2	17.9	75	NE			2		1						
Fanöe			30.12	765.1	63.9	17.7	72	WSW			4		6						
Godthaab, Greenland			29.49	749.1	35.1	1.7		S			4		10						
Stykkisholm, Iceland			29.76	755.8	50.9	10.5	90	Calm			0		8						
Thorshavn, Faröe			29.95	760.7	54.7	12.6	77	E			2		7						
Vestervig			30.06	763.4	60.1	15.6	85	WSW			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.
Alençon			29.96	760.9	77.0	25	33	SE			1		0			0	0	Clear	Normal School.
Amiens			30.03	762.7	82.0	27.8	47	N			3		0			0	0	Clear	Normal School.
Avignon			30.00	762.1	89.2	31.8	35	SE			2		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.03	762.7	80.6	27.0	28	SE			2		0			0	0	Clear	C. Saillard.
Beaumette, (near Angers)			29.90	759.4	86.4	30.2	21	E	6.0	2.7			2		W	0	0	Slightly cl'dy	Beaumette Observatory.
Beauvais			30.03	762.7	77.5	25.3	33	E			2		0			0	0	Clear	Normal School.
Besançon			29.98	761.6	81.0	27.2	50	NE			6		0			0	0	Clear	Normal School.
Bourg en Bresse			30.08	764.0	82.8	28.2	45	SW			2		0					Clear	Normal School.
Bourges			30.51?	775.7?	81.9	27.7	49	NE			2		0			0	0	Clear	Normal School.
Brest			29.93	760.3	87.6	30.9	51	SSW			2	4c				0	0		Naval Observatory.
Carcassonne			29.93	760.3	80.2	26.8	40	E			3		1		E	0	0	Clear	Normal School
Caen			29.97	761.5	78.4	25.8	79	NE			6		0			0	0	Clear	Normal School.
Chartres			30.01	762.2	73.8	23.2	59	E			2		0			0	0	Clear	Normal School.
Clermont			29.91	759.8	83.3	28.5	33	E			1		0			0	0		Puy de Dome Obs'y.
Commercy			30.04	763.1	72.9	22.7	40	E			4		0			0	0	Clear	Normal School.
Commune de Greasque*			30.09	764.2	88.3	31.3	22	SE			2		2		SE	0	0		M. Kina.
Grenoble			29.98	761.4	77.2	25.1	77	NW			4		8kn		SW	0	0	Very cloudy	Normal School.
La Roche-sur-Yon			29.90	759.4	88.5	31.4	27	ENE			4		0			0	0	Clear	Normal School.
Le Mans			29.91	760.4	83.5	28.6	52	E			6		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			29.99	761.7	76.1	24.5	53	W			1		0			0	0	Clear	Normal School.
Mâcon			30.21	767.4	76.6	24.8	62	NNE			6		0			0	0	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			29.97	761.3	75.4	24.1	39	NNE			4		0			0	0	Clear	Normal School.
Nismes			30.03	762.8	89.6	32	39	S			2		0			0	0	Clear	Normal School.
Orleans			29.91	759.7	81.0	27.2	36	E			2		0			0	0	Clear	Normal School.
Paris, Observatory			30.01	762.3	80.1	26.7	31	E			2		0			0	0	Very clear	National Observatory.
Parthenay			29.98	761.4	98.6	37	77	NW			2		0			0	0	Clear	Normal School.
Privas			29.98	761.6	86.0	30		N			2		0			0	0	Clear	Normal School.
Rochefort, Observatory			29.89	759.2	89.6	32.0	26	E			5		0			0	0	Blue sky	Naval Observatory.
Rouen			30.01	762.2	86.2	30.1	25	SSE			1		0			0	0	Clear	Normal School.
Saint Lo			29.79	754.4	81.2	29	27	NE			1		1			0	0		Normal School.
Tarbes	29.80	731.6	29.82	757.4	84.2	29		ESE			1		0			0	0	Clear	Normal School
Villefranche			30.10	764.6	87.8	31	70	SE			1		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.8	80.6	27													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.23	767.8	75.7	24.3	51	SSW	2	1			2			0	0		—. Falguère.
Montsouris, Paris			30.11	762.3	82.6	28.1	32	E			3		0			0	0		Montsouris Observ'tory.
Perpignan			29.97	761.3	78.6	25.9	68	SE	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)			30.01	762.2	82.4	28.0	31	NE			1		0			0	0	Clear	E. Renou.
Toulouse			29.96	761.0	88.3	31.3	30	SSE			4		0			0	0		Toulouse Observatory
Tours			29.95	760.6	86.4	30.2	25	E			2		1		W	0	0		C. Marquet.
Versailles, (near Paris)			30.02	762.5	81.3	27.4	31	E			3		0			0	0	Very clear	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Leo, S. J.

NOTE.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * 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			30.10	764.6	68.5	20.3	60	NW			3		0			0	0		Prof. T. Hoh.
Berlin			30.12	765.1	73.0	22.8	55	S			1		0			0	0		Prof. Arndt.
Breslau			30.14	765.6	70.9	21.6	48	NW			8		9			0	0		Dr. P. Neugebauer.
Carlsruhe			30.04	763.1	73.0	22.8	49	N			7		0			0	0		A. Senz.
Cassel			30.11	764.9	75.2	24.0	48	NE			4		1	NE		0	0		Dr. H. Möhl.
Emden			30.14	765.6	68.5	20.3	68	N			5		2			0	0		Prof. Prestel.
Frankfort on the Main			30.11	764.8	72.1	22.3	42	NE			1		0			0	0		Physical Society.
Friedrichshafen			30.00	762.1	74.7	23.7	57	NE			5		0			0	0		M. Wilhelm.
Hamburg			30.14	765.5	65.3	18.5	66	Calm			0		1c			0	0	Very fine	Captain F. Hegemann
Kiel			30.10	764.5	66.0	18.9	66	NW			2		3			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			30.00	761.9	70.3	21.3	59	N			2		4			0.001	0.1		Prof. E. Luther.
Köslin			30.11	764.8	68.0	20.0		NW			4		0			0	0		H. Müller.
Leipsic			30.13	765.2	74.3	23.5	47	SSE			1		4			0	0		Prof. Bruhns.
Memel			30.01	762.2	66.6	19.2	58	NW			4		1ck			0	0		Reinbrecht & Skalweit.
Münster			30.16	766.0	72.5	22.5	53	SE			2		0			0	0		Prof. E. Heis.
Neufahrwasser			30.11	764.7	70.9	21.6	71	N			1		4			0	0		A. Lothes.
Posen			30.10	764.5	74.5	23.6	39	NW			1		4			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.01	762.3	74.3	23.5	41	NE			1		0			0	0		Dr. Schur.
Stuttgart			30.04	763.1	73.8	23.2	44	NE			1		0			0	0		Prof. Schoder.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			30.03	762.7	76.3	24.6	37	ENE			6		0			0	0		Prof. Flesch.
Wustrow, Naval School			30.19	766.9	65.7	18.7	75	W			2		0			0	0		E. F. Schütz.

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.83	758.9	85.6	29.8		S					k					Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 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			30.04	763.0	77.9	25.5	43	SW	1.8	0.8			6			0	0		
Padua			30.04	763.1	76.8	24.9	58	E	8.1	3.6			9	SW		0	0		
Vicenza			30.05	763.3	79.0	26.1	49	SE	4.3	1.9			2	W		0	0		
Verona			30.06	762.4	81.0	27.2	47	E			1		0			0	0		
Bergamo	28.72	729.4	29.97	761.3	78.8	26.0	36	N			2		2			0	0		
Domodossola	29.04	737.5	30.02	762.5	76.6	24.8	48	S			4		0			0	0		
Milan			30.02	762.6	86.9	30.5	46	ENE			4		4	ENE		0	0		
Pavia			30.03	762.7	79.7	26.5	45	NE			4		0			0	0		
Moncalieri			30.05	763.2	75.6	24.2	62	ESE	2.5	1.1			8	NW		0	0		
Mondovi	28.20	716.2	30.03	762.8	77.4	25.2	51	W			2		9			0	0		
Porto Maurizio			30.08	763.9	79.9	26.6	73	SE			2		6			0	0		
Genoa			30.04	762.9	79.2	26.2	62	SW	1.3	0.6			4	NE		0	0		
Piacenza			30.04	763.0	79.0	26.1	44	E	11.9	5.3			0			0	0		
Parma			30.01	762.2	82.2	27.9	40	E			6		1			0	0		
Bologna			30.07	763.8	82.2	27.9	41	NE			6		4	N		0	0		
Florence			30.01	762.3	88.7	31.5	33	SE			2		2			0	0		
Leghorn			30.00	762.1	81.0	27.2	61	WSW	4.3	1.9			2			0	0		
Siena	28.83	732.3	30.02	762.6	79.2	26.2	54	ENE	0.7	0.3			7	N		0	0		
Urbino	28.56	725.5	30.05	763.3	74.5	23.6	47	SE			2		0			0	0		
Ancona			30.08	763.9	79.7	26.5	42	SE			4		1			0	0		
Grosseto			29.96	761.0	84.2	29.0	54	SE			2		3	NW		0	0		
Rome			30.04	762.9	83.5	28.6	59	SW	8.1	3.6			3	SW		0	0		
Naples, O. U.			30.07	763.6	82.8	28.2	37	SW			4		1	NNW		0	0		
Lecce			30.07	763.6	76.6	24.8	35	NNW	21.7	9.7			1			0	0		
Cosenza			30.04	763.0	84.6	29.2	67	NW	9.4	4.2			2			0	0		
Riposto, (Sicily)			30.02	762.6	84.2	29.0	62	ESE			2		3	W		0	0		
Palermo			30.00	761.9	79.5	26.4	70	NE	11.2	5.0			0			0	0		
Caltanissetta	28.08	713.2	29.94	760.5	80.1	26.7	29	WNW			1		4			0	0		
Sub-Series.																			
Naples, S. R.			30.07	763.8	83.1	28.4	39	S	0	0			3	SE		0	0		Prof. F. Brioschi.
Pesaro			30.15	765.7	74.7	23.7	61	E	26.0	11.64			0						L. Guidi.

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. Inches.	Rain-fall. 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. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Flushing			30.09	764.2	75.2	24.0		SE			2								
Groningen			30.06	763.4	68.9	20.5		E			1								
Helder			30.08	764.1	67.6	19.8		E			1								
Utrecht			30.04	763.1	76.3	24.6	38	SE			2		0					Clear	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 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			30.03	762.8	58.3	14.6	70	W	2.9	1.3			0			0	0		
Brönö			30.02	762.6	53.6	12.0	89	WSW	18	8			1			0.039	1.0	Light rain	
Christiania			29.94	760.5	74.5	23.6	50	WSW	6.9	3.1			10			0	0		
Tromsö			29.83	757.7	52.2	11.2	98	SW	2	1			10			0	0		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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	768.1	76.1	24.5	72	NNE	14.4	6.42			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.95	760.6	81.5	27.5	38	W	9.5	4.25			0			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.15	765.9	73.4	23.0	70	SW	6.3	2.8			10			0	0		Capt. D. A. da Cunha.
Lisbon			30.03	762.8	70.5	21.4	59	SW	19.1	8.9			1			0	0		The Observatory.

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

RUSSIAN SERIES.

Furnished by 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	761.0	68.7	20.4	55	NNW	11	5			5						Astronomical Obs.
Wilna			29.90	759.4	65.7	18.7	63	N	9	4			2						Astronomical Obs.
Dorpat			29.95	760.8	65.8	18.8	92	WSW	2	1			10						Physical Cabinet.
St. Petersburg			29.79	756.7	70.9	21.6	75	WNW	13	6			7						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kieff			29.61	752.1	75.4	24.1	51	SSE	7	3			0						Physical Cabinet.
Nikolaiev			29.75	755.6	82.0	27.8	40	SSW	18	8			3						Kurdakof.
Kertch			29.72	754.8	81.0	27.2	53	N	18	8			4						Lugorio.
Moscow			29.79	756.6	80.8	27.1	46	S	0	0			2						Meteorological Obs.
Lugan			29.64	752.8	91.9	33.3	20	SE	34	15			5						Meteorological Obs.
Archangel			29.69	754.1	72.3	22.4	95	W	18	8			10						Ogorodnikof.
Tiflis	23.43	722.0	29.73	755.2	90.3	32.4	38	W	4	2			1						Physical Observatory.
Astrakhan			29.85	758.2	90.1	32.3	28	SE	9	4			1						Sebastianof.
Kasan			29.77	756.2	80.2	26.8	53	NNW	9	4			3						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.66	728.0	29.56	750.9	72.3	22.4	63	NNW	7	3			8						Meteorological Obs.
Nikolsk			29.78	756.5	88.0	31.1	38	NNE	7	3			0						
Kasaly																			Bobref.
Tashkend	28.08	713.2	29.65	753.0	89.2	31.8	32	Calm	0	0			0						Michelson.
Barnaul			29.42	747.3	67.8	19.9	84	SSW	9	4			10						Meteorological Obs.
Yeniseisk			29.42	747.2	77.0	25.0	47	ESE	4	2			2						Marks.
Irkutsk																			Usoyef.
Oorga																			Mossin.
Peking, (China)			29.85	758.3	80.2	26.8	75	NE	9	4			7			Blank	Blank		Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.75	755.7	73.2	22.9	91	S	2	1			10						
Nikolaievsk, on the Amoor					66.6	19.2	95	E	9	4			1						

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

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and 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	756.1	98.1	36.7	19	SW	5.2	2.33		0	1			Inap.	Inap.		Royal Observatory.
San Fernando			30.04	763.0	75.0	23.9	59	W	5.8	2.6		0	4		W				The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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	758.5	68.4	20.2	40	NW			4		0			0	0		
Umea			29.94	760.5	70.5	21.4	46	NW			2		6			0	0		
Hernosand			29.99	761.8	69.8	21.0	52	SSW			2		8			0	0		
Stockholm			30.00	762.1	73.8	23.2	35	E			2		3			0	0		
Wisby			30.09	764.3	64.8	18.2	73	NNE			4		0			0	0		
Sub-Series.																			
Upsala			30.02	762.6	73.0	22.8	39	NNW	6.3	2.8			3	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; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall 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	28.63	727.2	30.00	762.0	74.5	23.6	50	NE			1		0			0	0	Clear	The Observatory.
Zurich	28.14	722.4	30.01	762.2	76.5	24.7	49	NE			1		0			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are Barometer, −0.5 mm.; Thermometer, +0.9 cent.; Relative Humidity, −2 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

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			29.86	758.5	69.8	21.0	70	NE	13	6.0			9		N	0	0		
Fao, (Persian Gulf)			29.63	752.6	98.6	37.0		NW			4		0						
Salonica			29.93	760.2	77.7	25.4		N			2		0						
Valona			29.99	761.8	73.0	22.8		NW			3		0						
Varna			29.76	756.0	77.0	25.0		NW			6		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.80	756.8	89.1	31.7	50	W			1		1k		W	0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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			30.10	764.5	64.9	18.3	68	W	2	0.9			0			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.16	766.1	69	20.6		NW	1	0.4		5c	0			0	0	Fair	W. R. Bigg.
*Chatham, N. B			30.10	764.5	63	17.2	62	NW	1	0.4		8c	0	NW		0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island			30.13	765.3	66	18.9	66	S	3	1.3		5k	0			0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			30.25	768.3	67.4	19.7	62	SE			1	10k	0			0	0	Fair	James Smith, M. A.
Dalhousie, N. B			30.15	765.8	58.2	14.6	87	NW			1					0	0	Clear	H. A. Johnson.
Esquimault, B. C																			W. H. Bevis.
Fredericton, N. B			30.19	766.8	63.0	17.2	54	NW	1	0.4		0	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			30.36	771.1	45	7.2	92	N	4	1.8		0	0			0.130	3.30	Clear	James Stewart.
Goderich, Ontario			30.07	763.8	64.4	18.0	89	Calm			0		10n			0.2 5	6.48	Threatening	H. J. Strang, M. A.
Granton, Ontario	28.99	736.3	30.07	763.8	60	15.6		S			2		10n			0.17	4.3	Cloudy	James Grant.
*Halifax, N. B			30.08	764.0	65	18.3	73	NW	3	1.3		0	0			0.580	14.73	Clear	F. Allison, M. A.
*Kingston, Ontario			30.16	766.1	67	19.4	74	S	2	0.9		5c	0			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			30.66	763.5	63.5	17.5	56	E	3	1.3		0	3s		SW	0.25	6.3	Fair	C. H. Rigby.
*Montreal, Quebec			30.16	766.1	62	16.7	68	SE	4	1.8		0	8ck		W	0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.18	766.6	56	13.3	74	NE	4	1.8		10ck	0	W		0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario			30.13	765.3	57	13.9	87	S	2	0.9		5k	5ks	SW	SW	0	0	Cloudy	Rev. R. Mosley.
*Port Dover, Ontario			30.12	765.0	62	16.7	77	NW	3	1.3		8ck	0	SW		0	0	Fair	H. Morgan.
Port Hastings, N. S.			30.09	764.3	64.6	18.1		NW	3	1.3						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.11	764.8	61	16.1	77	NW	1	0.4		8k	0	NW		0	0	Cloudy	M. Payne.
*Quebec, Quebec			30.19	766.8	58	14.4	76	Calm	0	0			10n			0	0	Cloudy	Capt. Ashe, R. N.
St. John, N. B.			30.16	766.1	64	17.8	46	N	5	2.2		1ck	0			0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			30.07	763.8	56	13.3	70	Calm	0	0			10n			Inap.	Inap.	Light rain	K. Stewart.
Stayner, Ontario			30.08	764.0	61	16.1	77	E	5	2.2			8n		NW	0	0	Cloudy	R. J. Cole.
Stratford, Ontario	28.81	731.8	30.07	763.8	58.3	14.6	82	SE	3	1.3		7cs		W		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			30.10	764.5	66	18.9	56	N	1	0.4		0	0			0.32	8.1	Clear	T. C. Hill.
*Toronto, Ontario			30.13	765.3	62	16.7	69	E	2	0.9		2ck	2s			0	0	Fair	Magnetic Observatory.
Woodstock, Ontario			30.10	764.5	62.1	16.7	80	S	9	4.0		3ck	6s	W		0	0	Fine	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			30.06	763.5	56	13.3	94	NE					10n			0	0	Cloudy	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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.			30.15	765.8	64	17.8	62	NW	2	0.9		2cs	0			0	0	Clear	
Alpena, Mich			29.92	760.0	59	15.0	81	S	28	12.5			10n		S	0.34	8.6	Light rain	
Atlantic City, N. J			30.09	764.3	72	22.2	75	NE	20	8.9		5k	0	NE		0	0	Fair	
Augusta, Ga.			30.08	764.0	76	24.4	86	SW	3	1.3		8k	0	W		0.55	14.0	Cloudy	
Baltimore, Md			30.13	765.3	74	23.3	59	NE	8	3.6		0	5s		N	0	0	Fair	
Barnegat, N. J			30.10	764.5	68	20.0	79	NE	10	4.5			10s		NE	0	0	Cloudy	
Benton, Montana	27.49	698.2	30.29	769.4	58	14.4	76	NE	11	4.9		5c	0	W		0	0	Fair	
Bismarck, Dakota	28.50	723.9	30.14	765.5	57	13.9	87	NE	5	2.2			10s			0	0	Threatening	
Boston, Mass			30.14	765.5	69	20.6	43	NE	14	6.3		1cs	Haze			0	0	Hazy	
Breckenridge, Minn			30.20	767.1	56	13.3	87	N	16	7.2		5c	5s	N	NE	0.14	3.6	Cloudy	
Buffalo, N. Y			30.08	764.0	62.5	16.9	64	SE	5	2.2		8c	0	W		0	0	Fair	
Burlington, Vt			30.18	766.6	62	16.7	66	Calm	0	0		2c	0			0	0	Fair	
Cairo, Ill			30.10	764.5	77	25.0	72	Calm	0	0		0	0			0	0	Clear	
Cape Hatteras, N. C			29.99	761.7	77	25.0	86	S	1	0.4			10ks			0.68	17.3	Cloudy	
Cape Henry, Va			30.04	763.0	74	23.3	90	Calm	0	0			10s			2.20	55.9	Cloudy	
Cape Lookout, N. C			30.06	763.5	78	25.6	86	NE	8	3.6		5ck	5ks	NE	NE	0.30	7.6	Cloudy	
Cape May, N. J			30.09	764.3	73	22.8	71	E	17	7.6		8k	0	NW		0	0	Fair	
Charleston, S. C			30.06	763.5	76	24.4	81	N	8	3.6			10s		N	0.22	5.6	Cloudy	
Cheyenne, Wyoming	24.24	615.7	30.18	766.6	57	13.9	68	SW	4	1.8		5c	0			0	0	Fair	
Chicago, Ill			30.01	762.2	72	22.2	67	SW	12	5.4		0	0			0	0	Clear	
Cincinnati, Ohio			30.06	763.5	71	21.7	62	E	3	1.3		0	0			0	0	Clear	
Cleveland, Ohio			30.12	765.0	62.4	16.9	78	E	3	1.3		5c	0	NW		0	0	Fair	
Colorado Springs, Col	24.28	616.7	30.15	765.8	57	13.9	87	N	4	1.8		1cs	0			0	0	Clear	
Corsicana, Tex			30.11	764.8	76	24.4	86	SW	1	0.4		1cs	0			0	0	Clear	
Davenport, Iowa			30.06	763.5	73	22.8	71	SW	12	5.4		2cs	5k	SW	SW	0	0	Fair	
Denison, Tex			30.13	765.3	78	25.6	77	E	3	1.3		0	0			0	0	Clear	
Denver, Col.	24.98	634.5	30.20	767.1	63	17.2	67	N	1	0.4		0	0			0	0	Clear	
Detroit, Mich			30.08	764.0	63	17.2	78	W	4	1.8		0	9s		W	0	0	Cloudy	
Dodge City, Kan	27.60	701.0	29.81	757.2	72	22.2	85	Calm	0	0		5k	0	W		0	0	Fair	
Dubuque, Iowa			29.98	761.5	73	22.8	71	SW	12	5.4		2c	0	W		0	0	Clear	
Duluth, Minn			30.16	766.1	57	13.9	87	Calm	0	0			10s		SW	0.89	22.6	Cloudy	
Eastport, Me			30.14	765.5	62	16.7	56	NW	8	3.6		Haze	Sm'e			0	0	Hazy	
Erie, Pa			30.08	764.0	68	20.0	60	NE	8	3.6		5c	1s	W		0	0	Fair	
Escanaba, Mich			29.96	761.0	56	13.3	93	N	12	5.4			10s		N	1.90	48.3	Cloudy	
Fort Gibson, Indian Ter			30.07	763.8	76	24.4	86	Calm	0	0		2c	0			Inap.	Inap.	Clear	
Fort St. Michael, Alaska																			
Fort Sill, Indian T	28.92	734.6	29.98	761.5	78	25.6	67	Calm	0	0		0	0			0	0	Clear	
Fort Sully, Dakota	28.53	724.6	30.16	766.1	65	18.3	64	N	6	2.7		10k	0	NW		0	0	Cloudy	
Galveston, Tex			30.11	764.8	83	28.3	74	Calm	0	0		2k	0			0.14	3.6	Fair	
Grand Haven, Mich			29.98	761.5	69	20.6	79	SW	19	8.5			10s		W	Inap.	Inap.	Cloudy	
Indianapolis, Ind			30.09	764.3	72	22.2	67	SE	1	0.4		2c	0			0	0	Clear	
Indianola, Tex			30.19	764.5	81	27.2	78	SE	4	1.8		2k	0	SW		0	0	Fair	
Jacksonville, Fla			30.06	763.5	82	27.8	74	S	8	3.6			10s			0	0	Cloudy	
Keokuk, Iowa			30.04	763.0	78	25.6	66	W	6	2.7		8k	0	W		0	0	Fair	
Key West, Fla			30.11	764.8	83.3	28.5	74	SE	3	1.3		1cs	Haze		SE	0	0	Hazy	
Kittyhawk, N. C			30.06	763.5	70	21.1	95	N	4	1.8			10s			0.14	3.6	Cloudy	
Knoxville, Tenn			30.05	763.3	73	22.8	90	SW	2	0.9			Fog			0.07	1.8	Dense fog	
La Crosse, Wis			29.96	761.0	74	23.3	81	N	6	2.7		8k	0	N		0	0	Fair	
Leavenworth, Kan			30.06	763.5	70	21.1	70	S	1	0.4		0	0			0	0	Clear	
Lexington, Ky	29.02	737.1	30.09	764.3	67	19.4	74	NE	4	1.8		0	0			0	0	Clear	
Louisville, Ky			30.08	764.0	70	21.1	75	N	3	1.3		0	0			0	0	Clear	
Lynchburg, Va			30.06	763.5	77	25.0	65	N	2	0.9			10n		N	0.04	1.0	Light rain	
Malone, N. Y			30.10	764.5	61	16.1	55	S	10	4.5		8ck	0	W		0	0	Cloudy	
Manhattan, Kan	29.03	737.3	30.14	765.5	70	21.1	90	Calm	0	0		0	0			0	0	Clear	
Marquette, Mich			30.04	763.0	48	8.9	92	NW	12	5.4			10n		NW	0.79	20.1	Light rain	
Memphis, Tenn			30.10	764.5	74	23.3	95	NW	2	0.9			10s			2.05	52.1	Cloudy	
Milwaukee, Wis			29.99	761.7	68	20.0	79	SW	14	6.3			10ks		W	0	0	Cloudy	
Mobile, Ala			30.08	764.0	83	28.3	70	W	1	0.4		5k	0	SW		0	0	Fair	
Montgomery, Ala			30.07	763.8	79	26.1	82	N	3	1.3		8cs	0	N		Inap.	Inap.	Fair	
Morgantown, W. Va	29.05	737.9	30.07	763.8	66	18.9	78	N	3	1.3		0	Haze			0	0	Clear	
Mt. Washington, N. H	23.98	609.1	30.34	770.6	44	6.7	58	NW	4	1.8		0	0			0	0	Clear	
Nashville, Tenn			30.04	763.0	80	26.7	70	NW	1	0.4		5k	0	NW		2.23	56.6	Fair	
New Haven, Conn			30.13	765.3	70	21.1	52	NE	10	4.5		5c	5ks		NE	0	0	Cloudy	
New London, Conn			30.15	765.8	71	21.7	75	NE	4	1.8		2c	2k	W	W	0	0	Fair	
New Orleans, La			30.09	764.3	83	28.3	74	W	4	1.8		4ck	0	N		Inap.	Inap.	Fair	
Newport, R. I			30.14	765.5	70	21.1	49	NE	10	4.5		0	0			0.04	1.0	Clear	
New York, N. Y			30.14	765.5	71	21.7	49	NE	10	8.5		2k	0	W		0	0	Clear	
Norfolk, Va			30.07	763.8	75	23.9	76	E	4	1.8		5cs	5ks		E	0.04	1.0	Cloudy	
North Platte, Neb			29.69	754.1	73	22.8	71	NW	4	1.8		0	0			0	0	Clear	
Omaha, Neb	27.24	691.9	30.02	762.5	74	23.3	95	SW	6	2.7		2ck	0	W		0	0	Clear	
Oswego, N. Y	28.99	736.3	30.13	765.3	64	17.8	68	SE	6	2.7		8cs	Haze	NW		0	0	Fair	
Pembina, Dakota			30.32	770.1	47	8.3	88	NW	4	1.8			10s		NW	0.21	5.3	Cloudy	
Philadelphia, Penn			30.13	765.3	71	21.7	85	E	17	7.6		0	2ks			0	0	Clear	
Pike's Peak, Colorado	18.13	460.5	30.34	770.6	37.5	3.1	50	N	13	5.8		0	5s			0.07	1.8	Clear	
Pittsburgh, Penn			30.07	763.8	65	18.3	78	E	4	1.8		Sm'e	0			0	0	Clear	
Port Huron, Mich			30.08	764.0	57	13.9	81	W	6	2.7			10s		W	0	0	Cloudy	
Portland, Me			30.19	766.8	64	17.8	52	NE	8	3.6		0	Haze			0	0	Clear	
Portland, Oregon			30.02	762.5	61	16.1	82	Calm	0	0			10s			0	0	Cloudy	
Punta Rassa, Fla			30.11	764.8	80.0	26.7	82	E	5	2.2		8cs	0			0.26	6.6	Fair	
Rochester, N. Y			30.11	764.8	63	17.2	67	SW	4	1.8		8c	Haze	W		0	0	Fair	
Salt Lake City, Utah	25.73	653.5	30.06	763.5	72	22.2	45	Calm	0	0		5k	0	E		0.02	0.5	Fair	
Sandy Hook, N. J			30.12	765.0	70	21.1	66	NE	17	7.6		2k	2ks	NW	NE	0	0	Fair	
San Diego, Cal			29.95	760.7	65	18.3	90	Calm	0	0		0	5s			Inap.	Inap.	Fair	
San Francisco, Cal			29.98	761.5	54	12.2	86	SW	12	5.4			Fog			0	0	Foggy	
Santa Fé, N. M			30.04	763.0	58	14.4	81	E	2	0.9		5c	0			0.21	5.3	Fair	
Savannah, Ga.	23.52	597.4	30.10	764.5	73	22.8	100	N	4	1.8			10ks		NW	0.11	2.8	Threatening	
Shreveport, La			30.13	765.3	79.5	26.4	84	NE	2	0.9		8ck	0	SW		0	0	Fair	
Smithville, N. C			30.06	763.5	74	23.3	90	N	8	3.6			10ks		SW	1.78	45.2	Cloudy	
Springfield, Mass.			30.16	766.1	71	21.7	57	N	4	1.8		2ck	0			0	0	Clear	
St. Louis, Mo			30.10	764.5	75	23.9	72	SW	4	1.8		0	0			0	0	Clear	
St. Marks, Fla			30.08	764.0	70	26.1	82	W	5	2.2		5cs	2ks	E	SE	0	0	Fair	
St. Paul, Minn																Blank	Blank		
St. Paul's Island, Alaska			29.62	752.3	42	5.6	91	SW	23	10.3			10s			0.87	22.1	Cloudy	
Thatcher's Island, Mass			30.16	766.1	64	17.8	67	NE	17	7.6		0	0			0	0	Clear	
Toledo, Ohio			30.06	763.5	65	18.3	78	SW	6	2.7		2ck	2ks	SW	SW	0	0	Fair	
Tucson, Arizona	27.59	700.8	30.18	766.6	79	26.1		S				5c	0			0.20	5.1	Fair	
Tybee Island, Ga			30.08	764.0	74	23.3	90	NE	8	3.6			10ks		NE	0.46	11.7	Cloudy	
Vicksburg, Miss			30.12	765.0	80.5	26.9	78	E	4	1.8		2c	0			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.	24.45	621.0	29.93	760.2	59	15.0	48	S	6	2.7	.....	10c	0	SW	.....	0	0	Cloudy	
Washington, D. C.	.....	.....	30.12	765.0	73.5	23.1	63	N	6	2.7	.....	1ck	5s	NW	W	0	0	Fair	
Wilmington, N. C.	.....	.....	30.08	764.0	73	22.8	95	Calm	0	0	.....	.....	10n	.....	.....	2.48	63.0	Light rain	
Wood's Holl, Mass.	.....	.....	30.15	765.8	71	21.7	61	NE	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Wytheville, Va.	27.49	698.2	29.88	758.9	68	20.0	90	E	4	1.8	.....	.....	10ks	.....	.....	0.13	3.3	Threatening	
Yankton, Dakota	28.84	732.3	30.07	763.8	71	21.7	80	N	7	3.1	.....	2cs	0	NW	.....	0.31	7.9	Clear	
Yuma, Arizona	.....	.....	29.85	758.2	85	29.4	.....	E	.....	.....	.....	2c	8s	W	W	0	0	Cloudy	
Sub-Series.																			
P'nte-a-Pitre, G'd'l'pe, W. I.	.....	.....	29.98	761.5	83	28.3	83	E	.....	.....	.....	2k	8ks	.....	.....	1.28	32.5	Cloudy	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.16	766.1	82	27.8	79	Calm	0	0	.....	2c	2s	.....	NE	0	0	.....	James Hall.
St. Georges, Bermudas	.....	.....	30.24	768.1	83.0	28.3	77	SSW	10.0	4.5	.....	0	2k	.....	.....	0	0	Clear	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	67	19.4	90	S	3.0	1.3	.....	5c	5k	.....	.....	0.27	6.9	Dull	C. Partridge.
Paramaribo, D. Guiana S.A.	.....	.....	30.03	762.7	80	26.7	87	E	.....	.....	2	6k	6ks	E	.....	0.190	4.83	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.11	764.7	.....	.....	84.2	29	.....	NE	.....	.....	.....	.....	.....	.....	.....	0.315	8.00	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.18	639.6	.....	.....	65.0	18.3	80	N	1	0.4	.....	3c	3ks	.....	.....	0	0	Fair	Thomas Herran
York Factory, B. A.	.....	.....	29.99	761.7	50	10.0	72	E	7	3.1	.....	0	6s	.....	N	0.10	2.5	.....	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.08	764.0	77	25.0	90	NE	.....	.....	4	.....	.....	.....	.....	0.10*	2.5*	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Addie Faller, off Cape Cod.	SSE	5	30.19	766.8	68	20.0	.....	NNE	.....	.....	5	.....	Haze	.....	.....	Short sea.	.....	Haze, smoke.	Capt. James Jorgenren.
Steamer Nova Scotian, at Liverpool.	.....	.....	30.16	766.1	72	22.2	.....	NW	.....	.....	2	.....	.....	.....	.....	.....	.....	Fair	Capt. Ritche.

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, 1,109 (?) 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.; Morgantown 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. *Rainfall from 1 a. m. until 4 a. m. of the 22nd.

UNITED STATES (NAVAL) SERIES.

By authority of the Secretary of the Navy.

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

Note.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

Collated at the Office of the CHIEF SIGNAL OFFICER OF THE ARMY, Washington, D. C.

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

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and s'mo, 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 JULY 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			30.00	762.0	82.9	28.3	58	NNE			1		0			0	0	Clear	Charnot.
Algiers			30.10	764.4	86.0	30.0	55	NNW			2		0			0	0	Clear	Peter.
La Calle			30.02	762.4	77.9	25.5	79	NE			2		0			0	0	Clear	Kunts.
Tunis			30.00	763.5	96.4	35.8	22	ESE			3		0			0	0	Clear	Jacques.
Sfax			30.16	766.0	86.7	30.4	51	SE			3		1			0	0	Clear	Chauvey.
Saida			30.02	762.6	89.6	32.0		NNE			2		1			0	0	Clear	Millot.
Tebessa			30.11	764.9	94.1	34.5		NW			2		1			0	0	Clear	Colin.
Geriville			30.08	764.0	87.3	30.7	33	SSE			2		2			0	0	Clear	Buard.
Laghouat			30.13	765.4	102.2	39.0		S			1		0			0	0	Clear	Guyot.
Biskra			30.10	764.5	95.0	35.0	39	NE			1		0			0	0		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	762.1	77.7	25.4	53	SW			2		3			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.98	761.4	70.9	21.6	50	W			1		2			0	0		Dr. Wierzbiski.
Eperies			29.89	759.1	71.6	22.0	50	N			3				S	0	0		Julius Mikolik.
Gratz	28.78	731.1	29.94	760.5	74.1	23.4	57	SW			3		1			0	0		Andreas Rospini.
Hermannstadt	28.48	723.3	29.86	758.4	66.9	19.4	55	WNW			3		5			0.055	1.40		Prof. Reissenberger.
Kremsmünster	28.70	729.0	29.99	761.8	72.3	22.4	46	E			3		0			0	0		Prof. C. Wagner.
Lemberg			29.77	756.1	60.4	15.8	90	N			3		10			0.420	10.0		Dr. T. Stanecki.
Nylregyhaza																			Habsuda Daniel.
Pola			30.00	763.5	77.7	25.4	63	WSW			1		18			0	0		I.R.Hydrographic Office.
Szegedin			29.92	760.0	75.2	24.0	51	NE			2		4			0	0		Karl Stancel.
Trieste			30.07	763.8	81.0	27.2	46	Calm			0		0			0	0		Prof. V. Farolfi.
Vienna			29.99	761.8	77.0	25.0	40	NNW			2		2			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not 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 J. C. Houzeau, 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			29.83	757.6	81.0	27.2	40	S			0	..e	..ck	WSW	SW	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			30.08	764.0	58.2	14.6		NW	12	5.4			6			0.660	16.76	*D. clouds	William Boswell.
Ardrossan																			William McNeil.
Armagh, Observatory			30.11	764.8	61.9	16.6		NNW	5	2.2			10					Gloomy	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.14	765.5	63.7	17.6		NW			1		8					*D. clouds	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	83.0	28.3		NE			1		6					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			29.93	760.2	66.0	18.9		N			1		3					Thunder	H. Todd.
Cardington			29.95	760.7	73.0	22.8		NE			1		6			Blank	Blank	*D. clouds	John McLaren.
Carlisle			30.01	762.2	61.4	18.0		N			3		8			0	0	*D. clouds	T. Bel, for J. Carmell.
Chatham, School M. E			29.91	759.7	61.0	16.1		Calm			0		10					Raining	Capt. J. Fellowes, R.E.
Dartmoor	28.62	726.9	30.09	764.3	65.6	18.7		N			4		0					Blue sky	R. E. Power.
Donaghadee			30.08	764.0	62	16.7		N			5		3					Blue sky	J. Mac Gowan.
Dover			29.88	758.9	74	23.3		NNW			3		6					½ clouded	J. Costello.
Eccles (near Manchester.)			29.95	761.0	68.8	20.4		NW	2.4	1.1			5					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.01	762.2	66.0	18.9		NNW			6		4					*D. clouds	The Staff.
Fort Napier, (Natal)	27.84	707.1	30.08	764.0	73.0	22.8		E			2		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.05	763.3	80	26.7		W			2		7					*D. clouds	
Galway, Queen's College			30.22	767.6	70	21.1		W			4		10					Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.94	760.5	80.0	26.7		W			6		0					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			30.00	762.0	65.5	18.6		W			1		5					Fine	Lewis Stuart.
Great Yarmouth			29.90	759.4	61	16.1		E			4		8					Raining	G. T. Watson.
Greenwich, Royal Ob'y			29.93	760.2	63.1	17.3		N			1		10					Raining	The Staff, for G. B. Airy
Guernsey			29.94	760.5	70.5	21.4		NNE			2		0					Blue sky	Dr. S. E. Hoskins.
Helston			29.97	761.2	71	21.7		N			6		0			0	0	Blue sky	M. P. Moyle.
Holyhead			30.06	763.5	59	15.0		NNW			0		0					Blue sky	John Tilston.
Kew, Observatory			29.93	760.2	65.8	18.8		N	9	4.0			8					*D. clouds	The Staff.
Kingstown			30.10	764.5	61	16.1		N			4		8					Overcast	George Mitchell.
Leicester Museum			29.97	761.2	69.4	20.8		NW			2		9			Blank	Blank	Overcast	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			30.06	763.5	82.0	27.8		NW			1		0						Corp'l F. Fraser, A. M. C.
Nairn			30.07	763.8	60	15.6		SW			1		2					¼ clouded	W. D. Penny.
Nassau, (Bahamas			30.10	764.5	85.0	29.4		E			0		7					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.95	760.7	68.8	20.4		NNE			4		3k, ks		N			*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.96	761.0	68.1	20.1		NW			3-4		1					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Ob's'y			29.91	759.7	70	21.1		NNW			2		3					Blue sky	J. Lucas.
Plymouth			29.97	761.2	74.5	23.6		NNW			3		1					*D. clouds	John Merrifield.
Roche's Point			30.12	765.0	64	17.8		N			4		5					Fine	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, Jersey			29.90	759.4	74.4	23.6		NE			4		2					¼ clouded	A. P. Amy.
Sandwick Manse (Orkneys)			30.08	764.0	56.1	13.4		W	12	5.4			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery Turkey			29.85	758.2	77.6	25.3		SW			2		4			Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.96	761.0	67.4	19.7		NNE			1		4			0.228	5.79	Blue sky	W. F. Cooper.
Silloth Rectory			30.04	763.0	73.4	23.0	64	SE			2		2			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.97	761.2	65.1	18.4		NE			1		5						Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			30.08	764.0	60	15.6		Calm			0		10					Overcast	John Smith.
Stratfield Turgiss			29.94	760.5	72.4	22.4		N			1		4					*D. clouds	Rev. Charles H. Griffith.
Thurso			30.06	763.5	60	15.6		N			1		4					*D. clouds	John Trotter.
Truro, Royal Institution			30.03	762.7	71	21.7		N			6		3					*D. clouds	W. Newcombe.
Valencia, Observatory			30.17	766.3	59.8	15.4		NNW	11	4.9			10					*D. clouds	The Staff.
Sub-Stations.																			
Calf of Man, Isle of Man					55	12.8		N			6		0						Thomas Dawson.
Cape Good Hope, Ob's'y			29.92	760.0	66.0	18.9	67	WNW	17	7.6		0	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			30.12	765.0	60.0	15.6	71	W			1		0			0	0		Francis Abbott, F.R.A.S.
Leith, Restaurig Park			30.07	763.8	61.9	16.6		E			2					0.34	8.6	Fine	Andrew Gibb.
Mauritius, Observatory			30.22	767.6				ESE	24.1	10.8						0.10	2.5		C. Meldrum
Melbourne, Observatory			30.29	769.4	39.2	4.0	92	N	6	2.7			0			0	0	Fine, h'y dew	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.00	764.3	59	15.0		SW			3	5	0	W		0.1	2.5		J. Youngclause.
North Unst, (Shetland Is.)			30.03	762.7	53	11.7		W			4	3	8	W					Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. 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			30.05	763.2	70.3	21.3	51	S			2		0						
Fanöe																			
Godthaab, Greenland			29.87	758.7	36.9	2.7		S			6		10						
Stykkisholm, (Iceland			29.30	744.2	50.9	10.5	91	SW			8		8						
Thorshavn, (Faröe)			29.88	758.9	54.7	12.6	77	SW			5		10						
Vestervig			30.00	761.9	69.1	20.6	68	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			29.93	760.3	78.8	26	52	SW			3		10n, k		SW	0	0	Covered	Normal School.
Amiens			29.83	757.7	90.7	32.6	37	N			3		0			0	0	Clear	Normal School.
Avignon			30.05	763.2	86.7	30.4	36	S			3		0			0	0	Clear	Normal School.
Bar-sur-Seine			29.89	759.2	89.6	32.0	28	NW			2		2			0	0	Slightly cl'dy	C. Saillard.
Beaumette, (near Angers)			29.84	757.8	91.8	33.2	39	S	5.8	2.6			2		SSW	0	0	Slightly cl'dy	Beaumette Observatory
Beauvais			29.87	758.6	85.6	29.8	38	Calm			0		8		SW	0	0	Very cloudy	Normal School.
Besançon			29.94	760.1	88.5	31.4	36	SSW			6		0			0	0	Clear	Normal School.
Bourg en Bresse			30.07	763.7	88.3	31.3	32	S			4		0					Clear	Normal School.
Bourges			30.02	777.7?	86.0	30	47	SSW			2		0			0	0	Clear	Normal School.
Brest			29.88	759.0	71.4	21.9	69	NE			4		1k		NE	0	0		Naval Observatory.
Carcassonne			30.01	762.3	75.6	24.2	69	E			4		5		W	0	0	Cloudy	Normal School.
Caen			29.91	759.6	75.0	23.9	60	NW			4		10		ENE	0	0	Covered	Normal School.
Chartres			29.87	758.7	75.2	24	67	SW			2		10			0	0	Covered	Normal School.
Clermont			29.87	758.8	88.3	31.3	45	SE			2		2		SW	0	0		Puy de Dome Obs'y.
Commercy			29.87	758.6	81.1	27.3	42	WSW			4		2ck		WSW	0	0	Slightly cl'dy	Normal School.
Commune de Greasque*			30.13	765.2	85.3	29.6	33	SW			4		2		SW	0	0		M. Kina.
Grenoble			29.95	760.7	84.6	29.2	73	NW			4		0			0	0	Clear	Normal School.
La Roche-sur-Yon			29.86	758.4	79.2	26.2	52	S			4		5		NE	0	0	Cloudy	Normal School.
Le Mans			29.85	758.3	81.9	27.7	69	S			2		5		S	0	0	Cloudy	Normal School.
Lons-Le-Saulnier			29.93	760.1	84.0	28.9	41	SW			4		0			0	0	Clear	Normal School.
Mâcon			30.14	765.5	84.2	29	52	SSE			4		0			0	0	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			29.84	757.8	84.4	29.1	40	NNE			2		8		E	0	0	Almost cov'd	Normal School.
Nismes			30.07	763.7	87.4	30.8	49	S			2		0			0	0	Clear	Normal School.
Orleans			29.87	758.7	88.2	31.2	30	W			1		8		W	0	0	Very cloudy	Normal School.
Paris, Observatory			29.87	758.7	84.0	28.9	30	NW			1		10			0	0	Covered	National Observatory.
Parthenay			29.92	760.0	76.6	24.8	83	S			2		2		S	0	0	Slightly cl'dy	Normal School.
Privas			30.00	762.0	85.1	29.5		W			2		2		W	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			29.95	760.7	79.3	26.3	55	SW			4		8		NE	0	0	¾ covered	Naval Observatory.
Rouen			29.86	758.4	83.8	28.8	37	W			1		8		SW	0	0	Very cloudy	Normal School.
Saint Lo			29.64	752.8	71.6	22	41	S			9		9		S	0	0		Normal School.
Tarbes	28.87	733.3	29.91	759.6	73.4	23		E			3		0			0	0	Clear	Normal School
Villefranche			30.01	762.3	91.4	33	45	SE			2		2			0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.8	81.0	27.2													L'Abbé Marchesi.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.26	768.5	76.6	24.8	54	SSW	2	1			4			0	0		—. Falguère.
Montsouris, Paris			29.88	758.9	83.7	28.7	28	NW			1		10		SW	0	0		Montsouris Observ'tory.
Perpignan			30.00	761.0	78.1	25.6	72	E	7.4	3.33			8		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																0	0		M. Baylac.
Pic du Midi, (Plantade)																0	0		General de Nansouty.
Saint Maur, (near Paris)			29.88	758.9	84.0	28.9	32	NW			1		10			0	0	Cloudy	E. Renou.
Toulouse			30.00	762.1	84.0	28.9	51	SSE			4		0			0	0		Toulouse Observatory
Tours			29.87	758.7	89.8	32.1	30	SSW			2		6		WSW	0	0		C. Marquet.
Versailles, (near Paris)			29.80	759.3	84.9	29.4	36	SE			1		10			0	0	Lightly cov'd	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai																			H. Le Lec, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Clermont, 388 m., or 1,272.9 ft; Commune de Greasque, 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * 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.
Hamberg			30.00	762.0	76.5	24.7	46	ESE			3		3	SE		0	0		Prof. T. Hon.
Berlin			30.07	763.7	77.9	25.5	48	SE			1		0			0	0		Prof. Arndt.
Breslau			30.10	764.6	74.5	23.6	38	NE			6		1			0	0		Dr. P. Neugebauer.
Carlsruhe			29.88	758.9	83.8	28.8	46	S			1		0			0	0		A. Senz.
Cassel			29.94	760.4	82.0	27.8	37	SE			3		1	SW		0	0		Dr. H. Möhl.
Cinden			29.94	761.4	77.2	25.1	52	E			8		6			0	0		Prof. Prestel.
Frankfort on the Main			29.95	760.6	83.5	28.6	23	ESE			2		2			0	0		Physical Society.
Friedrichshafen			29.97	761.1	73.4	23.0	69	S			1		1			0	0		M. Wilhelm.
Hamburg			29.98	761.5	77.2	25.1	52	SE			2		4cs			0	0	Fine	Captain F. Hegemann.
Kiel			29.98	761.5	74.8	23.8	56	ENE			2		8			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			30.01	762.2	69.1	20.6	60	N			2		2			0	0		Prof. E. Luther.
Koslin			30.13	765.3	70.5	21.4		N			1		0			0	0		H. Müller.
Leipsic			30.01	762.2	82.8	28.2	34	SE			1		6			0	0		Prof. Bruhns.
Memel			30.01	762.2	65.8	18.8	58	NW			4		1ck			0	0		Reinbrecht & Skalweit.
Münster			29.94	760.5	79.3	26.3	54	SW			2		0			0	0		Prof. E. Heis.
Neuinhrwasser			30.08	764.1	65.5	18.6	66	NNE			3		0			0	0		A. Lothes.
Posen			30.01	762.2	76.1	24.5	41	N			1		0			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.89	759.3	86.0	30.0	38	NE			1		2	NW		Inap.	Inap.		Dr. Schur.
Stuttgart			29.87	758.8	84.2	29.0	36	SE			1		0			0	0		Prof. Schoder.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.85	758.3	83.3	28.5	42	S			6		4			0	0		Prof. Flesch.
Wustrow, Naval School			30.13	765.3	66.6	19.2	77	ESE			2		0			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	86.7	30.4		SW										Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.02	762.6	78.8	26.0	42	SW	1.8	0.8			2			0	0		
Padua			30.02	762.6	78.6	25.9	59	SE	4.9	2.2			6	WSW		0	0		
Vicenza			30.02	762.4	80.2	26.8	48	S	3.8	1.7			2	W		0	0		
Verona			29.97	761.2	80.6	27.0	41	E			1		0			0	0		
Bergamo	28.70	728.9	29.95	760.8	81.3	27.4	44	S			2		1			0	0		
Domodossola	28.98	736.2	29.97	761.2	80.1	26.7	55	S			4		0			0	0		
Milan			30.00	762.0	88.5	31.4	45	SW			2		2	ENE		0	0		
Pavia			30.02	762.4	81.0	27.2	45	E			2		0			0	0		
Moncalieri			30.00	762.1	82.0	27.8	52	SSW	3.1	1.4			3	S		0	0		
Mondovi	28.17	715.4	30.00	762.0	78.8	26.0	54	NE			2		1			0	0		
Porto Maurizio			30.09	764.3	82.4	28.0	68	SW			2		5			0	0		
Genoa			30.06	763.4	80.1	26.7	62	SW	3.8	1.7			0			0	0		
Piacenza			30.03	762.8	80.6	27.0	44	NE	1.8	0.8			0			0	0		
Parma			30.00	762.1	83.1	28.4	43	N			4		1	NW		0	0		
Bologna			30.10	764.4	84.2	29.0	41	E			1		0			0	0		
Florence			30.04	762.1	86.0	30.0	38	W			2		1			0	0		
Leghorn			30.05	763.3	82.2	27.9	62	S	6.3	2.8			2			0	0		
Siena	28.85	732.9	30.01	762.2	81.7	29.3	41	SW	0.7	0.3			4	N		0	0		
Urbino	28.56	725.4	30.05	763.2	79.2	26.3	56	NE			4		3			0	0		
Ancona			30.04	763.1	78.6	25.9	55	SE			4		1			0	0		
Grosseto			29.99	761.8	84.2	29.0	55	SE			6		3	NW		0	0		
Rome			30.07	763.7	85.3	29.6	50	SW	5.6	2.5			1			0	0		
Naples, O. U.			30.08	764.1	84.9	29.4	51	SW			4		1	NW		0	0		
Lecce			30.07	763.6	77.7	25.4	49	N	15.4	6.9			0			0	0		
Cosenza			30.06	763.5	87.4	30.8	64	NW	19.9	8.9			3			0	0		
Riposto, (Sicily)			30.02	762.6	82.4	28.0	51	E			2		2	S		0	0		
Palermo			30.03	762.7	80.1	26.7	68	NE	6.9	3.1			1			0	0		
Caltanissetta	28.12	714.2	30.02	762.5	81.5	27.5	23	S			1		2			0	0		
Sub-Series.																			
Naples, S. R			30.10	764.5	83.1	28.4	56	SW	1.3	0.6			2	E		0	0		Prof. F. Brioschi.
Pesaro			30.11	764.8	76.1	24.5	67	E	13.0	5.81			0						L. Guidi.

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			29.88	759.0	79.7	26.5		NE			2								
Groningen			29.85	758.1	76.1	24.5		ESE			2								
Helder			29.90	759.4	70.5	21.4		ENE			2		2					Light cloudy	
Utrecht			29.84	757.8	81.7	27.6	39	SSE			2								

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	64.9	18.3	54	SSW	1.1	0.5			3			0	0		
Brono			29.99	761.7	52.5	11.4	88	SW	11	5			10			0.118	3.0	Light rain	
Christiania			30.01	762.2	67.6	19.8	57	WSW	1.3	0.6			3			0	0		
Tromsö			29.86	758.5	63.0	17.2	99	Calm	0	0			3			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 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,)			30.31	769.9	74.1	23.4	73	ENE	9.8	4.39			4			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.01	762.3	79.3	26.3	38	WSW	4.6	2.08			0			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.13	765.3	74.7	23.7	59	SW	6.9	3.1			9			0	0		Capt D. A. da Cunha.
Lisbon			30.06	763.5	72.3	22.4	55	SW	17.4	7.8			1			0	0		The Observatory.

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

RUSSIAN SERIES.

Furnished by 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			29.93	760.1	71.1	21.7	54	NW	13	6			3						Astronomical Obs.
Wilna			29.85	758.2	70.5	21.4	66	N	7	3			10						Astronomical Obs.
Dorpat			29.98	761.4	72.7	22.6	50	NNE	4	2			3						Physical Cabinet.
St. Petersburg			29.96	760.9	73.8	23.2	45	NE	7	3			2						Central Physical Obs.
Knopio																			Ch. Forsten.
Kieff			29.57	751.1	68.4	20.2	64	N	7	3			7						Physical Cabinet.
Nikolaiev			29.70	754.3	78.8	26.0	50	SW	18	8			5						Kurdakof.
Kertch			29.78	756.3	74.5	23.6	39	WNW	7	3			9						Lagorio.
Moscow			29.83	757.6	80.1	26.7	57	S	4	2			8						Meteorological Obs.
Lugan			29.57	751.1	81.3	27.4	53	WSW	18	8			10			Blank	Blank		Meteorological Obs.
Archangel			29.99	761.7	55.2	12.9	96	N	27	12			10						Ogorodnikof.
Tiflis	28.29	718.5	29.57	751.1	95.2	35.1	36	E	9	4			4						Physical Observatory.
Astrakhan			29.80	757.0	88.3	31.3	36	ESE	20	9			7						Sebastianof.
Kasan			29.85	758.2	82.9	28.3	56	WNW	2	1			7						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.80	731.5	29.71	754.6	68.7	20.4	81	W	4	2			8						Meteorological Obs.
Nukuss			29.77	756.1	85.8	29.9	43	W	4	2			0						
Kasaly																			Bobrof.
Tashkend	28.11	714.0	29.69	754.2	85.3	29.6	28	Calm	0	0			0						Michelson.
Barnaul			29.47	748.5	70.0	21.1	83	Calm	0	0			9						Meteorological Obs.
Yeniseisk			29.33	745.0	81.5	27.5	45	WSW	2	1			0						Marks.
Irkutsk																			Usoizef.
Oorga																			Mossin.
Peking, (China)			29.98	761.4	74.1	23.4	79	NE	9	4			9			Blank	Blank		Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.91	759.7	75.9	24.4	74	NW	18	18			0						
Nikolaievsk, on the Amoor					61.2	16.2	98	NW	22	10			2						

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.42 m., or 1,005.22 ft.; Tashkend 494.27 m., or 1,621.32 ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk 592.07 m., or 1,942.27 ft.; Oorga, 1,281.06 m., or 4,202.69 ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and 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			29.92	759.9	88.7	31.5	22	SW	14.2	6.33		0	0			0	0	Clear	Royal Observatory.
San Fernando			30.06	763.4	74.1	23.4	71	W	9.2	4.1		0	0						The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			30.01	762.3	68.0	20.0	43	S			2		2			0	0		
Umea			30.03	762.8	70.5	21.4	55	SW			2		7			0	0		
Hernosand			30.02	762.6	66.6	19.2	56	SSW			4		2			0	0		
Stockholm			30.05	763.3	76.1	24.5	30	ESE			2		1			0	0		
Wisby			30.10	764.5	66.9	19.4	63	NE			2		3			0	0		
SUB-SERIES.																			
Upsala			30.02	762.4	79.7	26.5	38	SSE	10.3	4.6			5		WSW	0	0		Dr. Hildebrandsson.

NOTE.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall 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	28.59	726.1	29.92	760.0	86.5	30.3	34	S	.....	.....	3	.....	0	.....	.....	0	0	Clear	The Observatory.
Zurich	28.39	721.2	29.93	760.2	86.9	30.5	44	W	.....	.....	1	.....	1	.....	.....	0	0	Clear	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note—For Geneva the corresponding departures from the normal values are Barometer, —1.6 mm.; Thermometer, +7.6 cent.; Relative Humidity, —18 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

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

Constantinople	.....	.....	29.91	759.8	74.3	23.5	63	SSW	6	2.5	.....	.....	5	.....	NNE	0	0	.....	
Fao, (Persian Gulf)	.....	.....	29.65	753.0	98.6	37.0	.....	NW	.....	.....	4	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.96	761.0	81.3	27.4	.....	W	.....	.....	2	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	30.03	762.7	73.8	23.2	.....	NW	.....	.....	2	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	29.80	757 0	80.6	27.0	.....	NE	.....	.....	3	.....	2	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.77	756.1	90.0	32.2	47	WSW	.....	.....	2	.....	1k	.....	SW	0	0	.....	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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

Bathurst, N. B	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.99	761.7	58	14.4	.....	NE	4	1.8	.....	.....	10s	.....	NE	0.02	0.5	Cloudy	W. R. Bigg.
*Chatham, N. B	.....	.....	30.00	762.0	60	15.6	91	Calm	0	0	.....	2k	8ks	SW	SW	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.06	763.5	64	17.8	63	SE	3	1.3	.....	.....	8ks	.....	.....	0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.96	761.0	57.7	14.3	83	NE	.....	.....	1	.....	10n	.....	.....	0	0	Unsettled	James Smith, M. A.
Dalhousie, N. B	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. A. Johnson.
Esquimault, B. C	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Bevis.
Fredericton, N. B	.....	.....	30.03	762.7	62.8	17.1	69	SE	5	2.2	.....	.....	10s	.....	.....	0.79	20.1	Stormy	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.28	769.1	51	10.6	93	NW	2	0.9	.....	2cs	2s	NW	NW	0	0	Fair	James Stewart.
Goderich, Ontario	.....	.....	30.09	764.3	58.1	14.5	85	N	.....	.....	2	4k	0	N	.....	0.267	6.78	Fine	H. J. Strang, M. A.
Granton, Ontario	28.96	735.6	30.05	763.3	55.5	13.1	.....	N	.....	.....	2	1ck	0	S	.....	0	0	Clear	James Grant.
*Halifax, N. S.	.....	.....	30.02	762.5	63	17.2	70	SE	13	5.8	.....	2cs	0	.....	.....	0	0	Fair	F. Allison, M. A.
*Kingston, Ontario	.....	.....	29.96	761.0	60	15.6	82	NE	18	8.0	.....	8ck	2s	NW	.....	0.03	0.8	Cloudy	S. Woods, M. A.
Little Glace Bay, N. S.	.....	.....	30.04	763.0	61.8	16.6	78	NW	5	2.2	.....	4c	0	NW	.....	0	0	Fair	C. H. Rigby.
*Montreal, Quebec	.....	.....	29.92	760.0	58	14.4	88	NE	10	4.5	.....	8k	2s	NE	E	0.01	0.3	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.96	761.0	59	15.0	73	N	8	3.6	.....	10k	0	N	.....	0.03	0.8	Cloudy	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.07	763.8	58	14.4	82	N	8	3.6	.....	0	0	.....	.....	0.21	5.3	Clear	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	30.01	762.2	58	14.4	82	N	13	5.8	.....	10k	0	NW	.....	0.13	3.3	Fair	H. Morgan.
Port Hastings, N. S.	.....	.....	30.06	763.5	64.0	17.8	.....	Calm	0	0	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
*Port Stanley, Ontario	.....	.....	30.04	763.0	58	14.4	82	NW	5	2.2	.....	5k	0	N	.....	0.08	2.0	Fair	M. Payne.
*Quebec, Quebec	.....	.....	29.99	761.7	55	12.8	87	NE	20	8.9	.....	.....	10n	.....	SE	0.02	0.5	Cloudy	Capt. Ashe, R. N.
St. John, N. B.	.....	.....	30.04	763.0	59	15.0	70	Calm	0	0	.....	.....	10ks	.....	.....	0.02	0.5	Cloudy	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.06	763.5	59	15.0	82	N	14	6.3	.....	5k	0	N	.....	0.37	9.4	Fair	K. Stewart.
Stayner, Ontario	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.18	4.6	.....	R. J. Cole.
Stratford, Ontario	23.76	730.5	30.01	762.2	56.9	13.8	96	N	10	4.5	.....	7k	0	N	.....	0.121	3.08	Fine	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.07	763.8	63	17.2	72	NW	3	1.3	.....	8c	0	W	.....	0	0	Fair	T. C. Hill.
*Toronto, Ontario	.....	.....	30.01	762.2	59	15.0	72	N	11	4.9	.....	5cs	5ks	NE	NE	0.13	3.3	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.05	763.3	58.0	14.4	76	N	5	2.2	.....	2ck	6ks	NE	.....	0	0	Fine	J. Montgomery
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	30.29	769.4	51	10.6	72	SE	.....	.....	.....	.....	10n	.....	.....	Insp.	Insp	Heavy rain	John Delaney.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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.			29.83	757.7	61	16.1	100	N	1	0.4			10n			1.42	36.1	Light rain	
Alpena, Mich			30.10	764.5	56	13.3	80	NW	10	4.5		0	0			0	0	Clear	
Atlantic City, N. J.			29.86	758.4	68	20.0	94	SW	8	3.6		2cs	2s	NW	SW	0	0	Fair	
Augusta, Ga.			30.00	762.0	82	27.8	79	Calm	0	0		0	0			0	0	Clear	
Baltimore, Md			29.91	759.7	76	24.4	72	W	4	1.8			10n		SW	Inap.	Inap.	Light rain	
Barnegat, N. J.			29.84	757.9	79	26.1	78	SW	15	6.7		8k	0	W		0	0	Cloudy	
Benton, Montana	27.31	695.7	30.19	766.8	60	15.6	81	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.45	722.6	30.08	764.0	58	14.4	42	NE	7	3.1		5ck	2s	NW		Inap.	Inap.	Fair	
Boston, Mass			29.85	758.2	61	16.1	100	S	8	3.6			10n		S	0.95	24.1	Light rain	
Breckenridge, Minn			30.23	767.8	55	12.8	87	NE	5	2.2		5k	0			0	0	Fair	
Buffalo, N. Y.			29.94	760.5	56	13.3	93	N	11	4.9			10ks		N	0.77	19.6	Cloudy	
Burlington, Vt.			29.88	758.9	59	15.0	94	N	1	0.4			10s			0.34	8.6	Cloudy	
Cairo, Ill.			30.07	763.8	76	24.4	86	W	6	2.7			10s		N	0	0	Cloudy	
Cape Hatteras, N. C			29.99	759.4	78	25.6	86	SW	9	4.0		8ck	0	W		0.04	1.0	Cloudy	
Cape Henry, Va			29.99	759.4	80	26.7	78	SW	9	4.0		2k	0	SW		0	0	Clear	
Cape Lookout, N. C.			29.95	760.7	82	27.8	87	Calm	0	0		5k	0	SW		0.02	0.5	Fair	
Cape May, N. J			29.87	758.7	72	22.2	85	S	16	7.2		8k	Haze	W		0	0	Fair	
Charleston, S. C.			30.00	762.0	81	27.2	74	W	6	2.7		0	0			0	0	Clear	
Cheyenne, Wyoming	24.19	614.4	30.13	765.3	65	18.3	41	NW	8	3.6		5c	0			0	0	Fair	
Chicago, Ill			30.16	766.1	61	16.1	71	NE	8	3.6		5k	0	NE		0	0	Fair	
Cincinnati, Ohio			29.99	761.7	70	21.1	70	N	12	5.4		8ks	0	NW		0	0	Cloudy	
Cleveland, Ohio			30.03	762.7	60.2	15.7	66	N	16	7.2			10ks		N	0.26	6.6	Cloudy	
Colorado Springs, Col.	24.25	615.9	30.12	765.0	64	17.8	68	N	4	1.8		0	0			0	0	Clear	
Corsicana, Tex			30.04	763.0	79	26.1	82	E	1	0.4		2cs	Haze			0	0	Fair	
Davenport, Iowa			30.24	768.1	62	16.7	57	NE	8	3.6		8ck	0	NW		0	0	Fair	
Denison, Tex			30.08	764.0	81	27.2	78	Calm	0	0		0	0			0	0	Clear	
Denver, Col.	25.01	635.2	30.23	767.8	65	18.3	48	S	4	1.8		0	0			0	0	Clear	
Detroit, Mich			30.07	763.8	59	15.0	76	N	8	3.6		8k	0	N		0	0	Fair	
Dodge City, Kan	27.50	698.5	29.68	753.9	76	24.4	76	S	4	1.8		0	0			0	0	Clear	
Dubuque, Iowa			30.22	767.6	61	16.1	71	NE	4	1.8		5ck	0			0	0	Fair	
Duluth, Minn			30.21	767.3	59	15.0	76	Calm	0	0		0	0			0	0	Clear	
Eastport, Me			30.00	762.0	53	11.7	86	N	3	1.3			10n			Inap.	Inap.	Light rain	
Erie, Pa			29.96	761.0	60	15.6	88	NW	18	8.0			10n		NW	0.06	1.5	Light rain	
Escanaba, Mich			30.19	766.8	56	13.3	74	N	5	2.2		5k	0	N		0	0	Fair	
Fort Gibson, Indian Ter.			30.02	762.5	78	25.6	82	Calm	0	0		0	0			0	0	Clear	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.86	733.0	29.91	759.7	80	26.7	70	S	4	1.8		0	0			0	0	Clear	
Fort Sully, Dakota	28.48	723.4	30.10	764.5	64	17.8	89	SE	8	3.6		8k	0	NW		Inap.	Inap.	Cloudy	
Galveston, Tex			30.08	764.0	82	27.8	78	NW	6	2.7		2ck	0	SE		0	0	Fair	
Grand Haven, Mich			30.16	766.1	61	16.1	68	NE	11	4.9		0	0			0	0	Clear	
Indianapolis, Ind			30.10	764.5	63	17.2	78	N	4	1.8			10s		NE	Inap	Inap.	Cloudy	
Indianola, Tex			30.10	764.5	81	27.2	86	SE	3	1.3		0	0			0	0	Clear	
Jacksonville, Fla			30.04	763.0	79	26.1	78	Calm	0	0		8k	0	W		0	0	Fair	
Keokuk, Iowa			30.15	765.8	62	16.7	83	NE	7	3.1		5k	5s	NE	NE	0	0	Cloudy	
Key West, Fla			30.06	763.5	82.0	27.8	74	SE	6	2.7		0	5ks		SE	0	0	Fair	
Kittyhawk, N. C.			29.94	760.5	78	25.6	86	SW	12	5.4		2k	0	W		0.09	2.3	Fair	
Knoxville, Tenn			30.03	762.7	69	20.6	90	NW	1	0.4		0	0			0	0	Clear	
La Crosse, Wis			30.24	768.1	54	12.2	79	N	2	0.9		0	0			0	0	Clear	
Leavenworth, Kan			30.05	763.3	73	22.8	76	SE	4	1.8			10s			0	0	Cloudy	
Lexington, Ky	28.93	734.8	29.98	761.5	73	22.8	80	NW	8	3.6		2k	0			0	0	Clear	
Louisville, Ky			30.02	762.5	71	21.7	71	N	10	4.5		2k	0	N		0	0	Clear	
Lynchburg, Va			29.90	759.4	78	25.6	65	SW	2	0.9		0	0			Inap.	Inap.	Clear	
Malone, N. Y.			29.88	758.9	57	13.9	87		7	3.1			10s		N	0.02	0.5	Threatening	
Manhattan, Kan	28.93	734.8	30.03	762.7	70	21.1	90	NE	2	0.9		5cs	0			0	0	Fair	
Marquette, Mich			30.15	765.8	58	14.4	64	W	12	5.4		5ck	0			0.04	1.0	Fair	
Memphis, Tenn			30.07	763.8	80	26.7	74	N	1	0.4		0	Sm'e			0	0	Clear	
Milwaukee, Wis			30.22	767.6	57	13.9	69	NE	6	2.7		0	0			0	0	Clear	
Mobile, Ala			30.05	763.3	77	25.0	86	NW	5	2.2		5cs	0			0.17	4.3	Fair	
Montgomery, Ala			30.03	762.7	78.5	25.8	86	W	3	1.3		0	2ks		N	0	0	Fair	
Morgantown, W. Va	28.94	735.1	29.97	761.2	61	16.1	88	N	16	7.2			10n		N	0.61	15.5	Light rain	
Mt. Washington, N. H	23.76	603.5	30.12	765.0	44	6.7	100	W	10	4.5			Fog			1.82	46.2	Foggy	
Nashville, Tenn			30.01	762.2	77	25.0	72	NW	2	0.9		0	Haze			0	0	Clear	
New Haven, Conn			29.80	756.9	74	23.3	85	SE	5	2.2		5k	Fog			1.05	26.7	Cloudy	
New London, Conn			29.86	758.4	66	18.9	94	NE	3	1.3			10n		SW	1.17	29.7	Light rain	
New Orleans, La			30.05	763.3	81	27.2	76	W	7	3.1		4c	2k	NE	NE	0.01	0.3	Fair	
Newport, R. I			29.89	759.2	63	17.2	94	Calm	0	0			10n		NW	1.40	35.6	Heavy rain	
New York, N. Y			29.84	757.9	73	22.8	85	SW	15	6.7			10n		W	Inap.	Inap.	Light rain	
Norfolk, Va			29.93	760.2	83	28.3	70	SW	9	4.0		2k	Haze			0	0	Fair	
North Platte, Neb			29.98	753.9	63	17.2	78	NE	30	13.4			10s		NE	0.02	0.5	Cloudy	
Omaha, Neb.	27.18	690.4	30.16	766.1	62	16.7	88	Calm	0	0			10n			0.79	20.1	Light rain	
Oswego, N. Y.	29.10	739.1	29.90	759.4	61	16.1	88	NE	16	7.2			10ks		NE	0.21	5.3	Threatening	
Pembina, Dakota			30.22	767.6	52	11.1	89	Calm	0	0		5k	0	NW		0	0	Fair	
Philadelphia, Penn			29.85	758.2	75	23.9	76	W	5	2.2			10ks		NW	0	0	Cloudy	
Pike's Peak, Colorado	18.15	461.0	30.36	771.1	39	3.9	91	NW	8	3.6		1cs	Haze			0.02	0.5	Clear	
Pittsburgh, Penn			29.96	761.0	63	17.2	78	N	7	3.1		2k	8ks	N	N	0.05	1.3	Cloudy	
Port Huron, Mich			30.06	763.5	58	14.4	76	N	19	8.5		8k	0	N		0.07	1.8	Cloudy	
Portland, Me			29.91	759.7	58	14.4	88	NE	10	4.5			10n			0.70	17.8	Light rain	
Portland, Oregon			30.15	765.8	61	16.1	77	Calm	0	0			10s			0	0	Cloudy	
Punta Rassa, Fla			30.07	763.8	80.0	26.7	88	NE	4	1.8		5c	2k	NE		0.01	0.3	Fair	
Rochester, N. Y			29.90	759.4	57	13.9	93	N	11	4.9			10n		N	0.48	12.2	Light rain	
Salt Lake City, Utah	25.77	654.6	30.10	764.5	66	18.9	73	Calm	0	0		5c	2s	SE		0.02	0.5	Fair	
Sandy Hook, N. J			29.83	757.7	75	23.9	85	SW	18	8.0		5cs	5s	SW	SW	0.02	0.5	Cloudy	
San Diego, Cal.			30.00	762.0	65	18.3	94	Calm	0	0		0	2s			Inap.	Inap.	Fair	
San Francisco, Cal			30.04	763.0	55	12.8	87	SW	8	3.6			10s			0	0	Cloudy	
Santa Fé, N. M	23.51	597.1	30.05	763.3	56	13.3	87	E	3	1.3		2k	0			0	0	Fair	
Savannah, Ga.			30.02	762.5	84	28.9	67	W	4	1.8		2cs	Haze			0	0	Fair	
Shreveport, La			30.10	764.5	80.5	26.9	85	SE	1	0.4		0	0			0	0	Clear	
Smithville, N. C.			29.97	761.2	78	25.6	82	N	4	1.8		1k	0			0.03	0.8	Clear	
Springfield, Mass.			29.84	757.9	66	18.9	90	SE	4	1.8			10ks		S	0.80	20.3	Cloudy	
St. Louis, Mo			30.15	765.8	65	18.3	80	NE	10	4.5			10s		N	0	0	Cloudy	
St. Marks, Fla			30.05	763.3	73	22.8	90	N	6	2.7			10s		N	2.16	54.9	Cloudy	
St. Paul, Minn			30.20	767.1	57	13.9	75	Calm	0	0		Haze	Haze			0	0	Hazy	
St. Paul's Island, Alaska			29.67	753.6	42	5.6	100	W	7	3.1			Fog			0	0	Foggy	
Thatcher's Island, Mass			29.88	758.9	62	16.7	100	S	8	3.6			10n		S	0.73	18.5	Heavy rain	
Toledo, Ohio			30.05	763.3	62	16.7	61	NW	12	5.4		2k	0	NW		0.03	0.8	Fair	
Tucson, Arizona	27.61	701.3	30.20	767.1	80	26.7		SE				5ck	0	E		0.08	2.0	Fair	
Tybee Island, Ga			30.02	762.5	80	26.7	74	NW	4	1.8		2c	Sm'e	W		0	0	Fair	
Vicksburg, Miss			30.08	764.0	83	28.3	82	Calm	0	0		2c	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.
Virginia City, M. T.	24.44	620.8	29.92	760.0	62	16.7	46	Calm	0	0	.....	10k	0	W	.....	0.02	0.5	Cloudy	
Washington, D. C.	.....	.....	29.89	759.2	75	23.9	76	SW	2	0.9	.....	0	9ks	.....	SW,W	0	0	Cloudy	
Wilmington, N. C.	.....	.....	29.97	761.2	76	24.4	95	N	5	2.2	.....	0	5ks	.....	NW	0.10	2.5	Fair	
Wood's Holl, Mass.	.....	.....	29.91	759.7	64	17.8	94	SW	3	1.3	.....	.....	10n	.....	NW	0.34	8.6	Heavy rain	
Wytheville, Va.	27.70	703.6	29.76	755.9	70	21.1	79	W	4	1.8	.....	1k	0	W	.....	0	0	Clear	
Yankton, Dakota	28.94	735.1	30.21	767.3	60	15.6	94	SE	10	4.5	.....	.....	10n	.....	.....	0.45	11.4	Light rain	
Yuma, Arizona	.....	.....	29.98	761.5	85	29.4	.....	N	.....	.....	.....	8c	0	NW	.....	Inap.	Inap.	Fair	
Sub-Series.																			
P'nte-a-Pitre, G'd'l'pe, W. I.	.....	.....	29.98	761.5	83	28.3	74	E	.....	.....	.....	2k	5ks	.....	.....	0.05	0.8	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.15	765.8	79	26.1	82	Calm	0	0	.....	8c	8n	.....	SE	0.08	2.0	.....	James Hall.
St. Georges, Bermudas	.....	.....	30.17	766.3	81.5	27.5	81	SSW	18	8.0	.....	0	8k	.....	.....	0.16	4.1	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	30.00	762.0	68	20.0	87	S	2.0	0.9	.....	8c	0	S	.....	0.32	8.1	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.01	762.2	81	27.2	91	E	.....	.....	2	5ks?	6ks	E	.....	1.040	26.42	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.08	763.9	.....	.....	82.4	28	.....	N	.....	.....	.....	.....	.....	.....	.....	1.388	35.25	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.21	640.3	.....	.....	64.5	18.1	78	Calm	0	0	.....	4ck	3s	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	30.07	763.8	52	11.1	79	N	2	0.9	.....	3c	0	E	.....	0	0	.....	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.09	764.3	77	25.0	90	NE	.....	.....	3	.....	.....	.....	.....	0	0	.....	Daniel Smith.
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.
Schooner Addie Fuller, off Gay-Head.	WSW	5	Rough	.....	Thunder, Lightning.	Capt. James Jorgensen.
Steamer Nova Scotian, at Liverpool.	.....	.....	.....	.....	Cloudy	Capt. Ritche.

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, 1,109 (?) 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.; Morgantown 1,027.9 ft., or 313.3 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, 1,051.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,262.2 ft., or 1,299.2 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, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and s'me, 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 JULY 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			30.01	762.3	83.3	28.5	65	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.07	763.8	93.2	34.0	43	NNE			1		1			0	0	Clear	Peter.
La Calle			29.93	761.5	81.7	27.6	68	NE			1		0			0	0	Clear	Kunts.
Tunis			30.02	762.5	92.7	33.7	42	E			3		0			0	0	Clear	Jacques.
Sfax			30.14	765.5	86.0	30.0	49	SE			3		1			0	0	Clear	Chauvey.
Salda			30.06	763.4	95.9	35.5		SSW			1		3			0	0	Fair	Millot.
Tebessa			30.15	765.9	92.7	33.7		N			2		0			0	0	Clear	Colin.
Geriville			30.13	765.3	89.6	32.0	20	NNW			1		3			0	0	Fair	Buard.
Laghouat			30.14	765.5	100.4	38.0		S			2		1			0	0	Clear	Guyot.
Biskra			30.11	764.7	97.3	36.3		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			29.89	759.2	81.0	27.2	60	SW			1		5			0.453	11.5		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.87	758.8	72.3	22.4	48	W			3		5			0	0		Dr. Wierzbiski.
Eperies			29.81	756.8	74.8	23.8	40	NW			4				S	0	0		Julius Mikolik.
Gratz	28.60	727.8	29.81	757.1	75.9	24.4	67	SW			2		5			0	0		Andreas Rospini.
Hermannstadt	28.41	721.7	29.77	756.2	72.3	22.4	44	WNW			5		4			0	0		Prof. Reissenberger.
Kremsmünster	28.64	727.4	29.93	760.3	67.6	19.8	67	WSW			2		7			0.039	1.0		Prof. C. Wagner.
Lemberg			29.59	751.6	65.8	18.8	87	NW			5		9			Blank	Blank		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.98	761.6	79.0	26.1	57	SSW			1		98			0	0		I.R.Hydrographic Office.
Szegedin			29.83	757.7	77.9	25.5	35	NE			4		2			0	0		Karl Stancel.
Trieste			29.98	761.5	82.8	28.2	53	Calm			0		1			0.343	8.7		Prof. V. Farolfi.
Vienna			29.59	759.1	80.4	26.9	32	N			2		2			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			29.88	758.9	71.1	21.7	69	SW			2	5	5	SSE	SSW	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			30.09	764.3	60.8	16.0		ESE	8	3.6			4			0	0	Blue sky	William Boswell.
Ardrossan			30.17	766.3	64	17.8		W			2		7					*D. clouds	William McNeil.
Armagh, Observatory			30.22	767.6	64.0	17.8		W	6	2.7			10					Gloomy	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.25	768.3	68.0	20.0		WNW			1		9					*D. clouds	J. Dreyer.
Bradford			30.09	764.3	70.1	21.2		NE			1		1			0.02	0.5	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	76.0	24.4		E			3		10					Raining	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			30.04	763.0	61.0	16.1		N			2		10					Raining	H. Todd.
Cardington			30.06	763.5	65.0	18.3		N			1		10			Blank	Blank	Overcast	John McLaren.
Carlisle			30.11	764.8	71.3	21.8		NW			2		1			0	0	Blue sky	T. Bell, for J. Carmichael.
Chatham, School M. E			30.09	762.0	63.0	17.2		NE			2		9					Overcast	Capt. J. Fellowes, R.E.
Dartmoor	8.77	730.7	30.24	768.1	64.0	17.8		N			5		3					Blue sky	R. E. Power.
Donaghadee			30.18	766.6	62	16.7		N			2		10					Overcast	J. Mac Gowan.
Dover			29.95	760.7	66	18.9		N			4		8					Overcast	J. Costello.
Eccles, (near Manchester.)			30.09	764.3	73.4	23.0		NW	5.6	2.5			3					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.18	766.6	64.0	17.8		NNW			6		0					Squally	The Staff.
Fort Napier, (Natal)	27.88	708.1	30.02	762.5	76.0	24.4		E			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	77	25.0		W			4		8			Blank	Blank	Overcast	
Galway, Queen's College			30.22	767.6	72	22.2		W			2		9					Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.00	762.0	79.5	26.4		W			4		0					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			30.12	765.0	63.8	17.7		W			1		8					Fine	Lewis Stuart.
Great Yarmouth			29.96	761.0	60	15.6		NNW			4		8					Raining	G. T. Watson.
Greenwich, Royal Obs'y			30.02	762.5	64.0	17.8		NNE			4		10			Blank	Blank	Overcast	The Staff, for G. B. Airy.
Guernsey			30.12	765.0	66	18.9		NW			4		0					Blue sky	Dr. S. E. Hoskins.
Helston			30.16	766.1	69	20.6		NW			6		0			0	0	Blue sky	M. P. Moyle.
Holyhead			30.20	767.1	60	15.6		NW			2		2					Blue sky	John Tilston.
Kew, Observatory			30.03	762.7	64.7	18.2		N	24	10.7			10					Threatening	The Staff.
Kingstown			30.21	767.3	65	18.3		NW			4		1					Blue sky	George Mitchell.
Leicester Museum			30.11	764.8	65.9	18.8		NW			1		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.99	761.7	83.8	28.8		NW			1		0						Corp'l F. Fraser, A. M. C.
Nairn			30.15	765.8	67	19.4		WSW			1		2					½ clouded	W. D. Penny.
Nassau, (Bahamas			30.11	764.8	77.6	25.3		SE			2		8					*D clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.10	764.5	70.0	21.1		NNW			2		7k		NNW			*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.07	764.8	69.8	21.0		N			3		7					*D clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.96	761.0	67	19.4		N			3		10					Gloomy	J. Lucas.
Plymouth			30.14	765.5	71.5	21.9		N			4		0					Blue sky	John Merrifield.
Roche's Point			30.22	767.6	72	22.2		N			3		2					Fine	W. Kennedy.
Saint Ann's Head			30.20	767.1	62	16.7		NNW			3		0						John C. Walker.
Saint Helier, Jersey			30.10	764.5	68.6	20.3		N			5		0					Clear	A. P. Amy.
Sandwick Manse, Orkneys			30.03	764.0	55.2	12.9		W	19	8.5			3					*D clouds	Rev. C. Clouston, LL. D.
Scarborough			30.10	764.5	61.2	16.2		N			4		6					*D. clouds	F. Shaw.
Scutari Cemetery, Turkey			29.85	758.2	77.8	25.4		SW			2		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			30.09	764.3	68.0	20.0		NNE			2		3			0.013	0.33	Blue sky	W. F. Cooper.
Silloth Rectory			30.13	765.3	76.7	24.8	57	SE			1		3			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.10	764.5	71.2	21.8		W			3		6			Blank	Blank	*D. clouds	Rev. S. J. Perry.
Stornoway, Lewis C. (Hebr.			30.10	764.5	60	15.6		W			4		2					Blue sky	John Smith.
Strathfield Turgiss			30.06	763.5	63.1	17.3		NW			3		10					Squally	Rev. Charles H. Griffith.
Thurso			30.05	763.3	61	16.1		WNW			3		7					*D. clouds	John Trotter.
Truro, Royal Institution			30.17	766.3	72	22.2		NW			4		4					*D. clouds	W. Newcombe.
Valencia, Observatory			30.30	769.6	63.7	17.6		NW	13	5.8			5					*D. clouds	The Staff.
Sea-Stations.																			
Calf of Man, Isle of Man					54	12.2		Calm			0		0						Thomas Dawson.
Cape Good Hope, Obs'y			30.32	770.1	61.7	16.5	60	W	14	6.3		2	3						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			29.82	757.4	60.0	15.6	87	W			2		8k			0	0		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			30.10	764.5	69.0	20.6		W			2	7ck				0	0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.27	768.8				ESE	20.9	9.3						0	0		C. Meldrum
Melbourne, Observatory			30.10	764.5	47.8	8.8	60	N	9	4.0			0			0	0	Fine, clear	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.13	765.3	58	14.4		NW			3	5	5	W		0	0		J. Youngclause.
North Unst, (Shetland Is.)			30.06	763.5	53	11.7		W			6	5	7	W					Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. 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	71.4	21.9	45	SE			2		0						
Faröe																			
Godthaab, Greenland			30.05	763.2	37.9	3.3		WSW			2		10						
Stykkisholm, Iceland			29.18	741.2	51.3	10.7	68	W			8		5						
Thorshavn, (Faröe)			29.85	758.2	53.1	11.7	73	SW			6		4						
Vestervig			29.98	761.4	72.7	22.6	62	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 Low'r 0—10.	Clouds. Amount. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.93	760.1	71.6	22	49	NE			4		2k		NE	0	0	Slightly cl'dy	Normal School.
Amiens			29.88	759.0	78.4	25.8	48	N			2		5		NW	0.087	2.2	Cloudy	Normal School.
Avignon			29.98	761.5	85.5	29.7	52	SE			2		0			0	0	Clear	Normal School.
Bar-sur-Seine			29.96	760.9	62.6	17.0	92	W			1		10		W	0.240	6.1	Raining	C. Saillard.
Beaumette, (near Angers)			30.00	762.1	73.9	23.3	84	N	10.3	4.6			5		N	0	0	Cloudy	Beaumette Observatory
Beauvais			29.98	761.6	70.2	21.2	63	NW			3		5		NW	0.246	6.25	Cloudy	Normal School.
Besançon			29.94	760.4	75.0	24.4	72	S			2		5		SW	0	0	Cloudy	Normal School.
Bourg en Bresse			30.01	763.0	83.3	28.5	48	S			2		5k,n		NE			Cloudy	Normal School.
Bourges			30.28?	769.27	69.1	20.6	82	SSW			6		10		E	0	0	Covered	Normal School.
Brest			30.11	764.8	66.7	19.3	63	N			4		2k		N	0	0		Naval Observatory.
Carcassonne			30.01	762.3	77.7	25.4	47	W			5		1		E	0	0	Clear	Normal School
Caen			30.05	763.3	70.9	21.6	85	NNW			6		10		SE	0	0	Covered	Normal School.
Chartres			29.97	761.1	72.3	22.4	65	N			4		8		NE	0.16	4.		Normal School.
Clermont			29.93	760.3	76.1	24.5	54	SW			6		10		W	0	0		Puy de Dome Obs'y.
Commercy			29.94	760.5	67.5	19.7	85	WNW			4		8k,n		W	0.087	2.2	Very cloudy	Normal School.
Commune de Greasque*			30.00	764.2	84.4	29.1	42	SW			2		2		SW	0	0		M. Kina.
Grenoble			29.91	759.7	77.7	25.4	89	NW			4		10n		NE	0.031	0.80	Covered	Normal School.
La Roche-sur-Yon			30.03	762.7	81.7	27.6	39	NW			4		5		SE	0	0	Cloudy	Normal School.
Le Mans			29.98	761.6	75.9	24.4	48	NE			2		5		NE	0	0	Cloudy	Normal School.
Lons-Le-Saulnier			29.93	760.2	81.3	27.4	56	W			2		5			0.768	19.50	Cloudy	Normal School.
Mâcon			30.15	765.9	80.8	27.1	77	SSE			1		5		SW	0	0	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			29.89	759.3	75.6	24.2	59	NE			4		8		E	0	0	Almost cov'd	Normal School.
Nismes			29.96	760.9	93.9	34.4	45	S			2		2		SW	0	0	Slightly cl'dy	Normal School.
Orleans			29.97	761.1	72.0	22.2	50	NNW			2		8		W	0.31	8.	Very cloudy	Normal School.
Paris, Observatory			29.94	760.5	71.1	21.7	43	NW			3		7k		NW	0.329	8.34	Cloudy	National Observatory.
Parthenay			30.01	762.3	84.2	29	87	NW			2		2		W	0	0	Slightly cl'dy	Normal School.
Privas			29.91	759.8	95.0	35		SSW			4		2		SSW	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.06	763.4	84.2	29.0	41	WNW			3		0			0	0	Blue sky	Naval Observatory.
Rouen			30.00	761.9	69.6	20.9	55	W			2		5		SW	0	0	Cloudy	Normal School.
Saint Lo			29.78	756.5	84.9	29.4	39	SE			7		7		SE	0	0		Normal School.
Tarbes	28.98	736.2	30.18	766.5	75.2	21		W			2		0			0	0	Clear	Normal School
Villefranche			29.95	760.6	82.4	28	71	SE			3		8		N	0	0	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.89	759.3	81.0	27.2													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.28	769.0	71.8	22.1	88	ESE	20.5	9.17			2		SSW	0	0		—. Faïguère.
Montsouris, Paris			29.94	760.5	71.2	21.8	43	N			3		9		NNW	0.358	9.1		Montsouris Observ'tory.
Perpignan			30.01	762.3	82.6	28.1	65	S	7.4	3.33			5		W	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			29.95	760.6	69.8	21.0	49	NW			2		10			0.319	8.1	Covered	E. Renou.
Toulouse			30.11	764.9	80.2	26.8	50	W			3		1			0	0		Toulouse Observatory
Tours			29.98	761.5	78.1	25.6	38	N			3		6		W	0.012	0.3		C. Marquet.
Versailles, (near Paris)			29.97	761.2	71.2	21.8	54	N			4		8			0.290	7.37	Cloudy	Dr. A. Bérigny.
Zi-Ka Wei, (near Shanghai																			H. Le Lec, S. J.

NOTE.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds; and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	Corrected for instrumental errors. Inches.	Corrected for instrumental errors. Millimeters.	Reduced to sea-level. Inches.	Reduced to sea-level. Millimeters.	Fahrenheit.	Centigrade.	Per cent.	Direction. From—	Miles per hour.	Meters per second.	Force. 0—10.	Amount. Up'er Low'r 0—10.	Amount. 0—10.	Direction. Upper. From—	Direction. Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Bamberg			29.90	759.4	78.8	26.0	52	SW			3		6	S		0.315	8.0		Prof. T. Hoh.
Berlin			29.91	759.8	81.5	27.5	36	SE			1		6			0	0		Prof. Arndt.
Breslau			30.00	761.9	76.6	24.8	36	NNW			4		1			0	0		Dr. P. Neugebauer.
Carlsruhe			29.84	758.0	78.4	25.8	67	SW			3		5			0.339	8.6		A. Sens.
Cassel			29.86	758.4	80.8	27.1	60	ENE			4		5	S		Blank	Blank		Dr. H. Möhl.
Emden			29.97	761.2	77.9	25.5	70	E			2		3			0	0		Prof. Prestel.
Frankfort on the Main			29.87	758.8	79.7	26.5	49	SSW			3		4			0.768	19.5		Physical Society.
Friedrichshafen			29.90	759.5	76.8	24.9	66	W			2		4			0.118	3.0		M. Wilhelm.
Hamburg			29.88	759.0	81.1	27.3	48	ESE			3		7cs			0	0		Captain F. Hegemann.
Kiel			29.90	759.5	77.2	25.1	56	ENE			4		2			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			29.87	758.8	68.5	20.3	54	N			5		2			0	0		Prof. E. Luther.
Köslin			29.98	761.5	74.5	23.6		ENE			1		0			0	0		H. Müller.
Leipsic			29.89	759.3	81.5	27.5	47	SSW			2		9			0	0		Prof. Bruhns.
Memel			29.86	758.5	67.6	19.8	64	NW			4		5c,cs	E		0	0		Reinbrecht & Skalweit.
Münster			29.91	759.8	72.3	22.4	81	NW			2		10			0.043	1.1	Thunder-storm.	Prof. E. Heis.
Neufahrwasser			29.95	760.7	68.2	20.1	61	N			4		1			0	0		A. Lothes.
Posen			29.97	761.1	77.7	25.4	45	N			1		1			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.86	758.5	84.9	29.4	38	W			2		10	W		0.03	0.9		Dr. Schur.
Stuttgart			29.85	758.3	81.1	27.3	51	N			1		8			0.378	9.6		Prof. Schoder.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.88	758.9	76.1	24.5	54	SW			4		10			0.091	2.3		Prof. Flesch.
Wustrow, Naval School			30.10	764.4	77.7	25.4	50	ENE			1		0			0	0		E. F. Schütz.

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	86.9	30.5		W										Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	80.2	26.8	54	SW	1.3	0.6			9						
Padua			29.92	759.9	81.0	27.2	57	S	3.1	1.4			5	W		0	0		
Vicenza			29.91	759.7	82.8	28.2	51	E	3.8	1.7			5	S		0	0		
Verona			29.90	759.4	81.7	27.6	46	E			2		6			0	0		
Bergamo	28.62	727.0	29.88	758.9	82.4	28.0	51	WSW			2		7			0	0		
Domodossola	28.96	735.5	29.94	760.5	75.6	24.2	76	Calm			0		10			0	0		
Milan			29.90	759.4	90.3	32.4	52	WNW			2		8	ENE		0	0		
Pavia			29.93	760.1	85.5	29.7	50	WSW			1		3	SW		0	0		
Moncalieri			29.91	759.6	83.3	28.5	59	ESE	4.3	1.9			6	NW		0.094	2.4	Showery	
Mondovi	28.01	712.3	29.88	758.9	81.5	27.5	55	SE			2		1	WNW		0	0		
Porto Maurizio			30.01	762.9	81.0	27.2	67	SW			2		2			0	0		
Genoa			30.00	762.1	79.2	26.2	65	S	4.9	2.2			4	S		0	0		
Piacenza			29.91	759.7	83.6	28.6	50	N	2.5	1.1			3	W		0	0		
Parma			29.91	759.7	87.1	30.6	36	SW			6		2			0	0		
Bologna			29.98	761.6	84.6	29.2	43	NE			1		0			0	0		
Florence			30.01	762.3	86.0	30.0	45	SW			2		2	W		0	0		
Leghorn																			
Siena	28.84	732.4	29.99	761.7	84.2	29.0	45	SW	0.7	0.3			4	W		0	0		
Urbino	28.56	725.4	30.05	763.2	82.9	28.3	39	WSW			2		2			0	0		
Ancona			29.95	760.7	84.6	29.2	39	SE			4		0			0	0		
Grosseto			30.00	761.9	84.2	29.0	58	SE			4		3	NW		0	0		
Rome			30.06	763.4	84.4	28.1	55	SW	7.4	3.3			1			0	0		
Naples, O. U.			30.08	764.1	82.9	28.3	63	SSW			4		1	SW		0	0		
Lecce			30.04	763.1	81.3	27.4	33	N	9.8	4.4			0			0	0		
Cosenza			30.04	762.9	88.9	31.6	62	NW	8.1	3.6			2			0	0		
Riposto, (Sicily)			30.00	762.1	82.2	27.9	71	NE			2		2	W		0	0		
Palermo			30.03	762.8	81.0	27.2	63	NE	3.8	1.7			0			0	0		
Caltanissetta	29.187	741.1?	29.98	761.4	82.4	28.0	15	S			2		0			0	0		
Sub-Series.																			
Naples, S. R.			30.10	764.4	82.0	27.8	61	W	1.8	0.8			3	SW		0	0		Prof. F. Brioschi.
Pesaro			30.03	762.7	70.0	26.1	59	E	13.0	5.81			0						L. Guidi.

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, 300 m., or 1,003.9 feet; Mondovi, 356 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	65.5	18.6		N			2								
Groningen			29.82	757.3	78.1	25.6		NE			2								
Helder			29.87	758.7	69.4	20.8		NE			2								
Utrecht			29.84	757.8	76.8	24.9	62	SW			2		8					Very cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.99	761.8	59.0	15.0	91	Calm	0	0			10			0.079	2.0		
Brono			29.89	759.2	51.7	12.6	93	SW	18	8			10			0.209	5.3	Light rain	
Christiania			29.91	759.6	75.9	24.4	50	SSW	6.9	3.1			1			0	0		
Tromso			29.71	754.6	63.7	17.6	100	Calm	0	0			8			0.102	2.6		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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	72.0	22.2	74	NNE	11.9	5.31			6			0.118	3.0		Dr. J. A. N. Sampaio.
Campo Major			29.96	761.0	92.3	33.5	17	SE	3.0	1.33			0			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.14	765.5	74.7	23.7	60	SW	6.3	2.8			7			0	0		Capt D. A. da Cunha.
Lisbon			30.07	763.8	73.8	23.2	57	SSW	15.0	6.7			0			0	0		The Observatory.

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

RUSSIAN SERIES.

Furnished by 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	756.4	73.8	23.2	38	NNW	18	8			7						Astronomical Obs.
Wilna			29.60	751.8	65.7	18.7	91	N	13	6			10					Raining	Astronomical Obs.
Dorpat			29.86	758.4	72.0	22.2	57	NE	9	4			10						Physical Cabinet.
St. Petersburg			29.91	759.8	69.3	20.7	63	ENE	13	6			6						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kieff			29.45	748.1	66.2	19.0	89	SE	7	3			10					Raining	Physical Cabinet.
Nikolaiev			29.69	754.0	70.2	21.2	68	SW	31	14			8						Kurdakof.
Kertch			29.82	757.3	75.7	24.3	66	SE	9	4			5						Lagorio.
Moscow			29.80	756.8	66.7	19.3	93	ESE	4	2			10					Raining	Meteorological Obs.
Lugan			29.65	753.0	80.8	27.1	45	SW	22	10			7						Meteorological Obs.
Archangel			30.10	764.6	66.9	19.4	90	NW	9	4			5						Ogorodnikof.
Tiflis	28.34	719.7	29.62	752.4	94.6	34.8	39	S	11	5			4						Physical Observatory.
Astrakhan			29.80	756.8	89.8	32.1	43	SE	16	7			3						Sebastianoi.
Kasan			29.89	759.1	87.6	30.9	53	W	4	2			5						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.96	735.5	29.85	758.3	76.3	24.6	50	WSW	4	2			6						Meteorological Obs.
Nukuss			29.76	755.8	88.0	31.1	39	N	7	3			0						
Kasaly																			Bobrof.
Tashkend	28.15	714.9	29.73	755.1	83.8	28.8	30	Calm	0	0			0						Michelson.
Barnaul			29.49	749.0	66.7	19.3	92	NW	2	1			10						Meteorological Obs.
Yeniseisk			29.30	744.2	73.2	22.9	62	WNW	4	2			3						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.97	761.1	75.2	24.0	89	Calm	0	0			1						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.95	760.7	69.3	20.7	87	Calm	0	0			0						
Nikolaievsk, on the Amoor					51.3	10.7	98	Calm	0	0			0						

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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 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			29.92	760.0	93.6	34.2	18	W	3.0	1.33		0	0			0	0	Clear	Royal Observatory.
San Fernando			30.07	763.6	74.8	23.8	74	SW	8.1	3.6		1	0	SW					The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			29.97	761.2	64.8	18.2	73	S			4		10			0	0		
Umea			29.95	760.6	68.7	20.4	65	SW			2		8			0	0		
Hernosand			29.91	759.6	70.2	21.2	53	S			2		3			0	0		
Stockholm			29.92	759.9	79.5	26.4	39	S			2		1			0	0		
Wisby			29.97	761.3	67.6	19.8	65	N			4		0			0	0		
SUB-SERIES.																			
Upsala			29.92	759.9	80.6	27.0	31	SSW	7.6	3.4			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; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall 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	28.55	725.1	29.89	759.2	82.9	28.3	41	WSW			4		9			0.110	2.8	Covered	The Observatory.
Zurich	28.36	720.4	29.91	759.8	81.0	27.2	56	W			1		8			0.157	4.0	Thunder-storm	The Observatory.

Note—For Geneva the corresponding departures from the normal values are Barometer, —2.7 mm; Thermometer, +5.6 cent.; Relative Humidity, —11 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

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

Station.	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0-10.	Up'er 0—10.	Low'r 0—10.	From—	From—	Inches.	Millimeters.	Weather.	Observer.
Constantinople			29.89	759.2	78.8	26.0	56	SSW	9	4.0			4		WNW	0	0		
Fao, (Persian Gulf)			29.57	751.0	100.4	38.0		NW			4		0						
Salonica			29.97	761.3	79.2	26.2		SW			2		0						
Valona			30.01	762.2	76.5	24.7		NW			1		0						
Varna			29.80	757.0	78.8	26.0		W			4		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.78	756.3	88.9	31.6	50	SW			2		3s		SW	0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

Station.	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0-10.	Up'er 0—10.	Low'r 0—10.	From—	From—	Inches.	Millimeters.	Weather.	Observer.
Bathurst, N. B			29.71	754.6	56.9	13.8	93	SE	11	4.9			10			Inap.	Inap	Raining	Hon. J. Ferguson.
Brockville, Ontario			29.92	760.0	70	21.1		NE	1	0.4		0	0			0.11	2.8	Clear	W. R. Bigg.
*Chatham, N. B			29.79	756.7	58	14.4	96	NE	1	0.4		2k	8ks	NE	NE	0.78	19.8	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			29.84	757.9	59	15.0	78	SE	11	4.9			10s			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.84	757.9	70.2	21.2	59	W			2	0	0			0	0	Clearing	James Smith, M. A.
Dalhousie, N. B			29.83	757.7	53	11.7	97	E			3					0.88	22.4	Raining	H. A. Johnson.
Esquimault, B. C																			W. H. Bovis.
Fredericton, N. B			29.77	756.1	53.3	11.8	90	E	6	2.7			10s			0.105	2.67	Raining	Prof. Harrison.
*Fort Garry, Manitoba			30.24	768.1	53	11.7	95	Calm	0	0		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.02	762.5	61.1	16.2	86	NW			1	4k	4n	NW		0	0	Unsettled	H. J. Strang, M. A.
Granton, Ontario	28.91	734.3	29.94	759.7	59	15.0		NW			2	1ck	0	SE		0	0	Clear	James Grant.
*Halifax, N. S.			29.75	755.6	57	13.9	90	SE	13	5.8			10n			0.050	1.27	Light rain	F. Allison, M. A.
*Kingston, Ontario			29.92	760.0	64	17.8	74	N	3	1.3		0	0			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			29.88	758.9	55.2	12.9	100	E	6	2.7		0	0			0	0	Misty	C. H. Rigby.
*Montreal, Quebec			29.81	757.2	62	16.7	76	W	7	3.1		0	2ks			0.10	2.5	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			29.85	758.2	63	17.2	72	W	6	2.7		0	2s			Inap.	Inap.	Clear	J. B. Haney.
*Parry Sound, Ontario			29.95	760.7	57	13.9	76	NW	6	2.7		2ck	2ks	NW	NW	0	0	Fair	Rev. R. Mosley.
*Port Dover, Ontario			30.00	762.0	59	15.0	65	NW	9	4.0		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.			29.87	758.7	57.8	14.3		SE	10	4.5						0.40	10.2	Fine	Peter Grant.
*Port Stanley, Ontario			30.04	763.0	59	15.0	69	W	9	4.0		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			29.78	756.4	59	15.0	87	Calm	0	0			10n			0.09	2.3	Cloudy	Capt. Ashe, R. N.
St. John, N. B.			29.77	756.1	56	13.3	81	NE	3	1.3			10n			0.46	11.7	Cloudy	G. Murdoch, C. E.
*Saugeen, Ontario			29.96	761.0	56	13.3	90	NW	3	1.3			10n			0	0	Cloudy	K. Stewart.
Stayner, Ontario			29.93	760.2	59	15.0	77	NW	8	3.6		2ck	0	NW		0.01	1.0	Fair	R. J. Cole.
Stratford, Ontario	28.74	730.0	29.99	761.7	58.9	14.9	87	W	7	3.1		7k	0	W		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			29.90	759.4	58	14.4	94	E	6	2.7			10n		E	0.01	0.3	Cloudy	T. C. Hill.
*Toronto, Ontario			29.96	761.0	59	15.0	70	W	12	5.4		0	0			0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.02	762.5	58.0	14.4	85	W	10	4.5		0	2ks			0	0	Fine	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			30.01	763.0	58	14.4	94	SE					10n			0.89	22.6	Light mist	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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	64	17.8	73	NW	2	0.9		2k	0	NW		0.10	2.5	Clear	
Alpena, Mich			29.99	761.7	58	14.4	69	NW	11	4.9		2k	0	NW		0	0	Clear	
Atlantic City, N. J			29.93	760.2	64	17.8	67	NW	10	4.5		2c	0	W		0.01	0.3	Fair	
Augusta, Ga.			29.92	760.0	79	26.1	80	NW	3	1.3		2c	0			0	0	Clear	
Baltimore, Md			30.02	762.5	66	18.9	59	NW	8	3.6		5cs	Haze	NW		0.06	1.5	Fair	
Barnegat, N. J			29.90	759.4	66	18.9	64	N	16	7.2		5c	0	W		0.07	1.8	Fair	
Benton, Montana	27.25	692.1	30.05	763.3	68	20.0	90	Calm	0	0			10n			0.05	1.3	Light rain	
Bismarck, Dakota	28.45	722.6	30.08	764.0	60	15.6	65	SE	7	3.1		0	0			0	0	Clear	
Boston, Mass			29.79	756.7	63	17.2	83	NW	12	5.4		1cs	1k	NW	W	1.18	30.0	Clear	
Breckenridge, Minn			30.20	767.1	55	12.8	87	NE	4	1.8		0	0			0	0	Clear	
Buffalo, N. Y			29.94	760.5	58.5	14.7	67	NW	9	4.0		0	1ks			0	0	Clear	
Burlington, Vt			29.83	757.7	62	16.7	72	Calm	0	0		5k	0	N		0.12	3.0	Fair	
Cairo, Ill			30.09	764.3	65	18.3	83	N	6	2.7			10n		N	0.02	0.5	Light rain	
Cape Hatteras, N. C			29.86	758.4	75	23.9	64	NE	15	6.7			10s			0.16	4.1	Cloudy	
Cape Henry, Va			29.95	760.7	70	21.1	61	NE	16	7.2		8c	0	SW		2.02	51.3	Fair	
Cape Lookout, N. C			29.94	760.5	75	23.9	69	NE	16	7.2			10s		NE	0	0	Cloudy	
Cape May, N. J			29.94	760.5	65	18.3	68	N	20	8.9		2cs	5k	W	W	0.56	14.2	Fair	
Charleston, S. C			29.92	760.0	83	28.3	74	W	7	3.1		2c	2cs	NW		0	0	Fair	
Cheyenne, Wyoming	24.16	613.6	30.10	764.5	60	15.6	94	S	4	1.8			10s		S	0.36	9.1	Cloudy	
Chicago, Ill			30.10	764.5	63	17.2	67	NW	2	0.9		0	0			0	0	Clear	
Cincinnati, Ohio			30.03	762.7	66	18.9	64	NE	4	1.8		0	5s			0	0	Fair	
Cleveland, Ohio			30.04	763.0	58.9	14.9	74	SE	3	1.3		2c	5k	W	W	0	0	Fair	
Colorado Springs, Col	24.24	615.7	30.11	764.8	62	16.7	88	NE	1	0.4		2ck	2s			0.22	5.6	Fair	
Corsicana, Tex			29.91	759.7	76	24.4	90	SE	1	0.4		5cs	Haze	SE		0.03	0.8	Fair	
Davenport, Iowa			30.15	765.8	63	17.2	67	N	8	3.6		0	Sm'e			0	0	Clear	
Denison, Tex			29.91	759.7	84	28.9	74	S	4	1.8		0	0			0	0	Clear	
Denver, Col.	24.90	632.4	30.12	765.0	65	18.3	78	N	1	0.4			8s			Inap.	Inap.	Cloudy	
Detroit, Mich			30.03	762.7	61	16.1	66	NW	4	1.8		1c	0			0	0	Clear	
Dodge City, Kan	27.39	695.7	29.59	751.6	68	20.0	90	NE	20	8.9			10s			0	0	Cloudy	
Dubuque, Iowa			30.15	765.8	60	15.6	76	N	4	1.8		0	0			0	0	Clear	
Duluth, Minn			30.16	766.1	63	17.2	57	NW	16	7.2		0	0			0.05	1.3	Clear	
Eastport, Me			29.71	754.6	51	10.6	93	NE	20	8.9			10n		NE	0.70	17.8	Light rain	
Erie, Pa			29.98	761.5	64	17.8	52	NW	8	3.6		5ck	0	W		0	0	Fair	
Escanaba, Mich			30.11	764.8	60	15.6	70	NW	8	3.6		0	0			0.06	1.5	Clear	
Fort Gibson, Indian Ter			29.97	761.2	78	25.6	86	NE	4	1.8			10s			0	0	Cloudy	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T	28.74	730.0	29.76	755.9	78	25.6	69	S	1	0.4		2k	2s	S		0	0	Fair	
Fort Sully, Dakota	28.49	723.6	30.13	763.5	60	15.6	76	E	5	2.2		5c	0	W		Inap.	Inap.	Fair	
Galveston, Tex			29.99	761.7	81	27.2	87	W	6	2.7		2cs	0	W		0	0	Fair	
Grand Haven, Mich			30.08	764.0	65	18.3	68	Calm	0	0		0	Sm'e		NW	0	0	Clear	
Indianapolis, Ind			30.08	764.0	64	17.8	67	NE	3	1.3		0	2s			0	0	Clear	
Indianola, Tex			29.98	761.5	82	27.8	83	S	4	1.8		1c	Haze			0	0	Clear	
Jacksonville, Fla			29.97	761.2	85	29.4	67	S	1	0.4		0	0			0	0	Clear	
Keokuk, Iowa			30.08	764.0	66	18.9	68	Calm	0	0		0	0			0.06	1.5	Clear	
Key West, Fla			30.02	762.5	83.2	28.4	70	S	5	2.2		1k	1ks	S		0	0	Clear	
Kittyhawk, N. C			29.96	761.0	70	21.1	75	NE	20	8.9		0	8ks		NE	0.20	5.1	Cloudy	
Knoxville, Tenn			29.97	761.2	67	19.4	79	NE	6	2.7		10ck	0	SW		0	0	Cloudy	
La Crosse, Wis			30.16	766.1	57	13.9	81	N	5	2.2		0	0			0	0	Clear	
Leavenworth, Kan			30.08	764.0	60	15.6	82	E	10	4.5			10s		E	0.06	1.5	Cloudy	
Lexington, Ky	28.97	735.8	30.05	763.3	60	15.6	88	N	2	0.9			10n			0.01	0.3	Light rain	
Louisville, Ky			30.04	763.0	64	17.8	83	N	2	0.9			10n			0.12	3.0	Light rain	
Lynchburg, Va			29.99	761.7	68	20.0	58	N	3	1.3		10k	0	W		0	0	Cloudy	
Malone, N. Y			29.81	757.2	60	15.6	70	W	4	1.8		2k	0	W		0.08	2.0	Fair	
Manhattan, Kan	28.94	735.1	30.17	766.3	59	15.0	100	NE	2	0.9			10n			2.25	57.1	Light rain	
Marquette, Mich			30.11	764.8	59	15.0	65	NW	12	5.4		0	0			0	0	Clear	
Memphis, Tenn			29.97	761.2	72	22.2	75	NE	6	2.7		5ck	5s	SW		0	0	Cloudy	
Milwaukee, Wis			30.13	765.3	62	16.7	66	N	6	2.7		0	0			0	0	Clear	
Mobile, Ala			29.95	760.7	83	28.3	83	Calm	0	0		5c	0			Inap.	Inap.	Fair	
Montgomery, Ala			29.97	761.2	79	26.1	82	S	1	0.4		8c	Haze	N		0	0	Fair	
Morgantown, W. Va	28.98	736.1	30.01	762.2	61	16.1	66	Calm	0	0		2c	0	W		0	0	Fair	
Mt. Washington, N. H	23.62	599.9	29.98	761.5	37	2.8	100	N	24	10.7			Fog			0.42	10.7	Foggy	
Nashville, Tenn			29.98	761.5	68	20.0	69	NE	4	1.8		10k	0	NW		0	0	Cloudy	
New Haven, Conn			29.85	758.2	68	20.0	56	N	10	4.5		0	0			1.20	30.5	Clear	
New London, Conn			29.85	758.2	68	20.0	60	NW	6	2.7		0	0			0.84	21.3	Clear	
New Orleans, La			29.95	760.7	82	27.8	78	Calm	0	0		4cs	Haze			0.02	0.5	Fair	
Newport, R. I			29.81	757.2	64	17.8	73	NW	12	5.4		0	0			2.05	52.1	Clear	
New York, N. Y			29.90	759.4	65	18.3	63	NW	6	2.7		0	2s			0.01	0.3	Clear	
Norfolk, Va			29.99	761.7	70	21.1	70	N	5	2.2		2k	5ks	N	N	Inap.	Inap.	Fair	
North Platte, Neb	27.22	691.4	29.75	755.6	59	15.0	94	E	16	7.2			10n			0.04	1.0	Light rain	
Omaha, Neb.	29.09	738.6	30.15	765.8	60	15.6	82	NE	2	0.9		5c	0			1.53	38.9	Fair	
Oswego, N. Y			29.91	759.7	63	17.2	74	W	6	2.7		Haze	1s			Inap.	Inap.	Clear	
Pembina, Dakota			30.20	767.1	51	10.6	89	Calm	0	0		0	0			0	0	Clear	
Philadelphia, Penn			29.94	760.5	64	17.8	58	N	14	6.3		5c	Haze			0.09	2.3	Fair	
Pike's Peak, Colorado	18.07	459.0	30.28	769.1	37	2.8	80	N	14	6.3		1k	1ks		NE	0.64	16.3	Fair	
Pittsburgh, Penn			30.01	762.2	57	13.9	75	NW	2	0.9		1c	2k	W	NW	0	0	Fair	
Port Huron, Mich			30.01	762.2	59	15.0	76	W	8	3.6		0	1s			0	0	Clear	
Portland, Me			29.75	755.6	64	17.8	73	NW	6	2.7		1k	0	NW		0.41	10.4	Clear	
Portland, Oregon			30.16	766.1	60	15.6	70	N	9	4.0			8s		W	0	0	Cloudy	
Punta Rassa, Fla			30.01	762.2	80.0	26.7	82	E	5	2.2		5c	0	E		1.32	33.5	Fair	
Rochester, N. Y			29.92	760.0	60	15.6	65	W	11	4.9		0	0			0.10	2.5	Clear	
Salt Lake City, Utah	25.68	652.3	30.01	762.2	64	17.8	78	Calm	0	0			10s			0.03	0.8	Cloudy	
Sandy Hook, N. J			29.88	759.9	64	17.8	73	NW	8	3.6		2c	0			0.10	2.5	Clear	
San Diego, Cal.			29.90	759.4	67	19.4	90	NW	4	1.8		0	0			0	0	Clear	
San Francisco, Cal			29.96	761.0	53	11.7	86	SW	4	1.8			10s		SW	0	0	Cloudy	
Santa Fé, N. M	23.38	593.8	29.92	760.0	59	15.0	81	NE	4	1.8		5c	0			0	0	Fair	
Savannah, Ga.			29.94	760.5	86	30.0	68	W	4	1.8		10cs	0			0	0	Cloudy	
Shreveport, La			29.98	761.5	80	26.7	84	Calm	0	0		10c	0	W		0	0	Fair	
Smithville, N. C			29.94	760.5	75	23.9	85	NE	4	1.8			10s			1.54	39.1	Cloudy	
Springfield, Mass.			29.83	757.7	69	20.6	61	N	4	1.8		1k	0	N		0.08	2.0	Clear	
St. Louis, Mo			30.12	765.0	59	15.0	81	E	8	3.6			10s			0.20	5.1	Cloudy	
St. Marks, Fla			29.98	761.5	80	26.7	82	Calm	0	0		2c	2ks			0	0	Fair	
St. Paul, Minn			30.14	765.5	62	16.7	71	Calm	0	0		Haze	Fog			Inap.	Inap.	Fair	
St. Paul's Island, Alaska			29.74	755.4	45	7.2	92	S	2	0.9			Fog			0	0	Foggy	
Thatcher's Island, Mass			29.77	756.1	62	16.7	77	NW	8	3.6		0	2k		NW	1.47	37.3	Fair	
Toledo, Ohio			30.03	762.7	61	16.1	70	NW	5	2.2		5cs	0			0	0	Fair	
Tucson, Arizona	27.59	700.8	30.18	766.6	74	23.3		S				0	0			0	0	Clear	
Tybee Island, Ga			29.91	759.7	82	27.8	78	W	4	1.8		2k	Sm'e	SW		0	0	Fair	
Vicksburg, Miss			29.97	761.2	50.5	10.3	76	Calm	0	0		8c	2cs	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.	24.34	618.2	29.82	757.4	60	15.6	88	SE	2	0.9		10k	0	W		0.53	13.5	Cloudy	
Washington, D. C.			30.02	762.5	65	18.3	64	NW	8	3.6		2c	5s	SW	W	Inap.	Inap	Fair	
Wilmington, N. C.			29.95	760.7	72	22.2	71	NE	10	4.5			10s		SW	1.41	35.8	Cloudy	
Wood's Holl, Mass.			29.80	756.9	68	20.0	69	N	8	3.6		0	2s		N	1.18	30.0	Fair	
Wytheville, Va.	27.70	703.6	29.82	757.4	58	14.4	76	N	3	1.3			10s		W	0	0	Threatening	
Yankton, Dakota	28.94	735.1	30.02	767.3	63	17.2	83	Calm	0	0		8c	0	W		0.15	3.8	Fair	
Yuma, Arizona			29.83	757.7	83	28.3		W				0	0			0	0	Clear	
Sub-Series.																			
P'nte-a-Pitre, G'd'l'pe, W. I.			29.96	761.0	79	26.1	82	E				10c	0			0.38	9.7	Hazy	L. V. Bigard.
Kingston, Jamaica, W. I.			30.12	765.0	81	27.2	74	E				2c	5n	E	E	0.31	7.9		James Gall.
St. Georges, Bermudas			30.08	764.0	83.0	28.3	78	SSW	15	6.7		0	2k			0.31	7.9	Hazy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa W. I.																			
Clifton, Jamaica W. I.	27.21	691.1	29.97	761.2	71	21.7	84	SE	4.0	1.8		8c	0	SE		0.11	2.8	Fine	C. Partridge.
Paramaribo, D. Guiana S.A.			30.03	762.7	80	26.7	82	E			1	4k	5ks			0.010	0.2	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.08	763.9			80.2	26.8		S								0.138	3.50		Dr. H. Groot.
Medellin, Colombia, S. A.	25.18	639.6			67.0	19.4	76	Calm	0	0		4ck	4ks			0.04	1.0	Cloudy	Thomas Herran.
York Factory, B. A.			30.01	762.2	57	13.9	75	S	3	1.3		0	0			0	0		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.			30.09	764.3	77	25.0	90	NE			2					0.02	0.5		Daniel Smith.
Makawao, Maui, H. I.																			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—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	State of ocean.	Direction of swell from—	Weather.	Observer
Schooner Addie Fuller, off Fire Island.	W	4½	29.90	759.4			68	20.0		N			5		2s		W			Smooth		Clear	Capt. James Jorgensen.
Steamer Nova Scotian, at Liverpool.					30.13	765.3	61	16.1		N			4		..ck		N					Clear	Capt. Ritche.

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, 6,042.4 ft., or 1,844.7 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.; Morgantown 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.37 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.
Furnished by coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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			30.03	762.8	83.7	28.7	70	N			2		1			0	0	Clear	Charnot.
Algiers			30.05	763.3	80.6	27.0	77	N			4		2			0	0	Clear	Peter.
La Calle			29.98	761.6	81.7	27.6	73	NNW			3		1			0	0	Clear	Kunta.
Tunis			29.99	761.7	85.6	29.8	16	NW			3		0			0	0	Clear	Jacques.
Sfax			30.09	764.2	86.4	30.2	46	SE			3		1			0	0	Clear	Chauvey.
Saida			30.09	764.3	98.6	37.0		NE			2		2			0	0	Clear	Millot.
Tebessa			30.11	764.7	97.7	36.5		NW			2		2			0	0	Clear	Colin.
Geriville			30.15	765.8	94.5	34.7	25	SSW			1		2			0	0	Clear	Buard.
Laghouat			30.10	764.5	98.6	37.0		SW			2		2			0	0	Clear	Guyot.
Biskra			30.05	763.2	99.0	37.2		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			29.82	757.4	80.6	27.0	65	Calm			0		7			0.069	1.6		Prof. Ivan Stosir.
Cracow, I. R. Observatory			29.87	758.6	75.2	24.0	42	W			1		1			0	0		Dr. Wiersbiski.
Eperies			29.81	756.9	77.7	25.4	38	NW			3					0	0		Julius Mikolik.
Gratz	28.69	728.8	29.87	758.6	66.9	19.4	92	SE			2		10			1.752	44.5		Andreas Rospini.
Hermannstadt	28.41	722.3	29.78	756.5	75.9	24.4	41	NW			2		1			0	0		Prof. Reissenberger.
Kremsmünster	28.61	726.6	29.90	759.5	68.0	20.0	79	SW			1		8			0.031	0.8		Prof. C. Wagner.
Lemberg			29.67	753.7	65.7	18.7	88	NW			5		9			0.031	0.8		Dr. T. Stanecki.
Nyiregyhaza																			Habasuda Daniel.
Pola			29.82	757.5	77.2	25.1	79	SE			4		8cs			0.091	2.32		I.R.Hydrographic Of'ce.
Szegedin			29.83	757.7	77.0	25.0	53	SW			3		8			0	0		Karl Stancel.
Trieste			29.84	757.9	83.7	28.7	58	Calm			0		1			0.457	11.6	Rainy	Prof. V. Farolfi.
Vienna			29.88	759.0	71.4	21.9	65	WNW			2		10			0	0		I. R. Central Met. Ob's'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1.258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.07	763.7	72.7	22.6	74	NNW			0		9		NNE	0.322	8.20		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			30.07	763.8	57.0	13.9		WNW	14	6.3			9					Showery	William Boswell.
Ardrossan			30.15	765.8	59	15.0		SSW			3		7					*D. clouds	William McNeil.
Armagh, Observatory			30.18	766.6	67.0	19.4		SW	9	4.0			10					Gloomy	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.22	767.6	67.8	19.9		WSW			1		10					*D. clouds	J. Dreyer.
Bradford			30.16	766.1	70.9	21.6		W			0		1			0	0	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.05	763.3	82.5	28.1		NE			1		6					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			30.20	767.1	74.5	23.6		NW			1		5					Fine	H. Todd.
Cardington			30.18	766.6	77.6	25.3		N			1		6					*D. clouds	John McLaren.
Carlisle			30.13	765.3	69.7	20.9		SW			5		8			0	0	*D. clouds	T. Bell, for J. Carmell.
Chatham, School M. E			30.17	766.3	75.7	24.3		Calm			0		1					Blue sky	Capt. J. Fellowes, R.E.
Dartmoor	28.85	733.5	30.35	770.9	67.0	19.4		N			5		5					*D. clouds	R. F. Power.
Donaghadee			30.16	766.1	62	16.7		SE			2		8					*D. clouds	J. Mac Gowan.
Dover			30.17	766.3	66	18.9		NE			3		1					¼ clo ded	J. Costello.
Eccles, (near Manchester.)			30.18	766.6	69.9	21.1		NW	6.0	2.7			2					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.26	768.6	71.0	21.7		SSW			3		4					*D. clouds	The Staff.
Fort Napier, (Natal)	27.96	710.2	30.19	766.8	65.4	18.6		S			2		9					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	77	25.0		W			8		10			Blank	Blank	Overcast	
Galway, Queen's College			29.93	760.2	68	20.0		SW			1		10					Misty	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.96	761.0	88.0	31.1		E			1		0					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			30.11	764.8	59.8	15.4		W			2		10					Overcast	Lewis Stuart.
Great Yarmouth			30.18	766.6	66	18.9		NNE			2		2					Blue sky	G. T. Watson.
Greenwich, Royal Ob'y			30.17	766.3	79.7	26.5		NNW			1		5					*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.24	768.1	69	20.6		NW			2		0					Blue sky	Dr. S. E. Hoskins.
Helston			30.24	768.1	73	22.8		SW			4		0			0	0	Blue sky	M. P. Moyle.
Holyhead			30.21	767.3	64	17.8		SSW			3		3					*D. clouds	John Tilston.
Kew, Observatory			30.17	766.3	75.7	24.3		NNW	5	2.2			3					Hazy	The Staff.
Kingstown			30.23	767.8	64	17.8		SE			4		3					Blue sky	George Mitchell.
Leicester Museum			30.18	766.6	73.3	22.9		W			1		3					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)			29.95	760.7	86.8	30.4		SW			1		0						Corp'l F. Fraser, A. M. C.
Nairn			30.05	763.3	57	13.9		WSW			1		10					Raining	W. D. Penny.
Nassau, (Bahamas			30.08	764.0	85.4	29.7		SE			5		8					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.17	766.3	77.3	25.2		SW			3		2c		WSW			Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.16	766.1	73.2	22.9		WNW			3		3					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Ob's'y			30.16	766.1	77	25.0		W			1		7					*D. clouds	J. Lucas.
Plymouth			30.23	767.8	79.9	26.6		NNW			1		1					*D. clouds	John Merrifield.
Roche's Point			30.27	768.8	66	18.9		SW			3		8					Cloudy	W. Kennedy.
Saint Ann's Head			30.25	768.3	62	16.7		NW			1		1					Blue sky	John C. Walker.
Saint Helier, Jersey			30.22	767.6	74.6	23.7		NE			2		0					Clear	A. P. Amy.
Sandwick Manse, Orkneys			29.99	761.7	55	12.8		WSW	16	7.2			5					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough			30.14	765.5	64.2	17.9		WSW			1		7					*D. clouds	F. Shaw.
Scutari Cemetery Turkey			29.85	758.2	83.4	28.6		SSW			1		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			30.15	765.8	73.0	22.8		NW			2		2					Blue sky	W. F. Cooper.
Silloth Rectory			30.15	765.8	69.7	20.9	57	SW			2		3			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.18	766.6	64.6	18.1		W			2		4			0.620	15.75	*D. clouds	Rev. S. J. Perry.
Stornoway Lewis C. Hebr.			29.99	761.7	60	15.6		SW			5		10					Drizzling	John Smith.
Strathfield Turgiss			30.18	766.6	78.7	25.9		N			2		2					Blue sky	Rev. Charles H. Griffith.
Thurso			29.99	761.7	56	13.3		SW			3		10					Overcast	John Trotter.
Truro, Royal Institution			30.27	768.8	78	25.6		NW			6		3					*D. clouds	W. Newcombe.
Valencia, Observatory			30.29	769.4	64.1	17.8		WSW	19	8.5			10					Misty	The Staff.
Sub-Stations.																			
Calf of Man, Isle of Man					60	15.6		W			3		10						Thomas Dawson.
Cape Good Hope, Ob's'y			30.46	773.7	57.2	14.0	58	SE	25	11.2		0	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			29.92	760.0	60.0	15.6	87	SW			1		10kn			0	0	Cloudy	Francis Abbott, F.R.A.S.
Leith, Restaurig Park			30.13	765.3	61.0	16.1		W			2	6es				0	0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.28	769.1				E	19.6	8.8						0.015	0.38		C. Meldrum
Melbourne, Observatory			30.07	763.8	44.1	6.7	69	NNW	5	2.2			3			0	0	Fine	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.06	763.5	53	11.7		WSW			6		10			0.2	5.1		J. Youngclouse.
North Unst, Shetland Is.			29.83	754.9	53	11.7		WSW			6		10						Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Hellier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,2[illegible]0 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			29.90	759.4	73.2	22.9	51	WNW			4		0						
Fanöe			30.01	762.3	62.6	17.0	75	NW			4		1						
Godthaab, (Greenland)			30.27	768.9	38.7	3.7		WSW			2		5						
Stykkisholm, (Iceland)			29.34	746.2	48.0	8.9	87	NE			6		8						
Thorshavn, (Faröe)			29.67	753.7	48.4	9.1	84	WSW			8		9					Raining	
Vestervig			29.97	761.2	61.9	16.6	69	WNW			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			30.08	764.1	75.2	24	42	NE			3		0			0	0	Clear	Normal School.
Amiens			30.05	763.2	80.2	26.8	55	NW			3		10			0	0	Covered	Normal School.
Avignon			30.00	762.1	75.7	24.3	39	NW			4		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.10	764.4	72.9	22.7	60	N			2		8		NE	0.295	7.5	Very cloudy	C. Saillard.
Beaumette, (near Angers)			30.12	765.0	80.6	27.0	39	NE	8.9	4.0			2		N	0	0	Slightly cl'dy	Beaumette Observatory
Beauvais			30.14	765.5	74.7	23.7	57	N			3		8		NNE	0.128	3.25	Very cloudy	Normal School.
Besançon			30.07	763.7	68.0	20	61	S			2		8			0.413	10.5	Very cloudy	Normal School.
Bourg en Bresse			30.22	767.6	68.2	20.1	59	N			2		5k, n		S			Cloudy	Normal School.
Bourges			30.38	771.7?	67.3	19.6	83	NW			2		10		E	0	0	Covered	Normal School.
Brest			30.20	767.0	76.1	24.5	50	NNE			2		0			0	0	Clear	Naval Observatory.
Carcassonne			30.10	764.6	74.8	23.8	46	W			4		0			0	0	Clear	Normal School
Caen			30.14	765.5	72.9	22.7	81	N			6		0			0	0	Clear	Normal School.
Chartres			30.11	764.7	71.6	22	63	N			2		0			0.272	6.9	Clear	Normal School.
Clermont			30.11	764.8	66.4	19.1	72	NW			3		10		NW	0.047	1.2		Puy de Dome Obs'y.
Commercy			30.07	763.7	69.6	20.9	68	NW			4		5k, n			0.028	0.7	Cloudy	Normal School.
Commune de Greasque*			29.97	761.3	79.0	26.1	18	NW			8		2		NW	0	0		M. Kina.
Grenoble			30.09	764.2	66.6	19.2	38	NNW			2		n		SE	0	0		Normal School.
La Roche-sur-Yon			30.28	769.1	84.6	29.2	40	NE			2		5		SW	0	0	Cloudy	Normal School.
Le Mans			30.13	765.2	77.4	25.2	73	NE			6		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			30.00	762.0	68.0	20	58	NW			2		2			0.16	4.	Slightly cl'dy	Normal School.
Mâcon			30.23	767.8	74.3	23.5	54	NNW			2		5		WNW	0	0	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			30.06	763.4	69.8	21	72	NW			2		8		S	0.16	4.	Almost cov'd	Normal School.
Nîmes			29.97	761.1	79.2	26.2	87	S			8		2		SW	0	0	Slightly cl'dy	Normal School.
Orleans			30.10	764.4	68.4	20.2	71	N			2		10		NNW	0	0	Covered	Normal School.
Paris, Observatory			30.15	765.9	65.8	18.8	80	N			1		10k		N	0.334	8.48	Covered	National Observatory.
Parthenay			30.13	765.4	80.2	26.8	60	NW			4		0			0	0	Clear	Normal School.
Privas			30.02	762.6	69.8	21		NW			4		2		NW	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.18	766.6	84.2	29.0	48	W			2		0			0	0	Blue sky	Naval Observatory.
Rouen			30.17	766.2	75.0	23.9	55	NNW			1		0			0.379	2.0	Clear	Normal School.
Saint Lo			29.92	760.0	86.0	30	41	SE			2		2			0	0		Normal School.
Tarbes	29.14	740.1	30.10	764.6	77.0	25		WNW			1		0			0	0	Clear	Normal School
Villefranche			30.10	764.4	77.0	25	77	SE			2		8			0.39	10.	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.93	760.2	82.4	28													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.28	769.0	70.0	21.1	35	W	14.9	66.6			0			0	0		—. Falguère.
Montsouris, Paris			30.14	765.6	67.6	19.8	75	NNW			3		10			0.488	12.4		Montsouris Observ'tory.
Perpignan			30.05	763.2	79.0	26.6	30	NW	29.8	13.33			0			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.15	765.7	67.3	19.6	78	N			1		10			0.209	5.3	Very cloudy	E. Renou.
Toulouse			30.18	766.6	79.2	26.2	47	NW			3		1			0	0		Toulouse Observatory
Tours			30.14	765.6	77.7	25.4	52	NE			1		5		N	0	0		C. Marquet.
Versailles, (near Paris)			30.15	765.9	71.2	21.8	74	NE			1		7			0.162	4.12	Cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai																			H. Le Lec, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * 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.
Hamberg			29.92	759.9	75.2	24.0	64	W			3		4	N		0.315	8.0		Prof. T. Hoh.
Berlin			29.94	760.5	81.5	27.5	33	SW			1		0			0	0		Prof. Arndt.
Breslau			29.98	761.5	76.1	24.5	34	N			5		0			0	0		Dr. P. Neugebauer.
Carlsruhe			29.98	761.4	70.2	21.2	77	SW			5		10			0.047	1.2		A. Senz.
Cassel			29.98	761.5	84.2	29.0	49	NNE			2		3	NE		0.319	8.1		Dr. H. Möhl.
Emden			30.09	764.3	68.4	20.2	75	N			3		1			0	0		Prof. Prestel.
Frankfort on the Main			29.98	761.4	80.2	26.8	48	NE			4		3			0.055	1.4		Physical Society.
Friedrichshafen			30.09	764.3	57.9	14.4	94	SW			7		10			2.154	54.7	Raining	M. Wilhelm.
Hamburg			30.01	762.2	77.9	25.5	56	N			3		0			0	0	Clear	Captain F. Hegemann.
Kiel			29.98	761.5	75.0	23.9	45	NW			3		0			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			29.79	756.6	73.8	23.2	47	N			5		2			0	0		Prof. E. Luther.
Köslin			29.97	761.3	75.0	23.9		N			2		0			0	0		H. Müller.
Leipsic			29.94	760.5	81.2	29.0	33	NNE			1		4			0	0		Prof. Bruhns.
Memel			29.77	756.2	66.7	19.3	72	NW			4		3c			0	0		Reinbrecht & Skalweit.
Münster			30.15	765.7	79.9	26.6	65	NW			2		0			0	0		Prof. E. Heis.
Neuhrwasser			29.87	758.6	71.2	21.8	56	ENE			2		4			0	0		A. Lothes.
Posen			29.95	760.6	79.7	26.5	43	NW			1		4			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.02	762.6	70.5	21.4	69	Calm			0		10	N		0.315	8.0		Dr. Schur.
Stuttgart			29.99	761.8	68.0	20.0	77	NW			2		10			0.201	5.1	Thunder-storm.	Prof. Schoder.
Thorn			29.85	758.3	79.0	26.1	36	N			2		5			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.00	762.0	78.4	25.8	52	E			4		8			0	0		Prof. Flesch.
Wustrow, Naval School			30.04	763.0	70.2	21.2	73	WNW			3		0			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observers.
Athens			29.90	759.4	88.2	31.2		S										Clear	

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

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.	Observers.
Udine			29.84	758.0	70.9	21.6	80	N	2.5	1.1			10			0.260	6.6		
Padua			29.84	757.9	65.5	18.6	83	N	11.9	5.3			10	E		0.398	10.1	Raining	
Vicenza			29.85	758.3	63.3	17.4	89	E	4.3	1.9			10	W		0.913	23.2	Showery	
Verona			29.85	758.2	77.4	25.2	69	E			6		10			0	0		
Bergamo	28.49	723.6	29.74	755.5	66.2	19.0	72	S			2		9			0	0		
Domodossola	28.92	734.5	29.90	759.5	65.7	18.7	68	Calm			0		9			0	0		
Milan			29.82	757.4	72.5	22.5	70	ENE			4		9	NE		0	0		
Pavia			29.80	757.0	71.4	21.9	52	NW			4		9	SW		0	0		
Moncalieri			29.81	757.2	68.2	20.1	55	ENE	15.4	6.9			9	NW		0	0		
Mondovi	27.97	710.4	29.80	757.0	60.1	15.6	80	SW			2		10			0.055	1.4		
Porto Maurizio			29.77	756.1	80.1	26.2	34	ENE			6		4			0	0		
Genoa			29.75	755.7	74.7	23.7	49	N	8.7	3.9			6	SW		0.406	10.3	Showery	
Piacenza			29.82	757.5	72.0	22.2	58	NW	1.8	0.8			0	S		0.098	2.5	Showery	
Parma			29.82	757.4	74.7	23.7	58	NNW			4		4			0.539	13.7	Showery	
Bologna			29.78	756.3	74.5	23.6	42	NW			1		4	S		0	0		
Florence			29.76	755.8	81.5	27.5	64	NE			2		9	S		0.071	1.8	Showery	
Leghorn			29.78	756.3	80.8	27.1	66	SW	15.4	6.9			8			0	0		
Siena	28.60	726.5	29.76	755.8	84.2	29.0	42	S	4.3	1.9			8	S		0.285	7.2		
Urbino	28.33	719.5	29.82	757.3	80.4	26.9	41	SW			4		4			0	0		
Ancona			29.79	756.7	84.9	29.4	53	SE			4		5			0.039	1.0		
Grosseto			29.74	755.3	83.8	28.8	55	NW			2		4	SE		0.476	12.1		
Rome			29.89	759.1	84.4	29.1	46	S	21.0	9.4			1			0	0		
Naples, O. U.			29.98	761.6	82.2	27.9	65	SSW			4		2			0	0		
Lecce			29.93	760.3	84.6	29.2	36	SE	6.3	2.8			1			0	0		
Cosenza			29.95	760.6	89.2	31.8	64	SE	4.9	2.2			0			0	0		
Riposto, (Sicily)			30.02	762.4	84.6	29.2	50	NE			2		0			0	0		
Palermo			29.91	759.7	83.7	28.7	46	NE	3.1	1.4			1			0	0		
Caltanissetta	28.06	712.6	29.92	759.9	83.3	28.5	21	SW			4		0			0	0		
Sub-Series.																			
Naples, S. R.			29.99	761.7	83.7	28.7	56	SSW	0	0			0			0	0		Prof. F. Brioschi.
Pesaro			29.81	757.9	86.5	30.3	42	S	16.3	7.28			10k,n	SW		Blank	Blank		L. Guidi.

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.	Observers.
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.	Observers.
Flushing			29.75	755.7	69.4	20.8		NNE			4								
Groningen			30.04	763.0	68.2	20.1		N			4								
Helder			30.11	764.9	66.0	18.9		NNE			4								
Utrecht			30.06	763.5	74.3	23.5	56	NNE			3		0					Clear	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observers.
Bergen			29.98	761.7	58.3	14.6	57	SW	4.3	1.9			5			0.079	2.0		
Brono			29.84	757.8	55.0	12.8	75	SW	18	8			8			0	0		
Christiania			29.76	756.0	75.6	24.2	25	SW	6.4	2.8			9			0	0		
Tromso			29.65	753.0	56.3	13.5	99	SW	2	1			5			0	0		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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,)			30.27	768.9	70.0	21.1	69	NE	10.4	7.33			5			0.039	1.0		Dr. J. A. N. Sampaio.
Campo Major			29.97	761.3	93.6	34.2	15	SSW	4.8	2.17			1			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.09	764.3	73.8	23.2	64	SSE	4.9	2.2			10			0.071	1.8		Capt D. A. da Cunha.
Lisbon			30.05	763.2	80.2	26.8	46	SW	12.5	5.6			1			0	0		The Observatory.

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

RUSSIAN SERIES.

Furnished by 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. Inches.	Rain-fall. Millimeters.	Weather	Observer.
Warsaw			29.78	756.5	75.0	23.9	48	NW	11	5			8						Astronomical Obs.
Wilna			29.65	753.0	66.4	19.1	86	NW	2	1			10						Astronomical Obs.
Dorpat			29.65	753.0	69.8	21.0	79	NE	7	3			10						Physical Cabinet.
St. Petersburg			29.66	753.4	70.5	21.4	79	NE	9	4			9						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kieff			29.50	749.3	74.1	23.4	51	NW	7	3			6						Physical Cabinet.
Nikolaiev			29.75	755.7	76.6	24.8	45	WSW	25	11			5						Kurdakof.
Kertch			29.85	758.2	81.3	27.4	55	SSW	18	8			6						Lagorio.
Moscow			29.63	752.5	76.3	24.6	65	S	9	4			7						Meteorological Obs.
Lugan			29.61	752.0	73.4	23.0	68	SW	34	15			9			Blank	Blank		Meteorological Obs.
Archangel			29.88	759.0	64.9	18.3	91	ESE	29	13			4						Ogorodnikof.
Tiflis	23.46	722.8	29.76	755.8	93.0	33.9	24	E	9	4			4						Physical Observatory.
Astrakhan			29.80	756.8	91.6	33.1	40	SE	7	3			9						Sebastianof.
Kasan			29.85	758.2	72.1	22.3	98	E	9	4			10						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	29.00	736.5	29.89	759.1	81.1	27.3	54	N	4	2			6						Meteorological Obs.
Nukuss			29.82	757.4	89.4	31.9	43	N	7	3			0						
Kasaly																			Bobrof.
Tashkend	28.11	713.9	29.68	753.8	88.9	31.6	32	Calm	0	0			1						Michelson.
Barnaul			29.78	756.3	71.2	21.8	46	N	2	1			1						Meteorological Obs.
Yeniseisk			29.50	749.4	63.3	17.4	69	NW	9	4			1						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.89	759.1	83.3	28.5	86	Calm	0	0			2						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.75	755.7	71.8	22.1	98	SE	9	4			10						
Nikolaievsk, on the Amoor.					64.4	18.0	97	E	4	2			4						

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

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and 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. Inches.	Rain-fall. Millimeters.	Weather	Observer.
Madrid			29.91	759.7	98.6	37.0	16	W	3.0	1.33		0	0			0	0	Clear.	Royal Observatory.
San Fernando			30.01	762.2	81.1	27.3	60	NW	10.3	4.6		2	1	NW	NW				The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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. Inches.	Rain-fall. Millimeters.	Weather	Observer.
Haparanda			29.79	756.6	68.7	20.4	55	S			4		0			0	0		
Umea			29.73	755.1	72.7	22.6	60	NNE			4		8			0	0		
Hernosand			29.75	755.6	66.9	19.4	53	N			4		10			0	0		
Stockholm			29.69	754.2	83.3	28.5	24	SW			2		1			0	0		
Visby			29.84	758.0	72.3	22.4	62	W			2		3			0	0		
Sub-Series.																			
Upsala			29.71	754.5	83.7	28.7	32	SW	4.9	2.2			3		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; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall 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	28.68	728.4	30.09	764.3	58.6	14.8	76	NNE	.....	.....	2	.....	10	.....	.....	0.787	14.9	Raining	The Observatory.
Zurich	28.46	722.9	30.10	764.5	53.4	11.9	95	SE	.....	.....	1	.....	10	.....	.....	1.610	40.9	Raining	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note—For Geneva the corresponding departures from the normal values are Barometer, +0.6 mm; Thermometer, −7.8 cent.; Relative Humidity, +23 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and Professor 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	.....	.....	29.91	759.6	83.8	28.8	39	SSW	4	2.0	.....	.....	1	.....	N	0	0	.....	
Fao, (Persian Gulf)	.....	.....	29.63	752.7	102.2	39.0	.....	NW	.....	.....	4	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.93	760.2	78.8	26.0	.....	NW	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	29.93	760.2	84.0	28.9	.....	W	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	29.80	757 0	87.8	31.0	.....	W	.....	.....	2	.....	2	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.78	756.5	89.6	32.0	57	WSW	.....	.....	2	.....	2k	.....	SW	0	0	.....	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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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	61.9	16.6	82	Calm	0	0	.....	0	0	.....	.....	0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.06	763.5	63	17.2	.....	Calm	0	0	.....	0	0	.....	.....	0.49	12.4	Clear	W. R. Bigg.
*Chatham, N. B	.....	.....	29.88	758.9	61	16.1	82	SW	1	0.4	.....	0	2ks	.....	SW	0.16	4.1	Fair	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.89	759.2	62	16.7	77	W	10	4.5	.....	.....	8ks	.....	W	0.080	2.03	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.97	761.2	61.7	16.5	74	S	.....	.....	1	10k	0	.....	.....	0.179	4.55	Unsettled	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.88	758.9	58.3	14.6	94	W	.....	.....	1	.....	10n	.....	.....	1.80	45.7	Cloudy	H. A. Johnson.
Esquimault, B. C	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Bevis.
Fredericton, N. B	.....	.....	29.93	760.2	55.3	12.9	92	Calm	0	0	.....	0	Fog	.....	.....	0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.97	761.2	56	13.3	90	S	8	3.6	.....	2c	Haze	NE	.....	0	0	Fair	James Stewart.
Goderich, Ontario	.....	.....	30.05	763.5	61.4	16.3	85	Calm	.....	.....	0	2k	0	W	.....	0	0	Fine, clear	H. J. Strang, M. A.
Granton, Ontario	28.95	735.3	30.03	762.7	57	13.9	.....	Calm	.....	.....	0	0	0	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S.	.....	.....	29.91	759.7	62	16.7	82	W	9	4.0	.....	.....	5n	.....	.....	0.281	7.14	Clearing	F. Allison, M. A.
*Kingston, Ontario	.....	.....	30.05	763.3	59	15.0	71	Calm	0	0	.....	8k	0	.....	.....	0.42	10.7	Cloudy	S. Woods, M. A.
Little Glace Bay, N. S.	.....	.....	29.82	757.4	69.0	20.6	82	W	6	2.7	.....	5k	0	NW	.....	0.14	3.6	Fair	C. H. Rigby
*Montreal, Quebec	.....	.....	29.95	760.7	54	12.2	75	W	7	3.1	.....	8k	2ks	W	W	0.10	2.5	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.99	761.7	53	11.7	76	NW	6	2.7	.....	2ck	5ks	N	N	Inap.	Inap.	Cloudy	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.02	762.5	56	13.3	75	NE	2	0.9	.....	0	0	.....	.....	0.05	1.3	Clear	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	30.06	763.5	57	13.9	63	NW	8	3.6	.....	2k	0	NW	.....	0	0	Fair	H. Morgan.
Port Hastings, N. S.	.....	.....	29.91	759.7	61.6	16.4	.....	W	4	1.8	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
*Port Stanley, Ontario	.....	.....	30.07	763.8	58	14.4	72	W	6	2.7	.....	8ck	0	NW	.....	0	0	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	29.89	759.2	56	13.3	94	S	3	1.3	.....	.....	10n	.....	S	0.40	10.2	Light rain	Capt. Ashe, R. N.
St. John, N. B.	.....	.....	29.94	760.5	57	13.9	94	S	1	0.4	.....	0	Haze	.....	.....	0	0	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.01	762.2	57	13 9	87	Calm	0	0	.....	2k	0	.....	.....	0	0	Clear	K. Stewart.
Stayner, Ontario	.....	.....	30.00	762.0	59	15.0	65	Calm	0	0	.....	2ck	0	W	.....	0	0	Fair	R. J. Cole.
Stratford, Ontario	23.75	730.2	30.01	762.2	53.7	12.1	84	N	7	3.1	.....	0	0	.....	.....	0	0	Fine	C. J. Macgregor, M. A.
*Sydney, C. B	.....	.....	29.87	758.7	70	21.1	81	SW	12	5.4	...	2ck	8ks	.....	W	0.05	1.3	Fair	T. C. Hill.
*Toronto, Ontario	.....	.....	30.03	762.7	55	12.8	78	W	4	1.8	.....	2k	0	NW	.....	0	0	Clear	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.05	763.3	56.7	13.7	75	NW	7	3.1	.....	1cs	1ks	.....	.....	0	0	Fine	J. Montgomery
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	30.05	763.3	69	20.6	85	SW	.....	.....	.....	0	5ks	.....	.....	0.16	4.1	Fair	John Delaney.
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Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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.			29.98	761.5	59	15.0	64	W	10	4.5		5k	0	W		0	0	Fair	
Alpena, Mich			30.01	762.2	55	12.8	68	NW	8	3.6		0	0			0	0	Clear	
Atlantic City, N. J			30.34	762.7	66	18.9	68	NW	6	2.7		1c	0	W		0	0	Clear	
Augusta, Ga.			30.09	764.3	64	17.8	94	NE	8	3.6			10n		NE	1.30	33.0	Heavy rain	
Baltimore, Md			30.08	764.0	68	20.0	55	NW	6	2.7		0	Haze			0	0	Clear	
Barnegat, N. J			30.01	762.2	69	20.6	56	NW	8	3.6		2cs	0			0	0	Clear	
Benton, Montana	27.11	688.6	29.91	759.7	64	17.8	78	NW	1	0.4		0	0			Inap.	Inap.	Clear	
Bismarck, Dakota	28.07	713.0	29.84	752.8	64	17.8	62	S	26	11.6		0	0			0	0	Clear	
Boston, Mass			29.92	760.0	65	18.3	63	W	9	4.0		1cs	Haze			0	0	Hazy	
Breckenridge, Minn			30.04	763.0	54	12.2	86	SE	8	3.6		0	0			0	0	Clear	
Buffalo, N. Y.			30.00	762.0	58	14.4	69	N	3	1.3		1k	5ks	NW	NW	0.13	3.3	Fair	
Burlington, Vt.			29.99	761.7	56	13.3	69	NW	4	1.8		8k	0	N		0	0	Cloudy	
Cairo, Ill.			30.12	765.0	66	18.9	78	NE	8	3.6		0	0			0.27	6.9	Clear	
Cape Hatteras, N. C.			30.02	762.5	69	20.6	75	NE	8	3.6			10s			0.41	10.4	Threatening	
Cape Henry, Va			30.05	763.3	72	22.2	58	NW	8	3.6		2c	0			Inap.	Inap.	Clear	
Cape Lookout, N. C.			30.08	764.0	70	21.1	84	NE	9	4.0			10n		NE	0.50	12.7	Light rain	
Cape May, N. J			30.04	763.0	69	20.6	69	N	14	6.3		0	0			0	0	Clear	
Charleston, S. C.			30.04	762.7	71	21.7	80	NE	10	4.5			10s		E	3.03	77.0	Cloudy	
Cheyenne, Wyoming	24.07	611.4	30.01	762.2	58	14.4	93	SW	8	3.6			Fog			0.01	0.3	Foggy	
Chicago, Ill			30.09	764.3	65	18.3	63	W	6	2.7		0	0			0	0	Clear	
Cincinnati, Ohio			30.08	764.0	65	18.3	68	NE	1	0.4		0	Fog			0	0	Foggy	
Cleveland, Ohio			30.08	764.0	60.4	15.8	66	W	7	3.1			8n		W	0.11	2.8	Light rain	
Colorado Springs, Col.	24.18	614.2	30.05	763.3	59	15.0	97	SE	5	2.2			Fog			0.07	1.8	Foggy	
Corsicana, Tex			29.92	760.0	75.3	24.1	85	E	1	0.4		5cs	Haze	E		0	0	Fair	
Davenport, Iowa			30.15	765.8	65	18.3	63	Calm	0	0		2cs	Sm'e			0	0	Fair	
Denison, Tex			30.00	762.0	70	21.1	79	SE	16	7.2			10s		E	0.01	0.3	Threatening	
Denver, Col.	24.82	630.4	30.04	763.0	59	15.0	87	S	4	1.8			Fog			0.20	5.1	Foggy	
Detroit, Mich			30.05	763.3	55	12.8	87	W	3	1.3			10s		W	0.03	0.8	Cloudy	
Dodge City, Kan	27.40	696.2	29.74	755.4	60	15.6	100	E	12	5.4			Fog			Inap.	Inap.	Dense fog	
Dubuque, Iowa			30.13	765.3	62	16.7	71	Calm	0	0		0	Haze			0	0	Clear	
Duluth, Minn			30.05	763.3	61	16.1	77	SW	4	1.8		5c	0			0	0	Fair	
Eastport, Me			29.90	759.4	54	12.2	79	Calm	0	0			Fog			0.06	1.5	Foggy	
Erie, Pa			30.02	762.5	62	16.7	57	NW	8	3.6		2c	7ks	W	W	0	0	Fair	
Escanaba, Mich			30.06	763.5	58	14.4	81	N	4	1.8			10s		N	0.02	0.5	Cloudy	
Fort Gibson, Indian Ter.			29.98	761.5	65	18.3	89	E	8	3.6			10s		E	1.37	34.8	Cloudy	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.74	731.0	29.86	758.4	68	20.0	94	NE	12	5.4			10n		N	0.34	8.6	Light rain	
Fort Sully, Dakota	28.27	718.0	29.86	758.4	65	18.3	73	S	18	8.0		5k	2s	S		0	0	Cloudy	
Galveston, Tex			29.94	761.0	81	27.2	87	W	4	1.8			10s			0	0	Threatening	
Grand Haven, Mich			30.05	763.3	64	17.8	73	SW	4	1.8		4ck	2s	NW	NW	0	0	Fair	
Indianapolis, Ind			30.12	765.0	63	17.2	72	Calm	0	0		0	0			0	0	Clear	
Indianola, Tex			29.95	760.7	81	27.2	82	S	6	2.7		0	0			0	0	Clear	
Jacksonville, Fla			30.11	765.2	82	27.8	74	S	4	1.8		5k	0	SW		0.50	12.7	Fair	
Keokuk, Iowa			30.00	762.0	65	18.3	83	Calm	0	0		0	0			0	0	Clear	
Key West, Fla			30.01	762.2	83	28.3	74	SE	12	5.4		5k	Haze	SE	SE	0	0	Fair	
Kittyhawk, N. C.			30.11	764.8	67	19.4	73	N	12	5.4		0	8ks		W	0.01	0.3	Cloudy	
Knoxville, Tenn			30.10	764.5	59	15.0	76	NE	4	1.8		2ck	0	SW		Inap.	Inap.	Clear	
La Crosse, Wis			30.13	765.3	57	13.9	100	S	6	2.7			Fog			0	0	Foggy	
Leavenworth, Kan			30.10	764.5	60	15.6	81	Calm	0	0		0	0			Inap	Inap.	Clear	
Lexington, Ky	29.03	737.3	30.11	764.8	65	18.3	68	SE	4	1.8			10s			0.14	3.6	Cloudy	
Louisville, Ky			30.11	764.8	62	16.7	83	Calm	0	0		0	Haze			Inap.	Inap.	Clear	
Lynchburg, Va			30.09	764.3	65	18.3	68	W	3	1.3		0	0			0.01	1.0	Clear	
Malone, N. Y.			29.96	761.0	52	11.1	72	W	7	3.1		2k	0	W		0.35	8.9	Fair	
Manhattan, Kan	28.97	735.8	30.11	764.8	57	13.9	93	S	2	0.9		0	0			0.15	3.8	Clear	
Marquette, Mich			30.01	762.2	58	14.4	81	Calm	0	0		8ck	0	NW		0.02	0.5	Cloudy	
Memphis, Tenn			30.04	763.0	67	19.4	71	NE	7	3.1		2c	0			0.45	11.4	Clear	
Milwaukee, Wis			30.10	764.5	63	17.2	72	W	8	3.6		0	0			0	0	Clear	
Mobile, Ala			29.93	760.2	84	28.3	70	S	2	0.9		5ck	5s	SW		0	0	Cloudy	
Montgomery, Ala			29.98	761.5	73.5	23.1	92	SE	5	2.2			10n		E	2.21	56.9	Light rain	
Morgantown, W. Va	29.03	737.3	30.06	763.5	62	16.7	71	SW	8	3.6		0	0			0	0	Clear	
Mt. Washington, N. H.	23.76	603.5	30.12	765.0	37	2.8	100	NW	10	4.5			Fog			0.48	12.2	Foggy	
Nashville, Tenn			30.07	764.8	68	20.0	60	NE	5	2.2		2cs	0	W		0	0	Clear	
New Haven, Conn			29.98	761.5	67	19.4	60	NW	10	4.5		0	Haze			0	0	Clear	
New London, Conn			29.97	761.2	71	21.7	49	NW	5	2.2		0	0			0	0	Clear	
New Orleans, La			29.92	760.0	82	27.8	78	SW	1	0.4		8c	Haze	W		Inap.	Inap.	Fair	
Newport, R. I			29.95	760.7	67	19.4	64	NW	8	3.6		0	0			0	0	Clear	
New York, N. Y			30.02	762.5	64	17.8	62	NW	6	2.7		0	Haze			0	0	Clear	
Norfolk, Va			30.10	764.5	70	21.1	71	W	3	1.3		2c	0			0.01	0.3	Fair	
North Platte, Neb			29.67	754.0	58	14.4	87	SE	22	9.8			10s		SE	0.01	0.3	Cloudy	
Omaha, Neb.	27.16	689.8	30.11	764.8	61	16.1	80	Calm	0	0		0	0			0	0	Clear	
Oswego, N. Y	29.05	737.9	30.02	762.5	60	15.6	63	SE	5	2.2		2k	5ks	NW	NW	Inap.	Inap	Fair	
Pembina, Dakota			29.93	760.2	57	13.9	87	S	11	4.9		2c	Haze			0	0	Fair	
Philadelphia, Penn			30.05	763.3	66	18.9	54	N	10	4.5		0	Haze			0	0	Clear	
Pike's Peak, Colorado			30.22	767.6	36	2.2	70	NW	24	10.7		0	5k			0.23	5.8	Clear	
Pittsburgh, Penn	18.02	457.7	30.03	762.7	62	16.7	71	W	2	0.9		0	0			Inap.	Inap.	Clear	
Port Huron, Mich			30.04	763.0	58	14.4	76	NW	6	2.7		1c	8s	NW	NW	Inap.	Inap.	Cloudy	
Portland, Me			29.9[illegible]	759.4	64	17.8	67	W	6	2.7		1k	Haze	W		0	0	Fair	
Portland, Oregon			30.01	762.2	59	15.0	76	N	1	0.4		0	0			0	0	Clear	
Punta Rassa, Fla			30.04	763.0	83.0	28.3	80	SE	6	2.7		2cs	2ks	SE	SE	0.87	22.1	Fair	
Rochester, N. Y			30.00	762.0	58	14.4	69	W	6	2.7		8k	Haze	W		0.35	8.9	Fair	
Salt Lake City, Utah	25.61	651.2	29.97	761.2	63	17.2	83	Calm	0	0			10s			0.25	6.3	Cloudy	
Sandy Hook, N. J			30.01	762.2	65	18.3	63	W	10	4.5		2c	0	NW		0	0	Fair	
San Diego, Cal.			29.89	759.2	67	19.4	90	NW	4	1.8			10s		NW	0	0	Cloudy	
San Francisco, Cal			29.90	759.4	53	11.7	93	W	16	7.2			Fog			0	0	Foggy	
Santa Fé, N. M	23.30	594.1	29.93	760.2	57	13.9	87	Calm	0	0		5c	0			0.62	15.7	Fair	
Savannah, Ga.			30.01	762.2	72	22.2	95	NE	6	2.7			10n			3.48	88.4	Light rain	
Shreveport, La			30.07	763.3	69	20.6	95	NE	8	3.6			10s		E	0.03	0.8	Threatening	
Smithville, N. C.			30.05	763.3	65	18.3	90	NE	8	3.6			10s		NE	0.32	8.1	Cloudy	
Springfield, Mass.			29.96	761.0	66.5	19.2	63	NW	8	3.6		2ck	0	W		0	0	Clear	
St. Louis, Mo			30.12	765.0	67	19.4	59	SE	8	3.6		0	0			0	0	Clear	
St. Marks, Fla			29.98	761.5	80	26.7	86	Calm	0	0		2cs	2ks	SW		0.19	4.8	Fair	
St. Paul, Minn			30.07	763.8	58	14.4	87	Calm	0	0		8c	Fog			0	0	Fair	
St. Paul's Island, Alaska			29.89	759.2	41	5.0	91	S	1	0.4			Fog			0	0	Foggy	
Thatcher's Island, Mass			29.91	759.7	65	18.3	68	W	8	3.6		0	0			0	0	Clear	
Toledo, Ohio			30.06	763.5	59	15.0	76	Calm	0	0		5k	5ks	NW	NW	0	0	Cloudy	
Tucson, Arizona	27.48	698.0	30.07	763.8	75	23.9		S				2c	0	SE		0	0	Fair	
Tybee Island, Ga			29.98	761.5	72	22.2	100	N	8	3.6			10n		N	3.10	78.7	Heavy rain	
Vicksburg, Miss			29.99	761.7	72.5	22.5	78	N	7	3.1		5c,cs	2k	NW	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.	24.29	617.0	29.77	756.1	55	12.8	93	Calm	0	0	.....	.....	10ks	.....	W	0.48	12.2	Cloudy	
Washington, D. C.	.....	.....	30.09	764.3	65.5	18.6	62	NW	8	3.6	.....	0	Haze	.....	.....	Inap.	Inap.	Clear	
Wilmington, N. C.	.....	.....	30.07	763.8	65	18.3	83	NE	6	2.7	.....	.....	10n	.....	SW	0.09	2.3	Light rain	
Wood's Holl, Mass.	.....	.....	29.95	760.7	71	21.7	67	W	6	2.7	.....	2c	0	.....	.....	0	0	Clear	
Wytheville, Va.	27.79	705.8	29.95	760.7	52	11.1	86	Calm	0	0	.....	5c	0	.....	.....	0.15	3.8	Fair	
Yankton, Dakota	28.83	732.3	30.10	764.5	59	15.0	82	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	29.77	756.1	91	32.8	.....	E	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub-Series.																			
P'nte-a-Pitre, G'd'l'pe, W. I.	.....	.....	29.98	761.5	82	27.8	83	E	.....	.....	.....	0	8ks	.....	.....	0.16	4.1	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.12	765.0	79	26.1	74	Calm	0	0	.....	8c	2s	.....	E	0	0	.....	James Hall.
St. Georges, Bermudas	.....	.....	30.18	766.6	82.5	28.1	79	SSW	13	5.8	.....	0	1k	.....	.....	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	67	19.4	90	S	4.0	1.8	.....	5c	5k	S	.....	Inap.	Inap.	Dull	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.03	762.7	81	27.2	87	E	.....	.....	2	7ks?	6ks	E	.....	0	0	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.7	.....	.....	86.0	30	.....	N	.....	.....	.....	.....	.....	.....	.....	0.089	2.25	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.19	639.8	.....	.....	64.0	17.8	85	Calm	0	0	.....	.....	10n	.....	.....	0.08	2.0	Cloudy	Thomas Herran
York Factory, B. A.	.....	.....	29.84	757.7	57	13.9	87	S	9	4.0	.....	4ks	0	S	.....	0	0	.....	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.08	764.0	77	25.0	90	NE	.....	.....	2	.....	.....	.....	.....	0	0	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—
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	.....	.....	.....	.....
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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.; Morgantown 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

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NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, frasto, 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 JULY 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			30.04	763.1	83.7	28.7	69	N			2		1			0	0	Clear	Charnot.
Algiers			30.10	764.4	82.4	28.0	66	ENE			1		0			0	0	Clear	Peter.
La Calle			30.03	762.7	81.1	27.3	56	NW			4		2			0	0	Clear	Kunts.
Tunis			29.99	761.7	86.5	30.3	36	NW			5		2			0	0	Clear	Jacques.
Sfax			30.09	764.2	87.1	30.6	48	E			4		1			0.	0	Clear	Chauvey.
Saida			30.10	764.5	98.6	37.0		NNE			3		2			0	0	Clear	Millot.
Tebessa			30.10	764.5	87.8	31.0		W			2		1			0	0	Clear	Colin.
Geriville			30.15	765.8	90.1	32.3	20	NNE			2		2			0	0	Clear	Buard.
Laghouat			30.10	764.4	107.6	42.0		SW			3		2			0	0	Clear	Guyot.
Biskra			30.03	762.7	101.7	38.7		NW			4		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			29.99	761.8	81.1	27.3	44	NE			2		8			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.01	762.2	80.2	26.8	49	W			1		4			0	0		Dr. Wierzbiski.
Kperies			29.95	760.8	82.2	27.9	45	NW			3					0	0		Julius Mikolik.
Gratz	28.78	730.9	29.93	760.1	77.0	25.0	60	SW			2		3			1.016	25.8		Andreas Rospini.
Hermannstadt	28.58	725.9	29.92	760.0	78.8	26.0	43	NW			1		6			0	0		Prof. Reissenberger.
Kremsmünster	28.79	731.2	30.09	764.2	70.9	21.6	62	NW			1		3			0	0		Prof. C. Wagner.
Lemberg			29.89	759.2	77.2	25.1	82	N			2		3			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			29.91	759.5	77.4	25.2	57	E			4		1cs			1.449	36.81		I.R.Hydrographic Office.
Szegedin			29.95	760.7	80.6	27.0	39	SW			2		3			0	0		Karl Stancel.
Trieste			29.95	760.7	80.6	27.0	41	ENE			3		1			0	0		Prof. V. Farolfi.
Vienna			30.01	762.2	82.6	28.1	40	NNW			2		1			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1.258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.05	763.2	76.6	24.8	51	WSW			3	1	1	W	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.78	756.4	59.6	15.3		E	7	3.1			4			0.080	2.03	Blue sky	William Boswell.
Ardrossan			29.88	758.9	62.5	16.9		NW			3		4					*D. clouds	William McNeil.
Armagh, Observatory			29.93	760.2	56.0	13.3		NNW	3	1.3			10					Raining	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.94	760.5	61.4	16.3		W			1–2		10					Raining	J. Dreyer.
Bradford			29.93	760.2	65.1	18.4		W			0		10			0.03	0.8	Raining	J. McLandsborough.
Bridgetown, (Barbados)			30.03	762.7	81.8	27.7		NE			2		5					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			30.01	762.0	80.0	26.7		SSW			2–3		3						H. Todd.
Cardington			30.00	762.0	82.0	27.8		W			2		1					Blue sky	John McLaren.
Carlisle			29.86	758.4	63.1	17.3		SW			1		10			0.54	13.7	Raining	T. Bel, for J. Carmell.
Chatham, School M. E			30.02	762.5	79.5	26.4		SW			2		0					Blue sky	Capt. J. Fellowes, R. E.
Dartmoor	28.84	732.5	30.31	769.6	68.0	20.0		NW			5		5					*D. clouds	R. E. Power.
Donaghadee			29.91	759.4	55	12.8		E			3		10					Raining	J. Mac Gowan.
Dover			30.05	763.3	68	20.0		SW			4		0					Clear	J. Costello.
Eccles, (near Manchester.)			29.94	760.5	64.6	18.1		SW	4.4	2.0			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			30.14	765.5	69.5	20.8		WSW			4		8					Overcast	The Staff.
Fort Napier, (Natal)	28.09	713.5	30.33	770.4	61.9	16.6		E			1		9					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.05	763.3	83	28.3		W			3		6					*D. clouds	
Galway, Queen's College			29.91	759.7	59	15.0		W			6		10					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.01	763.0	82.5	28.1		E			3		4					*D. clouds	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.85	758.2	61.1	16.2		W			2		6					Fine	Lewis Stuart.
Great Yarmouth			29.96	761.0	78	25.6		W			2		0					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			30.03	762.7	85.3	29.6		W			3		1					Blue sky	The Staff, for G. B. Airy
Guernsey			30.15	765.8	65	18.3		WSW			1		8					Misty	Dr. S. E. Hoskins.
Helston			30.06	763.5	70	21.1		N			4		0			0	0	Blue sky	M. P. Moyle.
Holyhead			29.92	760.0	59	15.0		SSW			5		10					Raining	John Tilston.
Kew, Observatory			30.04	762.7	76.6	24.8		WSW	17	7.6			3					Blue sky	The Staff.
Kingstown			29.93	760.2	65	18.3		WSW			4		10					Drizzling	George Mitchell.
Leicester Museum			29.98	761.5	74.7	23.7		W			2		6					D clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.85	758.2	81.8	27.7		NW			1		4k					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			29.77	756.1	62	16.7		WSW			4		5					½ clouded	W. D. Penny.
Nassau, (Bahamas			30.09	764.3	85.5	29.7		E			6		7					D clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.96	761.0	74.3	23.5		WNW			3		10k,ksd		WSW			Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.96	761.0	78.9	26.1		SSW			5		9					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.00	762.0	76	24.4		WSW			2		1					Blue sky	J. Lucas.
Plymouth			30.12	765.0	73.4	23.0		SW			3		0					Blue sky	John Merrifield.
Roche's Point			30.03	762.7	64	17.8		WSW			4		10					Raining	W. Kennedy.
Saint Ann's Head			30.05	763.3	62	16.7		WSW			3		10					Overcast	John C. Walker.
Saint Helier, Jersey			30.15	765.8	69.4	20.8		W			2		2					¼ clouded	A. P. Amy.
Sandwick Manse, Orkneys			29.71	754.6	55.2	12.9		W	25	11.2			6					Showery	Rev. C. Clouston, LL. D.
Scarborough			29.92	760.0	59.1	15.1		ESE			1		10					Overcast	F. Shaw.
Scutari Cemetery, Turkey			29.85	758.2	88.8	31.6		NE			2		0					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.96	761.0	68.0	20.0		SW			2		9			Inap.	Inap.	Drizzling	W. F. Cooper.
Silloth Rectory			29.88	758.9	65.5	18.6	82	SW			1		8			0.183	4.65	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.91	759.7	62.0	16.7		W			2		10					Raining	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			29.76	755.9	60	15.6		W			5		8					*D. clouds	John Smith.
Strathfield Turgiss			30.05	763.3	79.3	26.3		W			3		2					Blue sky	Rev. Charles H. Griffith
Thurso			29.72	754.9	56	13.3		WNW			5		6					*D. clouds	John Trotter.
Truro, Royal Institution			30.13	765.3	75	23.9		NW			4		5					*D. clouds	W. Newcombe.
Valencia, Observatory			30.01	762.2	61.6	16.4		SW	21	9.4			10					Misty	The Staff.
Sub-Stations.																			
Calf of Man, Isle of Man					59	15.0		NW			3		10						Thomas Dawson.
Cape Good Hope, Obs'y			30.21	767.3	61.0	16.1	74	SE	12	5.4		4	5						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			30.03	762.7	60.5	15.8	87	NW			1		10kn			0	0	Covered	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.86	758.4	63.0	17.2		W			3		5k			0.15	3.8	Fine	Andrew Gibb.
Mauritius, Observatory			30.27	768.8				SE	15.1	6.8						0.06	1.5		C. Meldrum
Melbourne, Observatory			29.85	758.2	45.1	7.3	71	ESE	3	1.3			6			0	0		R. L. J. Ellery.
Monach Lighthouse, Hebrides			29.79	756.7	56	13.3		WNW			4	5	5	W		0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.65	753.1	52	11.1		W			6	3	5	NW					Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,220 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	759.1	70.5	21.4	55	SW			4		5						
Fanöe			29.89	759.1	62.2	16.8	97	SW			6		10						
Godthaab, Greenland			29.86	758.4	39.6	4.2		ENE			2		0						
Stykkisholm, Iceland			29.39	746.4	54.9	12.7	94	W			4		0						
Thorshavn, (Faröe)			29.60	751.8	49.6	9.8	63	NW			4		5						
Vestervig			29.81	757.1	59.7	15.4	96	SW			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			30.13	765.3	73.4	23	29	NE			1		28 k		NE	0	0	Slightly cl'dy	Normal School.
Amiens			30.10	764.6	83.5	28.6	43	NW			3		0			0	0	Clear	Normal School.
Avignon			29.99	761.8	86.0	30	25	N			3		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.08	764.0	75.9	24.4	67	NW			2		8		NW	0	0	Hazy	C. Saillard.
Beaumette, (near Angers)			30.10	764.4	87.6	30.9	28	W	4.0	1.8			2		WSW	0	0	Slightly cl'dy	Beaumette Observatory
Beauvais			30.13	765.2	77.0	25	40	NW			3		0			0	0	Clear	Normal School.
Besançon			30.11	764.7	78.8	26	59	N			3		0			0.76	19.3	Clear	Normal School.
Bourg en Bresse			30.21	767.3	80.8	27.1	53	N			4		0					Clear	Normal School.
Bourges			30.607	777.32	74.3	23.5	62	W			2		0			0	0	Clear	Normal School.
Brest			30.09	764.2	77.9	25.5	62	SW			2		1k			0	0		Naval Observatory.
Carcassonne			30.03	762.7	77.0	25	37	W			1		0			0	0	Clear	Normal School
Caen			30.11	764.9	75.4	24.1	85	NE			4		1		E	0	0	Clear	Normal School.
Chartres			30.12	765.1	75.0	23.9	70	SW			2		0			0	0	Clear	Normal School.
Clermont			30.10	764.5	77.4	25.2	57	NE			1		2			0	0		Puy de Dome Obs'y
Clermont			30.13	765.4	74.7	23.7	66	WNW			2		2k		W	0	0	Slightly cl'dy	Normal School
Commercy			30.07	763.7	88.3	31.3	28	W			2		2		W	0	0		M. Kina.
Commune de Greasque*			30.09	764.3	84.4	29.1	72	SSE			1		0			0	0	Clear	Normal School.
Grenoble			30.20	767.1	87.4	30.8	45	SSE			1		5		N	0	0	Partly cl'dy	Normal School.
La Roche-sur-Yon			30.09	764.3	80.2	26.8	61	NW			2		0			0	0	Clear	Normal School.
Le Mans			30.08	764.1	77.2	25.1	62	N			2		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			30.27	768.8	85.3	29.6	41	N			2		0			0	0	Clear	Normal School.
Mâcon																			M. Schuster.
Metz			30.12	765.1	77.4	25.2	60	NNE			2		8		NW	0.08	2.	Almost cov'd	Normal School.
Mirecourt			29.99	761.7	86.0	30	25	NE			6		0			0	0	Clear	Normal School.
Nîmes			30.13	765.2	78.1	25.6	53	N			1		2		NW	0	0	Slightly cl'dy	Normal School.
Orleans			30.12	765.0	79.3	26.3	50	NW			2		6k		NW	0	0	Cloudy	National Observatory.
Paris, Observatory			30.13	765.2	82.4	28	62	S			1		0			0	0	Clear	Normal School.
Parthenay			30.05	763.3	79.9	26.6		N			4		2		N	0	0	Slightly cl'dy	Normal School.
Privas			30.13	765.4	88.2	31.2	46	NW			1		2			0	0	¼ covered	Naval Observatory.
Rochefort, Observatory			30.12	765.1	81.3	27.4	41	NW			2		0			0	0	Clear	Normal School.
Rouen			29.87	758.6	72.7	22.6	50	E			2		2			0	0		Normal School.
Saint Lo			30.08	764.0	85.1	29.5		W			3		10			0	0	Covered	Normal School
Tarbes	29.06	738.1	30.09	764.3	85.5	29.7	45	N			2		5			0	0	Cloudy	Normal School.
Villefranche																			
Sub-Series.																			
Fort de France, Martinique			29.93	760.3	81.0	27.2													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.32	770.0	73.8	23.2	43	NNE	7.4	3.33			0			0	0		—. Faïguère.
Montsouris, Paris			30.12	765.1	81.3	27.4	52	W			1		7		SW	0	0		Montsouris Observ'tory.
Perpignan			30.03	762.8	87.3	30.7	29	NE	18.6	8.33			0			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Laylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.12	765.1	80.6	27.0	50	NW			1		5			0	0	Fair	E. Renou.
Toulouse			30.16	766.0	82.2	27.9	36	N			1		0			0	0		Toulouse Observatory
Tours			30.11	764.9	83.5	28.6	44	SW			1		1		W	0	0		C. Marquet.
Versailles, (near Paris)			30.13	765.4	81.3	27.4	48	W			1		7			0	0	Fair	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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	763.1	78.1	25.6	53	SE			3		3	S		0.008	0.2		Prof. T. Hoh.
Berlin			30.05	763.2	77.0	25.0	35	SW			2		0			0	0		Prof. Arndt.
Breslau			30.11	764.7	78.6	25.9	42	NW			5		1			0	0		Dr. P. Neugebauer.
Carlsruhe			30.07	763.7	81.0	27.2	59	SE			1		1			0.134	3.4		A. Senz.
Cassel			30.04	763.0	84.0	28.9	50	W			4		4	SW		0	0		Dr. H. Möhl.
Emden			30.02	762.5	77.0	25.0	55	W			3		4			0	0		Prof. Prestel.*
Frankfort on the Main			30.08	764.0	85.6	29.8	37	SW			2		4			0	0		Physical Society.
Friedrichshafen			30.14	765.6	65.8	18.8	87	W			2		3			0.093	2.3		M. Wilhelm.
Hamburg			30.02	762.4	74.3	23.5	51	SW			3		88			0	0		Captain F. Hegemann.
Kiel			29.95	760.8	73.2	22.9	52	SW			4		5			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			29.93	760.2	68.2	20.1	47	W			5		2			0	0		Prof. E. Luther.
Köslin			30.03	762.7	68.2	20.1		NW			6		2			0	0		H. Müller.
Leipsic			30.07	763.7	81.3	27.4	42	WSW			1		3			0	0		Prof. Bruhns.
Memel			29.87	758.7	64.8	18.2	75	W			4		10			0	0		Reinbrecht & Skalweit.
Münster			30.12	765.0	77.7	25.4	67	SW			1		0			0	0		Prof. E. Heis.
Neufahrwasser			29.96	761.0	73.9	23.3	34	WNW			5		7			0	0		A. Lothes.
Posen			30.03	762.7	77.9	25.5	21	NW			1		2			0	0		Dr. Magener.
Strassburg, (In Alsace)			30.10	764.6	78.3	25.7	59	Calm			0		3			0.016	0.4		Dr. Schur.
Stuttgart			30.09	764.2	77.9	25.5	62	E			2		1			0	0		Prof. Schoder.
Thorn			29.97	761.3	80.8	27.1	18	NW			4		4			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.06	763.4	83.8	28.8	45	W			4		3			0	0		Prof. Flesch.
Wustrow, Naval School			30.07	763.8	67.1	19.5	52	W			2		7			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.85	758.2	92.3	33.5		SW										Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	760.7	81.9	27.7	37	NE	2.5	1.1			1			0	0		
Padua			29.95	760.7	80.2	26.8	49	NE	11.9	5.3			2			0	0		
Vicenza			29.96	761.0	79.7	26.5	51	E	3.1	1.4			1			0	0		
Verona			29.97	761.3	80.2	26.8	32	NE			2		10			0	0		
Bergamo	28.66	728.0	29.92	759.9	77.4	25.2	58	W			2		1			0	0		
Domodossola	28.99	736.3	29.97	761.3	77.0	25.0	61	SW			0		0			0	0		
Milan			29.97	761.3	84.9	29.4	60	W			2		2	NW		0	0		
Pavia			30.00	761.9	78.8	26.0	51	NE			4		0			0	0		
Moncalieri			30.00	761.9	79.3	26.3	40	SW	3.1	1.4			1			0	0		
Mondovi	28.16	715.3	30.00	761.9	75.2	24.0	40	NNW			4		0			0	0		
Porto Maurizio			29.98	761.5	86.0	30.0	26	NE			4		1			0	0		
Genoa			29.93	760.1	85.1	29.5	31	NE	3.8	1.7			0			0	0		
Piacenza			30.00	761.9	78.4	25.8	56	SE	2.5	1.1			1			0	0		
Parma			29.99	761.7	78.8	26.0	57	W			2		1			0.201	5.1		
Bologna			29.99	761.8	74.5	23.6	39	N			1		6	W		0.472	12.0		
Florence			29.95	760.8	77.0	25.0	53	NE			4		9			0	0		
Leghorn			29.91	759.6	78.3	25.7	54	NE	8.7	3.9			6			0	0		
Siena	28.71	729.3	29.87	758.6	73.6	23.1	59	NE	4.9	2.2			1	NE		0.157	4.0		
Urbino	28.44	722.4	29.93	760.2	67.8	19.9	90	NNE			6		10			4.822	122.5	Showery	
Ancona			29.78	756.4	81.0	27.2	66	SE			4		4			0	0		
Grosseto			29.79	756.7	74.8	23.8	66	NE			4		10	SE		0	0		
Rome			29.84	758.0	75.6	24.2	57	NNE	15.0	6.7			7	ENE		0	0		
Naples, O. U.			29.84	758.0	79.3	26.3	63	SE			2		8	SSW		0.591	15.0		
Lecce			29.84	757.9	85.8	29.9	38	SSE	21.8	11.1			2			0	0		
Cosenza			29.85	758.1	87.4	30.8	67	SE	9.8	4.4			2			0	0		
Riposto, (Sicily)			29.97	761.1	85.3	29.6	49	NE			2		2	W		0	0		
Palermo			29.83	757.6	79.9	26.6	52	W	13.7	6.1			6	W		0	0		
Caltanissetta	27.92	709.1	29.78	756.4	79.3	26.3	45	WSW			4		2						
Sub-Series.																			
Naples, S. R.			29.85	758.1	76.6	24.8	61	WSW	1.8	0.8			10	WSW		0	0		Prof. F. Brioschi.
pesaro			29.84	760.4	73.4	23.0	84	N	22.8	10.17			10k,e	N		Blank	Blank		L. Guidi.

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			30.17	766.3	70.3	21.3		WNW			4								
Groningen			29.94	760.4	75.2	24.0		SW			5								
Helder			29.98	761.6	69.6	20.9		SW			4								
Utrecht			30.00	762.0	80.4	26.9	50	SW			4		5					Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.71	754.6	59.4	15.2	74	SSW	21.7	9.7			7			0.241	6.2		
Brönö			29.56	750.7	56.8	13.8	59	SW	18	8			7			0	0		
Christiania			29.64	752.8	68.5	20.3	33	SE	15.7	7.0			7			0	0		
Tromsö			29.47	748.4	59.7	15.4	100	SW	2	1			1			0	0		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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	70.3	21.3	76	NE	13.1	5.86			6			0.047	1.2		Dr. J. A. N. Sampaio.
Campo Major			29.95	760.7	103.5	39.5	15	SSW	5.2	2.33			4			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.10	764.6	71.8	22.1	69	SSE	3.8	1.7			10			0	0		Capt. D. A. da Cunha.
Lisbon			30.03	762.8	86.0	30.0	40	E	6.3	2.8			4			0	0		The Observatory.

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

RUSSIAN SERIES.

Furnished by 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	77.7	25.4	27	WNW	11	5			4						Astronomical Obs.
Wilna			29.78	756.4	74.5	23.6	61	SW	4	2			7						Astronomical Obs.
Dorpat			29.70	754.4	75.2	24.0	60	SW	4	2			3						Physical Cabinet.
St. Petersburg			29.60	751.9	68.4	20.2	78	WNW	11	5			3						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kieff			29.78	756.5	76.3	24.6	50	WNW	7	3			7						Physical Cabinet.
Nikolaiev			29.94	760.4	84.6	29.2	44	W	11	5			3						Kurdakof.
Kertch			29.95	760.7	77.7	25.4	68	SE	4	2			1						Lagorio.
Moscow			29.57	751.0	65.8	18.8	91	S	4	2			9					Raining	Meteorological Obs.
Lugan			29.74	755.4	81.3	27.4	44	WSW	22	10			4						Meteorological Obs.
Archangel			29.50	749.3	55.2	12.9	91	NE	13	6			10						Ogorodnikof.
Tiflis	28.48	723.4	29.78	756.5	92.5	33.6	28	SW	4	2			2						Physical Observatory.
Astrakhan			29.88	759.0	81.7	29.3	56	NNE	4	2			8			Blank	Blank		Sebastianof.
Kasan			29.61	752.2	81.5	27.5	49	WSW	22	10			4						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.90	734.1	29.80	757.0	73.4	23.0	86	SSE	2	1			10						Meteorological Obs.
Nukuss			29.83	757.7	90.9	32.7	45	NW	11	5			0						
Kasaly																			Bobrof.
Tashkend	28.15	715.1	29.73	755.2	88.0	31.1	46	Calm	0	0			0						Michelson.
Barnaul			29.82	757.5	72.0	22.2	43	NW	0	0			9						Meteorological Obs.
Yeniseisk			29.64	752.9	61.5	16.4	77	NW	7	3			8						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.83	757.7	83.8	28.8	86	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.64	752.3	78.6	25.9	68	SE	9	4			1						
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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 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			29.92	760.0	104.4	40.2	15	W	10.4	4.66		0	0			0	0		Royal Observatory.
San Fernando			30.00	761.9	102.2	39.0	25	ESE	10.7	4.8		0	0						The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			29.54	750.2	59.4	15.2	74	N			2		10					Raining	
Umea			29.57	751.1	54.7	12.6	91	N			2		10					Raining	
Hernosand			29.58	751.4	55.0	12.8	85	N			2		10			0.197	5.0	Raining	
Stockholm			29.61	752.1	73.6	23.1	29	WSW			6		3			0	0		
Wisby			29.76	756.0	70.2	21.2	61	W			6		0			0	0		
SUB-SERIES.																			
Upsala			29.57	751.1	75.0	23.9	27	WSW	13.4	6.0			6	WSW		0	0		Dr. Hildebrandsson.

NOTE.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall 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	28.70	729.0	30.08	763.9	72.7	22.6	64	N			3		0			0.001	0.1	Clear	The Observatory.
Zurich	28.54	725.0	30.12	765.1	72.5	22.5	60	NE			1		0			0.915	24.0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are Barometer, +1.2 mm.; Thermometer, 0.0 cent.; Relative Humidity, +11 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and Professor 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			29.91	759.6	84.2	29.0	32	ENE	9	4.0			0			0	0		
Fao, (Persian Gulf)			29.61	752.0	105.8	41.0		NW			1		0						
Salonica			29.93	760.3	87.4	30.8		S			2		0						
Valona			29.85	758.2	86.9	30.5		SW			1		0						
Varna			29.92	760.0	84.2	29.0		NE			2		2						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.75	755.6	89.6	32.0	58	SW			3		1k		SW	0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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			30.01	762.2	63.0	17.2	71	W	5	2.2			0			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.17	766.3	63	17.2		S	1	0.4		0	2s		S	0.17	4.3	Fair	W. R. Bigg.
*Chatham, N. B			30.01	762.2	62	16.7	79	SW	3	1.3		0	0			0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island			30.10	764.5	65	18.3	78	S	13	5.8			8ks		S	0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.08	764.0	59.5	15.3	84	S			1	6k	0			0.042	1.07	Fair	James Smith, M. A.
Dalhousie, N. B.			30.02	762.5	61	16.1	86	W			1					0.24	6.1	Clear	H. A. Johnson.
Esquimault, B. C																			W. H. Bevis.
Fredericton, N. B.			30.10	764.5	61.0	16.1	77	W	2	0.9		2k	0	W		0.200	5.08	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.69	754.1	64	17.8	98	S	14	6.3		5k	5n	S	S	0.090	2.29	Cloudy	James Stewart.
Goderich, Ontario			30.19	766.8	60.9	16.1	65	Calm			0	0	0			0	0	Clear	H. J. Strang, M. A.
Granton, Ontario	29.08	738.6	30.17	766.3	55	12.8		Calm			0	0	0			0	0	Clear	James Grant.
*Halifax, N. S.			30.11	764.8	63	17.2	97	S	7	3.1			Fog			0	0	Foggy	F. Allison, M. A.
*Kingston, Ontario			30.17	766.3	58	14.4	80	Calm	0	0		0	0			0.07	1.8	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			30.14	765.5	64.5	18.1	84	SW	4	1.8		8ks	0	SW		0	0	Cloudy	C. H. Rigby.
*Montreal, Quebec			30.08	764.0	58	14.4	80	W	2	0.9		8k	2ks	W		Inap.	Inap	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.11	764.8	57	13.9	68	NW	4	1.8		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.19	766.8	54	12.2	87	N	1	0.4		0	0			0.03	0.8	Clear	Rev. R. Mosley.
*Port Dover, Ontario			30.19	766.8	53	11.7	80	N	5	2.2		0	0			0.05	1.3	Clear	H. Morgan.
Port Hastings, N. S.			30.15	765.8	62.8	17.1		Calm	0	0						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.17	766.3	54	12.2	84	N	6	2.7		0	0			0.15	3.8	Clear	M. Payne.
*Quebec, Quebec			30.08	764.0	59	15.0	82	Calm	0	0		0	0			0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.			30.12	765.0	57	13.9	94	S	1	0.4		1ck	0			0.05	1.3	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario			30.15	765.8	58	14.4	82	Calm	0	0		k	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.16	766.1	57	13.9	81	N	3	1.3		5k	0	N		0	0	Fair	R. J. Cole.
Stratford, Ontario	28.89	733.8	30.17	766.3	51.1	10.6	91	NW	2	0.9		0	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			30.17	766.3	64	17.8	87	SW	7	3.1		8k	2s	SW	SW	0	0	Cloudy	T. C. Hill.
*Toronto, Ontario			30.19	766.8	57	13.9	79	N	5	2.2		8cs	0			0	0	Fair	Magnetic Observatory.
Woodstock, Ontario			30.18	766.0	52.8	11.6	83	NE	6	2.7		1cs	1cs			0	0	Fine	J. Montgomery
Sub-Series.																			
St. Johns, Newfoundland			30.25	768.3	65	18.3	78	S				5c	0			0	0	Fair	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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.			30.08	764.0	61	16.1	70	NW	4	1.8		5k	5ks	W	W	0.04	1.0	Cloudy	
Alpena, Mich.			30.12	765.0	53	11.7	86	Calm	0	0		2ck	0	N		Inap.	Inap.	Fair	
Atlantic City, N. J.			30.11	764.8	67	19.4	79	N	6	2.7		0	Haze			0.01	0.3	Clear	
Augusta, Ga.			30.15	765.8	70	21.1	77	NE	2	0.9		0	0			0.22	5.6	Clear	
Baltimore, Md.			30.16	766.1	67	19.4	64	NW	8	3.6		0	Haze			0.09	2.3	Clear	
Barnegat, N. J.			30.10	764.5	65	18.3	78	NW	10	4.5		10k	0	NW		Inap.	Inap.	Cloudy	
Benton, Montana	27.14	690.4	29.98	761.5	62	16.7	44	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	27.97	710.4	29.51	749.5	69	20.6	84	N	9	4.0			10s		N	0	0	Cloudy	
Boston, Mass.			30.08	764.0	58	14.4	75	NW	10	4.5		10cs	Haze	W		0	0	Hazy	
Breckenridge, Minn.			29.70	754.4	67	19.4	74	SE	20	8.9			10s		SE	0	0	Cloudy	
Buffalo, N. Y.			30.15	765.8	56	13.3	75	Calm	0	0		1c	0			1.53	38.9	Clear	
Burlington, Vt.			30.09	764.3	56	13.3	75	E	2	0.9		2k	5s			0	0	Cloudy	
Cairo, Ill.			30.12	765.0	68	20.0	69	E	3	1.3		0	0			0	0	Clear	
Cape Hatteras, N. C.			30.05	763.3	73	22.8	76	NE	15	6.7			10s		NE	0.01	0.3	Cloudy	
Cape Henry, Va.			30.11	764.8	75	23.9	56	W	6	2.7		2c	Haze			0	0	Fair	
Cape Lookout, N. C.			30.15	765.8	71	21.7	85	N	14	6.3			10s		N	0.04	1.0	Cloudy	
Cape May, N. J.			30.11	764.8	69	20.6	75	NW	15	6.7		5k	Haze	NW		0	0	Fair	
Charleston, S. C.			30.12	765.0	72	22.2	80	NE	10	4.5		0	1s			0.19	4.8	Clear	
Cheyenne, Wyoming	24.10	612.1	30.04	763.0	62	16.7	52	NW	4	1.8		0	0			0	0	Clear	
Chicago, Ill.			30.09	764.3	70	21.1	57	SW	1	0.4		2k	0			0	0	Fair	
Cincinnati, Ohio			30.11	764.8	66	18.9	73	SE	1	0.4		0	Fog			0	0	Foggy	
Cleveland, Ohio			30.17	766.3	59.2	15.1	82	SE	2	0.9		0	Sm'e		SE	0.38	9.7	Clear	
Colorado Springs, Col.	24.17	613.9	30.01	763.0	69	20.6	53	S	4	1.8		0	1s			0	0	Clear	
Corsicana, Tex.			29.94	760.5	76	24.4	90	E	6	2.7		2cs	8ks		E	0	0	Cloudy	
Davenport, Iowa			30.10	764.5	66	18.9	68	S	2	0.9		5ck	0	W		0	0	Fair	
Denison, Tex.			29.95	760.7	71	21.7	90	SE	6	2.7			10n		SE	0.07	1.8	Light rain	
Denver, Col.	24.83	630.7	30.05	763.3	62	16.7	71	S	5	2.2		0	0			0.50	12.7	Clear	
Detroit, Mich.			30.13	765.3	62	16.7	77	E	3	1.3		2cs	Haze	N		0	0	Fair	
Dodge City, Kan.	27.38	695.4	29.58	751.3	66	18.9	100	SE	10	4.5			10s			0.29	7.4	Cloudy	
Dubuque, Iowa			30.06	763.5	66	18.9	78	W	4	1.8		10k	0			0	0	Cloudy	
Duluth, Minn.			29.94	760.5	57	13.9	80	Calm	0	0		8ck	0	W		0	0	Fair	
Eastport, Me.			30.09	764.3	53	11.7	93	Calm	0	0			Fog			Inap.	Inap.	Foggy	
Erie, Pa.			30.15	765.8	60	15.6	70	W	2	0.9		2k	0	W		0.07	1.8	Fair	
Escanaba, Mich.			30.09	764.3	64	17.8	78	S	6	2.7		5cs	0	S		0	0	Fair	
Fort Gibson, Indian Ter.			29.95	760.7	74	23.3	68	E	7	3.1		5ck	0	SE		Inap	Inap.	Fair	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.76	730.5	29.82	757.4	72	22.2	95	SE	8	3.6			10s		SE	0.06	1.5	Cloudy	
Fort Sully, Dakota	28.05	712.5	29.60	751.8	70	21.1	90	W	2	0.9		10k	0	W		0.05	1.3	Cloudy	
Galveston, Tex.			30.00	762.0	81	27.2	87	NW	8	3.6		8cs	0			1.00	25.4	Cloudy	
Grand Haven, Mich.			30.09	764.3	68	20.0	69	SE	2	0.9		5c	Sm'e	NW	SE	0	0	Fair	
Indianapolis, Ind.			30.15	765.8	66	18.9	73	Calm	0	0		2c	Sm'e			0	0	Clear	
Indianola, Tex.			29.98	761.5	83	28.3	83	S	7	3.1		2k	0			0	0	Fair	
Jacksonville, Fla.			30.10	764.5	74	23.3	90	N	8	3.6			10s			0.97	24.6	Cloudy	
Keokuk, Iowa			30.03	762.7	68	20.0	74	Calm	0	0		5c	0			0	0	Fair	
Key West, Fla.			30.04	763.0	83.2	28.4	74	SE	8	3.6		2k	Haze	SE	SE	0	0	Fair	
Kittyhawk, N. C.			30.16	766.1	69	20.6	75	N	15	6.7		0	8ks		W	0	0	Cloudy	
Knoxville, Tenn.			30.19	766.8	62	16.7	88	NE	3	1.3		1ck	0	SW		0	0	Clear	
La Crosse, Wis.			30.01	762.2	65	18.3	78	S	6	2.7			10s			0	0	Cloudy	
Leavenworth, Kan.			29.97	761.2	68	20.0	75	S	6	2.7			10s		SW	0	0	Threatening	
Lexington, Ky.	29.06	738.1	30.14	765.5	65	18.3	73	SE	4	1.8		0	0			0	0	Clear	
Louisville, Ky.			30.13	765.3	69	20.6	65	Calm	0	0		0	Fg.,sm'			0	0	Clear	
Lynchburg, Va.			30.14	765.5	68	20.0	60	W	4	1.8		0	0			0	0	Clear	
Malone, N. Y.			30.08	764.0	55	12.8	80	W	1	0.4		5k	5s	W	W	0.02	0.5	Cloudy	
Manhattan, Kan.	28.81	731.8	29.91	759.7	66	18.9	90	S	8	3.6		0	0			0	0	Clear	
Marquette, Mich.			30.04	763.0	63	17.2	66	SW	16	7.2		8ck	0	W		0	0	Cloudy	
Memphis, Tenn.			30.09	764.3	69	20.6	75	E	6	2.7		0	0			0	0	Clear	
Milwaukee, Wis.			30.11	764.8	65	18.3	73	Calm	0	0		2c	2k	N	SW	0	0	Fair	
Mobile, Ala.			30.03	762.7	80	26.7	78	E	12	5.4			10s		SE	0.83	21.1	Cloudy	
Montgomery, Ala.			30.12	765.0	69	20.6	90	E	10	4.5			10s		E	0.05	1.3	Threatening	
Morgantown, W. Va.	29.13	739.9	30.16	766.1	65	18.3	70	Calm	0	0		0	Haze			Inap.	Inap.	Clear	
Mt. Washington, N. H.	23.85	605.8	30.21	767.3	33	0.6	100	SW	10	4.5			10n		SW	0.10	2.5	Heavy snow	
Nashville, Tenn.			30.11	764.8	70	21.1	66	NE	2	0.9		2k	0	S		0	0	Fair	
New Haven, Conn.			30.09	764.3	63	17.2	73	N	5	2.2		5k	0	N		0.05	1.3	Fair	
New London, Conn.			30.08	764.0	66	18.9	64	W	2	0.9		2ck	2s	W	SW	Inap.	Inap.	Fair	
New Orleans, La.			29.97	761.2	78	25.6	86	NE	5	2.2		4c	2k		NE	1.11	28.2	Fair	
Newport, R. I.			30.08	764.0	66	18.9	73	SW	5	2.2		10cs	0	SW		0.08	2.0	Cloudy	
New York, N. Y.			30.12	765.0	64	17.8	62	W	8	3.6		10k	Fog	W		0.01	0.3	Cloudy	
Norfolk, Va.			30.16	766.1	72	22.2	58	NW	4	1.8		5c	Haze			0	0	Fair	
North Platte, Neb.			29.41	747.0	71	21.7	80	S	20	8.9		2k	0	S		0	0	Clear	
Omaha, Neb.	26.99	685.5	29.88	758.9	69	20.6	75	S	10	4.5		5c	0	W		0	0	Fair	
Oswego, N. Y.	28.85	732.8	30.13	765.3	59.5	15.3	68	W	5	2.2		0	1ks		NW	0.10	2.5	Clear	
Pembina, Dakota			29.63	752.6	63	17.2	94	SE	8	3.6			10n		SE	0.31	7.9	Light rain	
Philadelphia, Penn.			30.12	765.0	66	18.9	63	NW	10	4.5		0	Fog			0.08	2.0	Foggy	
Pike's Peak, Colorado	18.03	458.0	30.24	768.1	34	1.1	70	W	28	12.5		0	0			0	0	Clear	
Pittsburgh, Penn.			30.17	766.3	56	13.3	93	Calm	0	0			Fog			0.41	10.4	Foggy	
Port Huron, Mich.			30.16	766.1	54	12.2	93	Calm	0	0			Fog			0.35	8.9	Foggy	
Portland, Me.			30.08	764.0	56	13.3	81	NW	9	4.0			10n		S	0.04	1.0	Light rain	
Portland, Oregon			30.00	762.0	59	15.0	87	S	4	1.8		0	1s			0	0	Clear	
Punta Rassa, Fla.			30.07	763.8	80.5	26.9	80	E	9	4.0		2c	0	NW		0	0	Fair	
Rochester, N. Y.			30.13	765.3	57	13.9	75	W	5	2.2		8k	0	W		0.35	8.9	Fair	
Salt Lake City, Utah	25.66	651.8	29.99	761.7	67	19.4	50	SE	8	3.6		2c	2s	W		0	0	Fair	
Sandy Hook, N. J.			30.10	764.5	66	18.9	73	W	9	4.0		2ck	2s	W	W	0	0	Fair	
San Diego, Cal.			29.91	759.7	67	19.4	84	Calm	0	0			10s			0	0	Cloudy	
San Francisco, Cal.			29.93	760.2	54	12.2	93	SW	8	3.6			Fog		SW	0	0	Foggy	
Santa Fé, N. M.	23.36	593.3	29.90	759.4	60	15.6	76	NE	4	1.8		2c	0			0	0	Clear	
Savannah, Ga.			30.12	765.0	72	22.2	80	NE	4	1.8		5cs	2s	NE		0.08	2.0	Fair	
Shreveport, La.			30.04	763.0	74	23.3	88	NE	2	0.9		10ck	0	NW		Inap.	Inap.	Cloudy	
Smithville, N. C.			30.15	765.8	68	20.0	79	N	6	2.7		5k	2ks	NW		0.29	7.4	Cloudy	
Springfield, Mass.			30.08	764.0	63	17.2	67	N	4	1.8		8k	0	W		0.04	1.0	Fair	
St. Louis, Mo.			30.10	764.5	69	20.6	65	S	4	1.8		0	0			0	0	Fair	
St. Marks, Fla.			30.07	763.8	77	25.0	86	E	10	4.5		2ck	5s	NW	E	1.06	26.9	Fair	
St. Paul, Minn.			29.90	759.4	68	20.0	60	SE	10	4.5		8c	8s		SW	0	0	Cloudy	
St. Paul's Island, Alaska			29.80	756.9	41	5.0	91	SW	4	1.8			Fog			0.44	11.2	Foggy	
Thatcher's Island, Mass.			30.07	763.8	59	15.0	76	NW	10	4.5			10s		W	0	0	Cloudy	
Toledo, Ohio			30.11	764.8	64	17.8	73	Calm	0	0		5cs	Haze			0	0	Fair	
Tucson, Arizona	27.51	698.7	30.10	764.5	76	24.4		SW				5ck	0	SE		0.35	8.9	Fair	
Tybee Island, Ga.			30.10	764.5	71	21.7	95	NE	8	3.6			10s		NE	0.80	20.3	Cloudy	
Vicksburg, Miss.			30.05	763.3	74.5	23.6	88	SE	6	2.7		2cs	10k		E	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.	24.33	618.0	29.81	757.2	51	10.6	78	Calm	0	0		8c	0	W		0.01	0.3	Cloudy	
Washington, D. C.			30.16	766.1	68	20.0	60	NW	8	3.6		5cs	Haze			0.01	0.3	Fair	
Wilmington, N. C.			30.15	765.8	66	18.9	83	NE	6	2.7		8cs	0			0.15	3.8	Fair	
Wood's Holl, Mass.			30.08	764.0	68	20.0	74	S	10	4.5			10s		SW	0	0	Cloudy	
Wytheville, Va.	27.86	707.6	30.01	762.2	56	13.3	80	Calm	0	0		8c	0			0	0	Fair	
Yankton, Dakota.	28.56	725.4	29.79	756.7	68	20.0	79	S	9	4.0			10s		S	0	0	Cloudy	
Yuma, Arizona.			29.85	758.2	85	29.4		SW				0	0			0	0	Clear	
Sub-Series.																			
P'nte-a-Pitre, G'd'l'pe, W. I.			30.00	762.0	82	27.8	78	E				2k	5ks			0	0	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.			30.16	766.1	79	26.1	78	Calm	0	0		5c	2s			0	0		James Gall.
St. Georges, Bermudas			30.25	768.3	84.5	29.2	76	SE	7	3.1		0	1k			0	0	Clear	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	68	20.0	90	S	2.0	0.9		5c	0	S		0.36	9.1	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.03	762.7	81	27.2	83	SE			1	6k	5k	E		0	0	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.11	764.7			83.8	28.8		S								0.906	23.00		Dr. H. Groot.
Medellin, Colombia, S. A.	25.21	640.3			62.0	16.7	79	Calm	0	0		1c	2s			0.14	3.6	Fair	Thomas Herran.
York Factory, B. A.			29.59	751.6	68	20.0	60	S	10	4.5		4c	0	S		0	0		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.			30.09	764.3	77	25.0	90	NE			2					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Nova Scotian at Queenstown.			30.02	762.5	63	17.2		WSW			5		10			Rough		Heavy rain	Capt. Ritche.

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.; Morgantown 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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 added 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.
Furnished by coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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.
1:18 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			30.04	763.0	85.6	29.8	68	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.10	764.6	82.4	28.0	63	NNE			1		1			0	0	Clear	Peter.
La Calle			30.06	763.4	81.1	27.3	68	NW			3		4			0	0	Fair	Kunts.
Tunis			30.02	762.4	84.6	29.2	40	NW			5		3			0	0	Fair	Jacques.
Sfax			30.09	764.2	88.2	31.2	30	NW			4		4			0	0	Fair	Chauvey.
Saida			30.10	764.4	95.0	35 0		N			4		1			0	0	Clear	Millot.
Tebessa			30.12	765.0	75.6	24.2		NW			4		2			0	0	Clear	Colin.
Gerlville			30.16	766.0	89.6	32.0	20	NNE			4		1			0	0	Clear	Buard.
Laghouat			30.15	765.9	104.0	40.0		SW			4		0			0	0	Clear	Guyot.
Biskra			30.09	764.2	93.7	34.3	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.

Agram			29.98	761.4	84.9	29.4	49	NE			2		3			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.01	762.2	83.1	28.4	53	NE			1		0			0	0		Dr. Wierzbiski.
Eperies			29.96	761.0	83.1	28.4	43	NE			2		0			0	0		Julius Mikolik.
Gratz	28.83	732.3	29.98	761.5	77.7	25.4	51	SE			2		0			0	0		Andreas Rospini.
Hermannstadt	28.60	726.5	29.94	760.4	82.4	28.0	37	ESE			2		1			0	0		Prof. Reissenberger.
Kremsmünster	28.64	727.5	29.91	759.6	79.9	26.6	50	NW			2		1			0	0		Prof. C. Wagner.
Lemberg			29.98	761.5	77.0	25 0	81	S			1		0			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			29.98	761.6	82 9	28.3	53	Calm			0		3ks			0	0		I.R.Hydrographic Office.
Szegedin			29.95	760.8	84 2	29.0	40	Calm			0		0			0	0		Karl Stancel.
Trieste			29.98	761.5	89.1	31.7	51	Calm			0		0			Inap.	Inap.	Clear	Prof. V. Farolfi.
Vienna			29.93	760.2	88.9	31.6	29	S			3		1			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1.258.5 ft.

BELGIAN SERIES.

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

Brussels			30.00	762.0	64.8	18.2	82	NW			4		4		W	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.94	760.5	60.1	15.6		SSE	20	8.9			3			0	0	Blue sky	William Boswell.
Ardrossan			30.03	762.7	61	16.1		SW			3		4					*D. clouds	William McNeil.
Armagh, Observatory			30.03	762.7	62.6	17.0		SW	9	4.0			7					*D. clouds	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.08	764.0	60.2	15.7		W			1		10					*D. clouds	J. Dreyer.
Bradford			30.02	762.5	62.9	17.2		W			1		1			0.63	16.0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	82.5	28.1		NE			4		7					Overcast	Sergt. J. F. Halauen, A. H. C.
Cambridge			30.08	764.0	68.0	20.0		NNW			3		1						Mr. Pain, F. B. M. S.
Cardington			30.07	763.8	67.4	19.7		N			1		1					Blue sky	John McLaren.
Carlisle			30.02	762.5	61.8	16.6		W			1		6			0.15	3.8	*D. clouds	T. Bell, for J. Carmichael.
Chatham, School M. E			30.05	763.3	69.0	20.6		NE			1		1					Blue sky	Capt. J. Fellowes, R.E.
Dartmoor	28.73	729.7	30.19	766.8	67.6	19.8		NW			1		0					Blue sky	R. E. Power.
Donaghadee			30.03	762.7	63	17.2		WSW			2		5					*D. clouds	J. MacGowan.
Dover			30.05	763.3	68	20.0		SW			3		2					¼ clouded	J. Costello.
Eccles, (near Manchester.)			30.05	763.3	64.4	18.0		W	2.4	1.1			3					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.11	764.8	66.1	18.9		SSE			3		1					Hazy	The Staff.
Fort Napier, (Natal)	27.94	709.7	30.18	766.6	68.7	20.4		E			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.05	763.3	80	26.7		W			2		7					*D. clouds	
Galway, Queen's College			29.66	753.4	62	16.7		W			2		3					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.06	763.5	82.0	27.8		E			3		1					*D. clouds	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.98	761.5	59.8	15.4		W			3		2					Fine	Lewis Stuart.
Great Yarmouth			30.04	763.0	64	17.8		N			4		4					*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y			30.07	763.8	70.5	21.4		N			1		2			Blank	Blank	Blue sky	The Staff, for G. B. Airy
Guernsey			30.09	764.3	66	18.9		NE			1		3					*D. clouds	Dr. S. E. Roskius.
Helston			30.16	766.1	69	20.6		SW			2		2c			0	0	*D. clouds	M. P. Moyle.
Holyhead			30.03	764.0	60	15.6		WSW			3		4					*D. clouds	John Tilston.
Kew, Observatory			30.08	764.0	66.7	19.3		NNW	7	3.1			5					Hazy	The Staff.
Kingstown			30.11	764.8	58	14.4		SE			4		7					*D. clouds	George Mitchell.
Leicester Museum			30.08	764.0	64.2	17.9		W			1		2					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.80	756.9	80.6	27.0		NW			1		4k					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			29.90	759.4	65	18.3		WSW			1		8					¾ clouded	W. D. Penny.
Nassau, (Bahamas			30.12	765.0	84.1	28.9		SE			4		8					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.05	763.3	65.7	18.7		NNW			3		3k		W			*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.05	763.3	64.0	17.8		WNW			3		1					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.06	763.5	65	18.3		WNW			1		7					*D. clouds	J. Lucas.
Plymouth			30.09	764.3	71	21.7		S			2		4					*D. clouds	John Merrifield.
Roche's Point			30.11	764.8	63	17.2		SW			2		5					Cloudy	W. Kennedy.
Saint Ann's Head			30.11	764.8	58	14.4		NW			1		2					Hazy	John C. Walker.
Saint Helier, Jersey			30.09	764.3	70.2	21.2		NE			2		8					¾ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.88	758.9	55.8	13.2		W	25	8.9			5					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough			30.03	762.7	58.6	14.8		N			2		5					*D. clouds	F. Shaw.
Scutari Cemetery Turkey			29.86	758.4	84.6	29.2		NE			3		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			30.04	763.0	63.4	17.4		NW			2		6			0.447	11.36	*D. clouds	W. F. Cooper.
Silloth Rectory			30.04	762.7	68.5	20.3	53	SW			1		0			0.125	3.18	Blue sky	Rev. Francis Redford.
Stonyhurst, Observatory			30.03	762.7	61.4	16.3		W			2		5			Blank	Blank	*D. clouds	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			29.86	758.4	59	15.0		WSW			6		5					*D. clouds	John Smith.
Strathfield Turgiss			30.06	763.5	71.6	22.0		N			1		1					Blue sky	Rev. Charles H. Griffith.
Thurso			29.86	758.4	62	16.7		WNW			3		5					*D. clouds	John Trotter.
Truro, Royal Institution			30.11	764.8	75	23.9		N			4		4					*D. clouds	W. Newcombe.
Valencia, Observatory			30.10	764.5	62.0	16.7		SSE	20	8.9			7					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, Isle of Man					55	12.8		NW			3		0						Thomas Dawson.
Cape Good Hope, Obs'y			30.23	767.8	62.3	16.8	78	S	31	13.9		1	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.83	757.7	60.0	15.6	93	S			6		10n			0.02	0.5	Squally	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.99	761.7	63.8	17.7		W			3		3ck			0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.24	767.8				ESE	17.9	8.0						0.02	0.5		C. Meldrum
Melbourne, Observatory			29.89	759.2	54.9	12.2	72	SW	25	11.2			10			0.20	5.1	Rain-squalls	R. L. J. Ellery.
Monach Lt-house, Hebrides			29.89	759.2	55	12.8		WSW			4		10			0	0		J. Youngelause.
North Unst, (Shetland Is.)			29.76	755.9	53	11.7		SW			6	1	1	SW					Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Mauritius and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in Unst as read off, and the cloudiness for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,320 ft., or 707.3 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			29.68	753.8	74.3	23.5	55	SW			6		8						
Fanoe			29.83	757.6	57.2	14.0	97	WNW			7		10						
Godthaab, (Greenland)			29.88	759.0															
Stykkisholm, (Iceland)			29.23	742.5	53.1	11.7	91	NW			4		8						
Thorshavn, (Faröe)			29.56	750.7	54.9	12.7	76	WSW			5		6						
Vestervig			29.78	756.5	54.3	12.4	85	NW			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'or 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	73.4	23	46	NE			2		1s,k		NE	0	0	Slightly cl'dy	Normal School.
Amiens			30.00	761.9	80.2	26.8	50	NW			3		10			0	0	Covered	Normal School.
Avignon			30.01	763.0	92.7	33.7	27	N			1		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.00	762.1	84.7	29.3	29	N			2		2		NW	0	0	Slightly cl'dy	C. Saillard.
Beaumette, (near Angers)			30.03	762.8	82.4	28.0	42	N	2.2	1.0			2		SW	0	0	Slightly cl'dy	Beaumette Observatory
Beauvais			30.07	763.7	73.9	23.3	55	NW			3		8		NW	0	0	Very cloudy	Normal School.
Besançon			30.04	763.0	84.6	29.2	52	SSW			3		2		N	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse			30.19	766.8	89.2	31.8	39	S			1		0					Clear	Normal School.
Bourges			30.532	775.47	77.9	25.5	79	SSW			2		0			0	0	Clear	Normal School.
Brest			30.03	762.7	72.5	22.5	71	NNE			2		3k		NNE	0	0		Naval Observatory.
Carcassonne			30.02	762.4	81.5	27.5	38	W			1		0			0	0	Clear	Normal School
Caen			30.07	763.7	73.2	22.9	92	NW			4		10		NE	0	0	Covered	Normal School.
Chartres			30.01	762.2	72.5	22.5	61	N			2		0			0	0	Clear	Normal School.
Clermont			30.02	762.4	79.3	26.3	31	N			2		2		N	0	0		Puy de Dome Obs'y.
Commercy			30.00	762.1	75.6	24.2	59	W			4		2k		W	0	0	Slightly cl'dy	Normal School.
Commune de Greasque*			30.13	765.3	90.5	32.5	22	NW			2		0			0	0		M. Kina.
Grenoble			30.05	763.2	83.3	28.5	75	NNW			4		0			0	0	Clear	Normal School.
La Roche-sur-Yon			30.12	765.0	86.7	30.4	43	NE			2		8		F	0	0	Very cloudy	Normal School.
Le Mans			30.03	762.8	77.4	25.2	70	NE			2		2		NE	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier			30.03	762.8	79.7	26.5	50	SW			1		0			0	0	Clear	Normal School.
Mâcon			30.24	768.2	88.3	31.3	49	N			2		5		NW	0	0	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			29.99	761.7	83.7	28.7	44	SW			6		5		SW	0	0	Partly cloudy	Normal School.
Nismes			29.95	760.6	77.7	25.4	27	N			2		0			0	0	Clear	Normal School.
Orleans			30.07	763.8	82.0	27.8	40	SW			1		5		W	0	0	Cloudy	Normal School.
Paris, Observatory			30.05	763.3	73.9	23.3	45	NW			2		1ck		W	0	0	Clear	National Observatory.
Parthenay			30.04	763.1	86.0	30	86	NW			2		0			0	0	Clear	Normal School.
Privas			30.03	762.8	88.5	31.4		S			2		0			0	0	Clear	Normal School.
Rochefort, Observatory			30.05	763.2	89.6	32.0	46	E			1		5			0	0	½ covered	Naval Observatory.
Rouen			30.12	765.0	68.4	20.2	69	W			2		10		SE	0	0	Covered	Normal School.
Saint Lo			29.79	756.7	84.2	29	77	E			4		4		E	0	0		Normal School.
Tarbes	28.98	736.0	29.97	761.3	99.5	37.5		WNW			2		0			0	0	Clear	Normal School
Villefranche			30.07	763.8	91.4	33	50	ESE			2		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.8	80.6	27													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.33	770.3	81.1	27.3	39	NE	7.4	3.33			2		WSW	0	0		—. Faiguère.
Montsouris, Paris			30.04	763.0	75.2	24.0	50	NW			2		4		W	0	0		Montsouris Observ'tory.
Perpignan			30.07	763.6	86.0	30.0	41	S	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)			30.06	763.4	76.8	24.9	48	WNW			1		0			0	0	Clear	E. Renou.
Toulouse			30.10	764.6	90.5	32.5	27	ESE			1		0			0	0		Toulouse Observatory
Tours			30.04	763.0	85.3	29.6	34	W			1		5		W	0	0		C. Marquet.
Versailles, (near Paris)			30.07	763.8	75.9	24.4	50	N			3		2			0	0	Clear	Dr. A. Bérigny.
Zi-Ka Wei, (near Shanghai																			H. Le Lec, S. J.

NOTE.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * 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'or 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.95	760.8	81.3	27.4	44	SE			3		3	W		0	0		Prof. T. Hoh.
Berlin			29.82	757.3	81.2	29.0	42	SW			4		6			0	0		Prof. Arndt.
Breslau			30.00	761.9	88.9	31.6	25	SW			5		5			0	0		Dr. P. Neugebauer.
Carlsruhe			29.93	760.1	83.5	28.6	52	SW			5		2			0	0		A. Senz.
Cassel			29.89	759.2	73.9	23.3	64	WSW			7		6	WSW		0	0		Dr. H. Möhl.
Emden			29.87	758.6	64.4	18.0	75	NW			8		3			0	0		Prof. Prestel.
Frankfort on the Main			29.89	759.2	86.9	30.5	30	WSW			4		4			0	0		Physical Society.
Friedrichshafen			30.04	763.1	71.6	22.0	82	S			1		1			0	0		M. Wilhelm.
Hamburg			29.85	758.1	66.0	18.9	94	WNW			6		9k8,n			0	0		Captain F. Hegemann.
Kiel			29.78	756.3	64.2	17.9	80	WSW			6		7			0.146	3.7		Prof. G. Karston.
Königsberg, (Prussia.)			29.89	759.2	82.6	28.1	40	SW			2		5			0	0		Prof. E. Luther.
Köslin			29.82	757.3	72.5	22.5		WSW			6		5			0	0		H. Müller.
Leipsic			29.87	758.7	88.2	31.2	27	SSW			4		3	SW		0	0		Prof. Bruhns.
Memel			29.93	760.2	75.0	23.9	47	SSW			3		2c8			0	0		Reinbrecht & Skalweit.
Münster			29.99	761.7	57.4	14.1	50	SW			1		0			0	0		Prof. E. Heis.
Neufahrwasser			29.88	758.9	85.5	29.7	39	WSW			5		8			0.228	5.8		A. Lothes.
Posen			29.91	759.8	86.7	30.4	36	SW			1		4			0.091	2.3	Thunder-storm.	Dr. Magener.
Strassburg, (In Alsace)			29.97	761.3	85.8	29.9	36	SW			3		4	W		0	0		Dr. Schur.
Stuttgart			29.96	760.9	81.9	27.7	48	E			1		4			0	0		Prof. Schoder.
Thorn								S			3		2			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.92	759.9	83.3	28.5	39	W			7		2			0	0		Prof. Flesch.
Wustrow, Naval School			29.89	759.3	74.5	23.6	61	WSW			5		3			0	0		E. F. Schütz.

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observers.
Athens			29.85	758.1	86.5	30.3		NE			Strong							Clear	

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

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.	Observers.
Udine			29.97	761.1	84.7	29.3	39	S	0.7	0.3			1			0	0		
Padua			29.98	761.6	82.4	28.0	50	NE	1.3	0.6			1	N		0	0		
Vicenza			29.99	761.7	83.1	28.4	41	SE	0.7	0.3			0			0	0		
Verona			29.98	761.5	85.3	29.6	50	E			1		0			0	0		
Bergamo	28.69	728.8	29.95	760.7	82.4	28.0	48	WSW			2		0			0	0		
Domodossola	29.00	736.6	29.98	761.6	80.4	26.9	51	SW			4		3			0	0		
Milan			30.00	761.9	89.8	32.1	45	NNW			1		1	W		0	0		
Pavia			30.02	762.4	83.7	28.7	43	NE			1		0			0	0		
Moncalieri			30.02	762.5	81.5	27.5	53	SW	2.5	1.1			1			0	0		
Mondovi	28.19	715.9	30.02	762.5	77.4	25.2	45	NNW			4		0			0	0		
Porto Maurizio			30.06	763.5	82.8	28.2	51	SW			2		0			0	0		
Genoa			30.00	762.0	83.5	28.6	48	SW	2.5	1.1			0			0	0		
Piacenza			30.02	762.4	81.7	27.6	47	E	2.5	1.1			0			0	0		
Parma			29.98	761.6	83.3	28.5	48	SSE			2		0			0	0		
Bologna			30.07	763.6	81.3	27.4	42	NW			1		3	E		0	0		
Florence			30.00	762.1	86.9	30.5	34	NE			2		0			0	0		
Leghorn			30.00	762.0	82.0	27.8	48	WSW	4.9	2.2			0			0	0		
Siena	28.81	731.7	29.96	761.0	83.3	28.5	40	NW	0	0			1			0	0		
Urbino	28.53	724.6	30.02	762.4	75.0	23.9	61	NNE			4		3			0	0		
Ancona			29.97	761.2	80.6	27.0	62	NW			4		3			0	0		
Grosseto			29.95	760.7	88.5	31.4		NE			2		2	SE		0	0		
Rome			29.93	760.1	88.5	31.4	37	NNE	15.4	6.9			2	E		0	0		
Naples, O. U			29.92	759.9	87.4	30.8	43	ENE			6		3	SE		0.142	3.6		
Lecce			29.92	760.0	84.4	29.1	48	ENE	13.7	6.1			3			0	0		
Cosenza			29.83	757.6	90.0	32.2	63	SE	8.7	3.9			4			0	0		
Riposto, (Sicily)			29.91	759.6	82.8	28.2	54	NE			2		5	NW		0	0		
Palermo			29.83	757.7	76.6	24.8	60	NNE	4.9	2.2			8			0	0		
Caltanissetta	27.88	708.2	29.74	755.5	75.2	24.0	35	NE			4		8			0	0		
Sub-Series.																			
Naples, S. R			29.95	760.6	84.7	29.3	49	NNE	5.6	2.5			5	W		0	0		Prof. F. Brioschi.
Pesaro			30.07	763.8	76.1	24.5	75	NW	9.8	4.36			0						L. Guidi.

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.	Observers.
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.	Observers.
Flushing			30.07	763.6	64.0	17.8		WNW			4								
Groningen			29.86	758.5	65.7	18.7		WNW			4								
Helder			29.96	760.9	61.5	16.4		WNW			4								
Utrecht			29.94	760.5	69.3	20.7	58	WNW			4		5					Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observers.
Bergen			29.76	755.8	54.0	12.2	56	WNW	10.7	4.8			3			0	0		
Brono			29.63	752.7	55.8	13.2	64	W	11	5			6			0.315	8.0		
Christiania			29.66	753.3	67.3	19.6	30	SW	3.8	1.7			2			0	0		
Tromsö			29.45	747.9	53.6	12.0	97	W	2	1			10			0.157	4.0		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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,)			30.28	769.0	70.9	21.6	78	NE	12.7	5.67			7			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.95	760.6	104.9	40.5	8	SSW	10.8	4.83			3			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.11	764.8	75.0	23.9	66	SW	4.3	1.9			5			0	0		Capt. D. A. da Cunha.
Lisbon			30.03	762.8	86.9	30.5	42	SSE	4.9	2.2			4	SSW		0	0		The Observatory.

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

RUSSIAN SERIES.

Furnished by 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			29.98	761.4	81.9	27.7	39	WSW	2	1			0						Astronomical Obs.
Wilna			29.98	761.5	75.0	23.9	47	W	2	1			0						Astronomical Obs.
Dorpat			29.85	758.1	85.1	29.5	57	WSW	11	5			8						Physical Cabinet.
St. Petersburg			29.78	756.5	68.4	20.2	65	NW	16	7			2						Central Physical Obs.
Kiloplo			29.59	751.5	68.0	20.0	57	SW	27	12			8						Ch. Forsten.
Kleff			29.97	761.1	70.2	26.2	43	NW	4	2			3						Physical Cabinet.
Nikolaiev			30.04	762.9	85.3	29.6	39	N	11	5			3						Kurdakof.
Kertch			29.96	761.0	82.2	27.9	51	NNE	9	4			0						Lagorio.
Moscow			29.83	757.7	78.3	25.7	53	NE	9	4			6						Meteorological Obs.
Lugan			29.82	757.4	83.8	28.8	48	WNW	13	6			5						Meteorological Obs.
Archangel			29.49	749.0	70.5	21.4	94	S	22	10			10						Ogorodnikof.
Tiflis	28.46	722.9	29.76	755.9	93.2	34.0	25	SE	9	4			3						Physical Observatory.
Astrakhan			29.87	758.8	82.2	27.9	53	N	7	3			7			Blank	Blank		Sebastianof.
Kasan			29.61	752.2	69.1	20.6	77	NNW	31	14			10						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.69	728.7	29.58	751.4	72.9	22.7	64	SW	2	1			6						Meteorological Obs.
Nukuss			29.74	755.4	90.5	32.5	43	NW	9	4			0						
Kasaly																			Pobrof.
Tashkend	28.00	711.2	29.57	751.0	90.5	32.5	55	Calm	0	0			0						Michelson.
Barnaul			29.74	755.5	73.4	23.0	58	SE	0	0			2						Meteorological Obs.
Yeniseisk			29.69	754.0	70.7	21.5	47	NNW	2	1			1						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.78	756.3	87.1	30.6	76	Calm	0	0			3						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.56	750.8	72.5	22.5	94	E	11	5			2					Raining	
Nikolaievsk, on the Amoor					60.3	15.7	98	SE	25?	11?			10						

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

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and 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			30.02	762.5	96.8	36.0	26	NW	9.7	4.34		0	7			Inap.	Inap.	Cloudy	Royal Observatory.
San Fernando			30.02	762.5	97.5	36.4	26	ESE	24.4	10.9		0	5		ESE				The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			29.50	749.3	61.2	16.2	87	SW			4		5			0.315	8.0		
Umea			29.54	750.3	60.4	15.8	85	NW			2		5			0.110	2.8		
Hernosand			29.60	751.8	58.3	14.6	56	WNW			2		6			0.098	2.5		
Stockholm			29.68	753.9	65.7	18.7	47	SW			2		10			0	0		
Wisby			29.76	756.0	75.6	24.2	56	SW			7		0			0	0		
Sub-Series.																			
Upsala			29.68	753.9	61.9	16.6	56	W	7.4	3.3			10		WSW	0.213	5.40	Raining	Dr. Hildebrandsson.

Note.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall 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	28.67	728.3	30.02	762.4	84.9	29.4	30	S			3		1			0	0	Clear	The Observatory.
Zurich	28.48	723.3	30.03	762.8	79.7	26.5	56	W			1		2			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are Barometer, +0.5 mm; Thermometer, +6.8 cent.; Relative Humidity.—23 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and Professor 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			29.93	760.3	79.5	26.4	56	ENE	27	12.0			3		NE	0	0		
Fao, (Persian Gulf)			29.57	751 0	104.0	40.0		NW			1		0						
Salonica			29.97	761.2	95.0	35.0		S			1		0						
Valona			29.93	760.3	80.1	26.7		SW			1		8					Stormy	
Varna			30.00	762.0	84.2	29.0		NE			2		2						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.76	755.9	89.6	32.0	56	W			2		0			0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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.			30.02	762.5	59.9	15.5	76	W	3	1.3			7			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.27	768.8	63	17.2		SW	1	0.4			10s		SW	0	0	Cloudy	W. R Bigg.
*Chatham, N. B.			30.06	763.5	58	14.4	83	SW	7	3.1		10ck	0	SW		0.01	1.0	Fair	G. A. Blair.
Charlottetown, P. E. Island			30.08	764.0	59	15.0	77	W	8	3.6		2k	0			0.400	10.16	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			30.18	766.6	61.7	16.5	72	S			1	0	8s			0	0	Fair	James Smith, M. A.
Dalhousie, N. B.			30.00	762.0	58	14.4	91	W			1					0.20	5.1	Cloudy	H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			30.15	765.8	56.0	13.3	81	W	4	1.8		0	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.82	757.4	56	13.3	97	NW	5	2.2		0	0			0.070	1.78	Clear	James Stewart.
Goderich, Ontario			30.01	762.2	71.1	21.7	74	S			4	7ck	0	W		0	0	Dry	H. J. Strang, M. A.
Granton, Ontario	28.99	736.3	30.06	763.5	63	17.2		SE			2		10p			0	0	Cloudy	James Grant.
*Halifax, N. S.			30.11	764.8	62	16.7	67	NW	9	4.0		2cs	0			0.020	0.51	Fair	F. Allison, M. A.
*Kingston, Ontario			30.24	768.1	62	16.7	86	SW	2	0.9		10cs	0	SW		0	0	Cloudy	S. Woods, M. A.
Little Glace Bay, N. S.			30.01	762.2	60.0	15.6	95	Calm	0	0			10n			0.23	5.8	Misty	C. H. Rigby.
*Montreal, Quebec			30.19	766.8	62	16.7	76	SW	8	3.6		5ck	0	NW		0	0	Fair	C. H. McLeod, C. E.
*Ottawa, Ontario			30.19	766.8	59	15.0	79	E	2	0.9		8c	0	S		0	0	Fair	J. B. Haney.
*Parry Sound, Ontario			30.08	764.0	58	14.4	82	S	11	4.9		2k	5ks	SW	SW	0	0	Fair	Rev. R. Mosley.
*Port Dover, Ontario			30.11	764.8	68	20.0	74	SE	5	2.2		10ck	0	W		0	0	Fair	H. Morgan.
Port Hastings, N. S.			30.02	762.5	61.2	16.2		NW	4	1.8						0.28	7.1	Fine	Peter Grant.
*Port Stanley, Ontario			30.09	764.3	68	20.0	82	E	6	2.7			8ks		W	0	0	Cloudy	M. Payne.
*Quebec, Quebec			30.16	766.1	58	14.4	76	SW	1	0.4		5k	0	SW		0	0	Fair	Capt. Ashe, R. N.
St. John, N. B.			30.15	765.8	59	15.0	76	SE	4	1.8		0	0			0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			30.00	762.0	63	17.2	67	SE	8	3.6		5k	5s	E		0	0	Cloudy	K. Stewart.
Stayner, Ontario			30.05	763.3	63	17.2	73	SE	3	1.3		10ck	0	NW		0	0	Cloudy	R. J. Cone.
Stratford, Ontario	23.80	731.5	30.05	763.3	61.9	16.6	76	SE	4	1.8		10cs	0	W		0	0	Cloudy	C. J. Macgregor, M. A.
*Sydney, C. B.			30.05	763.3	62	16.7	95	SW	2	0.9			10n		SW	0.16	4.1	Cloudy	T. C. Hill.
*Toronto, Ontario			30.15	765.8	59	15.0	85	NE	2	0.9			1 ks		W	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.16	764.5	63.3	17.4	80	SE	7	3.1		5ck	3cs	W		0.25	6.3	Fine	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			30.31	769.9	63	17.2	89	S					5k			Inap.	Inap.	Heavy rain	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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.			30.24	768.1	59	15.0	76	Calm	0	0		5cs	Haze	W		0	0	Hazy	
Alpena, Mich.			29.88	758.9	66	18.9	84	S	18	8.0			10s		S	0	0	Cloudy	
Atlantic City, N. J.			30.24	768.1	72	22.2	75	Calm	0	0		1c	0	NW		0	0	Clear	
Augusta, Ga.			30.18	766.6	74	23.3	79	SE	1	0.4		0	0			0	0	Clear	
Baltimore, Md.			30.27	768.8	70	21.1	66	NW	2	0.9		0	Sm'e			0	0	Smoky	
Barnegat, N. J.			30.24	768.1	71	21.7	75	N	3	1.3		10cs	Fog			0	0	Fair	
Benton, Montana	27.17	690.1	29.97	761.2	57	13.9	68	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.20	716.3	29.81	757.2	57	13.9	69	N	1	0.4		8k	Haze	N		Inap.	Inap.	Fair	
Boston, Mass.			30.25	768.3	65	18.3	58	W	3	1.3		8cs	Haze	W		0	0	Hazy	
Breckenridge, Minn.			29.85	758.2	60	15.6	81	W	8	3.6		5c	0	W		0.44	11.2	Fair	
Buffalo, N. Y.			30.12	765.0	60.5	15.8	65	SE	2	0.9		2c	8ks			0	0	Cloudy	
Burlington, Vt.			30.23	768.7	62	16.7	66	S	5	2.2		5c	0			0	0	Fair	
Cairo, Ill.			30.04	763.0	74	23.3	85	S	6	2.7			10s		S	0	0	Cloudy	
Cape Hatteras, N. C.			30.15	765.8	77	25.0	65	NE	13	5.8		1c	0			0	0	Clear	
Cape Henry, Va.			30.21	767.3	75	23.9	68	E	4	1.8		2c	Haze			0	0	Fair	
Cape Lookout, N. C.			30.20	767.1	79	26.1	65	E	14	6.3		5ck	5s	E	E	0	0	Cloudy	
Cape May, N. J.			30.25	768.3	70	21.1	75	Calm	0	0		2c	0	NW		0	0	Fair	
Charleston, S. C.			30.15	765.8	77	25.0	83	E	7	3.1		1c	1ks		E	0	0	Clear	
Cheyenne, Wyoming	24.18	614.2	30.12	765.0	58	14.4	76	SW	4	1.8		0	0			0	0	Clear	
Chicago, Ill.			29.84	757.9	72	22.2	67	S	14	6.3		0	5s		SW	0	0	Fair	
Cincinnati, Ohio			30.02	762.5	70	21.1	66	SE	5	2.2		5ck	0			0	0	Fair	
Cleveland, Ohio			30.09	764.3	64.2	17.9	73	SE	8	3.6		5c	0	SW		0	0	Fair	
Colorado Springs, Col.	24.28	616.7	30.15	765.8	54	12.2	86	N	3	1.3		0	0			0.05	1.3	Clear	
Corsicana, Tex.			29.98	761.5	76.5	24.7	90	SE	3	1.3		2ck	8ks		SE	0	0	Cloudy	
Davenport, Iowa			29.84	757.9	71	21.7	85	SW	16	7.2		2k	7s		SW	0.07	1.8	Cloudy	
Denison, Tex.			30.01	762.2	73	22.8	95	S	3	1.3			10s			0.37	9.4	Cloudy	
Denver, Col.	24.94	633.5	30.16	766.1	59	15.0	76	S	1	0.4		0	0			0	0	Clear	
Detroit, Mich.			29.99	761.7	70	21.1	66	S	9	4.0		5k	0	S		0	0	Fair	
Dodge City, Kan.	27.43	696.7	29.61	752.1	72	22.2	90	W	8	3.6		5ck	0	W		0	0	Fair	
Dubuque, Iowa			29.79	756.7	72	22.2	83	SW	6	2.7		10k	0	SW		0	0	Cloudy	
Duluth, Minn.			29.67	753.6	66	18.9	89	NW	4	1.8		2k	5s	NW	NW	0.60	15.2	Clearing	
Eastport, Me.			30.16	766.1	60	15.6	70	SW	7	3.1		0	0			0.23	5.8	Clear	
Erie, Pa.			30.07	763.8	67	19.4	64	SE	8	3.6		5c	0			0	0	Fair	
Escanaba, Mich.			29.67	753.6	63	17.2	94	S	28	12.5			10s		S	0.98	24.9	Cloudy	
Fort Gibson, Indian Ter.			29.96	761.0	72	22.2	100	SE	2	0.9			10n			0.71	18.0	Light rain	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.77	730.7	29.82	757.4	76	24.4	86	S	4	1.8		5ck	0	S		0	0	Fair	
Fort Sully, Dakota	28.29	718.6	29.92	760.0	58	14.4	88	E	6	2.7		0	Haze			0	0	Clear	
Galveston, Tex.			30.02	762.5	82	27.8	83	W	4	1.8		2ck	0	E		0	0	Fair	
Grand Haven, Mich.			29.85	758.2	69	20.6	63	S	21	9.4			10s		SW	0	0	Cloudy	
Indianapolis, Ind.			30.01	762.2	70	21.1	71	SE	3	1.3		2cs	5ks		SW	0	0	Fair	
Indianola, Tex.			30.02	762.5	85	29.4	72	S	8	3.6		2c	0			0	0	Fair	
Jacksonville, Fla.			30.12	765.0	81	27.2	74	NE	4	1.8		5k	0	NE		Inap.	Inap.	Fair	
Keokuk, Iowa			29.86	758.4	75	23.9	81	W	11	4.9			10s		W	0	0	Cloudy	
Key West, Fla.			30.07	763.8	78.0	25.6	90	NE	8	3.6			10n			1.57	39.9	Light rain	
Kittyhawk, N. C.			30.26	768.6	75	23.9	76	E	5	2.2		5c	0			0	0	Fair	
Knoxville, Tenn.			30.18	766.6	67	19.4	84	NE	5	2.2		0	0			0	0	Clear	
La Crosse, Wis.			29.73	755.1	70	21.1	90	W	9	4.0			10s		W	0.14	3.6	Threatening	
Leavenworth, Kan.			29.88	758.9	75	23.9	85	Calm	0	0			10s			0	0	Threatening	
Lexington, Ky.	29.02	737.1	30.08	764.0	71	21.7	66	S	12	5.4		5c	0	SW		0	0	Fair	
Louisville, Ky.			30.06	763.5	70	21.1	70	Calm	0	0		5k	Sm'e	S		0	0	Fair	
Lynchburg, Va.			30.23	767.8	71	21.7	63	Calm	0	0		5c	0	W		0	0	Fair	
Malone, N. Y.			30.16	766.1	60	15.6	65	SE	8	3.6		8cs	0	W		0.05	1.3	Cloudy	
Manhattan, Kan.	28.83	732.3	29.92	760.0	72	22.2	90	S	2	0.9			10ks			0	0	Cloudy	
Marquette, Mich.			29.59	751.6	63	17.2	94	S	8	3.6			10n		S	0.15	3.8	Light rain	
Memphis, Tenn.			30.05	763.3	75	23.9	85	S	3	1.3		0	1s			0	0	Cloudy	
Milwaukee, Wis.			29.86	758.9	66	18.9	84	SW	16	7.2			10n		SW	0.03	0.8	Heavy rain	
Mobile, Ala.			30.07	763.8	81	27.2	82	E	6	2.7		5k	2s	S	SE	0.01	0.3	Cloudy	
Montgomery, Ala.			30.13	765.3	78	25.6	80	SE	4	1.8		2cs	Haze	E		0	0	Clear	
Morgantown, W. Va.	29.11	739.4	30.14	765.5	63	17.2	83	Calm	0	0		5c	Haze	W		0	0	Fair	
Mt. Washington, N. H.	24.01	609.8	30.37	771.4	35	1.7	100	NW	20	8.9			Fog			0.04	1.0	Foggy	
Nashville, Tenn.			30.08	764.0	73	22.8	81	E	4	1.8		5k	0	S		0	0	Fair	
New Haven, Conn.			30.24	768.1	67	19.4	60	N	5	2.2		Haze	5s			0	0	Fair	
New London, Conn.			30.27	768.8	64	17.8	67	N	4	1.8		8c	0	SW		0	0	Fair	
New Orleans, La.			30.03	762.7	80	26.7	86	S	1	0.4		2cs	2k		SE	0.51	13.0	Fair	
Newport, R. I.			30.26	768.6	66	18.9	73	N	2	0.9		10cs	0	NW		0	0	Cloudy	
New York, N. Y.			30.26	768.6	68	20.0	55	NE	8	3.6		2cs	Haze			0	0	Hazy	
Norfolk, Va.			30.26	768.6	70	21.4	64	E	2	0.9		0	Haze			0	0	Clear	
North Platte, Neb.	27.15	689.6	29.64	752.6	65	18.3	73	Calm	0	0		2c	0			0	0	Clear	
Omaha, Neb.	28.86	733.0	29.88	758.9	72	22.2	85	NW	3	1.3		0	0			0.52	13.2	Clear	
Oswego, N. Y.			30.21	767.3	58.5	14.7	78	SE	10	4.5		8ck	2s	NW		0	0	Cloudy	
Pembina, Dakota			29.78	756.4	58	14.4	87	Calm	0	0		0	0			0.09	2.3	Clear	
Philadelphia, Penn.			30.27	768.8	67	19.4	54	E	3	1.3		2cs	Fog			0	0	Foggy	
Pike's Peak, Colorado	18.12	460.2	30.33	770.4	37	2.8	54	NW	12	5.4		0	0			0.04	1.0	Clear	
Pittsburgh, Penn.			30.13	765.3	63	17.2	83	E	2	0.9		1ck	Fog	W		0	0	Foggy	
Port Huron, Mich.			30.01	762.2	68	20.0	74	S	11	4.9			10s		S	0	0	Cloudy	
Portland, Me.			30.26	768.6	58	14.4	70	W	1	0.4		1c	Haze			0.45	11.4	Clear	
Portland, Oregon			30.11	764.8	60	15.6	76	E	1	0.4			10s			0	0	Cloudy	
Punta Rassa, Fla.			30.09	764.3	78.0	25.6	86	NE	8	3.6		2ck	2ks	NE	SE	0.02	0.5	Fair	
Rochester, N. Y.			30.15	765.8	58	14.4	75	S	3	1.3		2ck	5s	W		0	0	Fair	
Salt Lake City, Utah	25.64	651.2	29.97	761.2	68	20.0	42	NW	6	2.7		0	0			0	0	Clear	
Sandy Hook, N. J.			30.24	768.1	69	20.6	70	NE	8	3.6		10c	0			0	0	Cloudy	
San Diego, Cal.			29.93	760.2	64	17.8	88	N	4	1.8			10s		N	0	0	Cloudy	
San Francisco, Cal.			29.99	761.7	55	12.8	87	S	8	3.6			Fog			0	0	Foggy	
Santa Fé, N. M.			29.96	761.0	60	15.6	76	NE	2	0.9		2k	0			0	0	Clear	
Savannah, Ga.	23.42	594.9	30.14	765.5	77	25.0	81	NE	4	1.8		2cs	Haze			0	0	Fair	
Shreveport, La.			30.06	763.5	78.5	25.8	89	Calm	0	0		8ck	0	NW		0	0	Fair	
Smithville, N. C.			30.18	766.6	78	25.6	78	E	13	5.8		1k	0			0	0	Clear	
Springfield, Mass.			30.26	768.6	60	15.6	76	NW	4	1.8		10ck,cs	0			0	0	Fair	
St. Louis, Mo.			29.97	761.2	75	23.9	72	S	8	3.6			10s			0	0	Cloudy	
St. Marks, Fla.			30.10	764.5	77	25.0	82	SE	8	3.6		0	2s		SE	0.74	18.8	Fair	
St. Paul, Minn.			29.83	757.7	68	20.0	84	W	8	3.6		2c	0	W		0.54	13.7	Fair	
St. Paul's Island, Alaska			29.86	758.4	42	5.6	100	SW	20	8.9			10n			0.02	0.5	Light rain	
Thatcher's Island, Mass.			30.26	768.6	64	17.8	73	NW	5	2.2		5c	2cs	NW	NW	0	0	Fair	
Toledo, Ohio			30.00	762.0	70	21.1	66	S	9	4.0		2ck	2ks	S	S	0	0	Fair	
Tucson, Arizona	27.54	699.5	30.12	765.0	79	26.1		E				8c	0			0	0	Fair	
Tybee Island, Ga.			30.12	765.0	77	25.0	90	NE	14	6.3		5k	0	E		0	0	Fair	
Vicksburg, Miss.			30.06	763.5	74.5	23.6	92	E	4	1.8		10k	0	SE		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.	24.35	618.5	29.83	757.7	52	11.1	66	SE	4	1.8		1c	0	W		0.07	1.8	Clear	
Washington, D. C.			30.25	768.3	70	21.1	65	SE	2	0.9		2c	Haze			0	0	Smoky	
Wilmington, N. C.			30.19	766.8	74	23.3	76	E	5	2.2		0	1ks		E	0	0	Clear	
Wood's Holl, Mass.			30.27	768.8	68	20.0	64	E	1	0.4		0	8s		NE	0	0	Fair	
Wytheville, Va.	27.90	708.6	30.05	763.3	57	13.9	87	Calm	0	0		10k	0	E		0	0	Cloudy	
Yankton, Dakota	28.71	729.2	29.96	761.0	63	17.2	78	NW	3	1.3		0	0			0.50	12.7	Clear	
Yuma, Arizona			29.91	759.7	84	28.9		SE				0	5s			0	0	Fair	
Sub-Series.																			
P'nte-a-Pitre, G'd'l'pe, W. I.			29.98	761.5	83	28.3	75	E				2k	5ks			0	0	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.			30.18	766.6	80	26.7	82	Calm	0	0		5c	8s		SE	0	0		James Gall.
St. Georges, Bermudas			30.25	768.3	85.0	29.4	74	SE	3	1.3		0	1k			0	0	Clear	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	68	20.0	87	SE	2.0	0.9		5c	0	SE		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana S.A.			30.01	762.2	81	27.2	87	E			2	5k	6k	E		0.130	3.30	Cloudy	C. J. Hering.
Batavia, Dutch Guiana S.A.	30.07	763.8			85.1	29.5		NE								2.441	62.00		Dr. H. Groot.
Medellin, Colombia, S. A.	25.23	640.8			64.8	18.2	80	SE	1	0.4		5ck	4s			0	0	Cloudy	Thomas Herran
York Factory, B. A.			29.44	747.8	62	16.7	77	S	7	3.1		0	4s		W	2.70	68.6		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.13	765.3	77	25.0	90	NE			3					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Nova Scotian, N. 51° 45′, W. 14° 04′.	NW by W	11½	30.05	763.3	59	15.0		SW			4		k		SW	Swells.	NW	Cloudy	Capt. Ritche.

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.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.97 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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			30.02	762.4	83.1	28.4	73	N			1		0			0	0	Clear	Charnot.
Algiers			30.07	763.7	87.8	31.0	42	N			1		0			0	0	Clear	Peter.
La Calle			30.06	763.5	80.8	27.1	69	NW			2		1			0	0	Clear	Kunts.
Tunis			30.04	763.1	93.2	34.0	30	NW			3		3			0	0	Fair	Jacques.
Sfax			30.08	764.0	85.6	29.8	35	NE			4		1			0	0	Clear	Chauvey.
Saida			30.09	764.3	96.8	36.0		N			3		1			0	0	Clear	Millot.
Tebessa			30.15	765.7	82.4	28.0		N			2		0			0	0	Clear	Colin.
Geriville			30.15	765.8	89.6	32.0	20	NNE			3		1			0	0	Clear	Buard.
Laghouat			30.14	765.5	96.8	36.0		S			2		0			0	0	Clear	Guyot.
Biskra			30.11	764.8	93.2	34.0	36	NW			1		0						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	758.8	86.5	30.3	46	Calm			0		4			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.96	761.0	76.6	24.8	64	NE			1		10			0	0		Dr. Wierzbiski.
Eperies			29.87	758.8	81.0	27.2	51	Calm			0				W	Blank	Blank		Julius Mikolik.
Gratz	28.71	729.2	29.85	758.2	81.1	27.3	61	SW			3		5			0	0		Andreas Rospini.
Hermannstadt	28.51	724.2	29.85	758.1	83.1	28.4	47	ESE			3		3			0	0		Prof. Reissenberger.
Kremsmünster	28.66	726.3	29.86	758.5	78.1	25.6	49	NE			1		1			0	0		Prof. C. Wagner.
Lemberg			29.84	758.0	81.1	27.3	78	SW			1		3			0	0		Dr. T. Stanecki.
Nytregyhaza																			Habsuda Daniel.
Pola			29.90	759.5	83.5	28.6	55	WNW			2		1k			0	0		I.R.Hydrographic Office.
Szegedin			29.86	758.5	81.0	27.2	41	Calm			0		3			0	0		Karl Stancel.
Trieste			29.91	759.8	84.2	29.0	68	NW			1		4			0	0		Prof. V. Farolfi.
Vienna			29.87	758.9	84.6	29.2	39	NE			2		0			0	0		I. R. Central Met. Obs'y

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			29.72	755.0	74.7	23.7	58	WSW			3	3	5	WSW	WSW	0.030	0.75		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.37	746.0	53.0	11.7		SSE	17	7.6			9			0.010	0.27	Raining	William Boswell.
Ardrossan			29.41	747.0	59	15.0		WNW			3		7					*D. clouds	William McNeil.
Armagh, Observatory			29.50	749.3	57.5	14.2		WSW	9	4.0			10					Showery	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.60	751.8	62.5	16.9		WNW			2–3		9					*D. clouds	J. Dreyer.
Bradford			29.48	748.8	63.7	17.6		W			2		7			0.07	1.8	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			29.95	760.7	75.5	24.2		NE			1		10					Gloomy	Sergt. J. F. Halanen, A. H. C.
Cambridge			29.65	753.1	65.0	18.3		S			2		10			Blank	Blank		Mr Pain, F. B. M. S.
Cardington			29.65	743.1	64.0	17.8		SW			1		10					Overcast	John McLaren.
Carlisle			29.41	747.0	60	15.6		SW			3		10			0.15	3.8	Showery	T. Bel, for J. Carmell.
Chatham, School M. E.			29.63	752.6	69.2	20.7		Calm			0		10					Gloomy	Capt. J. Fellowes, R.E.
Dartmoor	28.36	720.4	29.82	757.4	58.0	14.4		SW			5		10					Raining	R. E. Power.
Donaghadee			29.46	748.3	61	16.1		NW			5		7					*D. clouds	J. Mac Gowan.
Dover			29.70	754.4	66	18.9		WSW			4		7					¾ clouded	J. Costello.
Eccles (near Manchester.)			29.49	749.0	60.6	15.9		W	10.4	4.6			5					Squally	Thomas Mackereth.
Falmouth, Observatory			29.73	755.1	63.9	17.7		WSW			5		10					Rain and fog	The Staff.
Fort Napier, (Natal)	27.88	708.1	30.11	764.8	68.7	20.4		E			1		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.05	763.3	80	26.7		W			2		8			Blank	Blank	Overcast	
Galway, Queen's College			29.58	751.3	60	15.6		W			6		10					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.03	762.7	90.5	32.5		E			2		0					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.38	746.2	57.0	13.9		W			2		8					*D. clouds	Lewis Stuart.
Great Yarmouth			29.64	752.8	63	17.2		S			4		6					Raining	G. T. Watson.
Greenwich, Royal Ob's'y			29.67	753.6	68.8	20.4		SW			1		10					Overcast	The Staff, for G. B. Airy
Guernsey			29.78	756.4	66	18.9		WSW			4		7					Squally	Dr. S. E. Hoskins.
Helston			29.73	755.1	67	19.4		SW			4		10			0.3	7.6	Overcast	M. P. Moyle.
Holyhead			29.57	751.1	60	15.6		WSW			3		10					Misty	John Tiston.
Kew, Observatory			29.67	753.6	66.9	19.4		SSW	18	8.0			10					Raining	The Staff.
Kingstown			29.56	750.8	62	16.7		W			5		6			Blank	Blank	*D. clouds	George Mitchell.
Leicester Museum			29.59	751.6	61.6	16.4		SW			2		8					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.95	760.7	82.8	28.2		NW			1		2k					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			29.30	744.2	58	14.4		W			1		10					Raining	W. D. Penny.
Nassau, (Bahamas)			30.10	764.5	79.7	26.5		S			2		10					Overcast	Surg. Maj. Henry.
Nottingham, Observatory			29.56	750.8	64.3	17.9		S			5		10k. d		SW			Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.57	751.1	60.0	15.6		SSW			2		10					Drizzling	Rev. Stephen Whitty.
Oxford, Radcliffe Ob's'y			29.61	752.1	64	17.8		SSW			4		10					Gloomy	J. Lucas.
Plymouth			29.71	754.6	66.2	19.0		WSW			3		4?					Drizzling	John Merrifield.
Roche's Point			29.66	753.4	61	16.1		NNW			5		8					Cloudy	W. Kennedy.
Saint Ann's Head			29.63	752.6	60	15.6		WNW			4		4					Showery	John C. Walker.
Saint Helier, Jersey			29.80	756.9	68.6	20.3		W			6		2					¼ clouded	A. P. Amy.
Sandwick Manse, Orkneys			29.30	744.2	55.2	12.9		S	7	3.1			10					Raining	Rev. C. Clouston, LL. D.
Scarborough			29.50	749.3	56.4	13.6		SSW			4		10					Overcast	F. Shaw.
Scutari Cemetery, Turkey			29.79	756.7	85.0	29.4		NE			2		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.51	749.5	65.0	18.3		SW			6		5			0.017	0.43	*D. clouds	W. F. Cooper.
Silloth Rectory			29.42	747.3	63.4	17.4	77	SW			2		6			0.115	2.92	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.47	748.5	58.7	14.8		W			5		10			Blank	Blank	Threatening	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			29.28	743.7	57	13.9		WNW			1		8					D. clouds	John Smith.
Strathfield Turgiss			29.67	753.6	64.3	17.9		SW			2		10					Raining	Rev. Charles H. Griffith.
Thurso			29.28	743.7	55	12.8		SSE			3		9					Raining	John Trotter.
Truro, Royal Institution			29.78	756.4	65	18.3		W			6		8					Gloomy	W. Newcombe.
Valencia, Observatory			30.01	762.2	57.4	14.1		W	26	11.6			6					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, Isle of Man					51	10.6		SW			6		3						Thomas Dawson.
Cape Good Hope, Ob's'y			30.10	764.5	60.6	15.9	79	S	11	4.9		5	5						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.92	760.0	58.0	14.4	92	S			1		5k			0.81	20.6		Francis Abbott, F.R.A.S.
Leith, Restaurig Park			29.39	746.5	55.7	13.2		W			2		10k8					Showery	Andrew Gibb.
Mauritius, Observatory			30.22	767.6				ESE	17.8	8.0						0.045	1.14		C. Meldrum
Melbourne, Observatory			30.21	767.3	46.1	7.8	91	W	4	1.8			6			0.05	1.3	Fine	R. L. J. Ellery.
Monach Lighthouse, Hebrides			29.29	744.0	55	12.8		W			4		10			0.4	10.2		J. Youngclause.
North Unst, (Shetland Is.)			29.37	746.0	55	12.8		S			6		10						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,250 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			29.85	758.2	62.1	16.7	51	SSE			4		10						
Faröe			29.79	756.6	59.4	15.2	78	SSW			6		9						
Godthaab, Greenland			29.84	757.9															
Stykkisholm, Iceland			29.46	748.2	46.2	7.9	94	NE			7		8						
Thorshavn, (Faröe)			29.61	752.0	51.3	10.7	94	SSE			4		10					Misty	
Vestervig			29.74	755.5	56.8	13.8	71	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			29.80	756.8	77.0	25	34	W			1		1k,n		W	0	0	Slightly cl'dy	Normal School.
Amiens			29.72	754.9	83.8	28.8	76	NW			3		0			0	0	Clear	Normal School.
Avignon			29.89	759.1	96.8	36	28	NW			2		0			0	0	Clear	Normal School.
Bar-sur-Seine			29.77	756.1	86.5	30.3	34	NW			2		2		WSW	0	0	Slightly cl'dy	C. Saillard.
Beaumette, (near Angers)			29.80	756.9	85.1	29.5	33	W	20.6	9.2			2		SW	0	0	Slightly cl'dy	Beaumette Observatory
Beauvais			29.77	756.1	79.5	26.4	41	WSW			3		5		WSW	0	0	Cloudy	Normal School.
Besançon			29.80	757.0	88.2	31.2	48	S			6		0			0	0	Clear	Normal School.
Bourg en Bresse			29.91	759.7	94.8	34.9	28	S			4		0					Clear	Normal School.
Bourges			30.49?	774.4?	80.6	27	56	NE			2		0			0	0	Clear	Normal School.
Brest			29.83	757.6	69.6	20.9	73	SW			3		10		SW	0	0	Misty	Naval Observatory.
Carcassonne			29.91	759.7	82.4	28		W			1		0			0	0	Clear	Normal School
Caen			29.73	755.2	75.6	24.2	85	W			4		2		E	0	0	Slightly cl'dy	Normal School.
Chartres			29.96	760.9	73.9	23.3	54	WSW			2		0			0	0	Clear	Normal School.
Clermont			29.83	757.7	88.2	31.2	37	SW			3		0			0	0		Puy de Dome Obs'y.
Commercy			29.78	756.3	81.3	27.4	39	WSW			4		2k		WSW	0	0	Partly cloudy	Normal School.
Commune de Greasque*			30.01	762.3	94.8	34.9	31	SW			4		0			0	0		M. Kina.
Grenoble			29.88	759.0	85.1	29.5	56	NW			1		0			0	0	Clear	Normal School.
La Roche-sur-Yon			29.97	761.3	81.7	27.6	45	SW			4		0			0	0	Clear	Normal School.
Le Mans			29.79	756.7	82.9	28.3	91	WSW			6		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			29.98	761.5	86.0	30	44	SW			2		0			0	0	Clear	Normal School.
Mâcon			30.00	761.0	88.7	31.5	36	WSW			4		0			0	0	Clear	Normal School.
Metz													0						M. Schuster.
Mirecourt			30.14	765.6	80.2	26.8	50	SSW			2		2		NE	0	0	Slightly cl'dy	Normal School.
Nîmes			29.96	760.9	100.0	37.8	21	N			1		0			0	0	Clear	Normal School.
Orleans			30.14	765.6	84.9	29.4	46	SW			2		0			0	0	Clear	Normal School.
Paris, Observatory			29.77	756.1	84.2	29.0		SW			2		3k		SW	0	0	Slightly cl'dy	National Observatory.
Parthenay			29.93	760.2	84.2	29	85	W			2		0			0	0	Clear	Normal School.
Privas			29.88	758.9	95.4	35.2		S			4		2		NW	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			29.95	760.8	82.9	28.3	50	SW			4		0			0	0	Blue sky	Naval Observatory.
Rouen			30.10	766.1	82.2	27.9	34	WSW			1		2		W	0	0	Slightly cl'dy	Normal School.
Saint Lo			29.54	750.2	69.1	20.6	52	NE			0		0			0	0		Normal School.
Tarbes	28.94	735.0	29.96	760.9	83.5	28.6		WNW			4		0			0	0	Clear	Normal School
Villefranche			30.10	762.2	95.9	35.5	47	E			1		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.88	759.0	79.5	26.4													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.28	769.2	81.9	27.7	47	SW	13.0	5.83			2		W	0	0		—. Falguère.
Montsouris, Paris			29.78	756.4	86.7	30.3	35	WSW			4		3		WSW	0	0		Montsouris Observatory.
Perpignan			29.90	759.4	95.0	35.0	30	S	7.4	3.33			0			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Laylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			29.78	756.3	86.0	30.0	26	WSW			3		0			0	0		E. Renou.
Toulouse			30.02	762.6	89.1	31.7	33	NW			3		0			0	0		Toulouse Observatory
Tours			29.83	757.6	87.4	30.8	27	WSW			4		0			0	0	Clear	C. Marquet.
Versailles, (near Paris)			29.78	756.5	84.6	29.2	29	WNW			3		3			0	0	Fair	Dr. A. Bérigny.
Zi Ka Wei, (near Shanghai)																			H. Le Lee, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	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.	Millimeters.	Weather.	Observer.
Hamberg			29.89	759.3	83.8	28.8	58	SW			8		3			0.118	3.0		Prof. T. Hoh.
Berlin			29.90	759.5	73.2	22.9	54	S			2		6			0.279	7.0		Prof. Arndt.
Breslau			30.04	762.9	72.7	22.6	49	E			2		0			0.118	3.0		Dr. P. Neugebauer.
Carlsruhe			29.78	756.3	82.6	28.1	54	S			1		5			0	0		A. Senz.
Cassel			29.78	756.5	78.8	26.0	41	SSE			7		8	SW		0	0		Dr. H. Möhl.
Emden			29.86	758.4	66.2	19.0	74	S			3		8			0.071	1.8		Prof. Prestel.
Frankfort on the Main			29.82	757.4	81.5	27.5	35	W			1		8			0.067	1.7		Physical Society.
Friedrichshafen			29.84	758.0	77.0	25.0	68	S			2		3			0	0		M. Wilhelm.
Hamburg			29.85	758.2	66.0	18.9	52	SSE			2		10			0.081	4.6	Cloudy	Captain F. Hegemann.
Kiel			29.82	757.4	65.5	18.6	53	S			2		10			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			29.98	761.5	66.2	19.0	51	W			5		4			0.110	2.8		Prof. E. Luther.
Köslin			29.97	761.2	66.4	19.1		WSW			2		5			0.568	14.3		H. Müller.
Leipsic			29.88	758.9	77.9	25.5	44	S			2		6	SSW		0.059	1.5		Prof. Bruhns.
Memel			29.95	760.8	62.6	17.0	68	WSW			5		0			0.012	25.7		Reinbrecht & Skalweit.
Münster			29.90	761.0	72.5	22.5	53	SE			2		5			0.421	10.7		Prof. E. Heis.
Neufahrwasser			29.96	761.0	68.2	20.1	50	WNW			1		6			0.079	2.0		A. Lothes.
Posen			29.98	761.4	71.6	22.0	45	NW			1		0			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.79	756.7	84.4	29.1	49	S			1		2	SW		0	0		Dr. Schur.
Stuttgart			29.79	756.7	85.1	29.5	40	SW			1		3			0	0		Prof. Schoder.
Thorn			29.97	761.3	75.2	24.0	43	NW			2		2			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.76	756.0	81.3	27.4	41	SW			8		1			0	0		Prof. Flesch.
Wilstrow, Naval School			29.98	761.6	65.3	18.5	44	W			1		8			0.035	0.9		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.81	757.1	80.8	32.1		W										Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	88.0	31.1	33	Calm	0	0			2			0	0		
Padua			29.89	759.3	82.8	28.2	52	SSE	1.3	0.6			0			0	0		
Vicenza			29.90	759.4	86.5	30.3	47	SE	2.5	1.1			1			0	0		
Verona			29.90	759.5	86.7	30.4	50	E			1		0			0	0		
Bergamo																			
Domodossola	28.87	733.4	29.8	758.4	81.0	27.2	57	S			4		4			0	0		
Milan			29.90	759.4	90.0	32.2	53	SE			1		1	ENE		0	0		
Pavia			29.91	759.8	84.2	29.0	48	NE			1		0			0	0		
Moncalieri			29.93	760.1	82.6	28.1	59	NW	2.5	1.1			4	SW		0	0		
Mondovi	28.03	713.2	29.91	759.8	82.6	28.1	52	NW			4		6	NW		0	0		
Porto Maurizio			29.97	761.2	81.5	27.5	65	E			4		1			0	0		
Genoa			29.95	760.6	82.0	27.8	55	SW	3.1	1.4			0			0	0		
Piacenza			29.91	759.8	84.6	29.2	52	N	2.5	1.1			0			0	0		
Parma			29.88	758.9	87.6	30.9	42	NE			2		1	NW		0	0		
Bologna			29.95	760.8	87.0	30.9	44	WNW			4		2	W		0	0		
Florence			29.94	760.5	89.6	32.0	27	NW			2		1			0	0		
Leghorn			29.97	761.2	81.3	27.4	68	W	4.3	1.9			5			0	0		
Siena	28.75	730.3	29.91	759.5	86.0	30.0	35	W	0.7	0.3			3	W		0	0		
Urbino	28.47	723.1	29.96	760.9	77.0	25.0	55	NE			4		0			0	0		
Ancona			29.92	760.0	80.6	27.0	68	NW			4		1			0	0		
Grosseto			29.92	760.0	91.0	32.8	28	NE			2		3	NW		0	0		
Rome			29.88	759.0	89.6	32.0	28	NW	6.9	3.1			1			0	0		
Naples, O. U.			29.92	759.9	83.7	28.7	71	SW			4		2	NW		0	0		
Lecce			29.87	758.7	80.2	26.8	60	NNE	18.6	8.3			4			0	0		
Cosenza			29.92	760.0	89.6	32.0	66	W	11.9	5.3			3			0	0		
Riposto, (Sicily)			29.89	759.2	83.1	28.4	57	SSE			2		4	NE		0	0		
Palermo			29.94	759.4	88.2	31.2	33	W	6.9	3.1			0			0	0		
Caltanissetta	27.98	710.7	29.81	758.0	84.0	28.9	16	W			6		0			0	0		
Sub-Series.																			
Naples, S. R.			29.93	760.3	84.7	29.3	64	SE	1.3	0.6			0			0	0		Prof. F. Brioschi.
Pesaro			29.99	761.8	79.0	26.1	56	N	6.5	2.92			0						L. Guidi.

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			29.76	755.8	71.8	22.1		WNW			2								
Groningen			29.72	754.9	65.1	18.4		S			4								
Helder			29.73	755.1	64.8	18.2		S			2								
Utrecht			29.71	754.7	70.9	21.6	51	SSW			2		8					Very cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.61	752.0	59.4	15.2	56	SSE	15.2	6.8			10			0.295	7.5		
Brono			29.63	752.7	59.0	15.0	58	NNW	2	1			3			0	0		
Christiania			29.61	752.1	69.6	20.9	40	SSW	16.1	7.2			6			0	0		
Tromsö			29.61	751.8	57.9	14.4	99	Calm	0	0			5			0	0		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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	767.2	70.5	21.4	89	N	4.9	2.19			8			0.094	2.4		Dr. J. A. N. Sampaio.
Campo Major			29.95	760.6	104.5	40.3	10	SW	6.5	2.92			1			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.13	765.2	75.0	23.9	66	Calm?	1.8?	0.8?			10			0	0		Capt. D. A. da Cunha.
Lisbon			30.04	763.0	91.2	32.9	30	N	9.8	4.4			0			0	0		The Observatory.

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

RUSSIAN SERIES.

Furnished by 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	74.1	23.4	45	Calm	0	0			0						Astronomical Obs.
Wilna			29.91	759.8	74.1	23.4	62	WSW	7	3			4						Astronomical Obs.
Dorpat			29.82	757.4	62.2	16.8	91	SW	9	4			10					Light rain	Physical Cabinet.
St. Petersburg			29.76	756.0	80.2	26.8	43	SSW	25	11			8						Central Physical Obs.
Kiev			29.64	752.8	61.2	16.2	94	E	18	8			10					Raining	Ch. Forsten.
Kieff			29.93	760.1	83.1	28.4	45	SSE	7	3			3					Smoke-haze	Physical Cabinet.
Nikolaiev			29.97	761.3	91.4	33.0	32	NE	11	5			2						Kurdakof.
Kertch			29.89	759.2	85.5	29.7	51	NNE	18	8			0						Lagorio.
Moscow			30.03	762.8	76.8	24.9	59	N	4	2			7						Meteorological Obs.
Lugan			29.89	759.2	87.6	30.9	39	NE	13	6			4						Meteorological Obs.
Archangel			29.88	759.0	64.8	18.2	92	N	18	8			0						Ogorodnikof.
Tiflis	23.17	723.2	29.77	756.1	94.6	34.8	29	SE	11	5			1						Physical Observatory.
Astrakhan			29.84	758.0	90.0	32.2	30	SSE	13	6			3						Sebastianof.
Kasan			29.77	756.2	79.0	26.1	54	N	31	14			3						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.74	730.0	29.65	753.0	69.1	20.6	75						8						Meteorological Obs.
Nukuss			29.68	753.9	92.3	33.5	41	N	4	2			0						
Kasaly																			Bobrof.
Tashkend	7.96	710.1	29.51	749.6	91.9	33.3	47	Calm	0	0			0						Michelson.
Barnaul			29.61	752.0	70.0	21.1	87	S	4	2			9						Meteorological Obs.
Yeniseisk			29.56	750.2	68.9	20.5	60	E	2	1			10			Blank	Blank		Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.82	757.3	86.4	30.2	79	Calm	0	0			0						Physical Observatory.
Nertchinsk																Blank	Blank		Meteorological Obs.
Vladivostock			29.64	752.5	79.2	26.2	79	Calm	0	0			1					Raining	
Nikolaievsk, on the Amoor					53.1	11.7	100	NE	2	1			10						

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,311.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and 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			29.92	759.9	103.3	39.6	18	SW	12.0	5.34		1	0			0	0	Partly cloudy	Royal Observatory.
San Fernando			29.98	761.6	103.8	39.9	18	E	14.1	6.3		3	1	W	W				The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			29.77	756.1	63.0	17.2	63	SE			2		5			0	0		
Umea			29.60	751.9	53.1	11.7	87	NE			4		10			0.421	10.7	Raining	
Hernosand			29.58	751.2	49.3	9.6	92	N			4		10					Raining	
Stockholm			29.60	751.9	51.1	10.6	87	NNW			6		10			0.220	5.6		
Wisby			29.72	754.9	60.8	16.0	66	W			7		0			0	0		
Sub-Series.																			
Upsala			29.63	752.7	47.7	8.7	92	WNW	16.3	7.3			10			0.051	1.30	Raining	Dr. Hildebrandsson

Note.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall 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	28.49	723.6	29.82	757.4	89.1	31.7	83	SSW			8		0			0	0	Clear	The Observatory.
Zurich	28.30	718.7	29.84	757.8	84.7	29.3	47	W			1		1			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are Barometer, —4.2 mm; Thermometer, +9.1 cent.; Relative Humidity, —20 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and Professor 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			29.85	758.1	80.1	26.7	65	N	16	7.0			2		NE	0	0		
Fao, (Persian Gulf)			29.58	751.4	104.0	40.0		NW			1		0						
Salonica			29.91	759.6	98.4	36.9		S			2		0						
Valona			29.89	759.2	81.3	27.4		SW			1		5						
Varna			29.92	760.0	86.0	30.0		SW			2		2						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.77	756.1	89.6	32.0	54	SW			2		0			0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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			29.98	761.5	68.9	20.5	70	S	5	2.2			2			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			29.80	756.9	66	18.9		S	8	3.6			10s		S	0.45	11.4	Cloudy	W. R. Bigg.
*Chatham, N. B			30.06	763.5	63	17.2	72	S	7	3.1		10c	0	SW		0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island			30.12	765.0	63	17.2	70	W	10	4.5		5c	0			0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			29.80	756.9	67.2	19.6	88	SW			4		10n			0.390	9.91	Raining	James Smith, M. A.
Dalhousie, N. B			29.99	761.7	57	13.9	81	NW			1					0.02	0.5	Clear	H. A. Johnson.
Esquimault, B. C																			W. H. Bevis.
Fredericton, N. B			30.11	764.8	64.0	17.8	70	SE	6	2.7		10cs	0			0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			29.86	758.4	62	16.7	91	Calm	0	0		2ck	2s	NW	NW	0	0	Fair	James Stewart.
Goderich, Ontario			29.84	757.9	68.5	20.3	89	W			2		10n			0.115	2.92	Unsettled	H. J. Strang, M. A.
Granton, Ontario	28.77	730.7	29.83	757.7	66	18.9		Calm			0	2cs	0			0	0	Clear	James Grant.
*Halifax, N. S.			30.16	766.1	61	16.1	80	W	6	2.7		5cs	0			0	0	Fair	F. Allison, M. A.
*Kingston, Ontario			29.81	757.2	66	18.9	100	S	22	9.8			10ks		S	0.65	16.5	Cloudy	S. Woods, M. A.
Little Glace Bay, N. S.			30.11	764.8	66.8	19.3	67	W	5	2.2		4c	0	W		0	0	Fair	C. H. Rigby.
*Montreal, Quebec			29.80	756.9	62	16.7	96	S	16	7.2			10n			1.57	39.9	Heavy rain	C. H. McLeod, C. E.
*Ottawa, Ontario			29.83	757.7	67	19.4	89	S	16	7.2			10n		S	0.27	6.9	Threatening	J. B. Haney.
*Parry Sound, Ontario			29.77	756.1	60	15.6	94	W	16	7.2		2k	8ks	W	W	0.17	4.3	Cloudy	Rev. R. Mosley.
*Port Dover, Ontario			29.82	757.4	70	21.1	95	SW	8	3.6		10k	0	W		0.70	17.8	Fair	H. Morgan.
Port Hastings, N. S.			30.16	766.1	67.2	19.6		SW	4	1.8						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			29.84	757.9	69	20.6	85	W	5	2.2		5k	0	W		0.40	10.2	Fair	M. Payne.
*Quebec, Quebec			29.93	760.2	59	15.0	88	NE	2	0.9			10n		NE	0.02	0.5	Light rain	Capt. Ashe, R. N.
St. John, N. B.			30.17	766.3	55	12.8	93	S	7	3.1			10n			0	0	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario			29.78	756.4	60	15.6	85	Calm	0	0			10n			0.21	5.3	Cloudy	K. Stewart.
Stayner, Ontario			29.77	756.1	63	17.2	83	NW	6	2.7			10n		NW	0.11	2.8	Cloudy	R. J. Cole.
Stratford, Ontario	28.57	725.7	29.81	757.2	64.5	18.1	90	NW	10	4.5		10k	0	NW		0.102	2.59	Cloudy	C. J. Macgregor, M. A.
*Sydney, C. B			30.13	765.3	70	21.1	72	SW	4	1.8		8c	0	NW		0	0	Fair	T. C. Hill.
*Toronto, Ontario			29.79	756.7	69	20.6	98	SW	5	2.2		5k	5ks	W	W	0.19	4.8	Cloudy	Magnetic Observatory.
Woodstock, Ontario			29.84	757.9	68.6	20.3	80	NW	13	5.8		1cs	3ks			0.05	1.3	Fine	J. Montgomery
Sub-Series.																			
St. Johns, Newfoundland			30.19	766.8	65	18.3	68	W				0	0			0.61	15.5	Clear	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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.			29.94	760.5	72	22.2	62	S	20	8.9		5k	0	S		0	0	Fair	
Alpena, Mich.			29.77	756.1	63	17.2	83	NW	8	3.6			10s		NW	0.26	6.6	Cloudy	
Atlantic City, N. J.			30.10	764.5	72	22.2	75	SW	6	2.7		2cs	0	SW		0	0	Clear	
Augusta, Ga.			30.10	764.5	79	26.1	78	N	1	0.4		10k	0	E		0	0	Cloudy	
Baltimore, Md.			30.10	764.5	72	22.2	71	S	8	3.6		2c	Haze			0	0	Fair	
Barnegat, N. J.			30.09	764.3	76	24.4	72	SW	16	7.2		2ck	0	W		0	0	Clear	
Benton, Montana	27.31	693.4	30.10	764.5	62	16.7	61	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	27.96	710.2	29.52	749.8	62	16.7	77	Calm	0	0		2ck	Haze			0.12	3.0	Fair	
Boston, Mass.			30.07	763.8	71	21.7	71	SW	18	8.0		5cs	Haze	S		0	0	Fair	
Breckenridge, Minn.			29.78	756.4	62	16.7	88	SE	12	5.4		8k	0	S		0.09	2.3	Cloudy	
Buffalo, N. Y.			29.78	756.4	69.5	20.8	87	SW	13	5.8			10ks		SW	0.33	8.4	Cloudy	
Burlington, Vt.			29.87	758.7	67	19.4	79	S	10	4.5			10s			0.11	2.8	Cloudy	
Cairo, Ill.			29.94	760.5	76	24.4	90	S	1	0.4			10s			0.31	7.9	Cloudy	
Cape Hatteras, N. C.			30.06	763.5	79	26.1	82	SE	3	1.3		8c	0	NW		0	0	Cloudy	
Cape Henry, Va.			30.08	764.0	76	24.4	73	S	3	1.3		0	Haze			0	0	Clear	
Cape Lookout, N. C.			30.14	765.5	77	25.0	90	S	5	2.2		0	5ks		S	0.05	1.3	Fair	
Cape May, N. J.			30.10	764.5	71	21.7	75	SW	9	4.0		1c	Haze			0	0	Fair	
Charleston, S. C.			30.11	764.8	82	27.8	78	S	5	2.2		0	5ks			0	0	Fair	
Cheyenne, Wyoming	24.13	612.9	30.07	763.8	60	15.6	19	NW	12	5.4		0	0			0	0	Clear	
Chicago, Ill.			29.85	758.2	70	21.1	75	NW	1	0.4		0	0			0.03	0.8	Clear	
Cincinnati, Ohio			29.83	757.7	75	23.9	81	SW	4	1.8		2ck	2ks	W	SW	0.21	5.3	Fair	
Cleveland, Ohio			29.85	758.2	68.4	20.2	90	SW	8	3.6			10n		SW	0.25	6.3	Light rain	
Colorado Springs, Col.	24.21	614.9	30.08	764.0	68	20.0	69	N	8	3.6		0	0			0	0	Clear	
Corsicana, Tex.			29.96	761.0	77	25.0	86	S	1	0.4		2cs	Haze	E		0	0	Fair	
Davenport, Iowa			29.91	759.7	68	20.0	74	Calm	0	0		0	Sm'e			0	0	Clear	
Denison, Tex.			29.99	761.7	77	25.0	95	SE	3	1.3			Fog			0	0	Foggy	
Denver, Col.	24.88	631.9	30.10	764.5	62	16.7	45	S	7	3.1		0	0			0	0	Clear	
Detroit, Mich.			29.83	757.7	69	20.6	84	NW	5	2.2		2c	2s	W	NW	0.01	0.3	Fair	
Dodge City, Kan.	27.40	696.0	29.57	751.1	74	23.3	90	S	10	4.5		0	0			0.10	2.5	Clear	
Dubuque, Iowa			29.90	759.4	66	18.9	78	Calm	0	0		0	0			0	0	Clear	
Duluth, Minn.			29.84	757.9	69	20.6	70	SW	1	0.4		5ck	2s			0	0	Fair	
Eastport, Me.			30.11	764.8	61	16.1	82	S	10	4.5		0	8s			0	0	Fair	
Erie, Pa.			29.81	757.2	72	22.2	75	SW	14	6.3			10n		SW	0.15	3.8	Light rain	
Escanaba, Mich.			29.86	758.4	63	17.2	78	NW	4	1.8			10s		NW	0.14	3.6	Cloudy	
Fort Gibson, Indian Ter.			29.92	760.0	78	25.6	82	E	1	0.4		0	0			0.05	1.3	Clear	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.77	730.7	29.82	757.4	78	25.6	78	S	4	1.8		0	0			0	0	Clear	
Fort Sully, Dakota	28.13	714.5	29.71	754.6	66	19.4	79	N	8	3.6		2k	5ks	NW	NW	0	0	Cloudy	
Galveston, Tex.			30.01	763.0	81	27.2	87	W	3	1.3		5cs	2ks			0	0	Cloudy	
Grand Haven, Mich.			29.86	758.4	70	21.1	79	Calm	0	0		2c	0	NW		0.15	3.8	Clear	
Indianapolis, Ind.			29.86	758.4	75	23.9	85	W	2	0.9		0	8s		NW	0.03	0.8	Clearing	
Indianola, Tex.			30.01	763.0	84	28.9	79	S	6	2.7		5k	0	NE		0	0	Fair	
Jacksonville, Fla.			30.10	764.5	81	27.2	70	SE	9	4.0		0	0			0	0	Clear	
Keokuk, Iowa			29.88	758.9	73	22.8	67	Calm	0	0		0	Haze			0.08	2.0	Clear	
Key West, Fla.			30.03	762.7	80.8	27.1	74	SW	4	1.8		10cs	1ks	E		0.84	21.3	Cloudy	
Kittyhawk, N. C.			30.14	765.5	76	24.4	86	E	5	2.2		8k	2s	SW		0	0	Cloudy	
Knoxville, Tenn.			30.06	763.5	68	20.0	79	S	6	2.7			10n		SW	0.06	1.5	Light rain	
La Crosse, Wis.			29.90	759.4	63	17.2	88	S	6	2.7			Fog			0	0	Foggy	
Leavenworth, Kan.			29.91	759.7	72	22.2	67	Calm	0	0		2k	0			0.02	0.5	Clear	
Lexington, Ky.	28.86	733.0	29.92	760.0	68	20.0	94	SW	16	7.2			1cn			0.01	0.3	Light rain	
Louisville, Ky.			29.88	758.9	73	22.8	85	Calm	0	0			8k		S	1.45	36.8	Cloudy	
Lynchburg, Va.			30.06	763.5	74	23.3	72	S	2	0.9		5k	0	SW		0	0	Fair	
Malone, N. Y.			29.74	755.4	66	18.9	84	S	18	8.0			10n		W	0.25	6.3	Light rain	
Manhattan, Kan.	28.77	730.7	29.86	758.4	70	21.1	84	S	1	0.4		0	0			0	0	Clear	
Marquette, Mich.			29.82	757.4	67	19.4	69	W	8	3.6		0	0			0.03	0.8	Clear	
Memphis, Tenn.			29.97	761.2	80	26.7	82	S	1	0.4		0	2s		SW	0	0	Fair	
Milwaukee, Wis.			29.90	759.4	68	20.0	84	W	5	2.2		0	Sm'e			0.09	2.3	Clear	
Mobile, Ala.			30.05	763.3	80	26.7	86	SE	4	1.8		5k	0	SW		0.01	0.3	Fair	
Montgomery, Ala.			30.03	764.0	79	26.1	82	SE	6	2.7		10cs	0	S		0	0	Cloudy	
Morgantown, W. Va.	28.92	734.6	29.93	760.2	70	21.1	70	SW	2	0.9			10s		SW	0.02	0.5	Threatening	
Mt. Washington, N. H.	23.84	605.5	30.20	767.1	49	9.4	93	W	48	21.5		5c	2s	NW	W	0	0	Fair	
Nashville, Tenn.			29.96	761.0	75	23.9	90	SE	6	2.7			10ks		SW	0.01	0.3	Cloudy	
New Haven, Conn.			30.08	764.0	77	25.0	69	S	10	4.5		0	5s		SW	0	0	Fair	
New London, Conn.			30.12	765.0	73	22.8	71	SW	11	4.9		2c	2k	W	SW	0	0	Fair	
New Orleans, La.			30.03	762.7	79.5	26.4	86	Calm	0	0		2cs	2s	E		0.24	6.1	Fair	
Newport, R. I.			30.12	765.0	71	21.7	75	S	12	5.4		8ck	0	W		0	0	Cloudy	
New York, N. Y.			30.09	764.3	70	21.1	86	SW	12	5.4		5k	0			0	0	Fair	
Norfolk, Va.			30.12	765.0	77	25.0	69	S	8	3.6		0	0			0	0	Clear	
North Platte, Neb.	26.96	684.8	29.35	745.5	75	23.9	76	S	14	6.3		2k	0	W		0	0	Clear	
Omaha, Neb.	28.80	731.5	29.83	757.7	67	19.4	81	S	4	1.8		10cs	0	W		Inap.	Inap.	Cloudy	
Oswego, N. Y.			29.84	757.9	67.5	19.7	87	SE	12	5.4			10n		W	0.34	8.6	Light rain	
Pembina, Dakota			29.80	756.9	63	17.2	88	Calm	0	0		0	0			0	0	Clear	
Philadelphia, Penn.			30.08	764.0	72	22.2	71	W	16	7.2		0	2s			0	0	Clear	
Pike's Peak, Colorado	18.13	460.5	30.34	770.6	41	5.0	28	W	8	3.6		0	0			Inap.	Inap.	Clear	
Pittsburgh, Penn.			29.92	760.0	65	18.3	89	S	6	2.7			10n			0.68	17.3	Light rain	
Port Huron, Mich.			29.91	757.2	69	20.6	70	NW	8	3.6		1c	1s			0.07	1.8	Clear	
Portland, Me.			30.07	763.8	65	18.3	84	S	12	5.4		8k	2ks	SW	SW	0	0	Cloudy	
Portland, Oregon			30.06	763.5	59	15.0	87	S	3	1.3			10s			0	0	Cloudy	
Punta Rassa, Fla.			30.08	764.0	78.0	25.6	77	E	6	2.7		2cs	0	NE		1.51	38.4	Fair	
Rochester, N. Y.			29.80	756.9	68	20.0	90	S	15	6.7			10s		W	0.15	3.8	Cloudy	
Salt Lake City, Utah	25.67	652.0	30.00	762.0	67	19.4	24	Calm	0	0		0	0			0	0	Clear	
Sandy Hook, N. J.			30.07	763.8	75	23.9	64	SW	8	3.6		5ck	Sm'e	W	S	0	0	Fair	
San Diego, Cal.			29.91	759.7	63	17.2	94	N	8	3.6			10s		N	0	0	Cloudy	
San Francisco, Cal.			29.93	760.2	54	12.2	87	SW	14	6.3			10s		SW	0	0	Cloudy	
Santa Fé, N. M.	23.44	595.4	29.98	761.5	62	16.7	71	E	11	4.9		0	0			0.01	0.3	Clear	
Savannah, Ga.			30.09	764.3	83	28.3	74	SW	5	2.2		2k	Haze			0.01	0.3	Fair	
Shreveport, La.			30.03	762.7	79	26.1	95	NW	2	0.9		8k	Fog	N	NW	0.12	3.0	Cloudy	
Smithville, N. C.			30.12	765.0	79	26.1	82	S	6	2.7		8k	0	SW		0.17	4.3	Cloudy	
Springfield, Mass.			30.04	763.0	72.5	22.5	75	S	8	3.6		2cs,hz	0			0	0	Fair	
St. Louis, Mo.			29.88	758.9	75	23.9	85	NW	8	3.6		0	0			0.72	18.3	Clear	
St. Marks, Fla.			30.06	763.5	79	26.1	82	SE	7	3.1		0	2ks		SE	0	0	Fair	
St. Paul, Minn.			29.85	758.2	65	18.3	85	Calm	0	0		5c	Haze			0	0	Hazy	
St. Paul's Island, Alaska			29.69	754.1	44	6.7	100	S	21	9.4			10n			0.34	8.6	Light rain	
Thatcher's Island, Mass.			30.09	764.3	65	18.3	89	S	19	8.5		5c	2k	W	W	0	0	Fair	
Toledo, Ohio			29.81	757.2	72	22.2	85	W	3	1.3			10ks		W	0.01	0.3	Cloudy	
Tucson, Arizona	27.51	698.7	30.10	764.5	80	26.7		S				5c	0			0	0	Fair	
Tybee Island, Ga.			30.08	764.0	78	25.6	95	SW	4	1.8		0	5ks		SW	0.35	8.9	Fair	
Vicksburg, Miss.			30.03	762.7	78.5	25.8	88	S	4	1.8		5ck	2k	N	SW	0.02	0.5	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.	24.37	619.0	29.85	758.2	53	11.7	73	Calm	0	0		0	0			0.34	8.6	Clear	
Washington, D. C.			30.08	764.0	74	23.3	67	S	16	7.2		2k,c	Haze	W		0	0	Hazy	
Wilmington, N. C.			30.12	765.0	79	26.1	82	S	5	2.2		0	5ks		SW	0.10	2.5	Fair	
Wood's Holl, Mass.			30.14	765.5	71	21.7	71	S	17	7.6		5c	0	SW		0	0	Fair	
Wytheville, Va.	27.77	705.4	29.88	758.9	60	15.6	88	Calm	0	0		0	8ks		W	0	0	Cloudy	
Yankton, Dakota	28.70	729.0	29.94	760.5	64	17.8	89	S	16	7.2			10n			0.18	4.6	Light rain	
Yuma, Arizona			29.83	757.7	84	28.9		SW				0	0			0	0	Clear	
Sub Series.																			
P'nte-a-Pitre, G'd'l'pe, W. I.			29.94	760.5	82	27.8	78	E				10c	2k			0	0	Cloudy	L. V. Bigard.
Kingston, Jamaica, W. I.			30.19	766.8	79	26.1	78	Calm	0	0		5c	0			0.10	2.5		James Gall.
St. Georges, Bermudas			30.18	766.6	86.5	30.3	69	SE	3	1.3		0	1k			0	0	Clear	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			C. Partridge.
Clifton, Jamaica, W. I.	27.21	691.1	30.00	762.0	68	20.0	87	SE	3.0	1.3		5c	0			0.25	6.3	Fine	C. J. Hering.
Paramaribo, D. Guiana, S. A.			30.01	762.2	82	27.8	79	E			2	4k	4k	E		0.499	12.40	Fair	Dr. H. Groot.
Batavia, Dutch Guiana, S. A.	30.08	763.9			83.8	28.8		N								0.276	7.00		Thomas Herran
Medellin, Colombia, S. A.	25.22	640.6			64.1	17.8	80	W	1	0.4		0	8n			0.22	5.6	Clearing	J. Fortescue, W. Wood
York Factory, B. A.			29.68	753.9	53	11.7	80	W	5	2.2		0	0s		W	0	0		Daniel Smith.
Honolulu, Oahu, H. I.			30.12	765.0	75	23.9	95	NE			5					0.24*	6.1*	Cloudy	F. L. Clarke.
Makawao, Maui, H. I.																			

Marine Series.	True course towards.	Hourly rate in knots.	Barometer. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	Wind. Direction.	Wind. Velocity.	Wind. Force.	Clouds. Amount.	Clouds. Direction.	State of ocean.	Direction of swell from—	Weather.	Observer
Steamer Nova Scotian, N. 51° 48′, W. 19° 56′.	NW¾W	9¼	29.98	761.5	56	13.3	WNW		6	k	NW	Rough	NW	Cloudy	Capt. Ritche.

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.; Morgantown 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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 added 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. *Rainfall from 1 a. m. until 7 a. m. of the 28th.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.
Furnished by coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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			30.02	762.5	90.0	32.2	40	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.03	764.1	99.0	37.2	58	N			1		0			0	0	Clear	Peter.
La Calle			30.05	763.2	89.1	31.7	49	NE			2		4			0	0	Fair	Kuntz.
Tunis			30.04	763.0	92.8	33.8	37	SE			3		0			0	0	Clear	Jacques.
Sfax			30.07	763.8	88.2	31.2	56	S			4		1			0	0	Fair	Chauvey.
Salda			30.00	761.3	100.4	38.0		SSW			3		3			0	0	Clear	Millot.
Tlehssa			30.11	761.9	91.8	33.2		NW			2		2			0	0	Clear	Colin.
Geriville			30.15	765.9	91.8	33.2	22	WNW			2		2			0	0	Clear	Buard.
Laghouat			30.14	765.5	102.2	39.0		E			1		0			0	0	Clear	Guyot.
Biskra			30.10	764.4	104.0	40.0		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			29.84	757.8	84.6	29.2	53	Calm			0		2			0.110	2.8		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.78	756.4	85.6	29.8	43	W			2		1			0.228	5.8		Dr. Wierzbiski.
Eperies			29.81	757.2	81.2	29.0	49	S			2					Blank	Blank		Julius Mikolik.
Gratz	28.07	728.1	29.85	758.1	81.1	27.3	57	NW			3		7			0.020	0.5		Andreas Rospini.
Hermannstadt	28.48	723.5	29.81	757.2	84.7	28.7	38	ESE			2		2			0	0		Prof. Reissenberger.
Kremsmünster	28.65	727.6	29.94	760.3	71.6	22.0	61	W			3		10			0	0		Prof. C. Wagner.
Lemberg			29.77	756.2	82.6	28.1	72	SE			1		4			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzauda Daniel.
Pola			29.87	758.8	81.1	27.3	62	WNW			1		1k			0	0		I.R.Hydrographic Office.
Szekedin			29.89	759.1	76.6	24.8	58	SW			2		2			0	0		Karl Stancel.
Trieste			29.88	758.9	82.4	28.0	61	NW			1		0			0	0		Prof. V. Farolfi.
Vienna			29.81	757.9	74.7	23.7	57	W			2		10			0.047	1.2		I. R. Central Met. Obs'y

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1.258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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	761.1	68.5	20.3	44	W			5		5		WSW	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.59	751.6	63.0	17.2		W	18	8.0			4			0.030	0.76	Blue sky	William Boswell.
Ardrossan			29.75	755.6	61	16.1		NW			4		6					*D. clouds	William McNeil.
Armagh, Observatory			29.83	757.7	61.0	16.1		WSW	13	5.8			7					Squally	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.91	759.7	61.2	16.2		WSW			2–3		10					*D. clouds	J. Dreyer.
Bradford			29.85	758.2	60.0	15.6		W			2		10			0	0	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	81.0	27.2		NE			2		6					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge			29.96	761.0	66.0	18.9		W			2		10						Mr. Pain, F. B. M. S.
Cardington			29.94	760.2	70.0	21.1		W			2		8					Overcast	John McLaren.
Carlisle			29.78	756.4	61.9	16.6		W			6		8			0.17	4.3	Showery	T. Bel, for J. Carmell.
Chatham, School M. E			29.96	761.0	67.0	19.4		NW			2		6					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.65	728.0	30.14	765.5	59.0	15.0		W			6		8					Fine	R. E. Power.
Donaghadee			29.78	756.4	62	16.7		W			5		4					*D. clouds	J. Mac Gowan.
Dover			29.98	761.5	67	19.4		WSW			4		1					¼ clouded	J. Costello.
Eccles, (near Manchester.)			29.89	759.2	60.2	15.7		W	8.2	3.7			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			30.08	764.0	61.0	17.8		W			4		10					Overcast	The Staff.
Fort Napier, (Natal)	27.79	705.8	30.02	762.5	73.4	23.0		SE			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	79	26.1		W			3		6					*D. clouds	
Galway, Queen's College			29.88	758.9	61	16.1		SW			3		4					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.01	762.2	86.0	30.0		E			2		0					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.71	754.6	60.7	15.9		W			4		5					Fine	Lewis Stuart.
Great Yarmouth			29.91	759.7	67	19.4		WNW			4		3					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			29.98	761.5	72.1	22.3		W			3		6			Blank	Blank	*D. clouds	The Staff, for G. B. Airy
Guernsey			30.07	763.8	65	18.3		WSW			2		7					*D. clouds	Dr. S. E. Hoskins.
Helston			30.05	763.3	65	18.3		S			6		8k			0.6	15.2	Gloomy	M. P. Moyle.
Holyhead			29.91	759.7	62	16.7		SW			4		2					Blue sky	John Tilston.
Kew, Observatory			29.97	761.2	66.1	18.9		WSW	16	7.2			9					Threatening	The Staff.
Kingstown			29.88	758.9	63	17.2		WNW			4		5					*D. clouds	George Mitchell.
Leicester Museum			29.93	760.2	62.9	17.2		W			4		8					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)			29.95	760.7	84.8	29.3		W			1		0						Corp'l F. Fraser, A. M. C.
Nairn			29.50	749.3	60	15.6		SW			6		5					½ clouded	W. D. Penny.
Nassau, (Bahamas			30.14	765.5	81.0	27.2		NW			6		10					Overcast	Surg. Maj. Henry.
Nottingham, Observatory			29.90	759.4	67.7	19.8		SW			5		10k,d		W			Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.93	760.2	62.0	16.7		SW			3		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.95	760.7	68	20.0		W			3		7					*D. clouds	J. Lucas.
Plymouth			30.04	763.0	67	19.4		W			4		10					Overcast	John Merrifield.
Roche's Point			29.96	761.0	62	16.7		WSW			5		5					Cloudy	W. Kennedy.
Saint Ann's Head			29.98	761.5	62	16.7		W			1		7					*D. clouds	John C. Walker.
Saint Helier, Jersey			30.11	764.8	67.0	19.4		W			6		10					Overcast	A. P. Amy.
Sandwick Manse, Orkneys)			29.49	749.0	54.3	12.4		W	40	17.9			5					Showery	Rev. C. Clouston, LL. D.
Scarborough			29.77	756.1	61.5	16.4		W			4		7					*D. clouds	F. Shaw.
Scutari Cemetery Turkey			29.75	755.6	90.0	32.2		NE			2		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.87	758.7	63.7	17.6		SW			3		7			0.089	2.26	Overcast	W. F. Cooper.
Silloth Rectory			29.80	756.9	69.0	20.6	55	SW			3		5			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.86	758.4	57.8	14.3		W			4		10					Threatening	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.			29.56	750.8	55	12.8		W			6		5					*D. clouds	John Smith.
Strathfield Turgiss			29.99	761.7	66.3	19.1		SW			2		2					*D. clouds	Rev. Charles H. Griffith.
Thurso			29.48	748.8	57	13.9		WNW			6		3					Blue sky	John Trotter.
Truro, Royal Institution			30.08	764.0	65	18.3		W			4		9					Gloomy	W. Newcombe.
Valencia, Observatory			29.98	761.5	59.4	15.2		WSW	19	8.5			10					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man					51	10.6		W			4		0						Thomas Dawson.
Cape Good Hope, Obs'y			30.09	764.3	57.5	14.2	88	NW	4	1.8		5	5						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.01	762.2	58.0	14.4	87	W			3		0			0.05	1.3		Francis Abbott, F.R.A.S.
Leith, Restaurig Park			29.70	754.4	61.0	16.1		W			6		5k			0.16	4.1	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.22	767.6				ESE	15.1	6.8						0	0		C. Meldrum
Melbourne, Observatory			30.28	769.1	48.0	8.9	79	WSW	12	5.4			6			0.03	0.8	Fine	R. L. J. Ellery.
Monach Lt-house, Hebrides			29.49	749.0	55	12.8		W			6		10			0.2	5.1		J. Youngclause.
North Unst, (Shetland Is.)			29.28	743.7	53	17.7		W			6	0	2						Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,320 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			29.63	752.7	65.1	18.4	58	W			2		9					Raining	
Fanöe			29.74	755.5	60.1	15.6	88	W			6		5						
Godthaab, (Greenland)			29.82	757.3	41.7	5.4		S			2		0						
Stykkisholm, (Iceland)			29.50	749.2	43.7	6.5	98	NE			6		8						
Thorshavn, (Faröe)			29.23	742.5	51.6	10.9	74	W			4		10					Raining	
Vestervig			29.61	752.0	57.9	14.4	83	W			4		6						

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

FRENCH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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	762.6	71.6	22	48	N			2		10n,k		SW	0.047	1.2	Covered	Normal School.
Amiens			29.92	760.0	73.0	22.8	54	W			3		0			0	0	Clear	Normal School.
Avignon			30.02	762.6	84.6	29.2	33	N			3		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.11	764.7	70.5	21.4	41	W			2		5		SW	0.004	0.1	Cloudy	C. Saillard.
Beaumette, (near Angers)			30.09	764.3	73.9	23.3	30	W	4.3	1.9			5		W	0	0	Cloudy	Beaumette Observatory
Beauvais			30.08	763.9	71.2	21.8	44	W			3		8		W	0	0	Very cloudy	Normal School.
Besançon			30.10	764.5	77.0	25	54	S			4		2		W	0.08	2.	Slightly cl'dy	Normal School.
Bourg-en-Bresse			30.25	768.4	78.8	26	48	N			1		2ck		SE			Slightly cl'dy	Normal School.
Bourges			30.48?	774.3?	73.0	22.8	68	N			2		0			0.020	0.5	Clear	Normal School.
Brest			30.08	764.1	68.5	20.3	71	SW			3		8k		SW	0.030	0.75		Naval Observatory.
Carcassonne			30.13	765.2	76.8	24.9	49	W			2		0			0	0	Clear	Normal School.
Caen			30.06	763.4	73.4	23	84	WSW			6		10		E	0.008	0.2	Covered	Normal School.
Chartres			30.01	763.1	72.0	22.2	63	W			2		0			0	0	Clear	Normal School.
Clermont			30.07	763.8	76.8	24.9	51	W			2		5			0	0		Puy de Dome Obs'y.
Commercy			30.10	764.6	66.4	19.1	51	W			4		8k,n		W	0.130	3.3	Very cloudy	Normal School.
Commune de Greasque*			30.04	763.0	82.6	28.1	32	NW			6		0			0	0		M. Kina.
Grenoble			30.01	763.1	75.7	24.3	88	NNW			4		2k		NW	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.27	768.8	77.7	25.4	44	SW			2		2		E	0	0	Slightly cl'dy	Normal School.
Le Mans			30.10	764.5	72.1	22.3	49	NW			4		5		NW	0	0	Cloudy	Normal School.
Lons-Le-Saulnier			30.13	765.2	82.4	28	46	SW			2		0			0	0	Clear	Normal School.
Mâcon			30.25	768.4	75.0	23.9	51	W			2		0			0	0	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			30.13	765.3	69.8	21	65	NW			6		5		NE	0	0	Partly cloudy	Normal School.
Nîmes			30.02	762.5	88.9	31.6	25	N			6		0			0	0	Clear	Normal School.
Orleans			30.10	764.5	76.6	24.8	35	SW			2		8		W	0	0	Very cloudy	Normal School.
Paris, Observatory			30.10	764.4	70.5	21.4	42	WSW			3		5k		W	0.015	0.37	Cloudy	National Observatory.
Parthenay			30.15	765.8	73.0	22.8	82	NW			2		0			0	0	Clear	Normal School.
Privas			30.08	763.9	78.8	26		N			4		2		N	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.19	766.7	80.6	27.0	43	WSW			3		0			0	0	Blue sky	Naval Observatory.
Rouen			30.07	763.8	70.5	21.4	48	WSW			2		5		SW	0	0	Cloudy	Normal School.
Saint Lo			29.83	757.6	87.4	30.8	81	NE			6		7		E	0.008	0.2		Normal School.
Tarbes	29.14	740.1	30.17	766.4	77.0	25		SW			1		0			0	0	Clear	Normal School
Villefranche			30.08	763.9	91.0	32.8	45	WNW			1		8			0	0	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.7	80.6	27													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.32	770.1	74.7	23.7	67	ESE	9.3	4.17			1		SW	0	0		—. Falguère.
Montsouris, Paris			30.09	764.2	71.2	21.8	45	WSW			3		9		SW	0.024	0.6		Montsouris Observ'tory.
Perpignan			30.10	764.4	77.9	25.5	43	NW	16.8	7.50			0			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.10	764.4	74.7	23.7	42	WSW			2		5			0.047	1.2	Cloudy	E. Renou.
Toulouse			30.23	767.9	76.6	24.8	48	NW			1		2			0	0		Toulouse Observatory
Tours			30.13	765.3	75.2	24.0	39	W			2		4		WNW	0	0		C. Marquet.
Versailles, (near Paris)			30.10	764.6	71.2	21.8	44	WNW			3		7			0.030	0.76	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai																			H. Le Lec, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * 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			29.88	758.9	70.9	21.6	51	W			7		4	W		0.157	4.0		Prof. T. Hoh.
Berlin			29.85	758.2	71.6	22.0	48	W			4		7			0.181	4.6		Prof. Arndt.
Breslau			29.89	759.3	61.5	16.4	99	NW			7		8			0.382	9.7		Dr. P. Neugebauer.
Carlsruhe			30.01	762.2	70.9	21.6	54	SW			9		7			0.201	5.1		A. Senz.
Cassel			29.94	760.5	71.2	21.8	54	W			8		9	WSW		0.295	7.5		Dr. H. Möhl.
Emden			29.80	756.9	65.8	18.8	78	SW			9		5			0.035	0.9		Prof. Prestel.
Frankfort on the Main			29.98	761.6	75.2	24.0	32	W			1		6			0	0		Physical Society.
Friedrichshafen			30.05	763.3	72.0	22.2	69	W			8		5			0	0		M. Wilhelm.
Hamburg			29.81	757.1	66.4	19.1	62	WNW			5		8k,n			0.213	5.4	Squally	Captain F. Hegemann.
Kiel			29.76	755.9	66.6	19.2	55	W			8		8			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			29.63	752.7	85.8	29.9	36	S			7		4			0	0		Prof. E. Luther.
Köslin			29.73	755.2	70.5	21.4		WNW			1		5			0	0		H. Müller.
Leipsic			29.91	759.6	70.9	21.6	44	WNW			5		7	W		0	0	Stormy	Prof. Bruhns.
Memel			29.67	753.7	76.6	24.8	66	SSE			5		..ck	SW		0	0		Reinbrecht & Skalweit.
Münster					66.7	19.3	61	SW			2		5			0	0		Prof. E. Heis.
Neufahrwasser			29.67	753.6	78.4	25.8	58	W			4		8			0	0		A. Lothes.
Posen			29.84	757.6	73.2	22.9	59	SE			1		10			0.004	0.1		Dr. Magener.
Strassburg, (in Alsace)			30.08	764.0	70.7	21.5	54	WSW			4		9	WSW		0.110	2.8		Dr. Schur.
Stuttgart			30.04	763.1	68.0	20.0	61	W			4		5			0.413	10.5		Prof. Schoder.
Thorn			29.72	754.8	84.2	29.0	45	WSW			5		4			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.00	762.0	73.5	22.5	44	WNW			8		5			0	0		Prof. Flesch.
Wustrow, Naval School			29.75	755.7	61.9	16.6	78	W			6		7			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	89.6	32.0		S					..k					Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	757.8	86.5	30.3	39	SW	0.7	0.3			2			0	0		
Padua			29.84	757.8	81.0	28.9	59	SW	3.1	1.4			5	W		0	0		
Vicenza			29.84	757.9	86.0	30.0	47	SE	6.3	2.8			0			0	0		
Verona			29.82	757.5	88.2	31.2	52	SE			1		0			0	0		
Bergamo	28.55	725.1	29.80	757.0	86.0	30.0	53	SW			2		3			0	0		
Domodossola	28.85	732.7	29.83	757.7	86.0	30.0	25	NW			6		1			0	0		
Milan			29.85	758.3	90.3	32.4	54	N			1		1	NE		0	0		
Pavia			29.85	758.3	84.7	29.3	51	NE			1		0			0	0		
Moncalieri			29.87	758.7	84.4	29.1	52	SSW	2.5	1.1			2			0	0		
Mondovi	28.05	712.4	29.78	756.0	81.0	27.2	48	NE			2		0			0	0		
Porto Maurizio			29.93	760.1	81.1	27.3	68	ESE			2		1			0	0		
Genoa			29.90	759.4	80.1	27.0	64	SW	2.5	1.1			0			0	0		
Piacenza			29.87	758.6	84.2	29.0	49	NNW	1.8	0.8			1			0	0		
Parma			29.84	758.0	87.8	31.0	44	SE			2		1			0	0		
Bologna			29.86	758.4	86.7	30.3	45	N			1		2	S		0	0		
Florence			29.83	759.0	87.8	31.0	39	NW			2					0	0		
Leghorn			29.89	759.2	86.6	27.2	60	W	5.6	2.5			0			0	0		
Siena	28.71	729.2	29.86	758.4	87.8	30.2	37	W	0	0			3	W		0	0		
Urbino	28.11	721.5	29.89	759.3	81.0	28.0	43	SSW			2		1			0	0		
Ancona			29.87	758.6	86.4	28.6	55	SE			4		1			0	0		
Grosseto			29.91	759.6	83.7	30.2	40	ESE			2		3	S		0	0		
Rome			29.91	759.6	87.4	30.0	55	SW	7.4	3.3			1			0	0		
Naples, O. U.			29.95	760.8	86.0	28.0	56	WSW			4		0			0.047	1.2		
Lecce			29.91	759.8	82.4	27.8	59	ENE	4.9	2.2			5			0	0		
Cosenza			29.93	760.2	87.4	30.8	67	NW	7.1	3.3			5			0	0		
Riposto, (Sicily)			29.96	760.9	85.1	29.8	55	E			2		2			0	0		
Palermo			29.90	759.4	89.1	31.7	36	E	1.8	0.8			4			0	0		
Caltanissetta	28.09	711.7	29.86	758.4	84.4	29.1	18	WNW			6		0			0	0		
Sub-Series.																			
Naples, S. R.			29.97	761.2	82.4	28.0	55	SSW	1.8	0.8			2	SW		0	0		Prof. F. Brioschi.
Pesaro			29.92	759.9	80.4	26.9	66	E	13.6	5.8			0						L. Guidi.

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	762.4	65.8	18.8		W			5								
Groningen			29.82	757.3	62.4	16.9		W			5								
Helder			29.88	759.0	61.1	16.7		WSW			5								
Utrecht			29.91	759.7	68.4	20.2	54	W			4		5					Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	745.8	57.2	14.0	76	SSW	15.7	7.0			10			0.539	13.7	Raining	
Brono			29.32	744.7	68.4	20.2	41	SSE	18	8			5			0	0		
Christiania			29.31	745.3	60.8	16.0	72	SSW	0.9	0.4			6			0.142	3.6		
Tromso			29.41	746.9	56.1	13.4	98	Calm	0	0			10			0	0		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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	766.8	73.2	22.9	69	NE	15.5	6.94			4			0.024	0.6		Dr. J. A. N. Sampaio.
Campo Major			29.95	760.6	109.4	43.0	4	ESE	5.8	2.58			4	SSW		0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.11	764.8	75.4	24.1	67	SW	6.3	2.8			9			0	0		Capt. D. A. da Cunha.
Lisbon			30.00	761.9	91.9	33.5	37	S	6.3	2.8			0			0	0		The Observatory.

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

RUSSIAN SERIES.

Furnished by 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			29.71	754.6	86.4	30.2	35	S	13	6			1						Astronomical Obs.
Wilna			29.80	756.9	84.7	29.3	40	S	13	6			4						Astronomical Obs.
Dorpat			29.81	757.2	77.7	25.4	41	SSE	11	5			3						Physical Cabinet.
St. Petersburg			29.91	759.6	71.6	22.0	40	S	13	6			3						Central Physical Obs.
Kutopio			29.78	756.5	64.4	18.0	71	S	27	12			7						Ch. Forsten.
Kieff			29.87	758.6	87.3	30.7	36	E	9	4			3						Physical Cabinet.
Nikolaiev			29.91	759.6	95.4	35.2	29	NE	11	5			6						Kurdakof.
Kertch			29.84	757.9	85.1	29.5	51	NE	18	8			0						Lagorio.
Moscow			30.03	762.8	83.3	28.5	46	S	4	2			4						Meteorological Obs.
Lugan			29.85	758.2	87.8	31.0	32	NE	22	10			0						Meteorological Obs.
Archangel			29.84	757.6	69.4	20.8	63	NW	13	6			8						Ogorodnikof.
Tiflis	28.18	723.5	29.78	756.4	95.4	35.2	32	S	4	2			1						Physical Observatory.
Astrakhan			29.84	758.0	90.1	32.3	32	NNW	11	5			1						Sebastianof.
Kasan			29.94	760.1	83.8	28.8	50	NE	13	6			2						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.97	735.8	29.87	758.6	71.5	23.0	49	E	7	3			1						Meteorological Obs.
Nukuss			29.57	751.0	89.8	32.1	40	N	9	4			0						
Kasaly																			Bobrof.
Tashkend	28.02	711.7	29.61	752.1	83.1	28.4	53	Calm	0	0			9						Michelson.
Barnaul			29.69	754.0	67.5	19.7	60	NE	2	1			1						Meteorological Obs.
Yenisseisk			29.4[illegible]	748.0	61.0	16.1	82	NW	2	1			3						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.71	754.7	88.7	31.5	72	Calm	0	0			2						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.64	752.9	74.7	23.7	83	Calm	0	0			3						
Nikolaievsk, on the Amoor					54.5	12.5	91	NE	7	3			10						

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 403. meters, or 1,311.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and 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			29.91	759.8	106.7	41.5	13	SW	9.7	4.34		0	1			0	0	Partly cloudy	Royal Observatory.
San Fernando			30.01	762.2	98.4	36.9	31	SW	6.5	2.9		0	0						The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			29.60	751.7	58.0	14.8	76	SW			7		2			0.394	10.0		
Umea			29.60	751.7	57.7	14.3	88	SW			4		10			0.823	20.9		
Hernosand			29.56	750.7	59.7	15.4	66	S			4		9			0.317	8.0		
Stockholm			29.50	749.3	59.2	15.1	94	SSE			4		10			0.07	1.8	Raining	
Wisby			29.59	751.6	63.7	17.6	82	S			4		10			0	0		
SUB-SERIES.																			
Upsala			29.50	749.2	56.6	13.6	96	ESE	8.9	4.0			10		SE	0.324	8.34	Raining	Dr. Hildebrandsson.

NOTE.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall 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	28.71	729 2	30.07	763 8	77.2	25 1	46	WNW			1		2			0	0	Clear	The Observatory.
Zurich	28.48	723.3	30.06	763.4	72.5	22.5	60	NW			1		3			0	0	Bright	The Observatory.

Note—For Geneva the corresponding departures from the normal values are Barometer, +1.4 mm.; Thermometer, +2.5 cent.; Relative Humidity, —7 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and Professor 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.	Direction. 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			29.82	757 4	84.2	29.0	56	NNE	16	7.0			1		ENE	0	0		
Fao, (Persian Gulf)																			
Salonica			29.93	760 3	84.7	29 3		NW			2		2						
Valona			29.98	761.4	79.7	26.5		W			1		2					Stormy	
Varna			30.00	762.0	95.0	35.0		S			2		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.82	757.4	89.4	31.9	54	WSW			2		3s		SW	0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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.	Direction. 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.			29.81	757.2	60.9	16.1	94	SW	7	3.1			10			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.00	762.0	69	20.6		SW	1	0.4		0	2s		W	0	0	Fair	W. R Bigg.
*Chatham, N. B.			29.88	758.9	62	16.7	94	S	9	4.0			10ks		S	0.30	7.6	Light rain	G. A. Blair.
Charlottetown, P. E. Island			30.00	762.0	64	17.8	78	S	15	6.7			10s			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.89	759.2	68.7	20.4	76	N			1	1k	0			0	0	Fair	James Smith, M. A.
Dalhousie, N. B.			29.81	757.2	69	20.6	96	E			1					0.57	14.5	Raining	H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			29.92	760.0	63.0	17.2	89	SE	9	4.0			10s			0.39	9.9	Showery	Prof. Harrison.
*Fort Garry, Manitoba			29.99	761.7	60	15.6	91	SE	3	1.3		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.02	762.5	69.4	20.8	80	Calm			0	4e	2s			0	0	Fine	H. J. Strang, M. A.
Granton, Ontario	28.94	735.1	30.00	762.0	63	17.2		Calm			0	0	0			0	0	Clear	James Grant.
*Halifax, N. S.			30.00	762.0	61	16 1	94	SE	6	2.7			10n			0.008	0.20	Light rain	F. Allison, M. A.
*Kingston, Ontario			29.98	761.5	66	18.9	81	NE	2	0.9		2k	0			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			30.16	764.5	63.2	17.3	77	SW	6	2 7		6ck	0	SW		0	0	Fair	C. H. Rigby.
*Montreal, Quebec			29.89	759.2	63	17.2	88	W	10	4.5			10n			0.24	6.1	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.94	760.5	63	17.2	76	N	8	3.6		2ck	0	N		0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.00	762.0	65	18.3	89	W	6	2.7		2ck	0	W		0	0	Fair	Rev. R. Mosley.
*Port Dover, Ontario			30.02	762.5	60	15.6	88	N	6	2.7		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.																			Peter Grant.
*Port Stanley, Ontario			30.01	762.2	64	17.8	86	E	4	1 8		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			29.81	757 2	65	18.3	84	SW	5	2.2			10n		SW	0.41	10.4	Cloudy	Capt. Ashe, R. N.
St. John, N. B.			29.96	761.0	60	15.6	68	SE	3	1.3			10ks			0.26	6.6	Cloudy	G. Murdoch, C. E.
*Saugeen, Ontario			30.00	762.0	63	17.2	86	Calm	0	0		8k	0	N		0	0	Cloudy	K. Stewart.
Stayner, Ontario			29.98	761.5	65	18.3	80	Calm	0	0		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario	24.76	730.5	30.03	762.7	56.1	13.4	97	Calm	0	0		0	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			30.12	765.0	65	18.3	77	SW	7	3.1		8ck	2ks		SW	0	0	Fair	T. C. Hill.
*Toronto, Ontario			30.03	762.7	65	18.3	82	Q	2	0.9		2e	0	W		0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.04	763.0	61.6	16.4	90	NE	5	2.2		0	1es			0	0	Fine	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			30.26	768.6	73	22.8	50	W				5c	2es			0	0	Fair	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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.			29.90	759.4	68	20.0	84	NW	2	0.9		10k	0	W		0.21	5.3	Cloudy	
Alpena, Mich			29.96	761.0	65	18.3	78	NW	2	0.9		0	0			0	0	Clear	
Atlantic City, N. J			29.96	761.0	73	22.8	90	W	8	3.6		2cs	2s	SW	W	0.13	3.3	Fair	
Augusta, Ga.			30.03	762.7	80	26.7	78	S	4	1.8		0	0			0	0	Clear	
Baltimore, Md			30.00	762.0	74	23.3	81	W	3	1.3		5cs	Haze			0.06	1.5	Fair	
Barnegat, N. J			29.94	760.5	78	25.6	77	W	9	4.0		2c	Haze	W		0.09	2.3	Fair	
Benton, Montana	27.14	688.3	29.90	759.4	70	21.1	52	SE	1	0.4		0	0			0	0	Clear	
Bismarck, Dakota	28.24	716.3	29.79	756.7	64	17.8	83	E	2	0.9		0	0			0.01	0.3	Clear	
Boston, Mass			29.86	758.4	73	22.8	81	W	6	2.7		2cs	8s		W	0	0	Cloudy	
Breckenridge, Minn			29.83	758.4	83	28.3	49	E	12	5.4		0	0			0	0	Clear	
Buffalo, N. Y.			29.98	761.5	64	17.8	78	N	3	1.3		1k	0	NE		0.02	0.5	Clear	
Burlington, Vt.			29.90	759.4	67	19.4	79	Calm	0	0			10s			0.11	2.8	Cloudy	
Cairo, Ill.			29.94	760.5	75	23.9	90	S	5	2.2			10s		SW	0	0	Cloudy	
Cape Hatteras, N. C.			29.99	761.7	81	27.2	82	W	12	5.4		2k	0			0	0	Fair	
Cape Henry, Va			29.98	761.5	78	25.6	82	SW	9	4.0		2k	8ks	SW	SW	0	0	Cloudy	
Cape Lookout, N. C.			30.07	763.8	83	28.3	70	SW	11	4.9		1k	0	SW		0	0	Clear	
Cape May, N. J			29.96	761.2	72	22.2	90	W	8	3.6		2cs	0	W		0.30	7.6	Fair	
Charleston, S. C.			30.06	763.5	84	28.9	71	SW	6	2.7		0	5ks		SW	0	0	Fair	
Cheyenne, Wyoming	24.21	614.9	30.15	765.8	54	12.2	68	NW	4	1.8		0	0			0	0	Clear	
Chicago, Ill			29.93	760.2	69	20.6	75	SW	1	0.4			10n			0.05	1.3	Light rain	
Cincinnati, Ohio			29.87	758.7	74	23.3	76	NE	3	1.3		0	Fog			0	0	Foggy	
Cleveland, Ohio			29.97	761.2	66	18.9	84	SE	4	1.8		1k	Sm'e	W	SE	0.01	0.3	Smoky	
Colorado Springs, Col.	24.24	615.7	30.11	764.8	68	20.0	38	N	8	3.6		2ck	0	W		0	0	Clear	
Corsicana, Tex			29.96	761.0	79	26.1	78	S	6	2.7		2cs	0			0	0	Clear	
Davenport, Iowa			29.95	760.7	68	20.0	84	NE	8	3.6		5ck	5s	SE		0.17	4.3	Fair	
Denison, Tex			29.96	761.0	83	28.3	82	SW	4	1.8		0	0			0	0	Clear	
Denver, Col.	24.95	633.7	30.17	766.3	62	16.7	57	Calm	0	0		0	0			0	0	Clear	
Detroit, Mich			29.95	760.7	67	19.4	79	NE	7	3.1		5k	Haze	W		0	0	Fair	
Dodge City, Kan	27.38	695.4	29.53	750.0	77	25.0	69	SW	6	2.7		2ck	0	S		0	0	Fair	
Dubuque, Iowa			29.95	760.7	68	20.0	84	Calm	0	0			10n			0.15	3.8	Light rain	
Duluth, Minn			29.97	761.2	66	18.9	84	Calm	0	0		5ck	0	N		0.02	0.5	Fair	
Eastport, Me			29.91	759.7	57	13.9	93	S	8	3.6			Fog			Inap.	Inap.	Threatening	
Erie, Pa			29.96	761.0	69	20.6	70	W	4	1.8		1c	0			0.02	0.5	Clear	
Escanaba, Mich			29.96	761.0	66	18.9	78	NE	3	1.3		5cs	Haze	NE		0	0	Fair	
Fort Gibson, Indian Ter.			29.89	759.2	82	27.8	78	E	3	1.3		0	0			0	0	Clear	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.75	730.2	29.80	756.9	80	26.7	61	S	4	1.8		0	0			0	0	Clear	
Fort Sully, Dakota	28.28	718.3	29.88	758.9	62	16.7	88	E	1	0.4		0	0			Inap.	Inap.	Clear	
Galveston, Tex			30.03	762.7	81	27.2	82	W	3	1.3		5c	0			0	0	Fair	
Grand Haven, Mich			29.95	760.7	66	18.9	84	E	2	0.9			10s		W	0	0	Cloudy	
Indianapolis, Ind			29.91	759.7	68	20.0	84	Calm	0	0			10s			0	0	Cloudy	
Indianola, Tex			30.02	762.5	83	28.3	70	SW	8	3.6		5k	0			0	0	Fair	
Jacksonville, Fla			30.05	763.5	82	27.8	74	SE	6	2.7		0	0			0	0	Clear	
Keokuk, Iowa			29.87	758.7	70	21.1	85	E	3	1.3			10s		E	0.16	4.1	Cloudy	
Key West, Fla			30.07	763.8	80.2	26.8	78	S	7	3.1			8s		SW	0.80	20.3	Cloudy	
Kittyhawk, N. C.			30.04	763.0	78	25.6	82	SW	12	5.4		5k	0	W		0.12	3.0	Fair	
Knoxville, Tenn			29.96	761.0	73	22.8	90	S	4	1.8		1cs	8ks	SW	SW	0.54	13.7	Cloudy	
La Crosse, Wis			29.91	759.7	69	20.6	90	SW	4	1.8		8cs	0			0.09	2.3	Clearing	
Leavenworth, Kan			29.88	758.9	72	22.2	85	Calm	0	0		0	0			1.48	37.6	Clear	
Lexington, Ky	28.85	732.8	29.91	759.7	72	22.2	90	SW	4	1.8			10s			0.27	6.9	Cloudy	
Louisville, Ky			29.90	759.4	76	24.4	81	Calm	0	0			8ks,fog		SW	0.03	0.8	Cloudy	
Lynchburg, Va			29.95	760.7	74	23.3	85	SW	1	0.4		5k	5s			0.40	10.2	Cloudy	
Malone, N. Y.			29.99	761.7	61	16.1	88	W	8	3.6			10s		NW	0.10	2.5	Cloudy	
Manhattan, Kan	28.77	730.7	29.86	758.4	72	22.2	90	S	1	0.4		0	0			0	0	Clear	
Marquette, Mich.			29.93	761.0	64	17.8	78	SW	2	0.9		0	0			0	0	Clear	
Memphis, Tenn			29.98	761.5	80	26.7	82	S	4	1.8		5cs	Haze			0	0	Fair	
Milwaukee, Wis			29.94	760.5	68	20.0	70	W	6	2.7		10ks	Fog	E		0	0	Cloudy	
Mobile, Ala			30.01	762.2	81	27.2	82	S	2	0.9			10s			0.02	0.5	Cloudy	
Montgomery, Ala			30.02	762.5	76.5	24.7	90	E	1	0.4		10cs	0			0.83	21.1	Cloudy	
Morgantown, W. Va	28.94	735.1	29.95	760.7	70	21.1	90	Calm	0	0			10s		W	1.02	25.9	Cloudy	
Mt. Washington, N. H	23.80	604.5	30.16	766.1	47	8.3	100	NW	20	8.9			10n		NW	1.14	29.0	Light rain	
Nashville, Tenn			29.93	760.2	74	23.3	95	SE	3	1.3			10s			1.47	37.3	Cloudy	
New Haven, Conn			29.89	759.2	78	25.6	65	NW	10	4.5		5ck	Sm'e	NW		0.20	5.1	Fair	
New London, Conn			29.90	759.4	73	22.8	85	W	5	2.2		0	8s		W	0.64	16.3	Fair	
New Orleans, La			30.00	762.0	81	27.2	87	Calm	0	0		4c	2ck	W	W	0.40	10.2	Fair	
Newport, R. I.			29.89	759.2	73	22.8	85	S	2	0.9			10ks		SW	0.42	10.7	Cloudy	
New York, N. Y.			29.93	760.2	72	22.2	75	W	9	4.0		5cs	Haze			0.62	15.7	Fair	
Norfolk, Va			30.02	762.5	79	26.1	82	SW	8	3.6		2k	8ks	SW	SW	Inap.	Inap.	Cloudy	
North Platte, Neb	27.15	689.6	29.63	752.6	65	18.3	83	Calm	0	0		0	Fog			0	0	Clear	
Omaha, Neb.	23.88	733.5	29.92	760.0	64	17.8	100	Calm	0	0			Fog			0.72	18.3	Foggy	
Oswego, N. Y.			29.98	761.5	64	17.8	89	NW	7	3.1		2ck	2ks	NW	NW	0.11	2.8	Fair	
Pembina, Dakota			29.91	759.5	63	17.2	88	Calm	0	0		0	0			0	0	Clear	
Philadelphia, Penn			29.96	761.0	73	22.8	81	N	14	6.3		2c	5ks		NW	0.08	2.0	Cloudy	
Pike's Peak, Colorado	18.16	461.2	30.37	771.4	43	6.1	43	SW	2	0.9		1k	0			0	0	Clear	
Pittsburgh, Penn			29.96	761.0	67	19.4	94	NW	1	0.4			Fog			0.51	13.0	Foggy	
Port Huron, Mich			29.98	761.5	63	17.2	78	E	4	1.8		2ck	2s	W		0	0	Fair	
Portland, Me			29.87	758.7	66	18.9	94	S	5	2.2			Fog		S	0.41	10.4	Foggy	
Portland, Oregon			30.07	763.8	59	15.0	76	S	4	1.8			10s		SW	0	0	Cloudy	
Punta Rassa, Fla			30.03	764.0	75.0	23.9	93	SW	16	7.2			10n		SE	2.15	54.6	Heavy rain	
Rochester, N. Y			29.96	761.0	66	18.9	73	N	7	3.1		0	0			0.13	3.3	Clear	
Salt Lake City, Utah	25.59	650.0	29.92	760.0	73	22.8	31	SE	6	2.7			10s		SW	0	0	Cloudy	
Sandy Hook, N. J			29.92	760.0	73	22.8	85	NW	10	4.5		2cs	Haze	W	E	0.48	12.2	Clear	
San Diego, Cal.			29.84	757.9	62	16.7	100	N	8	3.6			Fog			0	0	Foggy	
San Francisco, Cal			29.92	760.0	54	12.2	87	S	2	0.9		0	0			0	0	Clear	
Santa Fé, N. M	23.44	595.4	29.98	761.5	62	16.7	71	Calm	0	0		0	0			Inap.	Inap.	Clear	
Savannah, Ga.			30.06	763.5	86	30.0	65	SW	2	0.9		2cs	Haze			0.01	0.3	Hazy	
Shreveport, La			30.01	762.2	81	27.2	87	Calm	0	0		0	0			0	0	Clear	
Smithville, N. C.			30.07	763.8	80	26.7	78	SW	9	4.0		5k	0	SW		0	0	Fair	
Springfield, Mass.			29.88	758.9	76.5	24.7	72	W	4	1.8		5c,cs,k	0			0.16	4.1	Fair	
St. Louis, Mo			29.92	760.0	73	22.8	80	SE	12	5.4		0	2s			0.15	3.8	Clear	
St. Marks, Fla			30.02	762.5	78	25.6	86	NE	4	1.8		5c	2ks	NE		0	0	Fair	
St. Paul, Minn			29.92	760.0	67	19.4	84	Calm	0	0		Haze	Haze			0.14	3.6	Hazy	
St. Paul's Island, Alaska			29.27	743.4	42	5.6	91	W	34	14.8			10s			0.45	11.4	Cloudy	
Thatcher's Island, Mass.			29.86	758.4	66	18.9	90	S	7	3.1		5ck	2s	W	W	0	0	Fair	
Toledo, Ohio			29.92	760.0	69	20.6	79	W	1	0.4		0	Haze			0	0	Hazy	
Tucson, Arizona	27.47	697.7	30.06	763.5	82	27.8		S				5ck	2ks	E	S	0	0	Cloudy	
Tybee Island, Ga.			30.04	763.0	80	26.7	86	Calm	0	0		2k	0	SW		0	0	Fair	
Vicksburg, Miss.			30.02	762.5	78.5	25.8	86	SE	4	1.8		0	0			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
Virginia City, M. T.	24.26	616.2	29.71	755.4	58	14.4	36	Calm	0	0		0	0			0	0	Clear	
Washington, D. C.			29.98	761.5	75	23.9	79	Calm	0	0		5cs	1s	W	SW	0.05	1.3	Fair	
Wilmington, N. C.			30.06	763.5	80	26.7	82	SW	10	4.5		0	2ks		SW	0.07	1.8	Fair	
Wood's Holl, Mass.			29.9	759.4	70	21.1	95	S	4	1.8			10s		S	0.22	5.6	Cloudy	
Wytheville, Va.	27.71	703.8	29.78	756.4	68	20.0	94	Calm	0	0			10n		W	0.30	7.6	Light rain	
Yankton, Dakota	28.69	728.7	29.92	760.0	69	20.6	85	Calm	0	0		0	0			0.09	2.3	Clear	
Yuma, Arizona			29.[illegible]0	756.9	86	30.0		E				2c	0	E		0	0	Fair	
Sub Series.																			
P'nte-a-Pitre, G'd'l'pe, W. I.			29.96	761.0	82	27.8	87	E				10c	2k			0.39	9.9	Cloudy	L. V. Bigard.
Kingston, Jamaica, W. I.			30.20	767.1	81	26.7	78	Calm	0	0		5c	0			0	0		James Gall.
St. Georges, Bermudas			30.20	767.1	85.5	29.7	68	SE	4	1.8		0	2k			0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.22	691.4	30.01	762.2	68	20.0	87	SE	2.0	0.9		8c	0	SE		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.04	763.0	80	26.7	91	E			2	5k	6ks	E		0.600	15.24	Fair	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.8			86.0	30		NE								0.413	10.50		Dr. H. Groot.
Medellin, Colombia, S. A.	25.21	640.3			67.0	19.4	74	SE	2	0.9		4k	0			0	0	Fair	Thomas Herran
York Factory, B. A.			30.02	762.5	53	11.7	93	W	2	0.9		3c	0	NW		0	0		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.10	764.5	78	25.6	90	NE	3	1.3						0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	Barometer. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	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 Leipzig. N. 47° 12′, W. 33° 57′.	N 72 E		30.30	769.6	72.5	22.5		WSW		2		..k		WSW	Short sea.		*D. clouds	Capt. R. Hoffmann.
Steamer Nova Scotian. N. 51° 46′, W. 25° 47′.	NW ¾ W	9½	29.84	757.9	57	13.9		SW		5		10			Moderate.	W	Raining	Capt. Ritche.

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, 6,012.4 ft., or 1,833.7 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.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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 698.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.91 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 elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. *D tashed Clouds.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy. General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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.
2:30 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			30.06	763.5	80.4	31.9	56	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.06	764.5	84.2	29.0	55	NNE			1		0			0	0	Clear	Peter.
La Calle			30.06	763.4	83.7	28.7	69	NW			3		1			0	0	Clear	Kunts.
Tunis			30.07	763.6	89.4	31.9	36	NW			4		0			0	0	Clear	Jacques.
Sfax			30.07	763.6	87.1	30.6	44	E			4		1			0	0	Clear	Chauvey.
Saida			30.08	763.9	100.4	38.0		W			1		3			0	0	Fair	Millot.
Tebessa			30.07	763.7	87.8	31.0		N			2		1			0	0	Clear	Colin.
Geriville			30.11	764.9	89.6	32.0	30	SW			1		3			0	0	Fair	Buard.
Laghouat			30.09	764.3	104.0	40.0		E			3		1			0	0	Clear	Guyot.
Biskra			30.07	763.8	104.7	40.4		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			30.17	766.2	70.2	26.2	44	NE			2		4			0	0		Prof. Ivan Stosir.
Cracow, I. R. Observatory			30.21	767.4	72.0	22.2	52	NE			1		8			0	0		Dr. Wierzbiski.
Eperies			30.13	765.2	74.8	23.8	40	N			4				S	0.016	0.40		Julius Mikolik.
Gratz	28.97	735.8	30.12	765.1	76.1	24.5	53	NW			2		0			1.248	31.7		Andreas Rospini.
Hermannstadt	28.59	726.2	29.93	760.1	83.1	28.4	41	N			3		3			1.047	26.60	Thunder-storm	Prof. Reissenberger.
Kremsmünster	28.88	733.5	30.17	766.4	71.6	22.0	50	WNW			1		0			0	0		Prof. C. Wagner.
Lemberg			30.09	764.2	71.8	22.1	72	NE			4		3			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.15	765.7	80.1	26.7	44	E			3		18			0	0		I.R. Hydrographic Office.
Szegedin			30.11	764.9	80.2	26.8	44	SW			3		2			0	0		Karl Stancel.
Trieste			30.16	766.0	84.2	29.0	55	ENE			1		1			0	0	Clear	Prof. V. Farolfi.
Vienna			30.17	766.4	76.1	24.5	35	N			2		1			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.0 feet; Hermannstadt, 407.8 m., or 1,337.0 ft.; Kremsmünster, 383.9 m., or 1.258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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	763.9	73.0	22.8	54	WSW			3		1		SW	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.56	750.8	63.0	17.2		SSW	28	12.5			6			0	0	*D. clouds	William Boswell.
Ardrossan																			William McNeil.
Armagh, Observatory			29.66	753.4	63.7	17.6		SSW	21	9.4									S. Cail, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.73	755.1	64.0	17.8		SSW			1–2		10					Gloomy	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			30.05	763.3	82.0	27.8		NE			3		5					*D. clouds	Sergt. J. F. Halamen, A.
Cambridge			29.97	761.2	75.5	24.2		S			3–4		2						Mr. Pain, F. B. M. S. [H. C.
Cardington			29.96	761.0	77.0	25.0		W			3		1					Blue sky	John McLaren.
Carlisle			29.75	755.6	63	17.2		SW			8		10			0.02	0.5	Showery	T. Bel, for J. Carmell.
Chatham, School M. E			30.01	762.2	72.5	22.5		NW			4		2					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.63	727.2	30.12	765.0	57.8	14.3		W			6		1?					Threatening?	R. E. Power.
Donaghadee			29.64	753.4	62	16.7		SW			5		10					Overcast	J. Mac Gowan.
Dover			30.06	763.5	66	18.9		SW			4		0					Clear	J. Costello.
Eccles (near Manchester.)			29.86	758.4	70.7	21.5		SW	3.0	1.3			4					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.00	762.0	67.3	19.6		SW			5		10					Overcast	The Staff.
Fort Napier, (Natal)	27.75	704.8	29.98	761.5	77.6	25.3		E			2		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.05	763.3	80	26.7		W			5		7					*D. clouds	
Galway, Queen's College			29.70	754.4	57	13.9		S			4		10					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.00	762.0	87.9	31.1		E			3		0					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.57	751.1	58.6	14.8		W			1		10					Drizzling	Lewis Stuart.
Great Yarmouth			29.95	760.7	72	22.2		SW			5		3					Squally	G. T. Watson.
Greenwich, Royal Obs'y			30.01	762.2	75.8	24.3		SW			2		3					*D. clouds	The Staff, for G. B. Airy
Guernsey			30.06	763.5	67.5	19.7		SSW			1		0					Blue sky	Dr. S. L. Hoskins.
Helston			29.99	761.7	78	25.6		SW			3		3ck			0.3	7.6		M. P. Moyle.
Holyhead			29.83	757.7	62	16.7		SSW			5		3					*D. clouds	John Tilston.
Kew, Observatory			30.00	762.0	69.7	20.9		SSW	19	8.5			5					Threatening	The Staff.
Kingstown			29.77	756.1	68	20.0		SSE			4		7					*D. clouds	George Mitchell.
Leicester Museum			29.93	760.2	70.8	21.6		SW			7		2					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.99	761.7	84.8	29.3		N			1		4k					D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			29.48	748.8	67	19.4		SW			3		5					½ clouded	W. D. Lenny.
Nassau, (Bahamas)			30.11	764.8	86.4	30.2		E			2		8					D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.91	759.7	75.0	23.9		SW			4		4c.k		SW			*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.90	759.4	71.0	21.7		SSW			6		5					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.96	761.0	71	21.7		SW			3		3					Blue sky	J. Lucas.
Plymouth			30.01	762.2	65.5	18.6		SW			2		10					Overcast	John Merrifield.
Roche's Point			29.86	758.4	61	16.1		SW			5		10					Misty	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, Jersey			30.08	764.0	68.0	20.0		SW			2		0					Clear	A. P. Amy.
Sandwick Manse, Orkneys			29.48	748.8	59	15.0		SW	11	4.9			4			0.52	13.2	*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, Turkey			29.84	757.7	88.6	31.4		NE			3		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.87	758.7	73.0	22.8		WNW			6		3			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			29.71	754.6	67.6	19.8	64	W			6		5			0.09	2.41	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.82	757.4	68.1	20.1		SW			3		5					*D. clouds	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			29.40	746.7	59	15.0		SW			6		10					Raining	John Smith.
Stratfield Turgiss			30.02	762.5	70.0	21.1		W			3		6					Squally	Rev. Charles H. Griffith.
Thurso			29.42	747.3	66	18.9		SW			2		5					*D. clouds	John Trotter.
Truro, Royal Institution			29.92	760.0	67	19.4		S			4		10					Gloomy	W. Newcombe.
Valencia, Observatory			29.74	755.4	60.6	15.9		SSW	34	15.2			10					Threatening	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					50	10.0		SW			6		5						Thomas Dawson.
Cape Good Hope, Obs'y			30.15	765.8	56.5	13.6	85	WNW	7	3.1		5	5						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.83	757.7	57.5	14.2	87	W			3		6ks			0.10	2.5		Francis Abbott, F.R.A.S.
Leith, Restaurig Park			29.63	752.6	66.8	19.3		W			5		10ks					Showery	Andrew Gibb.
Mauritius, Observatory			30.18	766.6				ESE	21.0	9.4						0.09	2.3		C. Meldrum
Melbourne, Observatory			30.23	767.8	48.7	9.3	68	N	14	6.3			10			0	0	Fine, dull	R. L. J. Ellery.
Monach Lighthouse, Hebrides			29.49	749.0	56	13.3		SW			4	10	0	SW		0.2	5.1		J. Youngehuse.
North Unst, Shetland Is.			29.38	746.2	55	12.8		W			6		10			Blank	Blank		Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,320 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			30.03	762.7	68.0	20.0	58	WSW			4		7						
Fanöe			30.00	762.1	64.6	18.1	72	SW			6		9						
Godthaab, (Greenland)			29.81	757.2	46.0	7.8		ENE			2		0						
Stykkisholm, Iceland			29.41	747.1	44.8	7.1	98	NE			8		10					Raining	
Thorshavn, Faröe			29.28	743.6	47.5	8.6	91	E			2		10					Raining	
Vestervig			29.91	759.6	63.7	17.6	82	SW			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			30.03	762.8	73.4	23	32	SW			1		0			0.008	0.2	Clear	Normal School.
Amiens			29.91	759.6	79.2	26.2	54	SW			3		0			0	0	Clear	Normal School.
Avignon			30.10	764.6	90.5	32.5	28	N			1		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.12	765.0	79.7	26.5	28	S			2		2			0	0	Slightly cl'dy	C. Saillard.
Beaumette, (near Angers)			30.00	763.4	83.8	28.8	30	W	2.2	1.0			0			0	0	Clear	Beaumette Observatory
Beauvais			30.07	763.8	78.6	25.9	32	SSW			2		0			0	0	Clear	Normal School.
Besançon			30.16	766.0	79.2	26.2	49	E			2		0			0	0	Clear	Normal School.
Bourg en Bresse			30.23	767.8	82.4	28	44	N			2		0					Clear	Normal School.
Bourges			30.55?	776.0?	77.0	25	51	W			2		0			0	0	Clear	Normal School.
Brest			29.98	761.6	75.4	24.1	61	SW			3	1c				0	0		Naval Observatory.
Carcassonne			30.01	762.2	82.4	28	25	NW			1		0			0	0	Clear	Normal School.
Caen			30.05	763.3	74.7	23.7	42	W			2		0			0	0	Clear	Normal School.
Chartres			30.11	764.7	74.1	23.4	59	SSW			2		0			0	0	Clear	Normal School.
Clermont			30.07	763.8	81.0	27.2	50	SW			1		0			0	0		Puy de Dome Obs'y.
Commercy			30.15	765.9	74.1	23.4	43	SE			4		0			0	0	Clear	Normal School.
Commune de Greasque*			30.20	767.0	90.5	32.5	23	S			4		2		SW	0	0		M. King.
Grenoble			30.13	765.3	81.5	27.5	75	NNW			1		0			0	0	Clear	Normal School.
La Roche-sur-Yon			30.18	766.5	81.7	27.6	41	SSE			2		0			0	0	Clear	Normal School.
Le Mans			30.07	763.6	79.2	26.2	41	S			2		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			30.13	765.4	75.7	24.3	51	SW			1		0			0	0	Clear	Normal School.
Mâcon			30.26	768.7	77.2	25.1	61	W			2		0			0	0	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			30.16	766.1	74.5	23.6	52	W			1		0			0	0	Clear	Normal School.
Nîmes			30.10	764.6	96.8	36	37	NE			1		0			0	0	Clear	Normal School.
Orléans			30.03	762.8	82.4	28	38	S			2		0			0	0	Clear	Normal School.
Paris, Observatory			30.08	764.1	81.5	27.5	31	SW			2	1c				0	0	Clear	National Observatory.
Parthenay			30.05	763.2	87.8	31	70	S			2		0			0	0	Clear	Normal School.
Privas			30.12	765.1	85.3	29.6		SE			2		0			0	0	Clear	Normal School.
Rochefort, Observatory			30.08	764.0	85.6	29.8	42	E			3		0			0.079	2.0	Blue sky	Naval Observatory.
Rouen			30.07	763.7	84.6	29.2	28	SSE			1		0			0	0	Clear	Normal School.
Saint Lo			29.80	756.9	74.1	23.4	45	SW			1		0			0	0		Normal School.
Tarbes	28.99	736.4	30.00	762.0	91.4	33		SSW			2		0			0	0	Clear	Normal School
Villefranche			30.05	763.3	92.8	33.8	40	N			1		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.93	760.3	80.6	27													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.39	771.8	76.1	24.5	42	ESE	13.0	5.83			0			0	0		—. Falguère.
Montsouris, Paris			30.09	764.3	84.7	29.3	26	S					0			0	0		Montsouris Observ'tory.
Perpignan			30.12	765.0	83.8	28.8	36	S	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)			30.09	764.3	84.0	28.9	28	S			2		0			0	0	Clear	E. Renou.
Toulouse			30.13	765.4	87.4	30.8	28	SE			2		0			0	0		Toulouse Observatory
Tours			30.08	764.1	82.8	28.2	27	SSW			1		0			0	0	Clear	C. Marquet.
Versailles, (near Paris)			30.10	764.6	84.2	29.0	50	SSW?			3		0			0	0	Very clear	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Leo, S. J.

NOTE.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * 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.
Hamburg			30.13	765.4	73.4	23.0	44	W			2		2	S		0	0		Prof. T. Hoh.
Berlin			30.16	766.0	73.4	23.0	49	S			2		1			0	0		Prof. Arndt.
Breslau			30.28	769.1	70.9	21.6	47	W			3		7			0	0		Dr. P. Neugebauer.
Carlsruhe			30.14	765.0	76.0	24.8	51	W			5		0			0	0		A. Senz.
Cassel			30.15	765.7	78.8	26.0	40	S			6		1	SSW		0	0		Dr. H. Möhl.
Emden			30.01	762.3	72.0	22.2	54	SW			7		0			0	0		Prof. Prestel.
Frankfort on the Main			30.17	766.4	78.6	25.9	25	W			1		0			0	0		Physical Society.
Friedrichshafen			30.08	764.1	71.2	21.8	75	W			4		0			0	0		M. Wilhelm.
Hamburg			30.11	764.9	70.9	21.6	60	WSW			3		6k			0.008	0.2	Fine	Captain F. Hegemann.
Kiel			30.05	763.2	72.0	22.2	53	WSW			5		5			0	0		Prof. G. Karsten.
Königsberg, (Prussia.)			30.12	765.0	70.0	21.1	57	W			5		4			0.031	0.8		Prof. F. Luther.
Köslin			30.16	766.0	70.3	21.3		W			4		3			0.250	6.5		H. Müller.
Leipsic			30.17	766.4	76.3	24.6	34	SW			2		0			0	0		Prof. Bruhns.
Memel			30.08	764.1	67.3	19.6	65	W			7		..k	W		0.079	2.0		Reinbrecht & Skalweit.
Münster			30.18	766.6	72.5	22.5	59	SW			2		0			0	0		Prof. E. Heis.
Neustahrwasser			30.14	765.6	69.1	20.6	50	NW			4		6			0	0		A. Lothes.
Posen			30.21	767.4	75.7	24.3	38	NW			1		1			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.16	766.1	77.0	25.0	43	Calm			0		0			0	0		Dr. Schur.
Stuttgart			30.15	765.9	75.7	24.3	45	E			2		0			0	0		Prof. Schoder.
Thorn			30.18	766.5	76.1	24.5	36	NW			4		2			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.11	764.9	76.6	24.8	38	W			3		1			0	0		Prof. Flesch.
Wustrow, Naval School			30.17	766.4	67.8	19.9	64	S			1		0			0	0		E. F. Schütz.

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is on a scale; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	91.6	33.1		S					k					Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	765.4	81.3	27.4	42	SW	0.7	0.3			0			0	0		
Padua			30.14	765.5	79.7	26.5	49	ESE	8.7	3.9			0			0	0		
Vicenza			30.14	765.6	81.3	27.4	38	SE	7.4	3.3			0			0	0		
Verona			30.12	765.1	86.4	30.2	37	E			1		0			0	0		
Bergamo	28.82	732.0	30.08	763.9	84.2	29.0	40	SSE			2		0			0	0		
Domodossola	29.10	739.0	30.08	764.0	82.0	27.8	41	S			6		2			0	0		
Milan			30.11	764.9	90.5	32.5	46	ESE			4		1	NE		0	0		
Pavia			30.13	765.4	82.8	28.2	38	NE			2		0			0	0		
Moncalieri			30.13	765.4	82.6	28.1	50	SE	4.9	2.2			2	E		0	0		
Mondovi	28.30	718.8	30.13	765.4	78.4	25.8	57	NW			4		1			0	0		
Porto Maurizio			30.11	764.8	83.7	28.7	66	E			6		1			0	0		
Genoa			30.09	764.2	87.1	30.6	48	NW	3.8	1.7			0			0	0		
Piacenza			30.15	765.7	82.0	27.8	48	SE	13.7	6.1			0			0	0		
Parma			30.13	765.3	84.2	29.0	46	NE			4		0			0	0		
Bologna			30.15	765.7	83.1	28.4	41	E			6		2	N		0	0		
Florence			30.10	764.6	87.8	31.0	36	NE			6		0			0	0		
Leghorn			30.08	763.9	90.0	32.2	33	NNW	6.3	2.8			0			0	0		
Siena	28.91	734.2	30.06	763.5	84.7	29.3	35	ENE	4.9	2.2			4	E		0	0		
Urbino	28.66	728.0	30.15	765.8	74.8	23.8	55	NE			2		1			0	0		
Ancona			30.15	765.8	82.8	28.2	51	N			4		0			0	0		
Grosseto			30.07	763.8	92.1	33.4	28	NNW			2		3	SE		0	0		
Rome			30.04	763.1	90.7	32.6	48	WNW	5.6	2.5			1			0	0		
Naples, O. U.			30.05	763.3	90.5	32.5	41	NE			6		0			0	0		
Lecce			30.02	762.4	82.0	27.8	51	N	15.0	6.7			2			0	0		
Cosenza			30.01	762.2	88.2	31.2	69	NW	12.5	5.6			2			0	0		
Riposto, (Sicily)			29.99	761.7	82.8	28.2	62	NNE			2		2	W		0	0		
Palermo			29.95	760.6	81.0	27.2	74	ENE	3.8	1.7			0			0	0		
Caltanissetta	28.03	712.0	29.89	759.3	84.6	29.2	19	NE			2		0			0	0		
Sub-Series.																			
Naples, S. R.			30.06	763.4	87.8	31.0	38	NE	6.3	2.8			2	W		0	0		Prof. F. Brioschi.
Pesaro			30.24	768.1	77.9	25.5	63	E	9.8	4.36			0			Blank	Blank		L. Guidi.

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			30.11	764.7	68.0	20.0		WNW			3								
Groningen			30.00	762.0	67.6	19.8		SW			5								
Helder			30.05	763.2	66.9	19.4		SW			4								
Utrecht			30.07	763.6	71.8	22.1	50	SW			4		2					Light cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.60	751.7	55.6	13.1	95	S	20.6	9.2			10			0.866	22.0	Raining	
Brönö			29.52	749.7	55.0	12.8	75	W	20	9			6			0.134	3.4		
Christiania			29.77	756.1	63.7	17.6	47	SSW	9.4	4.2			10			0.051	1.3		
Tromsö			29.39	746.4	56.8	13.8	100	Calm	0	0			5			0	0		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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,)			30.28	769.2	74.1	23.4	76	W	13.5	6.02			2			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.90	759.5	104.0	40.5	9	SSW	20.5	9.17			9	SSW		0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.19	766.8	75.4	24.1	70	SW	5.6	2.5			10			0	0		Capt. D. A. da Cunha.
Lisbon			30.02	762.6	79.9	26.6	55	NW	22.4	10.0			7	SSW		0	0		The Observatory.

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

RUSSIAN SERIES.

Furnished by 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	766.2	70.3	21.3	51	WSW	4	2			4						Astronomical Obs.
Wilna			30.08	763.9	67.8	19.9	54	W	4	2			8						Astronomical Obs.
Dorpat			29.87	758.6	65.3	18.5	55	WSW	16	7			6						Physical Cabinet.
St. Petersburg			29.72	754.9	67.5	19.7	54	W	20	9			9					Raining	Central Physical Obs.
Kutopio																			Ch. Forsten.
Kieff			29.87	758.7	86.9	30.5	37	WNW	7	3			6						Physical Cabinet.
Nikolaiev			29.92	760.0	83.8	28.8	51	NW	9	4			9						Kurdakof.
Kertch			29.82	757.4	82.9	28.3	70	S	7	3			6						Lagorio.
Moscow			29.93	760.3	80.8	27.1	55	S	4	2			7						Meteorological Obs.
Lugan			29.76	755.8	92.1	33.4	29	ESE	18	8			0						Meteorological Obs.
Archangel			29.64	752.8	83.5	28.6	84	SE	22	10			1						Ogorodnikof.
Tiflis	28.41	721.7	29.71	754.7	93.7	34.3	31	SE	9	4			0						Physical Observatory.
Astrakhan			29.81	757.2	91.6	33.1	32	NNW	4	2			1						Sebastianof.
Kasan			29.89	759.3	86.2	30.1	49	NNE	2	1			3						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.97	735.9	29.87	758.7	75.6	24.2	54	ENE	7	3			6						Meteorological Obs.
Nukuss			29.54	750.3	86.9	30.5	41	N	4	2			5						
Kasaly																			Bobrof.
Tashkend	28.05	712.4	29.61	752.2	88.9	31.6	47	Calm	0	0			2			Blank	Blank		Michelson.
Barnaul			29.65	753.0	72.5	22.5	45	NNE	2	1			3						Meteorological Obs.
Yeniseisk			29.49	749.0	66.2	19.0	81	SE	2	1			10						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.76	755.8	89.6	32.0	70	Calm	0	0			1						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.60	751.9	76.1	24.5	91	NE	9	4			2						
Nikolaievsk, on the Amoor					59.4	15.2	94	E	9	4			5						

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 366.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and 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	101.0	40.0	16	E	5.2	2.33		3	0	SW		Inap.	Inap.	Light clouds	Royal Observatory.
San Fernando			30.02	762.5	93.0	33.9	38	S	13.2	5.9		0	0						The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			29.42	747.2	57.9	14.4	85	NE			2		10			0	0		
Umea			29.43	747.4	63.7	17.6	73	NW			4		6			0.433	11.0		
Hernosand			29.55	750.6	59.7	15.4	63	WNW			2		6			0.091	2.3		
Stockholm			29.73	755.2	67.6	19.8	35	WSW			7		1			0.094	2.4		
Visby			29.88	759.0	64.4	18.0	62	W			7		0			0.094	2.4		
Sub-Series.																			
Upsala			29.70	754.3	68.5	20.3	36	WSW	16.1	7.2			2	NNW	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; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall 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.	Observers.
Geneva	28.77	730.8	30.13	765.4	76.6	24.8	45	NE			1		0			0	0	Clear	The Observatory.
Zurich	28.57	725.6	30.13	765.4	77.5	25.3	54	N			1		0			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are Barometer, +3.0 mm.; Thermometer, +2.3 cent.; Relative Humidity, —8 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and Professor 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.	Observers.
Constantinople			29.89	759 2	83.3	28.5	59	N	20	9.0			0			0	0		
Fao, (Persian Gulf)			29.53	750.0	87.8	31.0		NW			1		0						
Salonica			29.93	760.3	100.4	38.0		N			2		5						
Valona			30.04	763.1	81.1	27.3		W			1		2					Stormy	
Varna			29.86	758.5	87.8	31.0		NW			6		2						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			29.80	756.8	90.5	32.5	56	SW			2		2k	W	E	0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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.	Observers.
Bathurst, N. B.																			Hon. J. Ferguson.
Brockville, Ontario			30.08	764.0	67	19.4		Calm	0	0			8ks		W	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B.			29.88	758.9	68	20.0	74	W	8	3.6		0	0			0.33	8.4	Clear	G. A. Blair.
Charlottetown, P. E. Island.			29.86	758.4	66	18.9	87	W	3	1.3			10s			0.480	12.19	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.99	761.7	72.7	22.6	69	SE			1	8k	0			0	0	Clearing	James Smith, M. A.
Dalhousie, N. B.																0.18	4.6		H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			29.97	761.2	66.0	18.9	74	W	8	3.6		0	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.93	760.2	62	16.7	83	S	4	1.8		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.00	762.0	76.3	24.6	76	N			1	6ck	0	NE		0	0	Dry	H. J. Strang, M. A.
Granton, Ontario	28.93	734.8	29.99	761.7	67	19.4		NE			1	1c	0	W		0	0	Clear	James Grant.
*Halifax, N. S.			29.88	758.9	68	20.0	84	N	9	4.0			8n		N	0.035	0.89	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.04	763.0	67	19.4	95	Calm	0	0		10cs	0	SW		0	0	Fair	S. Woods, M. A.
Little Glace Bay, N. S.			29.81	757.2	69.2	20.7	89	S	2	0.9			10n			0	0	Hazy	C. H. Rigby.
*Montreal, Quebec			30.00	762.0	71	21.7	79	SW	2	0.9		5c	Haze	NW		0	0	Fair	C. H. McLeod, C. E.
*Ottawa, Ontario			29.96	761.0	68	20.0	70	NW	4	1.8		2c	0	NW		0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.04	763.0	66	18.9	89	N	1	0.4		0	0			0	0	Clear	Rev. R. Mosley.
*Port Dover, Ontario			30.01	762.2	63	17.2	63	NE	8	3.6		10ck	0	SW		0	0	Fair	H. Morgan.
Port Hastings, N. S.																			Peter Grant.
*Port Stanley, Ontario			30.00	762.0	66	18.9	74	NE	9	4.0		5ck	0	W		0	0	Fair	M. Payne.
*Quebec, Quebec			29.99	761.7	67	19.4	79	Calm	0	0		0	0			0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.			29.97	761.2	65	18.3	73	N	3	1.3		4cs	0			0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			30.00	762.0	68	20.0	65	Calm	0	0		0	0			0	0	Clear	R. Stewart.
Stayner, Ontario																			R. J. Cole.
Stratford, Ontario	28.76	730.5	30.00	762.0	65.0	18.3	84	Calm	0	0		3cs	0			0	0	Fine	C. J. Macgregor, M. A.
*Sydney, C. B.			29.84	757.9	66	18.9	96	SW	4	1.8		8k	5ks	W	SW	0.16	3.8	Clearing	T. C. Hill.
*Toronto, Ontario			30.03	762.7	66	18.9	82	N	8	3.6		8cs	0	W		0	0	Fair	Magnetic Observatory.
Woodstock, Ontario			30.03	762.7	63.3	17.4	88	E	4	1.8		5cs	2s			0	0	Fine	J. Montgomery
Sub-Series.																			
St. Johns, Newfoundland			30.14	765.5	59	15.0	88	S					10n			Inap.	Inap	Light rain	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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.			30.01	762.2	62	16.7	88	NW	1	0.4		0	10s			0	0	Cloudy	
Alpena, Mich.			30.00	762.0	65	18.3	73	W	3	1.3		0	0			0	0	Clear	
Atlantic City, N. J.			29.90	759.4	70	21.1	100	SE	14	6.3			10n		S	0.13	3.3	Light rain	
Augusta, Ga.			29.89	759.2	77	25.0	86	Calm	0	0			10ks		SW	0.88	22.4	Cloudy	
Baltimore, Md.			29.91	759.7	70	21.1	90	NE	4	1.8			10n		E	1.20	30.5	Light rain	
Barnegat, N. J.			29.92	760.0	68	20.0	90	E	13	5.8			10n			0.18	4.6	Light rain	
Bismarck, Dakota	28.04	712.2	29.58	751.3	71	21.7	53	E	5	2.2		2k	2s	W	W	0	0	Fair	
Boston, Mass.			30.02	762.5	68	20.0	69	N	2	0.9		10cs	Haze	W		0	0	Cloudy	
Breckenridge, Minn.			29.89	759.2	67	19.4	90	E	12	5.4		8k	0			0	0	Cloudy	
Buffalo, N. Y.			29.98	761.5	65	18.3	63	E	5	2.2		10c	0			0	0	Cloudy	
Burlington, Vt.			30.02	762.5	66	18.9	73	S	2	0.9		5c	2s			0	0	Cloudy	
Cairo, Ill.			29.92	760.0	70	21.1	79	N	6	2.7		0	0			0.05	1.3	Clear	
Cape Hatteras, N. C.			29.89	759.2	83	28.3	79	S	17	7.6		2cs	8ks		S	0.20	5.1	Cloudy	
Cape Henry, Va.			29.87	758.7	79	26.1	86	SW	9	4.0		10c,k	0	SW		0.86	21.8	Cloudy	
Cape Lookout, N. C.			29.95	760.7	78	25.6	82	SW	8	3.6		0	8n		SW	0.08	2.0	Light rain	
Cape May, N. J.			29.91	759.7	70	21.1	95	SE	8	3.6			10s		S	0.31	7.9	Cloudy	
Charleston, S. C.			29.91	759.7	83	28.3	74	SW	4	1.8		5c	0	NW		0	0	Fair	
Cheyenne, Wyoming	24.11	612.4	30.05	763.3	62	16.7	57	SW	4	1.8		5ck	1s	W		0	0	Fair	
Chicago, Ill.			29.98	761.5	68	20.0	79	N	6	2.7		0	0			0.07	1.8	Clear	
Cincinnati, Ohio			29.81	757.2	70	21.1	79	NE	4	1.8			8ks		NE	0.12	3.0	Cloudy	
Cleveland, Ohio			29.92	760.0	65.7	18.7	72	NE	7	3.1		2ck	8ks	N	W	0	0	Fair	
Colorado Springs, Col.	24.10	614.4	30.06	763.5	67	19.4	45	N	6	2.7		5ck	0			0.03	0.8	Fair	
Corsicana, Tex.			29.92	760.0	79	26.1	78	SW	4	1.8		2cs	Haze			0	0	Fair	
Davenport, Iowa			30.01	762.2	68	20.0	82	N	4	1.8		0	Sm'e			0	0	Clear	
Denison, Tex.			29.93	760.2	86	30.0	68	SW	7	3.1		0	0			0	0	Clear	
Denver, Col.	24.87	631.7	30.09	764.3	65	18.3	48	S	2	0.9		0	0			0	0	Clear	
Detroit, Mich.			29.95	760.7	67	19.4	74	NE	9	4.0		5cs	0			0	0	Fair	
Dodge City, Kan.	27.41	696.2	29.58	751.3	72	22.2	95	E	8	3.6			10s			0	0	Cloudy	
Dubuque, Iowa			30.00	762.0	65	18.3	89	N	1	0.4		0	Haze			0.10	2.5	Clear	
Duluth, Minn.			30.02	762.5	62	16.7	88	Calm	0	0		0	0			0.10	2.5	Clear	
Eastport, Me.			29.96	761.0	64	17.8	83	NW	7	3.1		8c	0	W		0.27	6.9	Fair	
Erie, Pa.			29.93	760.2	71	21.7	62	NE	4	1.8		7k	Haze			0	0	Fair	
Escanaba, Mich.			30.07	763.8	65	18.3	73	N	4	1.8		0	0			0	0	Clear	
Fort Gibson, Indian Ter.			29.87	758.7	80	26.7	78	NE	2	0.9			10s			0.01	0.3	Cloudy	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.73	729.7	29.77	756.1	79	26.1	65	SE	1	0.4		0	0			0	0	Clear	
Fort Sully, Dakota	28.17	715.5	29.72	754.9	75	23.9	52	SE	16	7.2		10k	0	NW		0	0	Cloudy	
Galveston, Tex.			29.98	761.5	82	27.8	87	N	8	3.6		5cs	0			0	0	Fair	
Grand Haven, Mich.			30.00	762.0	70	21.1	75	E	3	1.3		0	Sm'e		E	0.06	1.5	Clear	
Indianapolis, Ind.			29.91	759.7	65	18.3	94	N	7	3.1			10s		NE	0.05	1.3	Cloudy	
Indianola, Tex.			29.99	761.7	83	28.3	74	SW	3	1.3		5c	0			0	0	Fair	
Jacksonville, Fla.			29.94	760.5	80	26.7	78	S	9	4.0		5k	0	SW		0	0	Fair	
Keokuk, Iowa			29.94	760.5	70	21.1	79	Calm	0	0		0	Haze			0	0	Clear	
Key West, Fla.			30.04	763.0	79.0	26.1	82	SE	8	3.6		10cs	Haze	W		0.65	16.5	Cloudy	
Kittyhawk, N. C.			29.96	761.0	80	26.7	86	SW	12	5.4		8k	0	W		0	0	Cloudy	
Knoxville, Tenn.			29.85	758.2	70	21.1	80	S	4	1.8		1k	0	SW		0.08	2.0	Fair	
La Crosse, Wis.			30.01	762.2	65	18.3	100	Calm	0	0			Fog			0	0	Foggy	
Leavenworth, Kan.			29.98	761.5	70	21.1	79	Calm	0	0		0	0			0	0	Clear	
Louisville, Ky.			29.84	757.9	68	20.0	84	N	8	3.6			10s		N	0.93	23.6	Cloudy	
Lynchburg, Va.			29.83	757.7	73	22.8	90	SE	2	0.9			10n		S	0.66	16.8	Heavy rain	
Malone, N. Y.			29.98	761.5	65	18.3	83	S	6	2.7		8cs	0	W		0	0	Cloudy	
Marquette, Mich.			30.03	762.7	63	17.2	83	Calm	0	0		5k	0			0	0	Fair	
Memphis, Tenn.			29.91	759.7	77	25.0	82	N	8	3.6		1k	Sm'e			0.01	0.3	Clear	
Milwaukee, Wis.			30.05	763.3	64	17.8	83	N	6	2.7		0	Fog			0.22	5.6	Clear	
Mobile, Ala.			29.93	760.2	76	24.4	95	SW	2	0.9		5c	0			0.22	5.6	Fair	
Montgomery, Ala.			29.92	760.0	75.5	24.2	90	NW	5	2.2			10s		NW	0.44	11.2	Cloudy	
Morgantown, W. Va.	28.84	732.5	29.81	757.9	70	21.1	73	E	5	2.2			10s		SE	0	0	Threatening	
Mt. Washington, N. H.	23.92	607.6	30.28	769.1	44	6.7	75	N	10	4.5		5c	1s	N		0.10	2.5	Fair	
Nashville, Tenn.			29.84	757.9	68	20.0	94	W	2	0.9			10s			0.26	6.6	Cloudy	
New Haven, Conn.			30.01	762.2	68	20.0	68	NE	10	4.5		8cs	2s	NE	NE	0	0	Cloudy	
New London, Conn.			30.04	763.0	69	20.6	75	Calm	0	0		5ck	5s	SW	SW	0	0	Cloudy	
New Orleans, La.			29.91	759.7	79	26.1	86	W	5	2.2		6cs	0			0.59	15.0	Fair	
Newport, R. I.			30.02	762.5	70	21.1	71	N	5	2.2		10cs	0	NW		0	0	Cloudy	
New York, N. Y.			29.99	761.7	69	20.6	79	NE	16	7.2			10n			Inap.	Inap.	Light rain	
Norfolk, Va.			29.93	760.2	80	26.7	82	S	9	4.0			10ks		S	0.94	23.9	Cloudy	
North Platte, Neb.	27.08	687.8	29.50	749.3	72	22.2	67	SE	12	5.4		0	2s		W	0	0	Clear	
Omaha, Neb.	28.92	734.6	29.96	761.0	70	21.1	84	SE	1	0.4		0	0			0	0	Clear	
Oswego, N. Y.			30.03	762.7	64	17.8	85	SE	4	1.8			10s			0	0	Cloudy	
Pembina, Dakota			29.86	758.4	66	18.9	83	SE	4	1.8		0	2s			0	0	Clear	
Philadelphia, Penn.			29.94	760.5	67	19.4	90	E	18	8.0			10n		E	0.65	16.5	Light rain	
Pike's Peak, Colorado	18.13	460.5	30.34	770.6	43	6.1	51	SW	23	10.3		5ck	0	W		Inap.	Inap.	Fair	
Pittsburgh, Penn.			29.87	758.7	68	20.0	74	E	4	1.8			10s		E	0	0	Cloudy	
Port Huron, Mich.			29.99	761.7	65	18.3	89	NE	7	3.1		5c	2s			0	0	Cloudy	
Portland, Me.			30.03	762.7	67	19.4	69	NW	3	1.3		5k,hz.	Haze	W		Inap.	Inap.	Hazy	
Portland, Oregon			30.01	763.0	60	15.6	76	S	7	3.1		0	5s		S	0	0	Fair	
Punta Rassa, Fla.			30.02	762.5	82.0	27.8	72	S	17	7.6		2cs	2s	E	S	3.09	78.5	Fair	
Rochester, N. Y.			29.99	761.7	62	16.7	83	SW	1	0.4			10s		SW	0	0	Cloudy, halo	
Salt Lake City, Utah	25.56	649.2	29.89	759.2	74	23.3	32	SE	2	0.9			10s			0	0	Cloudy	
Sandy Hook, N. J.			29.95	760.7	69	20.6	84	NE	9	4.0			10n		NE	0.20	5.1	Light rain	
San Diego, Cal.			29.82	757.4	65	18.3	94	Calm	0	0			10s			0	0	Cloudy	
San Francisco, Cal.			29.91	759.4	55	12.8	87	SW	12	5.4			Fog			0	0	Foggy	
Santa Fé, N. M.	23.44	595.4	29.98	761.5	64	17.8	67	E	6	2.7		2c	0			0	0	Clear	
Savannah, Ga.			29.90	759.4	85	29.4	71	SW	4	1.8		2c	2cs	W	W	0	0	Fair	
Shreveport, La.			29.98	761.5	82.5	28.1	69	Calm	0	0		8c	Haze			0	0	Fair	
Smithville, N. C.			29.93	760.2	81	27.2	74	SW	9	4.0		2k	0	SW		0	0	Fair	
Springfield, Mass.			30.02	762.5	67	19.4	79	N	4	1.8		5cs	5s			0	0	Fair	
St. Louis, Mo.			29.96	761.0	70	21.1	75	NE	8	3.6		0	0			0	0	Clear	
St. Marks, Fla.			29.91	759.7	79	26.1	86	Calm	0	0		2c	2ks	N		0.12	3.0	Fair	
St. Paul, Minn.			29.96	761.0	68	20.0	84	Calm	0	0		0	0			0	0	Clear	
St. Paul's Island, Alaska			29.71	754.6	41	5.0	91	W	20	8.9			10s			0	0	Cloudy	
Tuckerton, Mass.			30.04	763.0	65	18.3	83	N	6	2.7		2cs	8s	W	W	0	0	Cloudy	
Toledo, Ohio			29.92	760.0	67	19.4	79	NE	8	3.6		2c	0			0.02	0.5	Clear	
Tucson, Arizona	27.48	698.0	30.07	763.8	82	27.8		S				2c	0	SE		0	0	Fair	
Tybee Island, Ga.			29.89	759.2	81	27.2	87	S	4	1.8		8c	0	SW		0	0	Fair	
Vicksburg, Miss.			29.91	759.7	84	28.9	81	W	5	2.2		0	0			0	0	Clear	
Virginia City, M. T.	24.31	617.5	29.79	756.7	51	10.6	46	Calm	0	0		0	0			0	0	Clear	
Washington, D. C.			29.89	759.2	67.5	19.7	97	NE	7	3.1			10n		NE	2.04	51.8	Light rain	
Wilmington, N. C.			29.93	760.2	79	26.1	86	S	2	0.9		0	5ks		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
Wood's Holl, Mass.			30.03	762.7	68	20.0	79	NE	2	0.9		0	8s		NE	0	0	Fair	
Wytheville, Va.	27.59	700.8	29.65	753.1	66	18.9	94	Calm	0	0			10ks		W	0.08	2.0	Threatening	
Yankton, Dakota	28.71	729.2	29.93	760.2	72	22.2	76	S	1	0.4		0	0			0	0	Clear	
Yuma, Arizona			29.81	757.2	87	30.6		E				2c	0	E		0	0	Fair	
Sub Series.																			
P'nte-a-Pitre, G'd T'pe, W. I.			30.00	762.0	83	28.3	83	E				0	8ks			0	0	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.			30.16	766.1	80	26.7	78	Calm	0	0		2c	2s	SE	SE	0	0		James Gall.
St. Georges, Bermudas			30.28	769.1	86.0	30.0	68	S	9	4.0		0	2k			0	0	Hazy	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	67	19.4	90	SE	1.0	0.4		5c	0	SE		0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A			30.01	763.0	78	25.6	86	E			2	1?	0	E		0.160	4.06	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.08	764.0			86.0	30		SW								0.187	4.75		Dr. H. Groot.
Medellin, Colombia, S. A.	25.19	639.8			66.5	19.2	72	Calm	0	0		7k	0			0	0	Cloudy	Thomas Herran
York Factory, B. A.			30.03	762.7	60	15.6	76	SE	6	2.7		4c	0	SE		0	0		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.10	764.5	78	25.6	90	NE			3					0	0		Daniel Smith.
Makawao, Maui, H. I.																			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 Le pzig. N 48° 38′, W. 29° 34′.	N 82 E		29.96	761.0	71.4	21.9		SSW			5					Smooth		Overcast	Capt. R. Hoffmann.
Steamer Nova Scotian N. 51° 21′, W. 31° 23′.	NW by W	9½	30.04	763.0	54	12.2		NW			4		·k		N	Moderate.	NW	Clear	Capt. Ritche.

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.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 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, 14,110.7 ft., or 4,303.1 m.; Salt Lake City, 4,262.2 ft., or 1,299.2 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.
Furnished by coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JULY 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			30.05	763.3	86.0	30.0	52	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.02	762.6	80.6	27.0	69	N			3		0			0	0	Clear	Peter.
La Calle			30.03	762.8	76.6	24.8	83	NE			4		0			0	0	Clear	Kunts.
Tunis			30.05	763.3	87.8	31.0	54	NE			3		0			0	0	Clear	Jacques.
Sfax			30.06	763.4	83.5	28.6	53	NE			4		1			0	0	Clear	Chauvey.
Saida			30.05	763.3	95.0	35.0		NNW			3		0			0	0	Clear	Millot.
Tebessa			30.05	763.2	89.6	32.0		W			1		1			0	0	Clear	Colin.
Gerlville			30.07	763.6	90.1	32.3	25	N			1		2			0	0	Clear	Buard.
Laghouat			30.04	763.1	100.4	38.0		E			2		0			0	0	Clear	Guyot.
Biskra			30.06	763.5	95.9	35.5		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			30.06	763.5	80.1	26.7	53	NE			2		2			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.12	765.1	76.3	24.6	52	NE			3		0			0	0		Dr. Wierzbiski.
Eperies			30.11	764.9	77.9	25.5	51	Calm			0		0			0	0		Julius Mikolik.
Gratz	28.83	732.7	30.00	762.0	74.5	23.6	58	SW			2		0			0	0		Andreas Rospini.
Hermannstadt	28.66	728.0	30.01	762.3	81.1	27.3	40	ESE			3		5			0	0		Prof. Reissenberger.
Kremsmünster	28.64	727.5	29.91	759.7	78.4	25.8	49	ENE			3		0			0	0		Prof. C. Wagner.
Lemberg			30.11	764.7	73.2	22.9	75	NE			2		2			0	0		Dr. T. Stanecki.
Nylregyhaza																			Habsuda Daniel.
Pola			30.05	763.3	79.7	26.5	60	WNW			1		0			0	0		I.R.Hydrographic Office.
Szegedin			30.04	762.9	80.6	27.0	40	SW			2		2			0	0		Karl Stancel.
Trieste			30.05	763.3	83.5	28.6	46	Calm			0		0			0	0	Clear	Prof. V. Farolfi.
Vienna			30.01	762.3	78.6	25.9	40	SE			3		0			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.0 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1.258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			29.72	754.9	79.5	70.5	48	SW			4		108		SSW	0	0	Covered	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.50	749.3	57.5	14.2		S	13	5.8			10			0.030	0.76	Raining	William Boswell.
Ardrossan			29.55	750.6	57	13.9		WNW			3		6					*D. clouds	William McNeil.
Armagh, Observatory			29.63	752.6	56.8	13.8		WNW	8	3.6			8					*D. clouds	S. Cal, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.70	754.4	57.8	14.3		WNW			1–3		10					Gloomy	J. Dreyer.
Bradford			29.54	750.3	57.4	14.1		W			1		10			0.01	0.3	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.05	763.3	82.5	28.1		NE			2		7					Overcast	Sergt. J. F. Halanen, A. H. C.
Cambridge			29.66	753.4	65.0	18.3		SSW			1		10			Blank	Blank		Mr. Pain, F. B. M. S.
Cardington			29.63	752.6	66.0	18.9		SW			1		10			Blank	Blank	Overcast	John McLaren.
Carlisle			29.50	749.3	60	15.6		SW			1		10			0.04	1.0	Showery	T. Bel, for J. Carmell.
Chatham, School M. E			29.68	752.9	64.0	17.8		SW			3		8					Raining	Capt. J. Fellowes, R.E.
Dartmoor	28.38	720.8	29.85	758.2	58.0	14.4		W			6		10					Showery	R. E. Power.
Donaghadee			29.56	750.8	58	14.4		N			3		10					Overcast	J. Mac Gowan.
Dover			29.71	754.6	63	17.2		SW			4		7					Raining	J. Costello.
Eccles, (near Manchester.)			29.56	750.8	58.5	14.7		SW	4.0	1.8			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			29.75	755.6	66.4	19.1		W			5		9					Overcast	The Staff.
Fort Napier, (Natal)	27.76	705.1	29.99	761.7	58.9	14.9		E			1		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	82	27.8		W			1		7					*D. clouds	
Galway, Queen's College			29.86	758.4	60	15.6		SW			2		3					D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.08	764.0	85.0	29.4		E			5		0					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.52	749.8	56.9	13.8		W			3		9					*D. clouds	Lewis Stuart.
Great Yarmouth			29.67	753.6	65	18.3		S			2		7					Raining	G. T. Watson.
Greenwich, Royal Obs'y			29.68	753.9	65.0	18.3		SW			2		10			Blank	Blank	Overcast	The Staff, for G. B. Airy
Guernsey			29.79	756.7	66.5	19.2		WSW			4		0					Blue sky	Dr. S. E. Hoskins.
Helston			29.77	756.1	66	18.9		SW			6		3k			0.3	7.6		M. P. Moyle.
Holyhead			29.61	752.1	54	12.2		NNW			4		10					Misty	John Tilston.
Kew, Observatory			29.68	753.9	65.5	18.6		SSW	19	8.5			10					Threatening	The Staff.
Kingstown			29.63	752.6	59	15.0		NW			5		5			Blank	Blank	*D. clouds	George Mitchell, F.G.S.
Leicester Museum			29.62	752.3	61.0	16.1		SW			1		10					Raining	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.97	761.2	82.8	28.2		NE			1		0						Corp'l F. Fraser, A. M. C.
Nairn			29.51	749.5	53	11.7		Calm			0		10					Raining	W. D. Fenny.
Nassau, (Bahamas			30.05	763.3	83.6	28.7		SE			4		8					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.59	751.6	62.2	16.8		SSE			3		10d,n	WNW	WSW			Raining	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.61	752.1	59.0	15.0		WSW			2		10					Drizzling	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.63	752.6	62	16.7		SW			2		10					Drizzling	J. Lucas.
Plymouth			29.72	751.9	68.1	20.1		SW			4		8					*D. clouds	John Merrifield.
Roche's Point			29.72	754.9	58	14.4		NNW			5		8					Full	W. Kennedy.
Saint Ann's Head			29.65	753.1	60	15.6		WNW			2		5					Showery	John C. Walker.
Saint Helier, Jersey			29.81	757.2	68.6	20.3		W			5		0					Clear	A. P. Amy.
Sandwick Manse (Orkneys)			29.53	750.0	52	13.1		WNW	12	5.4			10					Showery	Rev. C. Clouston, LL. D.
Scarborough			29.54	750.3	61.9	16.6		SSW			3		10					Overcast	F. Shaw.
Scutari Cemetery, Turkey			29.86	758.4	86.2	30.1		NNE			3		6					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.57	751.6	62.0	16.7		W			2		10			Inap.	Inap.	Drizzling	W. F. Cooper.
Silloth Rectory			29.54	750.3	60.2	15.7	84	SW			1		10			0.320	8.13	Overcast	Rev. Francis Redford
Stonyhurst, Observatory			29.56	750.8	57.3	14.1		W			2		10					Raining	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			29.50	749.3	58	14.4		WSW			2		2					Blue sky	John Smith.
Stratfield Turgiss			29.68	753.9	64.1	17.8		W			1		10					Raining	Rev. Charles H. Griffith.
Thurso			29.49	749.0	51	10.6		NNW			2		9					Raining	John Trotter.
Truro, Royal Institution			29.80	756.9	65	18.3		W			6		8					Gloomy	W. Newcombe.
Valencia, Observatory			29.83	757.7	55.7	13.2		NNW	19	8.5			10					Showery	The Staff.
Sub-Stations.																			
Calf of Man, (Isle of Man					52	11.1		SW			6		3						Thomas Dawson.
Cape Good Hope, Obs'y			30.15	765.8	57.0	13.9	71	NW	10	4.5		1	2						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			30.14	765.5	56.0	13.3	93	SW			2		0kn			0.15	3.8		Francis Abbott, F.R.A.S.
Leith, Restaurig Para			29.51	749.5	57.3	14.1		W			2		10s			0.31	8.6	Overcast	Andrew Gibb.
Mauritius, Observatory			30.14	765.5				ESE	20.1	9.0						0.05	1.3		C. Meldrum
Melbourne, Observatory			29.57	751.1	44.1	6.7	79	W	3	1.3			10			0.05	1.3	Dull	R. L. J. Ellery.
Monach Lighthouse, Hebrides			29.53	750.0	56	13.3		W			4	3	9	W		0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.43	747.5	52	11.1		NE			3		10			Blank	Blank		Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,240 ft., or 270.3 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			29.91	759.7	75.6	24.2	51	SSE			4		1						
Faroe			29.76	755.8	77.5	25.3	56	SW			4		2						
Godthaab, Greenland			29.78	756.3	40.5	4.7		ENE			2		0						
Seykis-holm, Iceland			29.59	751.6	46.6	8.1	85	N			2		0						
Thorshavn, (Faröe)			29.45	748.0	51.6	10.9	71	W			2		4						
Vestervig			29.78	756.3	67.3	19.6	70	SSW			2		10						

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

FRENCH SERIES.

Furnished by the 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			29.79	756.6	74.3	23.5	61	SW			6		5n		SW	0.098	2.5	Cloudy	Normal School.
Amiens			29.76	756.0	71.2	21.8	74	SW			6		5		SW	0	0	Cloudy	Normal School.
Avignon			30.01	762.3	91.0	32.8	37	SSW			2		0			0	0	Clear	Normal School.
Bar-sur-Seine			29.85	758.3	86.0	30.0	33	SW			2		8		SW	0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)			29.90	759.5	75.7	24.3	53	SW	25.1	11.2			10		SW	0.039	1.0	Covered	Beaumette Observatory
Beauvais			29.82	757.4	73.8	23.2	67	SSW			1		10		S	0	0	Covered	Normal School.
Besançon			29.95	760.7	87.4	30.8	44	SW			6		5		SW	0	0	Cloudy	Normal School.
Bourg en Bresse			30.08	764.1	93.2	34	45	S			6		10cn		N			Covered	Normal School.
Bourges			30.432	772.87	80.6	27	73	S			4		2		E	0	0	Slightly cl'dy	Normal School.
Brest			29.82	757.3	73.2	22.9	62	WSW			5		6k		WSW	0.010	0.25		Naval Observatory.
Carcassonne			30.04	763.1	77.0	25	23	E			2		0			0	0	Clear	Normal School
Caen			29.80	756.8	72.5	22.5	84	W			6		5		E	0	0	Cloudy	Normal School.
Chartres			29.81	757.2	74.1	23.4	75	SW			4		6		W	0	0		Normal School.
Clermont			29.94	760.4	75.2	24.0	69	W			3		8		W	0	0		Puy de Dome Obs'y.
Commercy			29.84	757.8	84.2	29	27	SW			8	2c		SW		0	0	Slightly cl'dy	Normal School.
Commune de Greasque*			30.11	764.7	89.4	31.9	35	SW			4		2		SE	0	0		M. Kina.
Grenoble			29.97	761.2	86.7	30.4	67	NW			4		0			0	0	Clear	Normal School.
La Roche-sur-Yon			30.04	762.9	76.6	24.8	61	SW			6		8		N	0	0	Very cloudy	Normal School.
Le Mans			29.85	758.3	75.6	24.2	97	W			6		5		W	0.059	1.5	Cloudy	Normal School.
Lons-Le-Saulnier			29.93	760.3	82.9	28.3	36	S			4		0			0.75	19.	Clear	Normal School.
Mâcon			30.09	764.2	84.6	29.2	85	S			8		10			0	0	Covered	Normal School.
Metz																			M. Schuster.
Mirecourt			30.04	762.9	83.5	28.6	51	SW			8		0			0	0	Clear	Normal School.
Nismes			30.10	764.4	91.8	33.2	39	S			2		0			0	0	Clear	Normal School.
Orleans			29.98	761.6	79.5	26.4	60	WSW			3		8		W	0	0	Very cloudy	Normal School.
Paris, Observatory			29.84	757.9	72.0	22.2	68	WSW			3		10k,n		WSW			Raining	National Observatory.
Parthenay			30.09	762.1	69.8	21	87	SW			2		0			0.04	1.	Clear	Normal School.
Privas			30.02	762.5	86.5	30.8		SSE			4		5		SSE	0	0	Cloudy	Normal School.
Rochefort, Observatory			30.03	762.8	75.2	24.0	64	W			3		10		E	0	0	Covered	Naval Observatory.
Rouen			29.81	757.2	67.5	19.7	81	SW			2		10			0	0	Covered	Normal School.
Saint Lo			29.54	750.3	74.5	23.6	77	E			7		6		SE	0.059	1.5		Normal School.
Tarbes	28.95	735.4	29.99	761.8	76.1	24.5		WSW			6		2			0	0	Slightly cl'dy	Normal School
Villefranche			29.87	758.7	92.3	33.5	36	NNW			1		5			0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.93	760.3	80.6	27													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.26	768.7	71.6	22.0	91	ESE	11.2	5.00			3		SW	0	0		—. Faïguère.
Montsouris, Paris			29.84	758.0	70.5	21.4	76	SW			3		10		SW	0.008	0.2		Montsouris Observ'tory.
Perpignan			30.02	762.6	77.5	25.3	73	S	11.2	5.00			1		W	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			29.85	758.3	71.6	22.0	75	S			1		10			1nap.	1nap.	Cloudy	E. Renou.
Toulouse			30.09	764.2	80.8	27.1	51	NW			1		9			0	0		Toulouse Observatory
Tours			30.11	764.7	82.0	27.8	59	SSW			3		9		WSW	0.051	1.3		C. Marquet.
Versailles, (near Paris)			29.85	758.2	75.2	24.0	65	WSW			3		10			0	0	Covered	Dr. A. Bérigny.
Zi Ka Wei, (near Shanghai																			H. Le Leo, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,580.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * 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	760.1	80.6	27.0	39	SE			2		1			0	0		Prof. T. Hoh.
Berlin			29.93	760.2	83.5	28.6	32	S			4		0			0	0		Prof. Arndt.
Breslau			30.13	765.4	80.6	27.0	30	SE			5		0			0	0		Dr. P. Neugebauer.
Carlsruhe			29.83	757.7	88.2	31.2	39	SW			3		0			0	0		A. Senz.
Cassel			29.83	757.7	84.7	29.3	35	SSE			5		0			0	0		Dr. H. Möhl.
Emden			29.64	752.8	81.7	27.6	44	S			4		0			0	0		Prof. Prestel.
Frankfort on the Main			29.85	758.1	88.0	31.6	17	S			4		0			0	0		Physical Society.
Friedrichshafen			29.96	760.9	74.5	23.6	67	SSW			3		0			0	0		M. Wilhelm.
Hamburg			29.83	757.7	80.8	27.1	44	SE			4		0			0	0	Clear	Captain F. Hegemann.
Kiel			29.80	757.0	78.4	25.8	45	S			2		0			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			30.13	765.2	81.1	27.3	35	SW			2		0			0	0		Prof. E. Luther
Köslin			30.04	763.1	82.4	28.0		S			4		0			0	0		H. Müller.
Leipsic			29.93	760.2	86.9	30.5	27	SE			4		0			0	0		Prof. Bruhns.
Memel			30.16	766.1	71.2	21.8	59	SW			3		0			0	0		Reinbrecht & Skalweit.
Münster			29.74	755.3	83.3	28.5	37	SW			5		0			0	0		Prof. E. Heis.
Neufahrwasser			29.71	754.6	81.0	27.2	40	SSE			3		0			0	0	Smoke-haze	A. Lothes.
Posen			30.08	763.9	82.6	28.1	37	SE			7		0			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.85	758.3	88.3	31.3	39	SW			4		0			0	0		Dr. Schur.
Stuttgart			29.87	758.6	86.5	30.3	40	E			1		0			0.118	3.0		Prof. Schoder.
Thorn			30.11	764.7	81.5	27.5	31	SSE			4		0			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.03	762.8	88.3	31.3	30	S			7		0			0	0		Prof. Flesch.
Wustrow, Naval School			30.02	762.4	79.9	26.6	48	S			3		0			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observat'on.

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	87.8	31.0		W					..k					Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.02	762.4	82.6	28.1	36	S	0.7	0.3			0			0	0		
Padua			30.03	762.7	80.6	27.0	47	E	3.1	1.4			0			0	0		
Vicenza			30.04	762.9	81.7	27.6	46	ESE	3.1	1.4			0			0	0		
Verona			30.02	762.4	86.9	30.5	35	E			1		0			0	0		
Bergamo	28.42	729.5	29.98	761.4	84.2	29.0	42	SW			2		1			0	0		
Domodossola	29.02	737.2	30.01	762.2	82.4	28.0	47	S			4		1			0	0		
Milan			30.02	762.4	90.5	32.5	46	NE			4		1	N		0	0		
Pavia			30.07	763.7	82.4	28.0	44	NE			2		0			0	0		
Moncalieri			30.04	763.0	82.6	28.1	47	NW	3.8	1.7			4	SE		0	0		
Mondovi	28.21	716.5	30.04	763.1	78.6	25.9	43	NW					3	WSW		0	0		
Porto Maurizio			30.09	764.2	83.1	28.4	38	ESE			2		1			0	0		
Genoa			30.06	763.4	82.9	28.3	46	SW	4.3	1.9			0			0	0		
Piacenza			30.05	763.2	82.6	28.1	38	S	5.6	2.5			0			0	0		
Parma			30.04	763.1	83.3	28.5	43	NE			6		0			0	0		
Bologna			30.06	763.4	84.9	29.4	46	NE			6		3	W		0	0		
Florence			30.01	763.1	86.0	30.0	28	N			4		0			0	0		
Leghorn			30.01	763.0	78.8	26.0	53	NNW	8.1	3.6			0			0	0		
Siena	28.85	732.8	30.00	762.1	84.7	29.3	38	E	0.7	0.3			0			0	0		
Urbino	28.60	726.3	30.08	764.1	74.8	23.8	56	NE			2		0			0	0		
Ancona			30.03	762.7	81.0	27.2	53	E			4		0			0	0		
Grosseto			30.05	763.3	87.4	30.8	22	N			2		0			0	0		
Rome			30.03	762.7	86.4	30.2	40	SW	6.9	3.1			1			0	0		
Naples, O. U.			30.02	762.5	87.6	30.9	43	SW			4		1	SE		0	0		
Lecce			29.97	761.1	81.3	27.4	50	NW	18.6	8.3			2			0	0		
Cosenza			30.03	762.7	89.2	31.8	67	NW	12.5	5.6			1			0	0		
Riposto, (Sicily)			29.91	759.6	84.2	29.0	63	NE			2		6	S		0	0		
Palermo			29.98	761.4	80.6	27.0	77	NNE	11.9	5.3			2			0	0		
Caltanissetta	28.05	712.5	29.91	759.8	82.9	28.3	32	SW			6		8			0	0		
Sub-Series.																			
Naples, S. R.			30.03	762.7	86.9	30.5	39	NE	0	0			0			0	0		Prof. F. Brioschi. L. Guidi.
Pesaro			30.12	765.0	76.3	24.6	58	N	13.0	5.81			0						

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	755.6	79.2	26.2		WNW			4								
Groningen			29.67	753.6	81.0	27.2		S			4								
Helder			29.67	753.7	77.7	25.4		ESE			2								
Utrecht			29.67	753.6	84.9	29.4	34	SSE			3		5					Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.61	752.1	62.2	16.8	81	S	23.3	10.4			10			0.906	23.0		
Bróno			29.60	751.8	62.6	17.0	63	S	7	3			9			0	0		
Christiania			29.81	757.1	63.9	17.7	72	S	13.2	5.9			9			0.020	0.5		
Tromsö			29.45	747.9	56.5	13.6	98	SW	2	1			10			0.146	3.7		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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,)	.....	.....	30.38	771.7	75.4	24.1	83	W	10.6	4.75	.....	.....	3	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.11	764.7	83.5	28.6	28	WNW	10.8	4.83	.....	.....	0	.....	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.26	768.7	75.6	24.2	66	SW	7.4	3.3	.....	.....	0	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.22	767.5	75.4	24.1	54	NNW	13.7	6.1	.....	.....	4	.....	.....	0	0	.....	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

RUSSIAN SERIES.

Furnished by 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	.....	.....	30.15	765.9	75.6	24.2	46	SE	4	3	.....	.....	0	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.20	767.0	74.3	23.5	47	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.08	763.9	71.4	21.9	54	WSW	13	6	.....	.....	6	.....	.....	.....	.....	.....	Physical Cabinet
St. Petersburg	.....	.....	29.97	761.3	66.6	19.2	65	W	11	5	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.10	764.6	73.4	23.0	43	N	9	4	.....	.....	2	.....	.....	.....	.....	.....	Physical Cabinet
Nikolaiev	.....	.....	29.97	761.3	91.0	32.8	30	N	11	5	.....	.....	4	.....	.....	.....	.....	.....	Kundakof.
Kertch	.....	.....	29.84	757.9	86.2	30.1	52	NE	18	8	.....	.....	3	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.11	764.7	70.0	21.1	47	NE	4	2	.....	.....	2	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.79	756.6	91.9	33.3	29	NE	13	6	.....	.....	3	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.60	751.9	59.5	15.3	96	SW	29	13	.....	.....	10	.....	.....	.....	.....	Raining	Ogorodnikof.
Tiflis	28.12	721.9	29.72	754.8	94.3	34.6	30	E	9	4	.....	.....	3	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.82	757.5	93.0	33.9	29	S	2	1	.....	.....	1	.....	.....	.....	.....	.....	Sebastianoi.
Kasan	.....	.....	29.84	757.8	69.4	20.8	79	W	9	4	.....	.....	9	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischet.
Ekaterinburg	28.88	733.5	29.77	756.2	78.1	25.6	28	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.62	752.3	82.9	28.3	60	W	9?	4?	.....	.....	1	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.13	714.4	29.72	754.8	84.9	29.4	54	Calm	0	0	.....	.....	4	.....	.....	Blank	Blank	.....	Michelson.
Barnaul	.....	.....	29.67	753.5	70.3	21.3	63	N	2	1	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.47	748.5	64.8	18.2	69	SW	4	2	.....	.....	7	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usoizef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.83	757.7	86.9	30.5	78	Calm	0	0	.....	.....	1	.....	.....	Blank	Blank	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	29.76	756.0	79.9	26.6	69	NW	9	4	.....	.....	9	.....	.....	Blank	Blank	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	54.0	12.2	98	Calm	0	0	.....	.....	6	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,651.3? 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 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	.....	.....	29.92	760.0	91.0	32.8	19	W	17.9	8.00	.....	0	0	.....	.....	0	0	Clear	Royal Observatory
San Fernando	.....	.....	30.17	766.2	78.8	26.0	56	WNW	13.9	6.2	.....	0	0	.....	.....	.....	.....	.....	The Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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	.....	.....	29.62	752.3	62.6	17.0	65	SW	.....	.....	4	.....	0	.....	.....	0.039	1.0	.....	
Umea	.....	.....	29.73	755.2	65.5	18.6	61	SW	.....	.....	2	.....	8	.....	.....	0.110	2.8	.....	
Hernosand	.....	.....	29.72	755.0	69.1	20.6	51	SW	.....	.....	2	.....	9	.....	.....	0.012	0.3	.....	
Stockholm	.....	.....	29.89	759.2	73.4	23.0	53	WSW	.....	.....	4	.....	2	.....	.....	0	0	.....	
Wisby	.....	.....	30.02	762.5	67.6	19.8	67	SW	.....	.....	6	.....	0	.....	.....	0	0	.....	
SUB-SERIES.																			
Upsala	.....	.....	29.89	759.1	68.7	20.4	61	SSW	10.7	4.8	.....	.....	6	W	WSW	0	0	.....	Dr. Hildebrandsson.

NOTE.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall 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 or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.62	726.9	29.95	760.8	87.8	31.0	37	S			5		1			0	0	Clear	The Observatory.
Zurich	28.39	721.1	29.93	760.1	85.8	29.9	45	SE			2		0			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are Barometer, —1.0 mm; Thermometer, +8.5 cent.; Relative Humidity, —16 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

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

Station.	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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	79.9	26.6	64	NNE	27	12.0			7		NE	0	0		
Fao, (Persian Gulf)			29.59	751.6	107.6	42.0		SW			3		0						
Salonica			29.98	761.6	89.2	31.8		NW			2		2						
Valona			30.03	762.7	82.6	28.1		W			1		2					Stormy	
Varna			30.00	762.0	78.8	26.0		N			8		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			29.75	755.7	90.1	32.3	54	WSW			2		2s		S	0	0		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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

Station.	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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			29.94	760.5	63.9	17.7		Calm	0	0			10			0	0	Gloomy	Hon. J. Ferguson.
Brockville, Ontario			29.98	761.5	68	20.0		Calm	0	0		2c	2s	W	SW	0	0	Fair	W. R. Bigg.
*Chatham, N. B			29.97	761.2	62	16.7	90	W	1	0.4		5k	5ks	W	W	0	0	Cloudy	G. A. Blair.
Charlottetown P. E. Island			29.99	761.7	66	18.9	79	W	6	2.7			10s			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.90	759.4	74.6	23.7	71	E			1	8ck	0			0	0	Fair	James Smith, M. A.
Dalhousie, N. B.			29.97	761.2	61	16.1	77	W			1					0	0	Clear, bright	H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			29.99	761.7	62.8	17.1	91	E	3	1.3			10n			0.145	3.69	Showery	Prof. Harrison.
*Fort Garry, Manitoba			29.73	755.1	72	22.2	80	S	12	5.4		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.01	762.2	72.3	22.4	72	Calm			0	0	0			0	0	Dry	H. J. Strang, M. A.
Granton, Ontario	28.92	734.6	29.98	761.5	66.5	19.2		N			1	3cs	0			0	0	Clear	James Grant.
*Halifax, N. S.			29.97	761.2	66	18.9	87	Calm	0	0			10n			Inap.	Inap	Light rain	F. Allison, M. A.
*Kingston, Ontario			29.98	761.5	70	21.1	76	SW	1	0.4		8cs	0			0	0	Fair	S. Woods, M. A.
Little Glace Bay, N. S.			30.00	762.0	70.5	21.4	72	S	2	0.9		0	6s			0	0	Fair	C. H. Rigby
*Montreal, Quebec			29.93	760.2	69	20.6	84	NE	8	3.6		0	Haze			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			29.96	761.0	71	21.7	66	N	8	3.6		5c	0	N		0	0	Fair	J. B. Haney.
*Parry Sound, Ontario			30.03	762.7	67	19.4	74	N	3	1.3		0	0			0	0	Clear	Rev. R. Mosley.
*Port Dover, Ontario			29.97	761.2	66	18.9	74	N	12	5.4		10ck	0	N		0	0	Fair	H. Morgan.
Port Hastings, N. S.																1.05	26.7		Peter Grant.
*Port Stanley, Ontario			29.99	761.7	63	17.2	82	N	4	1.8		2c	0	N		0	0	Clear	M. Payne.
*Quebec, Quebec			29.98	761.5	65	18.3	78	NE	2	0.9		5c	2o	NE	NE	0	0	Fair	Capt. Ashe, R. N.
St. John, N. B.			30.00	762.0	58	14.4	87	SE	3	1.3			10n			0.40	10.2	Heavy rain	G. Murdoch, C. E.
*Saugeen, Ontario			30.00	762.0	67	19.4	81	Calm	0	0		3cs	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.00	762.0	71	21.7	53	Calm	0	0		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario	28.73	729.7	29.97	761.2	63.2	17.3	76	N	3	1.3		3cs	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			30.02	762.5	71	21.7	79	SW	4	1.8		10k	0	W		0	0	Cloudy	T. C. Hill.
*Toronto, Ontario			29.98	761.5	68	20.0	68	N	6	2.7		5cs	0	W		0	0	Fair	Magnetic Observatory.
Woodstock, Ontario			29.98	761.5	65.9	18.8	73	E	9	4.0		2c	3cs	NE		0	0	Fine	J. Montgomery
Sub-Series.																			
St. Johns, Newfoundland			30.06	763.5	69	20.6	75	W				0	10cs			0.15	3.8	Fair	John Delaney.

Note.—The originals for Brockville, Charlottetown, St. Johns, N. F., 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.			29.91	759.7	63	17.2	83	N	1	0.4		10k	0	W		0.39	9.9	Cloudy	
Alpena, Mich			30.01	762.2	64	17.8	72	NW	9	4.0		0	0			0	0	Clear	
Atlantic City, N. J			29.80	756.9	70	21.1	100	Calm	0	0		2cs	8s	SW	S	0.11	2.8	Cloudy	
Augusta, Ga.			29.83	757.7	73	22.8	90	Calm	0	0			10ks			0.26	6.6	Cloudy	
Baltimore, Md			29.84	757.9	66	18.9	84	NW	9	4.0		8c,k	0	NW		1.94	49.3	Clearing	
Barnegat, N. J			29.80	756.9	67	19.4	100	NE	20	8.9			Fog			1.26	32.0	Foggy	
Bismarck, Dakota	27.98	710.7	29.50	749.3	73	22.8	55	SE	2	0.9		2ck	0			0	0	Fair	
Boston, Mass			29.92	760.0	59	15.0	94	NE	16	7.2			10n		NE	2.22	56.4	Light rain	
Breckenridge, Minn			29.81	757.2	70	21.1	79	SE	22	9.8		0	0			0	0	Clear	
Buffalo, N. Y			29.92	760.0	68	20.0	74	NE	2	0.9		5c	Sm'e	W		0	0	Fair	
Burlington, Vt			29.94	760.5	70	21.1	70	S	4	1.8		0	5s			0	0	Fair	
Cairo, Ill			29.97	761.2	72	22.2	75	NE	7	3.1		0	0			0	0	Clear	
Cape Hatteras, N. C			29.78	756.4	76	24.4	90	S	14	6.3			10n			0.39	9.9	Light rain	
Cape Henry, Va			29.80	756.9	73	22.8	88	NW	8	3.6			10s		NW	2.20	55.9	Cloudy	
Cape Lookout, N. C			29.84	757.9	75	23.9	90	S	3	1.3			10s			0.55	14.0	Threatening	
Cape May, N. J			29.80	756.9	69	20.6	94	SW	5	2.2		5ck	2s	SW	SW	0.40	10.2	Fair	
Charleston, S. C			29.83	757.7	76	24.4	90	N	3	1.3			10s		W	2.50	63.5	Cloudy	
Cheyenne, Wyoming	24.07	611.4	30.01	762.2	61	16.1	57	NW	4	1.8		0	1s			0	0	Clear	
Chicago, Ill			30.02	762.5	68	20.0	84	N	4	1.8		0	0			0	0	Clear	
Cincinnati, Ohio			29.90	759.4	66	18.9	78	NE	7	3.1		0	0			0.03	0.8	Clear	
Cleveland, Ohio			29.96	761.0	66.1	18.9	73	NE	1	0.4			8ks		NW	0	0	Fair	
Colorado Springs, Col	24.17	613.9	30.01	763.0	67	19.4	46	N	9	4.0		5cs	0			0	0	Fair	
Corsicana, Tex			29.88	758.9	79	26.1	86	SE	7	3.1		0	0			0	0	Clear	
Davenport, Iowa			30.07	763.8	70	21.1	79	Calm	0	0		0	Sm'e			0	0	Clear	
Denison, Tex			29.94	760.5	79	26.1	82	SE	8	3.6		0	0			0	0	Clear	
Denver, Col.	24.80	629.9	30.02	762.5	68	20.0	42	S	4	1.8			8s			0	0	Cloudy	
Detroit, Mich			29.98	761.5	65	18.3	73	NE	5	2.2		Haze	Haze			0	0	Hazy	
Dodge City, Kan	27.35	694.7	29.52	749.8	72	22.2	95	E	16	7.2			10s			0	0	Cloudy	
Dubuque, Iowa			30.06	763.5	67	19.4	90	Calm	0	0		0	Fog			0	0	Foggy	
Duluth, Minn			30.04	763.0	60	15.6	87	NE	4	1.8		5c	0	E		0	0	Fair	
Eastport, Me			29.96	761.0	56	13.3	93	S	6	2.7			10n		SE	0.14	3.6	Light rain	
Erie, Pa			29.93	760.2	71	21.7	67	NW	1	0.4		4c	0			0	0	Fair	
Escanaba, Mich			30.07	763.8	65	18.3	73	N	4	1.8		0	Haze			0	0	Hazy	
Fort Gibson, Indian Ter			29.92	760.0	74	23.3	76	NE	8	3.6		5k	0	NE		0	0	Fair	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T	28.69	728.7	29.73	755.1	80	26.7	78	SE	4	1.8		0	2s		SE	0	0	Clear	
Fort Sully, Dakota	28.06	712.7	29.60	751.8	75	23.9	68	S	10	4.5		5ck	0	E		0	0	Fair	
Galveston, Tex			29.94	760.5	81	27.2	87	W	8	3.6		1ck	0	NE		0	0	Clear	
Grand Haven, Mich			30.05	763.3	68	20.0	74	NE	5	2.2		5k	Sm'e	NE	NE	0	0	Fair	
Indianapolis, Ind			29.99	761.7	68	20.0	69	N	4	1.8		0	0			0	0	Clear	
Indianola, Tex			29.96	761.0	83	28.3	83	SW	12	5.4		0	0			0	0	Clear	
Jacksonville, Fla			29.85	758.2	82	27.8	70	S	15	6.7		5k	0	W		0.06	1.5	Fair	
Keokuk, Iowa			29.98	761.5	70	21.1	75	E	7	3.1		0	0			0	0	Clear	
Key West, Fla			30.01	762.2	83.0	28.3	74	S	6	2.7		Haze	0			0	0	Fair	
Kittyhawk, N. C			29.81	757.9	74	23.3	95	N	8	3.6			10ks		W	0.54	13.7	Cloudy	
Knoxville, Tenn			29.86	758.4	67	19.4	90	N	3	1.3			10ks		N	0.01	0.3	Cloudy	
La Crosse, Wis			30.05	763.3	70	21.1	75	Calm	0	0			Fog			0	0	Foggy	
Leavenworth, Kan			30.01	762.2	70	21.1	79	Calm	0	0		5c	0			0	0	Fair	
Louisville, Ky			29.93	760.2	67	19.4	79	N	8	3.6		0	0			Inap.	Inap.	Clear	
Lynchburg, Va			29.84	757.9	72	22.2	71	Calm	0	0		0	0			0.89	22.6	Clear	
Malone, N. Y			29.87	758.7	69	20.6	70	S	4	1.8		8cs	0	NW		0	0	Cloudy	
Marquette, Mich			30.08	764.0	60	15.6	76	NW	2	0.9		0	0			0	0	Clear	
Memphis, Tenn			29.95	760.7	75	23.9	76	N	8	3.6		0	Haze			0	0	Clear	
Milwaukee, Wis			30.07	763.8	68	20.0	69	NE	6	2.7		0	Haze			0	0	Clear	
Mobile, Ala			29.87	758.7	75	23.9	81	W	6	2.7		2k	0	N		0.58	14.7	Fair	
Montgomery, Ala			29.84	757.9	74.5	23.6	81	NW	4	1.8		0	Haze			1.02	25.9	Clear	
Morgantown, W. Va	28.88	733.5	29.90	759.4	63	17.2	83	N	3	1.3			10s		W	1.02	25.9	Cloudy	
Mt. Washington, N. H	23.84	605.5	30.20	767.1	44	6.7	100	NE	15	6.7			Fog			0	0	Foggy	
Nashville, Tenn			29.88	758.9	71	21.7	80	NE	5	2.2		10k	0	NE		0	0	Cloudy	
New Haven, Conn			29.87	758.7	61	16.1	83	NE	15	6.7			10s		NE	7.00	177.8	Cloudy	
New London, Conn			29.87	758.7	60	15.6	94	N	8	3.6			10n		NE	1.90	48.3	Light rain	
New Orleans, La			29.88	758.9	81	27.2	65	NE	4	1.8		2k	0	NW		0	0	Clear	
Newport, R. I			29.87	758.7	62	16.7	94	N	8	3.6			10n		E	0.56	14.2	Light rain	
New York, N. Y			29.86	758.4	62	16.7	88	NE	16	7.2			10ks			2.21	56.1	Cloudy	
Norfolk, Va			29.85	758.2	71	21.7	85	N	5	2.2		5k	5ks	N	N	1.63	41.4	Cloudy	
North Platte, Neb			29.48	748.8	71	21.7	80	SE	12	5.4			10s			0	0	Cloudy	
Omaha, Neb	27.05	687.1	29.94	760.5	70	21.1	79	SE	10	4.5		0	0			0	0	Clear	
Oswego, N. Y	28.91	734.3	29.94	760.5	70.5	21.4	63	SE	5	2.2		8ck	1s			0	0	Fair	
Pembina, Dakota			29.71	754.6	72	22.2	85	SE	12	5.4		0	0			0	0	Clear	
Philadelphia, Penn			29.82	757.4	64	17.8	89	E	16	7.2			10s		E	1.78	45.2	Cloudy	
Pike's Peak, Colorado	18.07	459.0	30.28	769.1	39	3.9	72	SW	25	11.2		5c	2ks	W		0.07	1.8	Fair	
Pittsburgh, Penn			29.91	759.7	65	18.3	78	NW	3	1.3			10s		NE	0	0	Cloudy	
Port Huron, Mich			29.98	761.5	67	19.4	79	N	10	4.5		1c	1s			0	0	Clear	
Portland, Me			29.98	761.5	62	16.7	88	NE	3	1.3			10n		NE	0.95	24.1	Light rain	
Portland, Oregon			30.20	767.1	58	14.4	87	Calm	0	0			10s			Inap.	Inap.	Cloudy	
Punta Rassa, Fla			29.96	761.0	81.0	27.2	80	SW	24	10.7			10ks		SW	0.34	8.6	Threatening	
Rochester, N. Y			29.92	760.0	70	21.1	61	W	2	0.9		1c	Sm'e	W		0	0	Clear	
Salt Lake City, Utah	25.56	649.2	29.89	759.2	75	23.9	40	SE	8	3.6			10s		SW	0	0	Cloudy	
Sandy Hook, N. J			29.82	757.4	64	17.8	94	NE	12	5.4			10s		NE	2.67	67.8	Cloudy	
San Diego, Cal			29.87	758.7	65	18.3	100	S	8	3.6			Fog		S	0	0	Foggy	
San Francisco, Cal			29.84	757.9	56	13.3	80	Calm	0	0		0	0			0	0	Clear	
Santa Fé, N. M	23.39	594.1	29.93	760.2	62	16.7	71	Calm	0	0		5k	0			0	0	Fair	
Savannah, Ga.			29.82	757.4	76	24.4	90	Calm	0	0			10s			2.11	53.6	Cloudy	
Shreveport, La			29.99	761.7	77	25.0	77	E	2	0.9		8ck	0	NW		0	0	Fair	
Smithville, N. C			29.83	757.7	75	23.9	85	E	7	3.1			10ks		E	0.13	3.3	Cloudy	
Springfield, Mass			29.91	759.7	62.5	16.9	88	NE	8	3.6			10ks		NE	2.22	56.4	Cloudy	
St. Louis, Mo			30.00	762.0	70	21.1	75	NE	8	3.6		0	0			0	0	Clear	
St. Marks, Fla			29.83	757.7	79	26.1	86	Calm	0	0		0	2ks			0.34	8.6	Fair	
St. Paul, Minn			29.98	761.5	69	20.6	79	SE	3	1.3		Haze	Haze			0	0	Hazy	
St. Paul's Island, Alaska			29.55	750.6	43	6.1	100	SW	8	3.6			10n			0.42	10.7	Light rain	
Thatcher's Island, Mass			29.92	760.0	59	15.0	94	NE	22	9.8			10n		NE	2.75	69.9	Light rain	
Toledo, Ohio			29.96	761.0	66	18.9	73	NW	3	1.3		Haze	Haze			0	0	Hazy	
Tucson, Arizona	27.62	701.5	30.21	767.3	69	20.6		NW				0	10ks		SE	0.28	7.1	Threatening	
Tybee Island, Ga			29.79	756.7	75	23.9	95	NW	8	3.6		2c	8ks	W	NW	4.50	114.3	Cloudy	
Vicksburg, Miss			29.95	760.7	74.5	23.6	78	NE	1	0.4		0	0			0	0	Clear	
Virginia City, M. T	24.20	614.7	29.98	753.9	53	11.7	54	SE	1	0.4		1c	0	SW		0	0	Clear	
Washington, D. C			29.84	757.9	65	18.3	83	NW	8	3.6			10ks		NW	2.16	54.9	Cloudy	
Wilmington, N. C			29.82	757.4	73	22.8	95	SE	2	0.9			10s			1.74	44.2	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.
Wood's Holl, Mass			29.87	755.7	65	18.3	94	N	8	3.6			10n			0.42	10.7	Light rain	
Wytheville, Va	27.58	700.5	29.66	753.4	63	17.2	88	Calm	0	0			10ks		NE	0.65	16.5	Threatening	
Yankton, Dakota	28.66	728.0	29.89	759.2	69	20.6	85	SE	12	5.4			10s			0	0	Cloudy	
Yuma, Arizona			29.89	759.2	89	31.7		E				0	10ks		E	0	0	Cloudy	
Sub-Series.																			
P'nte-a-Pitre, G'd'l'pe, W. I.			30.00	762.0	83	28.3	79	E				0	5ks			0.32	8.1	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.			30.15	765.8	82	27.8	78	Calm	0	0		2c	2s		SE	0	0		James Gall.
St. Georges, Bermudas			30.16	766.1	86.5	30.3	69	S	5	2.2		0	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	29.99	761.7	67	19.4	90	S	2.0	0.9		8c	0	S		1.20	30.5	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A			30.02	762.5	79	26.1	87	E			2	4c	3c?	E		0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.7			85.6	29.8		SW								0.646	16.25		Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1			66.0	18.9	76	SW	2	0.9		5ck	0			0	0	Fair	Thomas Herran
York Factory, B. A.			29.76	755.9	65	18.3	86	S	4	1.8		1c	0	S		0	0		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.			30.10	764.5	76	24.4	95	Calm			0					0.15*	1.3*	Cloudy	Daniel Smith.
Makawao, Maui, H. I.																			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 Leipzig. N. 49° 21′, W. 22° 26′.	N38 E	*	29.84	757.9	65.8	18.8		NW			6		k		NW	Short sea.		Squal'y	Capt. R. Hoffmann.
Steamer Nova Scotian N. 50° 49′, W. 37° 52′.	NW by W	10½	30.09	764.3	58	14.4		WSW			4		k		NW	Moderate.	NW	Cloudy	Capt. Ritche.

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.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. *Rain-fall from 1 A. M., until 4 A. M., of the 31st.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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.
2:39 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	762.5	88.2	31.2	37	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.01	762.9	79.2	26.2	80	N			1		0			0	0	Clear	Peter.
La Calle			29.99	761.8	79.5	26.4	79	NE			2		1			0	0	Clear	Kunts.
Tunis			30.02	762.4	90.7	32.6	37	NE			3		0			0	0	Clear	Jacques
Sfax			30.04	762.9	86.7	30.4	44	SSE			3		1			0	0	Clear	Chauvey.
Saida			30.01	762.9	89.6	32.0		SE			2		1			0	0	Clear	Millot.
Tebessa			30.03	762.7	87.8	31.0		W			1		1			0	0	Clear	Colin.
Gerlville			30.03	762.8	87.3	30.7	28	W			3		1			0	0	Clear	Lemaillot.
Leghouat			30.04	763.0	105.8	41.0		NE			2		0			0	0	Clear	Guyot.
Biskra			30.01	762.3	93.2	34.0	33	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			29.93	760.3	84.9	29.4	50	NE			1		2			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.97	761.2	82.0	27.8	49	NE			1		0			0	0		Dr. Wierzbiski.
Eperies			30.01	762.3	81.6	29.2	54	S			2		2c			0	0		Julius Mikolik.
Gratz	28.76	730.4	29.89	759.2	79.7	26.5	62	SW			2		4			0	0		Andreas Rospini.
Hermannstadt	28.63	727.2	30.00	761.9	72.0	22.2	76	ESE			2		9			0.016	0.40		Prof. Reissenberger.
Kremsmünster	28.71	729.2	29.99	761.8	75.6	24.2	60	WNW			3		3			1.709	18.0		Prof. C. Wagner.
Lemberg			29.95	760.8	79.7	26.5	76	S			2		0			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.94	760.4	80.6	27.0	65	WNW			2		0			0	0		I.R.Hydrographic Office.
Szegedin			29.96	760.9	81.3	27.4	56	NW			2		3			0	0		Karl Stancel.
Trieste			29.94	760.4	84.4	29.1	57	Calm			0		0			0	0	Clear	Prof. V. Farolfi.
Vienna			29.87	758.8	86.4	30.2	41	W			2		2			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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	66.7	19.3	50	N			3	2	4	SW	WSW	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.67	753.6	53.0	11.7		WNW	11	4.9			6			0.290	7.37	Showery	William Boswell.
Ardrossan			29.80	756.9	58	14.4		W			3		6					Showery	William McNeil.
Armagh, Observatory			29.88	758.9	60.2	15.7		WSW	10	4.5			8					Overcast	S. Cail, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.97	761.2	59.3	15.2		WNW			1		8					*D. clouds	J. Dreyer.
Bradford			29.89	759.2	56.9	13.8		W			4		7			0.54	13.7	Showery	J. McLandsborough.
Bridgetown, (Barbados)			30.05	763.3	80.0	26.7		NE			1		6					*D. clouds	Sergt. J. F. Halaguen, A. H. C.
Cambridge			30.01	762.2	62.0	16.7		WSW					7						Mr. Pain, F. B. M. S.
Cardington			29.98	761.5	66.0	18.9		W			6		3					*D. clouds	John McLaren.
Carlisle			29.80	756.9	55	12.8		SW			6		7			0.71	18.0	*D. clouds	T. Bel, for J. Carmell.
Chatham, School M. E.			30.05	763.3	62.5	16.9		SW			1		6					Gloomy	Capt. J. Fellowes, R.E.
Dartmoor	28.71	729.2	30.10	764.5	59.8	15.4		NW			6		6					*D. clouds	R. E. Power.
Donaghadee			29.83	757.7	61	16.1		WNW			5		8					*D. clouds	J. MacGowan.
Dover			30.06	763.5	63	17.2		W			5		10					Showery	J. Costello.
Eccles (near Manchester)			29.92	760.0	58.7	14.8		W	8.0	3.6			4					Squally	Thomas Mackereth.
Falmouth, Observatory			30.13	765.3	62.7	17.1		WSW			3		5					*D. clouds	The Staff.
Fort Napier, (Natal)	27.64	702.0	29.88	758.9	80.1	26.7		NW			2		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.05	763.3	82	27.8		W			3		6					*D. clouds	
Galway, Queen's College			29.96	761.0	58	14.4		W			3		9					Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.03	762.7	85.5	29.7		W			5		0					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.75	755.6	58.5	14.7		W			2		7					Fine	Lewis Stuart.
Great Yarmouth			29.96	761.0	61	16.1		W			4		6					Raining	G. T. Watson.
Greenwich, Royal Obs'y			30.05	763.3	68.1	20.1		W			4		2					Blue sky	The Staff, for G. B. Airy
Guernsey			29.16	766.1	62	16.7		WSW			4		8					Showery	Dr. S. E. Hoskins.
Helston			30.01?	762.2?	66	18.9		SW			4		0			0.3	7.6	Fine	M. P. Moyle.
Holyhead			29.96	761.0	60	15.6		SW			4		2					Blue sky	John Tinston.
Kew, Observatory			30.04	763.0	62.9	17.2		SW	19	8.5			6					Hazy	The Staff.
Kingstown			29.95	760.7	61	16.1		W			4		5			Blank	Blank	*D. clouds	George Mitchell.
Leicester, Museum			29.98	761.5	59.0	15.0		W			6		9					Squally	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.93	760.2	82.0	27.8		NE			1		2k					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			29.65	753.1	51	10.6		W			2		10					Drizzling	W. D. Lenny.
Nassau, (Bahamas)			30.10	764.5	86.2	30.1		SE			3		8					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.95	760.7	57.6	14.2		WSW			4		8d,ks	WNW	WSW	0.163	4.14	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.96	761.0	63.6	17.6		W			4		8					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.99	761.7	64	17.8		WSW			4		4					*D. clouds	J. Lucas.
Plymouth			30.10	764.5	66	18.9		SW			4		7					*D. clouds	John Merrifield.
Roche's Point			30.03	762.7	61	16.1		WNW			3		5					Fine	W. Kennedy.
Saint Ann's Head			30.04	763.0	58	14.4		WNW			4		5					*D. clouds	John C. Walker.
Saint Helier, Jersey			30.28	769.1	66.0	18.9		W			4		2					¼ clouded	A. P. Amy.
Sandwick Manse, Orkneys			29.55	750.6	57.9	14.4		W	24	10.7			5					Showery	Rev. C. Clouston, LL. D.
Scarborough			29.82	757.4	55.8	13.2		W			3		5					*D. clouds	F. Shaw.
Scutari Cemetery, Turkey			29.73	755.1	89.2	31.8		NE			2		6					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.90	759.4	60.2	15.7		WNW			4		5			0.181	4.60	*D. clouds	W. F. Cooper.
Silloth Rectory			29.84	757.9	65.8	18.8	62	W			3		2			0.030	0.76	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.87	758.7	56.7	13.7		W			4		8			Blank	Blank	Threatening	Rev. S. J. Perry.
Stornoway, Lewis, C. Hebr.			29.64	752.8	52	11.1		WNW			4		10					Overcast	John Smith.
Stratfield Turgiss			30.05	763.3	63.8	17.7		NW			3		6					Squally	Rev. Charles H. Griffith.
Thurso			29.55	750.6	54	12.2		W			6		8					Gloomy	John Trotter.
Truro, Royal Institution			30.14	765.5	67	19.4		W			6		4					*D. clouds	W. Newcombe.
Valencia, Observatory			30.05	763.3	59.0	15.0		SW	15	6.7			5					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)					55	12.8		SW			6		2						Thomas Dawson.
Cape Good Hope, Obs'y			29.99	761.7	57.7	14.3	76	NW	20	8.9		5	5						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.24	768.1	60.0	15.6	93	NW			2		7k			0.02	0.5	Hazy	Francis Abbott, F.R.A.S.
Leith, Restaurig Park			29.78	756.4	58.9	14.9		W			4		5k			0.03	0.8	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.11	764.8				ESE	15.9	7.1						0.01	0.3		C. Meldrum.
Melbourne, Observatory			30.46	773.7	41.9	5.5	92	ESE	2	0.9			3			0	0	Fine, foggy	R. L. J. Ellery.
Monach Lighthouse, (Hebrides)			29.69	754.1	57	13.9		W			4	3	0	W		0.11	2.8		J. Youngclause.
North Unst, (Shetland Isles)			29.40	746.7	50	10.0		W			6		10			Blank	Blank		Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,300 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			29.91	759.8	68.2	20.1	40	WSW			4		2						
Faröe			29.97	761.1	61.9	16.6	56	WSW			6		7						
Godthaab, Greenland			29.67	753.7	46.4	8.0		Calm			0		0						
Stykkisholm, Iceland			29.62	752.4	49.5	9.7	74	E			2		0						
Thorshavn, Faröe			29.45	747.9	51.4	10.8	79	NW			4		10						
Vestervig			29.85	758.2	60.1	15.6	59	SW			6		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			30.24	768.2	65.5	18.6	35	NW			2	8c		NW		0.102	2.6	¾ covered	Normal School.
Amiens																			Normal School.
Avignon			30.03	762.8	82.9	28.3	43	N			4					0	0	Clear	Normal School.
Bar-sur-Seine			30.17	766.4	68.2	20.1	34	N			2		5		W	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)			30.15	765.8	67.3	19.6	34	W	4.5	2.0					SW	0	0		Beaumette Observatory
Beauvais			30.17	766.4	67.8	19.9	36	W			3		8		W	0.079	2.00	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.26	768.5	68.0	20	64	N			2		8kn		E	0.20	5.		Normal School.
Bourges			30.20	767.0	70.5	21.4	51	WSW			2		2		NE	0	0	Slightly cl'dy	Normal School.
Brest			30.14	765.5	70.3	21.3	57	W			3		8k		W	0	0		Naval Observatory.
Carcassonne			30.10	764.5	77.4	25.2	69	W			2		10		E	0	0	Covered	Normal School
Caen																			Normal School.
Chartres			30.20	767.0	70.2	21.2	59	W			2		4		NW	0.008	0.2		Normal School.
Châlons-sur-Marne			30.18	766.5	67.6	19.8	36	WSW			3		5k		ENE	0	0	Cloudy	Normal School.
Clermont			30.15	765.7	67.5	19.7	58	E			2		8		N	0	0	Very cloudy	Puy de Dome Obs'y
Commercy			30.17	766.3	65.7	18.7	44	W			2		28.k		W	0	0	Slightly cl'dy	Normal School
Commune de Greasque*			30.08	763.9	83.3	28.5	32	NW			4		2		NW	0	0		M. Kina.
Grenoble			30.13	765.4	68.7	20.4	69	NNW			6		5		NE	0	0	Cloudy	Normal School.
La Roche-sur-Yon			30.35	770.9	71.6	22.0	49	SW			2		8		N	0.04	1.	Very cloudy	Normal School.
Le Mans			30.21	767.2	66.9	19.4	33	SW			2		2		SW	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier			30.06	763.5	72.5	22.5	50	NE			1		10		W	0	0	Covered	Normal School.
Mâcon			30.43	772.8	68.4	20.2	82	WNW			2		10			0.339	8.6	Covered	Normal School.
Metz																			M. Schuster.
Mirecourt			30.15	765.9	65.7	18.7	51	NW			6		5		SE	0	0	Cloudy	Normal School.
Nismes			30.05	763.2	85.6	29.8	26	W			2		2		N	0	0	Slightly cl'dy	Normal School.
Orleans																			Normal School.
Paris, Observatory			30.18	766.6	66.7	19.3	34	W			2		8k		W	0.009	0.22	Very cloudy	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			30.24	768.1	76.8	24.9	40	W			1		10		E	0	0	Covered	Naval Observatory.
Rouen			30.17	766.2	66.6	19.2	41	SW			2		8		W	0.150	3.8	Very cloudy	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School
Villefranche			30.13	765.4	74.1	23.4	67	NW			1		8			0.67	17.	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.8	80.6	27.													L'Abbé Marchesi.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.37	771.5	59.2	15.1	88	NNW	14.9	6.66			8		SW	0.386	9.8		—. Faiguère.
Montsouris, Paris			30.18	766.5	70.2	21.2	40	W			2	.e	8ek		SW	0	0	Covered	Montsouris Observ'tory.
Perpignan			30.10	764.6	74.8	23.8	68	NW	13.0	5.83			7		WSW	0	0		Dr. Pines.
Pic du Midi, (Summit) H.P.	21.42	544.1			50.7	10.4		SE			2		4					Cloudy	M. Baylac.
Pic du Midi, (Plantade)	22.71	576.7			49.3	9.6		SE			2		8			0	0	Cloudy	General de Nansouty.
Saint Maur, (near Paris)			30.18	766.5	73.5	21.4	35	WNW			1		5			0	0	Cloudy	E. Renou.
Toulouse			30.22	767.6	72.3	22.4	48	NW			1		9			0	0		Toulouse Observatory
Tours			30.21	767.3	71.2	21.8	36	WNW			1		5		W	0	0		C. Marquet.
Versailles, (near Paris)			30.19	766.7	69.1	20.6	37	W			3		7			0.027	0.68	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai																			H. Le Lee, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * 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	72.5	22.5	59	W			6		6	SW		0.059	1.5		Prof. T. Hoh.
Berlin			30.05	763.2	72.0	22.2	50	W			3		10			0	0		Prof. Arndt.
Breslau			30.03	762.7	83.1	28.4	40	NW			6		0			0	0		Dr. P. Neugebauer.
Carlsrune			30.08	764.1	71.4	21.9	61	NW			2		7			0	0		A. Senz.
Cassel			30.07	763.7	77.7	25.4	41	NW			6		3	NW		0	0		Dr. H. Möhl.
Emden			29.98	761.4	72.0	22.2	35	W			7		2			0.016	0.4		Prof. Prestel.
Frankfort on the Main			30.10	764.4	76.3	24.6	25	WSW			4		3			Inap.	Inap.		Physical Society.
Friedrichshafen			30.09	764.3	73.4	23.0	82	SW			3		9			0.185	4.7	Raining.	M. Wilhelm.
Hamburg			30.03	762.8	67.3	19.6	60	WNW			5		3k	WNW		0	0	Fair	Captain F. Hegemann.
Kiel			30.00	761.9	66.7	19.3	50	W			5		7			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			29.93	760.2	85.1	29.5	36	S			5		0			0	0		Prof. F. Luther.
Köslin			30.02	762.4	69.6	20.9		W			4		4			0	0		H. Müller.
Leipsic			30.05	763.2	75.6	24.2	49	NW			2		9	W		0	0		Prof. Bruhns.
Memel			29.98	761.4	78.3	25.7	46	S			5		0			0	0		Reinbrecht & Skalweit
Münster			30.05	763.3	71.4	21.9	81	SW			4		4			0	0		Prof. E. Heis.
Neufahrwasser			29.91	759.6	72.1	22.3	73	N			4		3			0	0	Smoke-haze	A. Lothes.
Posen			29.98	761.4	83.8	28.8	39	NE			6		5			Inap.	Inap.		Dr. Magener.
Strassburg, (in Alsace)			30.13	765.3	71.1	21.7	49	NNW			2		9	W		0	0		Dr. Schur.
Stuttgart			30.05	763.3	73.4	23.0	46	W			2		5			Inap	Inap.		Prof. Schoder.
Thorn			29.93	760.1	88.3	31.3	32	SW			3		0			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.10	764.4	70.9	21.6	50	W			5		1			0	0		Prof. Flesch.
Wustrow, Naval School			30.06	763.4	68.2	20.1	52	WSW			4		7			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.80	756.8	88.5	31.4		NW											

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	84.7	29.3	46	W	0.7	0.3			1			0	0		
Padua			29.92	759.9	84.4	29.1	52	E	9.8	4.4			10			0	0		
Vicenza			29.93	760.2	85.1	29.5	46	SE	4.3	1.9			3	E		0	0		
Verona			29.91	759.6	89.6	32.0	43	E			1		0			0	0		
Bergamo	28.74	729.9	29.99	761.7	82.4	28.0	51	SW			1		5			0	0		
Domodossola	28.92	734.6	29.90	759.5	82.0	27.8	61	S			6		6			0.157	4.0		
Milan			29.94	760.4	88.2	31.2	51	NE			2		5	S		0	0		
Pavia			29.93	760.3	83.5	28.6	45	E			1		1			0	0		
Moncalieri			29.93	760.3	82.4	28.0	56	NW	0.7	0.3			5	SE		0	0		
Mondovi	28.10	713.6	29.93	760.1	82.2	27.9	49	NW			4		6			0.165	4.2	Showery	
Porto Maurizio			30.00	762.0	80.6	27.0	70	WSW			2		1			0	0		
Genoa			29.97	761.2	81.5	27.5	64	SW	4.3	1.9			0			0	0		
Piacenza			29.94	760.4	83.1	28.4	43	N	2.5	1.1			2			0	0		
Parma			29.91	759.7	86.4	30.2	49	SE			2		8			0	0		
Bologna			29.97	761.1	83.1	28.4	49	W			1		0			0	0		
Florence			29.95	760.8	86.9	30.5	25	W			2		0			0	0		
Leghorn			30.00	761.9	80.1	26.7	66	WSW	3.8	1.7			0			0	0		
Siena	28.76	730.5	29.91	759.7	81.9	29.4	23	WNW	0.7	0.3			0			0	0		
Urbino	28.18	723.3	29.98	761.5	77.7	25.4	48	NE			2		0			0	0		
Ancona			29.96	760.9	82.8	28.2	56	N			4		0			0	0		
Grosseto			29.97	761.1	87.8	31.0	38	NNW			4		2	S		0	0		
Rome			29.94	760.4	88.2	31.2	36	W	7.4	3.3			1			0	0		
Naples, O. U.			29.95	760.7	87.4	30.8	44	SW			2		0			0	0		
Lecce			29.93	760.1	82.0	27.8	51	NNW	18.6	8.3			1			0	0		
Cosenza			29.94	760.4	90.7	32.6	68	NW	9.4	4.2			3			0	0		
Riposto, (Sicily)			29.93	760.2	84.2	29.0	60	E			2		4			0	0		
Palermo			29.91	759.8	81.1	27.3	57	N	10.5	4.7			1			0	0		
Caltanissetta	27.99	711.0	29.84	758.0	82.2	27.9	39	S			4		0			0	0		
Sub-Series.																			
Naples, S. R.			29.98	761.4	86.5	30.3	43	WNW	6.3	2.8			2	W		0	0		Prof. F. Brioschi.
Pesaro			30.02	762.5	77.2	25.1	69	NNE	16.3	7.28			0			0	0		L. Guidi.

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			30.11	764.9	63.1	17.3		W			4								
Groningen			29.97	761.1	64.4	18.0		SW			5								
Helder			30.00	762.0	63.7	17.6		SW			5								
Utrecht			30.03	762.8	70.6	21.1	36	WSW			5		5					Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.44	747.7	53.6	12.0	82	SSW	27.1	12.1			10			0.591	15.0		
Brönö			29.15	740.4	76.3	24.6	42	SE	29	13			4			0.315	8.0		
Christiania			29.54	750.4	65.7	18.7	58	SSE	16.1	7.2			7			0	0		
Tromsö			29.40	746.8	57.0	13.9		NE	2	1			6			0.457	11.6		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative 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,)			30.39	771.9	75.4	24.1	80	W	13.9	6.22			2			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.02	762.6	84.9	29.4	18	WNW	10.8	4.83			0			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.24	768.2	75.2	24.0	67	SW	8.0	3.58			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.15	765.9	74.5	23.6	40	N	22.4	10.0			1	NW		0	0		The Observatory.

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

RUSSIAN SERIES.

Furnished by 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	81.5	27.5	47	ESE	4	2			0						Astronomical Obs.
Wilna			30.07	763.8	81.7	27.6	39	S	16	7			0						Astronomical Obs.
Dorpat			30.02	762.6	82.6	28.1	39	S	9	4			0						Physical Cabinet.
St. Petersburg			30.07	763.6	79.2	26.2	51	W	4	2			0						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kieff			30.06	763.5	77.0	25.0	45	NNE	7	3			0						Physical Cabinet.
Nikolaiev			29.96	761.0	96.1	35.6	33	NNE	18	8			5						Kurdakof.
Kertch			29.89	759.2	86.5	30.3	52	NNE	25	11			0						Lagorio.
Moscow			30.16	766.0	76.1	24.5	49	N	9	4			2						Meteorological Obs.
Lugan			29.88	759.0	86.2	30.1	33	NE	34	15			0						Meteorological Obs.
Archangel			29.97	761.2	72.3	22.4	91	NW	9	4			1						Ogorodnikof.
Tiflis	28.46	722.9	29.78	756.3	91.2	32.9	33	S	9	4			4						Physical Observatory.
Astrakhan			29.82	757.5	93.4	34.1	22	SSE	2	1			1						Sebastianot.
Kasan			29.94	760.5	75.2	24.0	40	N	13	6			4						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.80	731.4	29.70	754.3	72.0	22.2	55	N	16	7			7						Meteorological Obs.
Nukuss			29.72	755.0	86.0	30.0	40	N	7?	3?			0						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul			29.64	752.9	68.0	20.0	56	Calm	0	0			7						Meteorological Obs.
Yeniseisk			29.47	748.5	67.3	19.6	59	WSW	2	1			0						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.87	758.8	86.0	30.0	66	Calm	0	0			1						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.89	759.2	66.2	19.0	98	S	2	1			10			Blank	Blank		
Nikolaievsk, on the Amoor																			

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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 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			29.91	759.6	93.6	34.2	28	SW	5.2	2.33		0	2			0	0	Partly cloudy	Royal Observatory.
San Fernando			30.11	764.8	75.7	24.3	58	W	17.0	7.6		0	0			0	0		The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			29.74	755.3	68.0	20.0	79	S			4		0			0	0		
Umea			29.64	752.9	64.4	18.0	73	SW			7		0			0	0		
Hernosand			29.55	750.6	63.0	17.2	78	S			6		8			0	0		
Stockholm			29.73	755.2	73.8	23.2	61	S			4		8			0	0		
Wisby			29.88	759.0	73.8	23.2	70	SW			7		7			0	0		
Sub-Series.																			
Upsala			29.68	753.8	74.8	23.8	59	SSW	18.1	8.1			9	SSW	SW	0	0		Dr. Hildebrandsson.

Note.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall 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 or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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	729.3	30.09	764.3	70.7	21.5	56	NNW			4		10			0.012	0.3	Covered	The Observatory.
Zurich	28.52	724.3	30.10	764.6	70.2	21.2	78	W			1		10			0.157	4.0	Covered	The Observatory.

NOTE—For Geneva the corresponding departures from the normal values are Barometer, +1.4 mm; Thermometer, —1.0 cent.; Relative Humidity, +3 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

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

Station.	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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	757.1	81.7	27.6	64	N	19	8.5			10		SSW	0	0		
Fao, (Persian Gulf)			29.61	752.0	102.2	39.0		SE			1		0						
Salonica			29.85	758.3	88.3	31.3		W			2		8						
Valona			29.97	761.2	81.0	27.2		W			1		0						
Varna			29.80	757.0	87.8	31.0		NE			4		5						
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y			29.76	756.0	87.3	30.7	56	W			1		38	S	N			Covered	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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

Station.	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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	67.9	19.9		Calm	0	0			0			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.18	766.6	69	20.6		NE	3	1.3		0	0			0	0	Clear	W. R. Bigg.
*Chatham, N. B			30.03	762.7	65	18.3	73	W	1	0.4		0	0			0	0	Clear	G. A. Blair.
Charlottetown P. E. Island			30.05	763.3	63	17.2	83	NW	3	1.3		5k	0			0.660	16.76	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			30.08	764.0	69.5	20.8	63	E			2	0	0			0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			30.04	763.0	65.4	18.6	71	W			1					0	0	Clear	H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			30.10	764.5	65.0	18.3	75	N	2	0.9		0	0			0	0	Fine	Prof. Harrison.
*Fort Garry, Manitoba			29.76	755.9	69	20.6	65	W	15	6.7		0	2ks		W	0	0	Fair	James Stewart.
Goderich, Ontario			30.13	765.3	76.4	24.7	79	Calm			0	0	0			0	0	Dry	H. J. Strang, M. A.
Granton, Ontario	29.04	737.6	30.10	764.5	69	20.6		NE			1	0	0			0	0	Clear	James Grant.
*Halifax, N. S.			30.02	762.5	62	16.7	91	N	6	2.7			8n			1.132	28.75	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.16	766.1	68	20.0	75	NE	14	6.3		0	0			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			29.96	761.0	62.0	16.7	79	E	4	1.8			10s			1.18	30.0	Overcast	C. H. Rigby
*Montreal, Quebec			30.15	765.3	67	19.4	72	NE	11	4.9		2ck	0	SW		0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.15	765.8	68	20.0	70	N	6	2.7		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.16	766.1	68	20.0	71	N	8	3.6		0	0			0	0	Clear	Rev. R. Mosley.
Port Dover, Ontario			30.11	764.8	68	20.0	60	N	9	4.0		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.			30.01	762.2	63.2	17.3		NW	5	2.2						0	0	Fine	Peter Grant.
Port Stanley, Ontari			30.09	764.3	67	19.4	69	NE	6	2.7		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			30.13	765.3	69	20.6	75	Calm	0	0		0	0			0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.			30.08	764.0	63	17.2	94	Calm	0	0		0	0			0	0	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario			30.11	764.8	62	16.7	87	Calm	0	0		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.14	765.5	71	21.7	66	Calm	0	0		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario	28.86	733.0	30.10	764.5	65.3	18.5	62	N	6	2.7		0	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			30.02	762.5	62	16.7	91	NW	3	1.3			10s			2.32	58.9	Cloudy	T. C. Hill.
*Toronto, Ontario			30.14	765.5	71	21.7	56	NE	4	1.8		0	Haze			0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.13	765.3	66.1	18.9	66	E	4	1.8		1cs	0			0	0	Fine	I. Montgomery
SUB-SERIES.																			
St. Johns, Newfoundland			29.91	759.7	57	13.9	100	E					10n			0.30	7.6	Cloudy	John Delaney.

NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.			30.05	763.3	69	20.6	79	Calm	0	0		0	Haze			0	0	Clear	
Alpena, Mich.			30.08	764.0	72	22.2	62	NW	1	0.4		0	0			0	0	Clear	
Atlantic City, N. J.			30.01	762.2	67	19.4	94	NE	20	8.9			10s		NE	0.03	0.8	Cloudy	
Augusta, Ga.			29.88	758.9	72	22.2	90	N	4	1.8			10s		N	0.87	22.1	Cloudy	
Baltimore, Md.			30.04	763.0	69	20.6	79	NE	6	2.7			10s		E	Inap.	Inap.	Cloudy	
Barnegat, N. J.			30.01	762.2	66	18.9	94	NE	19	8.5			10s		NE	0.01	0.3	Cloudy	
Bismarck, Dakota	28.24	717.3	29.82	757.4	65	18.3	53	NW	24	10.7		2ck	0	NW		0.08	2.0	Fair	
Boston, Mass.			30.07	763.8	69	20.6	70	NE	12	5.4		5cs	Haze	W		0.18	4.6	Fair	
Breckenridge, Minn.			29.87	758.7	69	20.6	90	S	18	8.0		0	10ks		S	0.32	8.1	Cloudy	
Buffalo, N. Y.			30.08	764.0	68.5	20.3	65	NE	3	1.3		1c	Sm'e			0	0	Clear	
Burlington, Vt.			30.12	765.0	66	18.9	68	N	4	1.8		2k	0	N		0	0	Fair	
Cairo, Ill.			30.02	762.5	70	21.1	75	N	5	2.2		0	0			0	0	Clear	
Cape Hatteras, N. C.			29.82	757.4	76	24.4	90	E	12	5.4			1n			0.66	16.8	Light rain	
Cape Henry, Va.			29.89	759.2	71	21.7	92	NE	22	9.8			10s		NE	0	0	Cloudy	
Cape Lookout, N. C.			29.87	758.7	71	21.7	100	N	5	2.2			10n		N	2.12	53.8	Heavy rain	
Cape May, N. J.			29.99	761.7	67	19.4	92	NE	13	5.8			10s			0.02	0.5	Cloudy	
Charleston, S. C.			29.84	757.9	75	23.9	90	NE	5	2.2		2cs	8s	S	N	0.27	6.9	Cloudy	
Cheyenne, Wyoming	24.21	614.9	30.15	765.8	59	15.0	53	N	20	8.9		2ck	8s			0.35	8.9	Cloudy	
Chicago, Ill.			30.08	764.0	71	21.7	71	NE	4	1.8		0	0			0	0	Clear	
Cincinnati, Ohio			29.96	761.0	70	21.1	66	NE	5	2.2		0	Sm'e		NE	0	0	Clear	
Cleveland, Ohio			30.06	763.5	71	21.7	67	NE	6	2.7		0	1s			0	0	Clear	
Corsicana, Tex.			29.90	759.4	76	24.4	72	E	7	3.1		0	0			0	0	Clear	
Davenport, Iowa			30.11	764.8	71	21.7	57	E	4	1.8		5c	2k	NE		0	0	Fair	
Denison, Tex.			29.98	761.5	74	23.3	75	SE	8	3.6		0	0			0	0	Clear	
Denver, Col.	24.93	633.2	30.15	765.8	63	17.2	71	NE	1	0.4			8s		SE	0.22	5.6	Cloudy	
Detroit, Mich.			30.08	764.0	68	20.0	65	NE	8	3.6		0	Haze			0	0	Clear	
Dodge City, Kan.	27.30	693.4	29.45	748.0	74	23.3	90	SE	20	8.9		5k	0	SE		0	0	Fair	
Dubuque, Iowa			30.10	764.5	67	19.4	79	S	4	1.8		0	Haze			0	0	Clear	
Duluth, Minn.			30.01	762.2	61	16.1	77	NE	4	1.8		5c	Haze	W		0	0	Fair	
Eastport, Me.			30.06	763.5	61	16.1	82	Calm	0	0		0	0			0.16	4.1	Clear	
Erie, Pa.			30.06	763.5	72	22.2	63	E	4	1.8		2c	Sm'e			0	0	Fair	
Escanaba, Mich.			30.09	764.3	70	21.1	79	Calm	0	0		2c	Haze			0	0	Fair	
Fort Gibson, Indian Ter.			29.95	760.7	73	22.8	71	E	8	3.6		2ck	0	E		Inap.	Inap.	Fair	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.72	729.5	29.77	756.1	77	25.0	69	S	12	5.4		0	0			0	0	Clear	
Fort Sully, Dakota	28.22	716.8	29.78	756.4	76	24.4	72	N	17	7.6		5ck	0	NW		0	0	Fair	
Galveston, Tex.			29.95	760.7	83	28.3	87	SW	2	0.9		2k	0	W		0	0	Fair	
Grand Haven, Mich.			30.08	764.0	71	21.7	71	E	3	1.3		0	Sm'e		E	0	0	Clear	
Indianapolis, Ind.			30.03	762.7	69	20.6	65	N	5	2.2		0	0			0	0	Clear	
Indianola, Tex.			29.94	760.5	83	28.3	83	S	10	4.5		0	0			0	0	Clear	
Jacksonville, Fla.			29.84	757.9	80	26.7	78	S	8	3.6			10s		S	0.06	1.5	Cloudy	
Keokuk, Iowa			30.02	762.5	67	19.4	79	E	4	1.8		8c	Haze		SE	0	0	Fair	
Key West, Fla.			29.99	761.7	83.0	28.3	79	SW	8	3.6		8c,k	Haze	SW	SW	0	0	Fair	
Kittyhawk, N. C.			29.90	759.4	75	23.9	90	NE	10	4.5			10s			0.27	6.9	Cloudy	
Knoxville, Tenn.			29.94	760.5	65	18.3	73	NE	2	0.9		3ck	0	NE		Inap.	Inap.	Fair	
La Crosse, Wis.			30.08	764.0	67	19.4	90	S	5	2.2		2c	Fog			0	0	Fair	
Leavenworth, Kan.			29.98	761.5	70	21.1	71	Calm	0	0			10s			0	0	Threatening	
Louisville, Ky.			30.00	762.0	67	19.4	76	N	8	3.6		0	0			0	0	Clear	
Lynchburg, Va.			29.95	760.7	68	20.0	84	NE	4	1.8			10s		NE	0	0	Cloudy	
Malone, N. Y.			30.08	764.0	66	18.9	73	NE	2	0.9		0	0			0	0	Clear	
Marquette, Mich.			30.03	762.7	72	22.2	67	SW	4	1.8		0	0			0	0	Clear	
Memphis, Tenn.			30.02	762.5	72	22.2	67	NE	4	1.8		0	Sm'e			0	0	Clear	
Milwaukee, Wis.			30.12	765.0	65	18.3	73	Calm	0	0		0	Fog			0	0	Clear	
Mobile, Ala.			29.92	760.0	75	23.9	68	N	6	2.7		0	0			0	0	Clear	
Montgomery, Ala.			29.91	759.7	73.5	23.1	72	N	5	2.2		0	0			0	0	Clear	
Morgantown, W. Va.	28.97	735.8	29.99	761.7	68	20.0	78	NE	2	0.9			10s		NE	0.02	0.5	Cloudy	
Mt. Washington, N. H.	24.01	609.8	30.37	771.4	46	7.8	85	N	10	4.5		1k	2s			0	0	Fair	
Nashville, Tenn.			29.95	760.7	73	22.8	67	N	2	0.9		0	Haze			0	0	Clear	
New Haven, Conn.			30.04	763.5	65	18.3	78	NE	10	4.5		0	5s		NE	0.15	3.8	Fair	
New London, Conn.			30.06	763.5	68	20.0	79	NE	7	3.1		2c	2s	W	NE	0.21	5.3	Fair	
New Orleans, La.			29.93	760.2	79	26.1	61	NE	7	3.1		0	0			0	0	Clear	
Newport, R. I.			30.04	763.0	67	19.4	70	N	12	5.4			10ks		NE	0.23	5.8	Cloudy	
New York, N. Y.			30.07	763.8	66	18.9	73	N	16	7.2		5c	0	SW		0.33	8.4	Fair	
Norfolk, Va.			29.94	760.5	72	22.2	90	NE	10	4.5			10s		NE	0	0	Cloudy	
North Platte, Neb.	27.06	687.3	29.50	749.3	69	20.6	90	Calm	0	0			10ks		W	0.03	0.8	Cloudy	
Omaha, Neb.	24.91	632.3	29.95	760.7	69	20.6	79	SE	11	4.9		5c	5ks			0	0	Cloudy	
Oswego, N. Y.			30.11	764.8	69	20.6	75	SW	1	0.4		0	Haz			0	0	Clear	
Pembina, Dakota			29.76	755.9	67	19.4	74	W	20	8.9		0	0			0.11	2.8	Clear	
Philadelphia, Penn.			30.03	762.7	67	19.4	79	E	11	4.9			10ks		E	Inap.	Inap.	Cloudy	
Pike's Peak, Colorado	18.12	460.2	30.33	770.4	38	3.3	71	W	16	7.2		5k	1k	SW		0.11	2.8	Fair	
Pittsburgh, Penn.			30.02	762.5	65	18.3	83	E	4	1.8		2c	5s	W	E	Inap.	Inap.	Fair	
Port Huron, Mich.			30.11	764.8	68	20.0	79	NE	10	4.5		0	0			0	0	Clear	
Portland, Me.			30.09	764.3	66	18.9	84	Calm	0	0		0	0			0.08	2.0	Clear	
Portland, Oregon			30.06	763.5	53	11.7	93	E	1	0.4			Fog		E	0	0	Foggy	
Punta Rassa, Fla.			29.95	760.7	82.0	27.8	78	SW	20	8.9			10ks		SW	1.69	42.9	Threatening	
Rochester, N. Y.			30.09	764.3	67	19.4	74	SW	2	0.9		Haze	Haze			0	0	Hazy	
Salt Lake City, Utah	25.7[illegible]	653.8	30.07	763.8	68	20.0	47	S	2	0.9			10s			0	0	Cloudy	
Sandy Hook, N. J.			30.03	762.7	67	19.4	79	NE	15	6.7		5c	0	SW		0	0	Fair	
San Diego, Cal.			29.96	761.0	66	18.9	84	Calm	0	0		0	5ks		S	0	0	Fair	
San Francisco, Cal.			29.93	760.2	53	11.7	93	SW	20	8.9			Fog		SW	0	0	Foggy	
Santa Fé, N. M.	23.39	594.1	29.94	760.2	65	18.3	78	N	3	1.3		5k	0			0	0	Fair	
Savannah, Ga.			29.86	758.4	71	21.7	95	N	4	1.8			10s			0.07	1.8	Cloudy	
Shreveport, La.			30.03	762.7	76	24.4	73	E	3	1.3		2k	0	N		0	0	Fair	
Smithville, N. C.			29.83	757.7	74	23.3	85	NE	8	3.6			10ks		NE	2.38	60.5	Cloudy	
Springfield, Mass.																			
St. Louis, Mo.			30.05	763.3	72	22.2	62	E	4	1.8		0	0			0	0	Clear	
St. Marks, Fla.			29.84	757.9	77	25.0	82	N	4	1.8		2k	2ks	W		0	0	Fair	
St. Paul, Minn.			29.99	761.7	69	20.6	75	SE	4	1.8		2c	8s			0	0	Cloudy	
St. Paul's Island, Alaska			29.47	748.5	41	5.0	91	W	49	21.9			10s		W	0.59	15.0	Cloudy	
Thatcher's Island, Mass.			30.07	763.8	63	17.2	94	N	7	3.1		0	0			0.14	3.6	Clear	
Toledo, Ohio			30.05	763.3	66	18.9	73	N	5	2.2		0	Haze			0	0	Clear	
Tucson, Arizona	27.6[illegible]	701.5	30.21	767.3	76	24.4		SE				8k	0	S		0	0	Fair	
Tybee Island, Ga.			29.83	757.7	73	22.8	95	NW	6	2.7			10ks		NW	0.25	6.3	Cloudy	
Vicksburg, Miss.			29.99	761.7	74.5	23.6	70	NE	1	0.4		0	0			0	0	Clear	
Virginia City, M. T.	24.41	620.0	29.89	759.2	44	6.7	52	Calm	0	0		0	0			0	0	Clear	
Washington, D. C.			30.02	762.5	67.5	19.7	87	NE	8	3.6			10s			0.01	0.3	Cloudy	
Wilmington, N. C.			29.83	757.7	73	22.8	95	NE	5	2.2			10s			0.57	14.5	Cloudy	
Wood's Holl, Mass.			30.05	763.3	67	19.4	84	NE	7	3.1		2c	5s	W	NE	0.91	23.1	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.
Yankton, Dakota	28.65	727.7	29.87	758.7	70	21.1	80	SE	3	1.3			10s			Inap.	Inap.	Threatening.	
Yuma, Arizona			29.97	761.2	88	31.1		SE				1c	0	W		0	0	Clear	
Sub-Series.																			
Kingston, Jamaica, W. I.			30.16	766.1	82	27.8	83	Calm	0	0		8c	2ks		SE	0	0		James Gall.
St. Georges, Bermudas			30.14	765.5	85.0	29.4	68	SW	4	1.8		0	1k			0	0	Clear	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			C. J. Hering.
Paramaribo, D. Guiana, S. A.			30.03	762.7	82	27.8	83	E			3	5k	6k	E		1.200	30.48	Fair	Dr. H. Groot.
Batavia, Dutch Guiana, S. A.	30.08	763.9			82.4	28.0		N								0.394	10.00		Thomas Herran
Medellin, Colombia, S. A.	25.29	640.1			65.0	18.3	73	Calm	0	0		9ck	0			0	0	Cloudy	J. Fortescue, W. Wood
York Factory, B. A.			29.41	747.0	70.5	21.4	77	N	6	2.7		2k	4s	W		0.50	12.7		Daniel Smith.
Honolulu, Oahu, H. I.			30.10	764.5	76	24.4		NE			5					0	0		F. L. Clarke.
Makawao, Maui, H. I.																			

Marine Series.	Fair course towards.	Hourly rate in knots.	Barometer. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	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 Leipzig, N. 49° 35′, W. 15° 10′.	N 88 E		30.06	763.5	62.4	16.9		WNW		4		7k		NW	Smooth		Clearing	Capt. R. Hoffmann.
Steamer Nova Scotian, N. 49° 38′, W. 44° 37′.	W N W	11	29.92	760.0	51	10.6		S		5		10			Light swells	W	Heavy rain	Capt. 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.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown 1,027.9 ft., or 313. 3 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, 4,262.2 ft., or 1,299.2 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			30.03	762.7	84.2	29.0	49	NE			1		1			0	0	Clear	Charnot.
Algiers			30.05	763.2	79.2	26.2	80	NNW			2		3			0	0	Clear	Peter.
La Calle			29.98	761.6	86.0	30.0	65	NE			2		4			0	0	Fair	Kuntz.
Tunis			30.00	762.1	89.6	32.0	45	E			3		0			0	0	Clear	Jacques.
Sfax			30.04	763.0	87.8	31.0	52	S			4		1			0	0	Clear	Chauvey.
Saïda			30.03	762.7	86.9	30.5		N			2		1			0	0	Clear	Millot.
Tebessa			30.03	762.7	93.2	34.0		E			1		4			0	0	Fair	Colin.
Gerlville			30.02	762.4	89.1	31.7	29	SW			3		1			0	0	Clear	Lemaillot.
Laghouat			30.07	763.6	104.0	40.0		NE			1		0			0	0	Clear	Guyot.
Biskra			30.01	762.2	91.4	33.0	30	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			29.97	761.2	82.0	27.8	55	SW			1		4			0	0		Prof. Ivan Stosir.
Cracow, I. R. Observatory			30.10	764.5	73.0	22.8	71	NE			1		9			0.252	6.4		Dr. Wierzbiski.
Eperies			29.94	760.4	81.5	27.5	63	NE			2		8c			0.205	5.20		Julius Mikolik.
Gratz	28.84	732.6	29.99	761.7	77.9	25.5	65	SW			2		7			0	0		Andreas Rospini.
Hermannstadt	28.58	725.8	29.93	760.1	77.7	25.4	62	ESE			1		5			0	0		Prof. Reissenberger.
Kremsmünster	28.74	730.0	30.04	763.0	70.5	21.4	68	ENE			3		8			0.338	8.6		Prof. C. Wagner.
Lemberg			29.92	760.0	83.7	28.7	73	S			2		6			0.532	13.5		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.94	760.3	84.4	29.1	48	E			3		2k8			0	0		I.R.Hydrographic Office.
Szegedin			29.98	761.4	79.5	26.4	57	SW			2		7			0	0		Karl Stancel.
Trieste			29.94	760.4	87.3	30.7	41	ENE			1		5k			0	0		Prof. V. Farolfi.
Vienna			30.03	762.7	75.6	24.2	56	N			1		8			0.496	12.6		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.11	764.7	66.9	19.4	51	SE			1		2		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.88	758.9	57.7	14.3		SSE	20	8.9			3			0.065	1.65	Blue sky	William Boswell.
Ardrossan																			William McNeil.
Armagh, Observatory			29.73	755.1	54.6	12.6		SSE	16	7.2			10					Raining	S. Cail, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.72	754.9	56.5	13.6		SE			1–2		10					Raining	J. Dreyer.
Bradford			29.93	760.2	59.1	15.1		S			0		10			0.10	2.5	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	80.5	26.9		NE			0		10					Raining	Sergt. J. F. Halanen, A.
Cambridge			30.07	763.8	70.0	21.1		SW					9						Mr Pain, F. B. M S. H C.
Cardington			30.02	762.5	72.0	22.2		SW			3		5					*D. clouds	John McLaren.
Carlisle			29.86	758.4	60.3	15.7		S			4		10			0.06	1.5	Overcast	T. Bel, for J. Car mell.
Chatham, School M. E			30.08	764.0	73.0	22.8		SW			3		3					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.54	724.9	30.12	762.5	58.5	14.7		SW			5		5					*D. clouds	R. E. Power.
Donaghadee			29.81	757.2	56	13.3		SSE			5		10					Overcast	J. Mac Gowan.
Dover			30.10	764.5	65	18.3		SW			3		2					¼ clo ded	J. Costello.
Eccles (near Manchester.)			29.90	759.4	57.5	14.2		SW	2.4	1.1			10					Raining	Thomas Mackereth.
Falmouth, Observatory			29.94	760.5	63.5	17.5		SSE			6		3					Squally	The Staff.
Fort Napier, (Natal)	27.61	701.3	29.81	757.9	81.8	27.7		NW			6		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	81	27.2		W			4		7					*D. clouds	
Galway, Queen's College			29.95	760.7	60	15.6		W			2		10					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.96	761.0	81.0	27.2		W			3		2					*D. clouds	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.82	757.4	57.8	14.3		S			2		10					Hazy	Lewis Stuart.
Great Yarmouth			30.08	764.0	64	17.8		SSE			5		2					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			30.07	763.8	72.0	22.2		S			4		2					Blue sky	The Staff, for G. B. Airy
Guernsey			30.03	762.7	67.5	19.7		SE			2		3					*D. clouds	Dr. S. E. Hoskins.
Helston			29.93	760.2	68	20.0		SE			7		10			0.1	2.5	Fine	M. P. Moyle.
Holyhead			29.80	756.9	59	15.0		SSW			5		10					Raining	John Tilston.
Kew, Observatory			30.05	763.3	70.1	21.2		SSE	23	10.3			6					Threatening	The Staff.
Kingstown			29.75	755.6	59	15.0		SE			4		10					Raining	George Mitchell.
Leicester Museum			29.98	761.5	69.0	20.6		S			6		4					*1. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.93	760.2	85.0	29.4		NE			1		0						Corp'l F. Fraser, A. M. C.
Nairn			29.81	757.2	59	15.0		W			1		8					¾ clo ded	W. D. Penny.
Nassau, (Bahamas			30.09	764.3	86.4	30.2		SE			5		8					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.97	761.2	69.0	20.6		S			6		10k		S	0.005	0.13	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.95	760.7	65.8	18.8		S			6		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.00	762.0	68	20.0		S			4		8					Overcast	J. Lucas.
Plymouth			30.00	762.0	66.3	19.1		SSE			6		0					Blue sky	John Merrifield.
Roche's Point			29.70	754.4	60	15.6		S			6		10					Raining	W. Kennedy.
Saint Ann's Head			29.87	758.7	62	16.7		S			6		10					Overcast	John C. Walker.
Saint Helier, Jersey			30.04	763.0	73.4	23.0		S			2		2					¼ clouded	A. P Amy.
Sandwick Manse Orkneys)			29.83	757.7	56.4	13.6		S	12	5.4			2					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough			29.94	760.5	61.3	16.3		S			3		10					Overcast	F. Shaw.
Scutari Cemetery Turkey			29.76	755.9	89.6	32.0		NNW			2		4					*D clouds	Sergt. W. H. Lyne.
Sheffield			29.94	760.5	65.4	18.6		SW			2		9			0.056	1.42	Overcast	W. F. Cooper.
Silloth Rectory			29.86	758.4	60.0	15.6	71	SW			1		10			0.795	20.20	Overcast	Rev. Francis Redford.
Stonyhurst, Observatory			29.90	759.4	56.9	13.8		S			2		10					Raining	Rev. S. J. Perry.
Stornoway Lewis C. Hebr.			29.75	755.6	56	13.3		S			5		5					*D. clouds	John Smith.
Stratfield Turgiss			30.06	763.5	69.8	21.0		SW			3		7					*D. clouds	Rev. Charles H. Griffith.
Thurso			29.79	756.7	57	13.9		S			2		6					Showery	John Trotter.
Truro, Royal Institution			29.98	761.5	67	19.4		S			7		7					Gloomy	W. Newcombe.
Valencia, Observatory			29.48	748.8	60.3	15.7		SSE	54	24.1			10					Drizzling	The Staff.
Sub-Series.																			
Calf of Man, Isle of Man					56	13.3		SE			3		0						Thomas Dawson.
Cape Good Hope, Obs'y			30.06	763.5	56.2	13.4	92	W	15	6.7		4	5						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			30.33	770.4	59.5	15.3	93	SW			1		10k			0	0	Covered	Francis Abbott, F.R.A.S.
Leith, Restaurig Park			29.84	757.9	56.9	13.8		NE			1		10k			0.02	0.5	Cloudy	Andrew Gibb.
Mauritius, Observatory			30.15	765.8				ESE	21.7	9.7						0	0		C. Meldrum
Melbourne, Observatory			30.34	770.6	44.5	6.9	87	NNE	4	1.8			8			0	0	Fine, foggy	R. L. J. Ellery.
Monach Lighthouse, Hebrides			29.73	755.1	57	13.9		S			4	5	5	S		0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.93	760.2	53	11.7		SW			4	4	5	SW		Blank	Blank		Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,220 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			30.19	766.9	67.5	19.7	42	S			2		3						
Faröe			30.18	766.5	65.8	18.8	55	WSW			4		1						
Godthaab, Greenland			29.80	756.9	43.5	6.4		S			6		8						
Stykkisholm, Iceland			29.46	748.2	50.5	10.3	85	NW			2		5						
Thorshavn, Faröe			29.71	754.7	55.0	12.8	66	SSW			4		6						
Vestervig			30.11	764.8	60.8	16.0	79	SW			6		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			30.15	765.8	75.2	24	32	SW			2	8c		SW		0	0	¾ Covered	Normal School.
Amiens																			Normal School.
Avignon			29.98	761.5	77.7	25.4	46	NNW			2		10			0	0	Covered	Normal School.
Bar-sur-Seine			30.06	763.4	74.1	23.4	30	E			3		2		NE	0	0	Slightly cl'dy	C. Saillard.
Beaumette, (near Angers)			29.97	761.1	77.4	25.2	16	E	5.8	2.6					SSW	0	0		Beaumette Observatory
Beauvais			30.12	765.1	68.5	20.3	31	ESE			2		0			0	0	Clear	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.10	764.5	77.0	25	54	N			1		10cn		S	0	0	Covered	Normal School.
Bourges			30.05	763.2	71.6	22	63	NE			4		0			0	0	Clear	Normal School.
Brest			29.97	761.2	69.6	20.9	68	SW			4		2ck		SW	0	0		Naval Observatory.
Carcassonne			30.01	762.2	69.8	21	58	W			2		10		E	0	0	Covered	Normal School
Caen																			Normal School.
Chartres			30.09	764.2	73.2	22.9	77	E			2		0			0	0	Clear	Normal School.
Châlons-sur-Marne			30.10	764.4	73.0	22.8	30	SW			3		0			0	0	Clear	Normal School.
Clermont			30.01	762.3	72.5	22.5	48	N			1		2		N	0	0	Slightly cl'dy	Puy de Dome Obs'y.
Commercy			30.09	764.3	69.6	20.9	40	NE			6		2s		NE	0	0	Slightly cl'dy	Normal School.
Commune de Greasque*			30.05	763.3	78.3	25.7	31	NW			2		8		NW	0	0		M. Kina.
Grenoble			30.00	762.1	72.5	22.5	65	NW			2		2		S	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.14	765.6	79.5	26.4	30	E			4		0			0	0	Clear	Normal School.
Le Mans			30.07	763.7	73.8	23.2	95	S			2		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			29.96	761.0	72.5	22.5	55	N			2		2		N	0	0	Slightly cl'dy	Normal School.
Mâcon			30.18	766.6	70.7	21.5	82	NE			2		5		E	0	0	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			30.08	763.9	70.0	21.1	42	NE			4		2		SW	0	0	Slightly cov.	Normal School.
Nismes			30.10	764.4	80.8	27.1	35	N			4		5		E	0	0	Cloudy	Normal School.
Orleans																			Normal School.
Paris, Observatory			30.10	764.4	71.8	22.1	29	ENE			2		0			0	0	Very clear	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			30.04	763.0	80.1	26.7	31	E			3		0			0	0	Blue sky	Naval Observatory.
Rouen			30.09	764.3	75.2	24.0	29	SSE			1		0			0	0	Clear	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School
Villefranche			30.08	764.1	75.7	24.3	75	NE			1		5			0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.8	80.6	27													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.34	770.5	54.7	12.6	96	WSW	5.6	2.50			10		WSW	0.508	12.9		—. Faïguère.
Montsouris, Paris			30.09	764.3	74.5	23.6	31	E			2		1			0	0		Montsouris Observ'tory.
Perpignan			30.03	762.8	79.9	26.6	33	S	3.7	1.67			8		W	0.059	1.5		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.39	543.3			49.6	9.8		SW			1		9					Rainy	M. Baylac.
Pic du Midi, (Plantade)	22.65	575.2			50.0	10.0		SW			3		8			0.417	10.6	Rainy	General de Nansouty.
Saint Maur, (near Paris)			30.10	764.4	72.9	22.7	29	NE			1		0			0	0	Clear	E. Renou.
Toulouse			30.08	764.1	70.2	21.2	46	WNW			1		3			Blank	Bla k		Toulouse Observatory
Tours			30.06	763.5	74.7	23.7	28	ESE			1		0			0	0	Clear	C. Marquet.
Versailles, (near Paris)			30.10	764.4	73.0	22.8	30	E			2		0			0	0	Very clear	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * 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.
Ramberg			30.08	764.0	74.1	23.4	49	NE			2		8	NE		0	0		Prof. T. Hoh.
Berlin			30.19	766.7	73.9	23.3	42	E			2		5			0	0		Prof. Arndt.
Breslau			30.28	769.1	61.2	16.2	83	N			4		10			0.539	13.7		Dr. P. Neugebauer.
Carlsrune			30.08	764.1	69.8	21.0	59	NE			4		10			0	0		A. Senz.
Cassel			30.15	765.9	76.1	24.5	34	ESE			2		1	E		0	0		Dr. H. Möhl.
Emden			30.07	763.6	71.6	22.0	47	S			3		1			0	0		Prof. Prestel.
Frankfort on the Main			30.12	765.1	75.4	24.1	31	E			2		3			0	0		Physical Society.
Friedrichshafen			30.02	762.4	67.6	19.8	87	NNE			5		5			0	0		M. Wilhelm.
Hamburg			30.18	766.6	69.3	20.7	45	WSW			1		4k	WSW		0	0	Fine	Captain F. Hegemann.
Kiel			30.17	766.3	68.9	20.5	47	SW			2		5			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			30.23	767.7	60.4	15.8	74	N			2		9			0	0		Prof. E. Luther.
Köslin			30.26	768.7	68.5	20.3		W			2		3			0	0		H. Müller.
Leipsic			30.18	766.6	75.0	23.9	32	ESE			3		4	E		0	0		Prof. Bruhns.
Memel			30.24	768.0	61.7	16.5	60	NNE			2		10s	WSW		0.024	0.6		Reinbrecht & Skalweit
Münster			30.07	763.8	73.6	23.1	49	S			2		0			0	0		Prof. E. Heis.
Neufahrwasser			30.26	768.6	66.2	19.0	64	ENE			2		10			0.134	3.4		A. Lothes.
Posen			30.21	767.4	69.6	20.9	52	N			6		10			0.083	2.1		Dr. Magener.
Strassburg, (in Alsace)			30.07	763.8	70.9	21.6	53	NE			3		10	NE		0	0		Dr. Schur.
Stuttgart			30.13	765.4	68.7	20.4	69	NE			2		8			0.016	0.4		Prof. Schoder.
Thorn			30.21	767.3	66.7	19.3	54	NE			3		7			0.161	4.1		Dr. Hasenbalg.
Treves, (Trier)			30.07	763.7	74.5	23.6	28	E			4		0			0	0		Prof. Flesch.
Wustrow, Naval School			30.30	769.7	63.5	17.5	56	NW			1		0			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	757.9	87.4	30.8		E										Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	84.0	28.9	47	SE	1.8	0.8			6			0	0		
Padua			29.91	759.7	84.4	29.1	52	E	9.8	4.4			10			0	0		
Vicenza			29.92	759.9	85.1	29.5	46	SE	4.3	1.9			3	E		0	0		
Verona			29.90	759.4	91.4	33.0	36	E			2		10			0	0		
Bergamo	28.63	727.1	29.88	758.9	84.2	29.0	46	SW			1		7			0	0		
Domodossola	28.96	735.5	29.94	760.4	74.3	23.5	75	Calm			0		10			0.827	21.0		
Milan			29.94	760.5	89.2	31.8	56	S			4		7	E		0	0		
Pavia			29.93	760.2	83.7	28.7	48	NE			1		2	NE		0	0		
Moncalieri			29.93	760.3	78.3	25.7	65	WNW	0.7	0.3			6	SE		1.205	30.6		
Mondovi	28.10	713.7	29.93	760.2	79.3	26.3	50	NW			2		7	W		0.004	0.1		
Porto Maurizio			29.98	761.6	82.2	27.9	60	ESE			2		2			0	0		
Genoa			29.94	760.5	79.9	26.6	67	SW	4.9	2.2			4	NW		0	0		
Piacenza			29.94	760.5	81.3	27.4	53	E	2.5	1.1			6	W		0	0		
Parma			29.91	759.6	82.4	28.0	47	NE			2		9			0	0		
Bologna			29.95	760.7	84.9	29.4	42	NE			1		2	E		0	0		
Florence			29.93	760.3	87.8	31.0	37	NW			2		1			0	0		
Leghorn			29.94	760.5	80.8	27.1	65	WNW	12.5	5.6			2			0	0		
Siena	28.75	730.2	29.90	759.4	85.5	29.7	36	WNW	0.7	0.3			3	SW		0	0		
Urbino	28.46	722.9	29.97	761.1	79.7	26.5	47	NE			2		2			0	0		
Ancona			29.96	760.9	81.0	27.2	71	NNW			4		1			0	0		
Grosseto			29.95	760.8	89.2	31.8	31	NNE			2		3	S		0	0		
Rome			29.95	760.7	87.4	30.8	46	SW	8.1	3.6			1			0	0		
Naples, O. U.			29.97	761.2	84.6	29.2	61	SSW			2		0			0	0		
Lecce			29.93	760.3	83.5	28.6	52	NNW	12.5	5.6			1			0	0		
Cosenza			29.94	760.5	91.2	32.9	67	NW	8.1	3.6			4			0	0		
Riposto, (Sicily)			29.93	760.3	84.9	29.4	52	E			2		1			0	0		
Palermo			29.93	760.1	80.4	26.9	63	ENE	10.5	4.7			0			0	0		
Caltanissetta	28.01	711.5	29.86	758.5	83.8	28.8	30	SE			6		0			0	0		
Sub-Series.																			
Naples, S. R			29.99	761.8	81.6	29.2	58	ESE	4.3	1.9			2	E		0	0		Prof. F. Brioschi.
Pesaro			30.00	762.0	78.6	25.9	71	NNE	9.8	4.36			1k			0	0		L. Guidi.

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			30.15	765.9	68.9	20.5		SE			1								
Groningen			30.10	764.5	68.9	20.5		S			2								
Helder			30.13	765.4	65.8	18.8		SW			4								
Utrecht			30.11	764.8	71.8	22.1	38	SSW			2		5					Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.89	759.2	60.4	15.8	64	SSW	21.9	9.8			8			0.236	6.0		
Brönö			29.69	754.1	53.6	12.0	82	WSW	25	11			8			0.039	1.0		
Christiania			29.97	761.3	63.7	17.6	45	SSE	10.7	4.8			8			0.016	0.4		
Tromsö			29.20	741.7	54.7	12.6		SSW	27	12			10			0.051	1.3		

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

PORTUGUESE SERIES.

Furnished by the 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,)			30.32	770.0	77.4	25.2	77	W	13.9	6.22			3			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.97	761.3	82.8	28.2	32	W	6.2	2.75			6	NNE		0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.19	766.8	74.7	23.7	62	SW	10.0	4.46			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.10	764.5	73.4	23.0	42	NNW	19.9	8.9			7	ESE		0	0		The Observatory.

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

RUSSIAN SERIES.

Furnished by 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	764.1	72.5	22.5	57	NNE	9	4			5						Astronomical Obs.
Wilna			30.07	763.8	83.3	28.5	40	S	2	1			4						Astronomical Obs.
Dorpat			30.11	764.8	74.8	23.6	59	NW	7	3			7						Physical Cabinet.
St. Petersburg			30.06	763.5	71.8	22.1	76	NW	16	7			2						Central Physical Obs.
Kuoplo																			Ch. Forsten.
Kieff			30.04	763.1	79.7	26.5	36	ENE	7	3			1						Physical Cabinet.
Nikolaiev			29.96	761.0	89.6	32.0	26	NE	25	11			5						Kurdakof.
Kertch			29.87	758.6	85.6	29.8	53	NNE	25	11			5						Lagorio.
Moscow			30.19	766.9	78.1	25.6	48	SSW	4	2			4						Meteorological Obs.
Lugan			29.91	759.7	85.8	29.9	27	ENE	34	15			0						Meteorological Obs.
Archangel			29.90	759.4	80.2	26.8	90	WSW	22	10			5						Ogorodnikof.
Tiflis	28.43	722.1	29.74	755.5	93.2	34.0	32	SW	7	3			1						Physical Observatory.
Astrakhan			29.86	758.5	90.9	32.7	33	Calm	0	0			2						Sebastianot.
Kasan			30.02	762.5	75.9	24.4	39	N	18	8			3						Physical Cabinet.
Orenburg																			Tschernischet.
Ekaterinburg	28.92	734.5	29.84	757.8	66.9	19.4	50	N	7	3			5						Meteorological Obs.
Nukuss			29.77	756.1	85.5	29.7	42	N	4	2			0						
Kasaly																			Robrof.
Tashkend																			Michelson.
Barnaul			29.82	757.3	70.3	21.3	43	NNW	4	2			2						Meteorological Obs.
Yeniseisk			29.58	751.2	67.5	19.7	62	SSW	2	1			1						Marks.
Irkutsk																			Usozef.
Oorga																			Mossin.
Peking, (China)			29.82	757.4	87.4	30.8	65	Calm	0	0			2						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.78	756.3	68.9	20.5	99	Calm	0	0			10						
Nikolaievsk, on the Amoor																			

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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 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			29.86	758.4	86.2	30.1	29	SW	10.4	4.66		0	8			0	0	Almost cov'd	Royal Observatory.
San Fernando			30.08	764.0	71.8	22.1	65	WNW	9.2	4.1		3	0	W		0	0		The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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	59.0	15.0	70	SSW			7		0			0	0		
Umea			29.82	757.5	60.3	15.7	70	SW			7		1			0	0		
Hernosand			29.85	758.2	68.0	20.0	32	SSW			6		4			0	0		
Stockholm			30.07	763.7	83.3	28.5		SW			4		2			0	0		
Wisby			30.17	766.4	65.5	18.6	64	W			6		5			0	0		
Sub-Series.																			
Upsala			30.04	763.0	66.9	19.4	37	SW	15.9	7.1			6		SW	0	0		Dr. Hildebrandsson.

Note.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall 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	28.63	727.2	30.01	762.3	69.8	21.0	60	NNE			3		5			0	0	Clouds	The Observatory.
Zurich	28.45	722.7	30.05	763.2	66.6	19.2	77	NW			1		10			0	0	Covered	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, —0.7 mm; Thermometer, —1.5 cent.; Relative Humidity, +7 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and Professor 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			29.82	757.4	83.1	28.4	63	NNW	12	5.5			6		NNE	0	0		
Fao, (Persian Gulf)			29.66	753.3	96.8	36.0		SE			3		0						
Salonica			29.93	760.3	86.4	30.2		S			1		0						
Valona			29.98	761.4	80.2	26.8		W			1		0						
Varna			29.96	761.0	86.0	30.0		N			3		5			Blank	Blank		
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.80	757.0	88.0	31.1	57	WNW			1		18		SE				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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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.			30.27	768.8	68.9	20.5		Calm	0	0			0			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.30	769.6	74	23.3		NE	1	0.4		0	0			0	0	Clear	W. R. Bigg.
*Chatham, N. B.			30.32	770.1	63	17.2	94	Calm	0	0		8c	0			0	0	Fair	G. A. Blair.
Charlottetown P. E. Island			30.30	769.6	66	18.9	69	N	10	4.5		0	0			0.130	3.30	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			30.25	768.3	72.0	22.2	70	E			1	0	0			0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			30.32	770.1	62.8	17.1	78	W			1					0	0	Clear	H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			30.33	770.4	68.1	20.1	70	Calm	0	0		1c	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.96	761.0	60	15.6	82	SW	12	5.4		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.20	767.1	77.8	25.4	60	SW			3	0	0			0	0	Dry	H. J. Strang, M. A.
Granton, Ontario	29.14	740.1	30.20	767.1	69	20.6		SE			1	0	0			0	0	Clear	James Grant.
*Halifax, N. S.			30.24	768.1	67	19.4	84	NW	6	2.7		0	0			0	0	Clear	F. Allison, M. A.
*Kingston, Ontario			30.30	769.6	70	21.1	79	Calm	0	0		0	0			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			30.23	767.8	66.0	18.9	79	NE	8	3.6		4k	0	NE		0	0	Fair	C. H. Rigby
*Montreal, Quebec			30.29	769.4	69	20.6	77	NE	4	1.8		0	0			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario.			30.28	769.1	60	15.6	70	N	4	1.8		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.25	768.3	67	19.4	84	S	7	3.1		0	0			0	0	Clear	Rev. R. Mosley.
Port Dover, Ontario			30.24	768.1	66	18.9	74	NE	7	3.1		2ck	0	NE		0	0	Fair	H. Morgan.
Port Hastings, N. S.			30.28	769.1	62.4	16.9		Calm	0	0						0	0	Fine	Peter Grant.
Port Stanley, Ontario			30.20	767.1	67	19.4	77	NE	4	1.8		5k	0	E		0	0	Fair	M. Payne.
*Quebec, Quebec			30.30	769.6	72	22.2	62	Calm	0	0		0	0			0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.			30.32	770.1	65	18.3	78	Calm	0	0		0	0			0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			30.19	766.8	70	21.1	60	Calm	0	0		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.22	767.6	66	18.9	73	Calm	0	0		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario	28.97	735.8	30.22	767.6	62.9	17.2	75	NE	3	1.3		0	0			0	0	Fine	C. J. Macgregor, M. A.
*Sydney, C. B.			30.27	768.8	68	20.0	72	N	4	1.8		0	0			0	0	Clear	T. C. Hill.
*Toronto, Ontario			30.26	768.6	69	20.6	49	NE	2	0.9		0	0			0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.24	768.1	64.2	17.9	98	E	6	2.7		1c8	1k8	NE		0	0	Fine	J. Montgomery
Sub-Series.																			
St. Johns, Newfoundland			30.16	766.1	65	18.3	79	NW				0	5k8			0	0	Fair	John Delaney.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.			30.27	768.8	70	21.1	75	Calm	0	0		5cs	Haze	S		0	0	Fair	
Alpena, Mich.			30.18	766.6	66	18.9	73	Calm	0	0		0	0			0	0	Clear	
Atlantic City, N. J.			30.13	765.3	68	20.0	94	NE	24	10.7			10n		NE	0.05	1.3	Light rain	
Augusta, Ga.			29.98	761.5	74	23.3	86	N	2	0.9			10s		N	0	0	Cloudy	
Baltimore, Md.			30.13	765.3	65	18.3	94	NE	10	4.5			10n		E	0.17	4.3	Light rain	
Barnegat, N. J.			30.15	765.8	70	21.1	84	E	30	13.4			10s		E	0.01	0.3	Cloudy	
Bismarck, Dakota	28.20	716.3	29.78	756.4	65	18.3	59	Calm	0	0		0	0			0	0	Clear	
Boston, Mass.			30.28	769.1	69	20.6	71	E	3	1.3		2c	Sm'e	W		0	0	Smoky	
Breckenridge, Minn.			29.95	760.7	69	20.6	90	SE	7	3.1		5c	5s	S	SE	0	0	Cloudy	
Buffalo, N. Y.			30.19	766.8	71	21.7	57	E	4	1.8		2c	Sm'e			0	0	Fair	
Burlington, Vt.			30.30	769.6	69	20.6	65	S	1	0.4		2k	0			0	0	Fair	
Cairo, Ill.			30.01	762.2	71	21.7	75	NE	6	2.7		0	0			0	0	Clear	
Cape Hatteras, N. C.			29.96	761.0	82	27.8	78	S	10	4.5		2k	0			1.20	30.5	Fair	
Cape Henry, Va.			29.98	761.5	73	22.8	90	S	6	2.7		8k	0	SW		1.94	49.3	Fair	
Cape Lookout, N. C.			30.04	763.0	80	26.7	87	S	9	4.0		5k	0	S		0.24	6.1	Fair	
Cape May, N. J.			30.08	764.0	70	21.1	95	E	24	10.7			10n			0.58	14.7	Light rain	
Charleston, S. C.			29.98	761.5	77	25.0	86	S	3	1.3		0	8s		S	0.71	18.0	Fair	
Cheyenne, Wyoming	24.17	613.9	30.11	764.8	57	13.9	76	SW	4	1.8		0	0			0	0	Clear	
Chicago, Ill.			30.13	765.3	71	21.7	71	NE	2	0.9		0	0			0	0	Clear	
Cincinnati, Ohio			30.02	762.5	71	21.7	80	E	5	2.2			10ks		E	0	0	Cloudy	
Cleveland, Ohio			30.16	766.1	72.5	22.5	63	E	10	4.5		0	1s			0	0	Clear	
Corsicana, Tex.			29.86	758.4	70	21.1	95	SE	12	5.4			10n		N	0.09	2.3	Light rain	
Davenport, Iowa			30.14	765.5	70	21.1	65	E	4	1.8		Haze	0			0	0	Clear	
Denison, Tex.			29.95	760.7	71	21.7	80	E	6	2.7			10s		NE	0.25	6.3	Cloudy	
Denver, Col.	24.93	633.2	30.15	765.8	60	15.6	88	Calm	0	0		0	0			0.17	4.3	Clear	
Detroit, Mich.			30.15	765.8	68	20.0	69	NE	4	1.8		5k	Haze	NE		0	0	Fair	
Dodge City, Kan.	27.41	697.0	29.63	752.6	70	21.1	90	E	4	1.8			10s		E	0	0	Cloudy	
Dubuque, Iowa			30.14	765.5	66	18.9	78	Calm	0	0		0	Haze			0	0	Clear	
Duluth, Minn.			30.07	763.8	66	18.9	89	Calm	0	0		2k	8s	W		0	0	Cloudy	
Eastport, Me.			30.29	769.4	63	17.2	83	N	7	3.1		0	Haze			0	0	Clear	
Erie, Pa.			30.16	766.1	74	23.3	59	SE	15	6.7		5k	Sm'e	E		0	0	Fair	
Escanaba, Mich.			30.14	765.5	72	22.2	71	S	4	1.8		8c	Haze			0	0	Fair	
Fort Gibson, Indian Ter.			29.92	760.0	70	21.1	79	E	11	4.9			10s			0	0	Cloudy	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.75	730.2	29.81	757.2	75	23.9	69	N	12	5.4			10s		N	0	0	Cloudy	
Fort Sully, Dakota	28.30	718.8	29.87	758.7	72	22.2	90	SE	3	1.3			10s		SW	0	0	Cloudy	
Galveston, Tex.			29.91	759.7	77	25.0	90	SW	8	3.6		2cs	8n			1.68	42.7	Light rain	
Grand Haven, Mich.			30.16	766.1	73	22.8	67	E	3	1.3		1k	Sm'e			0	0	Clear	
Indianapolis, Ind.			30.06	763.5	68	20.0	69	NE	6	2.7		8ck,cs	0	E		0	0	Fair	
Indianola, Tex.			29.88	758.9	80	26.7	82	SW	15	6.7		5c	5s	W		0	0	Cloudy	
Jacksonville, Fla.			29.97	761.2	79	26.1	78	S	14	6.3		5ck	0			1.74	44.2	Fair	
Keokuk, Iowa			30.04	763.0	70	21.1	71	E	8	3.6		0	0			0	0	Clear	
Key West, Fla.			30.03	762.7	82.6	28.1	79	SW	8	3.6		2cs,hz	1ks	SW		0	0	Fair	
Kittyhawk, N. C.			30.05	763.3	74	23.3	95	SW	6	2.7			10ks		SW	0.73	18.5	Cloudy	
Knoxville, Tenn.			29.99	761.7	68	20.0	70	N	6	2.7		3k	0	NE		0.03	0.8	Fair	
La Crosse, Wis.			30.11	764.8	66	18.9	84	S	1	0.4		8ck	0	SE		0	0	Fair	
Leavenworth, Kan.			30.02	762.5	73	22.8	71	Calm	0	0		2c	8s			Inap.	Inap.	Cloudy	
Louisville, Ky.			30.02	762.5	68	20.0	84	N	8	3.6		8cs	0	NE		0	0	Cloudy	
Lynchburg, Va.			30.07	763.8	67	19.4	90	N	3	1.3			10n		N	0.01	0.3	Light rain	
Malone, N. Y.			30.24	768.1	69	20.6	60	S	6	2.7		0	0			0	0	Clear	
Marquette, Mich.			30.12	765.0	70	21.1	79	SW	1	0.4		8ck	0			0.02	0.5	Cloudy	
Memphis, Tenn.			29.97	761.2	72	22.2	71	NE	8	3.6		0	Haze			0	0	Clear	
Milwaukee, Wis.			30.17	766.3	68	20.0	64	NE	5	2.2		0	Fog			0	0	Clear	
Mobile, Ala.			29.94	760.5	73	22.8	76	N	5	2.2		10c	0	NW		0	0	Cloudy	
Montgomery, Ala.			29.97	761.2	72	22.2	85	NE	5	2.2			10s		SE	0	0	Cloudy	
Morgantown, W. Va.	29.06	738.1	30.08	764.0	71	21.7	57	NE	8	3.6		1c	0	SW		0	0	Clear	
Mt. Washington, N. H.	24.19	614.4	30.55	776.0	40	9.4	71	NE	18	8.0		0	0			0	0	Clear	
Nashville, Tenn.			29.98	761.5	71	21.7	75	E	3	1.3		10k	0	E		0	0	Cloudy	
New Haven, Conn.			30.26	768.6	68	20.0	64	NE	12	5.4		5k	Haze	N		0	0	Fair	
New London, Conn.			30.28	769.1	70	21.1	66	N	5	2.2		5c	2ck			0	0	Fair	
New Orleans, La.			29.92	760.0	80	26.7	58	NE	6	2.7		4k	0	SW		0	0	Fair	
Newport, R. I.			30.28	769.1	67	19.4	74	NE	7	3.1		8cs	0	W		0	0	Cloudy	
New York, N. Y.			30.22	767.6	69	20.6	65	NE	19	8.5		5c	0	SW		0	0	Fair	
Norfolk, Va.			30.02	762.5	74	23.3	95	S	10	4.5		2k	5ks	SW	SW	0.89	22.6	Fair	
North Platte, Neb.	27.15	689.6	29.60	751.8	69	20.6	79	SE	14	6.3			10s			0.06	1.5	Cloudy	
Omaha, Neb.	28.90	736.3	30.03	762.7	70	21.1	85	SE	1	0.4		8ck	0			Inap.	Inap.	Cloudy	
Oswego, N. Y.			30.25	768.3	70	21.1	65	SE	4	1.8		5cs	Haze	SW		0	0	Fair	
Pembina, Dakota			29.93	760.2	58	14.4	87	SE	8	3.6		0	0			0	0	Clear	
Philadelphia, Penn.			30.17	766.3	67	19.4	84	E	16	7.2			10s		E	0	0	Cloudy	
Pike's Peak, Colorado	18.07	459.0	30.28	769.1	35	1.7	90	NW	10	4.5		5cs	0			0.73	18.5	Fair	
Pittsburgh, Penn.			30.12	765.0	71	21.7	71	E	8	3.6		1c	0			0	0	Clear	
Port Huron, Mich.			30.19	766.8	68	20.0	60	NE	4	1.8		0	1s			0	0	Clear	
Portland, Me.			30.30	769.6	67	19.4	79	Calm	0	0		1k	0			0	0	Clear	
Portland, Oregon			30.15	765.8	55	12.8	87	Calm	0	0		0	0			0	0	Clear	
Punta Rassa, Fla.			30.02	762.5	82.0	27.8	76	SW	10	4.5		2cs	2ks	SW	SW	Inap.	Inap.	Fair	
Rochester, N. Y.			30.21	767.3	68	20.0	65	SW	4	1.8		2c	Sm'e	W		0	0	Fair	
Salt Lake City, Utah	25.72	653.3	30.05	763.3	65	18.3	48	Calm	0	0		0	0			0	0	Clear	
Sandy Hook, N. J.			30.21	767.3	68	20.0	74	NE	20	8.9		0	5s		NE	0	0	Fair	
San Diego, Cal.			29.98	761.5	67	19.4	90	Calm	0	0		0	5s			0	0	Fair	
San Francisco, Cal.			30.02	762.5	54	12.2	86	SW	4	1.8			Fog			0	0	Foggy	
Santa Fe, N. M.	23.41	594.6	29.95	760.7	62	16.7	71	Calm	0	0		8k	0			0	0	Fair	
Savannah, Ga.			29.97	761.2	74	23.3	95	Calm	0	0			10s			0.23	5.8	Cloudy	
Shreveport, La.			29.98	761.5	74	22.3	81	NE	3	1.3		5ck	0			Inap.	Inap.	Fair	
Smithville, N. C.			30.02	762.5	78	25.6	86	S	14	6.3			10n		S	0.03	0.8	Heavy rain	
Springfield, Mass.																			
St. Louis, Mo.			30.03	762.7	71	21.7	66	NE	6	2.7		0	0			0	0	Clear	
St. Marks, Fla.			29.95	760.7	75	23.9	85	NE	6	2.7		5c	2ks	W		0.21	5.3	Fair	
St. Paul, Minn.			30.04	763.0	69	20.6	79	Calm	0	0		5c	2s			0	0	Fair	
St. Paul's Island, Alaska			29.98	761.5	41	5.0	91	N	13	5.8			Fog			0	0	Foggy	
Thatcher's Island, Mass.			30.27	768.8	64	17.8	89	N	3	1.3		1c	0	NW		0	0	Clear	
Toledo, Ohio			30.12	765.0	72	22.2	80	Calm	0	0		2ck	Haze			0	0	Fair	
Tucson, Arizona																			
Tybee Island, Ga.			29.93	760.2	78	25.6	90	N	4	1.8		0	8ks		E	0.45	11.4	Cloudy	
Vicksburg, Miss.			29.98	761.5	76.5	24.7	72	NE	1	0.4		8k	0	N		0	0	Fair	
Virginia City, M. T.	24.33	618.0	29.81	757.2	54	12.2	37	Calm	0	0		2k	0	W		0	0	Fair	
Washington, D. C.			30.09	764.3	66	18.9	94	NE	12	5.4			10n		NE	0.01	1.0	Light rain	
Wilmington, N. C.			30.02	762.5	73	22.8	95	NE	5	2.2			Fog			0.01	0.3	Foggy	
Wood's Holl, Mass.			30.26	768.6	68	20.0	74	NE	4	1.8		5c	0			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.
Yankton, Dakota	28.79	731.3	30.01	763.0	67	19.4	84	SE	1	0.4			10s		SW	Inap.	Inap.	Cloudy	
Yuma, Arizona			29.95	760.7	84	28.9		E				0	0			0.19	4.8	Clear	
Sub Series.																			
Kingston, Jamaica, W. I.			30.20	767.1	79	26.1	74	Calm	0	0		10c	2s			0.08	2.0		James Gall.
St. Georges, Bermudas			30.16	766.1	83.0	28.3	75	WSW	14	6.3		1c	1ck	SW		0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa W. I.																			
Paramaribo, D. Guiana S.A.			30.04	763.0	82	27.8	83	NE			2	5ks?	6ks	E		0.140	3.56	½ Cloudy	C. J. Hering.
Batavia, Dutch Guiana S.A.	30.07	763.7			83.8	28.8		NE								0.13	3.50		Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1			65.0	18.3	75	Calm	0	0		4ck	2s			0	0	Fair	Thomas Herran
York Factory, B. A.			29.44	747.6	70	21.1	61	W	20	8.9		3c	0			2.30	58.4		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.10	764.5	77	25.0		NE			3					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	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 Leipzig, N 49° 4′, W. 11° 8′.	N 3 E		30.12	765.0	57.9	14.4		Calm			0		10			Short sea.		Raining	Capt. R. Hoffmann.
Steamer Nova Scotian, 87 miles to St John.	W by N ½ N	11	30.22	767.6	56	13.3		W			3		0					Clear	Capt. 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.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			29.97	761.1	82.2	27.9	63	N			1		0			0	0	Clear	Charnot.
Algiers			30.10	764.5	82.4	28.0	67	N			2		0			0	0	Clear	Peter.
La Calle			29.98	761.6	86.0	30.0	22	NE			2		6			0	0	Fair	Kunts.
Tunis			30.07	763.8	91.6	33.1	26	ENE			3		0			0	0	Clear	Jacques.
Sfax			30.12	765.0	86.4	30.2	58	SE			3		1			0	0	Clear	Chauvey.
Saida			30.06	763.5	87.8	31.0	17	NNW			1		1			0	0	Clear	Millot.
Tebessa			30.09	764.3	97.0	36.1		NNE			5		8			0	0	Cloudy	Colin.
Geriville			30.06	763.4	89.4	31.9	22	WNW			3		2			0	0	Clear	Lemaillot.
Laghouat			30.08	763.9	104.0	40.0		NE			2		0			0	0	Clear	Guyot.
Biskra			30.08	764.0	95.0	35.0		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			29.95	760.7	84.2	29.0	58	SW			2		3			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.99	761.7	78.4	25.8	66	W			1		3			0	0		Dr. Wierzbiski.
Eperies			29.96	761.0	82.4	28.0	60	Calm			0		0			0	0		Julius Mikolik.
Gratz	28.78	730.9	29.92	759.9	76.8	24.9	72	SW			2		6			0.559	14.2		Andreas Rospini.
Hermannstadt	28.58	726.0	29.92	759.9	82.0	27.8	48	ESE			2		4			0	0		Prof. Reissenberger.
Kremsmünster	28.63	727.1	29.92	759.9	74.8	23.8	71	Calm			0		3			0	0		Prof. C. Wagner.
Lemberg			29.93	760.3	80.6	27.0	78	SE			2		7			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsauda Daniel.
Pola			29.98	761.5	81.9	27.7	70	WNW			2		2k8			0	0		I.R.Hydrographic Office
Szegedin			29.95	760.8	79.2	26.2	67	Calm			0		2			0	0		Karl Stancel.
Trieste			29.99	761.7	82.4	28.0	60	NNW			1		1			0	0	Clear	Prof. V. Farolfi.
Vienna			29.89	759.2	85.8	28.8	54	S			2		2			0	0		I. R. Central Met. Ob'y

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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	754.7	69.4	20.8	53	SSW			7		10		SSW	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen	.....	.....	29.02	737.1	54.5	12.5	.....	SSE	14	6.3	.....	.....	10	.....	.....	0.625	15.88	Raining	William Boswell.
Ardrossan	.....	.....	29.11	739.4	59	15.0	.....	W	.....	.....	5	.....	8	.....	.....	.....	.....	Raining	William McNeil.
Armagh, Observatory	.....	.....	29.34	745.2	58.5	14.7	.....	W	17	7.6	.....	.....	10	.....	.....	.....	.....	Squally	S. Cad, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	29.52	749.8	60.0	15.6	.....	W	.....	.....	4	.....	9	.....	.....	.....	.....	*D. clouds	J. Dreyer.
Bradford	.....	.....	29.32	744.7	60.0	15.6	.....	W	.....	.....	7	.....	8	.....	.....	0.09	17.5	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.05	763.3	81.0	27.2	.....	NE	.....	.....	2	.....	7	.....	.....	.....	.....	*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge	.....	.....	29.52	749.8	71.0	21.7	.....	WSW	.....	.....	.....	.....	8	.....	.....	.....	.....	.....	Mr Pain, F. R. M. S.
Cardington	.....	.....	29.97	761.2	70.0	21.1	.....	SW	.....	.....	6	.....	5	.....	.....	.....	.....	*D. clouds	John McLaren.
Carlisle	.....	.....	29.17	740.9	57.1	13.9	.....	SW	.....	.....	8	.....	10	.....	.....	0.32	8.1	Raining	T. Bell, for J. Carmichael.
Chatham, School M. E.	.....	.....	29.58	751.3	71.5	21.9	.....	SW	.....	.....	5	.....	8	.....	.....	Blank	Blank	*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	28.35	720.1	29.84	757.7	57.6	14.2	.....	NW	.....	.....	7	.....	7	.....	.....	.....	.....	Squally	R. E. Power.
Donaghadee	.....	.....	29.56	745.7	58	14.4	.....	WNW	.....	.....	6	.....	10	.....	.....	.....	.....	Raining	J. Mac Gowan.
Dover	.....	.....	29.62	752.3	66	18.9	.....	WSW	.....	.....	6	.....	7	.....	.....	.....	.....	Squally	J. Costello.
Eccles (near Manchester	.....	.....	29.47	746.7	61.1	16.2	.....	WSW	11.6	5.2	.....	.....	10	.....	.....	.....	.....	Squally	Thomas Mackereth.
Falmouth, Observatory	.....	.....	29.72	754.9	65.5	18.6	.....	W	.....	.....	6	.....	6	.....	.....	.....	.....	Overcast	The Staff.
Fort Napier, (Natal)	27.61	701.3	29.84	757.9	68.9	20.5	.....	E	.....	.....	2	.....	8	.....	.....	.....	.....	Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.95	760.7	82	27.8	.....	W	.....	.....	3	.....	7	.....	.....	.....	.....	*D. clouds	
Galway, Queen's College	.....	.....	29.92	760.0	60	15.6	.....	W	.....	.....	4	.....	4	.....	.....	.....	.....	*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.05	763.5	80.0	26.7	.....	E	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	29.05	738.1	55.2	12.9	.....	W	.....	.....	3	.....	10	.....	.....	.....	.....	Raining	Lewis Stuart.
Great Yarmouth	.....	.....	29.49	749.0	67	19.4	.....	WSW	.....	.....	5	.....	3	.....	.....	.....	.....	Blue sky	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	29.57	751.1	73.7	23.2	.....	SW	.....	.....	4	.....	3	.....	.....	Blank	Blank	Blue sky	The Staff, for G. B. Airy
Guernsey	.....	.....	29.77	756.1	65.5	18.6	.....	WSW	.....	.....	5	.....	3	.....	.....	.....	.....	*D. clouds	Dr. S. E. Hoskins.
Helston	.....	.....	29.73	755.1	66	18.9	.....	SW	.....	.....	6	.....	3c	.....	.....	0.10	2.5	Fine	M. P. Moyle.
Holyhead	.....	.....	29.47	748.5	61	16.1	.....	SW	.....	.....	6	.....	5	.....	.....	.....	.....	D. clouds	John Tilston.
Kew, Observatory	.....	.....	29.57	751.1	67.7	19.8	.....	SW	21	9.4	.....	.....	9	.....	.....	.....	.....	Threatening	The Staff.
Kingstown	.....	.....	29.42	747.3	63	17.2	.....	W	.....	.....	6	.....	5	.....	.....	.....	.....	*D. clouds	George Mitchell.
Leicester Museum	.....	.....	29.48	748.8	66.0	18.9	.....	W	.....	.....	6	.....	5	.....	.....	.....	.....	Squally	Wm. J. Harrison, F.G.S.
Malta, Mediterranean	.....	.....	30.00	762.0	84.0	28.9	.....	NE	.....	.....	1	.....	0	.....	.....	.....	.....	.....	Corp'l F. Fraser, A. M. C.
Nairn	.....	.....	28.90	736.3	61	16.1	.....	SW	.....	.....	2	.....	10	.....	.....	.....	.....	Overcast	W. D. Fenny.
Nassau, (Bahamas)	.....	.....	30.12	765.0	83.4	28.6	.....	SE	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	29.44	747.8	69.7	20.9	.....	WSW	.....	.....	6	.....	5k	W	WSW	0.268	6.80	D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	29.47	748.5	63.8	17.7	.....	WSW	.....	.....	6	.....	7	.....	.....	.....	.....	D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	29.54	751.3	65	18.3	.....	SW	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast	J. Lucas.
Plymouth	.....	.....	29.68	753.9	67.9	19.9	.....	W	.....	.....	5	.....	10	.....	.....	.....	.....	Overcast	John Merrifield.
Roche's Point	.....	.....	29.69	751.8	62	16.7	.....	NW	.....	.....	6	.....	5	.....	.....	.....	.....	Cloudy	W. Kennedy.
Saint Ann's Head	.....	.....	29.58	751.3	60	15.6	.....	W	.....	.....	6	.....	2	.....	.....	.....	.....	Blue sky	John C. Walker.
Saint Helier, Jersey	.....	.....	29.79	756.7	66.2	19.0	.....	WSW	.....	.....	6	.....	2	.....	.....	.....	.....	¼ clouded	A. P. Amy.
Sandwick Manse, Orkneys	.....	.....	28.98	736.1	54.4	12.4	.....	SE	31	13.9	.....	.....	10	.....	.....	.....	.....	Raining	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	29.26	743.2	60.0	15.6	.....	SW	.....	.....	7	.....	8	.....	.....	.....	.....	Overcast	F. Shaw.
Scutari Cemetery, Turkey	.....	.....	29.84	757.9	88.2	31.2	.....	N	.....	.....	3	.....	1	.....	.....	.....	.....	Hazy	Sergt. W. H. Lyne.
Sheffield	.....	.....	29.46	748.3	64.0	17.8	.....	WSW	.....	.....	6	.....	9	.....	.....	0.449	11.41	Overcast	W. F. Cooper.
Silloth Rectory	.....	.....	29.42	744.7	63.4	17.4	73	W	.....	.....	4	.....	4	.....	.....	0.395	10.01	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	29.33	745.0	58.1	14.5	.....	SW	.....	.....	6	.....	10	.....	.....	Blank	Blank	Threatening	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.	.....	.....	28.96	735.6	58	14.4	.....	SE	.....	.....	2	.....	10	.....	.....	.....	.....	Raining	John Smith.
Strathfield Turgiss	.....	.....	29.58	751.3	66.9	19.4	.....	W	.....	.....	4	.....	10	.....	.....	.....	.....	Showery	Rev. Charles H. Griffith.
Thurso	.....	.....	28.99	736.3	56	13.3	.....	SE	.....	.....	5	.....	9	.....	.....	.....	.....	Raining	John Trotter.
Truro, Royal Institution	.....	.....	29.82	757.4	66	18.9	.....	W	.....	.....	4	.....	6	.....	.....	.....	.....	D. clouds	W. Newcombe.
Valencia, Observatory	.....	.....	29.67	753.6	59.7	15.4	.....	W	24	10.7	.....	.....	5	.....	.....	.....	.....	*D. clouds	The Staff.
Sub-Stations.																			
Calf of Man, Isle of Man	.....	.....	.....	.....	55	12.8	.....	S	.....	.....	8	.....	10	.....	.....	.....	.....	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.18	766.6	63.0	17.2	75	WNW	6	2.7	.....	3	4	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	30.30	769.6	60.5	15.8	87	NW	.....	.....	1	.....	8k	.....	.....	0	0	Hazy	Francis Abbott, F.R.A.S.
Leith, Restaurig Parks	.....	.....	29.07	738.4	60.2	15.7	.....	W	.....	.....	4	.....	10k	.....	.....	0.23	5.8	Cloudy	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.16	766.1	.....	.....	.....	ENE	16.7	7.5	.....	.....	.....	.....	.....	0	0	.....	C. Meldrum.
Melbourne, Observatory	.....	.....	30.23	767.8	52.4	11.3	69	NE	9	4.0	.....	.....	8	.....	.....	0.04	1.0	Fine	R. L. J. Ellery.
Monach Lighthouse, Hebrides	.....	.....	28.99	736.3	57	13.9	.....	SW	.....	.....	4	.....	10	.....	.....	1.00	25.4	.....	J. Youngehuse.
North Unst, Shetland Isles	.....	.....	29.11	739.4	55	12.8	.....	SE	.....	.....	7	.....	10	.....	.....	Blank	Blank	.....	Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. 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	.....	.....	29.94	760.5	67.5	19.7	44	SE	.....	.....	6	.....	3	.....	.....	.....	.....	.....	
Faroe	.....	.....	29.71	754.7	69.8	21.0	45	SSW	.....	.....	7	.....	8	.....	.....	.....	.....	.....	
Godthaab, Greenland	.....	.....	29.53	750.0	48.2	9.0	.....	Calm	.....	.....	0	.....	8	.....	.....	.....	.....	.....	
Stykkisholm, Iceland	.....	.....	29.46	748.3	52.3	11.3	88	NW	.....	.....	2	.....	5	.....	.....	.....	.....	.....	
Thorshavn, (Faröe)	.....	.....	29.19	741.4	52.2	11.2	94	E	.....	.....	6	.....	10	.....	.....	.....	.....	Raining	
Vestervig	.....	.....	29.69	754.2	67.3	19.6	47	SE	.....	.....	7	.....	10	.....	.....	.....	.....	.....	

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

FRENCH SERIES.

Furnished by the 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			29.87	758.6	72.9	22.7	69	SW			4		10ck			0	0	Covered	Normal School.
Amiens																			Normal School.
Avignon			30.01	762.9	86.0	30	25	NW			2		0			0	0	Clear	Normal School.
Bar-sur-Seine			29.92	760.0	78.4	25.8	31	SW			3		8		W	0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)			29.85	758.3	69.4	20.8	85	SW	39.4	17.6			10		SW	0.067	1.7	Raining	Beaumette Observatory
Beauvais			29.78	756.3	72.5	22.5	57	SSW			3		8		WSW	0	0	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.11	764.9	75.2	24	60	S			2		10k		N	0	0	Covered	Normal School.
Bourges			29.99	759.4	78.4	25.8	55	SSW			6		2		E	0	0	Slightly cl'dy	Normal School.
Brest			29.82	757.3	69.6	20.9	75	W			5		8n		W	0.369	1.75		Naval Observatory.
Carcassonne			30.03	762.8	76.1	24.5	40	W			1		0			0	0	Clear	Normal School
Caen																			Normal School.
Chartres			29.80	756.8	72.7	22.6	84	W			2		5		NW	0	0		Normal School.
Châlons-sur-Marne			29.82	757.5	70.2	26.2	49	SW			4		8k		NE	0	0	Very cloudy	Normal School.
Clermont			29.92	760.0	78.8	26.0	41	S			3		8		WSW	0	0	Very cloudy	Puy de Dome Obs'y.
Commercy			29.90	757.4	75.4	24.1	33	SW			8		8s,k		SW	0	0	Very cloudy	Normal School
Commune de Greasque*			30.12	765.0	85.5	29.7	27	W			2		2		W	0	0		M. Kina.
Grenoble			30.00	761.9	79.3	26.3	64	NW			2		2			0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.08	763.0	69.8	21	76	SW			8		8		NE	0	0	Very cloudy	Normal School.
Le Mans			29.85	758.2	74.1	23.4	65	SW			6		8		SW	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier			29.94	760.4	78.6	25.9	30	SW			2		5		NE	0	0	Cloudy	Normal School.
Mâcon			30.17	766.2	75.2	24	58	ESE			2		5		E	0	0	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			29.87	758.8	71.1	21.7	57	SW			2		5		NE	0	0	Partly cl'dy	Normal School.
Nismes			30.05	763.2	91.0	32.8	35	SW			2		0			0	0	Clear	Normal School.
Orleans																			Normal School.
Paris, Observatory			29.82	757.3	74.7	23.7	52	WSW			4		10k		WSW	0	0	Covered	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			30.01	762.3	73.4	33.0	66	SW			6		10		NE	0	0	Covered	Naval Observatory.
Rouen			29.73	755.2	70.5	21.4	49	SE			3		10			0	0	Covered	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School
Villefranche			30.10	764.5	93.2	34	41	SW			2		5			0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.89	759.3	81.0	27.2													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.32	770.2	68.5	20.3	59	SSW	13.0	5.83			5		W	0.12	3.1		—. Falguère.
Montsouris, Paris			29.82	757.3	74.8	23.8	55	SW			4		10kn		SW	Inap.	Inap.		Montsouris Observatory.
Perpignan			30.06	763.4	81.0	27.2	40	SE	7.4	3.33			0			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.49	545.9			52.5	11.4		W			2		4					Clear	M. Baylac.
Pic du Midi, (Plantade)	22.74	577.7			57.6	14.2		W			2		4			0	0	Fair	General de Nansouty.
Saint Maur, (near Paris)			29.83	757.6	76.6	21.8	48	SW			4		10			0	0	Very cloudy	E. Renou.
Toulouse			30.12	765.1	83.8	28.8	32	WNW			1		3			0	0		Toulouse Observatory
Tours			29.91	759.6	74.8	23.8	55	WSW			5		8		WSW	0	0		C. Marquet.
Versailles, (near Paris)			29.83	757.6	73.4	23.0	60	W			6		10			0	0	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai																			H. Le Lec, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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			29.92	759.9	79.3	26.3	49	SE			5		2	S		0	0		Prof. T. Hoh.
Berlin			29.91	759.7	77.0	25.0	47	SE			1		1			0	0		Prof. Arndt.
Breslau			30.01	763.1	74.5	23.6	66	SE			5		8			0	0		Dr. P. Neugebauer.
Carlsruhe			29.88	759.0	81.0	27.2	47	SW			3		8	SW		0	0		A. Senz.
Cassel			29.82	757.5	80.8	27.1	44	S			7		7	S		0	0		Dr. H. Möhl.
Emden			29.63	752.5	71.1	21.7	70	SSW			3		10			0.071	1.8		Prof. Prestel.
Frankfort on the Main			29.86	758.4	82.4	28.0	25	SSW			4		6			0	0		Physical Society.
Friedrichshafen			29.97	761.2	73.2	22.9	66	SW			4		1			0	0		M. Wilhelm.
Hamburg			29.80	756.8	74.3	23.5	53	SE			6		10kn	SE		0	0	Squally	Captain F. Hegemann.
Kiel			29.76	756.0	73.2	22.9	47	SE			5		10			0	0		Prof. G. Karsten.
Königsberg, (Prussia.)			30.07	763.7	73.4	23.0	61	E			2		5			0.008	0.2		Prof. E. Luther.
Köslin			30.01	762.2	75.4	24.1		E			4		0			0	0		H. Müller.
Leipsic			29.91	759.8	82.9	28.3	40	S			3		2			0	0		Prof. Bruhns.
Memel			30.11	764.9	71.4	21.9	54	ESE			3		8ks	SSW		0.008	0.2		Reinbrecht & Skalwan.
Münster			29.81	757.1	76.6	24.8	53	S			5		10			0.091	2.3		Prof. E. Heis.
Neufahrwasser			30.11	764.9	67.1	19.5	73	E			2		4			0	0		A. Lothes.
Posen			30.02	762.4	74.1	23.4	53	SE			5		4			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.88	759.0	83.5	28.6	40	S			2		8	NW		0	0		Dr. Schur.
Stuttgart			29.89	759.2	81.9	27.7	35	W			6		4			0	0		Prof. Schoder.
Thorn			30.02	762.4	76.3	24.6	55	SE			4		4			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.81	757.1	79.9	26.6	31	SW			8		10			0.035	0.9		Prof. Flesch.
Wustrow, Naval School			30.03	762.8	75.0	23.9	43	SE			3		3			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.91	759.7	91.0	32.8		NE										Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	82.8	28.2	39	E	1.3	0.6			1			0.012	0.3		
Padua			29.96	760.9	82.2	27.9	54	W	2.5	1.1			0			0	0		
Vicenza			29.97	761.1	83.3	28.5	47	W	3.8	1.7			1	E		0	0		
Verona			29.96	760.9	85.5	29.7	45	E			1		6			0	0		
Bergamo	28.68	728.1	29.94	760.2	79.9	26.6	63	SW			1		2			0	0		
Domodossola	29.98	736.2	29.97	761.1	77.9	25.5	47	S			4		4			0	0		
Milan			29.95	760.7	87.1	30.6	54	SW			1		1	SW		0	0		
Pavia			30.00	761.9	81.0	27.2	51	N			4		0			0	0		
Moncalieri			30.00	762.1	76.1	24.5	62	ESE	0.7	0.3			1			0	0		
Mondovi	28.15	715.1	29.98	761.6	76.1	24.5	45	NNW			2		8	ESE		0	0		
Porto Maurizio			30.07	763.6	81.3	27.4	64	SW			2		1			0	0		
Genoa			30.01	762.3	81.3	27.4	60	SW	6.3	2.8			0			0	0		
Piacenza			30.00	762.0	79.0	26.1	58	N	4.3	1.9			1			0	0		
Parma			29.95	760.8	83.3	28.5	58	W			4		3			0	0		
Bologna			30.01	762.3	83.1	28.4	44	SW			6		3	N		0	0		
Florence			30.03	762.7	86.0	30.0	36	SW			2		0			0	0		
Leghorn			30.04	762.9	81.0	27.2	63	W	3.8	1.7			2			0	0		
Siena	28.83	732.3	29.98	761.5	86.2	30.1	39	W	0	0			6	W		1.488	37.8	Showery	
Urbino	28.50	724.0	30.01	762.2	80.1	26.7	55	NE			4		6			0	0		
Ancona			30.00	761.9	83.1	28.4	69	NNW			4		2			0	0		
Grosseto			30.05	763.3	86.4	30.2	53	SE			2		3	S		0	0		
Rome			30.03	762.8	87.3	30.7	45	SW	4.9	2.2			1			0	0		
Naples, O. U.			30.03	762.7	86.2	30.1	56	SW			4		0			0	0		
Lecce			29.99	761.8	84.7	29.3	42	NNW	8.1	3.6			1			0	0		
Cosenza			30.00	762.0	94.6	34.8	65	NW	9.8	4.4			2			0	0		
Riposto, (Sicily)			29.95	760.8	87.1	30.6	58	E			2		4			0	0		
Palermo			29.98	761.5	82.0	27.8	68	E	3.8	1.7			0			0	0		
Caltanissetta	28.06	712.8	29.91	759.8	86.5	30.3	25	SE			4		0			0	0		
Sub-Series.																			
Naples, S. R.			30.05	763.3	86.5	30.3	48	SSW	5.6	2.5			2			0	0		Prof. F. Brioschi.
Pesaro			30.05	763.3	77.9	25.5	78	NE	19.5	8.72			7ck	SW		Blank	Blank		L. Guidi.

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	754.2	68.0	20.0		SW			5								
Groningen			29.63	752.5	69.1	20.6		S			5								
Helder			29.61	752.1	60.8	16.0		S			5								
Utrecht			29.66	753.4	60.8	16.0	84	SSW			3		8					Very cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.60	751.7	67.8	19.9	43	SSE	23.7	10.6			5			0.295	7.5		
Brono			29.91	759.6	67.6	19.8	49	ESE	7	3			6			0	0		
Christiania			29.94	760.5	71.1	21.7	36	SSE	15.7	7.0			7			0	0		
Tromsö			29.89	759.3	52.7	11.7		SSW	9	4			10			0.299	7.6		

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

PORTEUGUSE 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,)			30.20	769.4	78.4	25.8	82	SW	4.9	2.19			4			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.02	762.5	91.4	33.0	25	NE	3.6	1.61			5			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.15	765.8	75.6	24.2	65	SW	7.6	3.39			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.08	763.9	81.3	27.4	51	NE	11.2	5.0			3			0	0		The Observatory.

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

RUSSIAN SERIES.

Furnished by 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			30.01	762.3	75.2	24.0	69	Calm	0	0			9						Astronomical Obs.
Wilna			30.08	764.0	72.1	22.3	75	NNE	2	1			10						Astronomical Obs.
Dorpat			30.20	767.0	70.5	21.4	38	NE	7	3									Physical Cabinet.
St. Petersburg			30.21	767.2	68.4	20.2	54	NE	7	3			8						Central Physical Obs.
Kinopio			30.26	768.7	68.7	20.4	65	SW	13	6			5						Ch. Forsten.
Kieff			29.99	761.8	84.0	28.9	32	E	9	4			4						Physical Cabinet.
Nikolaiev			29.96	761.0	93.2	34.0	30	NE	18	8			6						Kurdakof.
Kertch			29.87	758.6	87.4	30.8	51	ENE	9	4			3						Lagorio.
Moscow			30.18	766.5	82.6	28.1	50	SSW	9	4			1						Meteorological Obs.
Lugan			29.95	760.6	88.0	31.1	24	E	34	15			1						Meteorological Obs.
Archangel			30.14	765.5	65.1	18.4	92	N	7	3			10						Ogorodnikof.
Tiflis	28.49	723.7	29.81	757.1	93.9	34.4	31	E	11	5			4						Physical Observatory.
Astrakhan			29.97	761.2	85.3	29.6	23	NNE	7	3			0						Sebastianof.
Kasan			30.03	762.8	76.8	24.9	60	NNE	13	6			3						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	29.03	738.0	29.97	761.3	68.9	20.5	59	ENE	7	3			9						Meteorological Obs.
Nukuss			29.69	754.2	89.8	32.1	45	W?	0	0			6						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul			29.83	757.6	73.6	23.1	51	NE	2	1			9						Meteorological Obs.
Yeniseisk			29.66	753.1	66.6	19.2	70	NW	4	2			7						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.80	757.	89.2	31.8	68	Calm	0	0			2						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.77	756.2	74.8	23.8	97	SE	4	2			10						
Nikolaievsk, on the Amoor																			

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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 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			29.95	760.7	93.2	34.0	26	SW	3.7	1.67		1	0	NW		0	0	Light clouds	Royal Observatory.
San Fernando			30.08	763.9	79.0	26.1	65	W	6.5	2.9		0	5		W	0	0		The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			30.14	765.6	60.1	15.6	60	SW			4		0			0	0		
Umea			30.11	764.8	62.4	16.9	65	SW			4		1			0	0		
Hernosand			30.09	764.3	61.5	16.4	67	S			4		4			0	0		
Stockholm			30.11	764.9	70.9	21.6	36	SE			4		0			0	0		
Wisby			30.18	766.5	68.0	20.0	54	S			6		0			0	0		
Sub-Series.																			
Upsala			30.10	764.6	71.6	22.0	34	SSW	10.3	4.6			4		SSE	0	0		Dr. Hildebrandsson.

Note.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall 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	28.61	726.7	29.97	761.1	80.2	26.8	34	SW			6		3			0	0	Clouds	The Observatory.
Zurich	28.39	721.1	29.95	760.7	78.3	25.7	50	W			2		2			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, —1.1 mm; Thermometer, +4.4 cent.; Relative Humidity, —19 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

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

Station.	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour	Meters per second.	0–10.	Up'er 0–10.	Low'r 0–10.	Upper. From—	Lower From—	Inches.	Millimeters.	Weather.	Observer.
Constantinople			29.90	759.5	83.7	28.7	52	NNE	27	12.0			3		NNE	0	0		
Fao, (Persian Gulf)			29.65	753.0	96.8	36.0		SE			1		0						
Salonica			29.97	761.2	82.8	28.2		SE			2		0						
Valona			30.05	763.3	82.2	27.9		W			1		0						
Varna			29.86	758.5	82.4	28.0		NW			3		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.85	758.3	88.0	31.1	54	W			2		2ks		W			Cloudy	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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

Station.	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour	Meters per second.	0–10.	Up'er 0–10.	Low'r 0–10.	Upper. From—	Lower From—	Inches.	Millimeters.	Weather.	Observer.
Bathurst, N. B			30.14	765.5	75.0	23.9		SW	1	0.4			0			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.31	769.9	77	25.0		NW	1	0.4		0	2s		NW	0	0	Fair	W. R. Bigg.
*Chatham, N. B			30.22	767.6	68	20.0	74	SW	5	2.2		0	0			0	0	Clear	G. A. Blair.
Charlottetown P. E. Island			30.25	768.3	69	20.6	70	SW	5	2.2		0	0			0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			30.24	768.1	76.7	24.8	63	SW			1	5k	0			0	0	Fair	James Smith, M. A.
Dalhousie, N. B.			30.17	766.3	64	17.8	80	W			1					0	0	Clear	H. A. Johnson.
Esquimault, B. C																			W. H. Bevis.
Fredericton, N. B			30.29	769.4	66.2	19.0	74	E	1	0.4		0	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.77	756.1	61	16.1	91	SW	6	2.7		5es	2n	SW	SW	0.460	11.68	Clearing	James Stewart.
Goderich, Ontario			30.14	765.5	74.2	23.4	76	SE			1	4k	4n	SW		0	0	Threatening	H. J. Strang, M. A.
Granton, Ontario	29.08	738.6	30.14	765.5	67	19.4		SE			1		10n			0	0	Cloudy.	James Grant.
*Halifax, N. S.			30.26	768.6	66	18.9	74	N	1	0.4		0	0			0	0	Clear	F. Allison, M. A.
*Kingston, Ontario			30.28	769.1	73	22.8	78	SE	2	0.9		2e	0			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			30.20	767.1	71.6	22.0	58	SW	3	1.3		1e	0	SW		0	0	Fair	C. H. Rigby
*Montreal, Quebec			30.27	768.8	73	22.8	72	SW	10	4.5		8e	0			0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.27	768.8	71	21.7	70	Calm	0	0		5ek	0	NW		0	0	Fair	J. B. Haney.
*Parry Sound, Ontario			30.18	766.6	69	20.6	75	SE	7	3.1		2ek	2ks	W	W	0	0	Fair	Rev. R. Mosley.
Port Dover, Ontario			30.18	766.6	68	20.0	84	E	6	2.7		10k	0	S		0.02	0.5	Fair	H. Morgan.
Port Hastings, N. S.			30.28	769.1	61.0	16.1		Calm	0	0						0	0	Fine	Peter Grant.
Port Stanley, Ontario			30.15	765.8	69	20.6	78	E	16	7.2			10n		S	0	0	Cloudy	M. Payne.
*Quebec, Quebec			30.23	767.8	72	22.2	71	Calm	6	0		0	0			0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.			30.30	769.6	66	18.9	71	S	3	1.3		0	0			0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			30.12	765.0	71	21.7	65	SE	4	1.8		8k	0			0	0	Cloudy	K. Stewart.
Stayner, Ontario			30.14	765.5	75	23.9	72	SE	3	1.3		8ek	0	W		0	0	Fair	R. J. Cole.
Stratford, Ontario	28.89	733.8	30.14	765.5	66.5	19.2	85	SE	2	0.9			10s			0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B			30.26	768.6	72	22.2	66	W	4	1.8		2e	0			0	0	Clear	T. C. Hill.
*Toronto, Ontario			30.19	766.8	71	21.7	79	SE	6	2.7		5es	5ks		SW	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.16	766.1	69.1	20.6	79	E	6	2.7			10es			0	0	Fine	J. Montgomery
Sub-Series.																			
St. Johns, Newfoundland			30.25	768.3	70	21.1	54	W				5e	0			0	0	Fair	John Delaney.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.			30.29	769.4	69	20.6	69	Calm	0	0		0	Haze			0	0	Clear	
Alpena, Mich.			30.09	764.3	68	20.0	74	Calm	0	0		2ck	0	SW		0	0	Clear	
Atlantic City, N. J.			30.19	766.8	70	21.1	95	E	9	4.0		8k	2s	W	E	0.10	2.5	Cloudy	
Augusta, Ga.			30.11	764.8	80	26.7	78	E	2	0.9		5k	0	E		0	0	Fair	
Baltimore, Md.			30.22	767.6	67	19.4	94	NE	5	2.2			10n			0.11	2.8	Light rain	
Barnegat, N. J.			30.20	767.1	70	21.1	95	E	8	3.6			10n			0.14	3.6	Light rain	
Bismarck, Dakota	28.08	713.2	29.66	753.4	62	16.7	45	NW	9	4.0		5ck	Haze	NW		0.75	19.1	Fair	
Boston, Mass.			30.32	770.1	69	20.6	65	NE	2	0.9		1cs	Fog			0	0	Foggy	
Breckenridge, Minn.			29.75	755.6	68	20.0	84	SE	10	4.5		2k	Sm'e			0	0	Clear	
Buffalo, N. Y.			30.17	766.3	66.5	19.2	77	E	6	2.7			Haze			0	0	Threatening	
Burlington, Vt.			30.30	769.6	71	21.7	66	Calm	0	0		5c	0			0	0	Fair	
Cairo, Ill.			30.01	762.2	72	22.2	75	E	7	3.1		0	0			0.14	3.6	Clear	
Cape Hatteras, N. C.			30.10	764.5	83	28.3	83	S	1	0.4		1k	5ks		S	0.11	2.8	Fair	
Cape Henry, Va.			30.13	765.3	79	26.1	86	Calm	0	0			10s,hz.			0	0	Cloudy	
Cape Lookout, N. C.			30.18	766.6	82	27.8	83	Calm	0	0		5k	0	SW		0	0	Fair	
Cape May, N. J.			30.17	766.3	76	24.4	90	E	5	2.2		10k	Fog	S		0.02	0.5	Cloudy, fog.	
Charleston, S. C.			30.13	765.3	81	27.2	82	SW	2	0.9		0	5s		SW	0.48	12.2	Clearing	
Cheyenne, Wyoming	24.12	612.6	30.06	763.5	60	15.6	36	NW	12	5.4		0	0			0	0	Clear	
Chicago, Ill.			30.02	762.5	74	23.3	68	SE	2	0.9		0	0			0	0	Clear	
Cincinnati, Ohio			30.03	762.7	72	22.2	75	SE	4	1.8		2c	5ks	S	S	0	0	Cloudy	
Cleveland, Ohio			30.12	765.0	66.4	19.1	77	SE	10	4.5		0	0			0	0	Clear	
Corsicana, Tex.			29.90	759.4	70	21.1	95	E	3	1.3			10s			0.16	4.1	Cloudy	
Davenport, Iowa			30.02	762.5	72	22.2	71	E	1	0.4		5ck	0			0	0	Fair	
Denison, Tex.			29.94	760.5	73	22.8	75	E	2	0.9			10s			0.01	0.3	Cloudy	
Denver, Col.	24.87	631.7	30.09	764.3	61	16.1	55	S	5	2.2		0	0			0	0	Clear	
Detroit, Mich.			30.08	764.0	70	21.1	75	SE	1	0.4		0	8s		SE	0	0	Fair	
Dodge City, Kan.	27.39	695.7	29.59	751.6	67	19.4	90	E	6	2.7		5ck	Haze	W		0	0	Fair	
Dubuque, Iowa			30.01	762.2	67	19.4	74	Calm	0	0		2ck	0	SE		0	0	Fair	
Duluth, Minn.			29.94	760.5	65	18.3	89	NE	1	0.4			10ks		SW	0	0	Cloudy	
Eastport, Me.			30.29	769.4	68	20.0	69	SW	4	1.8		0	0			0	0	Clear	
Erie, Pa.			30.12	765.0	72	22.2	58	S	6	2.7		2ck	2s			0	0	Fair	
Escanaba, Mich.			30.01	763.0	70	21.1	75	Calm	0	0		5ck	Haze			0	0	Fair	
Fort Gibson, Indian Ter.			29.90	759.4	74	23.3	76	NE	2	0.9		0	0			0	0	Clear	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.74	730.0	29.80	756.9	73	22.8	81	Calm	0	0			10s			0	0	Cloudy	
Fort Sully, Dakota	28.12	714.2	29.70	754.4	64	17.8	73	SE	7	3.1		1ck	2ks			0	0	Fair	
Galveston, Tex.			29.93	760.2	76	24.4	86	NE	6	2.7		2ck	5s	N		1.79	45.5	Cloudy	
Grand Haven, Mich.			30.06	763.5	73	22.8	63	E	6	2.7		0	Sm'e			0	0	Clear	
Indianapolis, Ind.			30.01	763.0	73	22.8	76	E	6	2.7		0	0			0	0	Clear	
Indianola, Tex.			29.91	759.7	79	26.1	82	E	11	4.9		10cs	0			1.22	31.0	Cloudy	
Jacksonville, Fla.			30.11	764.8	80	26.7	78	SE	4	1.8		0	0			0	0	Clear	
Keokuk, Iowa			29.94	760.5	72	22.2	75	E	4	1.8		0	0			0	0	Clear	
Key West, Fla.			30.06	763.5	83.0	28.3	74	Calm	0	0		8cs, hz.	1ks	SW		Inap.	Inap.	Cloudy	
Kittyhawk, N. C.			30.19	766.8	79	26.1	90	W	4	1.8		8k	0	W		0.50	12.7	Cloudy	
Knoxville, Tenn.			30.08	764.0	69	20.6	95	NE	1	0.4		1c	0	SE		0.03	0.8	Clear	
La Crosse, Wis.			30.02	762.5	63	17.2	88	S	1	0.4		5cs	0			0	0	Fair	
Leavenworth, Kan.			29.93	760.2	70	21.1	75	Calm	0	0		5k	0			0	0	Fair	
Louisville, Ky.			30.04	763.0	76	24.4	77	SE	4	1.8		0	0			0	0	Clear	
Lynchburg, Va.			30.16	766.1	69	20.6	90	NE	2	0.9			10s			0.07	1.8	Cloudy	
Malone, N. Y.			30.17	766.3	70	21.1	60	NE	2	0.9		8c	0	NW		0	0	Cloudy	
Marquette, Mich.			30.00	762.0	72	22.2	54	SW	6	2.7		0	0			0	0	Clear	
Memphis, Tenn.			30.00	762.0	69	20.6	90	NE	4	1.8		0	2s fog		SE	0.21	5.3	Fair	
Milwaukee, Wis.			30.07	763.8	70	21.1	75	SE	5	2.2		0	Fog			0	0	Clear	
Mobile, Ala.			29.99	761.7	78	25.6	73	Calm	0	0		5c	0			0	0	Fair	
Montgomery, Ala.			30.01	763.0	75.5	24.2	81	E	3	1.3		5c	Haze	SE		Inap.	Inap.	Fair	
Morgantown, W. Va.	29.08	738.6	30.19	764.5	68	20.0	60	Calm	0	0		0	0			Inap.	Inap.	Clear	
Mt. Washington, N. H.	24.21	614.9	30.57	776.5	52	11.1	72	E	10	4.5		2k	0	E		0	0	Fair	
Nashville, Tenn.			30.01	762.2	76	24.4	69	E	2	0.9		0	0			0.15	3.8	Clear	
New Haven, Conn.			30.28	769.1	70	21.1	71	NE	10	4.5		Haze	0			0	0	Clear	
New London, Conn.			30.31	769.9	72	22.2	67	N	3	1.3		2c	0			0	0	Clear	
New Orleans, La.			29.93	760.2	79	26.1	69	SE	3	1.3		1cs	0			0	0	Clear	
Newport, R. I.			30.31	769.9	68	20.0	74	NE	8	3.6		2c	0	W		0	0	Fair	
New York, N. Y.			30.26	768.6	67	19.4	79	NE	13	5.8			10s			0	0	Cloudy	
Norfolk, Va.			30.18	766.6	78	25.6	86	SW	2	0.9			10s			0.06	1.5	Cloudy	
North Platte, Neb.	27.01	686.0	29.45	748.0	71	21.7	89	SE	12	5.4		0	2s			0	0	Clear	
Omaha, Neb.	28.89	733.8	29.92	760.0	70	21.1	89	S	3	1.3		8ck	0	NW		0	0	Cloudy	
Oswego, N. Y.			30.25	768.3	69.5	20.8	67	SE	8	3.6		1cs	2s			0	0	Fair	
Pembina, Dakota			29.73	755.1	64	17.8	91	W	4	1.8		5k	2s	SW		0.23	5.8	Cloudy	
Philadelphia, Penn.			30.24	768.1	66	18.9	94	E	12	5.4			10s		E	0.01	0.3	Cloudy	
Pike's Peak, Colorado	18.08	459.1	30.29	769.4	36	2.2	71	NE	8	3.6		0	Haze		W	0	0	Clear	
Pittsburgh, Penn.			30.12	765.0	69	20.6	79	E	4	1.8		0	0			0.07	1.8	Clear	
Port Huron, Mich.			30.12	765.0	66	18.9	84	SE	3	1.3		2c	8s	SE		0	0	Cloudy	
Portland, Me.			30.32	770.1	68	20.0	74	Calm	0	0		0	Haze			0	0	Clear	
Portland, Oregon			30.07	763.8	56	13.3	93	Calm	0	0		1cs	0			0	0	Clear	
Punta Rassa, Fla.			30.07	763.8	83.5	28.6	76	E	5	2.2		5cs	0	S		0	0	Fair	
Rochester, N. Y.			30.19	766.8	70	21.1	61	SE	8	3.6			10s		SE	0	0	Cloudy	
Salt Lake City, Utah	25.66	651.8	29.99	761.7	67	19.4	28	Calm	0	0		0	0			0	0	Clear	
Sandy Hook, N. J.			30.24	768.1	68	20.0	84	NE	14	6.3			10s		NE	0	0	Cloudy	
San Diego, Cal.			29.94	760.5	66	18.9	94	S	4	1.8			10s		S	0	0	Cloudy	
San Francisco, Cal.			29.97	761.2	53	11.7	93	W	8	3.6			Fog			0	0	Foggy	
Santa Fé, N. M.	23.38	593.8	29.92	760.0	57	13.9	87	Calm	0	0		0	0			0.11	2.8	Clear	
Savannah, Ga.			30.11	764.8	86	30.0	72	SW	2	0.9		2c	Haze	S		0.11	2.8	Fair	
Shreveport, La.			29.98	761.5	73	22.8	76	NE	3	1.3		0	0			0	0	Clear	
Smithville, N. C.			30.15	765.8	81	27.2	78	S	7	3.1		5k	0	SW		0.28	7.1	Fair	
Springfield, Mass.			30.31	769.9	70	21.1	70	NE	4	1.8		2c	0			0	0	Clear	
St. Louis, Mo.			29.96	761.0	74	23.3	75	S	4	1.8		0	0			0	0	Clear	
St. Marks, Fla.			30.04	763.0	81	27.2	78	S	6	2.7		2cs	2ks	W	SW	0.19	4.8	Fair	
St. Paul, Minn.			29.81	757.2	67	19.4	73	SE	3	1.3		2c	8s	SW	SW	0	0	Cloudy	
St. Paul's Island, Alaska			29.80	756.9	41	5.0	91	Calm	0	0			10s			0	0	Cloudy	
Thatcher's Island, Mass.			30.33	770.4	63	17.2	94	N	2	0.9		0	0			0	0	Foggy	
Toledo, Ohio			30.07	763.8	72	22.2	67	E	2	0.9		5ck	Haze			0	0	Fair	
Tucson, Arizona	27.50	698.5	30.09	764.3	79	26.1		SE				1c	0	E		0	0	Clear	
Tybee Island, Ga.			30.09	764.3	82	27.8	83	S	5	2.2		8k	0	S		0	0	Fair	
Vicksburg, Miss.			29.97	761.2	73.5	23.1	76	SE	2	0.9		2ck	0			0	0	Fair	
Virginia City, M. T.	24.34	618.2	29.82	757.4	53	11.7	36	Calm	0	0		0	0			0	0	Clear	
Washington, D. C.			30.21	767.1	67.5	19.7	94	NE	6	2.7			10s			0.46	11.7	Cloudy	
Wilmington, N. C.			30.16	766.1	80	26.7	85	S	4	1.8		0	2ks		S	0.56	14.2	Fair	
Wood's Holl, Mass.			30.29	769.4	69	20.6	75	NE	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
Yankton, Dakota	28.65	727.7	29.87	758.7	71	21.7	71	S	5	2.2		0	0			Inap.	Inap.	Clear	
Yuma, Arizona			29.83	757.7	85	29.4		SW				1cs	0	SW		0	0	Clear	
Sub Series.																			
Kingston, Jamaica, W. I.			30.16	766.1	79	26.1	78	Calm	0	0		8c	8s		SE	0	0		James Gall.
St. Georges, Bermudas			30.11	764.8	81.5	27.5	81	NNW	20	8.9			8n			0.690	2.29	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Paramaribo, D. Guiana S.A			30.03	762.7	80	26.7	82	E			2	5ks?	6ks	E		0.100	3.30	½ Cloudy	C. J. Hering.
Batavia, Dutch Guiana S.A.	30.08	764.0			81.5	27.5		N								1.132	28.75		Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640.6			64.5	18.1	78	Calm	0	0		1ck	3s			0.27	6.9	Fair	Thomas Herran
York Factory, B. A.			30.30	769.6	70	21.1	66	W	3	1.3		3ck	0	W		0	0		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.09	764.3	77	25.0		NE			3					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Nova Scotian off Cape Race	W by N ½ N	11	30.21	767.3	54	12.2		SSW			4		Fog					Foggy	Capt. R. Hoffmann.

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.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			30.15	765.7	82.4	28.0	73	NNE			4		2			0	0	Clear	Charnot.
Algiers			30.17	766.3	81.3	27.4	74	N			2		0			0	0	Clear	Peter.
La Calle			30.15	765.7	85.3	29.6	61	NE			1		7			0	0	Cloudy	Kunts.
Tunis			30.15	765.9	90.3	32.4	47	NE			3		0			0	0	Clear	Jacques.
Sfax			30.19	766.7	87.8	31.0	59	SE			1		1			0	0	Clear	Chauvey.
Saida			30.10	764.6	87.8	31.0	22	N			1		1			0	0	Clear	Millot.
Tebessa			30.16	766.0	87.8	31.0		N			2		1			0	0	Clear	Colin.
Geriville			30.09	764.3	89.6	32.0	25	WSW			2		2			0	0	Clear	Lemaillot.
Laghouat			30.08	764.1	105.8	41.0		NE			2		0			0	0	Clear	Guyot.
Biskra			30.15	765.8	97.0	36.1		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			30.08	763.9	87.4	30.8	52	NE			1		6			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.05	763.2	80.6	27.0	66	NE			1		4			0	0		Dr. Wierzbiski.
Eperies			29.94	760.1	88.2	31.2	61	S			2		SES		E	0	0		Julius Mikolik.
Gratz	28.84	732.6	29.99	761.6	81.6	27.0	41	SW			3		2			0.248	6.3		Andreas Rospini.
Hermannstadt	28.63	727.2	29.96	760.9	84.9	29.4	44	ESE			1		2			0	0		Prof. Reissenberger.
Kremsmünster	28.82	732.1	30.11	764.7	77.0	25.0	50	Calm			0		2			0	0		Prof. C. Wagner.
Lemberg			29.93	760.2	83.3	28.5	80	NW			1		3			Blank	Blank		Dr. T. Stanecki.
Nylregyhaza																			Habsuda Daniel.
Pola			30.08	764.0	82.2	27.9	70	NW			2		1k			0	0		I.R.Hydrographic Office
Szegedin			30.00	762.1	81.5	27.5	75	Calm			0		2			0	0		Karl Stancel.
Trieste			30.09	764.2	83.1	28.4	74	Calm			0		1			0	0	Clear	Prof. V. Farolfi.
Vienna			30.07	763.6	82.0	27.8	41	N			1		3			0	0		I. R. Central Met. Obs'y

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.10	764.6	69.4	20.8	60	SW			2		9		WSW	0.020	0.50		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.61	752.1	61.2	16.2		SW	22	9.8			3			0.260	6.60	Blue sky	William Boswell.
Ardrossan			29.76	755.9	61	16.1		W			5		7					*D. clouds	William McNeil.
Armagh, Observatory			29.84	757.9	60.4	15.8		SW	12	5.4			7					*D. clouds	S. Cad, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.88	758.9	62.2	16.8		W			1–2		7					*D. clouds	J. Dreyer.
Bradford			29.88	758.9	62.9	17.2		W			2		6			0.13	3.3	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.00	762.0	82.0	27.8		NE			2		8					Overcast	Sergt. J. F. Halanen, A. H. C.
Cambridge			30.01	762.2	70.0	21.1		W					9						Mr. Pain, F. B. M. S.
Cardington			30.01	762.2	64.0	17.8		SW			3		10					Overcast	John McLaren.
Carlisle			29.82	757.4	61.8	16.6		SW			6		7			0.53	13.5	*D. clouds	T. Bel, for J. Carmell.
Chatham, School M. E			30.03	762.7	68.5	20.3		SW			4		8					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.65	727.7	30.16	766.1	54.2	12.3		SSW			3		10					Rain and fog	R. E. Power.
Donaghadee			29.82	757.4	62	16.7		W			4		5					*D. clouds	J. Mac Gowan.
Dover			30.06	763.5	65	18.3		WSW			3		6					¾ clouded	J. Costelio.
Eccles (near Manchester)			29.89	759.2	66.6	19.2		SW	5.0	2.2			3					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.05	763.3	59.8	15.4		SSW			3		10					Raining	The Staff.
Fort Napier, (Natal)	27.75	704.8	29.99	761.7	58.5	14.7		E			1		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	79	26.1		W			3		5					*D. clouds	
Galway, Queen's College			29.97	761.2	63	17.2		SW			2		2					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.12	765.0	80.0	26.7		E			3		1					*D. clouds	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.74	755.4	56.2	13.4		W			4		9					*D. clouds	Lewis Stuart.
Great Yarmouth			29.99	761.7	67	19.4		WSW			4		4					*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y			30.04	763.0	69.0	20.6		WSW			3		9					Drizzling	The Staff, for G. B. Airy
Guernsey			30.11	764.8	68	20.0		WSW			2		6					*D. clouds	Dr. S. E. Hoskins.
Hélston			30.03	762.7	63	17.2		SW			4		10n					Raining	M. P. Moyle.
Holyhead			29.80	759.2	62	16.7		SSW			5		2					Blue sky	John Tilston.
Kew, Observatory			30.03	762.7	68.0	20.0		SW	23	10.3			9					*D. clouds	The Staff.
Kingstown			29.88	758.9	62	16.7		WSW			3		9					Overcast	George Mitchell.
Leicester Museum			29.98	761.5	62.2	16.8		SW			1		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			30.03	762.7	86.0	30.0		N			1		2k					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			29.56	750.8	60	15.6		SW			3		10					Overcast	W. D. Penny.
Nassau, (Bahamas			30.13	765.3	85.2	29.6		E			5		6					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.91	760.5	65.7	18.7		SW			5		9ck,ks		SW	0.057	1.45	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.95	760.7	62.7	17.1		SW			4		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.90	761.7	64	17.8		SW			2		10					Overcast	J. Lucas.
Plymouth			30.06	763.5	61	16.1		SW			1		10					Raining	John Merrifield.
Roche's Point			29.92	760.0	61	16.1		SW			4		5					Fine	W. Kennedy.
Saint Ann's Head			29.96	761.0	61	16.1		SW			3		10					Raining	John C. Walker.
Saint Helier, Jersey			30.13	765.3	70.4	21.3		SSW			3		8					¾ clouded	A. P. Amy.
Sandwick Manse Orkneys			29.43	747.5	53.8	12.1		W	40	17.9			10					Drizzling	Rev. C. Clouston, LL. D.
Scarborough			29.85	758.2	64.8	18.2		WSW			3		5					*D. clouds	F. Shaw.
Scutari Cemetery Turkey			29.85	758.4	90.0	32.2		NE			2		2					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.89	759.2	67.0	19.4		WSW			2		7			0	0	Overcast	W. F. Cooper.
Silloth Rectory			29.82	757.4	66.4	19.1	68	SW			5		3			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.88	758.9	61.5	16.4		W			4		7						Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			29.52	749.8	56	13.3		W			7		5					*D. clouds	John Smith.
Strathfield Turgiss			30.09	764.3	66.2	19.0		SW			3		10					Showery	Rev. Charles H. Griffith.
Thurso			29.44	747.8	58	14.4		W			6		6					*D. clouds	John Trotter.
Truro, Royal Institution			30.04	763.0	63	17.2		SW			4		10					Raining	W. Newcombe.
Valencia, Observatory			29.93	760.2	60.2	15.7		WNW	14	6.3			5					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, Isle of Man					56	13.3		SSW			7		0						Thomas Dawson.
Cape Good Hope, Obs'y			30.21	767.3	62.5	16.9	61	W	10	4.5		4	2						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			30.13	765.3	61.0	16.1	87	NW			1		10k			0	0	Hazy	Francis Abbott, F.R.A.S.
Leith, Restaurig Parks			29.74	755.4	57.9	14.4		W			5		8k			0.49	12.4	Cloudy	Andrew Gibb.
Mauritius, Observatory			30.16	766.1				SE	10.8	4.8						0.19	4.8		C. Meldrum
Melbourne, Observatory			30.20	767.1	51.0	10.6	83	NE	5	2.2			10			0.03	0.8	Foggy	R. L. J. Ellery.
Monach Lighthouse, Hebrides			29.59	751.6	57	13.9		W			6	5	0	W		0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.12	739.6	51	10.6		SW			4		10			Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in Mauritius, unknown. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,2[illegible]0 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			29.91	759.7	67.1	19.5	52	WSW			2		10						
Fanoe			29.91	759.8	61.9	16.6	70	WSW			6		9						
Godthaab, Greenland			29.35	745.4	43.5	6.4		ENE			4		10					Raining	
Stykkisholm, Iceland			29.54	750.4	52.0	11.1	73	W			2		8						
Thorshavn, Faröe			29.02	737.0	55.6	13.1	75	NW			4		7						
Vestervig			29.81	757.1	59.0	15.0	87	SW			7		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 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			30.27	768.8	71.1	21.7	55	SW			3	10c		SW		0	0	Covered	Normal School.
Amiens																			Normal School.
Avignon			30.12	765.1	86.9	30.5	38	N			3								Normal School.
Bar-sur-Seine			30.19	766.8	73.9	23.3	43	WNW			2		5		SW	0	0	Clear	C. Saillard.
Beaumette, (near Angers)			30.15	765.8	73.2	22.9	47	SW	10 3	4.6					SW	0	0	Cloudy	Beaumette Observatory
Beauvais			30.17	766.3	74.5	23.6	43	SW			3		8		WSW	0.039	1.00	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.41	769.8	78.8	26	48	N			2		1		W	0	0	Clear	Normal School.
Bourges			30.19	766.9	73.4	23	83	SSW			2		0			0	0	Clear	Normal School.
Brest			30.08	764.0	70.0	21.1	69	SSW			5		2k		SSW	0.0.0	0.50		Naval Observatory.
Carcassonne			30.17	766.4	76.6	24.8	55	W			1		0			0	0	Clear	Normal School
Caen																			Normal School.
Chartres			30.22	767.6	70.3	21.3	76	W			2		10		W	0	0	Covered	Normal School.
Châlons-sur-Marne			30.19	766.8	71.6	22.0	50	W			3		5k		E	0.118	3.0	Cloudy	Normal School.
Clermont			30.14	765.6	76.8	24.9	56	E			2		2			0	0	Slightly cl'dy	Puy de Dome Obs'y.
Commercy			30.19	766.7	70.9	21.6	54	W			2		5k		W	0.047	1.2	Cloudy	Normal School
Commune de Greasque*			30.19	766.9	90.5	32.5	22	NW			2		0			0	0		M. King.
Grenoble			30.01	762.2	77.7	25.4	49	NW			6		2		E	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.35	770.9	75.6	24.2	49	S			2		8		NE	0.016	0.4	Very cloudy	Normal School.
Le Mans			30.20	767.1	70.2	21.2	58	W			2		5		SW	0	0	Cloudy	Normal School.
Lons-Le-Saulnier			30.15	765.9	72.1	22.3	56	NW			2		2		NW	0	0	Slightly cl'dy	Normal School.
Mâcon			30.41	772.4	73.6	23.1	89	W			2		0			0	0	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			30.12	765.1	72.9	22.7	58	SW			2		2		NE	0	0	Slightly cl'dy	Normal School.
Nismes			30.18	766.5	88.2	31.2	33	W			4		0			0	0	Clear	Normal School.
Orleans																			Normal School.
Paris, Observatory			30.18	766.5	72.1	22.3	42	W			2		7k		SW	0.003	0.07	Very cloudy	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			30.24	768.2	78.3	25.7	46	WSW			3		2			0	0	¼ covered	Naval Observatory.
Rouen			30.16	766.0	68.7	20.4	54	S			2		5		S	0.110	2.8	Cloudy	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School
Villefranche			30.27	768.8	81.5	27.5	75	E			2		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.89	759.3	81.0	27.2													L'Abbé Marchesi.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.40	772.1	73.8	23.2	64	SSW	9.3	4.17			2		SW	0	0		—. Faiguère.
Montsouris, Paris			30.17	766.4	74.1	23.4	46	SW			3		6k		SW	0.059	1.5		Montsouris Observ'tory.
Perpignan			30.15	765.8	80.4	26.9	53	N	5.6	2.50			0			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.61	548.9			64.0	17.8		W			1		2					Clear	M. Baylac.
Pic du Midi, (Plantade)	22.87	581.0			66.2	19.0		W			2		2			0	0	Clear	General de Nansouty.
Saint Maur, (near Paris)			30.18	766.5	77.0	25.0	40	SW			2		6			0.035	0.9	Cloudy	E. Renou.
Toulouse			30.28	769.2	76.5	24.7	57	NW			2		3			0	0		Toulouse Observatory
Tours			30.20	767.1	73.8	23.2	44	W			1		4		W	0.028	0.7		C. Marquet.
Versailles, (near Paris)			30.13	765.3	72.3	22.4	47	W			2		7			0	0	Fair	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

NOTE.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont Louis is 1,580.40 meters, or 5,204.8 feet; Clermont 388 m., or 1,272.4 ft; Commune de Grésque, 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135, mm. has been added. * 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			30.09	764.3	76.8	24.9	47	W			6		4	W		0	0		Prof. T. Hoh.
Berlin			30.07	763.7	75.4	24.1	41	W			3		4			0	0		Prof. Arndt.
Breslau			30.13	765.4	78.1	25.6	37	NW			7		2			0	0		Dr. P. Neugebauer.
Carlsruhe			30.12	765.1	77.7	25.4	54	SW			5		4			0.193	4.9		A. Senz.
Cassel			30.14	765.6	75.7	24.3	42	WSW			4		4	SW		0	0		Dr. H. Möhl.
Emden			29.96	760.9	69.1	20.6	54	WSW			6		9			0	0		Prof. Prestel.
Frankfort on the Main			30.14	765.6	79.3	26.3	31	W			4		3			0	0		Physical Society.
Friedrichshafen			30.11	765.6	75.6	24.2	67	WSW			4		3			0	0		M. Wilhelm.
Hamburg			30.02	762.5	69.3	20.7	59	WSW			6		10k,n			0.024	0.6	Squally	Captain F. Hegemann
Kiel			29.96	761.0	68.7	20.4	52	W			6		10			0.098	2.5		Prof. G. Karston.
Königsberg, (Prussia.)			29.93	760.3	76.1	24.5	58	W			5		2			0	0		Prof. E. Luther.
Köslin			30.02	762.5	71.4	21.9		W			4		2			0	0		H. Müller.
Leipsic			30.10	764.6	79.2	26.2	41	SW			4		4	W		0	0		Prof. Bruhns.
Memel			29.91	759.6	68.4	20.2	84	W			4		6,ck			0	0	Squally	Reinbrecht & Skalweit.
Münster			30.02	762.4	71.6	22.0	66	SW			5		6			0	0		Prof. E. Heis.
Neuhirwasser			30.09	764.2	70.5	21.4	83	ENE			1		10	W		0.087	2.2		A. Lothes.
Posen			30.08	764.0	78.8	26.0	39	W			8		5			0	0		Dr. Magener.
Strassburg, (In Alsace)			30.14	765.6	80.4	26.9	39	SW			2		5	SW		0	0		Dr. Schur.
Stuttgart			30.14	765.5	77.0	25.0	45	N			2		4			0	0		Prof. Schoder.
Thorn			30.00	761.9	82.9	28.3	38	W			5		4			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.13	765.3	73.2	22.9	44	W			6		6			0	0		Prof. Flesch.
Wustrow, Naval School			30.08	763.9	69.3	20.7	64	WSW			5		4			0.167	1.7		E. F. Schütz.

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	759.9	93.2	34.0		NE										Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.10	764.4	86.7	30.4	49	NW	0.7	0.3			1			0	0		
Padua			30.07	763.7	81.5	27.5	54	E	4.3	1.9			5	W		0	0		
Vicenza			30.08	764.0	84.2	29.0	56	N	1.3	0.6			1	E		0	0		
Verona			30.04	763.1	87.8	31.0	44	NW			2		0			0	0		
Bergamo	28.77	730.8	30.02	762.6	82.4	28.0	51	S			2		0			0	0		
Domodossola	29.07	738.3	30.05	763.2	80.6	27.0	56	SW			6		1			0	0		
Milan			30.05	763.2	90.5	32.5	52	S			1		1	S		0	0		
Pavia			30.08	764.0	84.2	29.0	48	SE			2		0			0	0		
Moncalieri			30.10	764.4	81.1	27.3	63	ESE	0.7	0.3			1			0	0		
Mondovi	28.25	717.5	30.08	764.0	80.4	26.9	53	NW			2		2			0	0		
Porto Maurizio			30.16	766.0	81.3	27.4	68	ESE			2		1			0	0		
Genoa			30.11	764.8	81.7	27.6	62	SW	3.8	1.7			0			0	0		
Piacenza			30.10	764.4	84.6	28.9	48	N	1.8	0.8			0			0	0		
Parma			30.07	763.7	88.0	31.1	42	NNE			2		1			0	0		
Bologna			30.19	766.9	87.8	31.0	40	SE			1		2	W		0	0		
Florence			30.10	764.4	87.4	30.8	27	N			2		0			0	0		
Leghorn			30.10	764.6	81.3	27.4	57	WNW	3.8	1.7			0			0	0		
Siena	28.91	734.2	30.06	763.4	83.2	28.5	35	NW	0	0			1	SW		0	0		
Urbino	28.60	726.5	30.11	764.7	79.7	26.5	57	N			4					0	0		
Ancona			30.11	764.9	82.8	28.2	66	NNW			4		1			0	0		
Grosseto			30.09	764.3	89.6	32.0	39	N			4		2			0	0		
Rome			30.07	763.7	90.0	32.2	44	W	4.9	2.2			1			0	0		
Naples, O. U.			30.07	763.8	87.4	30.8	63	S			4		3	ENE		0	0		
Lecce			30.04	763.0	84.2	29.0	51	NW	17.4	7.8			5			0	0		
Cosenza			30.05	763.2	90.7	32.6	68	SE	6.5	2.8			4			0	0		
Riposto, (Sicily)			29.98	761.6	85.0	29.8	52	E			2		4	W		0	0		
Palermo			30.04	762.9	82.0	27.8	60	ENE	6.3	2.8			1			0	0		
Caltanissetta	28.10	713.8	29.95	760.8	87.1	30.6	28	SW			1		0			0	0		
Sub-Series.																			
Naples, S. R.			30.09	764.3	88.7	31.5	53	SSW	6.9	3.1			0	SE		0	0		Prof. F. Brioschi.
Pesaro			30.17	766.2	79.7	26.5	80	NE	19.5	8.72			0			0	0		L. Guidi.

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			30.12	765.1	66.2	19.0		WNW			4								
Groningen			29.96	761.0	66.2	19.0		SW			6								
Helder			30.01	762.2	64.9	18.3		SW			5								
Utrecht			30.03	762.8	71.6	22.0	59	WSW			5		5					Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.49	749.0	53.8	14.9	80	SSW	30.4	13.6			10			0.630	16.0		
Brönö			29.41	747.0	64.4	18.0	46	SE	45	20			9			0.244	6.2		
Christiania			29.59	751.5	61.9	16.6	75	S	11.9	5.3			10			0.241	6.2	Light rain	
Tromsö			29.63	752.6	62.6	17.0		N	2	1			3			0	0		

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

PORTEUGUSE 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,)			30.32	770.0	78.1	25.6	79	W	3.2	1.45			3			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.03	762.8	99.5	37.5	11	NW	3.0	1.33			0			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.11	764.7	77.4	25.2	66	SW	4.2	1.88			3			0	0		Capt. D. A. da Cunha.
Lisbon			30.02	762.4	86.2	30.1	42	SW	4.9	2.2			1			0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness withou distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level, excepting Lisbon. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by 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			29.97	761.3	81.7	27.6	47	WNW	9	4			1						Astronomical Obs.
Wilna			29.93	760.3	74.3	23.5	69	SSW	9	4			10					Raining	Astronomical Obs.
Dorpat			29.83	757.6	76.5	24.7	72	SSE	7	3			10			Blank	Blank		Physical Cabinet.
St. Petersburg			29.93	760.2	69.8	21.0	87	ESE	9	4			8						Central Physical Obs.
Kuopio			29.93	760.1	61.7	16.5	86	SE	22	10			10						Ch. Forsten.
Kieff			29.99	761.7	87.1	30.6	30	S	4	2			1					Smoke-haze	Physical Cabinet.
Nikolaiev			30.09	764.2	96.1	35.6	20	NE	13	6			0						Kurdakof.
Kertch			29.92	760.0	82.9	28.3	51	ESE	9	4			8						Lagorio.
Moscow			30.13	765.4	83.5	28.5	52	SSW	4	2			2						Meteorological Obs.
Lugan			29.95	760.6	88.7	31.5	30	E	34	15			3						Meteorological Obs.
Archangel			30.13	765.4	73.8	23.2	89	Calm	0	0			0						Ogorodnikof.
Tiflis	28.50	723.8	29.81	757.2	92.5	33.6	29	S	9	4			1						Physical Observatory.
Astrakhan			29.92	759.9	85.6	29.8	34	N	11	5			1						Sebastianof.
Kasan			30.07	763.7	80.6	27.0	46	NNE	13	6			0						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	29.10	739.0	30.00	761.9	75.4	24.1	47	NE	9	4			5						Meteorological Obs.
Nukuss			29.80	756.9	83.3	28.5	37	NE	4	2			0						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul			29.69	754.1	64.4	18.0	85	NW	18	8			10						Meteorological Obs.
Yeniseisk			29.64	752.8	66.4	19.1	76	WSW	2	1			2						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.78	756.4	91.0	32.8	66	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.80	757.0	70.9	21.6	97	SE	16	7			10						
Nikolaievsk, on the Amoor																			

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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 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	98.8	37.1	24	S	6.0	2.67		1	0	SW		0	0	Light clouds	Royal Observatory.
San Fernando			30.09	764.3	90.3	32.4	42	ESE	16.3	7.3		0	0			0	0		The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			29.91	760.4	68.4	20.2	46	SE			4		0			0	0		
Umea			29.72	754.8	65.1	18.4	69	E			4		9			0	0		
Hernosand			29.61	752.2	55.0	12.8	98	SE			4		10					Raining	
Stockholm			29.68	753.9	70.3	21.3	67	SW			4		5			0.130	3.4		
Visby			29.87	758.7	66.6	19.2	85	W			6		7			0.140	3.7		
Sub-Series.																			
Upsala			29.66	753.4	68.4	20.2	66	SW	12.3	5.5			6		SW	0.170	4.35		Dr. Hildebrandsson.

Note.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall 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 or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0 - 10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower From —	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	730.4	30.10	764.6	82.9	28.3	43	S			2		0			0	0	Clear	The Observatory.
Zurich	28.59	726.1	30.15	765.8	77.5	25.3	61	W			1		2			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +2.6 mm; Thermometer, +5.9 cent.; Relative Humidity, —10 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

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

Station.	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0 - 10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower From —	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			29.90	759.4	84.2	29.0	61	NNW	13	6.0			6		N	0	0		
Fao, (Persian Gulf)			29.72	755.0	96.1	35.6		SE			3		0						
Salonica			30.01	762.3	97.7	36.5		S			1		0						
Valona			30.10	764.4	82.8	28.2		W			1		0						
Varna			29.96	761.0	78.8	26.0		NE			3		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.79	756.6	88.9	31.6	52	W			2		38		E			Cloudy	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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

Station.	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0 - 10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower From —	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			30.09	762.0	77.5	25.3		SW	8	3.6			0			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.18	766.6	76	24.4		NW	3	1.3		0	5s		NW	0	0	Fair	W. R. Bigg.
*Chatham, N. B			30.07	763.8	69	20.6	84	SW	4	1.8		10c	0	SW		0	0	Fair	G. A. Blair.
Charlottetown P. E. Island			30.12	765.0	72	22.2	71	W	5	2.2		0	0			0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			30.10	764.5	76.7	24.8	68	SW			3	10k	0			0	0	Threatening	James Smith, M. A.
Dalhousie, N. B.			30.05	763.3	69.2	20.7	79	W			1					0	0	Clear	H. A. Johnson
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			30.15	765.8	70.1	21.2	74	SE	1	0.4		9ck	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.82	757.4	55	12.8	99	SW	3	1.3		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.07	763.8	79.2	26.2	75	Calm			0	0	0			0	0	Dry	H. J. Strang, M. A.
Granton, Ontario	29.02	737.1	30.08	764.0	71.2	21.8		S			1	0	0			0	0	Clear	James Grant.
*Halifax, N. S.			30.14	765.5	70	21.1	66	NW	3	1.3		2cs	0			0	0	Fair	F. Allison, M. A.
*Kingston, Ontario			30.15	765.8	71	21.7	91	S	9	4.0		10cs	0			0	0	Cloudy	S. Woods, M. A.
Little Glace Bay, N. S.			30.08	764.0	75.6	24.2	58	SW	4	1.8		0	0			0	0	Clear	C. H. Rigby.
*Montreal, Quebec			30.13	765.3	69	20.6	76	SW	5	2.2		8k	Haze	W		0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.11	764.8	75	23.9	74	S	4	1.8		8k	2n	SW	SW	0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario			30.10	764.5	72	22.2	87	Calm	0	0		2ck	5ks	W	W	0	0	Fair	Rev. R. Mosley.
Port Dover, Ontario			30.10	764.5	72	22.2	90	S	6	2.7		8k	0	SW		0	0	Fair	H. Morgan.
Port Hastings, N. S.			30.12	765.0	72.4	22.4		Calm	0	0						0	0	Fine	Peter Grant.
Port Stanley, Ontario			30.09	764.3	69	20.6	92	Calm	0	0		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			30.12	765.0	72	22.2	76	Calm	0	0		8k	0			0	0	Fair	Capt. Ashe, R. N.
St. John, N. B.			30.18	766.6	65	18.3	71	SE	5	2.2		4k	0			0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			30.06	763.5	73	22.8	78	S	4	1.8		Haze	Haze			0	0	Hazy	K. Stewart.
Stayner, Ontario			30.7	763.8	75	23.9	55	Calm	0	0		10k	0	W		0	0	Cloudy	R. J. Cole.
Stratford, Ontario	23.84	732.5	30.09	764.3	63.2	17.3	96	Calm	0	0		2cs	0	SW		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			30.12	765.0	76	24.4	67	SW	6	2.7		0	0			0	0	Clear	T. C. Hill.
*Toronto, Ontario			30.11	764.8	70	21.1	82	Calm	0			10ks	0	SW		0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.11	764.8	67.8	19.9	98	E	1	0.4		0	2ks			0	0	Fine	J. Montgomery
Sub-Series.																			
St. Johns, Newfoundland			30.16	766.1	70	21.1	66	W				0	0			0	0	Clear	John Delaney.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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	70	21.1	61	S	2	0.9		10k	0	S		0	0	Cloudy	
Alpena, Mich.			30.00	762.0	69	20.6	90	Calm	0	0		0	0			0	0	Clear	
Atlantic City, N. J.			30.17	766.3	71	21.7	90	E	10	4.5		2cs	8s	W	E	Inap.	Inap.	Cloudy	
Augusta, Ga.			30.11	764.8	77	25.0	82	Calm	0	0		5k	0	W		0.18	4.6	Fair	
Baltimore, Md.			30.18	766.6	70	21.1	95	NE	3	1.3			10n			0.18	4.6	Light rain	
Barnegat, N. J.			30.17	766.3	75	23.9	81	S	5	2.2		5ck	2s	NW		0.24	6.1	Cloudy	
Bismarck, Dakota	28.04	712.2	29.60	751.8	66	18.9	54	SE	3	1.3		0	0			0	0	Clear	
Boston, Mass.			30.22	767.6	71	21.7	57	W	4	1.8			Fog			0	0	Foggy	
Breckenridge, Minn.			29.86	758.4	67	19.4	80	E	8	3.6		0	0			0	0	Clear	
Buffalo, N. Y.			30.03	764.0	73.5	23.1	76	SW	4	1.8			10ks		SW	0	0	Cloudy	
Burlington, Vt.			30.16	766.1	73	22.8	72	S	7	3.1		2ck	5s			0	0	Cloudy	
Cairo, Ill.			30.01	762.2	70	21.1	84	E	6	2.7		5c	5s		SE	0.04	1.0	Cloudy	
Cape Hatteras, N. C.			30.06	763.5	81	27.2	78	NW	4	1.8		0	5ks		N	0.01	0.3	Fair	
Cape Henry, Va.			30.08	764.0	82	27.8	75	Calm	0	0		2c	Haze			0	0	Fair	
Cape Lookout, N. C.			30.16	766.1	80	26.7	82	N	4	1.8		5ck	2k	N	N	0	0	Fair	
Cape May, N. J.			30.14	765.5	74	23.3	90	E	12	5.4			10s		SE	0	0	Cloudy	
Charleston, S. C.			30.11	764.8	83	28.3	74	SE	4	1.8		0	5ks		SE	0	0	Fair	
Cheyenne, Wyoming	24.02	610.1	29.96	761.0	59	15.0	23	NW	12	5.4		0	1s			0	0	Clear	
Chicago, Ill.			29.96	761.0	75	23.9	76	Calm	0	0		5k	Sm'e	S		0	0	Fair	
Cincinnati, Ohio			30.00	762.0	76	24.4	81	SE	5	2.2		5ck	2ks	SE	SE	0.07	1.8	Fair	
Cleveland, Ohio			30.08	764.0	72	22.2	81	E	4	1.8		0	0			0	0	Clear	
Corsicana, Tex.			29.86	758.4	72	22.2	90	NE	1	0.4		5cs	2s	NE		0	0	Cloudy	
Davenport, Iowa			29.97	761.2	74	23.3	76	Calm	0	0		0	Sm'e			Inap.	Inap.	Clear	
Denison, Tex.			29.91	759.7	74	23.3	81	SE	3	1.3		0	1s			0	0	Clear	
Denver, Col.	24.77	629.2	29.99	761.7	62	16.7	50	S	3	1.3			8s			0	0	Cloudy	
Detroit, Mich.			30.05	763.3	72	22.2	85	SE	3	1.3		0	Sm'e			0	0	Clear	
Dodge City, Kan.	27.34	694.4	29.53	750.0	67	19.4	90	SW	12	5.4			10n			Inap.	Inap.	Light rain	
Dubuque, Iowa			29.95	760.7	74	23.3	81	SE	4	1.8		0	Haze			0	0	Clear	
Duluth, Minn.			29.85	758.2	68	20.0	79	N	2	0.9			10s		N	0.66	16.8	Cloudy	
Eastport, Me.			30.15	765.8	65	18.3	68	S	4	1.8		8ck	0	N		0	0	Fair	
Erie, Pa.			30.05	763.3	76	24.4	72	S	4	1.8		4k	Sm'e	W		0	0	Fair	
Escanaba, Mich.			29.96	761.0	72	22.2	80	S	6	2.7		8ck	Haze	SW		0	0	Fair	
Fort Gibson, Indian Ter.			29.86	758.4	75	23.9	76	NE	3	1.3		0	0			0	0	Clear	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.70	729.0	29.75	755.6	75	23.9	76	N	4	1.8		5ck	2s	N		0	0	Cloudy	
Fort Sully, Dakota	28.12	714.2	29.70	754.4	64	17.8	73	SE	7	3.1		1ck	2ks	NW		0	0	Fair	
Galveston, Tex.			29.87	758.7	79	26.1	82	NE	10	4.5		1k	0			0	0	Clear	
Grand Haven, Mich.			30.00	762.0	76	24.4	76	S	3	1.3		1c	Sm'e			0	0	Clear	
Indianapolis, Ind.			30.01	762.2	72	22.2	80	NE	3	1.3		0	5s		SE	0	0	Fair	
Indianola, Tex.			29.88	758.9	80	26.7	86	Calm	0	0			10s			0	0	Cloudy	
Jacksonville, Fla.			30.05	763.3	82	27.8	74	NE	4	1.8		8k	0	SE		0	0	Fair	
Keokuk, Iowa			29.89	759.2	72	22.2	80	E	5	2.2		0	0			0	0	Clear	
Key West, Fla.			30.01	762.2	75.8	24.3	86	E	7	3.1			1n		E	0.42	10.7	Light rain	
Kittyhawk, N. C.			30.14	765.5	78	25.6	90	Calm	0	0		5k	0	W		0	0	Fair	
Knoxville, Tenn.			30.10	764.5	69	20.6	95	NE	4	1.8			10ks		SW	0.66	16.8	Cloudy	
La Crosse, Wis.			29.92	760.0	70	21.1	84	S	4	1.8		5ck	0			0	0	Fair	
Leavenworth, Kan.			29.87	758.7	72	22.2	80	Calm	0	0		0	0			0	0	Clear	
Louisville, Ky.			30.03	762.7	75	23.9	77	S	4	1.8		5cs	0			0.22	5.6	Fair	
Lynchburg, Va.			30.14	765.5	74	23.3	88	NE	2	0.9			10s			0.02	0.5	Cloudy	
Malone, N. Y.			30.09	764.3	73	22.8	68	SW	5	2.2		10k	0	SW		0	0	Cloudy	
Marquette, Mich.			29.92	760.0	73	22.8	71	S	1	0.4		0	0			0	0	Clear	
Memphis, Tenn.			29.98	761.5	71	21.7	83	E	4	1.8		5cs	5s	SE	SE	0.36	9.1	Cloudy	
Milwaukee, Wis.			30.00	762.0	72	22.2	85	SW	3	1.3		0	Fog			0	0	Clear	
Mobile, Ala.			29.97	761.2	74	23.3	95	E	14	6.3			10n		SE	2.28	57.9	Light rain	
Montgomery, Ala.			30.03	762.7	73	22.8	90	E	6	2.7		10cs	Haze	S	E	0.10	2.5	Threatening	
Morgantown, W. Va.	29.08	738.6	30.08	764.0	76	24.4	72	Calm	0	0		2c	0	SW		0	0	Fair	
Mt. Washington, N. H.	24.11	612.4	30.47	773.9	52	11.1	66	N	11	4.9		0	Haze			0	0	Clear	
Nashville, Tenn.			30.02	762.5	77	25.0	72	E	2	0.9		2cs	0			0.27	6.9	Clear	
New Haven, Conn.			30.22	767.6	65	18.3	78	NE	5	2.2			10s		NE	5	0	Cloudy	
New London, Conn.			30.23	767.8	70	21.1	66	N	3	1.3		0	0			0	0	Clear	
New Orleans, La.			29.91	759.7	75	23.9	85	S	12	5.4			10n		S	0.53	13.5	Light rain	
Newport, R. I.			30.23	767.8	68	20.0	69	SE	2	0.9		0	0			0	0	Clear	
New York, N. Y.			30.21	767.3	70	21.1	79	NE	7	3.1		5ck	5ks	SW		0	0	Cloudy	
Norfolk, Va.			30.13	765.1	82	27.8	78	S	1	0.4		8c	0			0.07	1.8	Fair	
North Platte, Neb.	26.91	683.5	29.32	744.7	71	21.7	67	S	16	7.2		8ck	2s	W		0.10	2.5	Cloudy	
Omaha, Neb.	28.83	732.3	29.85	758.2	71	21.7	85	Calm	0	0		0	Haze			0	0	Clear	
Oswego, N. Y.			30.13	765.3	74.5	23.6	76	SE	4	1.8			10ks		SW	0	0	Cloudy	
Pembina, Dakota			29.77	756.1	57	13.9	87	SE	4	1.8		0	0			0	0	Clear	
Philadelphia, Penn.			30.18	766.6	69	20.6	90	E	8	3.6			10s		NE	0.08	2.0	Cloudy	
Pike's Peak, Colorado	18.03	458.0	30.24	768.1	38	3.3	71	N	4	1.8		5ck	0			0.07	1.8	Fair	
Pittsburgh, Penn.			30.08	764.0	74	23.3	81	SE	2	0.9		1c	0	SW		0	0	Clear	
Port Huron, Mich.			30.07	763.8	67	19.4	90	Calm	0	0		1c	Haze	S		0	0	Fair	
Portland, Me.			30.18	766.6	67	19.4	64	W	2	0.9		0	Haze			0	0	Clear	
Portland, Oregon			30.04	763.0	62	16.7	77	Calm	0	0			8s		NW	0	0	Cloudy	
Punta Rassa, Fla.			30.03	762.7	79.0	26.1	80	E	10	4.5		5cs	0	NW		0.11	2.8	Fair	
Rochester, N. Y.			30.10	764.5	72	22.2	75	S	6	2.7			10s		S	Inap.	Inap.	Cloudy	
Salt Lake City, Utah	25.53	648.5	29.86	758.4	73	22.8	34	Calm	0	0		5cs	2s	W	SE	0	0	Fair	
Sandy Hook, N. J.			30.19	766.8	70	21.1	90	E	7	3.1			10ks		E	0	0	Cloudy	
San Diego, Cal.			29.91	759.7	67	19.4	79	S	8	3.6			10s		S	0	0	Cloudy	
San Francisco, Cal.			29.91	759.7	53	11.7	93	SW	8	3.6			Fog			0	0	Foggy	
Santa Fé, N. M.	23.34	592.8	29.88	758.9	57	13.9	75	SE	1	0.4		5c	0			Inap.	Inap.	Fair	
Savannah, Ga.			30.10	764.5	79	26.1	86	Calm	0	0		5ck	2k	S	S	0.14	3.6	Cloudy	
Shreveport, La.			29.95	760.7	74	23.3	90	E	2	0.9			10s			0	0	Cloudy	
Smithville, N. C.			30.14	765.5	78	25.6	86	N	2	0.9		2k	2ks	N	N	0.19	4.8	Clearing	
Springfield, Mass.			30.21	767.3	70.5	21.4	61	Calm	0	0		5ck	2s			0	0	Fair	
St. Louis, Mo.			29.98	761.5	74	23.3	81	S	4	1.8			10s			0.02	0.5	Cloudy	
St. Marks, Fla.			30.07	763.8	71	21.7	100	E	6	2.7			10n		E	1.59	40.4	Light rain	
St. Paul, Minn.			29.83	757.7	69	20.6	84	SE	2	0.9		2c	Haze			0	0	Fair	
St. Paul's Island, Alaska			30.22	767.6	40	4.4	91	N	10	4.5		10ck	0			0.15	3.8	Cloudy	
Thatcher's Island, Mass.			30.21	767.3	65	18.3	73	SW	6	2.7		0	0			0	0	Clear	
Toledo, Ohio			30.01	762.2	75	23.9	84	Calm	0	0		0	Haze			0	0	Hazy	
Tucson, Arizona	27.46	697.5	30.06	763.5	79	26.1		SE				2c	5s	SW	S	0	0	Fair	
Tybee Island, Ga.			30.06	763.5	83	28.3	74	S	7	3.1		5k	0	S		0	0	Fair	
Vicksburg, Miss.			29.96	761.0	72	22.2	90	SE	6	2.7		10ck,cs	0	S		Inap.	Inap.	Cloudy	
Virginia City, M. T.	24.17	613.9	29.65	753.1	50	10.0	51	Calm	0	0		0	0			0	0	Clear	
Washington, D. C.			30.16	766.1	70	21.1	95	NE	7	3.1			10s			0.01	0.3	Cloudy	
Wilmington, N. C.			30.14	765.5	81	27.2	82	E	4	1.8		0	2k		NE	0	0	Fair	
Wood's Holl, Mass.			30.24	768.1	69	20.6	60	Calm	0	0		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.
Yankton, Dakota	28.59	726.2	29.81	757.2	71	21.7	75	SE	10	4.5		1cs	0	W		0	0	Clear	
Yuma, Arizona			29.77	756.1	89	31.7		SE				0	0			0	0	Clear	
Sub Series.																			
Kingston, Jamaica, W. I.			30.10	764.5	79	26.1	82	Calm	0	0		10c	8n			0	0		James Gall.
St. Georges, Bermudas			30.06	763.5	80.0	26.7	80	NNW	10	4.5			10n			0	0	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Paramaribo, D. Guiana S.A.			29.98	761.5	81	27.2	78	E			2	4c	5k	E		0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana S.A.	30.08	763.9			84.2	29.0		NE								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.17	639.3			64.2	17.9	80	Calm	0	0		8cs	1s			0	0	Cloudy	Thomas Herran.
York Factory, B. A.			29.55	750.6	60	15.6	97	Calm	0	0		4c	0	W		1.10	27.9		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.07	763.6	77	25.0		NE			4					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Nova Scotian, N. 45° 25′, W. 58° 55′.	W by N ½ N	11	30.21	767.3	61	16.1		WSW			3		0					Clear	Capt. Ritchie.

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.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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.
Namours			30.15	765.8	82.2	27.9	73	NNE			2		2			0	0	Clear	Charnot.
Algiers			30.19	766.9	80.6	27.0	82	NNW			2		8			0	0	Cloudy	Peter.
La Calle			30.17	766.4	86.4	30.2	61	NW			2		1			0	0	Clear	Kunts.
Tunis			30.18	766.5	90.9	32.7	43	NE			3		3			0	0	Fair	Jacques.
Sfax			30.22	767.5	87.4	30.8	54	NE			4		1			0	0	Clear	Chauvey.
Sousa			30.12	765.0	88.7	31.5	30	N			3		1			0	0	Clear	Millot.
Tebessa			30.18	766.6	87.1	30.6		S			1		0			0	0	Clear	Colin.
Gerlville			30.11	764.9	89.8	32.1	24	NNW			2		2			0	0	Clear	Lemaillot.
Laghouat			30.13	765.2	102.2	39.0		NE			1		0			0	0	Clear	Guyot.
Biskra			29.19	766.8	96.1	35.6		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.
Akram			30.10	764.6	87.4	30.8	44	SE			2		2			0	0		Prof. Ivan Stosir.
Cracow, I. R. Observatory			30.13	765.3	81.7	27.6	53	NE			1		0			0	0		Dr. Wierzbiski.
Eperies			30.06	763.4	83.8	28.8	48	Calm			0		0			0.008	0.20		Julius Mikolik.
Gratz	28.90	734.1	30.04	763.1	80.8	27.1	63	SSW			2		0			0	0		Andreas Rospini.
Hermannstadt	28.67	728.2	30.00	761.9	87.8	31.0	41	E			3		3			0	0		Prof. Reissenberger.
Kremsmünster	28.82	732.0	30.10	764.4	79.5	26.4	55	E			1		1			0	0		Prof. C. Wagner.
Lemberg			30.07	763.6	80.2	26.8	80	NE			1		2			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.10	764.6	85.6	29.8	57	WNW			1		0			0	0		I.R.Hydrographic Office
Szegedin			30.04	762.9	86.0	30.0	41	NW			2		2			0	0		Karl Stancel.
Trieste			30.08	763.9	86.0	30.0	62	Calm			0		0			0	0	Clear	Prof. V. Farolfi.
Vienna			29.97	763.8	86.2	30.1	40	Calm			0		1			0	0		I. R. Central Met. Obs'y

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.13	765.3	67.6	19.8	76	WNW			6		10		WNW	0.075	1.90		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			30.00	762.0	61.0	16.1		W	15	6.7			5			0	0	Blue sky	William Boswell.
Ardrossan			30.14	765.5	63	17.2		W			2		5					*D. clouds	William McNeil.
Armagh, Observatory			30.12	765.0	61.7	16.5		WSW	5	2.2			9					Overcast	S. Cail, for Dr. Robinson.
Birr Castle. (Parsonstown).			30.16	766.1	64.0	17.8		WSW			1		7					*D. clouds	J. Dreyer.
Bradford			30.14	765.5	63.6	17.6		NW			2		8			0.02	0.5	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			29.99	761.7	80.5	26.9		SE			0		9					Drizzling	Sergt. J. F. Halanen, A.
Cambridge			30.24	767.1	71.0	21.7		WNW					8						Mr Pain, F. B. M. S. H. C.
Cardington			30.18	766.6	71.0	21.7		W			1		3					*D. clouds	John McLaren.
Carlisle			30.12	765.0	61.6	16.4		SW			6		6			0	0	*D. clouds	T. Bell, for J. Carmell.
Chatham, School M. E			30.20	767.1	67.2	19.6		W			1		3			Blank	Blank	*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	8.83	732.3	30.33	770.4	60.4	15.8		NW			3		7					*D. clouds	R. E. Power.
Donaghadee			30.11	764.8	64	17.8		W			3		7					*D. clouds	A. Mac Gowan.
Dover			30.17	766.3	70	21.1		WNW			3		5					½ clouded	J. Costello.
Eccles (near Manchester.)			30.15	765.8	65.4	18.6		NW	2.2	1.0			4					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.28	769.1	66.5	19.2		W			2		9					Overcast	The Staff.
Fort Napier, (Natal)	27.87	707.9	29.90?	759.17	56.3	13.5		SE			2		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone			29.95	760.7	82	27.8		W			2		5					D. clouds	
Galway, Queen's College			30.04	763.0	64	17.8		SW			4		7					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean).			30.05	763.3	81.0	27.2		E			4		2					*D clouds	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			30.06	763.5	58.6	14.8		W			2		7					Fine	Lewis Stuart.
Great Yarmouth			30.15	765.8	66	18.9		NW			3		3					Blue sky	G. T. Watson.
Greenwich, Royal Ob'y			30.24	767.1	73.0	22.8		WSW			1		7			Blank	Blank	*D. clouds	The Staff, for G. B. Airy
Guernsey			30.22	767.6	66	18.9		WNW			3		0					Blue sky	Dr. S. E. Hoskins.
Helston			30.27	768.8	66	18.9		SW			4		2c			1.10	27.9	Fine	M. P. Moyle.
Holyhead			30.17	766.3	60	15.6		SW			3		10					Misty	John Tinston.
Kew, Observatory			30.20	767.1	67.0	19.4		WNW	10	4.5			7					*D. clouds	The Staff.
Kingstown			30.16	766.1	62	16.7		W			3		6					*D. clouds	George Mitchell.
Leicester Museum			30.19	766.8	66.4	19.1		W			1		5					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.04	763.0	83.6	28.7		NW			1		2k					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			29.94	760.5	62	16.7		SW			3		5					½ clouded	W. D. Penny.
Nassau, (Bahamas			30.04	763.0	85.6	29.8		E			6		8					D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.17	766.3	67.0	19.4		WNW			1		5k		W	0.05	6.1	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.15	765.8	68.2	20.1		NW			2-3		5					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Ob's'y			30.18	766.6	69	20.6		W			1		8					Overcast	J. Lucas.
Plymouth			30.25	768.3	67.5	19.7		NW			2		2					*D. clouds	John Merrifield.
Roche's Point			30.19	766.8	62	16.7		WSW			4		5					Cloudy	W. Kennedy.
Saint Ann's Head			30.21	767.3	62	16.7		W			1		1					Blue sky	John C. Walker.
Saint Helier, Jersey			30.27	768.8	71.6	22.0		W			4		0					Clear	A. P. Amy.
Sandwick Manse Orkneys			29.94	760.5	53.6	12.0		W	22	9.8			5					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough			30.10	764.5	62.3	16.8		WSW			2		6					*D. clouds	F. Shaw.
Scutari Cemetery Turkey			29.87	758.7	88.2	31.2		NE			2		2					Blue sky	Sergt. W. H. Lyne.
Sheffield			30.15	765.8	65.3	18.5		WSW			2		4			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			30.12	765.0	68.2	20.1	68	SW			2		4			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.14	765.5	61.2	16.2		W			2		5			Blank	Blank	*D. clouds	Rev. S. J. Perry.
Stornoway Lewis C. Hebr.			29.96	761.0	60	15.6		WNW			3		5					*D. clouds	John Smith.
Stratfield Turgiss			30.18	766.6	68.3	20.2		NW			2		2					Blue sky	Rev. Charles H. Griffith.
Thurso			29.92	760.0	58	14.4		NW			5		7					*D. clouds	John Trotter.
Truro, Royal Institution			30.27	768.8	69	20.6		NW			6		6					*D. clouds	W. Newcombe.
Valencia, Observatory			30.20	767.1	62.1	16.7		SW	19	8.5			6					*D. clouds	The Staff.
Sub-Stations.																			
Calf of Man, Isle of Man					56	13.3		W			6		0						Thomas Dawson.
Cape Good Hope, Ob's'y			30.31	769.9	61.0	16.1	65	S	22	9.8		0	0						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			29.92	760.0	60.0	15.6	94	N			1		8k			0	0		Francis Abbott, F.R.A.S.
Leith, Restaurig Parks			30.07	763.8	62.8	17.1		W			3		7k			0	0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.21	767.3				SE	18.3	8.2						0	0		C. Meldrum
Melbourne, Observatory			29.92	760.0	51.0	10.6	88	NNE	5	2.2			8			0.19	4.8	Dull	R. L. J. Ellery.
Monach Lighthouse, Hebrides			29.94	760.5	57	13.9		SW			3	3	3	SW		0	0		J. Youngehouse.
North Unst, (Shetland Is.)			29.77	756.1	52	11.1		W			6		10						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the *Beaufort notation*, the *barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach* and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,220 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			29.95	760.7	64.2	17.9	79	SW			4		10						
Faroe			30.02	762.6	62.2	16.8	78	W			4		8						
Godthaab, Greenland			29.49	749.1	37.4	3.0		WSW			2		10					Raining	
Stykkisholm, (Iceland			29.53	750.0	52.7	11.5	83	S			2		8						
Thorshavn, (Faröe)			29.82	757.5	53.8	12.1	69	WSW			6		6						
Vestervig			29.93	760.3	61.2	16.2	71	W			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			30.30	771.8	71.2	21.8	45	NE			3	5c		NE		0	0	½ covered	Normal School.
Amiens																			Normal School.
Avignon			30.17	766.4	91.4	33	23	N			2		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.23	767.7	76.8	24.9	43	W			2		8		W	0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)			30.21	767.3	75.6	24.2	55	NW	4.3	1.9					W	0.020	0.5		Beaumette Observatory
Beauvais			30.25	768.3	70.0	21.1	54	NW			3		8		NW	0	0	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.35	771.0	86.0	30	47	N			2		1		S	0	0	Clear	Normal School.
Bourges			30.23	767.9	77.0	25	68	SW			2		0			0	0	Clear	Normal School.
Brest			30.24	768.2	70.3	21.3	55	NW			2		8k		NW	0.187	4.75		Naval Observatory.
Carcassonne			30.21	767.3	79.7	26.5	29	W			1		0			0	0	Clear	Normal School
Caen																			Normal School.
Chartres			30.20	767.1	73.6	23.1	76	NNW			2		6		NE	0	0		Normal School.
Châlons-sur-Marne			30.22	767.5	74.8	23.8	53	SW			3		8ck		NE	0	0	Very cloudy	Normal School.
Clermont			30.19	766.7	84.4	29.1	33	NNE			2		0			0	0	Clear	Puy de Dome Obs'y
Commercy			30.16	766.0	72.7	22.6	64	W			4		5k		W	0	0	Cloudy	Normal School
Commune de Greasque*			30.25	768.3	91.9	33.3	23	NW			2		0			0	0		M. Kina.
Grenoble			30.19	766.7	81.5	27.5	52	NNE			1		0			0	0	Clear	Normal School.
La Roche-sur-Yon			30.39	771.8	73.8	23.2	82	S			6		8		N	0	0	Very cloudy	Normal School.
Le Mans			30.26	768.6	72.1	22.3	63	N			2		6		SW	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier			30.23	767.9	79 7	26.5	46	S			2		0			0	0	Clear	Normal School.
Mâcon			30.39	771.9	78.6	25.9	63	Calm			0		0			0	0	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			30.10	764.6	75.2	24 0	39	S			2		2		NE	0	0	Slightly cl'dy	Normal School.
Nismes			30.19	766.7	94.6	34.8	51	NW			1		0			0	0	Clear	Normal School.
Orleans																			Normal School.
Paris, Observatory			30.24	768.1	71.4	21.9	53	WNW			2		5k		WNW	0	0	Cloudy	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			30.30	769.6	81.1	27.3	50	SW			3		2		NE	0	0	¼ Covered	Naval Observatory.
Rouen			30.24	768.0	72.7	22.6	51	WSW			3		2		SW	0	0	Slightly cl'dy	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School
Villefranche			30.27	768.8	87.4	30.8	60	SE			1		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.85	758.1	81.3	27.4													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.52	775.1	75.6	24.2	64	SE	14.9	6.66			1		SW	0	0		—. Faïguère.
Montsouris, Paris			30.24	768.0	73.4	23.0	55	W			3		5k		W	0	0		Montsouris Observ'tory.
Perpignan			30.19	766.7	83.8	28.8	59	NE	3.7	1.67			0			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.70	551.3			59.5	15.3		S			2		4					Fair	M. Baylac.
Pic du Midi, (Plantade)	22.03	582.4			61.5	16.4		S			1		4			0	0	Fair	General de Nansouty.
Saint Maur, (near Paris)			30.24	768.2	74.3	23.5	47	WNW			2		3			0	0	Slightly cl'dy	E. Renou.
Toulouse			30.31	769.9	83.3	28.5	37	NW			2		0			0	0		Toulouse Observatory
Tours			30.23	767.9	79.0	26.1	55	W			2		7		W	0	0		C. Marquet.
Versailles, (near Paris)			30.28	769.0	72.7	22.6	53	W			2		6			0	0	Fair	Dr. A. Bérigny.
Zi Ka Wei, (near Shanghai)																			H. Le Lec, S. J.

NOTE.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * 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.
Hamburg			30.07	763.7	80.6	27.0	34	SW			5		2	SW		0	0		Prof. T. Hoh.
Berlin			30.03	762.8	81.0	27.2	36	SW			3		6			0	0		Prof. Arndt.
Breslau			30.15	765.7	84.9	29.4	38	SW			2		0			0	0		Dr. P. Neugebauer.
Carlsruhe			30.12	765.0	81.3	27.4	48	SSW			3		1			0	0		A. Senz.
Cassel			30.10	764.4	79.5	26.4	47	SW			8		7	SSW		0	0		Dr. H. Möhl.
Emden			29.99	761.8	63.9	17.7	90	NW			3		10			0.283	7.2		Prof. Prestel.
Frankfort on the Main			30.14	765.5	86.5	30.3	26	SW			4		6			0	0		Physical Society.
Friedrichshafen			30.19	766.7	74.5	23 6	68	SSW			3		1			0	0		M. Wilhelm.
Hamburg			30.03	762.7	62.1	16.7	96	SSW			1		10n	SW		0.303	7.7	Raining.	Captain F. Hegemann.
Kiel			29.99	761.7	63.5	17.5	87	SW			2		10			0.071	1.8		Prof. G. Karston.
Königsberg, (Prussia.)			30.13	765.2	74.3	23.5	43	W			2		5			0	0		Prof. E. Luther.
Köslin			30.16	764.6	72.7	22.6		S			1		4			0	0		H. Müller.
Leipsic			30.07	763.7	84.6	29.2	31	SW			4		3	SW		0	0		Prof. Bruhns.
Memel			30.14	765.6	69.4	20.8	61	W			1		7cs			0	0		Reinbrecht & Skalweit.
Münster			30.02	762.4	68.9	20.5	91	SW			5		10			0.130	3.3		Prof. E. Heis.
Neufahrwasser			30.14	765.5	71.6	22.0	55	W			2		10			0	0		A. Lothes.
Posen			30.16	764.6	82.2	27.9	41	SW			6		1			0.043	1.1		Dr. Magener.
Strassburg, (in Alsace)			30.16	766.0	83.7	28.7	37	SW			1		2	SW		0	0		Dr. Schur.
Stuttgart			30.14	765.5	81.1	27.3	39	E			1		0			0	0		Prof. Schoder.
Thorn			30.10	764.6	82.4	28.0	33	W			4		2			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.13	765.3	74.8	23.8	56	W			7		8			0	0		Prof. Flesch.
Wustrow, Naval School			30.10	764.6	65.3	18.5	78	SSW			3		10			0.038	0.9		E. F. Schütz.

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.94	760.5	91.8	33.2		NE										Very clear..	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	763.9	89.1	31.7	31	Calm	0	0			0			0	0		
Padua			30.09	764.3	86.4	30.2	46	NW	2.5	1.1			5			0	0		
Vicenza			30.10	764.4	89.1	31.7	38	SE	3.1	1.4			0			0	0		
Verona			30.06	763.4	91.4	33.0	35	E			1		0			0	0		
Bergamo	28.92	731.9	30.07	763.7	86.0	30.0	47	SW			1		0			0	0		
Domodossola	29.12	739.6	30.10	764.5	83.3	28.5	43	SW			6		2			0	0		
Milan			30.13	765.2	95.0	35.5	49	SE			1		0			0	0		
Pavia			30.13	765.4	86.5	30.3	42	E			1		0			0	0		
Moncalieri			30.14	765.6	83.5	28.6	55	WNW	0.7	0.3			1			0	0		
Mondovi	28.30	718.9	30.13	765.4	82.6	28.1	52	NE			2		7	SSE		0	0		
Porto Maurizio			30.19	766.8	82.4	28.0	66	SW			2		1			0	0		
Genoa			30.13	765.4	83.3	28.5	40	W	2.5	1.1			0			0	0		
Piacenza			30.13	765.4	86.0	30.0	48	SE	2.5	1.1			0			0	0		
Parma			30.09	764.2	89.6	32.0	39	NNW			2		0			0	0		
Bologna			30.14	765.5	87.8	31.0	40	WNW			6		0			0	0		
Florence			30.12	765.0	91.0	32.8	24	NE			2		0			0	0		
Leghorn			30.12	765.0	82.2	27.9	69	NW	4.9	2.2			0			0	0		
Siena	28.91	735.0	30.09	764.2	87.1	30.6	39	NW	0.7	0.3			1	N		0	0		
Urbino	28.65	727.8	30.16	766.0	81.9	27.7	46	NNW			4		0			0	0		
Ancona			30.15	765.7	83.5	28.6	67	NW			4		2			0	0		
Grosseto			30.12	765.0	92.8	33.8	35	SSW			2		2	S		0	0		
Rome			30.10	764.5	91.6	33.1	44	W	7.4	3.3			1			0	0		
Naples, O. U.			30.10	764.6	91.0	32.8	47	SW			4		0			0	0		
Lecce			30.05	763.3	84.9	29.4	49	W	16.1	7.2			1			0	0		
Cosenza			30.07	763.6	91.4	33.0	65	NW	11.2	5.0			2			0	0		
Riposto, (Sicily)			30.02	762.4	87.4	30.8	50	E			2		3	W		0	0		
Palermo			30.07	763.6	81.5	27.5	66	NNE	6.9	3.1			0			0	0		
Caltanissetta	28.13	714.4	29.98	761.4	86.9	30.5	26	NW			2		2			0	0		
Sub-Series.																			
Naples, S. R.			30.13	765.3	89.6	32.0	43	E	2.5	1.1			2			0	0		Prof. F. Brioschi.
Pesaro			30.19	766.7	81.9	27.7	72	NE	26.0	11.64			0			0	0		L. Guidi.

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			30.19	766.9	64.8	18.2		NW			3								
Groningen			30.00	761.9	63.1	17.3		WNW			3								
Helder			30.07	763.8	62.6	17.0		NW			4							Overcast	
Utrecht			30.07	763.7	66.4	19.1	77	WNW			4		10						

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.71	754.5	53.8	12.1	89	SW	14.3	6.4			1			0.906	23.0		
Brono			29.41	747.0	57.2	14.0	67	SSE	11	5			9			0.469	11.9		
Christiania			29.72	754.9	67.1	19.5	46	SSW	15.2	6.8			6			0.134	3.4		
Tromsö			29.29	744.0	60.4	15.8		SW	2	1			10			0	0		

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

PORTEUGUSE 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,)			30.27	771.3	78.4	25.8	79	SSW	3.2	1.45			2			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.05	763.3	98.6	37.0	17	ESE	4.3	1.92			0			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.11	764.7	78.8	26.0	59	SW	10.0	4.46			5			0	0		Capt. D. A. da Cunha.
Lisbon			30.11	764.8	88.3	31.3	38	W	4.9	2.2			1			0	0		The Observatory.

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

RUSSIAN SERIES.

Furnished by 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			30.12	765.0	79.7	26.5	41	WSW	2	1			1						Astronomical Obs.
Wilna			30.13	765.4	76.3	24.6	43	NNW	2	1			2						Astronomical Obs.
Dorpat			30.04	763.0	69.3	20.7	48	SW	9	4			6						Physical Cabinet.
St. Petersburg			30.00	761.9	66.2	19.0	71	WNW	9	4			6						Central Physical Obs.
Kiopio			29.78	755.6	64.4	18.0	67	SW	27	12			5						Ch. Forsten.
Kieff			30.04	763.0	88.5	31.4	29	E	4	2			2					Smoke-haze	Physical Cabinet.
Nikolaiev			30.04	763.0	94.6	34.8	24	NNE	18	8			4						Kurdakof.
Kertch			29.96	760.7	85.8	29.9	43	ENE	25	11			6						Lagorio.
Moscow			30.12	765.1	80.9	30.5	48	SSW	7	3			2						Meteorological Obs.
Lugan			29.98	761.5	89.6	32.0	25	NE	34	15			3						Meteorological Obs.
Archangel			29.76	755.9	69.4	20.8	94	WSW	29	13			10						Ogorodnikof.
Tiflis	28.57	725.7	29.90	759.4	88.2	31.2	31	S	7	3			7						Physical Observatory.
Astrakhan			30.02	762.5	80.8	32.1	32	SSE	2	1			0						Sebastianof.
Kasan			30.07	764.7	84.7	29.3	47	SW	4	2			1						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	29.13	740.0	30.04	763.1	71.6	22.0	69	W	7	3			9						Meteorological Obs.
Nukuss			29.85	758.3	81.0	27.2	44	N?	9	4			0						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul			29.86	758.4	66.7	19.3	63	NNW	9	4			9						Meteorological Obs.
Yeniseisk			29.60	751.9	71.6	22.0	66	WNW	2	1			2						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.72	754.8	88.5	31.4	68	Calm	0	0			6			Blank	Blank		Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.73	755.1	70.2	21.2	99	SE	4	2			10						
Nikolaievsk, on the Amoor																			

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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 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			30.05	763.3	101.3	38.5	24	S	3.7	1.67		0	1			0	0	Partly cloudy	Royal Observatory.
San Fernando			30.13	765.2	90.5	32.5	31	ESE	21.5	9.6		0	0			0	0		The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			29.51	749.6	58.3	14.6	85	SW			6		7			0.354	9.0		
Umea			29.56	750.8	63.0	17.2	64	SW			4		5			0.547	13.9		
Hernosand			29.58	751.4	69.8	21.0	35	SW			4		3			0.374	9.5		
Stockholm			29.85	758.3	63.7	17.6	63	WSW			6		9			0.024	0.6		
Wisby			30.04	763.1	64.8	18.2	80	W			6		7			0	0		
Sub-Series.																			
Upsala			29.82	757.4	65.8	18.8	43	SW	20.6	9.2			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; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall 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	28.82	731.9	30.15	765.8	87.6	30.9	31	NW			1		0			0	0	Clear	The Observatory.
Zurich	28.62	726.9	30.17	766.2	81.7	27.6	43	W			2		0			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +4.1 mm; Thermometer, +8.5 cent.; Relative Humidity, —22 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and Professor 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			29.94	760.4	81.5	27.5	67	NNE	16	7.0			4		N				
Fao, (Persian Gulf)			29.69	754.0	95.5	35.3		SW			3		5						
Salonica			30.05	763.2	101.5	38.6		S			1		0						
Valona			30.09	764.3	84.6	29.2		W			1		2						
Varna			29.96	761.0	91.4	33.0		N			3		2						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.80	756.9	86.0	30.0	65	NW			1		98		E			Covered	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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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			29.98	761.5	78.0	25.6		SW	1	0.4			0			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.17	766.3	81	27.2		NW	1	0.4		2c	0			0	0	Fair	W. R. Bigg.
*Chatham, N. B			30.02	762.5	72	22.2	80	SW	3	1.3		2c	0	SW		0	0	Fair	G. A. Blair.
Charlottetown P. E. Island			30.07	763.8	68	20.0	70	W	8	3.6		0	0			0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			30.10	764.5	83.7	28.7	64	W			1	6c	0			0	0	Fair	James Smith, M. A.
Dalhousie, N. B.			30.04	763.0	74	23.3	79	W			1					0	0	Clear	H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			30.10	764.5	71.6	22.0	74	SE	2	0.9		0	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.61	752.1	70	21.1	90	S	14	6.3		5k	2n	S	S	0	0	Threatening	James Stewart.
Goderich, Ontario			30.08	764.0	76.3	24.6	80	S			1	10k	0	SW		0.051	1.30	Dry	H. J. Strang, M. A.
Granton, Ontario	29.02	737.1	30.08	764.0	70	21.1		Calm			0	1cs	0			0	0	Clear	James Grant.
*Halifax, N. S.			30.10	764.5	67	19.4	69	W	6	2.7		0	0			0	0	Clear	F. Allison, M. A.
*Kingston, Ontario			30.16	766.1	74	23.3	87	SW	4	1.8		5c	0	SW		0	0	Fair	S. Woods, M. A.
Little Glace Bay, N. S.			30.04	763.0	77.4	25.2	54	SW	6	2.7		0	0			0	0	Clear	C. H. Rigby
*Montreal, Quebec			30.12	765.0	76	24.4	81	SW	2	0.9		2c	2ks	W		0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.13	765.3	71	21.7	64	Calm	0	0		0	8n c			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.08	764.0	73	22.8	88	S	5	2.2		2k	5ks	SW	SW	0	0	air	Rev. R. Mosley.
Port Dover, Ontario			30.10	764.5	73	22.8	90	Calm	0	0		2ck	0	SW		0	0	Fair	H. Morgan.
Port Hastings, N. S.			30.08	764.0	69.5	20.8		Calm	0	0						0	0	Fine	Peter Grant.
Port Stanley, Ontario			30.07	763.8	74	23.3	92	E	4	1.8		10k	0	E		0.02	0.5	Fair	M. Payne.
*Quebec, Quebec			30.11	764.8	77	25.0	82	Calm	0	0		0	0			0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.			30.13	765.3	61	16.1	80	S	5	2.2		0	0			0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			30.01	763.0	77	25.0	77	Calm	0	0		5cs	0			0	0	Fair	K. Stewart.
Stayner, Ontario			30.06	763.5	77	25.0	77	Calm	0	0		5c	0	W		0	0	Fair	R. J. Cole.
Stratford, Ontario	28.83	732.3	30.07	763.8	67.3	19.6	95	Calm	0	0		7cs	0	SW		0	0	Fair	C. J. Macgregor, M. A.
*Sydney, C. B			30.09	764.3	76	24.4	62	SW	5	2.2		0	0			0	0	Clear	T. C. Hill.
*Toronto, Ontario			30.10	764.5	74	23.3	81	Calm	0	0		2cs	0			0	0	Fair	Magnetic Observatory.
Woodstock, Ontario			30.08	764.0	74.6	23.7	73	S	1	0.4		2c	5cs	W		0.12	3.0	Fine	J. Montgomery
Sub-Series.																			
St. Johns, Newfoundland			30.17	766.3	74	23.3	70	W				0	0			0	0	Clear	John Delaney.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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	Clouds. Direction. Upper. From	Clouds. Direction. Lower. From	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	78	25.6	69	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	
Alpena, Mich.	.....	.....	30.00	762.0	71	21.7	80	Calm	0	0	.....	10ck	0	SW	.....	0	0	Cloudy	
Atlantic City, N. J.	.....	.....	30.10	764.8	72	22.2	90	E	4	1.8	.....	10k	0	NW	.....	0	0	Cloudy	
Augusta, Ga.	.....	.....	30.14	765.5	77	25.0	91	SE	3	1.3	.....	5k	Haze	E	.....	1.64	41.7	Fair	
Baltimore, Md.	.....	.....	30.18	766.6	74	23.3	85	E	4	1.8	.....	.....	10s	.....	.....	0.02	0.5	Cloudy	
Barnegat, N. J.	.....	.....	30.18	766.6	73	22.8	85	SE	3	1.3	.....	8cs	0	NW	.....	0	0	Fair	
Bismarck, Dakota	27.84	707.1	29.38	746.2	64	17.8	72	N	47	21.0	.....	.....	10s	.....	SE	0	0	Cloudy	
Boston, Mass.	.....	.....	30.15	765.8	72	22.2	75	W	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
Breckenridge, Minn.	.....	.....	29.61	752.1	68	20.0	84	SE	30	13.4	.....	5cs	0	SE	.....	0	0	Fair	
Buffalo, N. Y.	.....	.....	30.07	763.8	77	25.0	72	SW	4	1.8	.....	2c	1k	.....	.....	0	0	Fair	
Burlington, Vt.	.....	.....	30.15	765.8	74	23.3	72	SW	4	1.8	.....	8k	0	E	.....	0	0	Cloudy	
Cairo, Ill.	.....	.....	29.99	761.7	72	22.2	85	SE	4	1.8	.....	2c	0	W	.....	0.15	3.8	Fair	
Cape Hatteras, N. C.	.....	.....	30.08	764.0	80	26.7	78	E	6	2.7	.....	2k	0	.....	.....	0	0	Fair	
Cape Henry, Va.	.....	.....	30.12	765.0	70	26.1	78	SE	6	2.7	.....	5c	0	N	.....	0	0	Fair	
Cape Lookout, N. C.	.....	.....	30.11	765.5	79	26.1	86	E	4	1.8	.....	.....	8s	.....	E	0	0	Cloudy	
Cape May, N. J.	.....	.....	30.18	766.6	74	23.3	81	SE	6	2.7	.....	8k	0	W	.....	0	0	Fair	
Charleston, S. C.	.....	.....	30.15	765.8	83	28.3	74	S	2	0.9	.....	0	5ks	.....	SE	0	0	Fair	
Cheyenne, Wyoming	24.01	609.6	29.94	760.5	60	15.6	53	NE	8	3.6	.....	0	1s	.....	.....	0.02	0.5	Clear	
Chicago, Ill.	.....	.....	29.95	760.7	72	22.2	76	S	1	0.4	.....	0	Haze	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	30.00	762.0	75	23.9	85	W	4	1.8	.....	.....	10ks	.....	S	0.44	11.2	Cloudy	
Cleveland, Ohio	.....	.....	30.07	763.8	73.3	22.9	83	SE	4	1.8	.....	5c	Haze	S	SE	0.47	11.9	Fair	
Corsicana, Tex.	.....	.....	29.86	758.1	74	23.3	85	SE	2	0.9	.....	5cs	Haze	.....	.....	0	0	Fair	
Davenport, Iowa	.....	.....	29.92	760.0	69	20.6	84	S	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Denison, Tex.	.....	.....	29.89	759.2	73	22.8	85	SE	3	1.3	.....	5ck	5s	E	.....	0	0	Cloudy	
Denver, Col.	24.74	628.4	29.96	761.0	60	15.6	59	SE	6	2.7	.....	0	5s	.....	SW	0.02	0.5	Cloudy	
Detroit, Mich.	.....	.....	30.04	763.0	73	22.8	85	Calm	0	0	.....	.....	10s	.....	.....	0.06	1.5	Cloudy	
Dodge City, Kan.	27.20	690.9	29.36	745.7	69	20.6	79	SE	12	5.4	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Dubuque, Iowa	.....	.....	29.99	759.4	71	21.7	80	SE	8	3.6	.....	.....	10s	.....	.....	0.35	8.9	Cloudy	
Duluth, Minn.	.....	.....	29.86	758.4	59	15.0	93	NE	4	1.8	.....	.....	10s	.....	.....	0.27	6.9	Cloudy	
Eastport, Me.	.....	.....	30.11	764.8	66	18.9	73	S	5	2.2	.....	0	Sm'e	.....	.....	0	0	Clear	
Erie, Pa.	.....	.....	30.06	763.5	80	26.7	70	S	8	3.6	.....	2c	Sm'e	.....	.....	Inap.	Inap.	Fair	
Escanaba, Mich.	.....	.....	29.95	760.7	70	21.1	90	Calm	0	0	.....	.....	10n	.....	SW	0.31	7.9	Heavy rain	
Fort Gibson, Indian Ter.	.....	.....	29.83	757.7	76	24.4	76	E	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.65	727.7	29.69	754.1	79	26.1	69	S	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	27.90	708.6	29.44	747.8	71	21.7	75	NW	12	5.4	.....	.....	10s	.....	W	0	0	Cloudy	
Galveston, Tex.	.....	.....	29.96	760.4	81	27.2	82	N	6	2.7	.....	2k	0	Sc	.....	0	0	Fair	
Grand Haven, Mich.	.....	.....	29.99	761.7	71	21.7	95	SE	5	2.2	.....	5c	0	SW	.....	0.95	24.1	Fair	
Indianapolis, Ind.	.....	.....	30.01	762.2	71	21.7	90	SE	6	2.7	.....	.....	10s	.....	SE	0.05	1.3	Cloudy	
Indianola, Tex.	.....	.....	29.88	758.9	84	28.9	79	SW	4	1.8	.....	2k	0	.....	.....	0	0	Fair	
Jacksonville, Fla.	.....	.....	30.12	765.0	83	28.3	79	E	7	3.1	.....	5ck	0	.....	.....	0.05	1.3	Fair	
Keokuk, Iowa	.....	.....	29.84	757.9	72	22.2	85	S	5	2.2	.....	5k	0	S	.....	0	0	Fair	
Key West, Fla.	.....	.....	30.00	762.0	77.6	25.3	90	E	5	2.2	.....	.....	8s	.....	E	0.69	17.5	Threatening	
Kittyhawk, N. C.	.....	.....	30.18	766.6	79	26.1	86	E	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Knoxville, Tenn.	.....	.....	30.09	764.3	72	22.2	95	N	1	0.4	.....	.....	10n	.....	SW	0.08	2.0	Light rain	
La Crosse, Wis.	.....	.....	29.86	758.4	71	21.7	85	SE	5	2.2	.....	5ck	0	S	.....	0.28	7.1	Fair	
Leavenworth, Kan.	.....	.....	29.79	756.7	72	22.2	85	S	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Louisville, Ky.	.....	.....	30.03	762.7	75	23.9	81	Calm	0	0	.....	.....	10n	.....	.....	0.89	22.6	Light rain	
Lynchburg, Va.	.....	.....	30.14	765.5	75	23.9	90	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Malone, N. Y.	.....	.....	30.10	764.5	77	25.0	73	S	6	2.7	.....	8c	0	W	.....	0	0	Cloudy	
Marquette, Mich.	.....	.....	29.92	760.0	71	21.7	85	S	4	1.8	.....	.....	10s	.....	S	0	0	Cloudy	
Memphis, Tenn.	.....	.....	29.98	761.5	71	21.7	95	SE	4	1.8	.....	.....	8ks	.....	SE	0.97	24.6	Cloudy	
Milwaukee, Wis.	.....	.....	29.98	761.5	70	21.1	85	S	5	2.2	.....	2ck	Haze	SW	.....	0.01	0.3	Fair	
Mobile, Ala.	.....	.....	29.98	761.5	76	24.4	86	E	6	2.7	.....	.....	10s	.....	SE	1.91	48.5	Cloudy	
Montgomery, Ala.	.....	.....	30.06	763.5	74.5	23.6	90	SE	7	3.1	.....	.....	10s	.....	SE	0.13	3.3	Threatening	
Morgantown, W. Va.	29.98	738.6	30.08	764.0	77	25.0	77	Calm	0	0	.....	1c	Haze	.....	.....	1.00	25.4	Clear	
Mt. Washington, N. H.	24.13	612.9	30.49	774.4	59	15.0	64	Calm	0	0	.....	2k	0	.....	.....	0	0	Fair	
Nashville, Tenn.	.....	.....	30.01	762.2	71	21.7	90	E	5	2.2	.....	.....	10n	.....	SE	0.19	4.8	Light rain	
New Haven, Conn.	.....	.....	30.14	765.5	74	23.3	76	SW	5	2.2	.....	5ck	2s	.....	SW	0	0	Cloudy	
New London, Conn.	.....	.....	30.18	766.6	75	23.9	76	SW	2	0.9	.....	5ck	Haze	NW	.....	0	0	Fair	
New Orleans, La.	.....	.....	29.91	759.7	76.5	24.7	84	E	5	2.2	.....	.....	10s	.....	SE	0.09	2.3	Threatening	
Newport, R. I.	.....	.....	30.17	766.3	71	21.7	80	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
New York, N. Y.	.....	.....	30.20	767.1	70	21.1	79	W	6	2.7	.....	.....	10ks	.....	W	0	0	Cloudy	
Norfolk, Va.	.....	.....	30.17	766.3	82	27.8	74	SE	4	1.8	.....	5ck	2ks	.....	.....	0	0	Fair	
North Platte, Neb.	26.83	682.0	29.25	642.9	71	21.7	75	S	8	3.6	.....	.....	10ks	.....	W	0	0	Cloudy	
Omaha, Neb.	28.73	729.7	29.75	755.6	73	22.8	81	SE	6	2.7	.....	5c	0	W	.....	0	0	Fair	
Oswego, N. Y.	.....	.....	30.12	765.0	77	25.0	74	SE	5	2.2	.....	8cs	2s	.....	.....	0	0	Cloudy	
Pembina, Dakota	.....	.....	29.57	751.1	68	20.0	79	SE	8	3.6	.....	10c	0	NW	.....	0	0	Cloudy	
Philadelphia, Penn.	.....	.....	30.19	766.8	73	22.8	71	Calm	0	0	.....	5ck	5s	.....	W	0	0	Cloudy	
Pike's Peak, Colorado	17.95	455.9	30.16	765.1	31.5	-0.3	74	W	20	8.9	.....	0	2s	.....	.....	0.04	1.0	Fair	
Pittsburgh, Penn.	.....	.....	30.08	764.0	75	23.9	76	SE	2	0.9	.....	0	Sm'e	.....	.....	0	0	Clear	
Port Huron, Mich.	.....	.....	30.06	763.5	71	21.7	90	S	3	1.3	.....	.....	10s	.....	S	Inap.	Inap.	Cloudy	
Portland, Me.	.....	.....	30.13	765.3	68	20.0	79	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	
Portland, Oregon	.....	.....	30.09	764.3	54	12.2	79	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Punta Rassa, Fla.	.....	.....	30.05	763.3	81.0	27.2	80	E	8	3.6	.....	2ck	2k	NE	W	0	0	Fair	
Rochester, N. Y.	.....	.....	30.08	764.0	77	25.0	72	S	5	2.2	.....	1c	Haze	SW	.....	0	0	Fair	
Salt Lake City, Utah	25.62	650.7	29.95	760.7	62	16.7	45	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	30.18	766.6	72	22.2	85	SW	2	0.9	.....	10ck	0	SW	.....	0	0	Cloudy	
San Diego, Cal.	.....	.....	29.83	757.7	67	19.4	79	S	4	1.8	.....	.....	10s	.....	S	0	0	Cloudy	
San Francisco, Cal.	.....	.....	29.77	756.1	55	12.8	87	SW	6	2.7	.....	0	5s	.....	SW	0	0	Fair	
Santa Fé, N. M.	23.28	591.3	29.82	757.1	53	11.7	93	Calm	0	0	.....	0	0	.....	.....	0.09	2.3	Clear	
Savannah, Ga.	.....	.....	30.13	765.3	85	29.4	71	SE	4	1.8	.....	2c	2k	.....	.....	0.18	4.6	Fair	
Shreveport, La.	.....	.....	29.96	761.0	79	26.1	78	E	3	1.3	.....	2k	0	.....	.....	0	0	Fair	
Smithville, N. C.	.....	.....	30.17	766.3	79	26.1	82	N	4	1.8	.....	1k	0	.....	.....	0	0	Clear	
Springfield, Mass.	.....	.....	30.16	766.1	70	21.1	84	Calm	0	0	.....	0	5s, fog	.....	.....	0	0	Fair	
St. Louis, Mo.	.....	.....	29.94	760.5	71	21.7	90	S	6	2.7	.....	.....	10s	.....	S	0.55	14.0	Cloudy	
St. Marks, Fla.	.....	.....	30.03	763.5	79	26.1	82	SE	12	5.4	.....	5ck	5ks	S	SE	0.30	7.6	Cloudy	
St. Paul, Minn.	.....	.....	29.77	756.1	69	20.6	84	SE	12	5.4	.....	5c	2s	W	W	0.10	2.5	Fair	
St. Paul's Island, Alaska	.....	.....	30.17	766.3	43	6.1	83	NE	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Thatcher's Island, Mass.	.....	.....	30.15	765.8	66	18.9	84	SW	12	5.4	.....	0	0	.....	.....	0	0	Hazy	
Toledo, Ohio	.....	.....	30.02	762.5	72	22.2	90	Calm	0	0	.....	8ck	Fog	SW	.....	1.06	26.9	Cloudy	
Tucson, Arizona	27.39	695.7	29.98	761.5	81	27.2	.....	SE	.....	.....	.....	2ck	5s	S	S	0	0	Fair	
Tybee Island, Ga.	.....	.....	30.10	764.5	81	27.2	74	SE	6	2.7	.....	2k	0	SE	.....	0	0	Fair	
Vicksburg, Miss.	.....	.....	29.97	761.2	73	22.8	92	SE	6	2.7	.....	10k	2s	S	SE	0.01	0.3	Cloudy	
Virginia City, M. T.	24.30	617.2	29.78	756.4	44	6.7	67	N	4	1.8	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Washington, D. C.	.....	.....	30.18	766.6	74.5	23.6	90	Calm	0	0	.....	.....	10s	.....	NE	0	0	Cloudy	
Wilmington, N. C.	.....	.....	30.16	766.1	77	25.0	90	NE	2	0.9	.....	0	1ks	.....	NE	0	0	Clear	
Wood's Holl, Mass.	.....	.....	30.20	767.1	72	22.2	80	S	6	2.7	.....	0	2s	.....	S	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.
Yankton, Dakota	28.44	722.4	29.65	753.1	72	22.2	76	S	13	5.8		8cs	2s	SW	SW	0	0	Cloudy	
Yuma, Arizona			29.73	755.1	83	28.3		E				0	0			0	0	Clear	
Sub Series.																			
Kingston, Jamaica, W. I.			30.16	766.1	78	25.6	86	SE	4	1.8		5c	8n			0.03	0.8		James Gall.
St. Georges, Bermudas			30.08	764.0	86.0	30.0	72	Calm	0	0		0	2k			0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Paramaribo, D. Guiana S.A.			29.98	761.5	82	27.8	79	E			2	3c	4k	E		0	0	Clear	C. J. Hering.
Batavia, Dutch Guiana S.A.	30.07	763.7			86.9	30.5		E								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.18	639.6			63.0	17.2	79	Calm	0	0		9cs	1s			0.02	0.5	Cloudy	Thomas Herran
York Factory, B. A.			29.79	756.7	46	7.8	100	N	8	3.6			Fog			0	0		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.07	763.8	77	25.0		NE			2					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Nova Scotian at Halifax N. S.			30.14	765.5	78	25.6		Calm			0							Fine	Capt. Ritchie.

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.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 0 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			30.11	764.9	84.0	28.9	72	NNW			2		0			0	0	Clear	Charnot.
Algiers			30.14	765.6	81.3	27.4	74	NNE			1		3			0	0	Fair	Peter.
La Calle			30.14	765.6	82.2	27.9	63	NE			2		1			0	0	Clear	Kunta.
Tunis			30.15	765.7	90.0	32.2	39	E			3		0			0	0	Clear	Jacques.
Sfax			30.20	767.1	84.6	29.2	52	NE			4		1			0	0	Clear	Chauvey.
Saïda			30.09	764.2	93.2	34.0		NW			3		1			0	0	Clear	Millot.
Tebessa			30.15	765.9	86.0	30.0		W			2		0			0	0	Clear	Colin.
Geriville			30.11	764.8	88.5	31.4	23	SSE			1		2			0	0	Clear	Lemaillot.
Laghouat			30.13	765.3	95.0	35.0		N			3		0			0	0	Clear	Guyot.
Biskra			30.17	766.2	94.1	34.5	26	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			30.11	764.7	86.0	30.0	41	NE			2		3			0.197	5.0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.20	767.0	73.0	22.8	65	W			1		10			0	0		Dr. Wierzbiski.
Eperies			30.04	763.1	81.5	27.5	55	N			4		4cs,s		S	0	0		Julius Mikolik.
Gratz	28.88	733.6	30.02	762.5	82.6	28.1	54	NW			2		2			0	0		Andreas Rospini.
Hermannstadt	28.62	726.9	29.95	760.6	84.7	29.3	46	N			2		1			0	0		Prof. Reissenberger.
Kremsmünster	28.87	733.3	30.16	766.1	75.2	24.0	42	W			2		3			0.024	0.6		Prof. C. Wagner.
Lemberg			29.98	761.5	80.2	26.8	80	NE			3		6			0.020	0.5		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.08	764.0	89.4	31.9	42	ESE			1		1ck			0	0		I.R.Hydrographic Office
Szegedin			30.02	762.6	90.0	32.2	21	W			2		2			0	0		Karl Stancel.
Trieste			30.08	764.0	91.0	32.8	47	Calm			0		5k			0.205	5.2	Raining	Prof. V. Farolfi.
Vienna			30.14	765.6	80.1	26.7	50	NW			2		5			0	0		I. R. Central Met. Obs'y

Note.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Grutz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1.258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.27	768.9	71.2	21.8	52	WSW			2		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.97	761.2	63.6	17.6		S	14	6.3			4			0.010	0.25	Blue sky	William Boswell.
Ardrossan																			William McNeil.
Armagh, Observatory			30.05	763.3	59	15.0		SW	11	4.9									S. Cad, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.10	764.5	61.6	16.4		SW			1–2		10					Raining	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			30.05	763.3	80.8	17.4		SE			1		6					*D. clouds	Sergt. J. F. Halanen. A.
Cambridge			30.29	769.4	69.5	20.8		WNW					7						Mr Pain, F. B. M S. H. C.
Cardington			30.27	768.8	69.0	20.6		W			1		10					Overcast	John McLaren.
Carlisle			30.06	763.5	64.8	18.2		SW			3		10			0	0	Overcast	T. Bell, for J. Carmell.
Chatham, School M. E			30.26	768.6	72.7	22.6		NW			1		2			Blank	Blank	*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.92	734.6	30.42	772.7	61.0	16.1		W			3		10					Gloomy	R. E. Power.
Donaghadee			30.04	763.0	60	15.6		SSW			4		10					Raining	J. Mac Gowan.
Dover			30.29	769.4	68	20.0		WSW			3		0					Clear	J. Costello.
Eccles (near Manchester)			30.18	766.6	66.4	19.1		SW	3.2	1.4			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			30.34	770.6	66.0	18.9		SW			3		6					Overcast	The Staff.
Fort Napier, (Natal)	28.06	712.7	30.31	769.6	56.1	13.4		SE			1		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	78	25.6		W			2		7					*D. clouds	
Galway, Queen's College			30.13	765.3	58	14.4		S			6		10					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.00	762.0	80.0	26.7		E			4		2					*D. clouds	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.80	759.2	57.9	14.4		WSW			1		10					Raining	Lewis Stuart.
Great Yarmouth			30.24	768.1	70	21.1		W			2		2					Blue sky	G. T. Watson.
Greenwich, Royal Ob'y			30.29	769.4	72.5	22.5		W			1		8					*D. clouds	The Staff, for G. B. Airy
Guernsey			30.35	770.9	66.5	19.2		SW			1		3					*D. clouds	Dr. S. E. Hoskins.
Helston			30.31	769.9	67	19.4		SW			4		0			0	0	Fine	M. P. Moyle.
Holyhead			30.15	765.8	61	16.1		SSW			6		10					Misty	John Tiston.
Kew, Observatory			30.29	769.4	66.9	19.4		SW	8	3.6			5					*D. clouds	The Staff.
Kingstown			30.11	765.5	64	17.8		SW			3		10					Gloomy	George Mitchell.
Leicester Museum			30.25	768.3	66.5	19.2		SW			3		8					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			30.05	763.3	86.8	30.4		NW			1		0						Corp'l F. Fraser, A. M. C.
Nairn			29.88	758.9	63	17.2		SSW			3		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.18	766.6	86.4	30.2		NE			6		7					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.24	768.1	69.1	20.6		NW			4		10k. d		WSW	0.026	0.66	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.22	767.6	64.9	17.7		SSW			3		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Ob'y			30.25	768.3	67	19.4		WSW			2		9					Overcast	J. Lucas.
Plymouth			30.32	770.1	68.1	20.1		WSW			3		8					*D. clouds	John Merrifield.
Roche's Point			30.21	767.3	60	15.6		WSW			4		10					Misty	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, Jersey			30.35	770.9	68.4	20.2		WSW			3		2					¼ clouded	A. P. Amy.
Sandwick Manse Orkneys			29.88	758.9	61.5	16.4		S	21	9.4			6					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery Turkey			29.85	758.2	89.9	31.7		NE			2		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			30.19	766.8	69.9	21.1		SW			3		7			0	0	*D. clouds	W. F. Cooper.
Silloth Rectory			30.04	763.0	68.7	20.4	66	SW			3		6			0.150	3.81	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.17	766.3	63.0	17.2		SW			2					Blank	Blank		Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			29.75	755.6	58	14.4		SSW			6		10					Drizzling	John Smith.
Strathfield Turgiss			30.30	769.6	70.3	21.3		W			2		8					*D. clouds	Rev. Charles H. Griffith.
Thurso			29.85	758.2	64	17.8		S			4		8					Gloomy	John Trotter.
Truro, Royal Institution			30.33	770.4	70	21.1		SW			4		5					*D. clouds	W. Newcombe.
Valencia, Observatory			30.14	765.5	62.1	16.7		SSW	31	13.9			10					Overcast	The Staff.
SUB-SERIES.																			
Calf of Man, Isle of Man					57	13.9		SW			4		10						Thomas Dawson.
Cape Good Hope, Ob'y			30.13	765.3	75.0	23.9	39	SSE	1	0.4		0	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.62	752.3	61.0	16.1	82	S			1		10n					Light rain	Francis Abbott, F.R.A.S.
Leith, Restaurig Park			29.99	761.7	62.3	16.8		SW			2		10kts			0.06	1.5	Overcast	Andrew Gibb.
Mauritius, Observatory			30.25	768.3				ESE	18.2	8.1						0.005	0.13		C. Meldrum
Melbourne, Observatory			29.59	751.6	52.7	11.5	79	NNW	15	6.7			9			0.30	7.6	Showery	R. L. J. Ellery.
Monach Lighthouse, Hebrides			29.75	755.6	57	13.9		SW			4	7	10			0.1	2.5		J. Youngclause.
North Unst, (Shetland Is.)			29.92	760.0	55	12.8		S			6		5	S					Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; exceptions lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 3 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 4,200 ft., or 279.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			30.16	766.1	63.1	17.3	62	WNW			4		7						
Faröe			30.22	767.5	63.9	17.7	69	WNW			4		2						
Godthaab, (Greenland)			29.67	753.6	38.5	3.6		Calm			0		10						
Stykkisholm, Iceland			29.42	747.2	52.7	11.5	83	Calm			0		8					Raining	
Thorshavn, (Faröe)			29.71	754.7	54.9	12.7	88	S			6		8					Raining	
Vestervig			30.15	765.9	60.8	16.0	73	WNW			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 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			30.36	771.1	78.8	26	55	NE			1		28		NE	0	0	¼ Covered	Normal School.
Amiens																			Normal School.
Avignon			30.14	765.6	92.7	33.7	28	N			2		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.29	769.3	75.6	24.2	33	N			1		5		W	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)			30.35	770.9	78.3	25.7	35	N	2.7	1.2					W	0	0		Beaumette Observatory
Beauvais			30.33	770.3	73.4	23.0	44	NNW			2		0			0	0	Clear	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.26	768.7	86.0	30	54	N			1		0			0	0	Clear	Normal School.
Bourges			30.19	766.9	78.1	25.6	45	NNE			2		2		E	0	0	Slightly cl'dy	Normal School.
Brest			30.31	769.8	75.0	23.9	66	SSW			2		2k		SW	0	0		Naval Observatory.
Caen			30.18	766.6	79.7	26.5	46	W			1		0			0	0	Clear	Normal School
Chartres																			Normal School.
Châlons-sur-Marne			30.32	770.2	75.6	24.2	51	NE			2		1			0	0		Normal School.
Clermont			30.30	769.7	74.5	23.6	42	N			2		5ck		S	0	0	Cloudy	Normal School.
Commercy			30.24	768.0	82.0	27.8	46	N			2		5		N	0	0	Cloudy	Puy de Dome Obs'y.
Commune de Greasque*			30.30	769.5	69.3	20.7	49				2		2ks			0	0	Slightly cl'dy	Normal School
Grenoble			30.22	767.5	96.4	35.8	19	NW			2		0			0	0		M. Kina.
La Roche-sur-Yon			30.18	766.5	81.0	27.2	50	NE			1		2			0	0	Slightly cl'dy	Normal School.
Le Mans			30.46	773.7	80.8	27.1	79	N			2		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			30.30	769.5	72.7	22.6	47	NW			2		2		NW	0	0	Slightly cl'dy	Normal School.
Mâcon			30.10	764.6	83.3	28.5	65	N					2		N	0	0	Slightly cl'dy	Normal School.
Metz			30.43	772.9	80.6	27	58				2		5		E	0	0	Cloudy	Normal School.
Mirecourt																			M. Schuster.
Nismes			30.25	768.3	73.8	23.2	55	NW			2		5		SE	0	0	Cloudy	Normal School.
Orleans			30.20	767.1	95.2	35.1	52	N			1		0			0	0	Clear	Normal School.
Paris, Observatory																			Normal School.
Parthenay			30.32	770.1	73.6	23.1	29	WNW			2		0			0	0	Clear	National Observatory.
Privas																			Normal School.
Rochefort, Observatory																			Normal School.
Rouen			30.34	770.6	85.6	29.8	40	NW			3		0			0	0	Blue sky	Naval Observatory.
Saint Lo			30.32	770.2	77.7	25.4	35	NW			1		0			0	0	Clear	Normal School.
Tarbes																			Normal School.
Villefranche																			Normal School
Sub-Series.																			
Fort de France, Martinique			30.26	768.7	86.0	30	89	W			2		0			0	0	Clear	Normal School.
Marseilles			29.88	759.0	79.5	26.4													L'Abbé Marchesi.
Mont-Louis																			Marseilles Observatory.
Montsouris, Paris			30.50	774.6	73.0	22.8	75	SE	9.3	4.17			10		W	0	0		—. Faiguère.
Perpignan			30.32	770.2	73.6	23.1	33	NNW			3		1k			0	0		Montsouris Observ'tory.
Pic du Midi, (Summit) H.P.	21.64	549.6	30.16	766.0	85.8	29.9	48	N	9.3	4.17			0			0	0		Dr. Fines.
Pic du Midi, (Plantade)	22.92	582.1			61.3	16.3		WSW			1		7					Fair	M. Baylac.
Saint Maur, (near Paris)					63.5	17.5		WSW			3		7			0	0	Fair	General de Nansouty.
Toulouse			30.32	770.2	77.0	25.0	28	W			1		0			0	0	Clear	E. Renon.
Tours			30.31	769.9	83.8	28.8	42	NW			4		0			0	0		Toulouse Observatory
Versailles, (near Paris)			30.30	769.5	78.8	26.0	37	NNW			2		1		N	0.012	0.3		C. Marquet.
Zi-Ka-Wei, (near Shanghai)			30.34	770.5	75.2	24.0	38	N			1		0			0	0	Very clear	Dr. A. Bérigny.
																			H. Le Lee, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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			30.22	767.6	73.6	23.1	46	WNW			6		6	WNW		0	0		Prof. T. Hoh.
Berlin			30.29	769.3	69.4	20.8	41	W			2		8			0.024	0.6		Prof. Arndt.
Breslau			30.30	769.7	70.9	21.6	45	NW			5		7			0	0		Dr. P. Neugebauer.
Carlsruhe			30.22	767.6	75.9	24.4	50	N			3		9			0	0		A. Senz.
Cassel			30.33	770.3	73.9	23.3	46	NW			3		8	WNW		0	0		Dr. H. Möhl.
Emden			30.14	765.5	65.7	18.7	72	S			1		10			0.319	8.1	Thunder-storm	Prof. Prestel.
Frankfort on the Main			30.31	769.8	73.6	23.1	37	E			2		6			0	0		Physical Society.
Friedrichshafen			30.21	767.4	73.8	23.2	72	WSW			1		2			0.016	0.4		M. Wilhelm.
Hamburg			30.28	769.1	65.1	18.4	49	WNW			3		8k	WNW		0.098	2.5	Fair	Captain F. Hegemann.
Kiel			30.21	768.1	64.2	17.9	58	WNW			4		6			0.375	1.9		Prof. G. Karsten.
Königsberg, (Prussia.)			30.12	765.1	65.7	18.7	52	W			5		2			0.051	1.3		Prof. E. Luther.
Köslin			30.25	768.3	64.0	18.1		NW			4		2			0.181	4.6		H. Müller.
Leipsic			30.30	769.7	70.3	21.3	51	N			1		8	W		0.008	0.2		Prof. Bruhns.
Memel			30.11	764.7	62.6	17.0	71	WNW			4		1ck			0.008	0.2		Reinbrecht & Skaiweit.
Munster			30.26	769.4	71.2	21.8	62	NW			3		6			0	0		Prof. E. Heis.
Neufahrwasser			30.20	767.0	68.7	20.4	47	NNW			3		6			0.051	1.3		A. Lothes.
Posen			30.26	768.6	71.2	21.8	36	W			6		6			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.26	768.5	76.6	24.8	44	NE			1		9	SW		0	0		Dr. Schur.
Stuttgart			30.24	768.1	76.1	24.5	47	N			2		5			0	0		Prof. Schoder.
Thorn			30.20	767.0	75.4	24.1	35	NW			5		7			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.27	768.9	72.7	22.6	38	NE			2		10			0	0		Prof. Flesch.
Wustrow, Naval School			30.32	770.1	62.4	16.9	62	NW			2		5			0.079	2.0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	760.2	89.6	32.0		NE										Very clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 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			30.07	763.6	88.5	31.4	37	NW	0.7	0.3			5			0	0		
Padua			30.07	763.8	88.7	31.5	43	ESE	3.1	1.4			3			0	0		
Vicenza			30.07	763.6	89.8	32.1	41	SE	3.1	1.4			1			0	0		
Verona			30.05	763.3	90.0	32.2	42	NW			2		0			0	0		
Bergamo	28.77	730.8	30.03	762.6	86.7	30.4	44	E			2		0			0	0		
Domodossola	29.8	738.6	30.05	763.5	84.2	29.0	48	S			4		3			0	0		
Milan			30.09	764.3	88.7	31.5	55	ENE			1		6	SW		0	0		
Pavia			30.09	764.2	86.5	30.3	50	NE			1		0			0	0		
Moncalieri			30.10	764.5	83.7	28.7	55	N	0.7	0.3			1	E		0	0		
Mondovi	28.25	717.5	30.08	764.0	85.6	29.8	51	NW			2		1	SE		0	0		
Porto Maurizio			30.16	766.1	82.6	28.2	70	SW			2		1			0	0		
Genoa			30.11	764.8	84.2	29.0	57	SW	3.8	1.7			0			0	0		
Piacenza			30.08	764.1	86.7	30.4	49	NE	4.9	2.2			0			0	0		
Parma			30.07	763.7	90.9	32.7	38	NE			2		0			0	0		
Bologna			30.11	764.8	88.5	31.4	43	E			1		0			0	0		
Florence			30.09	764.3	91.9	33.3	26	NW			4		1			0	0		
Leghorn			30.11	764.9	82.0	27.8	74	NW	3.1	1.4			0			0	0		
Siena	28.91	734.2	30.06	763.4	89.1	31.7	33	NNW	0.7	0.3			0			0	0		
Urbino	28.64	727.1	30.14	765.6	82.2	27.9	54	NE			4		0			0	0		
Ancona			30.08	764.1	81.6	29.2	70	NW			4		1			0	0		
Grosseto			30.10	764.4	88.9	31.6	35	N			2		2			0	0		
Rome			30.07	763.7	92.1	33.4	41	SW	4.9	2.2			1			0	0		
Naples, O. U.			30.08	764.0	90.0	32.2	50	SW			2		1			0	0		
Lecce			30.02	762.5	85.3	29.6	51	NNW	18.6	8.3			0			0	0		
Cosenza			30.05	763.3	93.2	34.0	63	NW	4.3	1.9			2			0	0		
Riposto, (Sicily)			30.04	762.9	89.1	31.7	55	NW			2		3	NE		0	0		
Palermo			30.04	762.9	84.2	29.0	64	ENE	3.8	1.7			0			0	0		
Caltanissetta	28.12	714.3	29.97	761.3	87.8	31.0	28	W			4		2			0	0		
Sub-Series.																			
Naples, S. R.			30.10	764.5	87.8	31.0	42	SSW	6.9	3.1			3	W		0	0		Prof. F. Brioschi.
Pesaro			30.17	766.2	82.2	27.9	79	NE	16.3	7.28			0			0	0		L. Guidi.

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. Inches.	Rain-fall. 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. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Flushing			30.34	770.5	65.8	18.8		WNW			3								
Groningen			29.96	761.0	68.0	20.0		SSW			2								
Helder			30.24	768.1	67.8	19.9		SW			4								
Utrecht			30.24	768.2	74.1	23.4	61	SW			3		5					Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 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			30.08	763.9	61.5	16.4	71	SSW	7.2	3.2			5			0.047	1.2		
Brono			29.95	760.8	51.8	11.0	77	W	18	8			8			0	0		
Christiania			29.98	761.4	70.0	21.1	34	SSW	3.6	1.6			4			0	0		
Tromso			29.49	749.1	51.8	11.0		W	9	4			10			0.177	4.5		

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

PORTEUGUSE 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,)			30.37	771.4	78.1	25.6	79	ESE	4.1	1.81			4			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.07	763.7	97.7	36.5	19	SSW	4.6	2.00			1			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.15	765.9	82.8	28.2	43	SW	9.6	4.30			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.10	764.5	91.8	33.2	28	NNW	7.4	3.3			0			0	0		The Observatory.

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

RUSSIAN SERIES.

Furnished by 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			30.15	765.7	70.5	21.4	65	WNW	11	5			3						Astronomical Obs.
Wilna			30.01	762.3	72.0	22.2	69	W	9	4			3						Astronomical Obs.
Dorpat			29.94	760.5	62.6	17.0	75	W	7	3			5						Physical Cabinet.
St. Petersburg			29.92	760.0	58.6	14.8	94	SSE	7	3			10					Heavy rain.	Central Physical Obs.
Kuopio			29.78	756.3	67.6	19.8	64	SW	18	8			5						Ch. Forsten.
Kieff			29.94	760.4	90.0	32.2	33	SE	7	3			3					Smoke-haze	Physical Cabinet.
Nikolaiev			29.95	760.8	94.6	34.8	24	ENE	13	6			7						Kurdakof.
Kertch			29.89	759.2	86.9	30.5	51	ENE	13	6			2						Lagorio.
Moscow			30.03	762.8	86.4	30.2	48	S	4	2			2						Meteorological Obs.
Lugan			29.91	759.6	91.2	32.9	25	E	29	13			4						Meteorological Obs.
Archangel			29.83	757.7	67.3	19.6	90	W	27	12			5						Ogorodnikof.
Tiflis	28.56	725.4	29.89	759.3	85.1	29.5	44	SE	9	4			8						Physical Observatory.
Astrakhan			29.97	761.3	90.5	32.5	28	ESE	11	5			1						Sebastianoi.
Kasan			30.00	762.0	87.1	30.6	42	W	4	2			2						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	29.11	739.1	30.02	762.4	73.4	23.0	66	S	2	1			1						Meteorological Obs.
Nukuss			29.84	758.0	80.4	26.9	53	N ?	11	5			0						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul			29.82	757.4	70.3	21.3	51	N	0	0			5						Meteorological Obs.
Yeniseisk			29.63	752.6	59.7	15.4	67	NW	7	3			6			Blank	Blank		Marks.
Irkutsk																			Tsolgof.
Oorga																			Mossin.
Peking, (China)			29.78	756.3	72.7	22.6	98	Calm	0	0			10			Blank	Blank		Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.45	748.0	67.8	19.9	99	NW	16	7			10			Blank	Blank		
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk 592.0? m., or 1,942.2? ft.; 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 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	761.8	102.0	38.9	21	S	6.7	3.00		0	1			0	0	Partly cloudy	Royal Observatory.
San Fernando			30.10	764.4	92.3	33.5	33	ESE	23.9	10.7		0	0			0	0		The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			29.64	752.9	60.4	15.8	73	SW			6		2			0	0		
Umea			29.75	755.7	66.9	19.4	48	NW			7		5			0	0		
Hernosand			29.87	758.7	65.5	15.6	44	W			4		8			0	0		
Stockholm			29.92	759.9	70.0	21.6	51	SW			2		3			0	0		
Wisby			30.08	764.0	63.7	17.6	63	W			4		0			0.075	1.9		
SUB-SERIES.																			
Upsala			29.92	759.9	68.7	20.4	46	N	5.8	2.6			8		NW	0.000	0.01		Dr. Hildebrandsson.

NOTE.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall 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 or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. 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 82	732.1	30.18	766.5	79.7	26.5	47	N			2		4			0	0	Clouds	The Observatory.
Zurich	28.63	727.2	30.19	766.8	78.3	25.7	52	NW			1		1			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +4.3 mm; Thermometer, +4.2 cent.; Relative Humidity, —6 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

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

Station.	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. 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			29.93	760.2	83.1	28.4	54	NNE	19	8.5			1		N	0	0		
Fao, (Persian Gulf)			29.75	755.0	107.6	42.0		NW			3		0						
Salonica			30.06	763.4	94.6	34.8		SE			1		0						
Valona			30.07	763.6	85.1	29.5		W			1		2						
Varna			30.00	762 0	93.2	34.0		N			2		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.76	756.0	84.9	29.4	62	NW			1		28		SE				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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

Station.	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. 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			30.13	765.3	83	28.3		NW	4	1.8		0	2ks		SW	0	0	Fair	W. R Bigg.
*Chatham, N. B			30.00	762.0	75	23.9	78	W	3	1.3		8c	0	W		0	0	Fair	G. A. Blair.
Charlottetown P. E. Island			30.05	763.3	71	21.7	82	SW	5	2.2		5c	0			0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			30.06	763.5	86.9	30.5	62	S			1	0	0			0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			29.88	758.9															H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			30.08	764.0	76.1	24.5	79	SE	2	0.9		0	0			Inap.	Inap.	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.88	758.9	53	11.7	93	W	14	6.3		2c	2ks	W	W	1.040	26.42	Fair	James Stewart.
Goderich, Ontario			30.12	765.0	74.2	23.4	90	S			3		10n			Inap.	Inap.	Threatening	H. J. Strang, M. A.
Granton, Ontario	29.07	738.4	30.13	765.3	70	21.1		SW			1		10n			0.09	2.3	Cloudy	James Grant.
*Halifax, N. S.			30.05	763.3	73	22.8	79	W	2	0.9		0	0			0	0	Clear	F. Allison, M. A.
*Kingston, Ontario			30.15	765.8	77	25.0	88	SW	3	1.3		2ck	0			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			30.03	762.7	76.8	24.9	54	SW	1	0.4		5c	0	SW		0	0	Fair	C. H. Rigby
*Montreal, Quebec			30.08	764.0	80	26.7	73	SW	12	5.4		2c	Sm'e	NW		0	0	Fair	C. H. McLeod, C. E.
*Ottawa, Ontario			30.09	764.3	81	27.2	57	SW	8	3.6		2ck	0	S		0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.10	764.5	72	22.2	92	SW	8	3.6		2k	8ks	SW	SW	0.07	1.8	Cloudy	Rev. R. Mosley.
Port Dover, Ontario			30.15	765.8	74	23.3	90	SW	7	3.1		10k	0	SW		0.04	1.0	Fair	H. Morgan.
Port Hastings, N. S.			30.06	763.5	72.5	22.5		Calm	0	0						0	0	Fine	Peter Grant.
Port Stanley, Ontario			30.13	765.3	74	23.3	93	W	4	1.8		10k	0	W		0.66	16.8	Cloudy	M. Payne.
*Quebec, Quebec			30.07	763.8	79	26.1	78	Calm	0	0		0	0			0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.			30.10	764.5	62	16.7	80	S	2	0.9		0	0			0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			30.08	764.0	74	23.3	83	SW	8	3.6		2k	0	SW		0	0	Clear	K. Stewart.
Stayner, Ontario																			R. J. Cole.
Stratford, Ontario	28.88	733.5	30.12	765.0	69.0	20.6	95	SW	4	1.8		2c	3s			0.159	4.04	Sultry	C. J. MacGregor, M. A.
*Sydney, C. B			30.09	763.3	77	25.0	78	SW	2	0.9		8ck	0			0	0	Fair	T. C. Hill.
*Toronto, Ontario			30.14	765.5	76	24.4	83	S	6	2.7		5cs	2s	W		0	0	Fair	Magnetic Observatory.
Woodstock, Ontario			30.13	765.3	72.3	22.4	92	W	5	2.2		3ck	5s	SW		0.03	0.8	Fine	J. Montgomery
Sub-Series.																			
St. Johns, Newfoundland			30.16	766.1	75	23.9	55	W				2c	5ks			0	0	Fair	John Delaney.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.	.....	.....	30.16	766.1	81	27.2	70	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	
Alpena, Mich.	.....	.....	30.09	762.0	72	22.2	85	S	4	1.8	.....	.....	10ks	.....	S	0	0	Cloudy	
Atlantic City, N. J.	.....	.....	30.22	767.6	75	23.9	85	SW	3	1.3	.....	1cs	0	NW	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.24	767.8	75	23.9	81	Calm	0	0	.....	2ck	0	E	.....	0	0	Fair	
Baltimore, Md.	.....	.....	30.24	768.1	76	24.4	81	S	1	0.4	.....	Haze	Sm'e	.....	.....	0	0	Fair	
Barnegat, N. J.	.....	.....	30.21	767.3	80	26.7	70	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.31	719.1	29.93	760.2	57	13.9	80	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass.	.....	.....	30.16	766.1	82	27.8	70	W	3	1.3	.....	.....	Fog	.....	.....	0	0	Foggy	
Breckenridge, Minn.	.....	.....	29.98	761.5	54	12.2	86	W	10	4.5	.....	0	0	.....	.....	0.49	12.4	Clear	
Buffalo, N. Y.	.....	.....	30.11	764.8	76.5	24.7	72	SW	6	2.7	.....	8c	0	W	.....	0	0	Fair	
Burlington, Vt.	.....	.....	30.13	765.3	80	26.7	66	S	5	2.2	.....	2c	0	.....	.....	0	0	Fair	
Cairo, Ill.	.....	.....	30.12	765.0	74	23.3	90	S	3	1.3	.....	.....	10s	.....	.....	0.08	2.0	Cloudy	
Cape Hatteras, N. C.	.....	.....	30.16	766.1	81	27.2	78	E	1	0.4	.....	2k	0	.....	.....	0	0	Fair	
Cape Henry, Va.	.....	.....	30.18	766.6	78	25.6	78	SE	4	1.8	.....	5ck	0	W	.....	0	0	Fair	
Cape Lookout, N. C.	.....	.....	30.22	767.6	80	26.7	78	S	6	2.7	.....	2c	2ks	N	.....	0	0	Fair	
Cape May, N. J.	.....	.....	30.22	767.6	75	23.9	80	S	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Charleston, S. C.	.....	.....	30.24	768.1	81	27.2	82	NW	3	1.3	.....	0	1ks	.....	.....	0	0	Clear	
Cheyenne, Wyoming	24.20	614.7	30.14	765.5	56	13.3	53	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	29.99	761.7	73	22.8	85	SW	12	5.4	.....	.....	10s	.....	.....	0.08	2.0	Cloudy	
Cincinnati, Ohio	.....	.....	30.01	762.2	75	23.9	85	S	5	2.2	.....	.....	10ks,n	.....	S	1.45	36.8	Light rain	
Cleveland, Ohio	.....	.....	30.15	765.8	71.2	21.8	90	SE	6	2.7	.....	.....	10ks	.....	W	1.20	30.5	Cloudy	
Corsicana, Tex.	.....	.....	30.01	762.2	76	24.4	86	SE	1	0.4	.....	5k	0	NE	.....	0	0	Fair	
Davenport, Iowa	.....	.....	30.02	762.5	70	21.1	90	SW	8	3.6	.....	.....	10ks	.....	SW	1.25	31.7	Cloudy	
Denison, Tex.	.....	.....	30.02	762.5	80	26.7	78	S	4	1.8	.....	1c	0	.....	.....	0	0	Clear	
Denver, Col.	24.95	633.7	30.17	766.3	58	14.4	53	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.09	764.3	72	22.2	90	SW	8	3.6	.....	.....	10s	.....	SW	0.12	3.0	Cloudy	
Dodge City, Kan.	27.50	698.5	29.71	754.6	69	20.6	84	W	10	4.5	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Dubuque, Iowa	.....	.....	29.96	761.0	73	22.8	76	SW	6	2.7	.....	5k	0	SW	.....	0	0	Fair	
Duluth, Minn.	.....	.....	29.78	756.4	67	19.4	84	W	7	3.1	.....	5k	0	W	.....	0.39	9.9	Clearing	
Eastport, Me.	.....	.....	30.03	761.0	66	18.9	68	SW	1	0.4	.....	0	Sm'e	.....	.....	0	0	Clear	
Erie, Pa.	.....	.....	30.12	765.0	78	25.6	69	SW	4	1.8	.....	4c	0	.....	.....	0	0	Fair	
Escanaba, Mich.	.....	.....	29.86	758.4	71	21.7	85	S	16	7.2	.....	1ck	5s	S	S	0.03	0.8	Fair	
Fort Gibson, Indian Ter.	.....	.....	30.00	762.0	80	26.7	74	SE	4	1.8	.....	2c	0	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.83	732.3	29.88	758.9	80	26.7	61	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.39	721.1	30.03	762.7	58	14.4	70	NE	2	0.9	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Galveston, Tex.	.....	.....	30.06	763.5	80	26.7	82	SW	4	1.8	.....	0	8ks	.....	.....	0.10	2.5	Cloudy	
Grand Haven, Mich.	.....	.....	30.00	762.0	75	23.9	81	S	15	6.7	.....	0	4s	.....	SW	0	0	Fair	
Indianapolis, Ind.	.....	.....	30.19	764.5	74	23.3	85	SE	4	1.8	.....	.....	10s	.....	S	0.03	0.8	Cloudy	
Indianola, Tex.	.....	.....	30.02	762.5	81	27.2	82	S	3	1.3	.....	5k	0	SW	.....	0	0	Fair	
Jacksonville, Fla.	.....	.....	30.21	767.3	84	28.9	70	E	4	1.8	.....	5ck	0	E	.....	0	0	Fair	
Keokuk, Iowa	.....	.....	29.98	761.5	71	21.7	95	S	3	1.3	.....	.....	10n	.....	S	1.10	27.9	Light rain	
Key West, Fla.	.....	.....	30.11	764.8	80.8	27.1	87	E	8	3.6	.....	1cs	5ks,n	.....	E,S	0.16	4.1	Threatening	
Kittyhawk, N. C.	.....	.....	30.25	768.3	78	25.6	90	SE	4	1.8	.....	2k	0	W	.....	0	0	Fair	
Knoxville, Tenn.	.....	.....	30.24	767.8	71	21.7	95	NE	6	2.7	.....	10k	0	NE	.....	0.05	1.3	Cloudy	
La Crosse, Wis.	.....	.....	29.89	759.2	70	21.1	79	W	6	2.7	.....	.....	10s	.....	W	0.51	13.0	Cloudy	
Leavenworth, Kan.	.....	.....	30.02	762.5	74	23.3	81	Calm	0	0	.....	.....	10s	.....	SW	0.04	1.0	Cloudy	
Louisville, Ky.	.....	.....	30.13	765.3	75	23.9	86	SE	2	0.9	.....	.....	10n	.....	SE	0.09	2.3	Light rain	
Lynchburg, Va.	.....	.....	30.19	766.8	81	27.2	78	S	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	30.05	763.3	80	26.7	70	SW	4	1.8	.....	2c	0	W	.....	0	0	Fair	
Marquette, Mich.	.....	.....	29.80	756.9	72	22.2	80	S	8	3.6	.....	.....	8s	.....	S	0.01	1.0	Cloudy	
Memphis, Tenn.	.....	.....	30.10	764.5	74	23.3	90	SE	4	1.8	.....	2ck	5ks	.....	SE	0.40	10.2	Cloudy	
Milwaukee, Wis.	.....	.....	29.96	761.0	71	21.7	90	SW	9	4.0	.....	.....	10n	.....	SW	Inap.	Inap	Light rain	
Mobile, Ala.	.....	.....	30.13	765.3	77	25.0	86	SE	6	2.7	.....	.....	10s	.....	S	1.36	34.5	Cloudy	
Montgomery, Ala.	.....	.....	30.18	766.6	74.5	23.6	88	E	6	2.7	.....	.....	10s	.....	S	0.59	15.0	Cloudy	
Morgantown, W. Va.	29.18	741.1	30.18	766.6	79	26.1	73	SE	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Mt. Washington, N. H.	24.16	613.6	30.52	775.2	58	14.4	93	NW	15	6.7	.....	0	Haze	.....	.....	0	0	Fair	
Nashville, Tenn.	.....	.....	30.13	765.3	75	23.9	85	Calm	0	0	.....	10k	0	S	.....	0.62	15.8	Cloudy	
New Haven, Conn.	.....	.....	30.17	766.3	82	27.8	70	Calm	0	0	.....	Haze	Haze	.....	.....	0	0	Fair	
New London, Conn.	.....	.....	30.19	766.8	78	25.6	73	SW	2	0.9	.....	0	Haze	.....	.....	0	0	Clear	
New Orleans, La.	.....	.....	30.09	764.3	78.5	25.8	88	SE	3	1.3	.....	1ck	0	.....	.....	0.14	3.6	Clear	
Newport, R. I.	.....	.....	30.18	766.6	73	22.8	81	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
New York, N. Y.	.....	.....	30.2[illegible]	767.1	72	22.2	75	SW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Norfolk, Va.	.....	.....	30.23	767.8	83	28.3	70	SE	3	1.3	.....	2ck	0	.....	.....	0	0	Fair	
North Platte, Neb.	27.92	691.4	29.73	755.1	62	16.7	77	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb.	29.03	736.6	30.01	762.0	66	18.9	94	N	6	2.7	.....	0	5s	.....	N	1.43	36.3	Fair	
Oswego, N. Y.	.....	.....	30.12	765.0	81	27.2	72	S	4	1.8	.....	8cs	Haze	W	.....	0	0	Fair	
Pembina, Dakota	.....	.....	29.88	758.9	55	12.8	80	NW	4	1.8	.....	0	0	.....	.....	1.05	26.7	Clear	
Philadelphia, Penn.	.....	.....	30.21	767.3	74	23.3	81	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Pike's Peak, Colorado	18.11	460.0	30.32	770.1	33	0.6	79	W	20	8.9	.....	0	Haze	.....	.....	Inap.	Inap.	Clear	
Pittsburgh, Penn.	.....	.....	30.16	766.1	78	25.6	74	W	2	0.9	.....	5c	1k	.....	.....	Inap.	Inap.	Fair	
Port Huron, Mich.	.....	.....	30.10	764.5	71	21.7	95	S	6	2.7	.....	1c	8s	.....	SW	0.06	1.5	Cloudy	
Portland, Me.	.....	.....	30.12	765.0	77	25.0	77	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	
Portland, Oregon	.....	.....	29.87	758.7	55	12.8	84	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Punta Rassa, Fla.	.....	.....	30.14	765.5	80.0	26.7	80	E	10	4.5	.....	Haze	0	.....	.....	0.02	0.5	Clear	
Rochester, N. Y.	.....	.....	30.11	764.8	78	25.6	73	W	8	3.6	.....	2c	Haze	W	.....	Inap.	Inap.	Fair	
Salt Lake City, Utah	25.64	651.2	29.97	761.2	62	16.7	36	S	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	30.14	766.8	75	23.9	81	W	2	0.9	.....	0	0	.....	.....	0	0	Clear	
San Diego, Cal.	.....	.....	29.83	757.7	67	19.4	79	N	4	1.8	.....	.....	10s	.....	N	0	0	Cloudy	
San Francisco, Cal.	.....	.....	29.84	757.9	56	13.3	87	SW	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Santa Fé, N. M.	23.42	594.9	29.96	761.0	56	13.3	87	E	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.24	768.1	85	29.4	58	Calm	0	0	.....	2k	0	.....	.....	0	0	Clear	
Shreveport, La.	.....	.....	30.08	764.0	77	25.0	86	SE	2	0.9	.....	5c	0	.....	.....	0	0	Fair	
Smithville, N. C.	.....	.....	30.22	767.6	80	26.7	74	NW	1	0.4	.....	5k	0	E	.....	0	0	Fair	
Springfield, Mass.	.....	.....	30.16	766.1	78.5	25.8	73	S	4	1.8	.....	Haze	0	.....	.....	0	0	Clear	
St. Louis, Mo.	.....	.....	30.07	763.8	76	24.4	76	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.18	766.6	77	25.0	82	SE	9	4.0	.....	5c	2ks	N	SE	0	0	Fair	
St. Paul, Minn.	.....	.....	29.85	758.2	64	17.8	83	W	6	2.7	.....	2c	5s	W	W	0.77	19.6	Fair	
Thatcher's Island, Alaska	.....	.....	30.01	762.2	44	6.7	92	SE	13	5.8	.....	.....	10n	.....	.....	0.21	5.3	Light rain	
Toledo, Ohio	.....	.....	30.15	765.8	70	21.1	90	SW	8	3.6	.....	0	0	.....	.....	0	0	Hazy	
Tucson, Arizona	.....	.....	30.08	764.0	73	22.8	90	SW	10	4.5	.....	.....	10ks	.....	SW	1.06	26.9	Cloudy	
Tybee Island, Ga.	27.44	697.0	30.04	763.0	78	25.6	.....	Calm	.....	.....	.....	2ck	0	.....	.....	0	0	Fair	
Vicksburg, Miss.	.....	.....	30.21	767.3	84	28.9	67	Calm	0	0	.....	2k	0	SW	.....	0	0	Clear	
Virginia City, M. T.	.....	.....	30.09	764.3	74.5	23.6	92	Calm	0	0	.....	.....	10s	.....	.....	0.18	4.6	Cloudy	
Washington, D. C.	24.32	617.7	29.80	756.9	51	10.6	39	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Wilmington, N. C.	.....	.....	30.23	767.8	76.5	24.7	82	S	2	0.9	.....	.....	10s	.....	W	0	0	Cloudy	
Wood's Holl, Mass.	.....	.....	30.23	767.8	83	28.3	70	SW	2	0.9	.....	2cs	1ks	NE	S	0	0	Fair	
	.....	.....	30.19	766.8	74	23.3	81	S	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
Yankton, Dakota	28.84	732.5	30.11	764.8	61	16.1	77	W	1	0.4		0	0			Inap.	Inap.	Clear	
Yuma, Arizona			29.76	755.9	87	30.6		N				2ck	0	NE		0	0	Fair	
Sub-Series.																			
Kingston, Jamaica, W. I.			30.20	767.1	77	25.0	78	Calm	0	0		8c	2s			0.74	18.8		James Gall.
St. Georges, Bermudas			30.24	768.1	85.0	29.4	78	S	8	3.6		1k	5pk	SW		0.35	8.9	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Paramaribo, D. Guiana, S. A.			30.04	763.0	82	27.8	75	E			2	5k	5k	E		0.162	4.11	½ Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.13	765.2			85.6	29.8		E								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1			66.5	19.2	78	Calm	0	0		5ck	1s			0	0	Clearing	Thomas Herran.
York Factory, B. A.			29.59	751.6	53	11.7	93	E	8	3.6		7k	0	SW		0.20	5.1		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.06	763.5	77	25.0		NE			2					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Adelie Fuller, Sandy Hook, N. J.	S by E	3½	30.18	766.6	76	24.4		W			2	0	Haze			Smooth		Clear	Capt. James Jorgensen.
Steamer Nova Scotian, N. 42° 20′, W. 65° 22′	SW ½W	11	30.19	766.8	59	15.0		WSW			3		0			Smooth		Very clear	Capt. Ritchie.

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.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 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, 4,262.2 ft., or 1,299.2 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.04	763.0	83.3	28.5	68	N			1		0			0	0	Clear	Charnot.
Algiers			30.04	763.1	82.4	28.0	63	N			2		0			0	0	Clear	Peter.
La Calle			30.04	763.0	85.8	29.9	62	NW			2		1			0	0	Clear	Kunts.
Tunis			30.17	766.4	88.3	31.3	60	E			3		0			0	0	Clear	Jacques.
Sfax			30.10	764.6	88.9	31.6	49	SE			3		1			0	0	Clear	Chauvey.
Saida			30.02	762.5	94.1	34.5		N			3		1			0	0	Clear	Millot.
Tebessa			30.09	764.2	89.4	31.9		E			2		0			0	0	Clear	Colin.
Gerlville			30.06	763.4	87.6	30.9	28	NE			1		2			0	0	Clear	Lemaillot.
Laghouat			30.03	762.8	69.8	36.0		NE			2		0			0	0	Clear	Guyot.
Biskra			30.08	764.0	96.3	35.7		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			30.17	766.3	72.7	22.6	75	NE			1		5			0.028	0.7		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.22	767.6	70.2	21.2	53	NE			1		7			0	0		Dr. Wierzbiski.
Eperies			30.13	765.2	71.2	21.8	45	N			3		8c8,8			0	0		Julius Mikolik.
Gratz	28.96	735.5	30.13	765.2	70.0	21.1	77	SSW			2		4			1.470	37.5		Andreas Rospini.
Hermannstadt	28.54	724.9	29.87	758.8	81.9	27.7	54	ESE			1		4			1.852	47.05		Prof. Reissenberger.
Kremsmünster	28.90	734.0	30.20	767.1	70.2	21.2	48	NNW			2		3			0	0		Prof. C. Wagner.
Lemberg			30.08	764.0	64.4	18.0	80	NE			4		10			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.03	764.0	80.1	26.7	49	E			4		2c8			0	0		I.R.Hydrographic Office
Szegedin			30.01	762.2	87.4	30.8	56	NW			3		3			0	0		Karl Stancel.
Triesie			30.09	764.3	80.6	27.0	57	ENE			2		0			0	0		Prof. V. Farolfi.
Vienna			30.20	767.1	75.0	23.9	41	NW			1		4			0	0		I. R. Central Met. Ob'y

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.20	767.0	72.3	22.4	58	SSW			2	..c		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.88	758.9	62.1	16.7		SSW	15	6.7			7			0.165	4.19	*D. clouds	William Boswell.
Ardrossan			29.98	761.5	59	15.0		SW			2		8					Raining	William McNeil.
Armagh, Observatory			30.04	763.0	63.2	17.3		SW	14	6.3			10					Gloomy	S. Cail, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.10	764.5	65.6	18.7		SSW			1–2		10					*D. clouds	J. Dreyer.
Bradford			30.16	763.5	67.6	19.8		W			1		5			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.00	762.0	82.5	28.1		NE			3		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge			30.16	766.1	76.5	24.7		WNW					5						Mr. Pain, F. B. M. S. [H. C.
Cardington			30.15	765.8	79.0	26.1		SW			2		1					Blue sky	John McLaren.
Carlisle			30.01	762.2	66	18.9		SW			7		9			0.06	1.5	*D. clouds	T. Bell, for J. Carmell.
Chatham, School M. E.			30.16	766.1	78.0	25.6		SW			2		0					Hazy	Capt. J. Fellowes, R.E.
Dartmoor	8.84	732.5	30.32	770.1	65.4	18.6		W			4		4					*D. clouds	R. E. Power.
Donaghadee			30.01	762.2	65	18.3		WSW			4		10					Overcast	J. Mac Gowan.
Dover			30.20	767.1	66	18.9		WSW			4		1					¼ clo ded	J. Costello.
Eccles (near Manchester)			30.08	764.0	70.6	21.4		SW	6.8	3.0			5					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.25	768.3	68.3	20.2		WSW			3		8					Overcast	The Staff.
Fort Napier, (Natal)	27.00	708.6	30.14	765.5	70.4	21.3		E			2		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone			29.97	761.2	77	25.0		W			1		9					*D. clouds	
Galway, Queen's College			30.13	765.3	60	15.6		SW			4		5					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.04	763.0	81.2	27.3		E			3		1					*D. clouds	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.94	760.5	58.1	14.5		SW			2		10					Overcast	Lewis Stuart.
Great Yarmouth			30.15	765.8	72	22.2		W			3		2					Blue sky	G. T. Watson.
Greenwich, Royal Ob'y			30.18	766.6	79.7	26.5		WSW			3		0					Blue sky	The Staff, for G. B. Airy
Guernsey			30.25	768.6	67.5	19.7		WSW			1		0					Blue sky	Dr. S. E. Hoskins.
Helston			30.22	767.6	69	20.6		SW			2		8k			0	0	Gloomy	M. P. Moyle.
Holyhead			30.10	764.5	62	16.7		SSW			5		10					Misty	John Tilston.
Kew, Observatory			30.17	766.3	73.2	22.9		SSW	13	5.8			2					Hazy	The Staff.
Kingstown			30.07	763.8	69	20.6		SE			3		6					*D. clouds	George Mitchell.
Leicester Museum			30.14	765.5	70.1	21.2		W			2		4					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.95	760.7	85.2	29.6		NE			1		2k					*D clouds	Corp'l F. Fraser, A. M. C.
Nairn			29.89	756.9	61	16.1		WSW			2		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.20	767.1	87.5	30.8		E			6		6					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.13	765.3	74.2	23.4		SW			4		7c,ck,k	WSW	WNW	0.016	0.41	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.10	764.5	72.1	22.3		SW			4							*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Ob'y			30.14	765.5	75	23.9		WSW			2		7c						J. Lucas.
Plymouth			30.24	768.1	70	21.1		WSW			3		5					*D. clouds	John Merrifield.
Roche's Point			30.14	765.5	61	16.1		WSW			4		8					Dull	W. Kennedy.
Saint Ann's Head			30.18	766.6	61	16.1		SW			2		10					Overcast	John C. Walker.
Saint Helier, Jersey			30.26	768.6	69.4	20.8		WSW			3		0					Clear	A. P. Amy.
Sandwick Manse Orkneys			29.79	756.7	57.3	14.1		WSW	20	8.9			10					Overcast	Rev. C. Clouston, LL. D.
Scarborough			30.06	763.5	67.4	19.7		WSW			2		10					Overcast	F. Shaw.
Scutari Cemetery Turkey			29.70	754.4	90.0	32.2		NE			2		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			30.09	764.3	71.5	21.9		WSW			2		6			Inap.	Inap.	Overcast	W. F. Cooper.
Silloth Rectory			30.02	762.5	66.3	19.1	81	SW			4		7			0.010	0.25	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.08	764.0	63.3	17.4		W			2		10			Blank	Blank	Gloomy	Rev. S. J. Perry.
Stornoway Lewis C. Hebr.			29.75	755.6	56	13.3		SW			2		10					Raining	John Smith.
Stratfield Turgiss			30.31	770.6	74.0	23.3		W			1		2					*D. clouds	Rev. Charles H. Griffith.
Thurso			29.77	756.1	65	18.3		SW			4		7					Gloomy	John Trotter.
Truro, Royal Institution			30.26	768.6	76	24.4		NW			2		5					*D. clouds	W. Newcombe.
Valencia, Observatory			30.15	765.8	63.0	17.2		WSW	19	8.5			10					Overcast	The Staff.
Sub-Stations																			
Calf of Man, Isle of Man					57	13.9		SW			4		10						Thomas Dawson.
Cape Good Hope, Ob'y			29.99	761.7	64.7	18.2	69	NNW	10	4.5		1	3						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.62	752.3	60.5	15.8	87	S			5		10n			0.05	1.3	Squally	Francis Abbott, F.R.A.S.
Leith, Restaurig Parks			29.97	761.2	60.0	15.6		SW			3		10ks			0.03	0.8	Showery	Andrew Gibb.
Mauritius, Observatory			30.24	768.1				E	22.7	10.1						0.020	0.51		C. Meldrum
Melbourne, Observatory			29.78	756.4	51.2	10.7	93	W	14	6.3			10			0.17	4.3	Showery	R. L. J. Ellery.
Monach Lighthouse Hebrides			29.83	757.7	57	13.9		SW			4		10			0.1	2.5		J. Youngclause.
North Unst, Shetland Is.			29.72	754.9	54	12.2		S			6		10			Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. 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			30.13	765.4	65.8	18.8	70	SW			2		10						
Fanöe			30.09	764.3	63.7	17.6	83	WSW			4		9						
Godthaab, (Greenland)			29.61	752.1	38.3	3.5		NW			2		10						
Stykkisholm, (Iceland)			29.34	745.1	52.7	11.5	83	Calm			0		8						
Thorshavn, Faröe			29.51	749.4	52.9	11.6	95	SW			6		10					Raining	
Vestervig			30.02	762.6	59.0	15.0	93	SW			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			30.32	770.2	75.2	24	67	SW			1		0			0	0	Clear	Normal School.
Amiens																			Normal School.
Avignon			30.08	764.1	86.5	30.3	30	N			3					0	0	Lightly cov'd	Normal School.
Bar-sur-Seine			30.19	766.9	75.4	24.1	40	NE			2		..ck			0	0	Clear	C. Saillard.
Beaumette, (near Angers)			30.14	765.6	84.7	29.3	19	N	2.2	1.0						0	0		Beaumette Observatory
Beauvais			30.26	768.6	71.6	22.0	48	WNW			2		2		WNW	0	0	Slightly cl'dy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.17	766.3	81.9	27.7	43	N			1		0			0	0	Clear	Normal School.
Bourges			30.22	767.6	78.4	25.8	40	NE			2		0			0	0	Clear	Normal School.
Brest			30.21	767.3	79.7	26.5	59	SSW			1		1k			0	0		Naval Observatory.
Carcassonne			30.10	764.4	79.7	26.5	35	W			1		2		E	0	0	Slightly cl'dy	Normal School
Caen																			Normal School.
Chartres			30.21	767.4	80.2	26.8	64	SW			2		2		N	0	0		ormal School.
Châlons-sur-Marne			30.23	767.9	79.9	26.6	38	NW			2		0			0	0	Clear	Normal School.
Clermont			30.17	766.4	75.9	24.4	60	NE			1		5			0	0	Cloudy	Puy de Dome Obs'y
Commercy			30.24	768.1	73.4	23	49	NE			2		0			0	0	Clear	Normal School
Commune de Greasque*			30.14	765.5	92.7	33.7	21	NW			2		2		NW	0	0		M. Kina.
Grenoble			30.17	766.2	79.2	26.2	92	N			6		2			0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.32	770.1	87.1	30.6	32	NE			2		0			0	0	Clear	Normal School.
Le Mans			30.24	768.1	78.4	25.8	56	E			4		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			30.18	766.5	76.1	24.5	30	N			2		0			0	0	Clear	Normal School.
Mâcon			30.39	771.8	78.1	25.6	50	NNE			2		0			0	0	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			30.23	767.9	71.8	22.1	34	NNE			2		0			0	0	Clear	Normal School.
Nismes			30.15	765.9	90.7	32.6	33	N			6		0			0	0	Clear	Normal School.
Orleans																			Normal School.
Paris, Observatory			30.24	768.0	78.8	26.0	33	SSE			1	3c		NNW		0	0	Hazy	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			30.19	766.7	87.8	30.7	28	ENE			3		5		SW	0	0	½ covered	Naval Observatory.
Rouen			30.22	767.6	79.3	26.3	34	W			1		0			0	0	Clear	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School.
Villefranche			30.17	766.4	84.2	29	57	NE			2		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.93	760.3	81.0	27.2													L'Abbé Marchesi.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.41	772.4	70.3	21.3	83	E	13.0	5.83			8		NW	0.374	9.5		—. Falguère.
Montsouris, Paris			30.24	768.1	82.9	28.3	30	SW			1	1c				0	0	Vapory	Montsouris Observ'tory.
Perpignan			30.02	762.4	81.0	27.2	65	NE	5.6	2.50			1		W	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.59	548.4			48.7	9.3		W			2		8					Stormy	M. Baylac.
Pic du Midi, (Plantade)	22.85	580.4			53.8	12.1		W			3		9			0.043	1.1	Stormy	General de Nansouty.
Saint Maur, (near Paris)			30.24	768.1	81.7	27.6	32	S?			1		0			0	0	Clear	E. Renou.
Toulouse			30.20	767.0	86.0	30.0	34	NNW			1		3			0	0		Toulouse Observatory
Tours			30.24	767.5	83.1	28.4	27	E			1		0			0	0	Clear	C. Marquet.
Versailles, (near Paris)			30.25	768.3	81.0	27.2	31	NE			1		3			0	0	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lee, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Clermont 388 m., or 1,272.4 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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			30.23	767.9	72.5	22.5	39	NW			3		1			0	0		Prof. T. Hoh.
Berlin			30.22	767.6	75.2	21.0	31	W			1		8			0	0		Prof. Arndt.
Breslau			30.32	770.1	69.4	20.8	35	NW			4		6			0	0		Dr. P. Neugebauer.
Carlsruhe			30.22	767.6	75.9	24.4	42	NE			3		0			0	0		A. Senz.
Cassel			30.24	768.0	78.8	26.0	36	SW			6		6	WSW		0	0		Dr. H. Möhl.
Emden			30.12	765.0	68.0	20.0	75	W			3		10			0.051	1.3		Prof. Prestel.
Frankfort on the Main			30.27	768.8	77.7	25.4	31	SW			2		3			0	0		Physical Society.
Friedrichshafen			30.21	767.4	72.7	22.6	52	NNE			4		0			0	0		M. Wilhelm.
Hamburg			30.19	766.8	68.5	20.3	71	WSW			2		10			0	0	Cloudy	Captain F. Hegemann.
Kiel			30.14	765.6	66.9	19.4	76	SW			4		10			0.067	1.7		Prof. G. Karston.
Königsberg, (Prussia.)			30.20	767.1	67.3	19.6	37	NW			2		4			0	0		Prof. E. Luther.
Köslin			30.23	767.8	69.4	20.8		W			2		1			0.024	0.6		H. Müller.
Leipsic			30.26	768.7	75.0	23.9	34	SW			1		7			0	0		Prof. Bruhns.
Memel			30.18	766.5	62.8	17.1	71	WNW			3		2ck			0.004	0.1		Reinbrecht & Skalweit.
Münster			30.23	767.8	74.3	23.5	58	SW			4		6			0	0		Prof. E. Heis.
Neufahrwasser			30.22	767.5	67.3	19.6	56	E			2		7			0	0		A. Lothes.
Posen			30.27	768.8	70.7	21.5	39	NW			5		10			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.24	768.2	75.9	24.4	33	Calm			0		0			0	0		Dr. Schur.
Stuttgart			30.22	767.5	72.7	22.6	33	N			2		0			0	0		Prof. Schoder.
Thorn			30.23	767.7	69.8	21.0	53	W			2		7			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.21	767.4	77.5	25.3	32	S			4		0			0	0		Prof. Flesch.
Wustrow, Naval School			30.27	768.8	66.9	19.4	73	WSW			2		10			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	91.2	32.9		NE										Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	763.9	83.1	28.4	43	S	0.7	0.3			1			0	0		
Padua			30.08	764.1	81.9	27.7	40	NE	9.8	4.4			0			0	0		
Vicenza			30.09	764.2	83.3	28.5	38	SE	2.5	1.1			1			0	0		
Verona			30.08	764.1	88.2	31.2	31	E			6		0			0	0		
Bergamo	28.77	730.8	30.02	762.6	84.2	29.0	40	SW			2		1			0	0		
Domodossola	29.07	738.3	30.05	763.2	82.0	27.8	49	S			6		3			0	0		
Milan			30.08	764.0	88.9	31.6	46	ENE			4		3	ENE		0	0		
Pavia			30.09	764.2	83.3	28.5	44	E			4		0			0	0		
Moncalieri			30.10	764.4	81.9	27.8	58	NE	0.7	0.3			2			0	0		
Mondovi	28.26	717.7	30.09	764.2	77.4	25.2	64	NW			2		9			0.008	0.2		
Porto Maurizio			30.06	763.4	86.0	30.0	58	SW			2		1			0	0		
Genoa			30.01	762.3	90.3	32.4	38	N	4.3	1.9			0			0	0		
Piacenza			30.09	764.3	82.2	27.9	47	E	8.7	3.9			1			0	0		
Parma			30.04	763.1	84.2	29.0	41	NE			6		5			0	0		
Bologna			30.10	764.5	87.8	31.0	45	SE			6		3	W		0	0		
Florence			30.04	763.0	89.2	31.8	36	NE			6		0			0	0		
Leghorn			30.04	763.1	90.0	32.2	38	NE	8.1	3.6			1			0	0		
Siena	28.83	732.2	29.98	761.4	86.9	30.5	40	ENE	1.8	0.8			4	E		0	0		
Urbino	28.61	726.6	30.11	764.8	76.5	24.7	61	NE			4		3			0	0		
Ancona			30.07	763.6	83.5	28.6	57	E			4		2			0	0		
Grosseto			30.00	762.0	93.2	34.0	35	SE			2		3	S		0	0		
Rome			29.97	761.3	92.5	33.6	46	SW	6.9	3.1			1			0	0		
Naples, O. U.			29.98	761.6	88.9	31.6	61	SW			4		4	NNW		0	0		
Lecce			29.94	760.5	85.6	29.8	39	NW	15.4	6.9			1			0	0		
Cosenza			29.96	761.0	91.8	33.2	66	NW	1.8	0.8			5			0	0		
Riposto, (Sicily)			29.97	761.3	84.7	29.3	63	Calm			0		4			0	0		
Palermo			29.96	760.9	82.2	27.9	68	NE	7.4	3.3			0			0	0		
Caltanissetta	28.09	713.4	29.94	760.4	87.4	30.8	21	NNE			1		0			0	0		
Sub-Series.																			
Naples, S. R			30.02	762.5	88.9	31.6	47	SW	5.6	2.5			3	W		0	0		Prof. F. Brioschi.
Pesaro			30.15	765.8	79.0	26.1	64	E	26.0	11.64			0			0	0		L. Guidi.

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			30.24	768.2	67.6	19.8		WNW			3								
Groningen			30.11	764.8	67.8	19.9		SW			4								
Helder			30.16	766.0	67.5	19.7		SW			4								
Utrecht			30.17	766.3	72.7	22.6	63	SW			3		5					Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	57.6	14.2	94	S	19.5	8.7			10			0.394	10.0		
Bröno			29.83	757.6				Calm	0	0			0			0	0		
Christiania			29.98	761.5	59.5	15.3	83	SSW	8.1	3.6			10					Light rain	
Tromsö			29.91	759.6	54.7	12.6		SW	9	4			8			0.063	1.6		

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

PORTEUGUSE 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,)	.....	.....	30.32	770.0	76.8	24.9	77	S	4.9	2.19	.....	.....	3	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.96	761.0	102.2	39.0	14	NW	3.4	1.50	.....	.....	3	SSW	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.13	765.3	80.8	27.1	62	SW	4.8	2.15	.....	.....	0	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.02	762.5	85.3	29.6	27	NNW	23.7	10.6	.....	.....	0	.....	.....	0	0	.....	The Observatory.

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

RUSSIAN SERIES.

Furnished by 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	.....	.....	30.21	767.2	67.3	19.6	44	WNW	7	3	.....	.....	8	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.13	765.4	67.5	19.7	50	Calm	0	0	.....	.....	5	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.07	763.6	67.1	19.5	51	WNW	4	2	.....	.....	4	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.98	761.6	64.8	18.2	60	WNW	18	8	.....	.....	3	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.91	759.8	62.6	17.0	67		13	6	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.90	759.5	77.9	25.5	53	N	20	9	.....	.....	3	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.80	787.0	95.7	35.4	22	NNE	9	4	.....	.....	5	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.79	756.6	81.9	27.7	56	ENE	25	11	.....	.....	2	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.00	762.0	77.7	25.4	58	SE	9	4	.....	.....	6	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.75	755.7	91.8	33.2	24	ENE	22	10	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.75	755.6	68.0	20.0	93	WNW	7	3	.....	.....	4	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.42	721.9	29.74	755.4	91.4	33.0	34	E	9	4	.....	.....	3	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.90	759.5	87.4	30.8	40	ESE	13	6	.....	.....	3	.....	.....	.....	.....	.....	Sebastianoi.
Kasan	.....	.....	29.88	759.0	91.0	32.8	32	W	18	8	.....	.....	2	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.95	735.2	29.85	758.1	74.1	23.4	58	W	20	9	.....	.....	9	.....	.....	.....	.....	Light rain	Meteorological Obs.
Nukuss	.....	.....	29.85	758.3	81.9	27.7	51	NNW	13	6	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.87	758.8	61.9	18.3	39	N	4	2	.....	.....	7	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.80	757.0	54.1	12.3	60	W	4	2	.....	.....	1	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.74	755.4	78.8	26.0	89	Calm	0	0	.....	.....	8	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	29.80	756.9	68.9	20.5	86	SE	2	1	.....	.....	10	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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 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	.....	.....	29.73	755.2	93.0	33.9	25	N	7.1	3.17	.....	0	2	.....	.....	0	0	Partly cloudy	Royal Observatory.
San Fernando	.....	.....	30.02	762.6	94.8	34.9	25	E	14.5	6.5	.....	0	0	.....	.....	0	0	.....	The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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	61.9	16.6	48	NW	.....	.....	4	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	29.98	761.6	61.9	16.6	55	SW	.....	.....	2	.....	2	.....	.....	0	0	.....	
Hernosand	.....	.....	30.02	762.5	59.7	15.4	55	S	.....	.....	4	.....	1	.....	.....	0	0	.....	
Stockholm	.....	.....	30.02	762.6	68.5	20.3	53	SSE	.....	.....	4	.....	7	.....	.....	0.08	2.1	.....	
Wisby	.....	.....	30.16	766.1	61.9	16.6	77	W	.....	.....	4	.....	0	.....	.....	0	0	.....	
SUB-SERIES.																			
Upsala	.....	.....	30.02	762.6	71.8	22.1	41	S	10.5	4.7	.....	.....	8	.....	WSW	0.10	2.67	.....	Dr. Hildebrandsson.

NOTE.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall 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 or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower From —	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.78	731.1	30.15	765.8	75.0	23.9	54	N			3		1			0	0	Clear	The Observatory.
Zurich	28.64	727.4	30.13	765.3	73.8	23.2	50	E			1		1			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +3.3 mm; Thermometer, +1.6 cent.; Relative Humidity, +1 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

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

Station.	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower From —	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			29.77	756.1	82.8	28.2	57	N	19	8.5			4		N	0	0		
Fao, (Persian Gulf)			29.65	753.0	96.8	36.0		SE			3		0						
Salonica			29.89	759.2	90.1	32.3		W			6		5						
Valona			29.98	761.6	83.7	28.7		W			1		2					Stormy	
Varna			29.84	758.0	93.2	34.0		E			4		8						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.67	753.5	91.8	33.2	57	SW			3		4k		SW			Cloudy	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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

Station.	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower From —	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			29.93	760.2	79.0	26.1	77	Calm	0	0		0	0			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.10	764.5	77	25.0		SW	6	2.7			8s		SW	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B			29.99	761.7	78	25.6	80	Calm	0	0		8ck	2ks	W	W	0	0	Fair	G. A. Blair.
Charlottetown P. E. Island			30.01	762.2	73	22.8	85	S	3	1.3		2c	0			0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			30.02	762.5	82.2	27.9	69	SW			2	5k	0			0	0	Fair	James Smith, M. A.
Dalhousie, N. B			29.97	761.2	69.7	20.9	69	W			1					0	0	Cl'dy, sultry.	H. A. Johnson.
Esquimault, B. C																			W. H. Bevis.
Fredericton, N. B			30.06	763.5	78.3	25.7	76	W	6	2.7		9ck	0			0.41	10.4	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			29.96	761.0	60	15.6	97	S	10	4.5		0	0			0	0	Fair	James Stewart.
Goderich, Ontario			30.13	765.3	72.9	22.7	84	W			2	8n	0	W		0	0	Clearing	H. J. Strang, M. A.
Granton, Ontario	29.05	737.9	30.10	764.5	73	22.8		W			1	1c	0	E		1.51	13.0	Clear	James Grant.
*Halifax, N. S.			29.99	761.7	80	26.7	72	NW	6	2.7		0	0			0	0	Clear	F. Allison, M. A.
*Kingston, Ontario			30.12	765.0	74	23.3	95	W	10	4.5		10cs	0	SW		0	0	Cloudy	S. Woods, M. A.
Little Glace Bay, N. S.			29.97	761.2	74.5	23.6	70	W	5	2.2		3c	0	W		0	0	Fair	C. H. Rigby.
*Montreal, Quebec			30.04	763.0	76	24.4	83	SW	11	4.9		8k	2s	W		0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.04	763.0	76	24.4	73	SW	9	4.0		10ck	0	SW		0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario			30.07	763.8	71	21.7	90	W	13	5.8		2cs	0	W		0.14	3.6	Fair	Rev. R. Mosley.
Port Dover, Ontario			30.12	765.0	74	23.3	90	Calm	0	0		10k	0	NW		0	0	Fair	H. Morgan.
Port Hastings, N. S.			30.02	762.5	75.5	24.2		NW	3	1.3						0	0	Fine	Peter Grant.
Port Stanley, Ontario			30.13	765.3	74	23.3	92	W	4	1.8			10ks		W	0	0	Cloudy	M. Payne.
*Quebec, Quebec			30.05	763.3	73	22.8	86	Calm	0	0			10c			0.06	1.5	Cloudy	Capt. Ashe, R. N.
St. John, N. B.			30.06	763.5	67	19.4	84	Calm	0	0		6cs	0			0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			30.11	764.8	68	20.0	74	Calm	0	0		5cs	0			0	0	Fair	K. Stewart.
Stayner, Ontario			30.04	763.0	77	25.0	73	NW	5	2.2		8k	0	NW		0.12	3.0	Fair	R. J. Cole.
Stratford, Ontario	24.86	733.0	30.09	764.3	70.0	21.1	95	W	6	2.7			10n			0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B			30.01	762.2	78	25.6	71	W	2	0.9		0	0			Inap.	Inap.	Clear	T. C. Hill.
*Toronto, Ontario			30.10	764.5	75	23.9	86	SW	12	5.4		5cs	2ks	W	W	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.12	765.0	73.4	23.0	90	W	8	3.6			10s			0	0	Cloudy	J. Montgomery
Sub-Series.																			
St. Johns, Newfoundland			30.00	762.0	77	25.0	72	E					10n			0	0	Cloudy	John Delaney.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.	.....	.....	30.11	764.8	82	27.8	70	Calm	0	0	.....	Haze	Haze	.....	.....	0.08	2.0	Hazy	
Alpena, Mich.	.....	.....	30.10	764.5	68	20.0	65	NW	8	3.6	.....	0	0	.....	.....	0.02	0.5	Clear	
Atlantic City, N. J.	.....	.....	30.17	766.3	76	24.4	86	SW	4	1.8	.....	1c	0	W	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.24	768.1	78	25.6	82	Calm	0	0	.....	5ck	0	.....	.....	0	0	Fair	
Baltimore, Md	.....	.....	30.20	767.1	79	26.1	82	SE	3	1.3	.....	2ck	Haze	.....	.....	0	0	Fair	
Barnegat, N. J.	.....	.....	30.14	765.5	82	27.8	74	SW	9	4.0	.....	0	2s	.....	.....	0	0	Clear	
Bismarck, Dakota	28.13	714.5	29.70	754.4	67	19.4	64	SE	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass	.....	.....	30.09	764.3	82	27.8	70	SW	3	1.3	.....	1cs	Haze	.....	.....	0	0	Hazy	
Breckenridge, Minn	.....	.....	30.03	762.7	62	16.7	78	SE	16	7.2	.....	0	5s	.....	S	0	0	Fair	
Buffalo, N. Y.	.....	.....	30.09	764.3	75.5	24.2	84	SW	11	4.9	.....	.....	10ks	.....	SW	0	0	Cloudy	
Burlington, Vt.	.....	.....	30.09	764.3	78	25.6	73	S	5	2.2	.....	5k	2s	.....	.....	1.24	31.5	Cloudy	
Cairo, Ill.	.....	.....	30.18	766.6	74	23.3	90	Calm	0	0	.....	.....	10ks	.....	S	0	0	Cloudy	
Cape Hatteras, N. C.	.....	.....	30.15	765.8	79	26.1	78	SW	10	4.5	.....	.....	10s	.....	SW	0	0	Threatening	
Cape Henry, Va.	.....	.....	30.15	765.8	80	26.7	82	SW	4	1.8	.....	2k	0	SW	.....	0	0	Clear	
Cape Lookout, N. C.	.....	.....	30.23	767.8	83	28.3	67	SW	10	4.5	.....	0	5ks	.....	SW	0	0	Fair	
Cape May, N. J.	.....	.....	30.18	766.6	76	24.4	86	S	7	3.1	.....	1k	0	W	.....	0	0	Clear	
Charleston, S. C.	.....	.....	30.24	768.1	80	26.7	86	N	5	2.2	.....	8cs	2s	E	.....	0	0	Cloudy	
Cheyenne, Wyoming	24.20	614.7	30.14	765.5	58	14.4	34	NW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.17	766.3	70	21.1	66	NW	2	0.9	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Cincinnati, Ohio	.....	.....	30.13	765.3	76	24.4	86	SW	2	0.9	.....	.....	10ks	.....	SW	0.20	5.1	Cloudy	
Cleveland, Ohio	.....	.....	30.14	765.5	73.3	22.9	84	S	8	3.6	.....	2c	2ks	SW	W	0	0	Fair	
Corsicana, Tex	.....	.....	30.13	765.3	77	25.0	86	S	1	0.4	.....	1cs	Haze	.....	.....	0	0	Fair	
Davenport, Iowa	.....	.....	30.22	767.6	69	20.6	65	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Clear	
Denison, Tex.	.....	.....	30.14	765.5	77	25.0	85	Calm	0	0	.....	1ck	0	.....	.....	0	0	Clear	
Denver, Col.	24.95	633.7	30.17	766.3	61	16.1	60	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich	.....	.....	30.13	765.3	70	21.1	90	NW	7	3.1	.....	5k	5s	NW	NW	0.18	4.6	Clearing	
Dodge City, Kan	27.60	701.0	29.83	757.7	66	18.9	100	E	6	2.7	.....	.....	Fog	.....	.....	0	0	Foggy	
Dubuque, Iowa	.....	.....	30.22	767.6	63	17.2	72	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Duluth, Minn	.....	.....	30.14	765.5	68	20.0	50	NW	15	6.7	.....	0	0	.....	.....	0.02	0.5	Clear	
Eastport, Me.	.....	.....	30.03	762.7	75	23.9	76	Calm	0	0	.....	5c	Sm'e	W	.....	0	0	Fair	
Erie, Pa.	.....	.....	30.10	764.5	76	24.4	76	S	8	3.6	.....	4c	8ks	.....	SW	0	0	Cloudy	
Escanaba, Mich	.....	.....	30.14	765.5	64	17.8	68	W	12	5.4	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Fort Gibson, Indian Ter.	.....	.....	30.11	764.8	76	24.4	81	Calm	0	0	.....	0	0	.....	.....	0.01	0.3	Clear	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.93	734.8	29.99	761.7	78	25.6	78	S	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Fort Totten, Dakota	28.21	716.5	29.78	756.4	72	22.2	54	SE	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex	.....	.....	30.16	766.1	83	28.3	74	Calm	0	0	.....	5k	0	.....	.....	0	0	Fair	
Grand Haven, Mich	.....	.....	30.16	766.1	73	22.8	71	NE	5	2.2	.....	5ck	0	NW	.....	0	0	Fair	
Indianapolis, Ind	.....	.....	30.15	765.8	74	23.3	90	S	2	0.9	.....	.....	10s,sm'	.....	.....	Inap.	Inap.	Cloudy	
Indianola, Tex	.....	.....	30.15	765.8	81	27.2	87	E	11	4.9	.....	0	5ks	.....	S	0	0	Fair	
Jacksonville, Fla	.....	.....	30.23	767.8	81	27.2	82	E	1	0.4	.....	5k	0	E	.....	0	0	Fair	
Keokuk, Iowa	.....	.....	30.13	765.3	71	21.7	75	Calm	0	0	.....	0	0	.....	.....	0.06	1.5	Clear	
Key West, Fla.	.....	.....	30.17	766.3	80.8	27.1	67	E	9	4.0	.....	Haze	2ks,hz.	.....	E	0.20	5.1	Fair	
Kittyhawk, N. C.	.....	.....	30.22	767.6	81	26.7	82	W	9	4.0	.....	5k	0	W	.....	0	0	Fair	
Knoxville, Tenn	.....	.....	30.24	768.1	71	21.7	95	E	4	1.8	.....	.....	Fog	.....	.....	0	0	Dense fog	
La Crosse, Wis.	.....	.....	30.21	767.3	59	15.0	100	Calm	0	0	.....	0	Fog	.....	.....	0	0	Foggy	
Leavenworth, Kan	.....	.....	30.17	766.3	69	20.6	65	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Louisville, Ky.	.....	.....	30.18	766.6	76	24.4	86	S	4	1.8	.....	.....	8ks	.....	S	0.66	16.8	Cloudy	
Lynchburg, Va.	.....	.....	30.17	766.3	81	27.2	70	NW	2	0.9	.....	0	0	.....	.....	0.01	0.3	Clear	
Malone, N. Y.	.....	.....	30.03	762.7	79	26.1	70	SW	10	4.5	.....	8cs	0	W	.....	0	0	Cloudy	
Marquette, Mich.	.....	.....	30.11	764.8	65	18.3	73	W	12	5.4	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Memphis, Tenn	.....	.....	30.16	766.1	74	23.3	90	NE	8	3.6	.....	.....	10s	.....	SE	0.07	1.8	Cloudy	
Milwaukee, Wis	.....	.....	30.21	767.3	67	19.4	74	N	6	2.7	.....	0	Sm'e	.....	.....	Inap.	Inap.	Clear	
Mobile, Ala.	.....	.....	30.19	766.8	77	25.0	86	SE	4	1.8	.....	.....	10s	.....	.....	0.03	0.8	Cloudy	
Montgomery, Ala.	.....	.....	30.22	767.6	74	23.3	90	Calm	0	0	.....	2c	Fog	.....	.....	1.37	34.8	Fair	
Morgantown, W. Va.	29.16	740.7	30.17	766.3	80	26.7	74	SW	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Mt. Washington, N. H.	24.12	612.6	30.48	774.2	57	13.9	81	NW	24	10.7	.....	2k	0	NW	.....	0	0	Fair	
Nashville, Tenn	.....	.....	30.18	766.6	76	24.4	81	SE	3	1.3	.....	8ck	0	.....	.....	0	0	Fair	
New Haven, Conn	.....	.....	30.11	764.8	80	26.7	78	Calm	0	0	.....	5k	0	NW	.....	0	0	Fair	
New London, Conn	.....	.....	30.13	765.3	79	26.1	78	SW	4	1.8	.....	2ck	Haze	NW	.....	0	0	Fair	
New Orleans, La	.....	.....	30.16	766.1	79	26.1	86	SE	2	0.9	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Newport, R. I.	.....	.....	30.13	765.3	74	23.3	85	SW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
New York, N. Y.	.....	.....	30.14	765.5	75	23.9	81	SW	9	4.0	.....	0	Haze	.....	.....	0	0	Clear	
Norfolk, Va.	.....	.....	30.20	767.1	78	25.6	86	S	2	0.9	.....	.....	Fog	.....	.....	0	0	Foggy	
North Platte, Neb	27.22	691.4	29.68	753.9	68	20.0	74	SE	24	10.7	.....	0	2s	.....	.....	0	0	Clear	
Omaha, Neb.	29.13	739.9	30.18	766.6	66	18.9	78	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	30.11	764.8	79	26.1	73	SW	7	3.1	.....	5ck	5ks	.....	SW	0	0	Cloudy	
Pembina, Dakota	.....	.....	29.92	760.0	61	16.1	82	SE	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Penn	.....	.....	30.16	766.1	75	23.9	95	NW	6	2.7	.....	.....	Fog	.....	.....	0	0	Foggy	
Pike's Peak, Colorado	18.11	460.8	30.35	770.9	38	3.3	37	NE	10	4.5	.....	5c	2s	NW	.....	0.68	17.3	Fair	
Pittsburgh, Penn	.....	.....	30.14	765.5	79	26.1	73	SW	4	1.8	.....	1c	9k	.....	W	0	0	Cloudy	
Port Huron, Mich	.....	.....	30.12	765.0	70	21.1	90	NW	6	2.7	.....	.....	10s	.....	NW	0.01	0.3	Cloudy	
Portland, Me.	.....	.....	30.05	763.3	77	25.0	77	Calm	0	0	.....	1k,hz.	Haze	.....	.....	0	0	Hazy	
Portland, Oregon	.....	.....	30.02	762.5	59	15.0	87	SE	3	1.3	.....	.....	10s	.....	SW	0	0	Cloudy	
Punta Rassa, Fla.	.....	.....	30.20	767.1	80.5	26.9	84	NE	8	3.6	.....	0	2s	.....	NE	0.99	25.2	Fair	
Rochester, N. Y.	.....	.....	30.08	764.0	77	25.0	72	SW	5	2.2	.....	5ck	2s	W	W	0	0	Fair	
Salt Lake City, Utah	25.70	652.8	30.03	762.7	68	20.0	38	SE	4	1.8	.....	2c	0	W	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	30.12	765.0	81	27.2	78	SW	2	0.9	.....	0	Haze	.....	.....	0	0	Clear	
San Diego, Cal.	.....	.....	29.89	759.2	67	19.4	90	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
San Francisco, Cal	.....	.....	29.94	760.5	58	14.4	87	SW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Santa Fé, N. M	23.52	597.4	30.06	763.5	57	13.9	87	SE	5	2.2	.....	2c	2k	W	.....	0	0	Fair	
Savannah, Ga.	.....	.....	30.23	767.8	81	27.2	78	SW	1	0.4	.....	2c	2k	.....	.....	0	0	Fair	
Shreveport, La	.....	.....	30.18	766.6	78	25.6	86	SE	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Smithville, N. C.	.....	.....	30.24	768.1	81	27.2	78	SW	5	2.2	.....	8k	0	SW	.....	0.04	1.0	Cloudy	
Springfield, Mass.	.....	.....	30.10	764.5	80	26.7	74	S	4	1.8	.....	5cs	Haze	.....	.....	0	0	Fair	
St. Louis, Mo.	.....	.....	30.15	765.8	74	23.3	85	NE	4	1.8	.....	0	0	.....	.....	0.16	4.1	Clear	
St. Marks, Fla	.....	.....	30.23	767.8	77	25.0	86	E	4	1.8	.....	5c	2ks	NE	.....	0.39	9.9	Fair	
St. Paul, Minn.	.....	.....	30.17	766.3	60	15.6	82	NW	1	0.4	.....	0	Fog	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	29.72	754.9	40	4.4	91	W	3	1.3	.....	.....	Fog	.....	.....	0.10	2.5	Foggy	
Thatcher's Island, Mass.	.....	.....	30.08	764.0	67	19.4	94	SW	9	4.0	.....	0	0	.....	.....	0	0	Hazy	
Toledo, Ohio	.....	.....	30.11	764.8	73	22.8	90	SW	2	0.9	.....	.....	10s	.....	SW	0.13	3.3	Cloudy	
Tucson, Arizona	27.59	700.8	30.19	766.8	75	23.9	.....	S	.....	.....	.....	2c	5ks	SW	S	0.15	3.8	Clearing	
Tybee Island, Ga.	.....	.....	30.23	767.8	78	25.6	86	NW	8	3.6	.....	2c	2ks	.....	.....	0	0	Fair	
Vicksburg, Miss.	.....	.....	30.19	766.8	76	24.4	95	S	4	1.8	.....	5ck,cs	2k	N	SW	0	0	Cloudy	
Virginia City, M. T.	24.29	617.0	29.77	756.1	57	13.9	46	Calm	0	0	.....	1c	0	W	.....	0	0	Clear	
Washington, D. C.	.....	.....	30.18	766.6	80	26.7	74	SW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Wilmington, N. C.	.....	.....	30.24	768.1	78	25.6	90	S	2	0.9	.....	2cs	5ks	NE	S	2.05	52.1	Cloudy	
Wood's Holl, Mass.	.....	.....	30.14	765.5	75	23.9	85	SW	6	2.7	.....	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
Yankton, Dakota	28.90	734.0	30.15	765.8	67	19.4	69	SE	5	2.2		5ck	2s	W	W	0	0	Fair	
Yuma, Arizona			29.96	761.0	89	31.7		E				5ck	0	E		0	0	Fair	
Sub Series.																			
Kingston, Jamaica, W. I.			30.16	766.1	80	26.7	78	Calm	0	0		8c	5s			0	0		James Gall.
St. Georges, Bermudas			30.25	768.3	83.0	28.3	79	SW	15	6.7		0	2k			0.02	0.5	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Paramaribo, D. Guiana S.A.			30.03	762.7	82	27.8	83	E			2	5k	6ks	E		0.360	9.14	Fair	C. J. Hering.
Batavia, Dutch Guiana S.A.	30.07	763.8			86.0	30.0		E								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640.6			65.5	18.6	82	Calm	0	0			10s			0.35	8.9	Cloudy	Thomas Herran
York Factory, B. A.			29.74	755.4	54	12.2	90	W	5	2.2		2c	0	W		2.20	55.9		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.08	764.0	77	25.0		NE			2					0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Addie Fuller, at Sandy Hook, N. J.			30.13	765.3	79	26.1		W			1	0	Haze					Clear	Capt. James Jorgensen.
Steamer Nova Scotian, N. 39° 27′, W. 69° 27′.	W by S ½ S	11	30.21	767.3	73	22.8		WSW			2		0			Smooth		Very clear	Capt. Ritchie.

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.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			29.97	761.1	84.6	29.2	62	Calm			0		3			0	0	Fair	Charnot.
Algiers			29.97	761.1	82.4	28.0	75	NE			2		7			0	0	Cloudy	Peter.
La Calle			29.97	761.3	83.7	28.7	68	N			2		6			0	0	Fair	Kunts.
Tunis			29.99	761.8	87.8	31.0	62	E			3		0			0	0	Clear	Jacques
Sfax			30.05	763.2	86.4	30.2	48	E			3		1			0	0	Clear	Chauvey.
Saida			29.95	760.8	95.0	35.0		NNW			2		3			0	0	Fair	Millot.
Tebessa			30.03	762.7	89.8	32.1		E			3		0			0	0	Clear	Colin.
Gerlville			30.01	762.2	90.1	32.3	25	ENE			2		2			0	0	Clear	Lemaillot.
Laghouat			30.00	761.9	93.2	34.0	22	E			2		0			0	0	Clear	Guyot.
Biskra			30.03	762.8	97.9	36.6		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			30.10	764.4	74.7	23.7	58	NE			2		0			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.14	765.6	72.0	22.2	41	NE			1		2			0	0		Dr. Wierzbiski.
Eperies			30.08	763.9	69.8	21.0	51	N			4		5c		S	0	0		Julius Mikolik.
Gratz	28.91	734.3	30.07	763.7	73.2	22.9	63	E			1		2			0.146	3.7		Andreas Rospini.
Hermannstadt	28.57	725.6	29.95	760.7	65.8	18.8	81	NNE			1		10			0.008	0.20		Prof. Reissenberger.
Kremsmünster	28.82	732.1	30.12	765.0	71.2	21.8	44	E			1		1			0	0		Prof. C. Wagner.
Lemberg			29.99	761.8	68.0	20.0	79	NE			3		7			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.07	763.6	77.9	25.5	28	NE			3		0			0	0		I.R.Hydrographic Office
Szegedin			30.01	762.3	79.5	26.4	59	NW			3		3			0	0		Karl Stancel.
Trieste			30.07	763.8	80.2	26.8	31	ENE			2		0			0	0	Clear	Prof. V. Farolfi.
Vienna			30.11	764.9	73.8	23.2	38	N			1		1			0	0		I. R. Central Met. Obs'y

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.12	765.0	75.7	24.3	56	WNW			1	0	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			28.99	761.7	63.0	17.2		SSE	15	6.7			2			0	0	Blue sky	William Boswell.
Ardrossan			30.06	763.5	64	17.8		SSW			2		7					*D. clouds	William McNeil.
Armagh, Observatory			30.09	764.3	62.4	16.9		SW	8	3.6			10					Gloomy	S. Cail, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.09	764.3	70.0	21.1		SW			1		7					*D. clouds	J. Dreyer.
Bradford			30.14	765.6	66.4	19.1		W			1		5			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			28.99	761.7	83.0	28.3		NE			4		7					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge			30.18	766.6	77.0	25.0		W					4						Mr. Pain, F. B. M. S.
Cardington			30.18	766.6	72.0	22.2		N			1		3					Blue sky	John McLaren.
Carlisle			30.10	764.5	66.9	19.4		SW			3		8			0.04	1.0	*D. clouds	T. Bell, for J. Carmichael.
Chatham, School M. E.			30.15	765.8	81.7	27.6		SW			2		2					Hazy	Capt. J. Fellowes, R.E.
Dartmoor	28.80	731.5	30.25	768.3	71.0	21.7		E			1		4					*D. clouds	R. E. Power.
Donaghadee			30.08	764.0	65	18.3		SW			3		5					*D. clouds	J. Mac Gowan.
Dover			30.17	766.3	65	18.3		WSW			3		5					Foggy	J. Costello.
Eccles (near Manchester)			30.14	765.5	64.5	17.5		SW	0.2	0.1			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			30.20	767.1	65.9	18.8		SSE			1		1					*D. clouds	The Staff.
Fort Napier, (Natal)	27.69	703.3	29.93	760.2	72.4	22.4		E			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	80	26.7		W			1		6					Overcast	
Galway, Queen's College			30.22	767.6	66	18.9		W			1		2					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.91	759.7	80.3	26.8		E			3		4					*D. clouds	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			30.01	763.0	65.2	18.4		SW			2		7					Fine	Lewis Stuart.
Great Yarmouth			30.16	766.1	69	20.6		NNE			2		2					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			30.16	766.1	79.5	26.4		W			1		5					Hazy	The Staff, for G. B. Airy
Guernsey			30.19	766.8	65	18.3		NW			1		7					*D. clouds	Dr. S. E. Hoskins.
Helston			30.30	769.6	69	20.6		NW			2		0			0	0	Fine	M. P. Moyle.
Holyhead			30.14	765.5	62	16.7		SW			4		10					Misty	John Tilston.
Kew, Observatory			30.16	766.1	73.7	23.2		SW	5	2.2			1					Hazy	The Staff.
Kingstown			30.13	765.3	67	19.4		E			3		4					*D. clouds	George Mitchell.
Leicester Museum			30.17	766.3	70.0	21.1		SW			1		3					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.93	760.2	85.2	29.6		NW			1		2k					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			29.93	760.2	69	20.6		WSW			2		8					¾ clouded	W. D. Penny.
Nassau, (Bahamas)			30.12	765.0	78.4	25.8		NE			6		10					Overcast	Surg. Maj. Henry.
Nottingham, Observatory			30.16	766.1	75.1	23.9		NW			2		9k		SW	0	0	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.14	765.5	67.1	19.5		SW			0–1		9					Foggy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.14	765.5	72	22.2					1		3					Blue sky	J. Lucas.
Plymouth			30.19	766.8	66	18.9		SSW			3		0					Blue sky	John Merrifield.
Roche's Point			30.16	766.1	63	17.2		SSW			2							Foggy	W. Kennedy.
Saint Ann's Head			30.17	766.3	64	17.8		SW			1		3					*D. clouds	John C. Walker.
Saint Helier, Jersey			30.19	766.8	69.6	20.9		ESE			1		2					¼ clouded	A. P. Amy.
Sandwick Manse Orkneys			29.92	760.0	61.0	15.6		S	21	9.4			8					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough			30.12	765.0	69.3	20.7		SW			1		7					*D. clouds	F. Shaw.
Scutari Cemetery Turkey			29.77	756.1	79.2	26.2		NE			2		3			Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.15	765.8	68.9	20.5		W			1		9			0	0	Hazy	W. F. Cooper.
Silloth Rectory			30.10	764.5	69.8	21.0	77	SW			3		4			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.84	757.9	57	13.9		SSW			7		10					Overcast	Rev. S. J. Perry.
Stornoway Lewis C. Hebr.			30.14	765.5	64.4	18.0		SW			1		10			Blank	Blank	Gloomy	John Smith.
Strathfield Turgiss			30.24	767.8	74.0	23.3		W			1		0					Blue sky	Rev. Charles H. Griffith
Thurso			29.89	759.2	63	17.2		S			3		8					Overcast	John Trotter.
Truro, Royal Institution			30.22	767.6	75	23.9		N			4		0					Blue sky	W. Newcombe.
Valencia, Observatory			30.12	765.0	63.5	17.5		SSW	16	7.2			7					*D. clouds	The Staff.
Sub-Stations																			
Calf of Man, Isle of Man					58	14.4		S			4		5						Thomas Dawson.
Cape Good Hope, Obs'y			29.96	761.0	59.0	15.0	76	NNW	16	7.2		5	5						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.01	762.2	57.0	13.9	86	W			1		4k			0.11	2.8		Francis Abbott, F.R.A.S.
Leith, Restaurig Parks			30.05	763.3	69.2	20.7		W			2		7k			0.01	1.0	Cloudy	Andrew Gibb.
Mauritius, Observatory			30.22	767.6				ESE	20.9	9.3						0.150	3.81		C. Meldrum
Melbourne, Observatory			30.29	769.4	46.0	7.8	91	W	6	2.7			5			0.02	0.5	Fine	R. L. J. Ellery.
Monach Lighthouse, Hebrides			29.86	758.4	56	13.3		SW			6		10			0.2	5.1		J. Youngehouse
North Unst, (Shetland Is.)			29.84	757.7	54	12.2		S			6	4	5	SW		Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,220 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. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Copenhagen			30.06	763.5	64.6	18.1	87	WSW			2		10						
Fanoe			30.09	764.3	65.7	18.7	30	W			4		5						
Godthaab, Greenland			29.60	751.7	37.4	3.0		N			2		2						
Stykkisholm, Iceland			29.27	743.5	51.6	10.9	97	E			2		8						
Thorshavn, Faröe			29.64	752.9	52.0	11.1	94	S			4		10					Raining	
Vestervig			30.03	762.7	60.8	16.0	87	WNW			2		8						

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

FRENCH SERIES.

Furnished by the 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			30.25	768.4	83.3	28.5	42	NE			1	2c				0	0	¼ covered	Normal School.
Amiens																			Normal School.
Avignon			30.02	762.5	88.0	31.1	36	N			2		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.10	764.5	74.8	23.8	27	ENE			2		0			0	0	Clear	C. Saillard.
Beaumette, (near Angers)			30.07	763.7	84.6	29.2	30	N	3.1	1.4						0	0		Beaumette Observatory
Beauvais			30.16	766.0	73.2	22.9	43	NW			2		0			0	0	Clear	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.07	763.6	82.6	28.1	43	W			1		0			0	0	Clear	Normal School.
Bourges			30.05	763.2	83.1	28.4	57	NNE			2		0			0	0	Clear	Normal School.
Brest			30.10	764.6	75.7	24.3	59	NE			2		0			0	0	Clear	Naval Observatory.
Carcassonne			29.98	761.6	80.6	27	44	W			1		2		E	0	0	Slightly cl'dy	Normal School.
Caen																			Normal School.
Chartres			30.13	765.3	83.7	28.7	47	NE			2		0			0	0	Clear	Normal School.
Châlons-sur-Marne			30.10	764.5	84.6	29.2	31	NW			2		0			0	0	Clear	Normal School.
Clermont			30.06	763.4	76.6	24.8	44	NNE			2		0			0	0	Clear	Puy de Dome Obs'y.
Commercy			30.11	764.8	77.2	25.1	63	E			2		0			0	0	Clear	Normal School
Commune de Greasque*			30.12	765.1	87.6	30.9	31	W			2		2		W	0	0		M. Kina.
Grenoble			30.21	767.3	78.8	26	97	N			1		2			0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.17	766.4	88.2	31.2	37	NE			6		0			0	0	Clear	Normal School.
Le Mans			30.20	767.0	81.0	27.2	43	E			4		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			30.01	762.2	76.5	24.7	49	SW			1		0			0	0	Clear	Normal School.
Mâcon			30.24	768.2	76.1	24.5	65	N			2		0			0	0	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			30.11	764.9	74.3	23.5	28	NNE			2		1		SW	0	0	Clear	Normal School.
Nismes			30.05	763.5	77.4	25.2	24	S			2		5		N	0	0	Cloudy	Normal School.
Orleans																			Normal School.
Paris, Observatory			30.13	765.4	81.3	27.4	27	NW			1		0			0	0	Clear	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			30.07	763.6	89.1	31.7	22	ENE			4		0			0	0	Blue sky	Naval Observatory.
Rouen			30.15	765.7	82.8	28.2	37	W			1		0			0	0	Clear	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School
Villefranche			30.15	765.8	86.0	30	66	NW			1		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.88	758.9	81.3	27.4													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.35	771.0	66.0	18.9	73	SW	11.2	5.00			7		SW	0.110	2.8		—. Falguère.
Montsouris, Paris			30.14	765.5	83.5	28.6	27	NE			1		0			0	0	Clear	Montsouris Observ'tory.
Perpignan			29.79	756.6	80.4	26.9	58	S	9.3	4.17			8		SE	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.50	546.2			51.4	10.8		SW			1		7					Stormy	M. Baylac.
Pic du Midi, (Plantade)	22.76	578.0			59.5	15.3		W			1		6			0.067	1.7	Stormy	General de Nansouty.
Saint Maur, (near Paris)			30.14	765.5	83.5	28.6	33	NE			1		0			0	0	Clear	E. Renou.
Toulouse			30.08	763.9	85.6	29.8	33	NW			1		7			Inap	Inap.		Toulouse Observatory
Tours			30.11	764.7	84.7	29.3	27	E			2		0			0	0	Clear	C. Marquet.
Versailles, (near Paris)			30.15	765.9	83.5	28.6	29	N			1		0			0	0	Very clear	Dr. A. Bérigny.
Zi Ka Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * Bouches-du-Rhône.

GERMAN SERIES.

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

Stations.	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.	Force. 0—10.	Amount. Up'er 0—10.	Amount. Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Bamberg			30.14	765.6	75.2	24.0	43	NW			2		2	W		0	0		Prof. T. Hoh.
Berlin			30.11	764.9	77.4	25.2	51	W			1		4			0.173	4.4		Prof. Arndt.
Breslau			30.19	766.8	78.4	25.8	32	SW			3		7			0	0		Dr. P. Neugebauer.
Carlsruhe			30.10	764.4	81.7	27.6	42	E S E			2		0			0	0		A. Senz.
Cassel			30.13	765.3	83.8	28.8	40	WNW			2		1	WNW		0	0		Dr. H. Möhl.
Emden			30.04	763.1	63.3	17.4	73	NNW			3		1			0	0		Prof. Prestel.
Frankfort on the Main			30.14	765.5	89.2	26.8	30	NE			4		0			0	0		Physical Society.
Friedrichshafen			30.08	764.1	76.5	24.7	45	NE			6		0			0	0		M. Wilhelm.
Hamburg			30.13	765.4	73.9	23.3	65	WSW			2		9k	SW		Inap.	Inap.	Cov'red	Captain F. Hegemann.
Kiel			30.08	764.1	71.4	21.9	67	W			4		10			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			30.08	763.9	74.3	23.5	51	W			2		5			0	0		Prof. E. Luther.
Köslin			30.13	765.3	68.0	20.0		Calm			0		4			3	0		H. Müller.
Leipsic			30.13	765.4	80.4	26.9	37	NW			1		2	NW		0	0		Prof. Bruhns.
Meinel			30.11	764.8	69.3	20.7	58	SW			2		9cs	W		0	0		Reinbrecht & Skalweit.
Münster			30.20	767.1	78.8	26.0	68	S			2		0			0	0		Prof. E. Heis.
Neufahrwasser			30.10	764.5	70.5	21.4	70	ESE			1		10			0	0		A. Lothes.
Posen			30.15	765.7	78.3	25.7	53	NE			3		9			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.11	764.8	81.5	27.5	34	Calm			0		0			0	0		Dr. Schur.
Stuttgart			30.12	765.0	78.8	26.0	40	N			1		0			0	0		Prof. Schoder.
Thorn			30.09	764.3	77.0	25.0	43	W			2		9			0.016	0.4		Dr. Hasenbalg.
Treves, (Trier)			30.09	764.3	82.4	28.0	35	NE			3		1			0	0		Prof. Flesch.
Wustrow, Naval School			30.20	767.1	68.7	20.4	75	WSW			2		10			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.80	756.8	88.2	31.2		NE										Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Udine			30.04	763.1	79.2	26.2	40	NE	9.7	0.3			1			0	0		
Padua			30.07	763.7	77.7	25.4	45	S	5.6	2.5			10			0	0		
Vicenza			30.07	763.6	79.9	26.6	39	SE	4.9	2.2			0			0	0		
Verona			30.05	763.2	85.5	29.7	41	W			1		0			0	0		
Bergamo					79.5	26.4	49	W			2		4			0	0		
Domodossola	29.95	737.8	30.03	762.7	78.8	26.0	53	S			4		1			0	0		
Milan			30.08	763.9	85.6	29.8	60	ENE			4		5	E		0	0		
Pavia			30.07	763.7	80.1	26.7	52	E			4		0			0	0		
Moncalieri			30.07	763.8	79.9	26.6	73	ESE	0.7	0.3			5	W		0	0		
Mondovi	28.23	717.1	30.07	763.6	75.7	24.3	45	NW			4		8			0	0		
Porto Maurizio			30.09	764.3	83.8	28.8	56	ESE			2		8			0	0		
Genoa			30.02	762.6	87.3	30.7	41	SE	3.1	1.4			4	SE		0	0		
Piacenza			30.07	763.7	79.7	26.5	48	E	6.9	3.1			4	E		0	0		
Parma			30.04	763.0	83.1	28.4	51	SE			4		2			0	0		
Bologna			30.08	764.0	83.1	28.4	48	E			6		4	N		0	0		
Florence			30.03	764.0	82.4	28.0	30	NW			6		7			0	0		
Leghorn			30.02	762.5	85.8	29.9	31	ENE	13.0	5.8			3			0	0		
Siena	28.84	732.5	29.99	761.7	79.5	26.4	36	ENE	6.3	2.8			3	N		0	0		
Urbino	28.60	726.4	30.10	764.6	76.6	24.8	55	NE			4		4			0	0		
Ancona			30.07	763.8	81.3	27.4	47	NW			4		1			0	0		
Grosseto			30.02	762.5	86.4	30.2	28	NNE			6		3	SE		0	0		
Rome			29.94	760.5	87.8	31.0	25	N	4.9	2.2			2			0	0		
Naples, O. U.			29.95	760.6	89.1	31.7	36	ESE			2		3			0	0		
Lecce			29.92	760.0	81.7	27.6	42	WNW	17.4	7.8			1			0	0		
Cosenza			28.94	760.5	89.2	31.8	67	NW	6.3	2.8			2			0	0		
Riposto, (Sicily)			29.99	761.7	85.3	29.6	51	NW			2		0			0	0		
Palermo			29.88	759.0	83.3	28.5	73	NE	5.6	2.5			1			0	0		
Caltanissetta	27.98	710.8	29.84	757.8	87.3	30.7	29	S			4		2			0	0		
Sub-Series.																			
Naples, S. R.			29.98	761.5	84.6	29.2	34	NE	1.8	0.8			3	W		0.055	1.4		Prof. F. Brioschi.
Pesaro			30.15	765.7	75.4	24.1	44	NE	32.6	14.58			0			0	0		L. Guidi.

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	67.3	19.6		WNW			3								
Groningen			30.07	763.6	73.4	23.0		WSW			3								
Helder			30.13	765.2	66.6	19.2		WNW			2								
Utrecht			30.10	764.6	78.6	25.9	63	WSW			2		5					Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	760.0	58.6	14.8	78						8			0.012	0.3		
Brönö			29.87	758.8	55.6	12.8	91	SW	7	3			10			0.035	0.9		
Christiania			29.87	758.8	69.1	20.6	59	SSW	6.7	0.3			7			0.177	4.5		
Tromsö			29.80	756.9	55.8	13.2		NE	9	4			0			0	0		

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

PORTEUGUSE 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	77.2	25.1	78	S	5.7	2.56			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.93	760.3	82.4	28.0	37	WSW	6.7	3.00			0			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.08	763.9	78.6	25.9	68	SW	4.6	2.05			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.00	762.1	72.1	22.3	66	NNW	15.0	6.7			3			0	0		The Observatory.

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

RUSSIAN SERIES.

Furnished by 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	764.7	73.4	23.0	43	W	4	2			0						Astronomical Obs.
Wilna			30.10	764.4	71.1	21.7	47	NE	2	1			4						Astronomical Obs.
Dorpat			30.11	764.8	71.2	21.8	40	S	0	0			4						Physical Cabinet.
St. Petersburg			30.08	764.1	66.2	19.0	46	WNW	9	4			1						Central Physical Obs.
Knopio			30.00	762.1	66.2	19.0	74	W	7	3			5						Ch. Forsten.
Kieff			29.87	758.8	68.7	20.4	76	N	13	6			10						Physical Cabinet
Nikolaiev			29.68	753.9	86.5	30.3	33	N	20	9			7						Kurdakof.
Kertch			29.68	753.8	82.2	27.9	50	E	7	3			10						Lagorio.
Moscow			30.04	763.1	69.1	20.6	56	NW	7	3			8						Meteorological Obs.
Lugan			29.66	753.3	86.2	30.1	26	E	18	8			10						Meteorological Obs.
Archangel			29.90	759.5	64.4	18.0	92	WNW	18	8			8						Ogorodnikof.
Tiflis	28.36	720.4	29.68	753.8	92.3	33.5	30	S	11	5			3						Physical Observatory.
Astrakhan			29.83	757.6	85.0	31.1	44	E	9	4			3						Sebastianot.
Kasan			29.91	759.7	86.0	30.0	44	Calm	0	0			7						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.93	734.9	29.82	757.4	82.9	28.3	37	WSW	18	8			4						Meteorological Obs
Nukuss			29.85	758.3	86.0	30.0	37	N?	9	4			0						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul			29.84	757.8	68.5	20.3	41	NW	4	2			1						Meteorological Obs.
Yeniseisk			29.71	754.5	59.5	15.3	81	SW	2	1			10					Raining	Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.73	755.1	78.4	25.8	87	Calm	0	0			8						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.77	756.1	63.3	17.4	98	SE	16	7			10			Blank	Blank		
Nikolaievsk, on the Amoor																			

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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 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	758.0	95.0	35.0	24	SE	7.4	3.33		0	2			0	0	Partly cloudy	Royal Observatory.
San Fernando			29.95	760.8	93.7	34.3	28	ESE	18.3	8.2		4	8	ESE	ESE	0	0		The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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			30.01	762.3	60.4	15.8	63	S			4		7			0	0		
Umea			29.93	760.3	64.2	17.9	74	SW			2		9			0	0		
Hernosand			29.87	758.8	56.7	13.7	93	Calm			0		10			0	0		
Stockholm			29.91	759.8	65.1	18.4	80	WSW			2		8			0.031	0.8		
Wisby			30.02	762.6	63.7	17.6	92	SW			0		7			0	0		
Sub-Series.																			
Upsala			29.90	759.4	64.9	18.3	80	S	8.5	3.8			10		SW	0.081	2.05	Raining	Dr. Hildebrandsson.

Note.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall 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 or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	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	28.70	729.0	30.07	763.7	75.6	24.2	49	N			2		1			0	0	Clear	The Observatory.
Zurich	28.54	724.8	30.10	764.5	77.4	25.2	40	E			2		1			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +1.2 mm; Thermometer, +2.0 cent.; Relative Humidity, —5 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

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

Station.	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	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			29.83	757.7	75.0	23.9	66	N	22	10.0			6		N	0.228	5.8		
Fao, (Persian Gulf)			29.63	752.6	98.6	37.0		SE			1		2						
Salonica			29.90	759.4	92.5	33.6		NW			2		5						
Valona			29.92	760.0	82.8	28.2		SW			1		0						
Varna			29.96	761.0	77.0	25.0		NE			3		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.71	754.5	91.9	33.3	54	SW			3		2k		SW				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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

Station.	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	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			29.75	755.6	78.3	25.7	71	NW	9	4.0		0	0			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.15	765.8	76	24.4		SW	1	0.4		0	0			Inap.	Inap.	Clear	W. R. Bigg.
*Chatham, N. B			29.77	756.1	75	23.9	83	SW	8	3.6		0	0			0.18	4.6	Clear	G. A. Blair.
Charlottetown, P. E. Island			29.83	757.7	72	22.2	87	W	8	3.6		0	0			0.235	5.97	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			30.03	762.7	78.7	25.9	53	W			3	0	0			0	0	Bright	James Smith, M. A.
Dalhousie, N. B					74.5	23.6	83	W			1					0.14	3.6	Cloy, sultry	H. A. Johnson.
Esquimault, B. C																			W. H. Davis.
Fredericton, N. B			29.84	757.9	76.1	24.5	81	NW	4	1.8		0	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.58	751.3	68	20.0	95	SW	16	7.2		0	28		S	0	0	Fair	James Stewart.
Goderich, Ontario			30.18	766.6	70.9	21.6	75	Calm			0	0	0			0	0	Fine	H. J. Strang, M. A.
Granton, Ontario	29.11	739.4	30.18	766.6	65	18.3		Calm			0	0	0			0	0	Clear	James Grant.
*Halifax, N. S.			29.87	758.7	69	20.6	97	S	6	2.7			8n			0.412	10.46	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.15	765.8	73	22.8	74	Calm	0	0		2c	0			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			29.84	757.9	71.0	21.7	90	SW	6	2.7		8k	0	SW		0.07	1.8	Cloudy	C. H. Rigby.
*Montreal, Quebec			30.02	762.5	72	22.2	73	W	14	6.3		0	0			0.15	3.8	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.09	764.3	71	21.7	65	NW	12	5.4		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.16	766.1	68	20.0	84	Calm	0	0		0	0			0	0	Clear	Rev. R. Mosley.
Port Dover, Ontario			30.18	766.6	65	18.3	63	NW	5	2.2		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.			29.84	757.9	75.0	23.9		Calm	0	0						0	0	Fine	Peter Grant.
Port Stanley, Ontario			30.18	766.6	64	17.8	80	NW	4	1.8		2ck	0	W		0	0	Clear	M. Payne.
*Quebec, Quebec			29.94	760.5	71	21.7	85	SW	19	8.5			10n		SW	0.64	16.3	Cloudy	Capt. Ashe, R. N.
St. John, N. B.			29.89	759.2	58	14.4	97	S	3	1.3			Fog			0	0	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario			30.16	766.1	68	20.0	76	W	2	0.9		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.14	765.5	68	20.0	64	NW	1	0.4		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario	28.91	734.3	30.17	766.3	59.9	15.5	83	NW	3	1.3		0	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.85	758.2	75	23.9	87	SW	8	3.6		8k	0	W		0.49	4.8	Fair	T. C. Hill.
*Toronto, Ontario			30.16	766.1	64	17.8	66	Calm	0	0		0	0			0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.18	766.6	64.9	18.3	76	W	5	2.2		0	1cs			0	0	Fine	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			30.11	764.8	60	15.6	94	SE					10n			0	0	Cloudy	John Delaney.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.			30.05	763.3	71	21.7	66	NW	8	3.6		2cs	2k	SW	W	0.34	8.6	Fair	
Alpena, Mich.			30.15	765.8	63	17.2	72	Calm	0	0		0	0			0	0	Clear	
Atlantic City, N. J.			30.05	763.3	78	25.6	77	NW	4	1.8		1cs	0	W		0	0	Clear	
Augusta, Ga.			30.16	766.1	78	25.6	73	NW	1	0.4		8ck	0	NW		Inap.	Inap.	Fair	
Baltimore, Md.			30.12	765.0	79	26.1	73	NW	8	3.6		2ck	0			Inap.	Inap.	Fair	
Barnegat, N. J.			30.04	763.0	81	27.2	70	NW	6	2.7		2c	0	W		0	0	Fair	
Bismarck, Dakota	27.92	709.2	29.45	748.0	70	21.1	39	SE	2	0.9		5k	0	S		0	0	Fair	
Boston, Mass.			29.98	761.5	80	26.7	55	NW	12	5.4		1ck	5cs	NW	NW	Inap.	Inap.	Fair	
Breckenridge, Minn.			29.72	754.9	71	21.7	80	SE	12	5.4		0	0			0	0	Clear	
Buffalo, N. Y.			30.13	765.3	67.5	19.7	58	N	3	1.3		1c	0	W		0	0	Clear	
Burlington, Vt.			30.05	763.3	73	22.8	67	NW	5	2.2		2k	0			0.11	2.8	Fair	
Cairo, Ill.			30.12	765.0	71	21.7	90	E	7	3.1			10s		S	0.08	2.0	Cloudy	
Cape Hatteras, N. C.			30.06	763.5	82	27.8	74	W	7	3.1		2c	0			Inap.	Inap.	Fair	
Cape Henry, Va.			30.08	764.0	80	26.7	74	NW	12	5.4		2k	0	NW		0	0	Fair	
Cape Lookout, N. C.			30.13	765.3	80	26.7	78	W	9	4.0		2c	2ks			0.10	2.5	Fair	
Cape May, N. J.			30.07	763.8	74	23.3	90	W	8	3.6		2ck	0	NW		0	0	Fair	
Charleston, S. C.			30.16	766.1	79	26.1	73	NW	4	1.8		2c	0	N		0.01	0.3	Fair	
Cheyenne, Wyoming	24.09	611.9	30.03	762.7	64	17.8	36	NW	12	5.4		0	0			Inap.	Inap.	Clear	
Chicago, Ill.			30.01	762.2	74	23.3	47	E	6	2.7		0	0			0	0	Clear	
Cincinnati, Ohio			30.09	764.3	73	22.8	85	E	1	0.4			10m			0.38	9.7	Light rain	
Cleveland, Ohio			30.17	766.3	66	18.9	84	S	1	0.4		8c	Smo	W	S	0	0	Fair	
Corsicana, Tex.			30.04	763.0	76	24.4	86	S	1	0.4		5cs	0	W		Inap.	Inap.	Fair	
Davenport, Iowa			30.12	765.0	69	20.6	70	E	4	1.8		0	0			0	0	Clear	
Denison, Tex.			30.03	762.7	80	26.7	78	Calm	0	0		2cs	0			0	0	Fair	
Denver, Col.	24.85	631.2	30.07	763.8	65	18.3	46	S	6	2.7		0	0			0	0	Clear	
Detroit, Mich.			30.15	765.8	67	19.4	74	NE	4	1.8		1c	0			0	0	Clear	
Dodge City, Kan.	27.44	697.0	29.62	752.3	73	22.8	81	SE	12	5.4		2c	0			0	0	Fair	
Dubuque, Iowa			30.11	764.8	71	21.7	67	SE	4	1.8		0	0			0	0	Clear	
Duluth, Minn.			29.93	760.2	64	17.8	78	Calm	0	0		0	0			0	0	Clear	
Eastport, Me.			29.87	758.7	68	20.0	79	Calm	0	0		8ck	0	W		0.29	7.4	Fair	
Erie, Pa.			30.12	765.0	73	22.8	50	Calm	0	0		4c	0			0	0	Fair	
Escanaba, Mich.			30.10	764.5	68	20.0	74	SW	4	1.8		0	Haze			0	0	Clear	
Fort Gibson, Indian Ter.			29.97	761.2	78	25.6	77	E	1	0.4		0	0			0	0	Clear	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.80	731.5	29.85	758.2	78	25.6	65	Calm	0	0		2cs	2s			0	0	Fair	
Fort Sully, Dakota	28.09	713.5	29.62	752.3	80	26.7	37	SE	12	5.4		5ck	0	NW		0	0	Fair	
Galveston, Tex.			30.04	763.0	81	27.2	74	NE	3	1.3		2c	0			0.18	4.6	Fair	
Grand Haven, Mich.			30.14	765.5	68	20.0	74	E	2	0.9		0	Sm'e		E	0	0	Clear	
Indianapolis, Ind.			30.13	765.3	71	21.7	95	Calm	0	0		Haze	Haze			0.24	6.1	Hazy	
Indianola, Tex.			30.05	763.3	81	27.2	87	NE	4	1.8		2k	0			0	0	Fair	
Jacksonville, Fla.			30.17	766.3	82	27.8	78	Calm	0	0		0	0			0	0	Clear	
Keokuk, Iowa			30.07	763.8	69	20.6	70	E	5	2.2		0	0			0	0	Clear	
Key West, Fla.			30.06	763.5	81.8	27.7	74	E	6	2.7		5cs	1k	SE	E	0	0	Fair	
Kittyhawk, N. C.			30.14	765.5	79	26.1	82	NW	12	5.4		2c	0	N		0	0	Fair	
Knoxville, Tenn.			30.15	765.8	71	21.7	90	Calm	0	0		1c	0	NE		0	0	Clear	
La Crosse, Wis.			30.08	764.0	63	17.2	83	S	6	2.7		0	0			0	0	Clear	
Leavenworth, Kan.			30.01	762.2	72	22.2	81	Calm	0	0		0	0			0	0	Clear	
Louisville, Ky.			30.11	764.8	75	23.9	86	NE	2	0.9			10ks		SW	0	0	Cloudy	
Lynchburg, Va.			30.11	764.8	79	26.1	74	NW	3	1.3		0	0			0.02	0.5	Clear	
Malone, N. Y.			30.02	762.5	69	20.6	70	W	8	3.6		2c	0	W		0	0	Fair	
Marquette, Mich.			30.06	763.5	70	21.1	56	SW	7	3.1		0	0			0	0	Clear	
Memphis, Tenn.			30.08	764.0	72	22.2	90	E	8	3.6			10s		E	0.02	0.5	Cloudy	
Milwaukee, Wis.			30.17	766.3	66	18.9	73	Calm	0	0		0	Fo			0	0	Clear	
Mobile, Ala.			29.12	765.0	76	24.4	90	E	4	1.8		2c	2s			0.46	11.7	Fair	
Montgomery, Ala.			30.15	765.8	77	25.0	84	SE	5	2.2		Haze	2ks		SE	0	0	Fair	
Morgantown, W. Va.	29.11	739.1	30.13	765.3	73	22.8	85	SW	1	0.4			10s		SW	0.41	10.4	Cloudy	
Mt. Washington, N. H.	23.86	606.0	30.22	767.6	48	8.9	100	NW	60	26.8			Fog			0	0	Foggy	
Nashville, Tenn.			30.09	764.3	82	27.8	67	Calm	0	0		8cs	0			0	0	Fair	
New Haven, Conn.			30.03	762.7	82	27.8	64	N	10	4.5		5c	Haze	NW		0	0	Fair	
New London, Conn.			30.04	762.7	84	28.9	67	Calm	0	0		2c	Haze	W		0	0	Fair	
New Orleans, La.			30.07	763.8	75	23.9	85	S	3	1.3			10s			0.15	3.8	Threatening	
Newport, R. I.			30.00	762.0	77	25.0	82	SW	1	0.4		2cs	0	W		0	0	Fair	
New York, N. Y.			30.05	763.3	79	26.1	69	NW	6	2.7		5c	Haze	W		0.60	15.2	Fair	
Norfolk, Va.			30.13	765.3	79	26.1	73	NW	5	2.2		2k	0	W		0	0	Fair	
North Platte, Neb.	27.08	687.8	29.51	749.5	72	22.2	71	SE	16	7.2		0	0			0	0	Clear	
Omaha, Neb.	28.91	735.1	29.98	761.5	72	22.2	81	S	6	2.7		5k	0	SW		0	0	Fair	
Oswego, N. Y.			30.13	765.3	71	21.7	71	W	7	3.1		2ck	2ks	NW		0	0	Fair	
Pembina, Dakota			29.55	750.6	68	20.0	89	SE	8	3.6		0	0			0	0	Clear	
Philadelphia, Penn.			30.06	763.5	79	26.1	69	NE	9	4.0		2ck	Haze	NE		Inap.	Inap.	Fair	
Pike's Peak, Colorado	18.09	459.5	30.30	769.6	40	4.4	56	NW	4	1.8		0	0			Inap.	Inap.	Clear	
Pittsburgh, Penn.			30.13	765.3	70	21.1	90	NW	4	1.8		2c	Fog	NW		0.04	1.0	Fair	
Port Huron, Mich.			30.16	766.1	65	18.3	68	Calm	0	0		0	1s			0	0	Clear	
Portland, Me.			29.95	760.7	79	26.1	66	NW	7	3.1		5c	Haze	NW		0	0	Fair	
Portland, Oregon			30.21	767.3	49	9.4	93	NE	1	0.4		0	0			Inap.	Inap.	Clear	
Punta Rassa, Fla.			30.12	765.0	80.0	26.7	82	NE	8	3.6		5cs	0	NE		0.44	11.2	Fair	
Rochester, N. Y.			30.12	765.0	69	20.6	65	W	8	3.6		0	Haze			Inap.	Inap.	Clear	
Salt Lake City, Utah	25.60	650.2	29.93	760.2	76	24.4	31	SE	8	3.6		2k	0	SE		0	0	Fair	
Sandy Hook, N. J.			30.05	763.3	76	24.4	81	W	2	0.9		2c	2s	SW	W	Inap.	Inap.	Fair	
San Diego, Cal.			29.94	760.5	67	19.4	90	Calm	0	0		0	Haze			0	0	Fair	
San Francisco, Cal.			29.91	759.5	54	12.2	86	W	10	4.5		0	0			0	0	Clear	
Santa Fé, N. M.	23.42	594.9	29.96	761.0	58	14.4	93	NE	3	1.3		10k	0	W		0.11	2.8	Cloudy	
Savannah, Ga.			30.16	766.1	84	28.9	70	Calm	0	0		2ck	Sm'e			0	0	Fair	
Shreveport, La.			30.09	764.3	75	23.9	95	SE	2	0.9			Fog			0	0	Foggy	
Smithville, N. C.			30.16	766.1	76	24.4	86	W	4	1.8		8ck	0			0.03	0.8	Cloudy	
Springfield, Mass.			30.02	762.5	78.5	25.8	73	W	4	1.8		5ck	1s	SW	W	0.76	19.3	Cloudy	
St. Louis, Mo.			30.05	763.3	75	23.9	85	S	4	1.8		5c	2s			0	0	Fair	
St. Marks, Fla.			30.16	766.1	76	24.4	86	NE	4	1.8		2c	1ks			0	0	Fair	
St. Paul, Minn.			29.95	760.7	68	20.0	69	SE	4	1.8		1cs	Haze			0	0	Fair	
St. Paul's Island, Alaska			29.71	754.6	43	6.1	92	W	11	4.9			Fog			0	0	Foggy	
Thatcher's Island, Mass.			29.98	761.5	76	24.4	72	NW	10	4.5		2c	2ck	NW	NW	0	0	Fair	
Toledo, Ohio			30.12	765.0	71	21.7	80	Calm	0	0		Haze	Haze			Inap.	Inap.	Hazy	
Tucson, Arizona	27.59	700.8	30.19	766.8	77	25.0		SE				2ck	0			0	0	Fair	
Tybee Island, Ga.			30.15	765.8	80	26.7	91	Calm	0	0		5c	0			0	0	Fair	
Vicksburg, Miss.			30.11	764.8	72.5	22.5	95	SE	3	1.3			10s		S	0.22	5.6	Cloudy	
Virginia City, M. T.	24.20	614.7	29.68	753.9	61	16.1	35	Calm	0	0		1k	0	SW		0	0	Clear	
Washington, D. C.			30.11	764.8	77	25.0	77	N	8	3.6		1ck	0	W		0.41	10.4	Clear	
Wilmington, N. C.			30.14	765.5	78	25.6	77	W	4	1.8		2cs	0	W		0	0	Fair	
Wood's Holl, Mass.			30.03	762.7	74	23.3	100	NW	4	1.8			Fog			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
Yankton, Dakota	28.68	728.5	29.94	759.4	74	23.3	72	S	12	5.4		0	0			0	0	Clear	
Yuma, Arizona			29.93	760.2	88	31.1		SE				1ck	0	W		0	0	Clear	
Sub Series.																			
Kingston, Jamaica, W. I.			30.15	765.8	78	25.6	85	Calm	0	0			10n			0.46	11.7		James Gall.
St. Georges, Bermudas			30.17	766.3	82.5	28.1	77	W	13	5.8		1c	5k	E		0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Paramaribo, D. Guiana S.A			30.00	762.0	81	27.2	83	SE			2	3c	5k	E		0.060	15.2	Fair	C. J. Hering.
Batavia, Dutch Guiana S.A.	30.07	763.7			86.9	30.5		N								1.299	33.00		Dr. H. Groot.
Medellin, Colombia, S. A.	25.30	642.6			64.0	17.8	85	Calm	0	0			10s			0.37	9.4	Cloudy	Thomas Herran
York Factory, B. A			29.29	744.0	68	20.0	90	SW	6	2.7		2c	0	W		0	0		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.11	764.8	76	24.4		NE			2					0	0	Very clear	Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Adelie Fuller, at Sandy Hook, N. J.			30.04	763.0	78	25.6		W			3	2c	Haze	W				Clear	Capt. James Jorgensen.
Steamer Hibernian, at Liverpool.			30.12	765.0	64	17.8		SW			6		8		NE	Rough		Cloudy	Lieut. F. Archer, R. N. R.
Steamer Nova Scotian N 37° 58′, W. 71° 29′.	WbyS	10½	30.10	764.5	75	23.9		SW			3		0			Smooth		Very clear	Capt. Ritchie.

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.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			29.98	761.4	84.7	29.3	66	Calm			0		4			0	0	Fair	Charnot.
Algiers			29.98	761.6	81.3	27.4	74	N			2		2			0	0	Clear	Peter.
La Calle			30.02	762.4	79.0	26.1	80	NE			4		1			Inap.	Inap.	Clear	Kuntz.
Tunis			30.04	763.1	87.8	31.0	58	E			3		0			0	0	Clear	Jacques.
Sfax			30.10	764.6	86.7	30.4	51	E			3		1			0	0	Clear	Chauvey.
Saida			29.98	761.4	93.2	34.5		SW			3		4			0	0	Fair	Millot.
Tebessa			30.05	763.2	90.5	32.5		W			2		0			0	0	Clear	Colin.
Gerlville			30.04	763.0	88.9	31.6	26	SSE			4		2			0	0	Clear	Lemaillot.
Laghouat			30.06	763.5	93.2	34.0	22	SE			2		1			0	0	Clear	Guyot.
Biskra			30.04	763.0	94.6	34.8		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			30.10	764.4	80.1	26.7	46	NE			3		4			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.06	763.4	76.6	24.8	48	W			1		3			0.035	0.9		Dr. Wierzbiski.
Eperies			30.02	762.4	75.2	24.0	53	N			2		2c8		S	0	0		Julius Mikolik.
Gratz	28.87	733.3	30.03	762.7	74.1	23.4	72	SSW			2		0			0	0		Andreas Rospini.
Hermannstadt	28.56	725.3	29.91	759.8	74.5	23.6	56	E			3		5			0	0		Prof. Reissenberger.
Kremsmünster	28.76	730.4	30.04	763.0	75.2	24.0	46	Calm			0		1			0	0		Prof. C. Wagner.
Lemberg			29.93	760.2	70.9	21.6	80	N			4		5			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.04	763.0	79.2	26.2	37	ESE			3		18			0	0		I.R.Hydrographic Office
Szegedin			29.94	760.4	79.0	26.1	44	NW			2		2			0	0		Karl Stancel.
Triesto			30.05	763.3	82.2	27.9	55	Calm			0		4k			0	0		Prof. V. Farolfi.
Vienna			30.05	763.3	80.1	26.7	35	NNE			1		3			0	0		I. R. Central Met. Ob's'y

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 342.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.98	763.9	77.9	25.5	51	NNE			1		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.83	757.7	64.0	17.8		S	20	8.9			3			0	0	Blue sky	William Boswell.
Ardrossan			29.89	759.2	61	16.1		S			2		9					Raining	William McNeil.
Armagh, Observatory			29.98	761.5	56.0	13.3		WNW	10	4.5			10					Raining	S. Cail, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.03	762.7	61.3	16.3		SW			1		10					Raining	J. Dreyer.
Bradford			30.01	762.2	74.8	23.8		W			1		0			0	0	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			29.98	761.5	83.0	28.3		NE			3		6					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge			30.07	763.8	86.0	30.0		SW			1		1						Mr. Pain, F. B. M. S.
Cardington			30.09	764.3	84.0	28.9		S			1		1					Blue sky	John McLaren.
Carlisle			29.94	760.5	73.2	22.9		SW			3		5			0	0	*D. clouds	T. Bell, for J. Carmell.
Chatham, School M. E			30.08	764.0	81.5	27.5		SE			1		0					Blue sky	Capt. J. Fellowes, R.E.
Dartmoor	28.74	730.0	30.18	766.6	72.5	22.5		NW			1		0					Blue sky	R. L. Power.
Donaghadee			29.93	760.2	65	18.3		SW			4		5					*D. clouds	J. Mac Gowan.
Dover			30.09	764.3	67	19.4		NE			1		0					Clear	J. Costello.
Eccles (near Manchester.)			30.01	762.2	76.7	24.8		SW	5.0	2.2			3					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.13	765.3	64.2	17.9		S			1		2					Foggy	The Staff.
Fort Napier, (Natal)	27.55	699.2	29.76	755.9	83.4	28.6		NW			2		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.95	760.7	80	26.7		W			5		5					*D. clouds	
Galway, Queen's College			30.23	767.8	67	19.4		W			1		1					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.95	760.7	81.5	27.5		E			2		4					*D. clouds	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.86	758.4	61.0	17.8		SSW			5		9					Squally	Lewis Stuart.
Great Yarmouth			30.10	764.5	67	19.4		SSE			3		0					Blue sky	G. T. Watson.
Greenwich, Royal Ob'y			30.08	764.0	89.4	31.9		SSW			1		0					Blue sky	The Staff, for G. B. Airy
Guernsey			30.12	765.0	72.5	22.5		NNW			2		0			Blank	Blank	Blue sky	Dr. S. E. Hoskins.
Helston			30.14	765.5	63	17.2		SW			2		0			0	0	Clear	M. P. Moyle.
Holyhead			30.04	763.0	61	16.1		SSW			5		10					Misty	John Tinton.
Kew, Observatory			30.07	763.8	80.9	27.2		SW	8	3.6			0					Blue sky	The Staff.
Kingstown			29.99	761.7	70	21.7		W			4		7					*D. clouds	George Mitchell.
Leicester Museum			30.05	763.3	80.0	26.7		SW			1		0					Blue sky	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.00	762.0	87.6	30.9		SE			1		2k					*D clouds	Corp'l F. Fraser, A. M. C.
Nairn																			W. D. Penny.
Nassau, (Bahamas			30.07	763.8	79.0	26.4		NE			6		10					Overcast	Surg. Maj. Henry.
Nottingham, Observatory			30.05	763.3	84.3	29.1		SSE			3		0			0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.02	762.5	80.1	26.7		S			2		0					Hazy	Rev. Stephen Whitty.
Oxford, Radcliffe Ob's'y			30.05	763.3	81	27.2		S			1		0					Blue sky	J. Lucas.
Plymouth			30.11	764.8	69.5	20.8		SSW			3		0					Blue sky	John Merrifield.
Roche's Point			30.08	764.0	63	17.2		WSW			4		8					Dull, foggy	W. Kennedy.
Saint Ann's Head			30.10	764.5	62	16.7		WSW			1		10					Overcast	John C. Walker.
Saint Helier, Jersey			30.10	764.5	70.6	21.4		E			1		0					Clear	A. P. Amy.
Sandwick Manse Orkneys			29.74	755.4	58.8	14.9		SW	14	6.3			10					Overcast	Rev. C. Clouston, LL. D.
Scarborough			30.02	762.5	75.8	24.3		S			3		0					Blue sky	F. Shaw.
Scutari Cemetery Turkey			29.87	758.7	81.4	27.4		NE			2		3					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.03	762.7	78.8	26.0		W			3		1			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			30.04	764.0	62.5	16.9	78	SW			3		5			0.005	0.13	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.00	762.0	72.1	22.3		SW			1		3					*D. clouds	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.)			29.75	755.6	57	13.9		SW			1		10					Overcast	John Smith.
Strathfield Turgiss			30.08	764.0	82.0	27.8		Calm			0		0					Blue sky	Rev. Charles H. Griffith.
Thurso			29.73	755.1	60	15.6		SW			2		10					Gloomy	John Trotter.
Truro, Royal Institution			30.13	765.3	72	22.2		NW			4		4					*D. clouds	W. Newcombe.
Valencia, Observatory			30.[illegible]8	764.0	56.8	13.8		NNW	13	5.8			10					Misty	The Staff.
SUB-SERIES																			
Calf of Man, (Isle of Man					57	13.9		S			4		10						Thomas Dawson.
Cape Good Hope, Ob's'y			30.27	768.8	57.4	14.1	79	SE	14	6.3		3	3						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.92	760.0	61.5	16.4	93	N			3		4k			0.01	0.3		Francis Abbott, F.R.A.S.
Leith, Restal'rig Park			29.88	758.9	69.0	20.6		SW			4		6k			0	0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.20	767.1				E	24.6	11.0						0.01	0.3		C. Meldrum
Melbourne, Observatory			30.40	772.1	52.3	11.3	67	NNW	15	6.7		4				0	0	Fine	R. L. J. Ellery.
Monach Lighthouse Hebrides			29.70	756.7	56	13.3		SW			1		10			0.5	12.7		J. Youngclaus.
North Unst, (Shetland Is.)			29.67	753.6	60	15.6		S			7		10			Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity; distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Mauritius and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,2[illegible]0 ft., or 70[illegible] m. *D stands for clouds. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.10 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown.

DANISH SERIES.

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

Copenhagen			30.11	764.7	63.9	17.7	72	NNE			4		1						
Faröe			30.14	765.6	64.4	18.0	71	W			4		1						
Godthaab, (Greenland)			29.13	747.5	46.4	8.0	62	S			4		10						
Stykkisholm, (Iceland			29.34	745.1	48.0	8.9	88	Calm			0		8						
Thorshavn, (Faröe)			29.43	747.5	52.3	11.3	80	SW			6		8						
Vestervig			30.10	764.4	63.7	17.6	80	WSW			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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.24	768.0	88.2	31.2	41	NE			1		2k		NE	0	0	¼ Covered	Normal School.
Amiens																			Normal School.
Avignon			30.06	763.4	88.3	31.3	42	SW			2		2		S	0	0	Partly cloudy	Normal School.
Bar-sur-Seine			30.02	762.5	86.4	30.2	21	N			2	2c				0	0	Slightly cl'dy	C. Saillard.
Beaumette, (near Angers)			29.98	761.6	90.0	32.2	24	NE	2.7	1.2						0	0		Beaumette Observatory
Beauvais			30.08	764.0	77.2	25.1	46	E			2		0			0	0	Clear	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.03	762.8	82.8	28.2	48	SW			1		0			0	0	Clear	Normal School.
Bourges			30.00	762.0	83.8	28.8	67	NE			2		0			0	0	Clear	Normal School.
Brest			30.01	762.9	81.5	27.5	44	NNE			1		0			0	0	Clear	Naval Observatory.
Carcassonne			30.00	762.0	80.2	26.8	42	E			1		0			0	0	Clear	Normal School
Caen																			Normal School.
Chartres			30.02	762.5	88.9	31.6	59	N			2		0			0	0	Clear	Normal School.
Châlons-sur-Marne			30.06	763.4	89.6	32.0	34	N			2		0			0	0	Clear	Normal School.
Clermont			29.96	760.9	81.7	27.6	39	NW			2		2			0	0	Slightly cl'dy	Puy de Dome Obs'y.
Commercy			30.04	763.1	81.0	27.2	32	E			2	2c		E		0	0	Slightly cl'dy	Normal School
Commune de Greasque*			30.14	765.5	82.2	27.9	44	SW			2		8		SW	0	0		M. Kina.
Grenoble			30.19	766.9	79.9	26.6	92	N			1		2			0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.09	764.3	92.5	33.6	25	NE			6		0			0	0	Clear	Normal School.
Le Mans			30.07	763.8	86.2	30.1	33	E			4		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			29.99	761.8	77.9	25.5	45	SW			1		0			0	0	Clear	Normal School.
Mâcon			30.21	767.4	82.0	27.8	61	N			2		0			0	0	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			30.01	763.0	76.5	24.7	31	NNE			2		2		SW	0	0	Slightly cl'dy	Normal School.
Nîmes			30.04	763.0	102.4	39.1	24	S			1		0			0	0	Clear	Normal School.
Orleans																			Normal School.
Paris, Observatory			30.05	763.2	86.5	30.3	29	E			2	1c				0	0	Clear	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			29.99	761.8	90.7	32.6	25	ENE			3		0			0	0	Blue sky	Naval Observatory.
Rouen			30.06	763.5	89.6	32.0	31	SE			1		0			0	0	Clear	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School
Villefranche			30.01	762.3	93.2	34	48	SE			1		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.81	757.8	81.0	27.2													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.28	769.2	69.3	20.7	84	SE	9.3	4.17			5		SW	0.748	19.0		—, Faignère.
Montsouris, Paris			30.10	764.5	89.4	31.9	27	E			1	..c	..k			0	0		Montsouris Observ'tory.
Perpignan			30.00	762.1	74.1	23.4	47	SE	13.0	5.83			6		SW	0	0		Pr. Fines.
Pic du Midi, (Summit) H.P.	21.47	545.4			50.0	10.0		SSW			2		8					Stormy	M. Baylac.
Pic du Midi, (Plantade)	22.73	577.3			55.4	13.0		SSW			2		8			0.031	0.8	Stormy	General de Nansouty.
Saint Maur, (near Paris)			30.06	763.5	89.6	32.0	23	NE			2		0			0	0	Clear	F. Renou.
Toulouse			30.05	763.3	86.4	30.2	37	SSE			3		1			0	0		Toulouse Observatory
Tours			30.02	762.5	89.2	31.8	25	E			2		0			0	0	Clear	C. Marquet.
Versailles, (near Paris)			30.07	763.7	88.2	31.2	25	SE			1		0			0	0	Very clear	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai																			H. Le Lee, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.08	764.1	79.3	26.3	51	NW			3		2	N		0	0		Prof. T. Hoh.
Berlin			30.09	764.3	74.5	23.6	61	W			2		7			0.024	0.6		Prof. Arndt.
Breslau			30.12	765.1	78.4	25.8	42	NW			2		9			0	0		Dr. P. Neugebauer.
Carlsruhe			30.04	763.0	83.8	28.8	40	ENE			2		9			0	0		A. Senz.
Cassel			30.10	764.5	80.6	27.0	48	NNE			3		3	NW		0	0		Dr. H. Möhl.
Emden			30.10	764.5	72.0	22.2	60	N			3		0			0	0		Prof. Prestel.
Frankfort on the Main			30.08	764.0	85.3	29.6	27	ENE			2		3			0	0		Physical Society.
Friedrichshafen			30.04	763.0	78.8	26.0	44	NE			5		0			6	0		M. Wilhelm.
Hamburg			30.14	765.6	68.0	20.0	60	NNW			2		6k			0.004	0.1	Fair	Captain F. Hegemann
Kiel			30.13	765.3	65.3	18.5	65	NNE			2		5			0	0		Prof. G. Karsten.
Königsberg, (Prussia.)			30.08	764.0	71.2	21.8	66	N			2		4			0.055	1.4		Prof. E. Luther.
Köslin			30.08	764.1	68.7	20.4		NW			2		4			0.059	1.5		H. Müller.
Leipsic			30.12	765.0	82.2	27.9	37	NW			2		7	W		0	0		Prof. Bruhns.
Memel			30.10	764.5	66.7	19.3	78	WNW			2		1ks			Inap.	Inap.		Reinbrecht & Skalweit
Munster			30.20	767.0	76.6	24.8	63	NE			2		0			0	0		Prof. E. Heis.
Neufahrwasser			30.11	764.7	66.9	19.4	80	NE			1		10			0.165	4.2	Thunder-storm	A. Lothes.
Posen			30.09	764.2	80.6	27.0	46	W			5		10			0.224	5.7		Dr. Magener.
Strassburg, (in Alsace)			30.06	763.4	84.7	29.3	30	NE			1		9			0	0		Dr. Schur.
Stuttgart			30.05	763.2	82.4	28.0	37	N			2		5			0	0		Prof. Schoder.
Thorn			30.08	763.9	79.7	26.5	49	NW			1		7			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.04	763.0	86.0	30.0	30	NW			3		2			0	0		Prof. Flesch.
Wustrow, Naval School			30.23	767.9	66.4	19.1	72	N			1		0			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	759.5	86.2	30.1		NE					0					Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	762.3	81.7	27.6	32	NW	0.7	0.3			2			0	0		
Padua			30.03	762.8	78.1	25.6	44	SW	2.5	1.1			10	N		0	0		
Vicenza			30.03	762.8	83.5	28.6	35	SE	4.9	2.2			1			0	0		
Verona			30.02	762.6	88.0	31.1	32	W			1		0			0	0		
Bergamo	28.74	729.9	29.99	761.7	81.0	27.2	42	SW			2		3			0	0		
Domodossola	29.02	737.1	30.00	762.0	80.6	27.0	49	S			4		3			0	0		
Milan			30.01	763.1	84.2	29.0	46	E			4		1	ESE		0	0		
Pavia			30.05	763.3	80.1	26.7	39	NE			2		0			0	0		
Moncalieri			30.06	763.4	79.2	26.2	50	NNW	0.7	0.3			3	NE		0	0		
Mondovi	28.23	717.1	30.07	763.6	73.9	23.3	55	NW			2		1			0.091	2.3		
Porto Maurizio			30.10	764.6	78.4	25.8	61	WSW			2		5			0	0		
Genoa			30.03	762.7	84.0	28.9	34	SW	6.3	2.8			2			0	0		
Piacenza			30.07	763.6	81.1	27.3	35	ESE	6.3	2.8			1			0	0		
Parma			30.04	763.1	82.4	28.0	47	E			6		1			0	0		
Bologna			30.08	764.0	82.4	28.0	43	SW			6		3	E		0	0		
Florence			30.01	763.0	83.3	28.5	25	NE			6		0			0	0		
Leghorn			30.01	762.3	83.8	28.8	39	ENE	11.9	5.3			1			0	0		
Siena	28.83	732.2	29.98	761.4	77.7	25.4	35	ENE	6.3	2.8			4	E		0	0		
Urbino	28.57	725.6	30.07	763.8	71.6	22.0	51	NE			2		2			0	0		
Ancona			30.07	763.7	81.0	27.2	36	NNW			4		2			0	0		
Grosseto			30.02	762.6	84.2	29.0	32	NNE			6		3	SE		0	0		
Rome			29.97	761.2	85.1	29.5	31	SW	5.6	2.5			2			0	0		
Naples, O. U.			29.98	761.5	86.0	30.0	36	SSW			1		0			0	0		
Lecce			29.95	760.8	80.1	26.7	38	NE	16.1	7.2			1			0	0		
Cosenza			29.96	761.0	87.6	30.9	69	N	4.9	2.2			4			0	0		
Riposto, (Sicily)			29.92	760.0	84.9	29.4	54	NW			2		8			1.087	27.6		
Palermo			29.88	759.0	85.3	29.6	46	NE	4.9	2.2			2			0	0		
Caltanissetta	28.01	711.4	29.86	758.4	78.8	26.0	45	SSW			6		10			0	0		
Sub-Series.																			
Naples, S. R.			29.99	761.7	83.5	28.6	31	NE	1.8	0.8			4			0	0		Prof. F. Brioschi.
Pesaro			30.13	765.2	75.4	24.1	47	SE	19.5	8.72			0			0	0		L. Guidi.

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			30.14	765.6	76.3	24.6		SSE			1								
Groningen			30.09	764.2	70.0	21.1		NE			1								
Helder			30.13	765.3	67.8	19.9		ENE			1								
Utrecht			30.10	764.5	75.4	24.1	70	N			2		0					Clear	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	761.0	65.5	18.6	70	S	18.3	8.2			10			0.413	10.5		
Brönö			29.95	760.6	60.4	15.8	77	SW	2	1			10					Light rain	
Christiania			30.06	763.4	68.0	20.0	68	W	1.6	0.7			4			0	0		
Tromsö			29.93	760.3	54.0	12.2		NE	2	1			10			0	0		

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

PORTEUGUSE 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,)			30.23	767.8	74.7	23.7	82	SSW	3.2	1.45			8			0.346	8.8		Dr. J. A. N. Sampaio.
Campo Major			29.92	759.9	80.7	30.4	30	SW	2.6	1.17			2			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.09	764.2	77.0	25.0	62	SW	6.2	2.78			1			0	0		Capt. D. A. da Cunha.
Lisbon			30.00	762.1	68.4	20.2	78	NNW	9.8	4.4			10			Inap.	Inap.		The Observatory.

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

RUSSIAN SERIES.

Furnished by 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			30.03	762.8	72.7	22.6	60	N	7	3			6						Astronomical Obs.
Wilna			30.07	763.6	80.1	26.7	32	N	4	2			3						Astronomical Obs.
Dorpat			30.12	765.1	73.8	23.2	49	ESE	4	2			6						Physical Cabinet.
St. Petersburg			30.16	766.0	70.9	21.6	41	NE	7	3			4						Central Physical Obs.
Kuopio			30.11	764.9	65.5	18.6	80	S	13	6			10						Ch. Forsten.
Kieff			29.87	758.7	67.3	19.6	76	N	13	6			10						Physical Cabinet.
Nikolaiev			29.79	756.6	83.5	28.6	49	NW	20	9			6						Kurdakof.
Kertch			29.79	756.6	79.9	26.6	57	W	9	4			2						Lagorio.
Moscow			30.09	764.2	65.7	18.7	74	NW	7	3			10						Meteorological Obs.
Lugan			29.59	751.5	84.9	29.4	51	E	34	15			5			Blank	Blank		Meteorological Obs.
Archangel			30.16	766.0	63.1	17.3	94	NNW	7	3			8						Ogorodnikof.
Tiflis	28.40	721.4	29.71	754.6	96.1	35.6	25	SSE	4	2			0						Physical Observatory.
Astrakhan			29.87	758.6	84.6	29.2	38	ESE	25	11			5						Sebastianoi.
Kasan			29.99	761.8	84.4	29.1	55	ENE	9	4			6						Physical Cabinet.
Orenburg																			Tschernischel.
Ekaterinburg	29.10	739.2	30.02	762.4	70.5	21.4	62	W	4	2			8						Meteorological Obs.
Nukuss			29.89	759.3	89.1	31.7	28	NE	11	5			0						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul			29.79	756.6	75.4	24.1	47	Calm	0	0			8						Meteorological Obs.
Yeniseisk			29.53	750.0	61.2	16.2	92	S	2	1			9			Blank	Blank		Marks.
Irkutsk																			Usolzof.
Oorga																			Mossin.
Peking, (China)			29.84	757.9	79.2	26.2	78	Calm	0	0			0			Blank	Blank		Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.77	756.1	65.5	18.6	92	SE	13	6			10			Blank	Blank		
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft. Tashkend 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk 592.0? m., or 1,942.2? ft.; 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 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			29.86	758.4	93.6	34.2	27	S	5.2	2.33		0	3			Inap.	Inap.	Cloudy	Royal Observatory
San Fernando			29.97	761.1	78.8	26.0	72	ESE	14.8	6.6		4	6	ESE	E	0.126	3.2		The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	764.4	61.9	16.6	75	S			2		10			0	0		
Umea			30.06	763.4	60.3	15.7	89	SW			2		10			0.028	0.7		
Hernosand			30.07	763.6	60.8	16.0	78	S			2		7			0	0		
Stockholm			30.06	763.5	70.3	21.3	66	W			2		3			0.185	4.7		
Wisby			30.13	765.2	63.3	17.4	88	NNW			4		5			0.134	3.4		
Upsala. SUB-SERIES.			30.07	763.7	69.1	20.6	63	W	3.4	1.5			5			0.031	0.08		Dr. Hildebrandsson.

NOTE.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall 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 or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0 - 10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From	Clouds. 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	28.67	728.2	30.03	762.7	78.1	25.6	45	N	.....	.....	2	.....	1	.....	.....	0	0	Clear	The Observatory.
Zurich	28.49	723.7	30.05	763.3	80.2	26.8	41	ESE	.....	.....	1	.....	1	.....	.....	0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +0.4 mm; Thermometer, +3.4 cent.; Relative Humidity, —9 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

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

Station.	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0 - 10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From	Clouds. 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	.....	.....	29.93	760.3	76.6	24.8	66	NNE	16	7.0	.....	.....	6	.....	NNE	0	0	.....	
Fao, (Persian Gulf)	.....	.....	29.69	754.2	106.3	41.3	.....	NW	.....	.....	3	.....	5	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.97	761.3	84.7	29.3	.....	S	.....	.....	1	.....	2	.....	.....	.....	.....	.....	
Valona	.....	.....	29.98	761.6	80.2	26.8	.....	NW	.....	.....	3	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	29.88	759.0	84.2	29.0	.....	NE	.....	.....	2	.....	5	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.84	758.0	91.4	33.0	52	W	.....	.....	2	.....	0	.....	.....	.....	.....	Clear	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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

Station.	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0 - 10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From	Clouds. 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	.....	.....	29.96	761.0	76.8	24.9	73	NE	2	0.9	.....	0	0	.....	.....	0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.19	766.8	77	25.0	.....	N	1	0.4	.....	0	0	.....	.....	0	0	Clear	W. R. Bigg.
*Chatham, N. B	.....	.....	29.98	761.5	70	21.1	75	SW	1	0.4	.....	0	0	.....	.....	0.03	0.8	Clear	G. A. Blair.
Charlottetown P. E. Island	.....	.....	30.00	762.0	73	22.8	65	W	3	1.3	.....	0	0	.....	.....	0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.13	765.3	76.2	24.6	63	SE	.....	.....	1	0	0	.....	.....	0	0	Bright	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.02	762.5	69.2	20.7	77	NW	.....	.....	1	.....	.....	.....	.....	0	0	Clear	H. A. Johnson.
Esquimault, B. C	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Bevis.
Fredericton, N. B	.....	.....	30.07	763.8	69.1	20.6	65	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.55	750.6	69	20.6	92	SE	5	2.2	.....	2cs	2ks	.....	.....	0	0	Fair	James Stewart.
Goderich, Ontario	.....	.....	30.11	764.8	76.4	24.7	59	Calm	.....	.....	0	0	0	.....	.....	0	0	Dry	H. J. Strang, M. A.
Granton, Ontario	29.06	738.1	30.12	765.0	68	20.0	.....	Calm	.....	.....	0	0	0	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S.	.....	.....	29.97	761.2	72	22.2	71	N	7	3.1	.....	0	0	.....	.....	0	0	Clear	F. Allison, M. A.
*Kingston, Ontario	.....	.....	30.15	765.8	73	22.8	94	SW	2	0.9	.....	0	0	.....	.....	0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.	.....	.....	29.89	759.2	72.6	22.6	70	Calm	0	0	.....	0	0	.....	.....	0.06	1.5	Fair	C. H. Rigby.
*Montreal, Quebec	.....	.....	30.12	765.0	75	23.9	66	SW	4	1.8	.....	0	Sm'e	.....	.....	0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.14	765.5	68	20.0	62	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Smoky	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.13	765.3	66	18.9	89	SE	5	2.2	.....	0	0	.....	.....	0	0	Clear	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.16	766.1	66	18.9	84	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	H. Morgan.
Port Hastings, N. S.	.....	.....	29.97	761.2	72.1	22.3	.....	NW	5	2.2	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	30.14	765.5	66	18.9	90	.....	4	1.8	.....	2ck	0	W	.....	0	0	Clear	M. Payne.
*Quebec, Quebec	.....	.....	30.10	764.5	71	21.7	80	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.	.....	.....	30.13	765.3	68	20.0	65	NW	1	0.4	.....	0	0	.....	.....	0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.09	764.3	71	21.7	73	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Clear	R. Stewart.
Stayner, Ontario	.....	.....	30.11	764.8	66	18.9	78	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	R. J. Cole.
Stratford, Ontario	24.88	733.5	30.14	765.5	60.9	16.1	96	Calm	0	0	.....	0	0	.....	.....	0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.95	760.7	75	23.9	72	N	4	1.8	.....	0	2ks	.....	NE	0.11	3.6	Clear	T. C. Hill.
*Toronto, Ontario	.....	.....	30.15	765.8	69	20.6	69	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.14	765.5	65.1	18.4	89	S	3	1.3	.....	0	1cs	.....	.....	0	0	Fine	J. Montgomery
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	29.87	758.7	68	20.0	80	NW	.....	.....	.....	0	5ks	.....	.....	.....	.....	Fair	John Delaney.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.			30.14	765.5	70	21.1	75	Calm	0	0		0	Haze			0	0	Clear	
Alpena, Mich.			30.04	763.0	68	20.0	79	Calm	0	0		0	0			0	0	Clear	
Atlantic City, N. J.			30.09	764.3	76	24.4	76	NE	8	3.6			10s	W		0	0	Cloudy	
Augusta, Ga.			30.11	764.8	78	25.6	82	SE	3	1.3		2cs	0	E		0	0	Fair	
Baltimore, Md.			30.13	765.3	76	24.4	69	NW	4	1.8		2cs	Haze			0.07	1.8	Fair	
Barnegat, N. J.			30.08	764.0	76	24.4	72	NE	14	6.3		8c	0	NW		0	0	Fair	
Bismarck, Dakota	27.07	702.8	29.16	740.7	76	24.4	68	SE	43	19.2		2c	0			0.60	15.2	Fair	
Boston, Mass.			30.12	765.0	76	24.4	52	N	6	2.7		1cs	Haze			0	0	Hazy	
Breckenridge, Minn.			29.54	750.3	73	22.8	76	SE	28	12.5		2k	0	S		0	0	Clear	
Buffalo, N. Y.			30.12	765.0	70	21.1	70	SE	1	0.4		0	Sm'e			0	0	Clear	
Burlington, Vt.			30.16	766.1	68	20.0	69	Calm	0	0		0	Sm'e			0	0	Smoky	
Cairo, Ill.			30.00	762.0	71	21.7	90	SE	8	3.6			10s		SE	0.47	11.9	Cloudy	
Cape Hatteras, N. C.			30.03	762.7	79	26.1	86	NW	1	0.4		5c	5ks			0.26	6.6	Cloudy	
Cape Henry, Va.			30.04	763.0	80	26.7	82	NW	6	2.7		8c	0	W		0	0	Fair	
Cape Lookout, N. C.			30.09	764.3	78	25.6	86	SW	6	2.7		10cs	0			0.30	7.6	Threatening	
Cape May, N. J.			30.09	764.3	75	23.9	69	NE	5	2.2		8k	0	NW		0	0	Fair	
Charleston, S. C.			30.12	765.0	79	26.1	86	N	4	1.8		2c	2ks		W	0	0	Fair	
Cheyenne, Wyoming	23.86	606.0	29.80	756.9	65	18.3	33	W	4	1.8		2ck	0	W		0	0	Fair	
Chicago, Ill.			30.00	762.0	75	23.9	76	S	1	0.4		0	0			0	0	Clear	
Cincinnati, Ohio			30.00	762.0	75	23.9	85	Calm	0	0		2c	Sm'e			0.26	6.6	Clear	
Cleveland, Ohio			30.12	765.0	63	17.2	73	Calm	0	0		2c	Sm'e	W		0	0	Smoky	
Corsicana, Tex.			29.84	757.9	74	23.3	85	SE	4	1.8		5cs	0	SW		0	0	Fair	
Davenport, Iowa			29.97	761.2	74	23.3	81	SE	1	0.4		0	0			0	0	Clear	
Denison, Tex.			29.84	757.9	75	23.9	78	SE	4	1.8		0	0			0	0	Clear	
Denver, Col.	24.59	624.6	29.81	757.2	66	18.9	45	S	4	1.8		0	0			0	0	Clear	
Detroit, Mich.			30.08	764.0	69	20.6	75	S	2	0.9		2c	Sm'e	W		0	0	Fair	
Dodge City, Kan.	27.23	691.6	29.39	746.5	70	21.1	84	SE	12	5.4		0	0			0	0	Clear	
Dubuque, Iowa			29.94	760.5	72	22.2	85	S	8	3.6		10k	0	S		0	0	Cloudy	
Duluth, Minn.			29.83	757.7	72	22.2	71	SW	5	2.2		0	0			0	0	Clear	
Eastport, Me.			30.06	763.5	69	20.6	60	NW	8	3.6		0	0			0	0	Clear	
Erie, Pa.			30.10	764.5	73	22.8	59	SE	6	2.7		2c	Sm'e			0	0	Fair	
Escanaba, Mich.			29.99	761.7	69	20.6	75	SW	12	5.4		0	Haze			0	0	Clear	
Fort Gibson, Indian Ter.			29.79	756.7	77	25.0	77	E	5	2.2		0	0			Inap.	Inap.	Clear	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.61	726.7	29.66	753.4	72	22.2	67	S	4	1.8		0	0			0	0	Clear	
Fort Sully, Dakota	27.81	706.4	29.31	744.5	80	26.7	62	SE	8	3.6		5ck	0	W		0	0	Fair	
Galveston, Tex.			29.88	758.9	79	26.1	82	SE	3	1.3		0	8ks			0	0	Cloudy	
Grand Haven, Mich.			30.02	762.5	73	22.8	81	SE	3	1.3		5k	0	S		0	0	Fair	
Indianapolis, Ind.			30.02	762.5	76	24.4	81	E	4	1.8		2cs	8s			0	0	Fair	
Indianola, Tex.			29.88	758.9	80	26.7	86	S	1	0.4		0	5ks			0	0	Fair	
Jacksonville, Fla.			30.10	764.5	82	27.8	78	SE	4	1.8		0	0			0	0	Clear	
Keokuk, Iowa			29.89	759.2	72	22.2	80	SE	8	3.6		2c	0			0	0	Fair	
Key West, Fla.			30.01	762.2	79.2	26.2	82	E	10	4.5			10n			0.19	4.8	Light rain	
Kittyhawk, N. C.			30.12	765.0	78	25.6	77	N	9	4.0		0	8s			0	0	Cloudy	
Knoxville, Tenn.			30.10	764.5	66	18.9	94	N	4	1.8			Fog			Inap.	Inap.	Dense fog	
La Crosse, Wis.			29.94	760.5	66	18.9	90	S	2	0.9		0	Fog			0	0	Clearing	
Leavenworth, Kan.			29.84	757.2	75	23.9	81	Calm	0	0		0	0			0	0	Clear	
Louisville, Ky.			30.03	762.7	76	24.4	77	SE	4	1.8		5k	0	SE		Inap.	Inap.	Fair	
Lynchburg, Va.			30.09	764.3	75	23.9	81	W	3	1.3		10ck	0	NW		0	0	Cloudy	
Malone, N. Y.			30.12	765.0	68	20.0	65	S	5	2.2		0	0			0	0	Clear	
Marquette, Mich.			29.95	760.7	70	21.1	71	E	3	1.3		0	0			0	0	Clear	
Memphis, Tenn.			30.00	762.0	72	22.2	95	SE	4	1.8			10s		SE	0.30	7.6	Cloudy	
Milwaukee, Wis.			30.03	762.7	68	20.0	84	Calm	0	0			Fog			0	0	Foggy	
Mobile, Ala.			30.01	762.2	77	25.0	90	SE	7	3.1		5c	5s		S	0.88	22.4	Cloudy	
Montgomery, Ala.			30.07	763.8	76	24.4	81	SE	3	1.3		10c	0			0	0	Cloudy	
Morgantown, W. Va.	29.05	738.1	30.09	764.3	68	20.0	79	Calm	0	0		5c	Fog			0	0	Fair	
Mt. Washington, N. H.	24.01	611.0	30.45	773.4	53	11.7	29	NW	10	4.5		0	0			0	0	Clear	
Nashville, Tenn.			30.01	762.2	75	23.9	81	E	3	1.3		5k	0			0	0	Fair	
New Haven, Conn.			30.11	764.8	76	24.4	65	N	10	4.5		0	0			0	0	Clear	
New London, Conn.			30.12	765.0	75	23.9	59	NW	3	1.3		0	Haze			0	0	Clear	
New Orleans, La.			29.96	761.0	76	24.4	86	SE	3	1.3			10s		S	0.75	19.1	Threatening	
Newport, R. I.			30.11	764.8	72	22.2	67	N	8	3.6		0	0			0	0	Clear	
New York, N. Y.			30.11	764.8	70	24.4	56	NE	13	5.8		0	Sm'e			0	0	Clear	
Norfolk, Va.			30.11	764.8	82	27.8	70	W	4	1.8		5k	0	SW		0	0	Fair	
North Platte, Neb.			29.98	761.0	74	23.3	68	SE	20	8.9		0	0			0	0	Clear	
Omaha, Neb.	28.77	730.7	29.78	756.4	73	22.8	85	SE	7	3.1		2ck	0	SW		0	0	Clear	
Oswego, N. Y.			30.16	766.1	70	21.1	79	S	4	1.8		Haze	Haze			0	0	Clear	
Pembina, Dakota			29.50	749.3	74	23.3	81	S	12	5.4		2c	0	SE		0	0	Clear	
Philadelphia, Penn.			30.09	764.3	76	24.4	56	E	4	1.8		1cs	Haze			0	0	Clear	
Pike's Peak, Colorado	17.89	454.4	30.10	764.5	35	1.7	80	W	20	8.9		0	5s			0.03	0.8	Fair	
Pittsburgh, Penn.			30.10	764.5	62	16.7	88	N	4	1.8			Fog			0	0	Foggy	
Port Huron, Mich.			30.10	764.5	68	20.0	74	Calm	0	0		1c	0			0	0	Clear	
Portland, Me.			30.12	765.0	73	22.8	59	Calm	0	0		0	0			0	0	Clear	
Portland, Oregon			30.39	769.6	49	9.4	85	Calm	0	0		0	2s		N	0.13	3.3	Fair	
Punta Rassa, Fla.			30.05	763.3	80.0	26.7	82	NE	10	4.5		5cs	Haze	NE		0.08	2.0	Fair	
Rochester, N. Y.			30.14	765.6	68	20.0	74	SW	6	2.7		Haze	Sm'e			0	0	Hazy	
Salt Lake City, Utah	25.61	650.5	29.94	760.5	61	16.1	40	NW	8	3.6		2k	2s	SW		0.55	14.0	Fair	
Sandy Hook, N. J.			30.09	764.3	75	23.9	64	NE	2	0.9		2c	Haze	SW		0	0	Clear	
San Diego, Cal.			29.91	759.7	69	20.6	90	S	4	1.8			10s		S	0	0	Cloudy	
San Francisco, Cal.			29.87	758.7	53	11.7	81	Calm	0	0		0	0			0	0	Clear	
Santa Fé, N. M.	23.25	590.5	29.79	756.7	56	13.3	87	SW	2	0.9		5k	0			0	0	Fair	
Savannah, Ga.			30.11	764.8	84	28.9	75	Calm	0	0		2ck	Haze			0.22	5.6	Fair	
Shreveport, La.			29.95	760.7	73	22.8	95	SE	10	4.5			10n			0.07	1.8	Light rain	
Smithville, N. C.			30.13	765.3	76	24.4	81	W	5	2.2			10ks		W	0	0	Threatening	
Springfield, Mass.			30.12	765.0	73.5	23.1	71	N	4	1.8		0	Fog			0	0	Clear	
St. Louis, Mo.			29.99	761.0	73	22.8	85	SE	8	3.6			10n			0.19	4.8	Light rain	
St. Marks, Fla.			30.00	763.5	78	25.6	82	SE	7	3.1		0	2ks		SE	0	0	Fair	
St. Paul, Minn.			29.81	757.2	68	20.0	75	SE	4	1.8		5c	0	SW		0	0	Fair	
St. Paul's Island, Alaska			29.82	757.4	44	6.7	92	SW	10	4.5			10s			0	0	Cloudy	
Thatcher's Island, Mass.			30.13	765.3	69	20.6	79	N	3	1.3		0	0			0	0	Clear	
Toledo, Ohio			30.07	763.8	70	21.1	71	Calm	0	0		5c	Haze			0	0	Fair	
Tucson, Arizona	27.54	699.5	30.14	765.5	74	23.3		E				5ck	0	E		0.07	1.8	Fair	
Tybee Island, Ga.			30.09	764.3	80	26.7	86	NW	4	1.8		2c	2ks		NW	0	0	Fair	
Vicksburg, Miss.			29.99	761.7	73	22.8	95	SE	6	2.7		2ck	10s		SE	0.01	0.3	Cloudy	
Virginia City, M. T.	24.12	612.6	29.60	751.8	33	0.6	95	W	4	1.8			10n			0.08	2.0	Light snow	
Washington, D. C.			30.10	764.5	76	24.4	59	NE	4	1.8		0	1s,hz			0.38	9.7	Clear	
Wilmington, N. C.			30.12	765.0	73	22.8	95	SW	9	4.0		2cs	8n			0.57	14.5	Light rain	
Wood's Holl, Mass.			30.13	765.3	77	25.0	64	N	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.
Yankton, Dakota	28.48	723.4	29.68	753.9	74	23.3	77	S	15	6.7		0	0			0	0	Clear	
Yuma, Arizona			29.83	757.7	90	32.2		E				8ck	0	W		0	0	Fair	
Sub-Series.																			
Kingston, Jamaica, W. I.			30.10	764.5	82	27.8	83	SE	5	2.2		8c	5n			0.04	1.0		James Gall.
St. Georges, Bermudas			30.15	765.8	83.0	28.3	62	SW	5	2.2			8n			0	0	Hazy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Paramaribo, D. Guiana, S. A.			30.04	76.30	81	27.2	83	E			3	3c	4k	E		0	0	Clear	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.03	762.7			86.0	30.0		N								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.19	639.8			64.5	18.1	85	S	1	0.4		7cs	2s			0.58	14.7	Cloudy	Thomas Herran
York Factory, B. A.			29.56	750.8	58.5	14.7	82	W	2	0.9		3k	0	E		0	0		J. Forteseue, W. Wood.
Honolulu, Oahu, H. I.			30.10	764.5	76	24.4		NE			2					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.

Marine Series	True course towards.	Hourly rate in knots.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	State of ocean.	Direction of swell from—	Weather.	Observer.
Schooner Adelaide Fuller, Long Branch, N. J.	S	3	30.09	764.3	76	24.4		NNE			3	2c	0	S		Smooth		Clear	Capt. James Jorgenson.
Steamer Hibernian, N. 51° 46′, W. 7° 56′.	Various.	10	30.17	766.3	62	16.7		NW			6		n		SW	Smooth		Fine	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.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 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, 1,051.8 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,262.2 ft., or 1,299.2 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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	763.4	83.1	28.4	71	Calm			0		8			0	0	Cloudy	Charnot.
Algiers			30.08	763.9	82.0	27.8	80	SE			1		9			0	0	Hidden	Peter.
La Calle			30.11	764.7	77.4	25.2	87	NE			4		2			0	0	Clear	Kunts.
Tunis			30.15	765.7	87.8	31.0	44	ENE			3		0			0	0	Clear	Jacques.
Sfax			30.20	767.0	87.1	30.6	55	NE			2		2			0	0	Clear	Chauvey.
Sa'da			30.07	763.7	91.4	33.0	25	W			3		2			0	0	Clear	Millot.
Tebessa			30.13	765.2	91.4	33.0		N			3		3			0	0	Fair	Colin.
Geriville			30.12	765.1	90.3	32.4	25	SSE			3		1			0	0	Clear	Lemaillot.
Laghouat			30.15	765.7	95.0	35.0	24	S			3		1			0	0	Clear	Guyot.
Biskra			30.14	765.6	95.9	35.5		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			30.07	763.6	78.4	25.8	56	SW			2		3			0.350	8.9		Prof. Ivan Stosir.
Cracow, I. R. Observatory			30.06	763.5	72.0	22.2	68	W			1		8			0.417	10.6		Dr. Wierzbiski.
Eperies			30.00	762.1	71.6	22.0	71	Calm			0		8c			0.034	0.8		Julius Mikolik.
Gratz	28.82	731.9	29.97	761.3	73.6	23.1	79	SW			2		7			0	0		Andreas Rospini.
Hermannstadt	28.58	725.9	29.94	760.4	74.5	23.6	48	NW			3		5			0	0		Prof. Reissenberger.
Kremsmunster	28.77	730.7	30.05	763.2	76.6	24.8	47	WNW			5		7			0	0		Prof. C. Wagner.
Lemberg			29.91	759.7	72.7	22.6	86	NE			3		6			0.016	0.4		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.08	764.1	79.3	26.3	65	NW			2		10cks			0	0		I.R.Hydrographic Office
Szegedin			29.94	761.4	79.5	21.4	68	Calm			0		7			0.315	8.00		Karl Stancel.
Trieste			30.10	764.4	80.6	27.0	58	Calm			0		0			0	0	Clear	Prof. V. Farolfi.
Vienna			30.00	761.9	78.1	25.6	53	WNW			1		2			0.122	3.1		I. R. Central Met. Obs'y

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1.258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.18	766.6	77.2	25.1	53	N			1		1			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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			30.20	767.1	63.0	17.2		W	6	2.7			4			0.070	1.78	Blue sky	William Boswell.
Ardrossan			30.28	769.1	62	16.7		WSW			2		5					*D. clouds	William McNeil.
Armagh, Observatory			30.32	770.1	63.8	17.7		SW	7	3.1			4					*D. clouds	S. Cail, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.33	770.4	65.3	18.5		SW			1		2					*D. clouds	J. Dreyer.
Bradford			30.31	769.9	65.5	18.6		W			1		2			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			29.96	761.0	82.6	28.1		SE			1		7					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			30.30	769.6	73.0	22.8		N			2		7						H. Todd.
Cardington			30.31	769.9	71.0	21.7		NE			1		6					*D. clouds	John McLaren.
Carlisle			30.30	769.6	65.2	18.4		SW			1		6			0.08	2.0	*D. clouds	T. Bel, for J. Carmell.
Chatham, School M. E.			30.28	769.1	72.0	22.2		E			2		6					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.91	734.3	30.36	771.1	72.0	22.2		E			1		5					*D. clouds	R. E. Power.
Donaghadee			30.31	769.6	63	17.2		SSW			2		2					Blue sky	J. Mac Gowan.
Dover			30.28	769.1	66	18.9		ENE			3		3					¼ clouded	J. Costello.
Eccles (near Manchester)			30.31	769.9	67.6	19.8		SW	2.0	0.9			3					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.31	769.9	66.8	19.3		S			2		2					*D. clouds	The Staff.
Fort Napier, (Natal)	27.81	706.4	30.04	763.0	66.5	13.6		E			1		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	82	27.8		W			1		5					*D. clouds	
Galway, Queen's College			30.21	767.3	66	18.9		SW			2		3					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.05	763.3	80.0	26.7		E			2		9					Overcast	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			30.26	768.6	59.4	15.2		SW			2		9					D. clouds	Lewis Stuart.
Great Yarmouth			30.31	769.9	64	17.8		N			3		2					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			30.30	769.6	74.0	23.3		NNE			1		7					D. clouds	The Staff, for G. B. Airy
Guernsey			30.26	768.6	67.5	19.7		NNE			2		0			Blank	Blank	Blue sky	Dr. S. E. Hoskins.
Helston			30.28	769.1	71	21.7		NE			2		0			0	0	Clear	M. P. Moyle.
Holyhead			30.35	770.9	60	15.6		NW			3		2					Blue sky	John Tilston.
Kew, Observatory			30.30	769.6	70.1	21.2		N	7	3.1			9					*D. clouds	The Staff.
Kingstown			30.37	771.4	62	16.7		SSE			4		5					*D. clouds	George Mitchell, F.G.S.
Leicester Museum			30.34	770.6	67.2	19.6		NE			1		5					Hazy	Wm. J. Harrison, A. M. C.
Malta, Mediterranean			30.05	763.3	84.6	29.2		NW			1		4k					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			30.13	765.3	64	17.8		WSW			2		5					½ clouded	W. D. Penny.
Nassau, (Bahamas)			30.12	765.0	82.3	27.9		NE			6		10					Overcast	Surg. Maj. Henry.
Nottingham, Observatory			30.31	769.9	75.7	24.3		S			2		2c		W	0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.31	769.9	66.9	19.4		NW			1		9					Hazy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.29	769.4	69	20.6		ENE			1		7					*D. clouds	J. Lucas.
Plymouth			30.29	769.4	70	21.1		S			2		1					*D. clouds	John Merrifield.
Roche's Point			30.35	770.9	64	17.8		S			2		2					Fine	W. Kennedy.
Saint Ann's Head			30.33	770.4	64	17.8		N			1		5						John C. Walker.
Saint Helier, Jersey			30.25	768.3	76.4	24.7		ENE			3		0					Clear	A. P. Amy.
Sandwick Manse, Orkneys			30.09	764.3	57.2	14.0		WSW	20	8.9			8					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough			30.31	769.9	61.0	16.1		SE			1		6					*D. clouds	F. Shaw.
Scutari Cemetery, Turkey			29.94	760.5	84.8	29.3		NE			2		4					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.31	769.9	66.7	19.3		WNW			2		3			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			30.29	769.4	69.9	21.1	73	SW			4		4			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.32	770.1	62.6	17.0		W			1		5			Blank	Blank	*D. clouds	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			30.08	764.0	59	15.0		W			4		8					*D. clouds	John Smith.
Stratfield Turgiss			30.28	769.1	71.5	21.9		NE			2		0					Blue sky	Rev. Charles H. Griffith.
Thurso			30.08	764.0	62	16.7		W			5		5					D. clouds	John Trotter.
Truro, Royal Institution			30.33	770.4	76	24.4		N			4		3					D. clouds	W. Newcombe.
Valencia, Observatory			30.45	770.9	64.3	17.9		S	12	5.8			5					*D. clouds	The Staff.
Sub-Stations.																			
Calf of Man, Isle of Man					58	14.4		S			3		0						Thomas Dawson.
Cape Good Hope, Obs'y			30.31	769.9	61.0	16.1	59	S	24	10.3		0	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.24	768.1	59.5	15.3	81	W			1		10n			0.09	2.3	Raining	Francis Abbott, F.R.A.S.
Leith, Restaurig Parks			30.25	768.3	63.1	17.3		W			3	6ck				0.06	1.5	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.25	768.3				E	16.3	7.3						0.21	5.3		C. Meldrum
Melbourne, Observatory			30.39	771.9	50.0	10.0	77	NNE	8	3.6			0			0	0	Fine	R. L. J. Ellery.
Monach Lighthouse, Hebrides			30.09	764.3	58	14.4		SW			6		10			0.4	10.2		J. Youngelsuse.
North Unst, (Shetland Is.)			29.95	760.7	56	13.3		W			7	0	0						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,220 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			30.12	765.0	71.2	21.8	53	W			2		6						
Faröe			30.19	766.7	64.8	18.2	46	NNW			6		5						
Godthaab, Greenland			29.60	751.7	43.5	6.4	78	Calm			0		10						
Stykkisholm, Iceland			29.35	745.5	45.1	7.3	73	NE			6		8						
Thorshavn, (Faröe)			29.73	755.2	52.7	11.5	81	SSW			6		10					Raining	
Vestervig			30.17	766.4	60.8	16.0	64	NW			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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.25	768.4	85.6	29.8	48	NE			2		0			0	0	Clear	Normal School.
Amiens																			Normal School.
Avignon			30.13	765.3	89.6	32	37	SSW			2		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.14	765.6	88.3	31.3	22	NE			2	2c				0	0	Slightly cl'dy	C. Saillard.
Beaumette, (near Angers)			30.12	765.1	89.8	32.1	25	NE	10.5	4.7						0	0		Beaumette Observatory
Beauvais			30.19	766.7	84.0	28.9	48	NNE			2		0			0	0	Clear	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.12	765.1	89.8	32.1	47	N			2		0			0	0	Clear	Normal School.
Bourges			30.17	766.3	84.9	29.4	49	NE			2		0			0	0	Clear	Normal School.
Brest			30.19	766.8	68.9	20.5	74	NNE			4		0			0	0	Clear	Naval Observatory.
Carcassonne			30.11	764.9	81.3	27.4	50	E			1		2		W	0	0	Slightly cl'dy	Normal School.
Caen																			Normal School.
Chartres			30.08	764.1	78.8	26	47	E			2		0			0	0	Clear	Normal School.
Châlons-sur-Marne			30.16	766.0	89.2	31.8	41	N			2		2k		S	0	0	Slightly cl'dy	Normal School.
Clermont			30.11	764.9	82.6	28.1	35	NE			2		0			0	0	Clear	Puy de Dome Obs'y
Commercy			30.19	766.8	81.3	27.4	56	E			2		2kn		E	0	0	Slightly cl'dy	Normal School
Commune de Greasque*			30.22	767.5	88.7	31.5	27	NW			2		2		NW	0	0		M. Kina.
Grenoble			30.09	764.2	73.8	23.2	53	N			2		2		S	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon					99.3	37.4	25	NW			2		0			0	0	Clear	Normal School.
Le Mans			30.22	767.6	85.1	29.5	38	NE			2		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			30.07	763.7	83.3	28.5	34	NW			2		0			0	0	Clear	Normal School.
Mâcon			30.24	768.2	86.2	30.1	59	N			2		0			0	0	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			30.12	765.0	79.3	26.3	43	N			2		1		N	0	0	Clear	Normal School.
Nismes			30.13	765.5	71.6	22	69	W			4		2		N	0	0	Slightly cl'dy	Normal School.
Orleans																			Normal School.
Paris, Observatory			30.18	766.5	87.4	30.8	28	NW			2		1k			0	0	Clear	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			30.13	765.2	94.1	34.5	28	E			3		0			0	0	Blue sky	Naval Observatory.
Rouen			30.21	767.2	86.0	30.0	34	NW			1		0			0	0	Clear	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School.
Villefranche			30.19	764.6	91.4	33	34	NE			1		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.90	759.5	81.0	27.2													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.43	773.0	69.6	20.9	71	SE	11.2	5.00			6		SW	0.102	2.6		—. Faignère.
Montsouris, Paris			30.18	766.6	89.1	31.7	27	NW			1		0			0	0	Clear	Montsouris Observatory.
Perpignan			30.15	765.8	78.1	25.6	46	SE	7.4	3.33			5		SE	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.57	547.8			48.2	9.0		NE			2		10					Stormy	M. Baylac.
Pic du Midi, (Plantade)	22.84	580.1			51.8	11.0		NE			3		10			0.343	8.7	Stormy	General de Nansouty.
Saint Maur, (near Paris)			30.18	766.5	89.2	31.8	30	NNW			1		0			0	0	Clear	F. Renou.
Toulouse			30.19	766.8	87.8	31.0	36	ESE			1		7			0	0		Toulouse Observatory
Tours			30.15	765.7	92.1	33.4	23	ENE			1		0			0	0	Clear	C. Marquet.
Versailles, (near Paris)			30.20	767.1	89.2	31.8	28	NE			2		1			0	0	Very clear	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Hamburg			30.07	763.7	80.2	26.8	24	NW			5		1	E		0	0		Prof. T. Hoh.
Berlin			30.11	764.7	73.6	23.1	48	NW			2		5			0	0		Prof. Arndt.
Breslau			30.13	765.3	73.0	23.1	58	NW			3		9			Inap.	Inap.		Dr. P. Neugebauer.
Carlsruhe			30.12	765.1	84.6	29.	42	W			2		0			0	0		A. Senz.
Cassel			30.17	766.4	83.8	28.8	32	NNE			4		6			0	0		Dr. H. Möhl.
Emden			30.31	769.8	65.8	18.8	76	N			3		10			0	0		Prof. Prestel.
Frankfort on the Main			30.15	765.7	84.6	29.2	24	E			2		0			0	0		Physical Society.
Friedrichshafen			30.17	766.4	73.8	23.2	73	SSW			3		2			0	0		M. Wilhelm.
Hamburg			30.17	766.2	72.9	22.7	59	SW			1		48			0	0		Captain F. Hegemann
Kiel			30.13	765.3	72.3	22.4	58	W			2		10			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			30.07	763.8	75.2	24.0	53	NE			2		4			0	0		Prof. E. Luther.
Köslin			30.13	765.2	72.1	22.3		NW			4		1			0	0		H. Müller.
Leipsic			30.17	766.2	74.1	23.4	41	NW			3		1			0	0		Prof. Bruhns.
Memel			30.10	764.4	67.3	19.6	85	NW			2		1k			0	0		Reinbrecht & Skalweit.
Münster			30.17	766.2	85.1	29.5	67	SW			2		7			0	0		Prof. E. Heis.
Neufahrwasser			30.13	765.2	65.1	18.4	86	N			2		8	NNE		0	0		A. Lothes.
Posen			30.11	764.8	75.2	24.0	52	NW			1		1			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.15	765.7	84.7	29.3	34	NE			1		1			0	0		Dr. Schur.
Stuttgart			30.13	765.2	82.4	28.0	37	N			2		0			0	0		Prof. Schoder.
Thorn			30.06	763.5	83.8	28.8	35	E			2		5			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.11	764.9	87.4	30.8	29	WNW			4		2			0	0		Prof. Flesch.
Wustrow, Naval School			30.25	768.3	68.0	20.0	66	WNW			2		8			0	0		E. F. Schütz

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	83.3	28.5		NE											

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	763.3	81.9	27.7	42	Calm	0	0			10			0	0		
Padua			30.07	763.6	80.6	27.0	49	NW	1.8	0.8			3			0	0		
Vicenza			30.07	763.6	82.8	28.2	51	SSW	3.1	1.4			1			0	0		
Verona			30.07	763.6	88.2	31.2	28	W			1		0			0	0		
Bergamo								SW			2		3			0	0		
Domodossola	29.07	738.3	30.05	763.2	82.0	27.8	57	S			6		1			0	0		
Milan			30.08	763.9	87.6	30.9	53	SW			2		1	W		0	0		
Pavia			30.08	764.0	84.2	29.0	40	NE			2		0			0	0		
Moncalieri			30.10	764.6	81.9	27.7	51	SSW	0.7	0.3			1			0	0		
Mondovi	28.25	717.6	30.07	763.6	79.9	26.6	47	NNW			4		0			0	0		
Porto Maurizio			30.16	766.1	81.7	27.6	62	SW			2		1			0	0		
Genoa			30.11	764.9	83.3	28.5	53	SW	4.3	1.9			0			0	0		
Piacenza			30.10	764.4	82.0	27.8	38	N	3.8	1.7			0			0	0		
Parma			30.07	763.8	84.4	29.1	45	NW			2		1			0	0		
Bologna			30.10	764.4	86.7	30.4	43	WNW			1		2	N		0	0		
Florence			30.10	764.5	88.7	31.5	24	E			2		4			0	0		
Leghorn			30.09	764.3	84.6	29.2	43	W	3.8	1.7			0			0	0		
Siena	28.91	734.3	30.06	763.5	83.8	28.8	30	NNE	2.5	1.1			4	NE		0	0		
Urbino	28.63	727.3	30.11	765.5	75.9	24.4	43	NE			1		3			0	0		
Ancona			30.13	765.3	81.3	27.4	48	NW			4		1			0	0		
Grosseto			30.10	764.6	88.5	31.4	26	NNE			4		2	SE		0	0		
Rome			30.07	763.7	84.7	29.3	44	SW	4.3	1.9			2	NE		0	0		
Naples, O. U.			30.07	763.8	85.6	29.8	38	SSW			2		1	NW		0	0		
Lecce			30.06	763.4	80.6	27.0	38	ENE	11.2	5.0			5	NW		0	0		
Cosenza			30.06	763.4	82.4	28.0	69	SE	5.6	2.5			8			0	0		
Riposto, (Sicily)			29.92	760.0	85.3	29.6	51	NW			2		8			0.882	22.4	Showery	
Palermo			29.99	761.8	84.2	29.0	52	N	5.6	2.5			4			0	0		
Caltanissetta	28.06	712.8	29.91	759.8	81.9	27.7	30	W			6		2			0	0		
Sub-Series.																			
Naples, S. R.			30.08	764.1	82.8	28.2	30	N	1.8	0.8			2			0	0		Prof. F. Brioschi.
Pesaro			30.17	766.4	78.3	25.7	54	N	13.0	5.81			5c	N		0	0		L. Guidi.

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			30.28	769.2	70.2	21.2		NNE			4								
Groningen			30.16	766.1	66.4	19.1		NNW			2								
Helder			30.24	768.1	63.3	17.4		N			4								
Utrecht			30.19	766.9	70.7	21.5	65	N			4		5					Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	763.3	56.5	13.6	60	W	11.6	5.2			5			0.256	6.5		
Brono			29.89	759.1	53.2	11.8	74	S	11	5			10			0.079	2.0		
Christiania			29.92	759.9	67.8	19.9	26	WNW	17.4	7.8			3			0.039	1.0		
Tromsö			29.69	754.2	59.9	15.5		NE	2	1			5			0.453	11.5		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	767.1	75.0	23.9	75	S	6.5	2.92			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.99	761.7	93.2	34.0	20	ESE	10.6	4.75			4	SSW		0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.09	764.3	75.6	24.2	57	SW	8.1	3.60			1			0	0		Capt. D. A. da Cunha.
Lisbon			30.00	762.1	82.4	28.0	47	S	12.5	5.6			1			0	0		The Observatory.

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

RUSSIAN SERIES.

Furnished by 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			30.02	762.6	71.6	22.0	72	SW	4	2			4						Astronomical Obs.
Wilna			30.02	762.6	75.0	23.9	35	NW	2	1			4						Astronomical Obs.
Dorpat			30.07	763.6	75.6	24.2	31	ESE	4	2			2						Physical Cabinet.
St. Petersburg			30.06	763.5	73.2	22.9	40	ENE	4	2			2						Central Physical Obs.
Kuopio			30.00	762.0	68.4	20.2	73	SW	18	8			2						Ch. Forsten.
Kieff			29.87	758.6	70.5	21.4	64	NW	11	5			10						Physical Cabinet.
Nikolaiev			29.97	761.2	77.4	25.2	55	NW	11	5			7						Kurdakof.
Kertch			29.99	761.7	80.2	26.8	60	Calm	0	0			9						Lagorio.
Moscow			29.81	757.1	68.9	20.5	83	S	11	5			10						Meteorological Obs.
Lugan			29.78	756.3	75.2	24.0	64	WSW	34	15			4						Meteorological Obs.
Archangel			30.07	764.7	75.2	24.0	88	Calm	0	0			3						Ogorodnikof.
Tiflis	28.45	722.7	29.76	755.9	99.1	37.3	21	S	13	6			0						Physical Observatory.
Astrakhan			29.90	759.4	87.1	30.6	45	SE	13	6			0						Sebastianof.
Kasan			29.92	760.0	84.2	29.0	54	SE	13	6			7						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	29.22	742.1	30.13	765.2	73.4	23.0	44	Calm	0	0			6						Meteorological Obs.
Nukuss			29.89	759.3	91.9	33.3	30	NNE	9	4			0						
Kasaly																			Robrof.
Tashkend																			Michelson.
Barnaul			29.85	758.2	67.1	19.5	55	NW	4	2			9						Meteorological Obs.
Yeniselsk			29.60	751.7	61.2	16.2	90	NW	2	1			9					Raining	Marks.
Irkutsk																			Usoizef.
Oorga																			Mossin.
Peking, (China)			29.91	759.6	79.2	26.2	81	Calm	0	0			5						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.74	755.3	64.8	18.2	100	Calm	0	0			10			Blank	Blank		
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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 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			30.02	762.4	89.8	32.1	39	SE	3.7	1.67		0	4			0	0	Cloudy	Royal Observatory.
San Fernando			29.97	761.3	90.9	32.7	43	ESE	17.7	7.9		0	0			0	0		The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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			30.01	762.3	57.2	14.0	90	S			2		10			0	0		
Umea			29.95	760.8	56.8	13.8	92	SW			4		10			0	0		
Hernosand			29.86	758.4	61.2	16.2	81	S			4		8			0.020	0.5		
Stockholm			29.98	761.5	70.3	21.3	65	S			4		3			0	0		
Wisby			30.10	764.6	69.4	20.8	68	W			4		0			0	0		
SUB-SERIES.																			
Upsala			29.95	760.7	72.9	22.7	60	S	14.8	6.6			5	WSW	SW	0.002	0.01		Dr. Hildebrandsson.

NOTE.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall 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	30.13	765.3	79.9	26.6	47	N			3		0			0	0	Clear	The Observatory.
Zurich	28.60	726.3	30.14	765.5	83.1	28.4	35	NE			1		1			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +3.1 mm; Thermometer, +4.5 cent.; Relative Humidity, —7 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and Professor 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	762.0	79.7	26.5	57	ENE	15	6.5			6		NE	0	0		
Fao, (Persian Gulf)																			
Salonica			29.99	761.8	91.8	33.2		W			1		2						
Valona			30.09	764.2	77.9	25.5		NW			1		2						
Varna			30.08	764.0	69.8	21.0		E			2		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			29.93	760.3	84.9	29.4	60	NW			2		0					Clear	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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

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			30.03	762.7	82.0	27.8	62	SW	1	0.4		0	0			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.19	766.8	79	26.1		Calm	0	0		0	0			0	0	Clear	W. R. Bigg.
*Chatham, N. B			30.07	763.8	75	23.9	68	SW	6	2.7		0	0			0	0	Clear	G. A. Blair.
Charlottetown P. E. Island.			30.12	765.0	72	22.2	71	W	6	2.7		0	0			0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			30.16	766.1	79.7	26.5	62	S			1	0	0			0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			30.08	764.0	70.5	21.4	80	NW			1					0	0	Clear	H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			30.17	766.3	72.0	22.2	77	W	3	1.3		0	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.60	751.8	58	14.4	98	NW	8	3.6		5k	5n	NW	NW	0.480	12.19	Light rain	James Stewart.
Goderich, Ontario			30.12	765 0	75.9	24.4	63	Calm			0	2c	1s	SW		0	0	Dry	H. J. Strang, M. A.
Granton, Ontario	29.07	738.4	30.14	765.3	68	20.0		Calm			0	0	0			0	0	Clear	James Grant.
*Halifax, N. S.			30.14	765.5	76	24.4	69	NW	1	0 4		Haze	Haze			0	0	Hazy	F. Allison, M. A.
*Kingston, Ontario			30.21	767.3	74	23.3	90	Calm	0	0		0	0			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			30.05	763.3	78.8	26.0	64	W	6	2.7		0	0			0	0	Fair	C. H. Rigby.
*Montreal, Quebec			30.17	766.3	75	23.9	73	SW	4	1.8		0	Sm'e			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.19	766.8	69	20.6	70	E	2	0.9		0	Sm e		E	0	0	Smoky	J. B. Haney.
*Parry Sound, Ontario			30.14	765.5	71	21.7	72	S	6	2.7		0	0			0	0	Clear	Rev. R. Mosley.
Port Dover, Ontario			30.15	765.8	66	18.9	79	NW	4	1.8		8ck	0	NW		0	0	Fair	H. Morgan.
Port Hastings N. S.			30.11	764.8	76.1	24.5		Calm	0	0						0	0	Fine	Peter Grant.
Port Stanley, Ontario			29.14	765.5	62	16.7	94	N	4	1.8		8ck	0	W		0	0	Cloudy	M. Payne.
*Quebec, Quebec			30.19	766.8	74	23.3	86	Calm	0	0		0	0			0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.			30.19	766.8	66	18.9	71	Calm	0	0		0	0			0	0	Hazy	G. Murdoch, C. E.
*Saugeen, Ontario			30.10	764.5	69	20.6	71	SE	1	0.4		5ks	0			0	0	Fair	K. Stewart.
Stayner, Ontario			30.13	765.3	66	18.9	78	Calm	0	0		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario	28.88	733.5	30.13	765.3	63.4	17.4	88	Calm	0	0		5cs	0	SW		0	0	Fine	C. J. Macgregor, M. A.
*Sydney, C. B			30.09	764.3	80	26.7	70	SW	5	2.2		0	0			0	0	Clear	T. C. Hill.
*Toronto, Ontario			30.15	765.8	72	22.2	73	NE	3	1.3		Haze	2ks			0	0	Fair	Magnetic Observatory.
Woodstock, Ontario			30.15	765.8	65.7	18.7	85	E	1	0.4		6cs	0			0	0	Fine	J. Montgomery
Sub-Series.																			
St. Johns, Newfoundland			30.06	763.5	79	26.1	37	W				0	0			0	0	Clear	John Delaney.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.	.....	.....	30.20	767.1	74	23.3	71	Calm	0	0	.....	0	Haze	.....	.....	0	0	Hazy	
Alpena, Mich.	.....	.....	30.01	763.0	69	20.6	75	SE	1	0.4	.....	2ck	0	S	.....	0	0	Fair	
Atlantic City, N. J.	.....	.....	30.19	766.8	76	24.4	86	E	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.17	766.3	78	25.6	82	SE	2	0.9	.....	2c	0	.....	.....	0	0	Fair	
Baltimore, Md.	.....	.....	30.20	767.1	78	25.6	82	NE	8	3.6	.....	2ck	8s	.....	E	0	0	Cloudy	
Barnegat, N. J.	.....	.....	30.19	766.8	77	25.0	82	E	10	4.5	.....	0	5s	.....	E	0	0	Fair	
Bismarck, Dakota	28.11	714.0	29.73	755.1	49	9.4	85	NW	22	9.8	.....	2c	8s	SE	NW	0.27	6.9	Cloudy	
Boston, Mass.	.....	.....	30.19	766.8	75	23.9	64	SW	2	0.9	.....	.....	Fog	.....	.....	0	0	Foggy	
Breckenridge, Minn.	.....	.....	29.72	754.9	54	12.2	86	W	16	7.2	.....	.....	10n	.....	W	0.37	9.4	Light rain	
Buffalo, N. Y.	.....	.....	30.11	764.8	75.5	24.2	64	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Burlington, Vt.	.....	.....	30.20	767.1	71	21.7	71	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Smoky	
Cairo, Ill.	.....	.....	30.01	762.2	74	23.3	85	E	10	4.5	.....	.....	10s	.....	.....	0	0	Cloudy	
Cape Hatteras, N. C.	.....	.....	30.11	764.8	77	25.0	90	W	3	1.3	.....	.....	10n	.....	.....	Inap.	Inap.	Light rain	
Cape Henry, Va.	.....	.....	30.14	765.5	81	27.2	83	Calm	0	0	.....	5c,k	0	.....	.....	Inap.	Inap.	Fair	
Cape Lookout, N. C.	.....	.....	30.20	767.1	79	26.1	86	SE	3	1.3	.....	5ck	2ks	SE	SE	0	0	Fair	
Cape May, N. J.	.....	.....	30.18	766.6	78	25.6	82	E	12	5.4	.....	1k	Haze	.....	.....	0	0	Fair	
Charleston, S. C.	.....	.....	30.18	766.6	82	27.8	78	SW	1	0.4	.....	0	Haze	.....	.....	0.23	5.8	Clear	
Cheyenne, Wyoming	24.10	612.1	30.04	763.0	36	2.2	80	NW	2	0.9	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Chicago, Ill.	.....	.....	29.98	761.5	75	23.9	76	SW	6	2.7	.....	0	0	.....	.....	0.04	0.8	Clear	
Cincinnati, Ohio	.....	.....	30.04	763.0	77	25.0	82	E	2	0.9	.....	.....	10ks	.....	.....	0.08	2.0	Cloudy	
Cleveland, Ohio	.....	.....	30.12	765.0	66.8	19.3	78	E	4	1.8	.....	8c	0	W	.....	0	0	Fair	
Corsicana, Tex.	.....	.....	29.77	756.1	74	23.3	95	SE	8	3.6	.....	.....	10n	.....	.....	0.32	8.1	Light rain	
Davenport, Iowa	.....	.....	29.92	760.0	73	22.8	81	S	8	3.6	.....	7ck	5ks	S	S	0.07	1.8	Cloudy	
Denison, Tex.	.....	.....	29.82	757.4	74	23.3	90	SE	4	1.8	.....	.....	10n	.....	.....	0.19	4.8	Light rain	
Denver, Col.	24.87	631.7	30.09	764.3	47	8.3	55	S	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.06	763.5	72	22.2	80	S	1	0.4	.....	5cs	0	.....	.....	0	0	Fair	
Dodge City, Kan.	27.30	693.4	29.54	750.3	56	13.3	93	NW	6	2.7	.....	.....	10s	.....	NW	Inap.	Inap	Cloudy	
Dubuque, Iowa	.....	.....	29.88	758.9	73	22.8	85	S	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Duluth, Minn.	.....	.....	29.67	753.6	69	20.6	84	NE	3	1.3	.....	10k	0	SW	.....	0	0	Cloudy	
Eastport, Me.	.....	.....	30.16	766.1	73	22.8	63	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Erie, Pa.	.....	.....	30.10	764.5	76	24.4	72	SE	4	1.8	.....	7c	Sm'e	.....	.....	0	0	Fair	
Escanaba, Mich.	.....	.....	29.91	759.7	72	22.2	85	S	20	8.9	.....	8k	0	S	.....	0	0	Fair	
Fort Gibson, Indian Ter.	.....	.....	29.82	757.4	75	23.9	81	NE	8	3.6	.....	.....	10n	.....	NE	Inap	Inap.	Light rain	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.61	726.7	29.66	753.4	73	22.8	85	S	4	1.8	.....	.....	10s	.....	S	0.03	0.8	Threatening	
Fort Sully, Dakota	28.25	717.5	29.88	758.9	53	11.7	72	NW	5	2.2	.....	10k	0	.....	.....	0.30	7.6	Cloudy	
Galveston, Tex.	.....	.....	29.84	757.9	83	28.3	70	S	14	6.3	.....	5cs	5ks	.....	S	0.69	17.5	Cloudy	
Grand Haven, Mich.	.....	.....	30.00	762.0	75	23.9	81	S	11	4.9	.....	5k	0	SW	.....	0	0	Fair	
Indianapolis, Ind.	.....	.....	30.04	763.0	75	23.9	85	SE	4	1.8	.....	2cs	8s	.....	.....	Inap.	Inap.	Cloudy	
Indianola, Tex.	.....	.....	29.81	757.2	81	27.2	82	S	14	6.3	.....	.....	8s	.....	S	0.01	0.3	Cloudy	
Jacksonville, Fla.	.....	.....	30.15	765.8	82	27.8	70	SE	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Keokuk, Iowa	.....	.....	29.85	758.2	72	22.2	85	SE	7	3.1	.....	5k	2s	S	S	0.06	1.5	Cloudy	
Key West, Fla.	.....	.....	30.02	762.5	78.5	25.8	86	SE	13	5.8	.....	.....	8s,n	.....	E, SE	0.13	3.3	Threatening	
Kittyhawk, N. C.	.....	.....	30.19	766.8	79	26.1	86	E	2	0.9	.....	2c	7s	N	.....	0	0	Cloudy	
Knoxville, Tenn.	.....	.....	30.16	766.1	69	20.6	95	SE	2	0.9	.....	.....	Fog	.....	.....	0.01	0.3	Dense fog	
La Crosse, Wis.	.....	.....	29.82	757.4	75	23.9	85	S	14	6.3	.....	.....	10s	.....	S	0	0	Threatening	
Leavenworth, Kan.	.....	.....	29.81	757.2	73	22.8	85	S	1	0.4	.....	.....	10s	.....	SW	0.04	1.0	Threatening	
Louisville, Ky.	.....	.....	30.06	763.5	78	25.6	78	SE	3	1.3	.....	8c	0	.....	.....	0	0	Fair	
Lynchburg, Va.	.....	.....	30.16	766.1	78	25.6	78	NE	2	0.9	.....	10k	0	W	.....	0.01	0.3	Cloudy	
Malone, N. Y.	.....	.....	30.15	765.8	72	22.2	58	S	8	3.6	.....	0	Haze	.....	NW	0	0	Fair	
Marquette, Mich.	.....	.....	29.85	758.2	72	22.2	80	SE	9	4.0	.....	.....	10s	.....	S	0	0	Cloudy	
Memphis, Tenn.	.....	.....	29.99	761.7	72	22.2	95	SE	8	3.6	.....	.....	10s	.....	SE	0.58	14.7	Cloudy	
Milwaukee, Wis.	.....	.....	29.98	761.5	72	22.2	85	SW	14	6.3	.....	0	Fog	.....	.....	0	0	Clear	
Mobile, Ala.	.....	.....	30.03	762.7	79	26.1	86	SE	7	3.1	.....	5c	5s	.....	.....	0.12	3.0	Cloudy	
Montgomery, Ala.	.....	.....	30.09	764.3	76	24.4	84	E	7	3.1	.....	10c	Haze	.....	.....	0.02	0.5	Cloudy	
Morgantown, W. Va.	29.11	739.4	30.13	765.3	71	21.7	80	Calm	0	0	.....	8c	0	W	.....	0	0	Fair	
Mt. Washington, N. H.	24.18	614.2	30.54	775.7	60	15.6	34	E	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Nashville, Tenn.	.....	.....	30.05	763.3	75	23.9	81	E	2	0.9	.....	8c	0	.....	.....	0.09	2.3	Fair	
New Haven, Conn.	.....	.....	30.23	767.8	78	25.6	70	Calm	0	0	.....	Haze	Sm'e	.....	.....	0	0	Clear	
New London, Conn.	.....	.....	30.22	767.6	75	23.9	72	N	1	0.4	.....	0	0	.....	.....	0	0	Clear	
New Orleans, La.	.....	.....	29.97	761.2	76	24.4	88	S	10	4.5	.....	.....	9n	.....	S	2.07	52.6	Light rain	
Newport, R. I.	.....	.....	30.21	767.3	72	22.2	67	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
New York, N. Y.	.....	.....	30.22	767.6	75	23.9	68	NE	7	3.1	.....	Haze	Sm'e	.....	NE	0	0	Clear	
Norfolk, Va.	.....	.....	30.18	766.6	82	27.8	74	W	1	0.4	.....	8ck	0	.....	.....	0	0	Fair	
North Platte, Neb.	27.13	689.1	29.69	754.1	50	10.0	64	NW	20	8.9	.....	0	8ks	.....	W	1.40	35.6	Cloudy	
Omaha, Neb.	28.73	729.7	29.74	755.4	73	22.8	85	S	7	3.1	.....	.....	10s	.....	SW	0	0	Cloudy	
Oswego, N. Y.	.....	.....	30.18	766.6	72.5	22.5	75	SE	6	2.7	.....	Haze	Haze	.....	.....	0	0	Hazy	
Pembina, Dakota	.....	.....	29.58	751.3	55	12.8	93	NW	8	3.6	.....	.....	10s	.....	NW	2.14	54.4	Cloudy	
Philadelphia, Penn.	.....	.....	30.20	767.1	71	21.7	90	E	6	2.7	.....	0	5s	.....	.....	0	0	Fair	
Pike's Peak, Colorado	17.85	453.4	30.06	764.5	31	— 0.6	100	W	22	9.8	.....	.....	Fog	.....	W	0.32	8.1	Foggy	
Pittsburgh, Penn.	.....	.....	30.14	765.5	66	18.9	90	N	2	0.9	.....	.....	Fog	.....	.....	0	0	Foggy	
Port Huron, Mich.	.....	.....	30.09	764.3	68	20.0	84	SE	2	0.9	.....	8c	2s	S	.....	0	0	Cloudy	
Portland, Me.	.....	.....	30.19	766.8	72	22.2	71	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	
Portland, Oregon	.....	.....	29.98	761.5	59	15.0	70	S	8	3.6	.....	.....	10s	.....	S	0	0	Cloudy	
Punta Rassa, Fla.	.....	.....	30.05	763.3	80.0	26.7	77	E	14	6.3	.....	8cs	0	E	.....	Inap.	Inap.	Fair	
Rochester, N. Y.	.....	.....	30.14	765.5	73	22.8	67	SW	4	1.8	.....	Haze	Haze	.....	.....	0	0	Hazy	
Salt Lake City, Utah	25.70	652.8	30.02	762.5	51	10.6	27	E	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	30.21	767.3	75	23.9	81	NE	5	2.2	.....	0	0	.....	.....	0	0	Clear	
San Diego, Cal.	.....	.....	29.84	757.9	60	18.9	78	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	29.80	756.9	57	13.9	81	Calm	0	0	.....	Haze	Haze	.....	.....	0	0	Hazy	
Santa Fé, N. M.	23.23	590.0	29.77	756.1	54	12.2	86	NE	6	2.7	.....	0	0	.....	.....	0.07	1.8	Clear	
Savannah, Ga.	.....	.....	30.16	766.1	84	28.9	75	Calm	0	0	.....	Haze	Sm'e	.....	.....	0.12	3.0	Smoky	
Shreveport, La.	.....	.....	29.94	760.2	74	23.3	95	S	5	2.2	.....	.....	10s	.....	.....	0.34	8.6	Cloudy	
Smithville, N. C.	.....	.....	30.19	766.8	78	25.6	82	N	2	0.9	.....	.....	10ks	.....	.....	0	0	Cloudy	
Springfield, Mass.	.....	.....	30.21	767.3	73.5	23.1	76	S	4	1.8	.....	0	Fog	.....	.....	0	0	Fair	
St. Louis, Mo.	.....	.....	29.98	761.5	73	22.8	85	S	8	3.6	.....	.....	10s	.....	.....	0.14	3.6	Cloudy	
St. Marks, Fla.	.....	.....	30.09	764.3	79	26.1	82	SE	12	5.4	.....	0	2ks	.....	SE	0.04	1.0	Fair	
St. Paul, Minn.	.....	.....	29.97	753.6	74	23.3	76	SE	20	8.9	.....	2c	8s	S	S	0	0	Cloudy	
St. Paul's Island, Alaska	.....	.....	29.83	757.7	44	6.7	92	SE	2	0.9	.....	.....	Fog	.....	.....	0	0	Foggy	
Thatcher's Island, Mass.	.....	.....	30.20	767.1	70	21.1	84	SW	2	0.9	.....	0	0	.....	.....	0	0	Hazy	
Toledo, Ohio	.....	.....	30.05	763.3	74	23.3	72	S	2	0.9	.....	5ck	Haze	SW	.....	0	0	Fair	
Tucson, Arizona	27.50	693.8	30.10	764.5	70	21.1	.....	N	.....	.....	.....	0	Haze	.....	.....	0.76	19.3	Clear	
Tybee Island, Ga.	.....	.....	30.16	766.1	83	28.3	70	S	4	1.8	.....	2k	Haze	S	.....	0	0	Fair	
Vicksburg, Miss.	.....	.....	29.97	761.2	74.5	23.6	95	SE	2	0.9	.....	.....	10s	.....	S	0.39	9.9	Cloudy	
Virginia City, M. T.	24.27	616.4	29.75	755.6	41	5.0	65	Calm	0	0	.....	10k	0	W	.....	0.52	13.2	Cloudy	
Washington, D. C.	.....	.....	30.19	766.8	76	24.4	88	NE	3	1.3	.....	.....	10s	.....	NE	0	0	Cloudy	
Wilmington, N. C.	.....	.....	30.19	766.8	76	24.4	99	NW	8	3.6	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Wood's Holl, Mass.	.....	.....	30.22	767.6	73	22.8	63	N	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
Yankton, Dakota	28.62	726.9	29.88	758.9	53	11.7	86	NW	15	6.7			10s		NW	0.60	15.2	Cloudy	
Yuma, Arizona			29.72	754.9	87	30.6		E				0	0			0	0	Clear	
Sub Series.																			
Kingston, Jamaica, W. I.																0.37	9.4		James Gall.
St. Georges, Bermudas			30.21	767.3	81.5	27.5	77	Calm	0	0			8ks			1.08	27.4	Hazy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa W. I.																			
Paramaribo, D. Guiana S. A.			29.95	760.7	81	27.2	78	E			2	8ks	8ks	E		0.230	5.84	Cloudy	C. J. Hering.
Batavia, Dutch Guiana S. A.	30.03	762.7			85.6	29.8		N								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.18	639.6			65.0	18.3	85	SE	1	0.4		1cs	2ks			Inap.	Inap.	Fair	Thomas Herran.
York Factory, B. A.			29.75	755.6	46	7.8	96	S	28	12.5			10s			0	0		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.			30.04	763.0	76	24.4		NE			2					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.

Marine Series	True course towards.	Hourly rate in knots.	Barometer. Inches.	Barometer. Millimeters	Temperature. Fahrenheit.	Temperature. Centigrade.	Relative Humidity.	Wind. Direction.	Wind. Velocity.	Wind. Force.	Clouds. Amount.	Clouds. Direction.	Rain-fall.	State of ocean.	Direction of swell from—	Weather.	Observer
Schooner Adelie Fuller. N. 38° 50′ W. 74° 0′	S by E	3.2	30.18	766.6	80	26.7		E		3	2k	Haze	ENE	Short sea.		Clear	Capt. James Jorgensen.
Steamer Hibernian. N 51° 28′, W. 13° 20′.	N 88 W	10	30.33	770.4	58	14.4		NW to SW		6		.k	ENE	Rough		Clear	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.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 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, 4,262.2 ft., or 1,299.2 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, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			30.09	764.3	85.1	29.5	65	N			2		3			0	0	Fair	Charnot.
Algiers			30.11	761.8	82.4	28.0	75	N			1		3			0	0	Fair	Peter.
La Calle			30.12	765.1	78.3	25.7	73	NE			4		1			0	0	Clear	Kunts.
Tunis			30.16	766.1	87.3	30.7	40	E			3		5			0	0	Fair	Jacques.
Sfax			30.22	767.5	85.3	29.6	47	N			4		1			0	0	Clear	Chauvey.
Sousa			30.10	764.6	89.6	32.0	19	SE			1		3			0	0	Fair	Millot.
Tebessa			30.14	765.6	87.8	31.0		NNE			3		3			0	0	Fair	Colin.
Gerlville			30.15	765.8	89.6	32.0	22	S			3		3			0	0	Fair	Lemaillot.
Laghouat			30.17	766.3	96.8	36.0		S			3		2			0	0	Clear	Guyot.
Biskra			30.17	766.2	93.6	34.2	39	Calm			0		0			0.138	3.5	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			30.15	765.8	77.9	25.5	48	NE			2		4			0	0		Prof. Ivan Stosir.
Cracow, I. R. Observatory			30.19	766.8	71.2	21.8	74	W			2		8			0.449	11.4		Dr. Wierzbiski.
Eperies			30.09	764.2	77.7	25.4	49	N			3		9cs,s		S	0	0		Julius Mikolik.
Gratz	28.98	736.2	30.13	765.4	76.1	24.5	51	SW			2		2			0	0		Andreas Rospini.
Hermannstadt	28.64	727.2	29.99	761.8	73.6	23.1	57	NW			3		6			0.219	5.55		Prof. Reissenberger.
Kremsmünster	28.88	733.5	30.18	766.5	73.8	23.2	46	Calm			0		3			0	0		Prof. C. Wagner.
Lemberg			29.89	759.3	75.6	24.2	71	N			4		2			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.15	765.8	80.8	27.1	53	SW			1		9cs			0	0		I.R. Hydrographic Office
Szegedin			30.10	762.3	79.2	26.2	41	Calm			0		3			0	0		Karl Stancel.
Trieste			30.17	766.2	81.0	27.7	53	Calm			0		2ks			0	0		Prof. V. Farolfi.
Vienna			30.14	765.5	79.5	26.4	40	NNW			1		2			0	0		I. R. Central Met. Obs'y

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.0 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.28	769.2	70.3	21.5	50	E			0	1	0	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			30.15	765.8	71.0	21.7		SSW	22	9.8			2			0	0	Blue sky	William Boswell.
Ardrossan			30.27	768.8	64	17.8		SW			3							Blue sky	William McNeil.
Armagh, Observatory			30.29	769.4	67.3	19.6		SSW	5	2.2			0					Blue sky	S. Cad. for Dr. Robinson.
Birr Castle. (Parsonstown)			30.27	768.8	70.6	21.4		SW			1		0					Blue sky	J. Dreyer.
Bradford			30.29	769.4	72.2	22.3		W			0		0			0	0	Blue sky	J. McLandsborough.
Bringetown, (Barbados)			30.02	762.5	83.0	28.3		E			2		5					*D. clouds	Sergt. J. F. Halanen, R.H.C.
Cambridge, Observatory.			30.43	770.4	76.0	24.4		ESE			1		1						H. Todd.
Cardington			30.36	771.1	75.0	23.9		SE			1		3					*D. clouds	John McLaren.
Carlisle			30.26	768.6	70.4	21.3		N			1		0			0	0	Blue sky	T. Bell, for J. Carmichael.
Chatham, School M. E			30.35	771.1	69.5	20.8		NE			2		4					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.91	734.3	30.38	771.6	70.2	21.2		E			4		0					Blue sky	R. E. Power.
Donaghadee			30.27	768.8	63	17.2		SSE			2		0					Blue sky	J. Mac Gowan.
Dover			30.33	770.4	65	18.3		ENE			3		2					¼ clouded	J. Costello.
Eccles (near Manchester.)			30.31	769.9	77.5	25.3		SE	2.6	1.2			0					Blue sky	Thomas Mackereth.
Falmouth, Observatory			30.29	769.4	66.9	19.4		E			2		0					Hazy	The Staff.
Fort Napier, (Natal)	27.96	710.2	30.25	767.1	61.0	16.1		E			2		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.95	761.0	82	27.8		W			1		5					*D. clouds	
Galway, Queen's College			30.29	767.1	70	21.1		S			2		2					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.01	763.0	82.2	27.9		E			2		7					*D. clouds	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			30.25	768.3	65.1	18.4		SW			2		1					Fine	Lewis Stuart.
Great Yarmouth			30.37	771.4	66	18.9		ESE			1		0					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			30.35	770.9	73.9	23.3		SE			1		5					*D. clouds	The Staff, for G. B. Airy
Guernsey			30.25	768.6	68	20.0		NE			1		0					Blue sky	Dr. S. E. Hoskins.
Helston			30.27	768.8	69	20.6		E			6		0			0	0	Clear	M. P. Moyle.
Holyhead			30.31	769.9	68	20.0		SSW			2		0					Blue sky	John Tinston.
Kew, Observatory			30.33	770.4	74.0	23.3		E	12	5.4			3					Hazy	The Staff.
Kingstown			30.31	769.9	64	17.8		ESE			4		0					Blue sky	George Mitchell, F.G.S.
Leicester Museum			30.15	765.9	74.0	23.3		SE			1		2					*D. clouds	Wm. J. Harrison, A.M.C.
Malta. Mediterranean			30.06	763.5	82.2	27.9		NE			1		2k					*D. clouds	Corp'l F. Fraser, A.M.C.
Nairn			30.11	764.8	62	16.7		WSW			3		8					¾ clouded	W. D. Penny.
Nassau, (Bahamas			30.17	766.3	82.4	28.0		NE			6		6					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.33	770.4	81.3	27.4		SSE			3		1c		SE	0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.31	769.9	75.1	23.9		S			2		0					Hazy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.31	769.9	74	23.3		E			1		1					Blue sky	J. Lucas.
Plymouth			30.29	769.4	72	22.2		ENE			3		0					Blue sky	John Merrifield.
Roche's Point			30.29	769.4	67	19.4		SSE			2		2					Fine	W. Kennedy.
Saint Ann's Head			30.32	770.1	66	18.9		SE			1		2					Blue sky	John C. Walker.
Saint Helier, Jersey			30.24	768.1	76.6	24.8		E			5		0					Clear	A. P. Amy.
Sandwick Manse Orkneys			30.06	763.5	62.0	16.7		WSW	18	8.0			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough			30.32	770.1	72.5	22.5		SSW			2		0					Blue sky	F. Shaw.
Scutari Cemetery Turkey			29.85	757.7	81.8	27.7		NE			2		9			Blank	Blank	Threatening	Sergt. W. H. Lyne.
Sheffield			30.32	770.1	75.2	24.0		SW			1		0			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			30.30	769.6	72.6	22.6	67	SW			1		0			0	0	Blue sky	Rev. Francis Redford
Stonyhurst, Observatory			30.31	769.9	71.7	22.1		W			1								Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			30.04	763.0	57	13.9		SW			7		8					*D. clouds	John Smith.
Strathfield Turgiss			30.49	772.1	63.0	17.2		E			1		0					Blue sky	Rev. Charles H. Griffith
Thurso			30.12	762.5	73	22.8		SW			5		4					*D. clouds	John Trotter.
Truro, Royal Institution			30.31	769.9	80	26.7		SE			3		0					Blue sky	W. Newcombe.
Valencia, Observatory			30.28	769.1	63.9	17.7		S	11	4.9			5					*D. clouds	The Staff.
Sub-Stations.																			
Calf of Man, Isle of Man					58	14.4		SW			3		0						Thomas Dawson.
Cape Good Hope, Obs'y			30.10	764.5	66.0	18.9	58	SSE	4	1.8		4	4						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			30.12	765.0	59.5	15.3	93	W			2		8kn			0.31	7.9	Cloudy	Francis Abbott F.R.A.S.
Leith, Restaurig Park			30.26	768.6	72.8	22.7		W			3					0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.18	766.6				E	12.4	5.5						0.02	0.5		C. Meldrum
Melbourne, Observatory			30.31	769.9	48.6	9.2	79	NE	2	0.9			0			0	0	Very fine	R. L. J. Ellery.
Monach Lighthouse, Hebrides			30.07	763.8	59	15.0		SW			4	0	10			0	0		J. Youngclause
North Unst, (Shetland Is.)			29.93	760.2	55	12.8		W			7		10						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. 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. 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.
Copenhagen			30.31	769.8	66.7	19.3	42	NW			2		0						
Faroe			30.35	770.9	66.9	19.4	89	W			2		1						
Godthaab, Greenland			29.82	757.5	40.8	4.9	70	NW			4		10						
Stykkisholm, Iceland			29.37	745.9	41.4	6.9	77	NW			6		8						
Thorshavn, Faröe			29.65	753.2	54.3	12.4	80	WSW			7		7						
Vestervig			30.32	770.2	62.6	17.0	74	W			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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	83.5	28.6	50	NE			1		0			0	0	Clear	Normal School.
Amiens																			Normal School.
Avignon			30.12	765.1	90.7	32.6	41	SSW			2		0			0	0	Clear	Normal School.
Bar-sur-Seine †																			C. Saillard.
Beaumette, (near Angers)			30.13	765.4	89.8	32.1	25	E	2.7	1.2					SW	0	0		Beaumette Observatory
Beauvais			30.27	768.9	76.1	24.5	32	NE			2		0			0	0	Clear	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.15	765.7	89.1	31.7	35	W			1		0			0	0	Clear	Normal School.
Bourges			30.10	764.5	91.4	33	37	NNE			2		0			0	0	Clear	Normal School.
Brest			30.14	765.6	84.7	29.3	87	NNE			2	1c				0	0		Naval Observatory.
Carcassonne			30.14	765.5	81.5	27.5	38	E			1		1		W	0	0	Clear	Normal School.
Caen																			Normal School.
Chartres			30.35	771.0	85.6	29.8	64	NW			2		0			0	0	Clear	Normal School.
Châlons-sur-Marne			30.22	767.5	82.8	28.2	50	NNW			2		0			0	0	Clear	Normal School.
Clermont			30.08	764.0	82.9	28.3	34	NE			2		0			0	0	Clear	Puy de Dome Obs'y.
Commercy			30.24	768.1	81.0	27.2	22	NW			2		2ks		NW	0	0	Slightly cl'dy	Normal School.
Commune de Greasque*			30.24	768.0	87.3	30.7	37	W			2		2		W	0	0		M. Kina.
Grenoble			30.10	764.5	77.5	25.3	54	N			2		2		SSW	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon					91.6	34.8	25	NE			2		2		NE	0	0	Slightly cl'dy	Normal School.
Le Mans			30.19	766.9	86.2	30.1	35	NE			2		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			30.07	763.8	85.8	29.9	32	NE			2		0			0	0	Clear	Normal School.
Mâcon			30.23	767.8	86.4	30.2	48	NE			1		0			0	0	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			30.13	765.3	78.8	26.0	46	NNE			2		1		NNE	0	0	Clear	Normal School.
Nismes			30.13	765.2	66.6	18.9	41	NE			4		5		W	0	0	Partly cloudy	Normal School.
Orleans																			Normal School.
Paris, Observatory			30.23	767.8	80.2	26.8	27	NE			2	1c				0	0	Clear	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			30.12	765.0	95.4	35.2	25	ESE			4		2		W	0	0	¼ covered	Naval Observatory.
Rouen			30.25	768.3	83.5	28.6	34	E			1		0			0	0	Clear	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School.
Villefranche			30.07	763.8	89.6	32	52	N			2		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.86	758.5	81.0	27.2													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.17	774.0	67.1	19.5	78	SSW	11.2	5.00			10		S	0.004	0.1		—. Faïguère.
Montsouris, Paris			30.24	768.0	81.0	27.2	28	NNE			3		1			0	0		Montsouris Observatory.
Perpignan			30.11	764.9	76.5	24.7	54	SE	7.4	3.33			1		ESE	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.57	547.8			48.0	8.9		N			2		10					Stormy	M. Baylac.
Pic du Midi, (Plantade)	22.84	580.0			53.4	11.9		N			1		9			0.650	16.5	Storm	General de Nansouty.
Saint Maur, (near Paris)			30.24	767.0	82.9	28.3	33	NE			1		0			0	0	Clear	E. Renou.
Toulouse			30.17	766.4	90.1	32.3	30	SE			1		0			0.071	1.8		Toulouse Observatory
Tours			30.18	766.6	91.4	33.0	24	ENE			2		1		E	0	0		C. Marquet.
Versailles, (near Paris)			30.25	768.3	83.1	28.4	32	NE			2		0			0	0	Very clear	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai																			H. Le Lec, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * Bouches-du-Rhône. †Observation not simultaneous.

GERMAN SERIES.

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

Stations.	Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Bamberg			30.19	766.8	82.0	27.8	31	NW			3		2	NW		0	0		Prof. T. Hoh.
Berlin			30.27	768.8	76.3	24.6	46	N			1		5			0	0		Prof. Arndt.
Breslau			30.29	769.3	77.4	25.2	48	NW			5		9			0	0		Dr. P. Neugebauer.
Carlsruhe			30.17	766.2	83.8	28.8	41	NE			2		0			0	0		A. Senz.
Cassel			30.28	769.2	79.7	26.5	56	N			4		1	NW		0	0		Dr. H. Möhl.
Emden			30.36	771.2	68.9	20.5	45	ENE			6		0			0	0		Prof. Prestel.
Frankfort on the Main			30.22	767.6	82.2	27.9	40	NNE			2		3			0	0		Physical Society.
Friedrichshafen			30.20	767.1	77.7	25.4	49	NE			4		6			0	0		M. Wilhelm.
Hamburg			30.35	770.8	68.7	20.4	45	N			2		0			0	0	Clear	Captain F. Hogemann.
Kiel			30.33	770.4	64.4	18.0	33	NE			4		0			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			30.20	767.0	69.3	20.7	54	NW			2		2			0	0		Prof. E. Luther.
Köslin			30.30	769.7	66.4	19.1		NW			2		1			0	0		H. Müller.
Leipsic			30.28	769.2	77.0	25.0	43	N			1		4			0	0		Prof. Bruhns.
Memel			30.19	766.7	65.5	18.6	70	NW			4		0			0	0		Reinbrecht & Skalweit
Münster			30.32	770.1	75.0	23.9	58	NE			5		0			0	0		Prof. E. Heis.
Neufahrwasser			30.25	768.4	67.6	19.8	68	NE			3		6			0	0		A. Lothes.
Posen			30.26	768.6	77.0	25.0	39	NW			6		3			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.20	767.0	77.5	25.3	48	Calm			0		8			0	0		Dr. Schur.
Stuttgart			30.20	767.0	80.1	26.7	36	E			1		0			0	0		Prof. Schoder.
Thorn			30.20	767.1	78.8	26.0	39	NW			1		9			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.21	767.2	76.1	24.5	51	NE			6		0			0	0		Prof. Flesch.
Wustrow, Naval School			30.13	772.8	63.5	17.5	71	N			2		7			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.95	760.7	79.7	26.5		W										Half clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	765.4	81.9	27.7	43	S	0.7	0.3			4			0	0		
Padua			30.13	765.3	82.0	27.8	53	E	3.1	1.4			7	NW		0	0		
Vicenza			30.13	765.3	80.6	27.0	60	E	2.5	1.1			5	W		0	0		
Verona			30.09	764.2	90.0	32.2	38	E			2		3			0	0		
Bergamo																0	0		
Domodossola	29.08	738.6	30.07	763.6	85.1	29.5	36	SW			6		0			0	0		
Milan			30.07	763.8	90.7	32.6	59	E			2		1	ENE		0	0		
Pavia			30.10	764.6	85.3	29.6	47	NE			1		0			0	0		
Moncalieri			30.11	764.8	83.7	28.7	47	NE	0	0			1			0	0		
Mondovi	28.25	717.6	30.09	764.3	83.1	28.4	41	NW			2		0			0	0		
Porto Maurizio			30.18	766.6	82.0	27.8	72	ESE			2		1			0	0		
Genoa			30.14	765.6	83.1	28.4	61	SW	4.3	1.9			0			0	0		
Piacenza																			
Parma			30.08	764.1	86.2	30.1	46	E			2		2			0	0		
Bologna			30.12	765.0	85.6	29.8	42	NW			1		4	W		0	0		
Florence			30.14	765.6	86.9	30.5	40	NW			2		0			0	0		
Leghorn			30.10	764.5	82.9	28.3	63	WSW	4.3	1.9			0			0	0		
Siena	28.94	735.0	30.09	764.3	85.3	29.6	32	NNW	1.3	0.6			2	W		0	0		
Urbino	28.68	728.5	30.18	766.5	80.2	26.8	46	ENE			2		3			0	0		
Ancona			30.17	766.2	83.8	28.8	57	ESE			4		2			0	0		
Grosseto			30.12	765.1	90.3	32.4	34	NNW			4		3	SE		0	0		
Rome			30.11	764.8	87.8	31.0	55	W	9.8	4.4			2			0	0		
Naples, O. U.			30.10	764.5	87.1	30.6	29	WNW			4		5	NNE		0	0		
Lecce			30.02	762.6	80.4	26.9	41	ENE	15.0	6.7			4	NE		0	0		
Cosenza			30.06	763.5	86.0	30.0	66	NW	10.5	4.7			6			0	0		
Riposto, (Sicily)			30.13	765.3	85.5	29.7	60	NNE			2		1	N		0	0		
Palermo			30.08	763.9	82.6	28.1	56	NNE	9.4	4.2			3			0	0		
Caltanissetta	28.15	715.1	30.02	762.6	79.7	26.5	30	NNW			6		0			0	0		
Sub-Series.																			
Naples, S. R			30.12	765.1	84.6	29.2	27	WSW	13.7	6.1			4	SW		0	0		Prof. F. Brioschi.
Pesaro			30.21	767.4	79.7	26.5	62	E	16.3	7.28			10c	NE		0	0		L. Guidi.

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			30.26	771.1	70.2	21.2		NE			2								
Groningen			30.31	769.9	68.0	20.0		N			1								
Helder			30.36	771.1	65.1	18.4		NE			1								
Utrecht			30.29	769.3	70.3	21.3	50	NNE			2		2					Light cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.16	766.1	61.5	16.4	85	S	20.1	9.0			6			0.059	1.5		
Brono			29.91	759.8	55.[illegible]	13.0	82	SSW	11	5			10					Light rain	
Christiania			30.14	765.5	69.1	20.6	42	SSW	8.3	3.7			7			0	0		
Tromsö			29.87	758.6	54.7	12.6		NE	2	1			7			0	0		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Angra, (Azores,)			30.30	769.7	75.7	24.3	79	S	9.0	4.03			5			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.02	762.4	97.2	36.2	26	SE	3.9	1.75			1			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.11	765.6	74.1	23.4	62	SE	4.6	2.05			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.05	763.3	84.7	29.3	46	S	3.8	1.7			0			0	0		The Observatory.

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

RUSSIAN SERIES.

Furnished by 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			30.17	766.2	70.9	21.6	65	NW	2	1			0						Astronomical Obs.
Wilna			30.09	764.3	73.9	23.3	46	NW	11	5			4						Astronomical Obs.
Dorpat			30.06	763.5	68.0	20.0	55	NW	7	3			0						Physical Cabinet.
St. Petersburg			29.97	761.1	64.6	18.1	74	WNW	18	8			4						Central Physical Obs.
Knoplo			29.87	758.8	58.3	14.6	77	WSW	18	8			10						Ch. Forsten.
Kieff			29.97	761.3	72.7	22.6	44	NNW	13	6			10						Physical Cabinet.
Nikolaiev			29.99	761.7	85.3	29.6	35	NW	7	3			5						Kurdakof.
Kertch			30.00	761.9	79.5	26.4	56	N	7	3			1						Lagorio.
Moscow			29.72	754.8	61.2	17.9	95	N	9	4			10					Light rain	Meteorological Obs.
Lugan			29.81	757.2	82.9	28.3	40	W	22	10			8						Meteorological Obs.
Archangel			29.87	758.7	75.6	24.2	90	NW	9	4			0						Ogorodnikof.
Tiflis	28.44	722.4	29.75	755.6	98.2	36.8	12	SSE	9	4			1						Physical Observatory.
Astrakhan			29.85	758.2	93.4	34.1	36	Calm	0	0			4						Sebastianoi.
Kasan			29.69	754.2	85.8	29.9	49	W	13	6			8						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.99	736.3	29.91	759.7	64.4	18.0	91	ESE	7	3			10					Light rain	Meteorological Obs.
Nukuss			29.80	756.8	92.8	33.8	34	W ?	9	4			0						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul																			Meteorological Obs.
Yeniseisk			29.91	761.8	58.1	14.5	72	Calm	0	0			9						Marks.
Irkutsk			29.66	753.3	56.5	13.6	92	NW	4	2			10					Raining	Usoze'.
Oorga																			Mossin.
Peking, (China)			29.87	758.7	78.8	26.0	79	Calm	0	0			8						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.82	757.5	68.2	20.1	96	E	7	3			1						
Nikolaievsk, on the Amoor																			

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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 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			30.07	763.6	87.1	30.6	42	SE	2.2	1.00		0	2			0.500	12.7		Royal Observatory.
San Fernando			30.07	763.6	91.4	33.0	41	ESE	20.8	9.3		0	0			0	0		The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	68.4	20.2	91	S			2		10			0	0		
Umea			29.89	759.2	59.5	15.3	61	NNW			4		9			0.051	1.3		
Hernosand			29.98	761.6	66.2	19.0	38	WNW			4		1			0.240	6.1		
Stockholm			30.10	764.5	70.5	21.4	36	SW			4		2			0	0		
Wisby			30.23	767.9	62.8	17.1	83	NW			4		0			0	0		
Sub-Series.																			
Upsala			30.10	764.4	68.9	20.5	33	SW	12.8	5.7			1		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; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall is measured at 8 a. m., local time.

SWISS SERIES.

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

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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	28.79	731.2	30.13	765.4	82.8	28.2	39	N			2		0			0	0	Clear	The Observatory.
Zurich	28.61	726.8	30.17	766.4	78.3	25.7	50	NE			1		4			0	0	Cloudy	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +3.4 mm; Thermometer, +6.1 cent.; Relative Humidity.—15 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

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

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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			29.88	759.0	80.8	27.1	57	ENE	31	15.0			8		NE	1.693	43.0		
Fao, (Persian Gulf)			29.69	754.0	104.0	40.0		NW			4		10						
Salonica			30.01	762.2	89.6	32.0		NE			1		2						
Valona			30.03	762.7	77.5	25.3		NW			2		2						
Varna			29.92	760.0	77.0	25.0		SE			3		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.85	758.3	85.3	29.6	63	NW			1		3k	NW	SE			Cloudy	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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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			30.07	763.8	82.0	27.8	71	SW	2	0.9		0	0			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.12	765.0	79	26.1		Calm	0	0		0	0			0	0	Clear	W. R. Bigg.
*Chatham, N. B.			30.13	765.3	76	24.4	74	SW	4	1.8		0	0			0	0	Clear	G. A. Blair.
Charlottetown P. E. Island			30.16	766.1	75	23.9	70	W	3	1.3		0	0			0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			30.15	765.8	81.0	27.2	64	E			1	0	0			0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			30.12	765.0	72.0	22.2	77	NW			1					0	0	Clear	H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			30.22	767.6	72.3	22.4	58	SE	2	0.9		0	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.81	757.2	52	11.1	98	S	4	1.8		2cs	2s	W	W	0.020	0.51	Fair	James Stewart.
Goderich, Ontario			30.08	764.0	78.0	25.6	74	SW			2	4k	4n	SW		0.248	6.30	Threatening	H. J. Strang, M. A.
Granton, Ontario	29.05	737.9	30.09	764.3	75	23.9		Calm			0	1cs	0			0	0	Clear	James Grant.
*Halifax, N. S.			30.19	766.8	72	22.2	73	W	4	1.8		0	0			0	0	Clear	F. Allison, M. A.
*Kingston, Ontario			30.19	766.8	77	25.0	84	S	5	2.2		0	0			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.								W	3	1.3		0	0			0	0	Fair	C. H. Rigby.
*Montreal, Quebec			30.17	766.3	73	22.8	84	S	3	1.3		0	Sm'e			0	0	Smoky	C. H. McLeod, C. E.
*Ottawa, Ontario			30.17	766.3	72	22.2	60	S	2	0.9			Sm'e		S	0	0	Smoky	J. B. Haney.
*Parry Sound, Ontario			30.11	764.8	75	23.9	75	S	7	3.1		2ck	0	S		0	0	Fair	Rev. R. Mosley.
Port Dover, Ontario			30.12	765.0	75	23.9	86	NW	7	3.1		8k	0	NW		0	0	Fair	H. Morgan.
Port Hastings, N. S.			30.15	765.8	80.3	26.8		Calm	0	0						0	0	Fine	Peter Grant.
Port Stanley, Ontario			30.12	765.0	72	22.2	95	N	1	0.4		10k	0	W		0	0	Cloudy	M. Payne.
*Quebec, Quebec			30.19	766.8	75	23.9	81	Calm	0	0		0	0			0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.			30.24	768.1	60	15.6	85	SE	3	1.3			10s			0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			30.05	763.3	76	24.4	66	SE	4	1.8			10n			0	0	Cloudy	K. Stewart.
Stayner, Ontario			30.07	763.8	70	21.1	70	Calm	0	0		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario	28.80	733.0	30.09	764.3	69.0	20.6	87	S	2	0.9		3cs	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			30.13	765.3	82	27.8	68	SW	6	2.7		8c	Sm'e			0	0	Hazy	T. C. Hill.
*Toronto, Ontario			30.13	765.3	73	22.8	82	NE	2	0.9		0	0			0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.13	765.3	70.8	21.6	88	E	1	0.4		4ck	0	SW		0.04	1.0	Fine	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			30.18	766.6	73	22.8	61	SE				5c	0			0	0	Fair	John Delaney.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.			30.22	767.6	75	23.9	64	S	1	0.4		0	Haze			0	0	Clear	
Alpena, Mich			29.92	760.0	73	22.8	85	S	2	0.9			10s		S	0	0	Cloudy	
Atlantic City, N. J			30.22	767.6	77	25.0	72	E	8	3.6		2k	0	E		0	0	Fair	
Augusta, Ga			30.20	767.1	78	25.6	82	Calm	0	0		10cs	0			0	0	Cloudy	
Baltimore, Md			30.24	768.1	75	23.9	85	NE	4	1.8			10s			0.01	0.3	Cloudy	
Barnegat, N. J			30.22	767.6	77	25.0	86	NE	5	2.2		0	2s		NE	0	0	Clear	
Bismarck, Dakota	28.02	711.7	29.60	751.8	60	15.6	59	S	7	3.1		8ck	0	W		0	0	Fair	
Boston, Mass			30.22	767.6	73	22.8	67	S	6	2.7		1k	Fog	W		0	0	Foggy	
Breckenridge, Minn			29.92	760.0	48	8.9	71	SE	8	3.6		2k	0			0.01	0.3	Clear	
Buffalo, N. Y			30.11	764.8	76.5	24.7	70	S	3	1.3		0	Sm'e			0	0	Clear	
Burlington, Vt			30.20	767.1	75	23.9	68	S	1	0.4		0	Sm'e			0	0	Smoky	
Cairo, Ill			30.10	764.5	72	22.2	95	S	7	3.1			10s			1.05	26.7	Cloudy	
Cape Hatteras, N. C			30.13	765.3	77	25.0	82	NW	2	0.9		2ck	5ks			0.01	0.3	Cloudy	
Cape Henry, Va			30.15	765.8	81	27.2	70	W	4	1.8		2c	0			0	0	Clear	
Cape Lookout, N. C			30.20	767.1	76	24.4	72	N	8	3.6		5ck	2s	N		0.52	13.2	Fair	
Cape May, N. J			30.21	767.3	77	25.0	82	E	9	4.0		0	Haze			0	0	Clear	
Charleston, S. C			30.21	767.3	83	28.3	70	W	2	0.9		5c	Haze			0	0	Fair	
Cheyenne, Wyoming	24.07	611.4	30.01	762.2	47	8.3	54	Calm	0	0		0	0			0	0	Clear	
Chicago, Ill			29.96	761.0	70	21.1	100	Calm	0	0			10n			0.85	21.6	Light rain	
Cincinnati, Ohio			30.03	763.5	78	25.6	73	S	6	2.7			10ks		S	0	0	Cloudy	
Cleveland, Ohio			30.12	765.0	73.7	23.2	78	SE	4	1.8		2ck	8ks	SW	SW	0	0	Fair	
Corsicana, Tex			29.97	761.2	76	24.4	95	SE	3	1.3			10s		SE	0.37	9.4	Cloudy	
Davenport, Iowa			29.96	761.0	72	22.2	90	NW	4	1.8			10s			0.52	13.2	Cloudy	
Denison, Tex			29.99	761.7	72	22.2	95	SW	6	2.7			10n			3.58	90.9	Light rain	
Denver, Col	24.82	630.4	30.04	763.0	52	11.1	59	S	4	1.8		0	0			0	0	Clear	
Detroit, Mich			30.03	763.5	75	23.9	85	SW	4	1.8		8ck	0	W		Inap.	Inap.	Fair	
Dodge City, Kan	27.46	697.5	29.72	754.9	56	13.3	93	Calm	0	0			10s			Inap.	Inap.	Cloudy	
Dubuque, Iowa			29.96	761.0	67	19.4	90	NW	2	0.9			10s			Inap.	Inap.	Cloudy	
Duluth, Minn			29.93	760.2	60	15.6	82	SW	4	1.8		0	0			0.51	13.0	Clear	
Eastport, Me			30.22	767.6	68	20.0	69	SW	4	1.8		0	Sm'e			0	0	Clear	
Erie, Pa			30.09	764.3	77	25.0	72	S	8	3.6		4cs	Haze			0	0	Fair	
Escanaba, Mich			29.90	759.4	70	21.1	90	S	12	5.4			10s			0.13	3.3	Cloudy	
Fort Gibson, Indian Ter			29.93	760.2	75	23.9	81	NE	4	1.8			10s			Inap.	Inap.	Cloudy	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T	28.79	731.3	29.87	758.7	67	19.4	90	NE	8	3.6			10s		E	0	0	Cloudy	
Fort Sully, Dakota	28.14	714.7	29.74	755.4	61	16.1	66	SE	12	5.4		0	0			0	0	Clear	
Florence, Arizona	28.24	717.3	29.68	753.9	73	22.8		SW				0	0			0	0	Clear	
Galveston, Tex			30.00	762.0	81	27.2	87	S	4	1.8			10n,ks		S	0.48	12.2	Light rain	
Grand Haven, Mich			30.00	762.0	72	22.2	90	S	9	4.0			10n		S	0.20	5.1	Light rain	
Indianapolis, Ind			30.05	763.3	73	22.8	90	SE	8	3.6			10n		SE	0.49	12.4	Light rain	
Indianola, Tex			29.97	761.2	80	26.7	86	SE	4	1.8			10s		S	0	0	Cloudy	
Jacksonville, Fla			30.18	766.6	83	28.3	70	NE	4	1.8		9k	0	N		0	0	Fair	
Keokuk, Iowa			29.91	759.7	72	22.2	90	W	6	2.7			10s		W	0.28	7.1	Cloudy	
Key West, Fla			30.10	764.5	81.2	27.3	82	E	16	7.2		8cs	2k,hz.	SE	E	0.35	8.9	Cloudy	
Kittyhawk, N. C			30.20	767.1	77	25.0	86	NW	9	4.0		2k	5s	NW		0	0	Cloudy	
Knoxville, Tenn			30.10	766.8	71	21.7	95	NE	4	1.8		10k	0	NE		0.08	2.0	Cloudy	
La Crosse, Wis			29.97	761.2	63	17.2	78	S	6	2.7		0	0			0.03	0.8	Clear	
Leavenworth, Kan			29.97	761.2	65	18.3	83	Calm	0	0			10s			0	0	Cloudy	
Louisville, Ky			30.10	764.5	75	23.9	86	S	5	2.2			10n			0.04	1.0	Light rain	
Lynchburg, Va			30.20	767.1	73	22.8	90	NE	2	0.9			10s		NE	0.45	11.4	Cloudy	
Malone, N. Y			30.14	765.5	73	22.8	68	SE	4	1.8		0	Sm'e		SE	0	0	Fair	
Marquette, Mich			29.88	758.9	67	19.4	84	NW	6	2.7			10n			0.13	3.3	Light rain	
Memphis, Tenn			30.09	764.3	74	23.3	95	Calm	0	0			10n			1.73	43.9	Light rain	
Milwaukee, Wis			29.97	761.2	68	20.0	94	S	5	2.2		10s	Fog	S		0.37	9.4	Cloudy	
Mobile, Ala			30.11	764.8	80	26.7	82	E	8	3.6		2k	2s	S	SE	0.45	11.4	Fair	
Montgomery, Ala			30.17	766.3	77	25.0	79	SE	6	2.7		8c	Haze			0.10	2.5	Fair	
Morgantown, W. Va	29.13	739.9	30.14	765.5	76	24.4	76	S	1	0.4		8c	2s	W	S	0	0	Cloudy	
Mt. Washington, N. H	24.24	615.4	30.59	777.0	62	16.7	36	SE	10	4.5		0	Haze			0	0	Fair	
Nashville, Tenn			30.12	765.0	74	23.3	90	Calm	0	0			10n			0.19	4.8	Light rain	
New Haven, Conn			30.21	767.3	72	22.2	67	S	5	2.2		Haze	0			0	0	Clear	
New London, Conn			30.25	768.3	73	22.8	81	Calm	0	0		0	Haze			0	0	Clear	
New Orleans, La			30.05	763.3	79	26.1	86	SE	14	6.3		4k	5n	SE	SE	0.24	6.1	Light rain	
Newport, R. I			30.24	768.1	73	22.8	81	S	3	1.3		0	0			0	0	Clear	
New York, N. Y			30.24	768.1	72	22.2	80	SW	2	0.9		0	Sm'e			0	0	Clear	
Norfolk, Va			30.21	767.3	78	25.6	77	SW	4	1.8		2c	2k			0.10	2.5	Fair	
North Platte, Neb	27.10	688.3	29.61	752.1	58	14.4	81	SE	8	3.6		0	0			0	0	Clear	
Omaha, Neb	28.95	735.3	30.01	762.2	60	15.6	82	Calm	0	0		0	0			0.04	1.0	Clear	
Oswego, N. Y			30.17	766.3	77	25.0	69	SE	5	2.2		Haze	Haze			0	0	Hazy	
Pembina, Dakota			29.77	756.1	55	12.8	80	SE	7	3.1		0	2ks			0	0	Clear	
Philadelphia, Penn			30.23	767.8	71	21.7	85	SE	6	2.7		0	5ks,fog			0	0	Fair	
Pike's Peak, Colorado	17.98	456.7	30.19	766.8	35	1.7	37	W	22	9.8		0	2s			0	0	Fair	
Pittsburgh, Penn			30.13	765.3	75	23.9	76	W	3	1.3		Haze	9ks	W		0	0	Cloudy	
Port Huron, Mich			30.06	763.5	74	23.3	85	S	5	2.2		5c	2s	S		0	0	Cloudy	
Portland, Me			30.23	767.8	67	19.4	74	Calm	0	0		0	Sm'e			0	0	Clear	
Portland, Oregon			30.08	764.0	55	12.8	80	Calm	0	0		0	5s			0.03	0.8	Fair	
Punta Rassa, Fla			30.15	765.8	81.0	27.2	76	E	12	5.4		Haze	0			0.28	7.1	Clear	
Rochester, N. Y			30.12	765.0	76	24.4	72	SW	9	4.0		1ck	Haze	W		0	0	Hazy	
Salt Lake City, Utah	25.51	648.7	29.87	758.7	60	15.6	34	E	2	0.9		0	0			0	0	Clear	
Sandy Hook, N. J			30.22	767.6	76	24.4	76	SE	1	0.4		0	Haze			0	0	Clear	
San Diego, Cal			29.80	756.9	66	18.9	90	N	4	1.8		0	0			0	0	Clear	
San Francisco, Cal			29.78	756.4	59	15.0	76	Calm	0	0		0	0			0	0	Clear	
Santa Fé, N. M			29.90	759.4	51	10.6	93	Calm	0	0		0	0			0	0	Clear	
Savannah, Ga	23.36	593.3	30.20	767.1	82	27.8	83	Calm	0	0		5cs	Haze			0	0	Fair	
Shreveport, La			30.07	763.8	77	25.0	91	SE	4	1.8		10cs	0	SE		0.13	3.3	Cloudy	
Smithville, N. C			30.22	767.6	76	24.4	81	NE	2	0.9			10ks		NW	0.03	0.8	Cloudy	
Springfield, Mass			30.23	767.8	72.5	22.5	80	S	4	1.8		0	Fog			0	0	Foggy	
St. Louis, Mo			30.02	762.5	74	23.3	85	SW	12	5.4			10s			0.33	8.4	Cloudy	
St. Marks, Fla			30.16	766.1	77	25.0	82	SE	7	3.1		5c	2ks	N	SE	0	0	Fair	
St. Paul, Minn			29.94	760.5	56	13.3	93	W	1	0.4			Fog			0.04	1.0	Foggy	
Thatcher's Island, Alaska			29.74	755.4	42	5.6	91	E	13	5.8			10s			0	0	Cloudy	
Toledo, Ohio			30.22	767.6	70	21.1	84	SW	8	3.6		0	0			0	0	Clear	
Tucson, Arizona			30.04	763.0	75	23.9	81	SW	5	2.2		2ck	8ks		SW	0.05	1.3	Cloudy	
Tybee Island, Ga	27.44	697.0	30.05	763.3	74	23.3		S				2c	0			0	0	Fair	
Vicksburg, Miss			30.19	766.8	81	27.2	78	Calm	0	0		5c	Sm'e			0	0	Fair	
Virginia City, M. T			30.10	764.5	74.5	23.6	95	SE	7	3.1		5c	8ck		SW	0.07	1.8	Cloudy	
Washington, D. C	24.10	612.1	29.58	751.3	52	11.1	66	SW	2	0.9		2k	0	W		0.01	0.3	Fair	
Wilmington, N. C			30.21	767.3	74.5	23.6	92	E	3	1.3			10s			0	0	Cloudy	
			30.23	767.8	71	21.7	90	W	8	3.6			10n			1.96	49.8	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
Woods Holl, Mass.	.....	.....	30.26	768.6	72	22.2	63	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Yankton, Dakota	28.74	730.0	30.03	762.7	49	9.4	92	Calm	0	0	.....	.....	Fog	.....	.....	0.03	0.8	Foggy	
Yuma, Arizona	.....	.....	29.75	755.6	83	28.3	.....	E	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.17	766.3	79	26.1	86	Calm	0	0	.....	8c	8n	.....	.....	0	0	.....	James Gall.
St. Georges, Bermudas	.....	.....	30.24	768.1	81.0	27.2	79	SE	7	3.1	.....	0	2k	.....	.....	0	0	Fair	C. F. Allen.
St. John's Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Paramaribo, D. Guiana S.A	.....	.....	29.96	76.10	80	26.7	82	E	.....	.....	2	4ck	5ks	E	.....	0.320	8.13	Fair	C. J. Hering.
Batavia, Dutch Guiana S.A	30.11	764.7	.....	.....	83.3	28.5	.....	N	.....	.....	.....	.....	.....	.....	.....	0.748	19.0	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.21	640.3	.....	.....	65.0	18.3	84	E	1	0.4	.....	1k	7s	.....	.....	0.20	5.1	Cloudy	Thomas Herran
York Factory, B. A.	.....	.....	29.55	750.6	40.5	4.7	96	W	14	6.3	.....	.....	10s	.....	.....	2.50	63.5	.....	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.03	762.7	76	24.4	.....	NE	.....	.....	2	.....	.....	.....	.....	0	0	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Addie Fuller. N. 37° 49′ W. 71° 25′	.....	.....	30.19	766.8	82	27.8	.....	Calm	.....	.....	0	0	2ks	.....	N	Smooth	.....	.....	Capt. James Jorgensen.
Steamer Hibernian. N 51° 45′, W. 19° 53′.	N36W	10	30.12	765.0	60	15.6	.....	SW	.....	.....	6	.....	..ks	.....	NE	Rough	.....	Dull	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.; Denver, 5,135 ft., or 1,565. m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,235 ft., or 1,900.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,051.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,262.2 ft., or 1,299.2 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.; Wythevlle, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.30 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			30.08	764.0	83.1	28.4	71	Calm			0		4			0	0	Fair	Charnot.
Algiers			30.05	763.3	81.7	27.6	66	NNW			3		0			0	0	Clear	Peter.
La Calle			30.06	763.4	80.6	27.0	65	S			2		1			0	0	Clear	Kunts.
Tunis			30.07	763.7	89.6	32.0	35	E			3		3			0	0	Fair	Jacques.
Sétif			30.14	765.5	86.0	30.0	55	E			3		2			0	0	Clear	Chauvey.
Sidi-la			30.03	764.1	91.4	33.0	21	NE			2		2			0	0	Clear	Millot.
Tebessa			30.08	763.9	88.7	31.5		N			2		2			0	0	Clear	Colin.
Gerlville			30.12	765.0	86.5	30.3	21	NW			3		2			Inap.	Inap.	Clear	Lemaillot.
Laghouat			30.11	764.8	95.0	35.0	24	W			3		2			0	0	Clear	Guyot.
Biskra			30.09	764.2	93.7	34.3	48	Calm			0		0			0.335	8.5	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			30.13	765.3	81.7	27.6	43	NE			2		4			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.18	766.5	74.5	23.6	62	NE			2		2			0	0		Dr. Wierzbiski.
Eperies			30.08	763.9	78.1	25.6	53	N			3		6cks		S	0	0		Julius Mikolik.
Gratz	28.93	734.7	30.08	764.0	75.2	24.0	52	SSW			2		5			0	0		Andreas Rospini.
Hermannstadt	28.61	727.5	30.00	762.1	76.3	24.6	48	WNW			2		4			0	0		Prof. Reissenberger.
Kremsmünster	28.87	733.2	30.16	766.1	74.8	23.8	52	ENE			2		3			0	0		Prof. C. Wagner.
Lemberg			30.03	762.8	73.6	23.1	80	NW			3		6			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.10	764.5	81.1	27.3	56	WNW			3		6ks			0	0		I.R.Hydrographic Office
Szegedin			30.04	763.0	80.2	26.8	32	NE			2		1			0	0		Karl Stancel.
Trieste			30.11	764.7	82.6	28.1	60	Calm			0		8k			0	0		Prof. V. Farolfi.
Vienna			30.13	765.2	81.1	27.3	38	N			1		3			0	0		I. R. Central Met. Obs'y

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1.258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			30.11	764.8	81.3	27.4	45	ESE			1	0	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			30.19	766.8	70.2	21.2		SSE	16	7.2			1			0	0	Blue sky	William Boswell.
Ardrossan			30.19	766.8	70	21.1		W			1		1					Hazy	William McNeil.
Armagh, Observatory			30.17	766.3	72.0	22.7		SE	8	3.6			2					*D. clouds	S. Cal, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.09	764.3	77.2	25.1		SE			1		1					*D. clouds	J. Dreyer.
Bradford			30.22	767.6	72.4	22.4		E			2		0			0	0	Blue sky	J. McLandsborough.
Bridgetown, (Barbadoes)			30.04	763.0	83.5	28.6		NE			3		6					*D. clouds	Sergt. J. F. Halanon, A. H. C.
Cambridge, Observatory			30.18	766.6	80.5	26.9		NE			1		0						H. Todd.
Cardington			30.24	767.1	80.0	26.7		NE			1		1					Blue sky	John McLaren.
Carlisle			30.15	765.8	82.2	27.9		SE			0		1			0	0	Blue sky	T. Bell, for J. Carmell.
Chatham, School M. E			30.16	766.1	74.0	23.3		NE			3		0					Blue sky	Capt. J. Fellowes, R.E.
Dartmoor	28.75	730.2	30.21	767.3	70.6	21.4		E			6		3					Blue sky	R. E. Power.
Donaghadee			30.16	766.1	65	18.3		SE			3		0					Blue sky	J. Mac Gowan.
Dover			30.15	765.8	69	20.6		NE			4		0					Clear	J. Costello.
Eccles (near Manchester)			30.19	766.8	79.6	26.4		SE	1.4	0.6			0					Blue sky	Thomas Mackereth.
Falmouth, Observatory			30.11	764.8	66.9	19.4		E			3		6					Overcast	The Staff.
Fort Napier, (Natal)	27.54	699.5	29.78	756.4	80.8	27.1		NW			5		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	80	26.7		W			0		4					*D. clouds	
Galway, Queen's College			30.18	766.6	74	23.3		S			3		4					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.09	764.3	85.0	29.4		E			2		1					*D. clouds	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			30.17	766.3	71.8	22.1		W			1		2					Fine	Lewis Stuart.
Great Yarmouth			30.24	768.1	67	19.4		E			3		0					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			30.17	766.3	81.6	27.6		ENE			3		0					Blue sky	The Staff, for G. B. Airy
Guernsey			30.18	764.0	68.5	20.3		NE			2		0					Blue sky	Dr. S. E. Hoskins.
Helston			30.16	766.1	65	18.3		NE			6		2c			0	0	Fine	M. P. Moyle.
Holyhead			30.11	765.5	67	19.4		NW			2		1					Blue sky	John Tilston.
Kew, Observatory			30.16	766.1	77.8	25.4		E	21	9.4			1					Hazy	The Staff.
Kingstown			30.18	766.6	64	17.9		SE			3		1					Blue sky	George Mitchell, F.G.S.
Leicester Museum			30.20	767.1	78.0	25.6		Calm			0		0					Blue sky	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.97	761.2	87.0	30.6		NW			1		2k					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			30.14	765.5	76	24.4		Calm			0		0					Clear	W. D. Penny.
Nassau, (Bahamas)			30.13	765.3	84.0	28.9		NE			4		6					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.20	767.1	82.6	28.1		SSE			3		0			0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.17	766.3	76.9	24.9		ENE			1		0					Blue sky	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.05	765.8	76	24.4		E			1		0					Blue sky	J. Lucas.
Plymouth			30.11	764.8	75	23.9		ENE			4		5					*D. clouds	John Merrifield.
Roche's Point			30.11	764.8	67	19.4		ESE			4		5					Fine	W. Kennedy.
Saint Ann's Head			30.12	765.0	69	20.6		ESE			3		4					*D. clouds	John C. Walker.
Saint Helier, Jersey			30.07	763.8	79.5	26.4		E			4		0					Clear	A. P. Amy.
Sandwick Manse (Orkneys)			30.19	766.8	61.5	16.4		W	9	4.0			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough			30.26	768.6	62.7	17.1		SE			3		1					Blue sky	F. Shaw.
Scutari Cemetery, Turkey			29.73	755.1	79.6	26.4		SE			2		6					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.21	767.3	75.5	24.2		SE			2		1			Blank	Blank	Blue sky	W. F. Cooper.
Siloth Rectory			30.17	766.3	82.3	27.9	55	Calm			0		0			0	0	Blue sky	Rev. Francis Redford.
Stonyhurst, Observatory			30.18	766.6	74.5	23.6		S			1					0	0	Hazy	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			30.13	765.3	64	17.8		SSW			4		5					*D. clouds	John Smith.
Stratfield Turgiss			30.22	767.6	78.0	25.6		NE			1		0					Blue sky	Rev. Charles H. Griffith.
Thurso			30.11	765.5	66	18.9		NNE			1		1					Blue sky	John Trotter.
Truro, Royal Institution			30.12	765.0	78	25.6		E			6		5					*D. clouds	W. Newcombe
Valencia, Observatory			29.99	761.7	75.2	21.0		SE	21	13.9			3					*D. clouds	The Staff.
Sub-Stations.																			
Calf of Man, (Isle of Man)					60	15.6		E			3		2						Thomas Dawson.
Cape Good Hope, Obs'y			30.15	765.8	61.3	16.3	69	SSE	28	12.5		5	2						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.01	763.0	60.5	15.8	94	NW			3		0						Francis Abbott, F.R.A.S.
Leith, Restaurig Park			30.21	767.3	70.0	21.1		E			1					0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.10	764.5				WNW	3.2	1.4						0	0		C. Meldrum
Melbourne, Observatory			30.34	770.6	50.6	10.3	90	WSW	3	1.3			4			0.42	0.5	Fine	R. L. J. Ellery.
Monach Lighthouse, Hebrides			30.14	765.5	59	15.0		SW			4	5	5	8		0	0		J. Youngclause.
North Unst, (Shetland Isles)			30.14	765.5	54	12.2		SW			6	0	0						Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,2[illegible]0 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.	Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	Direction. From—	Miles per hour.	Meters per second.	0–10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Copenhagen			30.29	769.4	72.1	22.3	44	NNW			2		7						
Faroe			30.31	770.6	68.5	20.3	53	W			4		1						
Godthaab, Greenland			29.91	759.8	48.6	9.2	70	Calm			0		8						
Stykkisholm, Iceland			29.80	756.8	49.5	9.7	84	NE			7		8						
Thorshavn, Faroe			29.88	758.9	55.8	13.2	95	SW			6		10						
Vestervig			30.32	770.2	67.3	19.6	67	WNW			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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.10	766.8	81.3	27.4	48	NE			1		0			0	0	Clear	Normal School.
Amiens																			Normal School.
Avignon			30.08	764.1	91.4	33	37	S			2		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.06	763.5	88.2	31.2	27	N			2		0			0	0	Clear	C. Saillard.
Beaumette, (near Angers)			30.00	761.9	93.6	34.2	21	E	2.7	1.2						0	0		Beaumette Observatory
Beauvais			30.08	764.0	76.8	24.9	48	E			2		0			0	0	Clear	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.18	766.6	89.8	32.1	34	N			2		..ck		N	0	0		Normal School.
Bourges			30.04	763.0	82.6	27.8	70	S			3		2		S	0	0	Slightly cl'dy	Normal School.
Brest			29.94	761.5	91.2	32.9	47	ESE			2	1c				0	0		Naval Observatory.
Carcassonne			30.11	764.7	81.0	27.2	35	E			2		1		W	0	0	Clear	Normal School
Caen																			Normal School.
Chartres			29.89	759.3	67.3	19.6	72				2		0			0	0	Clear	Normal School.
Châlons-sur-Marne			30.08	764.1	90.3	32.4	36	S			2		0			0	0	Clear	Normal School.
Clermont			29.99	761.7	85.6	29.8	37	NW			2		0			0	0	Clear	Puy de Dome Obs'y.
Commercy			30.11	764.7	81.7	27.6	15	E			4		0			0	0	Clear	Normal School
Commune de Greasque*			30.19	766.7	89.1	31.7	38	SW			4		5		NE	0	0		M. King.
Grenoble			30.04	762.9	85.5	29.7	45	N			2		0			0	0	Clear	Normal School.
La Roche-sur-Yon					95.4	35.2	25	SSE			2		0			0	0	Clear	Normal School.
Le Mans			30.05	763.2	84.2	29	29	E			2		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			30.07	763.6	83.1	28.4	45	N			2		0			0	0	Clear	Normal School.
Mâcon			30.19	766.8	83.5	28.6	81	N			2		0			0	0	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			30.17	766.4	60.4	15.8	33	NE			2		1		NE	0	0	Clear	Normal School.
Nismes			30.13	765.5	88.9	31.6	43	SE			1		0			0	0	Clear	Normal School.
Orleans																			Normal School.
Paris, Observatory			30.07	763.6	83.8	28.8	39	NE			1		0			0	0	Clear	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			30.01	762.2	91.3	34.6	36	ESE			4		0			0	0	Blue sky	Naval Observatory.
Rouen			30.05	763.3	86.7	30.4	34	ESE			1		0			0	0	Clear	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School
Villefranche			30.05	763.2	93.2	34	49	SE			1		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.7	82.4	28													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.34	770.7	71.4	21.9	62	SSW	18.6	8.33			4		SW	0.087	2.2		—. Falguère.
Montsouris, Paris			30.07	763.8	87.4	30.8	36	NNE			2		0			0	0	Clear	Montsouris Observ'tory.
Perpignan			30.00	763.4	83.1	28.4	35	SE	11.2	5.00			0			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.52	546.7			54.5	12.5		WSW			2		5					Fair	M. Baylac.
Pic du Midi, (Plantade)	22.77	578.4			60.1	15.6		SSW			3		5			0	0	Fair	General de Nansouty.
Saint Maur, (near Paris)			30.07	763.8	86.0	30.0	40	NNE			1		0			0	0	Clear	E. Renou.
Toulouse			30.08	764.0	91.2	32.9	17	SE			3		0			0	0		Toulouse Observatory
Tours			30.02	762.5	91.6	33.1	26	SE			1		0			0	0	Clear	C. Marquet.
Versailles, (near Paris)			30.09	764.3	85.0	29.8	38	SE			1		0			0	0	Very clear	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai																			H. Le Lec, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	766.7	81.1	27.3	39	NE			3		4	E		0	0		Prof. T. Hoh.
Berlin			30.29	769.4	76.1	24.5	31	N			1		0			0	0		Prof. Arndt.
Breslau			30.32	770.0	73.2	22.9	34	NNW			6		0			0	0		Dr. P. Neugebauer.
Carlsruhe			30.11	764.8	84.9	29.4	37	ENE			5		0			0	0		A. Senz.
Cassel			30.24	768.2	82.6	28.1	38	ENE			2		0			0	0		Dr. H. Möhl.
Emden			30.15	765.9	76.5	24.7	32	E			5		0			0	0		Prof. Prestel.
Frankfort on the Main			30.18	766.5	86.9	30.5	33	NE			2		3			0	0		Physical Society.
Friedrichshafen			30.09	764.3	81.0	27.2	43	NE			4		0			0	0		M. Wilhelm.
Hamburg			30.33	770.3	73.9	23.3	48	ENE			1		0			0	0	Clear	Captain F. Hegemann
Kiel			30.32	770.0	71.1	21.7	41	NNE			1		0			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			30.17	766.2	71.4	21.9	48	NW			5		2			0	0		Prof. E. Luther.
Köslin			30.29	769.3	67.6	19.8		NW			4		1			0	0		H. Müller.
Leipsic			30.30	769.5	77.4	25.2	14	NE			3		1			0	0		Prof. Bruhns.
Memel			30.17	766.4	66.7	19.3	74	NW			4		1c			0	0		Reintrecht & Skalweit.
Münster			30.27	768.8	82.6	28.1	53	NE			5		0			0	0		Prof. E. Heis.
Neufahrwasser			30.24	768.0	68.7	20.4	74	N			4		5			0	0		A. Lothes.
Posen			30.26	768.5	75.4	24.1	41	NW			6		1			0	0		Dr. Magener.
Strassburg, (In Alsace)			30.11	764.8	86.7	30.4	28	SE			2		0			0	0		Dr. Schur.
Stuttgart			30.14	765.6	82.9	28.3	31	NE			2		0			0	0		Prof. Schoder.
Thorn			30.20	767.1	75.7	24.3	45	E			2		4			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.11	764.7	86.5	30.3	20	NE			5		1			0	0		Prof. Flesch.
Wustrow, Naval School			30.39	772.0	66.7	19.3	74	W			1		7			0	0		E. F. Schütz

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	760.1	77.4	25.2		NW										Half clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.07	763.8	83.7	28.7	33	W	1.3	0.6			4			0	0		
Padua			30.10	764.4	82.8	28.2	37	E	4.3	1.9			1			0	0		
Vicenza			30.09	764.3	84.6	29.2	34	S	6.3	2.8			1			0	0		
Verona			30.06	763.4	88.5	31.4	48	E			1		0			0	0		
Bergamo																			
Domodossola	29.97	738.3	30.05	763.3	82.9	28.3	45	S			6		3			0	0		
Milan			30.09	764.3	88.7	31.5	49	E			2		1	E		0	0		
Pavia			30.10	764.6	81.5	27.5	51	E			2		0			0	0		
Moncalieri			30.10	764.6	80.2	26.8	48	NW	0	0			1			0	0		
Mondovi	28.27	718.0	30.11	764.7	77.9	25.5	47	NNW			2		1	NNW		0	0		
Porto Maurizio			30.17	766.3	84.0	28.9	54	E			2		4			0	0		
Genoa			30.10	764.1	85.1	29.5	33	SW	1.3	0.6			0			0	0		
Piacenza																			
Parma			30.05	763.2	84.2	29.0	43	NE			2		0			0	0		
Bologna			30.13	765.4	86.0	30.0	40	W			1		4	S		0	0		
Florence			30.12	765.0	86.9	30.5	24	N			4		0			0	0		
Leghorn			30.10	764.4	83.1	28.4	51	WNW	5.6	2.5			2			0	0		
Siena	28.89	733.9	30.05	763.2	82.9	28.3	26	ENE	2.5	1.1			2	NE		0	0		
Urbino	28.62	727.0	30.12	765.0	75.4	24.1	44	NNE			4		1			0	0		
Ancona			30.13	765.4	81.0	27.2	55	NNW			4		1			0	0		
Grosseto			30.09	764.3	88.2	31.2	25	NE			4		3	SE		0	0		
Rome			30.04	763.0	86.9	30.5	36	W	7.4	3.3			2			0	0		
Naples, O. U.			30.04	762.9	87.4	30.8	28	ESE			4		3	SSE		0	0		
Lecce			29.99	761.7	78.8	26.0	42	ENE	23.7	10.6			4			0	0		
Cosenza			30.02	762.5	103.6	39.8	67	NNW	6.9	3.1			5			0	0		
Riposto, (Sicily)			30.03	762.7	84.7	29.3	58	ESE			4		0			0	0		
Palermo			29.98	761.5	84.6	29.2	47	NW	9.8	4.4			8			0	0		
Caltanissetta	28.06	712.8	29.93	760.3	81.7	27.4	33	NNW			6		5	E		0	0		
Sub-Series.																			
Naples, S. R			30.09	764.3	84.9	29.4	28	NE	2.5	1.1			4	W		0	0		Prof. F. Brioschi.
Pesaro			30.19	766.7	78.1	25.6	55	N	16.3	7.28			0			0	0		L. Guidi.

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	78.8	26.0		ENE			3								
Groningen			30.23	767.7	74.3	24.5		ENE			4								
Helder			30.21	768.2	68.5	20.3		NE			4								
Utrecht			30.17	766.4	81.5	27.5	41	E			2		0					Clear	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.23	767.7	70.2	21.2	62	SSW	20.8	9.3			0			0	0		
Brono			30.02	762.5	54.3	12.4	95	WSW	27	12			10					Light rain	
Christiania			30.19	766.7	79.0	26.1	43	S	1.3	0.6			1			0	0		
Tromsö			29.73	755.2	52.9	11.6		SW	13	6			10			0.661	16.8	Raining	

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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,)	.....	.....	29.89	759.1	74.8	23.8	88	SW	13.9	6.22	.....	.....	7	.....	.....	0.354	9.0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.02	762.5	84.2	29.0	33	SW	10.2	4.58	.....	.....	0	.....	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.17	766.4	73.0	22.8	66	SSE	11.6	5.19	.....	.....	0	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.11	764.9	73.9	24.3	63	SW	12.5	5.6	.....	.....	3	.....	.....	0	0	.....	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

RUSSIAN SERIES.

Furnished by 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	.....	.....	30.16	766.1	71.2	21.8	33	WNW	7	3	.....	.....	0	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.07	763.7	71.1	21.7	41	W	11	5	.....	.....	3	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.05	763.2	65.3	18.5	55	NNW	4	2	.....	.....	5	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.99	761.8	65.1	18.4	62	WNW	9	4	.....	.....	2	.....	.....	.....	.....	.....	Central Physical Obs.
Kiopio	.....	.....	30.00	762.0	64.4	18.0	67	NW	13	6	.....	.....	5	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.92	759.9	73.0	23.1	50	NNW	9	4	.....	.....	5	.....	.....	.....	.....	.....	Physical Cabinet
Nikolaiev	.....	.....	29.92	760.0	81.3	27.4	33	N	20	9	.....	.....	6	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.85	758.3	79.3	26.3	56	N	18	8	.....	.....	6	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.78	756.3	65.7	18.7	70	N	9	4	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.73	755.1	79.9	26.6	45	NW	18	8	.....	.....	2	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.85	758.4	71.2	21.8	94	NNW	18	8	.....	.....	9	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	24.35	720.2	29.67	753.5	95.7	35.4	27	S	18	8	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.70	754.3	93.4	34.1	36	ESE	2	1	.....	.....	4	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.57	751.0	75.0	23.9	61	W	13	6	.....	.....	8	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.69	728.7	29.60	751.8	64.0	17.8	90	E	4	2	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.71	751.5	93.4	34.1	20	NNE	2	1	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Fedrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.87	758.6	62.4	16.9	61	ENE	0	0	.....	.....	5	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.73	755.1	58.6	14.8	75	NW	7	3	.....	.....	4	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.4	758.0	77.5	25.3	75	Calm	0	0	.....	.....	3	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	29.87	758.6	68.9	20.5	94	Calm	0	0	.....	.....	10	.....	.....	Blank	Blank	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk 592.0? m., or 1,942.2? ft.; 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 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	.....	.....	29.93	759.4	96.1	35.6	30	SW	7.4	3.33	.....	0	1	.....	.....	0	0	Almost clear	Roya Observatory.
San Fernando	.....	.....	30.19	764.5	81.5	27.5	70	W	15.9	7.1	.....	3	5	W	W	0.004	0.1	.....	The Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Gasparanda	.....	.....	29.95	760.8	65.8	18.8	60	SW	.....	.....	4	.....	5	.....	.....	0	0	.....	
Umea	.....	.....	30.07	763.8	70.5	21.4	57	NW	.....	.....	2	.....	9	.....	.....	0	0	.....	
Hernosand	.....	.....	30.12	765.0	70.7	21.5	44	SSW	.....	.....	2	.....	9	.....	.....	0	0	.....	
Stockholm	.....	.....	30.13	765.2	76.5	24.7	43	WSW	.....	.....	2	.....	2	.....	.....	0	0	.....	
Wisby	.....	.....	30.21	767.3	64.4	18.0	78	NW	.....	.....	4	.....	0	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.13	765.2	78.8	26.0	41	NNW	6.7	3.0	.....	.....	1	N	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; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall is measured at 8 a. m., local time.

SWISS SERIES.

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

Stations	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From	Clouds. Direction. Lower. From —	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	30.08	764.0	78.8	26.0	45	N			2		0			0	0	Clear	The Observatory.
Zurich	28.55	725.2	30.10	764.6	80.8	27.1	44	NE			2		0			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +1.7 mm; Thermometer, +4.0 cent.; Relative Humidity, —9 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

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

Stations	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From	Clouds. Direction. Lower. From —	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			29.78	756.4	72.3	22.4	80	SSE	15	6.5			8		SE	0.827	21.0		
Fao, (Persian Gulf)			29.60	751.7	104.0	40.0		NW			3		0						
Salonica			29.99	761.7	80.2	26.8		N			1		10						
Valona			29.99	761.7	80.2	26.8		E			2		10						
Varna			29.92	760.0	75.2	24.0		N			6		10			Bla k	Blank		
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			29.84	758.0	89.1	31.7	49	W			2		1k		S				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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

Stations	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From	Clouds. Direction. Lower. From —	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	79.2	26.2	81	Calm	0	0		0	0			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.17	766.3	79	26.1		W	3	1.3		2c	0	W		0	0	Fair	W. R. Bige.
*Chatham, N. B			30.14	765.5	72	22.2	78	SW	5	2.2		0	0			0	0	Clear	G. A. Blair.
Charlottetown P. E. Island			30.19	766.8	71	21.7	67	W	3	1.3		0	0			0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			30.10	764.5	83.7	28.7	60	S			1	7c	0			0	0	Fair	James Smith, M. A.
Dalhousie, N. B			30.14	765.5	72.5	22.5	83	NW			1					0	0	Clear	H. A. Johnson.
Esquimault, B. C																			W. H. Bevis.
Fredericton, N. B			30.23	767.8	67.3	19.6	78	E	2	0.9		0	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.96	761.0	60	15.6	100	E	7	3.1		5k	5n	SE	SE	0.540	13.72	Light rain	James Stewart.
Goderich, Ontario			30.08	764.0	76.4	24.7	89	Calm			0		8n			0	0	Threatening	H. J. Strang, M. A.
Granton, Ontario	29.02	737.1	30.06	763.5	72	22.2		SE			1	1cs	0	W		0.15	3.8	Clear	James Grant.
*Halifax, N. S.			30.21	767.3	70	21.1	66	W	4	1.8		0	0			0	0	Clear	F. Allison, M. A.
*Kingston, Ontario			30.17	766.3	76	24.4	91	SW	5	2.2		8c	0	SW		0	0	Fair	S. Woods, M. A.
Little Glace Bay, N. S.			30.15	765.8	78.5	25.8	62	SW	6	2.7		0	0			0	0	Smoky	C. H. Rigby
*Montreal, Quebec			30.12	765.0	74	23.3	79	W	2	0.9		0	Sm'e		W	0	0	Smoky	C. H. McLeod, C. E.
*Ottawa, Ontario			30.12	765.0	77	25.0	61	Calm	0	0		2ck	Sm'e			0	0	Smoky	J. B. Haney.
*Parry Sound, Ontario			30.11	764.8	71	21.7	92	E	5	2.2		2ck	5ks	SW	SW	0.50	12.7	Fair	Rev. R. Mosley.
Port Dover, Ontario			30.10	764.5	72	22.2	100	S	12	5.4			10k		S	1.43	36.3	Light rain	H. Morgan.
Port Hastings N. S.			30.17	766.3	76.4	24.7		NW	5	2.2						0	0	Fine	Peter Grant.
Port Stanley, Ontario			30.07	763.8	73	22.8	98	W	2	0.9			10n		W	0.20	5.1	Cloudy	M. Payne.
*Quebec, Quebec			30.16	766.1	76	24.4	86	Calm	0	0		0	Haze			0	0	Hazy	Capt. Ashe, R. N.
St. John, N. B.			30.28	769.1	56	13.3	93	S	3	1.3			Fog			0	0	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario			30.06	763.5	71	21.7	59	S	1	0.4			10ks			0.44	11.2	Cloudy	K. Stewart.
Stayner, Ontario			30.06	763.5	78	25.6	69	Calm	0	0		8k	0	S		0.29	7.4	Cloudy	R. J. Cole.
Stratford, Ontario	28.82	732.0	30.05	763.3	71.3	21.8	97	SE	5	2.2			10n	SE		0.096	2.41	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B			30.16	766.1	79	26.1	69	SW	4	1.8		0	Sm'e			0	0	Hazy	T. C. Hill.
*Toronto, Ontario			30.10	764.5	74	23.3	87	S	5	2.2		2k	8ks	W	W	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.08	764.0	73.3	22.9	95	E	8	3.6		1cs	9s	S		0.01	0.3	Gloomy	J. Montgomery
Sub-Series.																			
St. Johns, Newfoundland			30.25	768.3	68	20.0	69	SE				0	2cs			0	0	Fair	John Delaney.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.			30.17	766.3	75	23.9	72	S	4	1.8		4k	Haze	SW		0	0	Fair	
Alpena, Mich.			30.03	762.7	70	21.1	90	S	1	0.4			10s		S	0.14	3.6	Cloudy	
Atlantic City, N. J.			30.20	767.1	81	27.2	78	S	4	1.8		2k	2ks	S		0	0	Fair	
Augusta, Ga.			30.17	766.3	79	26.1	78	Calm	0	0		8c	0	W		0	0	Fair	
Baltimore, Md.			30.21	767.3	76	24.4	86	SE	2	0.9		2ck	8s		SE	Inap.	Inap.	Cloudy	
Barnegat, N. J.			30.19	766.8	82	27.8	74	N	3	1.3		5k	0	W		0	0	Fair	
Bismarck, Dakota	28.01	711.4	29.59	751.6	58	14.4	75	Calm	0	0		8ck	0	N		0	0	Fair	
Boston, Mass.			30.22	767.6	71	21.7	85	S	9	4.0		10s	Fog	SW		0	0	Foggy	
Breckenridge, Minn.			29.64	752.8	48	8.9	84	SE	24	10.7		5cs	0	S		0	0	Fair	
Buffalo, N. Y.			30.09	764.3	73.5	23.1	78	S	10	4.5			10ks		SW	0	0	Cloudy	
Burlington, Vt.			30.16	766.1	77	25.0	69	S	6	2.7		0	Sm'e			0	0	Smoky	
Cairo, Ill.			30.12	765.0	73	22.8	95	S	4	1.8			10n		S	1.36	34.5	Light rain	
Cape Hatteras, N. C.			30.14	764.5	80	26.7	74	SE	8	3.6		5k	0	SE		0	0	Fair	
Cape Henry, Va.			30.13	765.3	81	27.2	74	S	1	0.4		5c	0			0	0	Fair	
Cape Lookout, N. C.			30.17	766.3	80	26.7	78	NE	3	1.3		5k	0	NE		0.35	8.9	Fair	
Cape May, N. J.			30.19	766.8	79	26.1	82	SE	4	1.8		0	2ks		NW	0	0	Fair	
Charleston, S. C.			30.18	766.6	79	26.1	82	NW	2	0.9		5cs	2s		NW	0.05	1.3	Fair	
Cheyenne, Wyoming	23.95	608.3	29.84	759.2	55	12.8	34	W	4	1.8		5c	0	W		0	0	Fair	
Chicago, Ill.			30.03	762.7	75	23.9	85	Calm	0	0			10s			Inap.	Inap.	Cloudy	
Cincinnati, Ohio			30.07	763.8	76	24.4	86	SW	3	1.3			10ks		S	0.12	3.0	Cloudy	
Cleveland, Ohio			30.09	764.3	70.9	21.6	93	SW	6	2.7			10n		W	0.23	5.8	Raining	
Corsicana, Tex.			30.02	762.5	74	23.3	95	SE	3	1.3		5k	0	S		0	0	Fair	
Davenport, Iowa			30.03	762.7	72	22.2	90	E	2	0.9			10s			0	0	Cloudy	
Denison, Tex.			30.04	763.0	76	24.4	90	SE	4	1.8		5ck	0	S		0.03	0.8	Fair	
Denver, Col.	24.17	613.9	29.92	760.0	62	16.7	32	S	5	2.2		0	0			0	0	Clear	
Detroit, Mich.			30.06	763.5	72	22.2	90	NW	4	1.8		8k	0	NW		1.09	27.7	Fair	
Dodge City, Kan.	27.31	694.4	29.52	749.8	70	21.1	90	SE	12	5.4			10s			0	0	Cloudy	
Dubuque, Iowa			29.99	761.7	72	22.2	85	SE	6	2.7		5k	0	SE		0	0	Fair	
Duluth, Minn.			29.94	761.0	60	15.6	82	NE	4	1.8		5c	0	SW		0	0	Fair	
Eastport, Me.			30.04	768.1	60	15.6	82	S	4	1.8			Fog		S	0	0	Foggy	
Erie, Pa.			30.03	763.5	75	23.9	76	SE	10	4.5		1c	7s			0.78	19.8	Fair	
Escanaba, Mich.			30.02	762.5	65	18.3	90	Calm	0	0			Fog			0	0	Dense fog	
Fort Gibson, Indian Ter.			29.97	761.2	78	25.6	82	E	4	1.8		2c	0	E		0.07	1.8	Clear	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.78	731.0	29.83	757.7	80	26.7	78	S	12	5.4		5k	0	S		0	0	Fair	
Fort Sully, Dakota	28.07	713.0	29.64	752.8	66	18.9	54	N	7	3.1		1cs	0	NW		0	0	Clear	
Florence, Arizona	28.30	718.8	29.74	755.4	76	24.4		S				0	0			0	0	Clear	
Galveston, Tex.			30.03	762.7	79	26.1	90	NE	8	3.6		2cs	8ks			0.29	7.4	Cloudy	
Grand Haven, Mich.			30.04	763.0	75	23.9	90	Calm	0	0		0	5s		SW	0.06	1.5	Fair	
Indianapolis, Ind.			30.03	764.0	74	23.3	95	Calm	0	0			Fog			0.88	22.4	Foggy	
Indianola, Tex.			30.02	762.5	83	28.3	83	SE	3	1.3		2k	0			0.16	4.1	Fair	
Jacksonville, Fla.			30.18	766.6	78	25.6	82	E	3	1.3		Haze	0			0	0	Fair	
Keokuk, Iowa			29.94	760.5	76	24.4	86	S	4	1.8		8c,k	0	S		0	0	Fair	
Key West, Fla.			30.12	765.0	81.1	27.3	74	E	11	4.9		5cs	2k,hz.	NE	E	0.05	1.3	Fair	
Kittyhawk, N. C.			30.19	766.8	79	26.1	78	SE	8	3.6		8c	0	N		0	0	Cloudy	
Knoxville, Tenn.			30.17	766.3	72	22.2	95	Calm	0	0		10k	0	SW		Inap.	Inap.	Cloudy	
La Crosse, Wis.			30.01	762.2	61	16.1	91	Calm	0	0		0	Fog			0	0	Foggy	
Leavenworth, Kan.			29.91	760.5	73	22.8	85	S	6	2.7			10s			0	0	Cloudy	
Louisville, Ky.			30.11	764.8	75	23.9	90	SW	2	0.9			8ks		SW	0.52	13.2	Threatening	
Lynchburg, Va.			30.16	766.1	74	23.3	87	Calm	0	0			10s			0	0	Cloudy	
Malone, N. Y.			30.10	764.5	76	24.4	65	SE	6	2.7		0	Haze		NE	0	0	Fair	
Marquette, Mich.			30.04	763.0	58	14.4	93	Calm	0	0			10s			0	0	Cloudy	
Memphis, Tenn.			30.13	765.3	76	24.4	95	Calm	0	0			10s			0.13	3.3	Cloudy	
Milwaukee, Wis.			30.06	764.5	70	21.1	95	SW	2	0.9		5k	Fog	S	S	0.58	14.7	Cloudy	
Mobile, Ala.			30.15	765.8	80	26.7	86	SE	5	2.2		5k	2s			0	0	Cloudy	
Montgomery, Ala.			30.29	767.1	77	25.0	86	Calm	0	0		10cs	Haze	S	S	0	0	Cloudy	
Morgantown, W. Va.	29.11	739.1	30.13	765.3	69	20.6	95	SE	1	0.4			10n		SE	2.02	51.3	Light rain	
Mt. Washington, N. H.	24.15	613.4	30.51	771.9	60	15.6	44	NE	10	4.5		0	Haze			0	0	Fair	
Nashville, Tenn.			30.12	765.0	77	25.0	86	Calm	0	0			10s		S	0.01	0.3	Cloudy	
New Haven, Conn.			30.18	766.6	78	25.6	78	Calm	0	0		Haze	0			0	0	Clear	
New London, Conn.			30.24	768.1	68	20.0	94	Calm	0	0			Fog		SE	0	0	Foggy	
New Orleans, La.			30.10	764.5	79.5	26.4	84	SE	5	2.2		1cs	0	SW		0.17	4.3	Clear	
Newport, R. I.			30.28	769.1	73	22.8	85	Calm	0	0		5k	0	SW		0	0	Fair	
New York, N. Y.			30.22	767.6	72	22.2	90	NW	1	0.4			Fog			0	0	Foggy	
Norfolk, Va.			30.17	766.3	81	27.2	74	SE	3	1.3		5c	0	N		0	0	Fair	
North Platte, Neb.	26.93	684.0	29.33	745.7	67	19.4	99	SE	14	6.3			10ks		SW	0	0	Cloudy	
Omaha, Neb.	28.81	732.5	29.86	758.4	73	22.8	90	S	10	4.5		0	0			0	0	Clear	
Oswego, N. Y.			30.14	765.5	80	26.7	66	S	5	2.2		5cs	2s			0	0	Fair	
Pembina, Dakota			29.66	753.4	61	16.1	94	N	8	3.6		0	10s			0.60	15.2	Cloudy	
Philadelphia, Penn.			30.21	767.3	69	20.6	95	E	5	2.2			Fog			0	0	Foggy	
Pike's Peak, Colorado	17.98	456.7	30.19	766.8	37	2.8	37	W	28	12.5		0	0			0	0	Clear	
Pittsburgh, Penn.			30.11	764.8	71	21.7	90	S	3	1.3			10n		S	0.14	3.6	Light rain	
Port Huron, Mich.			30.03	764.5	72	22.2	90	SW	4	1.8			10s		W	0.87	22.1	Cloudy	
Portland, Me.			30.22	767.6	65	18.3	89	SW	3	1.3			Fog			0	0	Foggy	
Portland, Oregon			30.16	766.1	48	8.9	92	Calm	0	0		0	2s		NW	0	0	Fair	
Punta Rassa, Fla.			30.15	765.8	80.5	26.9	80	E	8	3.6		5cs	0	NE		0	0	Fair	
Rochester, N. Y.			30.11	764.8	75	23.9	72	S	4	1.8		2ck	5s	W	W	0	0	Fair	
Salt Lake City, Utah	25.44	646.2	29.77	756.1	63	17.2	57	NE	4	1.8		0	0			0	0	Clear	
Sandy Hook, N. J.			30.21	767.3	76	24.4	86	NE	1	0.4		0	Haze			0	0	Clear	
San Diego, Cal.			29.83	757.7	70	21.1	84	S	8	3.6			10s		S	0	0	Cloudy	
San Francisco, Cal.			29.77	756.1	55	12.8	80	W	8	3.6		0	0			0	0	Clear	
Santa Fé, N. M.	23.32	592.3	29.86	758.4	58	14.4	81	E	5	2.2		2c	0			0	0	Clear	
Savannah, Ga.			30.19	766.8	80	26.7	78	Calm	0	0		5ck	5s	SE		0	0	Cloudy	
Shreveport, La.			30.10	764.5	76	24.4	95	SE	4	1.8			10s		SE	0	0	Cloudy	
Smithville, N. C.			30.17	766.3	71	21.7	95	N	5	2.2			10s		N	1.08	27.4	Cloudy	
Springfield, Mass.			30.20	767.1	71	21.7	85	S	4	1.8			Fog			0	0	Dense fog	
St. Louis, Mo.			30.04	763.0	75	23.9	90	S	8	3.6		0	0			Inap.	Inap.	Clear	
St. Marks, Fla.			30.18	766.6	76	24.4	86	E	2	0.9		2c	2ks	E		0	0	Fair	
St. Paul, Minn.			29.89	759.2	62	16.7	88	E	6	2.7		2c	2s	SW	SW	0	0	Fair	
St. Paul's Island, Alaska			29.78	756.4	42	5.6	91	N	7	3.1			Fog			0.02	0.5	Foggy	
Thatcher's Island, Mass.			30.22	767.6	66	18.9	100	SW	5	2.2						0	0	Dense fog	
Toledo, Ohio			30.05	764.3	73	22.9	95	SW	4	1.8			Fog		SW	0.06	1.5	Foggy	
Tucson, Arizona	27.40	698.2	30.10	764.5	76	24.4		SE					10ks			0	0	Cloudy	
Tybee Island, Ga.			30.17	766.3	78	25.6	95	Calm	0	0		2c	5ks	S		0	0	Cloudy	
Vicksburg, Miss.			30.13	765.3	75.5	24.2	92	SE	2	0.9		5cs,k	0	SE		0.05	1.3	Fair	
Virginia City, M. T.	24.17	613.9	29.65	753.1	41	5.0	57	SE	2	0.9		1k	0	W		0	0	Clear	
Washington, D. C.			30.19	766.8	75.5	24.2	84	Calm	0	0		8ck	2ks	NW		0.75	19.1	Cloudy	
Wilmington, N. C.			30.17	766.3	71	21.7	95	NE	4	1.8			10s		NE	0.91	23.1	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.
Wood's Holl, Mass			30.25	768.3	75	23.9	72	SE	1	0.4		2c	0	SE		0	0	Clear	
Yankton, Dakota	28.56	725.4	29.71	756.1	72	22.2	80	S	11	4.9		0	0			0	0	Clear	
Yuma, Arizona			29.79	756.7	87	30.6		E				0	0			0	0	Clear	
Sub-Series.																			
Kingston, Jamaica, W. I.			30.17	766.3	78	25.6	86	Calm	0	0		5c	2s			0.50	12.7		James Gall.
St. Georges, Bermudas			30.25	768.3	79.5	26.4	91	SSE	8	3.6			10n			0	0	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Paramaribo, D. Guiana, S. A.			30.04	763.0	79	26.1	87	E			2	3c	5k	E		0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.08	764.0			77.0	25.0		N								1.752	44.5		Dr. H. Groot.
Medellin, Colombia, S. A.	25.13	638.3			64.0	17.8	80	S	1	0.4		1c	8s			0.52	13.2	Cloudy	Thomas Herran.
York Factory, B. A.			30.00	762.0	43	6.1	71	N	8	3.6		2c	0	NE		0	0		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.07	763.8	76	24.4		NE			2					0	0	Cloudy	Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	State of ocean.	Direction of swell from—	Weather.	Observer.
Schooner Annie Fuller, N. 37° 00′ W. 75° 20′	NWby W	2¼	30.18	766.6	82	27.8		SSE		2	2ck	2ks	NW	W	Smooth		*D. clouds	Capt. James Jorgensen.
Steamer Hibernian, N. 51° 51′, W. 26° 29′.	NwW	10¼	29.50	749.3	60	15.6		Var.		7		..ks		SE,E	Rough		Misty	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.; Denver, 5,135 ft., or 1,565. m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,245 ft., or 1,9156 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,051.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,262.2 ft., or 1,299.2 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. * Detached clouds.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			30.01	761.9	84.0	28.9	70	Calm			0		1			0	0	Clear	Charnot.
Algiers			29.99	761.7	86.0	30.0	62	N			3		4			0	0	Fair	Peter.
La Calle			30.00	762.0	79.5	26.4	78	NE			2		0			0	0	Clear	Kunts.
Tunis			30.02	762.5	88.5	31.4	42	NE			3		3			0	0	Fair	Jacques.
Sfax			30.04	764.3	87.8	31.0	78	SE			3		2			0	0	Clear	Chauvey.
Sousa			30.01	762.8	80.0	30.0	24	W			5		5			0.890	22.6	Fair	Millot.
Tebessa			30.02	762.6	82.8	28.2		SW			1		2			0	0	Clear	Colin.
Gerville			30.06	763.4	88.3	31.3	28	NNE			2		3			Inap.	Inap.	Fair	Lemaillot.
Laghouat			30.07	763.8	91.4	33.0	25	W			3		2			0	0	Clear	Guyot.
Biskra			30.03	762.7	90.5	32.5	42	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			29.98	761.6	81.0	27.2	42	NE			2		1			0	0		Prof. Ivan Stozir.
Olmütz, I. R. Observatory			30.07	764.8	72.7	22.6	53	W			1		6			0	0		Dr. Wierzbiski.
Eperies			29.96	761.0	73.8	23.2	52	N			5		6cks		S	0	0		Julius Mikolik.
Gratz	28.83	732.0	29.97	761.2	76.1	24.5	57	SW			2		0			0	0		Andreas Rospini.
Hermannstadt	28.48	723.3	29.83	757.6	77.4	25.2	40	NW			3		4			0.045	1.15		Prof. Reissenberger.
Kremsmünster	28.72	729.6	30.01	762.2	75.2	24.0	40	ENE			3		0			0	0		Prof. C. Wagner.
Lemberg			29.92	760.0	67.3	19.6	76	NE			4		5			0.047	1.2		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.00	762.1	81.9	27.7	53	WNW			1		2ks			0	0		I.R.Hydrographic Office
Szegedin			29.95	760.8	77.4	25.2	41	Calm			0		4			0	0		Karl Stancel.
Trieste			30.00	762.1	82.6	28.1	63	NW			1		2k			0	0		Prof. V. Farolfi.
Vienna			30.00	762.0	79.7	26.5	38	Calm			0		0			0	0		I. R. Central Met. Obs'y

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.0 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			29.96	760.9	82.9	28.5	36	SSE			2	0	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			30.08	764.0	60.6	15.9		ESE	8	3.6			1			0	0	Blue sky	William Boswell.
Ardrossan																			William McNeil.
Armagh, Observatory			29.94	760.5	73.4	23.0		E	7	3.1									S. Caul, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.86	758.4	79.4	26.3		SE			1		0					Blue sky	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbadoes)			30.01	762.2	84	28.9		NE			2		4					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			29.93	760.2	91.2	32.9		SE			1		0						H. Todd.
Cardington			29.96	761.0	91.4	33.0		SE			1		1					Blue sky	John McLaren.
Carlisle			29.93	760.2	85.5	29.7		E			3		1			0	0	Blue sky	T. Bell, for J. Carmell.
Chatham, School M. E			29.94	760.5	82.5	28.1		NE			2		0					Blue sky	Capt. J. Fellowes, R.E.
Dartmoor	18.61	726.7	30.05	763.3	74.5	23.6		S			1		0					Blue sky	R. L. Power.
Donaghadee			29.96	761.0	67	19.4		NNE			1		0					Blue sky	J. MacGowan.
Dover			29.94	760.5	74	23.3		ENE			3		0					Clear	J. Costello.
Eccles (near Manchester)			29.93	760.2	84.1	28.9		SE	3.4	1.5			0					Blue sky	Thomas Mackereth.
Falmouth, Observatory			29.94	760.5	71.5	21.9		WSW			1		8					Overcast	The Staff.
Fort Napier, (Natal)	27.65	702.3	29.89	759.2	62.1	16.7		S			3		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone			29.98	761.5	77	25.0		W			2		8					Overcast	
Galway, Queen's College			30.12	765.0	76	24.4		Calm			0		0					Blue sky	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.00	762.0	82.9	28.3		W			4		0					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.98	761.5	70.1	21.2		W			1							Fine	Lewis Stuart.
Great Yarmouth			30.04	762.7	70	21.1		SE			2		0					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			29.95	760.7	92.3	33.5		E			2		0					Blue sky	The Staff, for G. B. Airy
Guernsey			29.96	761.0	67.5	19.7		NW			1		7					D. clouds	Dr. S. E. Hoskins.
Helston			29.98	761.5	71	21.7		SW			2		2c			0	0	Fine	M. P. Moyle.
Holyhead			29.93	760.2	68	20.0		NW			2		0					Blue sky	John Tinston.
Kew, Observatory			29.93	760.2	90.6	32.6		SW	13	5.8			0					Hazy	The Staff.
Kingstown			29.95	760.7	63	17.2		E			3		0					Blue sky	George Mitchell.
Leicester Museum			29.95	760.7	83.0	31.1		SE			1		0					Blue sky	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.92	759.0	82.0	27.8		NE			1		4k					D clouds	Corp'l F. Fraser, A. M. C.
Nairn			29.96	761.0	60	15.6		Calm			0							Hazy	W. D. Lenny.
Nassau, (Bahamas)			29.93	761.5	84.1	28.9		NE			4		6					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.96	761.0	88.5	31.4		ESE			3		0			0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.97	761.2	84.0	28.9		E			2		0					Blue sky	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.92	760.0	87	30.6		SE			1		0					Blue sky	J. Lucas.
Plymouth			29.95	760.7	70.5	21.4		E			2		5					D. clouds	John Merrifield.
Roche's Point			29.89	759.2	70	21.1		ESE			4		8					Dull	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, Jersey			29.96	761.0	72.0	22.2		E			1		8					¾ clouded	A. P. Amy.
Sandwick Manse, Orkneys			30.06	763.5	64.6	18.1		SE	20	8.9			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, Turkey			29.81	757.2	79.0	25.0		NE			2		8			Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.97	761.2	79.8	26.6		ENE			1		0			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			29.93	760.2	85.7	29.8	63	S			2		0			0	0	Blue sky	Rev. Francis Redford
Stonyhurst, Observatory			29.94	760.5	78.1	25.6		E			2							Hazy	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			29.98	761.5	65	18.3		NE			1		0					Blue sky	John Smith.
Stratfield Turgiss			29.88	758.9	88.0	31.1		SE			1		0					Blue sky	Rev. Charles H. Griffith
Thurso			29.91	759.7	72	22.2		ESE			4		3					Blue sky	John Trotter.
Truro, Royal Institution			29.96	761.0	80	26.7		SW			2		3					*D clouds	W. Newcombe.
Valencia, Observatory			29.82	757.4	69.9	21.1		SE	30	13.4			4					*D. clouds	The Staff.
Sub-Stations.																			
Calf of Man, (Isle of Man)					58	14.4		SE			3		2						Thomas Dawson.
Cape Good Hope, Obs'y			30.38	771.6	62.1	16.7	52	SE	21	9.4		0	1						The Staff, for E. J. Stone
Hobart Town, (Tasmania)			30.14	765.5	60.0	15.6	87	N			1		8n			0.02	0.5		Francis Abbott, F.R.A.S.
Leith, Restaurig Park			30.04	763.0	62.0	16.7		E			2					0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.05	763.3				E	15.3	6.8						0.025	0.63		C. Meldrum
Melbourne, Observatory			30.37	771.4	45.2	7.3	82	SW	3	1.3			0			0	0	Fine, frosty	R. L. J. Ellery.
Monach Lighthouse, Scotland			29.95	760.7	68	20.0		SE			3	0	0			0	0		J. Youngclause.
North Unst, (Shetland Isls.)			30.14	765.5	59	15.0		SE			1	2	0	S					Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,220 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	69.1	20.6	67	NE			2		0						
Faröe			30.16	766.0	74.8	23.8	84	WSW			2		0						
Godthaab, Greenland			29.77	756.1	40.5	4.7	94	SSW			7		10					Raining	
Stykkisholm, Iceland			30.09	764.3	49.5	9.7	84	NW			2		0						
Thorshavn, Faröe			30.15	765.8	49.6	9.8	94	ENE			2		10						
Vestervig			30.13	765.3	69.1	20.6	64	WNW			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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observers.
Alençon			30.07	763.7	82.8	28.2	57	NE			1		8k		NE	0	0	Very cloudy	Normal School.
Amiens																			Normal School.
Avignon			30.03	762.7	89.2	31.8	47	SSW			2		0			0	0	Clear	Normal School.
Bar-sur-Seine			29.93	760.2	88.5	31.4	23	NW			2		0			0	0	Clear	C. Saillard.
Beaumette, (near Angers)			29.97	761.1	66.0	18.9	98	E	5.4	2.4			10		SW	0.299	7.6	Raining	Beaumette Observatory
Beauvais			29.93	760.2	86.4	30.2	29	E			1		0			0	0	Clear	Normal School.
Besançon																			Normal School.
Bourg en Bresse			29.322	744.87	91.4	33	25	S			2		0			0	0	Clear	Normal School.
Bourges			29.99	761.8	89.2	31.8	63	S			3				S	0	0		Normal School.
Brest			29.93	760.3	78.3	25.7	65	SW			2		1		SW	0	0	Stormy	Naval Observatory.
Carcassonne			30.03	762.7	79.7	26.5	60	W			1		5		E	0	0	Cloudy	Normal School
Caen																			Normal School.
Chartres			29.98	761.6	81.9	27.7	74	SW			4		5		N	0	0		Normal School.
Châlons-sur-Marne			29.95	760.6	87.3	30.7	33	W			2		0			0	0	Clear	Normal School.
Clermont			29.91	759.7	85.5	29.7	34	NNW			2		2			0	0	Slightly cl'dy	Puy de Dôme Obs'y.
Commercy			30.03	762.8	79.2	26.2	44	E			2		0			0	0	Clear	Normal School
Commune de Greasque*			30.12	765.0	85.1	29.5	38	SW			4		2		NE	Inap.	Inap.		M. Kina.
Grenoble			29.94	760.4	81.0	27.2	89	NW			2		2		SE	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon					81.7	27.6	60	WNW			2		5		N	0	0	Cloudy	Normal School.
Le Mans			29.97	761.2	79.3	26.3	53	W			2		8		SW	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier			30.03	762.8	84.6	29.2	39	W			4		0			0	0	Clear	Normal School.
Mâcon			30.16	766.1	84.4	29.1	54	Calm			0		5		N	0	0	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			29.94	760.4	79.7	26.5	46	ENE			1		1		E E	0	0	Clear	Normal School.
Nîmes			30.11	764.8	93.7	34.3	58	W			1		5		NW	0	0	Cloudy	Normal School.
Orleans																			Normal School.
Paris, Observatory			29.92	760.0	90.0	32.2	28	E			2		0			0	0	Clear	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			30.13	765.2	80.1	26.7	65	WNW			4		10		SE	0.079	2.0	Covered	Naval Observatory.
Rouen			29.89	759.1	95.4	35.2	28	SE			1		0			0	0	Clear	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School
Villefranche			30.01	762.3	93.2	34	61	SE			2		2			0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.89	759.2	82.4	28													L'Abbé Marchesi.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.28	769.1	68.0	20.0	88	ESE	16.8	7.50			6		SW	0.004	0.1		—. Falguère.
Montsouris, Paris			29.93	760.1	97.0	36.1	32	SSE			1		0			0	0	Clear	Montsouris Observatory.
Perpignan			30.02	762.4	78.8	26.0	25	E	13.0	5.83			8		W	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.46	545.0			63.9	17.7		S			1		10					Stormy	M. Baylac.
Pic du Midi, (Plantade)	22.70	576.6			51.6	10.9		S			2		10			0.120	3.2	Stormy	General de Nansouty.
Saint Maur, (near Paris)			29.93	760.2	92.3	33.5	21	E			1		0			0	0	Clear	E. Renou.
Toulouse			30.12	765.1	73.8	23.2	67	WNW			3		10			0	0		Toulouse Observatory
Tours			29.96	760.9	84.2	29.0	38	SW			2		9		SSW	0	0		C. Marquet.
Versailles, (near Paris)			29.94	760.5	92.5	33.6	24	SE			1		0			0	0	Very clear	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai																			H. Le Lec, S. J.

NOTE.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Clermont, 388 m., or 1,272.9 ft; Commune de Grésasque, 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observers.
Bamberg			30.07	763.7	81.7	27.6	34	NE			2		0			0	0		Prof. T. Hoh.
Berlin			30.13	765.3	79.9	26.6	30	E			1		0			0	0		Prof. Arndt.
Breslau			30.17	766.3	76.8	24.9	37	N			6		1			0	0		Dr. P. Neugebauer.
Carlsruhe			29.96	760.9	84.9	29.4	38	ENE			2		0			0	0		A. Senz.
Cassel			30.09	764.2	85.3	29.6	29	E			5		0			0	0		Dr. H. Möhl.
Emden			30.04	762.9	80.4	26.9	47	E			4		0			0	0		Prof. Prestel.
Frankfort on the Main			30.01	763.0	84.9	29.4	16	E			2		0			0	0		Physical Society.
Friedrichshafen			30.00	762.1	73.6	23.1	76	WSW			3		0			0	0		M. Wilhelm.
Hamburg			30.15	765.9	78.3	25.7	40	E			3		0			0	0	Blue sky	Captain F. Hegemann.
Kiel			30.13	765.3	73.0	22.8	42	NNE			3		0			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			30.14	765.3	72.5	22.5	51	NE			2		2			0.004	0.1		Prof. E. Luther.
Köslin			30.17	766.3	74.5	23.6		SE			4		0			0	0		H. Müller.
Leipsic			30.12	765.1	80.8	27.1	26	ESE			1		0			0	0		Prof. Bruhns.
Memel			30.15	765.9	66.9	19.4	73	NW			2		1k			0	0		Reinbrecht & Skalweit
Münster			30.18	766.6	84.0	28.9	47	E			5		0			0	0		Prof. E. Heis.
Neufahrwasser			30.19	766.8	69.1	20.6	68	ENE			1		2			0	0		A. Lothes.
Posen			30.15	765.9	77.7	25.4	38	NW			3		1			0	0		Dr. Magener.
Strasburg, (in Alsace)			29.98	761.5	83.3	28.5	38	Calm			0		0			0	0		Dr. Schur.
Stuttgart			30.00	762.0	83.1	28.4	31	E			2		0			0	0		Prof. Schoder.
Thorn			30.12	765.1	77.9	25.5	36	NE			4		3			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.97	761.3	85.8	29.9	26	E			6		0			0	0		Prof. Flesch.
Wustrow, Naval School			30.29	769.3	71.4	21.9	60	N			1		0			0	0		E. F. Schütz.

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.91	759.7	79.3	26.3		NE										Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	82.9	28.3	32	NW	1.3	0.6			3			0	0		
Padua			29.99	761.6	82.2	27.9	42	S	2.2	1.1			2	NE		0	0		
Vicenza			30.02	762.6	82.0	27.8	38	SE	3.1	1.4			3	W		0	0		
Verona			29.92	759.9	87.8	31.0	33	SE			1		0			0	0		
Bergamo																			
Domodossola	28.96	735.5	29.91	760.5	83.3	28.5	50	SW			6		4			0	0		
Milan			29.98	761.6	89.1	31.7	46	E			2		1	E		0	0		
Pavia			30.00	762.1	82.6	28.1	42	N			1		0			0	0		
Moncalieri			30.00	762.1	82.8	28.2	48	ESE	4.9	2.2			1			0	0		
Mondovi	28.16	715.3	30.00	762.0	79.7	26.5	42	N			2		1			0	0		
Porto Maurizio			30.07	763.6	83.8	28.8	49	S			2		1			0	0		
Genoa			29.99	761.8	84.2	29.0	46	SW	1.8	0.8			0			0	0		
Piacenza																			
Parma			29.97	761.3	86.9	30.5	38	E			2		0			0	0		
Bologna			30.02	762.4	83.1	28.4	41	N			1		4	S		0	0		
Florence			30.01	762.3	87.8	31.0	25	N			2		1			0	0		
Leghorn			30.01	762.3	81.7	27.6	46	ENE	5.6	2.5			3			0	0		
Siena	28.82	731.8	29.97	761.1	82.6	28.1	27	NE	1.8	0.8			4	NE		0	0		
Urbino	28.51	724.9	30.04	762.9	76.1	24.5	46	NE			2		4			0	0		
Ancona			30.00	761.9	82.0	27.8	57	WSW			4		0			0	0		
Grosseto			30.00	762.0	89.2	31.8	23	NW			2		3	NW		0	0		
Rome			29.95	760.6	87.4	30.8	22	N	3.8	1.7			3			0	0		
Naples, O. U.			29.96	760.9	83.7	28.7	53	SW			4		10			0.315	8.0		
Lecce			29.95	760.7	81.0	27.2	41	E	15.0	6.7			5			0	0		
Cosenza			29.96	761.0	83.5	28.6	76	SE	15.4	6.9			10			0.031	0.8		
Riposto, (Sicily)			29.93	760.2	84.7	29.3	68	E			2		0			0	0		
Palermo			29.92	759.9	82.8	28.2	48	NE	6.9	3.1			2			0	0		
Caltanissetta	28.00	711.1	29.87	758.6	78.6	25.9	42	SSW			6		9	E		0	0		
Sub-Series.																			
Naples, S. R			29.97	761.2	82.9	28.3	39	SW	3.1	1.4			10	W		0	0		Prof. F. Brioschi.
Pesaro			30.08	764.1	77.5	25.3	66	N	19.5	8.7			1k	N		0	0		L. Guidi.

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 1,004.9 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	762.4	82.9	28.3		SE			2								
Groningen			30.05	763.2	79.0	26.1		E			4								
Helder			30.05	763.2	77.4	25.2		E			2								
Utrecht			30.00	762.1	84.2	29.0	30	SE			3		0					Clear	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	765.9	68.0	20.0	74	NW	3.6	1.6			0			0	0		
Bröno			29.95	760.8	53.6	12.0	86	W	27	12			10			0.630	16.0		
Christiania			30.01	762.9	78.4	25.8	35	SSW	0.4	0.2			1			0	0		
Tromsö			29.51	749.5	47.8	8.8		SW	13	6			10			0.571	14.5	Light rain	

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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,)			29.92	760.0	73.4	22.3	77	WNW	14.7	6.58			7			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.02	762.5	88.0	31.1	26	NW	8.1	3.58			2			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.16	766.0	74.5	23.6	69	SW	6.4	2.86			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.11	764.9	78.3	25.7	40	NNE	7.4	3.3			0			0	0		The Observatory.

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

RUSSIAN SERIES.

Furnished by 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			30.08	764.1	69.3	20.7	46	NNE	11	5			1						Astronomical Obs.
Wilna			30.07	764.7	70.9	21.6	40	NE	9	4			1						Astronomical Obs.
Dorpat			30.07	763.7	73.9	23.3	44	SSW	4	2			1						Physical Cabinet.
St. Petersburg			30.01	762.2	68.7	20.4	73	WNW	13	6			0						Central Physical Obs.
Kiopio			29.85	758.1	75.7	24.3	63	W	22	10			3						Ch. Forsten.
Kieff			29.89	759.4	67.1	19.5	55	NW	7	3			8						Physical Cabinet
Nikolaiev			29.87	758.7	80.2	26.8	35	N	13	6			8						Kurdakof.
Kerich			29.85	758.2	73.6	23.1	81	N	13	6			10						Lagorio.
Moscow			29.89	759.1	72.9	22.7	55	NW	9	4			6						Meteorological Obs.
Lugan			29.71	754.5	77.9	25.5	40	E	18	8			10			Blank	Blank		Meteorological Obs.
Archangel			29.68	753.8	70.5	21.4	94	W	22	10			0						Ogorodnikof.
Tiflis	28.29	718.6	29.59	751.5	97.9	36.6	16	SE	7	3			0						Physical Observatory.
Astrakhan			29.64	752.6	95.5	35.3	25	Calm	0	0			0						Sebastianof.
Kasan			29.61	752.2	68.9	20.5	84	NNE	9	4			9						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinbourg	28.76	730.4	29.68	753.9	56.5	13.6	88	NE	2	1			10						Meteorological Obs.
Nukuss			29.63	752.7	91.0	32.8	44	NNW	4	2			0						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul			29.37	746.1	64.5	17.5	83	SE	4	2			10						Meteorological Obs.
Yenisetsk			29.54	750.3	60.3	15.7	74	SE	2	1			6						Marks.
Irkutsk																			Usoizef.
Oorga																			Mossin.
Peking, (China)			29.85	758.3	79.2	26.2	79	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.85	758.1	70.7	21.5	100	SE	9	4			10			Blank	Blank		
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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 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			29.92	760.0	90.9	32.7	28	W	3.7	1.67		3	0	SW		0	0	Light clouds	Royal Observatory
San Fernando			30.06	763.5	80.8	27.1	56	WNW	11.9	5.3		0	0			0	0		The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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			29.69	754.0	65.5	18.6	68	SW			4		5			0	0		
Umea			29.94	760.4	73.0	22.8	52	NW			4		0			0	0		
Hernosand			29.96	761.0	77.7	25.4	37	W			4		3			0	0		
Stockholm			30.09	761.9	83.8	28.8	35	SW			4		0			0	0		
Visby			30.15	765.9	70.2	21.2	67	W			6		0			0	0		
SUB-SERIES.																			
Upsala			29.99	761.7	83.1	28.4	32	SW	12.5	5.6			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; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall is measured at 8 a. m., local time.

SWISS SERIES.

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

Stations	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0 - 10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. 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	28.61	726.7	29.94	760.5	88.5	31.4	47	SW			4		1			0	0	Clear	The Observatory.
Zurich	28.44	722.3	29.98	761.5	83.5	28.6	48	NW			1		1			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, —1.1 mm; Thermometer, +9.4 cent.; Relative Humidity, —7 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

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

Stations	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0 - 10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. 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			29.86	758.4	76.1	24.5	76	NNE	13	6.0			8		NE	0	0		
Fao, (Persian Gulf)																			
Salonica			29.95	760.6	84.0	28.9		NW			1		10						
Valona			29.97	761.3	81.5	27.5		W			1		8						
Varna			29.84	758 0	82.4	28.0		E			2		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.81	758.0	85.1	29.5	55	WNW			2		1k	S	N				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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

Stations	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0 - 10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. 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			30.22	767.6	80	26.7		SW	1	0.4		0	0			0	0	Clear	W. R Bigg.
*Chatham, N. B			30.14	765.5	72	22.2	78	SW	4	1.8		8c	0	SW		0	0	Fair	G. A. Blair.
Charlottetown P. E. Island			30.17	766.3	70	21.1	73	SW	5	2.2		0	0			0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			30.13	765.3	76.2	24.6	79	SE			1	6k	0			0	0	Dull	James Smith, M. A.
Dalhousie, N. B			30.00	762.0				NW			1					0	0	Clear	H. A. Johnson.
Esquimault, B. C																			W. H. Bevis.
Fredericton, N. B			30.22	767.6	64.32	17.4?	88	W	1	0.4			Fog			0	0	Foggy	Prof. Harrison.
*Fort Garry, Manitoba			30.02	762.5	52	11.1	98	N	12	5.4			10n			0.130	3.30	Cloudy	James Stewart.
Goderich, Ontario			30.14	765.5	72.9	22.7	92	SE			1		10n			0	0	Threatening	H. J. Strang, M. A.
Granton, Ontario	29.06	738.1	30.11	764.8	74.2	23.4		SE			1	1cs	0	W		0	0	Clear	James Grant.
*Halifax, N. S.			30.18	766.6	75	23.9	76	W	7	3.1			8ks		NW	0	0	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.22	767.6	77	25.0	95	SW	1	0.4		0	2k		SW	0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			30.09	764.3	79.0	26.1	59	SW	5	2.2		0	0			0	0	Smoky	C. H. Rigby
*Montreal, Quebec			30.15	765.8	75	23.9	84	Calm	0	0		5k	Sm'e	E		0	0	Smoky	C. H. McLeod, C. E.
*Ottawa, Ontario			30.17	766.3	75	23.9	63	W	2	0.9		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.13	765.3	76	24.4	86	S	4	1.8		2cs	0	SW		0	0	Fair	Rev. R. Mosley.
Port Dover, Ontario			30.14	765.5	73	22.8	90	S	5	2.2		5k	0	SW		0.06	1.5	Clear	H. Morgan.
Port Hastings N. S.																			Peter Grant.
Port Stanley, Ontario			30.11	764.8	73	22.8	98	E	1	0.4		8k	0			0.43	10.9	Cloudy	M. Payne.
*Quebec, Quebec			30.17	766.3	76	24.4	83	Calm	0	0		0	0			0	0	Clear	Capt. Ashe, R. N
St. John, N. B.			30.24	768.1	60	15.6	94	Calm	0	0			10s			0	0	Cloudy	G. Murdoch, C. E
*Saugeen, Ontario			30.10	764.5	71	21.7	94	Calm	0	0			Fog			0	0	Foggy	K. Stewart.
Stayner, Ontario																			R. J. Cole.
Stratford, Ontario	28.87	733.3	30.10	764.5	69.8	21.0	97	Calm	0	0			Fog			0	0	Foggy	C. J. MacGregor, M. A
*Sydney, C. B			30.14	765.5	76	24.4	72	W	4	1.8		0	Sm'e			0	0	Clear	T. C. Hill.
*Toronto, Ontario			30.15	765.8	76	24.4	83	SE	5	2.2		8ck	0	SE		0	0	Fair	Magnetic Observatory.
Woodstock, Ontario			30.13	765.3	70.3	21.3	97	E	1	0.4			10s			0.08	2.0	Gloomy	J. Montgomery
Sub-Series.																			
St. Johns, Newfoundland			30.20	767.1	67	19.4	83	SE					10n			0	0	Cloudy	John Delaney.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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	.....	.....	30.16	766.1	77	25.0	69	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	
Alpena, Mich	.....	.....	30.06	763.5	70	21.1	90	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Atlantic City, N. J	.....	.....	30.18	766.6	79	26.1	82	E	12	5.4	.....	2k	2ks	W	E	0	0	Fair	
Augusta, Ga	.....	.....	30.11	764.8	75	23.9	86	N	3	1.3	.....	.....	10ks	.....	.....	0.06	1.5	Cloudy	
Baltimore, Md	.....	.....	30.19	766.8	75	23.9	85	SE	6	2.7	.....	8k	Fog	E	.....	0.29	7.4	Clearing	
Barnegat, N. J	.....	.....	30.18	766.6	80	26.7	82	SE	10	4.5	.....	5k	2s	E	E	0	0	Fair	
Bismarck, Dakota	28.24	717.3	29.85	758.2	57	13.9	82	Calm	0	0	.....	10k	0	N	.....	0.16	4.1	Cloudy	
Boston, Mass	.....	.....	30.19	766.8	75	23.9	76	SW	3	1.3	.....	2cs	Haze	SW	.....	0	0	Hazy	
Breckenridge, Minn	.....	.....	29.75	755.6	64	17.8	89	NE	8	3.6	.....	.....	10ks	.....	.....	0.35	8.9	Cloudy	
Buffalo, N. Y	.....	.....	30.12	765.0	74.5	23.6	74	S	3	1.3	.....	5c	0	W	.....	0	0	Fair	
Burlington, Vt	.....	.....	30.17	766.3	78	25.6	69	S	5	2.2	.....	0	Sm'e	.....	.....	0	0	Smoky	
Cairo, Ill	.....	.....	30.07	763.8	75	24.9	90	S	4	1.8	.....	.....	10s	.....	.....	1.07	27.2	Cloudy	
Cape Hatteras, N. C	.....	.....	30.04	763.0	81	27.2	74	Calm	0	0	.....	5k	0	S	.....	0	0	Fair	
Cape Henry, Va	.....	.....	30.08	764.0	79	26.1	74	E	8	3.6	.....	5c	5ks	W	W	0	0	Cloudy	
Cape Lookout, N. C	.....	.....	30.10	764.5	78	25.6	82	SE	8	3.6	.....	5ck	2ks	SE	SE	0	0	Fair	
Cape May, N. J	.....	.....	30.17	766.3	79	26.1	78	SE	11	4.9	.....	2k	0	SE	.....	0	0	Fair	
Charleston, S. C	.....	.....	30.09	764.3	79	26.1	82	N	7	3.1	.....	5cs	0	.....	.....	0.15	3.8	Fair	
Cheyenne, Wyoming	24.09	611.9	30.03	762.7	48	8.9	77	N	24	10.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Chicago, Ill	.....	.....	30.02	762.5	76	24.4	86	S	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Cincinnati, Ohio	.....	.....	30.05	763.3	75	23.9	90	W	1	0.4	.....	0	Fog	.....	.....	Inap.	Inap.	Foggy	
Cleveland, Ohio	.....	.....	30.10	764.5	69.6	20.9	90	E	5	2.2	.....	0	2ks	.....	.....	0.01	0.3	Clear	
Corsicana, Tex	.....	.....	29.98	761.5	76	24.4	90	SE	5	2.2	.....	.....	10s	.....	S	0	0	Cloudy	
Davenport, Iowa	.....	.....	30.01	762.2	76	24.4	86	S	2	0.9	.....	2k	0	S	.....	0	0	Clear	
Denison, Tex	.....	.....	29.99	761.7	77	25.0	85	SE	3	1.3	.....	.....	10s	.....	S	0	0	Cloudy	
Denver, Col	24.83	630.7	30.05	763.3	55	12.8	62	NE	5	2.2	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Detroit, Mich	.....	.....	30.07	763.8	76	24.4	86	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	
Dodge City, Kan	27.26	692.4	29.41	747.0	73	22.8	85	SE	17	7.6	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	29.98	761.5	77	25.0	86	SE	4	1.8	.....	10k	0	SE	.....	0	0	Cloudy	
Duluth, Minn	.....	.....	29.87	758.7	62	16.7	94	Calm	0	0	.....	.....	10s	.....	SW	0.04	1.0	Threatening	
Eastport, Me	.....	.....	30.22	767.6	56	13.3	100	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Dense fog	
Erie, Pa	.....	.....	30.08	764.0	76	24.4	72	SE	8	3.6	.....	5c	0	.....	.....	0.15	3.8	Fair	
Escanaba, Mich	.....	.....	30.04	763.0	71	21.7	90	SW	8	3.6	.....	.....	Fog	.....	.....	0	0	Foggy	
Fort Gibson, Indian Ter	.....	.....	29.92	760.0	79	26.1	78	E	6	2.7	.....	2c	0	.....	.....	0	0	Fair	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T	28.72	729.5	29.76	755.9	79	26.1	78	S	8	3.6	.....	2cs	2s	S	S	0	0	Fair	
Fort Sully, Dakota	28.24	717.3	29.85	758.2	61	16.1	88	NW	16	7.2	.....	.....	10s	.....	N	1.16	29.5	Cloudy	
Florence, Arizona	28.31	719.8	29.76	755.9	82	27.8	.....	SE	.....	.....	.....	.....	10s	.....	SE	0	0	Threatening	
Galveston, Tex	.....	.....	30.03	762.7	82	27.8	78	S	8	3.6	.....	8ck	2ks	N	S	1.48	37.6	Cloudy	
Grand Haven, Mich	.....	.....	30.04	763.0	77	25.0	86	SE	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Indianapolis, Ind	.....	.....	30.07	763.8	75	23.9	85	Calm	0	0	.....	.....	10s	.....	SW	0	0	Cloudy	
Indianola, Tex	.....	.....	30.00	762.0	81	27.2	87	S	18	8.0	.....	.....	8s	.....	S	0.03	0.8	Cloudy	
Jacksonville, Fla	.....	.....	30.11	764.8	82	27.8	74	SW	4	1.8	.....	4k	0	.....	.....	0	0	Fair	
Keokuk, Iowa	.....	.....	29.94	760.5	76	24.4	81	SE	4	1.8	.....	0	Haze	.....	.....	0	0	Clear	
Key West, Fla	.....	.....	30.08	764.0	83.0	28.3	70	E	6	2.7	.....	2k.hz.	Haze	E	E	0	0	Hazy	
Kittyhawk, N. C	.....	.....	30.11	764.8	80	26.7	74	E	6	2.7	.....	2ck	5ks	.....	.....	0	0	Fair	
Knoxville, Tenn	.....	.....	30.12	765.0	72	22.2	90	SW	1	0.4	.....	3ck	0	SW	.....	Inap.	Inap.	Fair	
La Crosse, Wis	.....	.....	29.93	760.2	76	24.4	86	S	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan	.....	.....	29.88	758.9	77	25.0	82	S	6	2.7	.....	5c	0	W	.....	0	0	Fair	
Louisville, Ky	.....	.....	30.08	764.0	74	23.3	90	Calm	0	0	.....	.....	Fog	.....	E	0.05	1.3	Foggy	
Lynchburg, Va	.....	.....	30.10	764.5	72	22.2	95	NE	2	0.9	.....	.....	10s	.....	NE	2.36	59.9	Cloudy	
Malone, N. Y	.....	.....	30.13	765.3	74	23.3	81	S	4	1.8	.....	8k	0	S	.....	0	0	Cloudy	
Marquette, Mich	.....	.....	30.03	762.0	70	21.1	84	SW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn	.....	.....	30.08	764.0	75	23.9	90	SE	4	1.8	.....	2ck	5s	S	SE	0.11	2.8	Cloudy	
Milwaukee, Wis	.....	.....	30.03	762.7	72	22.2	95	Calm	0	0	.....	0	Fog	.....	.....	0	0	Clear	
Mobile, Ala	.....	.....	30.13	765.3	75	23.9	95	S	3	1.3	.....	.....	10s	.....	.....	0.77	19.6	Cloudy	
Montgomery, Ala	.....	.....	30.13	765.3	78.5	25.8	84	W	2	0.9	.....	5ck	5s	.....	.....	0	0	Cloudy	
Morgantown, W. Va	29.98	738.6	30.09	764.3	75	23.9	81	Calm	0	0	.....	.....	10s	.....	S	0.10	2.5	Cloudy	
Mt. Washington, N. H	24.16	613.6	30.52	775.2	57	13.9	87	NE	8	3.6	.....	5k	Haze	NE	.....	0	0	Fair	
Nashville, Tenn	.....	.....	30.07	763.8	79	26.1	78	SE	2	0.9	.....	5c	0	.....	.....	0.38	9.7	Fair	
New Haven, Conn	.....	.....	30.21	767.3	75.0	23.9	86	Calm	0	0	.....	5k	Fog	.....	.....	0	0	Cloudy	
New London, Conn	.....	.....	30.22	767.6	75	23.9	85	S	1	0.4	.....	0	2s	.....	S	0	0	Fair, foggy	
New Orleans, La	.....	.....	30.11	764.8	78.5	25.8	84	SE	3	1.3	.....	4c	2ck	N	N	0.06	1.5	Fair	
Newport, R. I	.....	.....	30.22	767.6	75	23.9	81	Calm	0	0	.....	0	8s	.....	SE	0	0	Cloudy	
New York, N. Y	.....	.....	30.22	767.6	73	22.8	85	NE	6	2.7	.....	Haze	Fog	NE	.....	0	0	Fair	
Norfolk, Va	.....	.....	30.12	765.0	77	25.0	86	SE	2	0.9	.....	2cs	8ks	.....	.....	0.57	14.5	Cloudy	
North Platte, Neb	26.88	682.7	29.27	743.4	73	22.8	81	E	4	1.8	.....	0	2ks	.....	W	0	0	Clear	
Omaha, Neb	28.80	731.5	29.81	757.2	77	25.0	86	S	11	4.9	.....	8cs	0	S	.....	0	0	Cloudy	
Oswego, N. Y	.....	.....	30.18	766.6	78.3	25.7	69	S	6	2.7	.....	Haze	Haze	.....	.....	0	0	Hazy	
Pembina, Dakota	.....	.....	29.95	760.7	53	11.7	100	N	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Philadelphia, Penn	.....	.....	30.20	767.1	72	22.2	100	E	7	3.1	.....	.....	Fog	.....	.....	Inap.	Inap.	Foggy	
Pike's Peak, Colorado	18.00	457.2	30.21	767.4	38	3.3	71	W	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Pittsburgh, Penn	.....	.....	30.10	764.5	72	22.2	85	E	3	1.3	.....	1c	8s	.....	S	1.96	49.8	Clearing	
Port Huron, Mich	.....	.....	30.08	764.0	73	22.8	90	Calm	0	0	.....	0	Sm'e	.....	SW	0	0	Clear	
Portland, Me	.....	.....	30.20	767.1	69	20.6	90	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Dense fog	
Portland, Oregon	.....	.....	30.05	763.3	52	11.1	86	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Punta Rassa, Fla	.....	.....	30.08	764.0	81.0	27.2	78	NE	4	1.8	.....	2cs	Haze	.....	.....	0.11	2.8	Fair	
Rochester, N. Y	.....	.....	30.15	765.8	74	23.3	81	SW	4	1.8	.....	5c	Haze	W	.....	0.25	6.3	Fair	
Salt Lake City, Utah	25.63	651.0	29.96	761.0	54	12.2	55	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J	.....	.....	30.20	767.1	77	25.0	80	NE	5	2.2	.....	0	1ks	.....	SE	0	0	Clear	
San Diego, Cal	.....	.....	29.89	759.2	68	20.0	84	S	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
San Francisco, Cal	.....	.....	29.79	756.7	55	12.8	80	S	14	6.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Santa Fé, N. M	23.30	591.8	29.84	757.9	58	14.4	81	SE	6	2.7	.....	5c	0	.....	.....	0	0	Fair	
Savannah, Ga	.....	.....	30.10	764.5	81	27.2	74	Calm	0	0	.....	8k	0	SE	.....	0.07	1.8	Fair	
Shreveport, La	.....	.....	30.09	764.3	77	25.0	91	SE	4	1.8	.....	.....	10s	.....	SE	0.38	9.7	Cloudy	
Smithville, N. C	.....	.....	30.09	764.3	75	23.9	85	N	5	2.2	.....	5ck	2ks	N	N	0	0	Cloudy	
Springfield, Mass	.....	.....	30.19	766.8	73	22.8	85	S	4	1.8	.....	.....	Fog	.....	.....	0	0	Dense fog	
St. Louis, Mo	.....	.....	30.04	763.0	75	23.9	90	S	6	2.7	.....	0	10s	.....	SE	0.02	0.5	Cloudy	
St. Marks, Fla	.....	.....	30.10	764.5	77	25.0	90	Calm	0	0	.....	5cs	2s	N	.....	0	0	Fair	
St. Paul, Minn	.....	.....	29.81	757.2	77	25.0	82	SE	8	3.6	.....	.....	10s	.....	SW	0	0	Cloudy	
St. Paul's Island, Alaska	.....	.....	30.15	765.8	41	5.0	91	NE	10	4.5	.....	.....	10s	.....	.....	0	0	Cloudy	
Thatcher's Island, Mass	.....	.....	30.21	767.3	69	20.6	95	SW	4	1.8	.....	0	0	.....	.....	0	0	Foggy	
Toledo, Ohio	.....	.....	30.06	764.5	75	23.9	85	Calm	0	0	.....	5ck	5ks	.....	NE	0	0	Cloudy	
Tucson, Arizona	27.49	698.2	30.09	764.3	78	25.6	.....	Calm	.....	.....	.....	2k	0	.....	.....	0	0	Fair	
Tybee Island, Ga	.....	.....	30.08	764.0	78	25.6	78	N	4	1.8	.....	5ck	0	.....	.....	0.14	3.6	Fair	
Vicksburg, Miss	.....	.....	30.13	765.3	75	23.9	98	S	4	1.8	.....	0	10s	.....	.....	0.32	8.1	Cloudy	
Virginia City, M. T	24.40	619.8	29.88	758.9	41	5.0	73	SE	4	1.8	.....	3k	0	NE	.....	0.01	0.3	Fair	
Washington, D. C	.....	.....	30.17	766.3	75	23.9	90	NE	5	2.2	.....	2ck	8ks	.....	E	0.52	13.2	Cloudy	
Wilmington, N. C	.....	.....	30.09	764.3	74	23.3	90	NE	4	1.8	.....	0	8s	.....	NE	0.07	1.8	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.
Woo l's Holl, Mass			30.21	768.1	74	23 3	85	SE	4	1.8		2c	0	SW		0	0	Fair	
Yankton, Dakota	28.54	724.9	29.75	755.6	76	24.4	81	S	3	1.3		0	0			0	0	Clear	
Yuma, Arizona			29.83	757.7	87	30.4		SE				0	0			0	0	Clear	
Sub-Series.																			
Kingston, Jamaica, W. I.			30.14	765.5	80	26.7	82	Calm	0	0		5c	2n	SE	SE	0	0		James Gall.
St. Georges, Bermudas			30.18	766.6	82.0	27.8	77	SE	18	8.0			10n			0.14	3.6	Hazy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Paramaribo, D. Guiana S.A			30.00	762.0	82	27.8	83	E			2	4c	3c?	E		0.060	1.52	Clear	C. J. Hering.
Batavia, Dutch Guiana S.A.	30.07	763.7			79.7	26.5		E								0.433	11.00		Dr. H. Groot.
Medellin, Colombia, S. A.	25.23	640.8			64.0	17.8	85	N	1	0.4			10s			0	0	Cloudy	Thomas Herran.
York Factory, B. A.			30.15	765.8	51	10.6	90	NE	1	0.4		1c	0	S		0	0		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.05	763.3	76	24.4		NE			2					0	0	Overcast	Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Adelie Fuller, off Currituck B'cn Light,	SW	2	30.12	765.0	81	27.2		E			2	5cs	2ks	NW	E	Short sea.		Squally	Capt. James Jorgen en.
Steamer Hibernian, N 51° 59′, W. 31° 40′.	S 83 W	8	29.32	744.7	50	10.0		Var.			8		..s			Heavy sea.		Stormy	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.; Denver, 5,135 ft., or 1,565. m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,916.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,262.2 ft., or 1,299.2 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, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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'Endeville, 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			29.93	760.3	82.2	27.9	73	NNE			2		2			0	0	Clear	Charnot.
Algiers			29.95	760.8	80.2	26.8	82	N			1		2			0	0	Clear	Peter.
La Calle			29.98	761.6	79.2	26.2	73	NE			4		2			0	0	Clear	Kunts.
Tunis			30.04	763.1	87.4	30.8	47	E			3		3			0	0	Fair	Jacques.
Sfax			30.13	765.2	84.6	29.2	56	E			3		3			0	0	Clear	Chauvey.
Sidia			30.00	762.1	87.8	31.0	22	S			1		2			0	0	Clear	Millot.
Tebessa			30.03	762.8	86.0	30.0		W			1		4			0	0	Fair	Colin.
Gerlville			30.01	762.3	87.1	30.6	30	N			2		2			0	0	Clear	Lemaillot.
Laghouat			30.07	763.8	87.8	31.0	42	S			3		2			0	0	Clear	Guyot.
Biskra			30.05	763.3	91.4	33.0	28	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			29.97	761.2	81.2	26.8	52	NW			2		3			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.01	762.3	72.3	22.4	55	NE			1		4			0	0		Dr. Wierzbiski.
Eperies			29.96	761.0	69.8	21.0	58	N			2		10k,s			Blank	Blank		Julius Mikolik.
Gratz	28.78	731.0	29.93	760.2	73.6	23.1	61	WSW			2		0			0	0		Andreas Rospint.
Hermannstadt	28.46	722.9	29.82	757.5	72.7	22.6	46	NW			4		2			0.024	0.6		Prof. Reissenberger.
Kremsmunster	28.68	728.4	29.96	761.0	71.1	23.4	84	E			2		1			0	0		Prof. C. Wagner.
Lemberg			29.89	759.1	62.2	16.8	92	NE			2		7			0.035	0.9		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.98	761.4	80.6	27.0	66	WNW			2		2ks			0	0		I.R.Hydrographic Office
Szegedin			29.88	759.0	75.4	24.1	40	NW			3		3			0	0		Karl Stancel.
Trieste			29.98	761.5	82.4	28.0	62	Calm			0		3k			0	0		Prof. V. Farolfi.
Vienna			29.98	761.5	73.8	23.2	44	Calm			0		0			0	0		I. R. Central Met. Obs'y

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1.258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			29.90	759.4	83.7	28.7	37	SSE			0		1		SSE	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.96	761.0	62.0	16.7		E	7	3.1			0			0	0	Blue sky	William Boswell.
Ardrossan			29.93	760.2															William McNeil.
Armagh, Observatory			29.91	759.7	75.9	24.4		S	5	2.2			0					Blue sky	S. Cal, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.92	760.0	70.1	21.2		SE			1		9					*D. clouds	J. Dreyer.
Bradford			29.93	760.2	80.2	26.8		E			0		0			0	0	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	84.5	29.2		NE			1		4					*D. clouds	Sergt. J. F. Halanon, A. H. C.
Cambridge, Observatory			29.89	759.2	91.0	31.4		S			1		1						H. Todd.
Cardington			29.91	759.7	91.4	33.0		SW			1		1					Blue sky	John McLaren.
Carlisle			29.91	759.7	86	30.0		Calm			0		0			0	0	Blue sky	T. Bell, for J. Carmell.
Chatham, School M. E			29.93	760.2	90.5	32.5		Calm			0		0					Blue sky	Capt. J. Fellowes, R.E.
Dartmoor	28.62	726.9	30.08	764.0	66.5	19.2		W			1		10					Overcast	R. E. Power.
Donaghadee			29.93	760.2	65	18.3		S			2		3					*D. clouds	J. Mac Gowan.
Dover			29.94	760.5	65	18.3		SW			3		10					Foggy	J. Costello.
Eccles (near Manchester.)			29.90	759.4	85.2	29.6		S	2.8	1.3			0					Blue sky	Thomas Mackereth.
Falmouth, Observatory			29.98	761.5	66.5	19.2		SE			1		10					Foggy	The Staff.
Fort Napier, (Natal)	28.05	712.5	30.28	769.1	58.9	14.9		S			4		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.05	763.3	85	29.4		W			0		4					*D. clouds	
Galway, Queen's College			30.02	762.5	73	22.8		S			1		2					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.91	759.7	80.2	26.8		E			3		4					*D. clouds	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.93	760.2	75.6	24.2		NE			1		2					Fine	Lewis Stuart.
Great Yarmouth			29.96	761.0	72	22.2		ESE			1		0					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			29.91	760.5	92.1	33.4		SW			1		0					Blue sky	The Staff, for G. B. Airy
Guernsey			29.98	761.5	66.5	19.2		ESE			1		7					Misty	Dr. S. E. Hoskins.
Helston			29.98	761.5	72	22.2		S			2		3c			0	0	Fine	M. P. Moyle.
Holyhead			29.96	761.0	66	18.9		SSW			2		10					Misty	John Tilston.
Kew, Observatory			29.92	760.0	82.1	27.8		SW	7	3.1			0					Hazy	The Staff.
Kingstown			29.95	760.7	66	18.9		ESE			3		0					Blue sky	George Mitchell.
Leicester Museum			29.91	759.7	88.6	31.4		Calm			0		0					Blue sky	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.01	762.2	79.8	26.6		E			1		6k					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			29.92	760.0	70	21.1		Calm			0		0					Clear	W. D. Lenny.
Nassau, (Bahamas			30.11	764.8	73.6	23.1		SE			0		10					Drizzling	Surg. Maj. Henry.
Nottingham, Observatory			29.92	760.0	90.7	32.6		E			2		0			0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.94	760.5	86.8	30.4		S			1		0					Hazy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.90	759.4	83	28.3		SW			1		0					Blue sky	J. Lucas.
Plymouth			29.97	761.2	73.3	22.9		S			1		1					*D. clouds	John Merrifield.
Roche's Point			29.93	760.2	67	19.4		SSW			3		10					Misty	W. Kennedy.
Saint Ann's Head			29.96	761.0	69	20.6		Calm			0		8					Hazy	John C. Walker.
Saint Helier, Jersey			29.99	761.7	75.5	24.2		WSW			2		0					Clear	A. P. Amy.
Sandwick Manse Orkney's			29.98	761.5	67.1	19.5		SE	13	5.8			1					Blue sky	Rev. C. Clouston, LL. D.
Scarborough			29.98	761.5	66.7	19.3		ESE			1		0					Blue sky	F. Shaw.
Scutari Cemetery Turkey			29.73	755.1	82.8	28.2		NE			2		7					Threatening	Sergt. W. H. Lyne.
Sheffield			29.92	760.0	82.3	27.9		SE			1		1			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			29.92	760.0	84.7	29.3	56	S			1		0			0.005	0.13	Blue sky	Rev. Francis Redford.
Stonyhurst, Observatory			29.92	760.0	76.4	24.7		SW			1							Hazy	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			29.92	760.0	66	18.9		Calm			0		0					Blue sky	John Smith.
Strathfield Turgiss			29.98	761.5	84.0	28.9		W			1		1					*D. clouds	Rev. Charles H. Griffith.
Thurso			29.93	760.2	75	23.9		NE			2		0					Hazy	John Trotter.
Truro, Royal Institution			29.99	761.7	72	22.2		N			2		10					Raining	W. Newcombe.
Valencia, Observatory			29.92	760.0	64.0	17.8		WSW	9	4.0			5					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man					60	15.6		SE			1		10						Thomas Dawson.
Cape Good Hope, Obs'y			29.98	761.5	70.0	21.1	41	SSE	6	2.7		5	5						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			30.12	765.0	57.5	14.2	86	Calm			0		10n			0.01	0.3	Cloudy	Francis Abbott F.R.A.S.
Leith, Restaurig Park			29.96	761.0	68.0	20.0		NE			2					0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.05	763.3				NNE	13.4	6.0						0.02	0.5		C. Meldrum
Melbourne, Observatory			30.26	768.6	45.0	7.2	92	SSW	2	0.9			8			0	0	Fine, foggy	R. L. J. Ellery.
Monach Lighthouse, Hebrides			29.93	760.2	67	19.4		Calm			0	0	0			0	0		J. Youngclause.
North Unst, (Shetland Is.)			30.05	763.5	51	10.6		E			4		Fog						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,2 0 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			30.00	762.1	70.5	21.4	61	SE			2		0						
Faroe			29.98	761.6	79.0	26.1	46	SW			2		1						
Godthaab, Greenland			29.68	753.9	42.4	5.8	82	SSW			4		10						
Stykkisholm, Iceland			29.89	759.3	56.7	13.7	80	Calm			0		5						
Thorshavn, Faröe			30.13	765.2	50.7	10.4	95	ENE			4		10					Misty	
Vestervig			30.03	762.7	73.4	23.0	49	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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	764.5	82.0	27.8	66	S			1		8k		S	0	0	Stormy	Normal School.
Amiens																			Normal School.
Avignon			29.99	761.8	82.4	28	57	NNE			2		10			0	0	Covered	Normal School.
Bar-sur-Seine			29.97	761.1	82.9	28.3	26	N			2		5		SW	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.98	761.5	80.8	27.1	41	W	2.7	1.2					SW	0	0		Beaumette Observatory
Beauvais			29.97	761.2	82.0	27.8	40	WNW			1		0			0	0	Clear	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.08	763.9	78.8	26	55	N			2		5ck		NW	0	0	Cloudy	Normal School.
Bourges			30.04	762.9	73.4	23	83	ESE			2		10		ESE	0.827	21.	Covered	Normal School.
Brest			29.92	759.9	79.7	26.5	66	SW			2		8		SW	0.049	1.25	Stormy	Naval Observatory.
Carcassonne			29.95	760.7	76.8	24.9	44	W			1		2		E	0	0	Slightly cl'dy	Normal School.
Caen																			Normal School.
Chartres			29.97	761.2															Normal School.
Châlons-sur-Marne			29.98	761.6	85.6	29.8	41	W			2		0			0	0	Clear	Normal School.
Clermont			30.00	762.1	72.1	22.3	82	E			2		10			0.984	25.0	Covered	Puy de Dome Obs'y.
Commercy			30.01	762.2	79.5	26.4	41	W			2		0			0	0	Clear	Normal School
Commune de Greasque*			30.08	764.0	86.5	30.3	40	SW			4		8		SW	0	0		M. Kina.
Grenoble			29.96	761.0	77.7	25.4	86	NW			6		5		SSW	0	0	Cloudy	Normal School.
La Roche-sur-Yon					69.4	20.8	89	SSE			4		8		NNE	0	0	Very cloudy	Normal School.
Le Mans			30.01	762.2	74.8	23.8	73	SW			2		8		S	0.295	7.5	Very cloudy	Normal School.
Lons-Le-Saulnier			30.17	766.3	78.1	25.6	61	SW			2		5		NE	0	0	Cloudy	Normal School.
Macon			30.19	766.7	77.7	25.4	73	Calm			0		5		N	0	0	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			29.95	760.7	78.8	26.0	55	SE			1		2		SE	0	0	Slightly cl'dy	Normal School.
Nîmes			30.05	763.2	90.3	32.4	59	E			2		2		E	0	0	Slightly cl'dy	Normal School.
Orleans																			Normal School.
Paris, Observatory			29.97	761.1	83.1	28.4	39	W			2		1k			0	0	Clear	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			30.0	763.2	71.1	21.7	81	SSW			2		10		NE	0.157	4.0	Rainy	Naval Observatory.
Rouen			29.97	761.1	83.1	28.4	41	W			1		0			0	0	Clear	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School.
Villefranche			30.01	762.3	78.8	26	51	NW			1		5			0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.87	758.7	81.0	27.2													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.26	768.5	66.7	19.3	87	ESE	18.6	8.33			8		SW	0.016	0.4		—. Falguère.
Montsouris, Paris			29.97	761.2	86.4	30.2	41	SSW			1		1k			0	0	Clear	Montsouris Observ'tory.
Perpignan			29.97	761.1	79.2	26.2	37	S	9.7	4.33			6		WSW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.43	544.2			51.4	10.8		W			3		7					Stormy	M. Baylac.
Pic du Midi, (Plantade)	22.68	576.0			55.4	13.0		W			2		7			0.563	14.3	Stormy	General de Nansouty.
Saint Maur, (near Paris)			29.97	761.3	87.3	30.7	33	WSW			1		0			0	0	Clear	E. Renou.
Toulouse			30.07	763.6	76.6	24.8	65	NNW			1		8			Inap.	Inap.		Toulouse Observatory
Tours			30.01	762.2	77.2	25.1	58	NE			1		4		W				C. Marquet.
Versailles, (near Paris)			29.99	761.7	81.2	29.0	38	W			1		3			0	0	Fair	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.98	761.6	81.1	27.3	39	E			3		1	E		0	0		Prof. T. Hoh.
Berlin			30.00	761.9	82.0	27.8	32	S			1		0			0	0		Prof. Arndt.
Breslau			30.07	763.6	78.6	25.9	36	NW			5		3			0	0		Dr. P. Neugebauer.
Carlsruhe			29.88	758.9	88.2	31.2	37	E			2		0			0	0		A. Senz.
Cassel			29.97	761.1	81.7	27.6	41	ENE			2		0			0	0		Dr. H. Möhl.
Emden			29.85	758.2	84.2	29.0	38	E			3		0			0	0		Prof. Prestel.
Frankfurt on the Main			29.95	760.7	88.3	31.3	21	E			4		0			0	0		Physical Society.
Friedrichshafen			30.03	762.8	74.5	23.6	76	SW			2		0			0	0		M. Wilhelm.
Hamburg			30.00	762.1	80.6	27.0	39	ESE			2		0			0	0	Clear	Captain F. Hegemann.
Kiel			29.99	761.7	78.8	26.0	48	NNE			2		0			0	0		Prof. G. Karsten.
Königsberg, (Prussia.)			29.98	761.5	77.7	25.4	39	SE			2		2			0.004	0.1		Prof. E. Luther.
Leipsic			30.03	762.8	76.8	24.9		NW			2		0			0.016	0.4		H. Müller.
Memel			30.00	762.0	81.2	29.0	24	E			2		1			0	0		Prof. Bruhns.
Munster			30.03	762.8	70.3	21.3	68	W			2		0			0	0		Reinbrecht & Skalweit.
Neuhuhrwasser			29.98	761.4	82.4	28.0	46	SE			1		0			0	0		Prof. E. Heis.
Posen			30.02	762.4	71.2	21.8	61	ESE			1		0			0	0		A. Lothes.
Strassburg, (in Alsace)			30.02	762.5	79.7	26.5	36	NW			5		1			0	0		Dr. Magener.
Stuttgart			29.92	760.0	85.8	29.9	39	E			1		2			0	0		Dr. Schur.
Thorn			29.91	759.8	85.1	29.5	28	S			1		0			0	0		Prof. Schoder.
Treves, (Trier)			29.99	761.8	81.7	27.6	37	E			3		1			0	0		Dr. Hasenbalg.
Wustrow, Naval School			29.89	759.2	87.4	30.8	35	W			4		2			0	0		Prof. Flesch.
			30.14	765.6	74.1	23.4	49	N			1		0			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	761.1	80.1	26 7		SE										Cloudy	

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

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	760.2	86.0	30.0	38	SW	3.1	1.4			3			0	0		
Padua			29.93	760.2	83.1	28.4	39	S	6.3	2.8			0			0	0		
Vicenza			29.93	760.1	86.5	30.3	34	SW	6.3	2.8			1			0	0		
Verona			29.91	759.8	91.4	33.0	29	E			1		0			0	0		
Bergamo																			
Domodossola	28.93	734.7	29.91	759.7	81.5	27.5	59	SW			6		9			0	0		
Milan			29.99	761.8	91.8	33.2	49	E			2		0			0	0		
Pavia			29.94	760.5	84.6	29.2	39	E			1		0			0	0		
Moncalieri			29.95	760.6	82.0	27.8	55	SE	4.9	2.2			1			0	0		
Mondovi	28.11	714.0	29.95	760.7	81.0	27.2	44	NNW			2		0			0	0		
Porto Maurizio			30.03	762.8	82.6	28.1	69	SW			2		1			0	0		
Genoa			29.97	761.3	82.4	28.0	60	SW	6.3	2.8			0			0	0		
Piacenza																			
Parma			29.91	759.7	86.7	30.4	41	NE			2		1			0	0		
Bologna			29.96	760.9	88.5	31.4	41	SE			1		2	WNW		0	0		
Florence			29.98	761.6	86.9	30.5	27	NW			2		0			0	0		
Leghorn			29.99	761.8	85.6	29.8	49	SW	5.6	2.5			2			0	0		
Siena	28.80	731.6	29.96	760.9	83.3	28.5	22	SE	0	0			1	NE		0	0		
Urbino	28.50	724.0	30.00	762.0	79.9	26.6	31	WSW			2		1			0	0		
Ancona			29.97	761.3	82.0	27.8	54	SE			4		0			0	0		
Grosseto			30.02	762.4	87.1	30.6	46	NNW			4		3	S		0	0		
Rome			30.01	762.3	82.0	27.8	57	SSW	10.5	4.7			8			0	0		
Naples, O. U.			30.02	762.6	83.5	28.6	34	SW			4		4	NE		0	0		
Lecce			30.02	762.4	79.2	26.2	53	ESE	3.8	1.7			3	W		0	0		
Cosenza			30.01	762.2	81.2	29.0	71	NW	6.3	2.8			4			0	0		
Riposto, (Sicily)			29.93	760.3	85.3	29.6	74	NE			4		0			0	0		
Palermo			29.97	761.1	81.0	27.2	57	NE	6 3	2.8			2			0	0		
Caltanissetta	28.09	713.4	29.96	760.9	77.9	25.5	39	E			1		5	NE		0	0		
Sub-Series.																			
Naples, S. R.			30.04	762.9	82.8	28.2	38	WSW	4.9	2.2			2	W		0.071	1.8		Prof. F. Brioschi.
Pesaro			30.04	763.1	79.2	26.2	62	NE	19.5	8.72			0			0	0		L. Guidi.

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			29.96	760.9	75.2	24.0		WNW			2								
Groningen			29.90	759.5	83.4	28.4		ESE			2								
Helder			29.97	761.2	73.0	22.8		ENE			1								
Utrecht			29.89	759.3	88.3	31.3	30	SE			2		0					Clear	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.04	763.0	64.4	18.0	80	NW	3.8	1.7			5			0	0		
Brönö			30.08	763.9	52.9	11.6	87	WNW	9	4			7			0.008	0.2		
Christiania			29.95	760.8	72.3	22.4	50	E	0.7	0.3			8			0	0		
Tromsö			29.79	756.6	45.3	7.4		Calm	0	0			10			0.276	7.0	Light rain	

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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,)			29.84	757.8	73.0	22.8	70	W	17.2	7.69			4			0.543	13.8		Dr. J. A. N. Sampaio.
Campo Major			29.89	759.2	90.3	32.4	22	WNW	3.9	1.75			0			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.06	763.4	75.2	24.0	66	SW	5.0	2.24			0			0	0		Capt. D. A. da Cunha.
Lisbon			29.96	760.9	81.3	27.4	44	N	13.7	6.1			0			0	0		The Observatory.

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

RUSSIAN SERIES.

Furnished by 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			29.98	761.4	73.4	23.0	41	NNE	7	3			1						Astronomical Obs.
Wilna			29.97	761.3	75.4	24.1	41	Calm	0	0			5						Astronomical Obs.
Dorpat			29.94	760.5	76.1	24.5	48	WSW	4	2			1						Physical Cabinet.
St. Petersburg			29.87	758.7	65.7	18.7	60	WNW	18	8			3						Central Physical Obs.
Kutaïs			30.19	766.7	63.0	17.2	59	NNW	22	10			5						Ch. Forsten.
Kieff			29.87	758.6	75.2	24.0	45	ENE	7	3			7						Physical Cabinet
Nikolaïev			29.89	759.2	88.2	31.2	28	SW	13	6			6						Kurdakof.
Kertch			29.93	760.2	77.2	25.1	69	N	4	2			2						Lagorio.
Moscow			29.91	759.6	73.2	22.9	58	NNW	7	3			7						Meteorological Obs.
Lugan			29.76	755.9	80.6	27.0	41	N	13	6			9						Meteorological Obs.
Archangel			29.56	750.7	60.3	15.7	66	WNW	27	12			10						Ogorodnikof.
Tiflis	28.38	720.9	29.69	754.0	97.5	36.4	18	S	11	5			0						Physical Observatory.
Astrakhan			29.75	755.6	93.7	34.3	44	E	4	2			2						Sebastianoi.
Kasan			29.76	755.9	75.9	24.4	43	Calm	0	0			0						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.77	730.8	29.69	754.0	66.6	19.2	50	WNW	4	2			1						Meteorological Obs.
Nukuss			29.70	754.3	90.7	32.6	51	NNW	4	2			0						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul			29.58	751.2	63.9	17.7	62	NW	0	0			10						Meteorological Obs.
Yeniseisk			29.44	747.7	55.8	13.2	83	W	7	3			10			Blank	Blank		Marks.
Irkutsk																			Usolze'.
Oorga																			Mossin.
Peking, (China)			29.93	760.1	78.6	25.9	76	Calm	0	0			4						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.82	757.3	70.9	21.6	98	Calm	0	0			10			Blank	Blank		
Nikolaievsk, on the Amoor																			

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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 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			29.85	758.1	91.0	32.8	31	SE	3.7	1.67		1	0			0	0	Almost clear	Royal Observatory
San Fernando			29.95	760.7	82.6	28.1	58	SW	4.9	2.2		0	0			0	0		The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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			29.75	755.6	61.2	16.2	73	NW			4		7			0	0		
Umea			29.88	758.9	64.4	18.0	48	NW			2		6			0	0		
Hernosand			29.95	760.8	69.8	21.0	26	NW			4		2			0	0		
Stockholm			29.91	759.6	73.2	22.9	57	NNE			4		6			0	0		
Visby			30.01	762.2	68.9	20.5	70	W			4		3			0	0		
Sub-Series.																			
Upsala			29.95	760.6	69.8	21.0	47	NE	11.6	5.2			5	W	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; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall is measured at 8 a. m., local time.

SWISS SERIES.

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

Stations	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	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	28.59	726.2	29.93	760.2	85.3	29.6	44	SW			4		3			0	0	Clouds	The Observatory.
Zurich	28.32	720.8	29.92	759.9	84.6	29.2	48	E			1		1			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, —1.6 mm; Thermometer, +7.7 cent.; Relative Humidity, —11 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

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

Stations	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	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	77.4	25.2	59	NE	15	6.5			8		NE	0	0		
Fao, (Persian Gulf)			29.59	751.5	96.8	36.0		NW			3		10						
Salonica			29.95	760.8	82.4	28.0		S			1		0						
Valona			30.05	763.3	79.2	26.2		W			1		2						
Varna			30.04	763.0	71.6	22.0		E			2		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			29.89	759.3	86.5	30.3	54	W			2		1k		S				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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

Stations	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	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			29.97	761.2	78.0	25.6	72	Calm	0	0			0			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.11	764.8	80	26.7		SW	1	0.4		0	2s		SW	0	0	Fair	W. R. Bigg.
*Chatham, N. B.			30.04	763.0	73	22.8	80	SW	4	1.8		0	0			0	0	Clear	G. A. Blair.
Charlottetown P. E. Island			30.11	764.8	67	19.4	85	SW	8	3.6			10s			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.04	763.0	78.7	25.9	71	SE			1	5k	0			0	0	Dull	James Smith, M. A.
Dalhousie, N. B.			29.93	762.7	74.5	23.6	74	W			1					0	0	Hazy, sultry.	H. A. Johnson
Esquimault, B. C.																			W. H. Davis.
Fredericton, N. B.			30.11	764.8	72.1	22.3	72	W	4	1.8		0	3ks			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			30.23	767.8	49	9.4	100	W	5	2.2		0	2s		W	0	0	Fair	James Stewart.
Goderich, Ontario			30.02	762.5	81.3	27.4	65	SE			2	0	0			0	0	Clear	H. J. Strang, M. A.
Granton, Ontario	23.97	735.8	30.02	762.5	74	23.3		S			1	0	0			0	0	Foggy	James Grant.
*Halifax, N. S.			30.11	764.8	71	21.7	85	W	2	0.9			5ks		W	0	0	Fair	F. Allison, M. A.
*Kingston, Ontario			30.10	764.5	77	25.0	98	S	5	2.2		0	0			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			30.02	762.5	77.0	25.0	67	SW	6	2.7		0	0			0	0	Smoky	C. H. Rigby.
*Montreal, Quebec			30.05	763.3	78	25.6	71	SW	6	2.7		0	Sm'e			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.08	764.0	76	24.4	62	Calm	0	0		0	Sm'e			0	0	Smoky	J. B. Haney.
*Parry Sound, Ontario			30.03	762.7	77	25.0	79	S	8	3.6		0	0			0	0	Clear	Rev. R. Mosley.
Port Dover, Ontario			30.06	763.5	75	23.9	86	S	6	2.7		0	0			0	0	Clear	H. Morgan.
Port Hastings N. S.			30.09	764.3	73.7	23.2		NW	7	3.1						0	0	Fine	Peter Grant.
Port Stanley, Ontario			30.05	763.3	76	24.4	86	SE	5	2.2		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			30.05	763.3	77	25.0	91	Calm	0	0		0	0			0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.			30.17	766.3	57	13.9	97	S	4	1.8			Fog			0	0	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario			29.98	761.5	77	25.0		Calm	0	0		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.01	762.2	75	23.9	83	Calm	0	0		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario	23.79	731.3	30.02	762.5	70.2	21.2	97	S	4	1.8		0	0			0	0	Clear	C. J. MacGregor, M. A.
*Sydney, C. B.			30.06	763.5	76	24.4	73	SW	4	1.8		0	Sm'e			0	0	Clear	T. C. Hill.
*Toronto, Ontario			30.06	763.5	75	23.9	83	E	1	0.4		0	0			0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.05	763.3	72.0	22.2	96	SE	4	1.8		2cs	1s	N		0	0	Fine	I. Montgomery
Sub-Series.																			
St. Johns, Newfoundland			30.06	763.5	77	25.0	68	S				5c	0			0	0	Fair	John Delaney.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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	77	25.0	69	Calm	0	0	.....	0	Haze	.....	.....	Inap.	Inap.	Clear	
Alpena, Mich.	.....	.....	29.91	759.7	74	23.3	90	SE	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Atlantic City, N. J.	.....	.....	30.03	764.0	77	25.0	86	NE	20	8.9	.....	10cs	0	E	.....	Inap.	Inap.	Cloudy	
Augusta, Ga.	.....	.....	30.03	762.7	73	22.8	90	NW	2	0.9	.....	.....	10s	.....	.....	0.13	3.3	Cloudy	
Baltimore, Md.	.....	.....	30.14	764.5	73	22.8	90	SE	10	4.5	.....	8k	Sm'e	E	.....	0.12	3.0	Clearing	
Barnegat, N. J.	.....	.....	30.08	764.0	79	26.1	82	E	16	7.2	.....	10ck	0	E	.....	0	0	Cloudy	
Bismarck, Dakota	28.52	724.4	30.18	766.6	54	12.2	70	Calm	0	0	.....	0	0	.....	.....	0.01	0.3	Clear	
Boston, Mass.	.....	.....	30.13	765.3	72	22.2	85	SE	3	1.3	.....	.....	Fog	.....	SE	0	0	Foggy	
Breckenridge, Minn.	.....	.....	30.20	767.1	52	11.1	79	NW	16	7.2	.....	0	8ks	.....	NW	0.55	14.0	Cloudy	
Buffalo, N. Y.	.....	.....	30.04	763.0	74.5	23.6	72	S	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Burlington, Vt.	.....	.....	30.03	764.3	77	25.0	69	S	4	1.8	.....	0	Sm'e	.....	.....	0	0	Smoky	
Cairo, Ill.	.....	.....	30.02	762.5	73	22.8	95	S	3	1.3	.....	.....	10s	.....	.....	0.29	7.4	Cloudy	
Cape Hatteras, N. C.	.....	.....	29.98	761.5	79	26.1	82	E	6	2.7	.....	.....	10ks	.....	S	0	0	Threatening	
Cape Henry, Va.	.....	.....	30.01	762.2	79	26.1	74	E	6	2.7	.....	5c,k	0	.....	.....	Inap.	Inap.	Fair	
Cape Lookout, N. C.	.....	.....	30.04	763.0	78	25.6	86	S	8	3.6	.....	5ks	5s	S	S	0.13	3.3	Cloudy	
Cape May, N. J.	.....	.....	30.07	763.8	77	25.0	82	E	9	4.0	.....	5k	0	SE	.....	0	0	Fair	
Charleston, S. C.	.....	.....	30.02	762.5	75	23.9	85	N	6	2.7	.....	.....	10s	.....	N	0.05	1.3	Cloudy	
Cheyenne, Wyoming	24.21	615.7	30.18	766.6	53	11.7	86	SE	16	7.2	.....	.....	10n	.....	SE	0.01	0.3	Light rain	
Chicago, Ill.	.....	.....	29.89	759.2	78	25.6	82	S	7	3.1	.....	2c	Haze	W	.....	0	0	Fair	
Cincinnati, Ohio	.....	.....	29.94	760.5	75	23.9	85	E	2	0.9	.....	0	Sm'e	.....	.....	0	0	Clear	
Cleveland, Ohio	.....	.....	30.02	762.5	70.5	21.2	82	SE	10	4.5	.....	0	0	.....	.....	0.05	1.3	Clear	
Corsicana, Tex.	.....	.....	29.99	761.7	75	23.9	90	SE	3	1.3	.....	Haze	8s	.....	SE	0.02	0.5	Cloudy	
Davenport, Iowa	.....	.....	29.99	761.7	71	21.7	85	NE	4	1.8	.....	5ck	5s	NE	NE	0.21	5.3	Fair	
Denison, Tex.	.....	.....	30.02	762.5	75	23.9	90	SE	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy	
Denver, Col.	25.00	635.0	30.22	767.6	60	15.6	70	Calm	0	0	.....	.....	10s	.....	.....	0.02	0.5	Cloudy	
Detroit, Mich.	.....	.....	29.97	761.2	75	23.9	85	S	3	1.3	.....	1k	0	S	.....	0	0	Clear	
Dodge City, Kan.	27.47	697.7	29.70	754.4	64	17.8	100	NE	20	8.9	.....	.....	10s	.....	.....	0.20	5.1	Cloudy	
Dubuque, Iowa	.....	.....	29.97	761.2	72	22.2	80	NW	8	3.6	.....	5k	0	NW	.....	0.22	5.6	Fair	
Duluth, Minn.	.....	.....	30.01	762.2	65	18.3	83	NW	2	0.9	.....	.....	10s	.....	NW	0.91	23.1	Cloudy	
Eastport, Me.	.....	.....	30.11	765.5	58	14.4	93	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Erie, Pa.	.....	.....	30.01	762.2	76	24.4	69	S	12	5.4	.....	0	Haze	.....	.....	0	0	Clear	
Escanaba, Mich.	.....	.....	29.89	759.2	69	20.6	95	NW	12	5.4	.....	.....	10n	.....	.....	0.42	10.7	Light rain	
Fort Gibson, Indian Ter.	.....	.....	29.96	761.0	79	26.1	84	SE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Fort St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.77	730.7	29.83	757.7	77	25.0	82	S	12	5.4	.....	.....	10s	.....	S	0	0	Cloudy	
Fort Sully, Dakota	28.56	725.4	30.23	767.8	54	12.2	87	N	6	2.7	.....	8ck	0	NW	.....	0	0	Cloudy	
Florence, Arizona	28.39	721.1	29.83	757.7	78	25.6	.....	S	.....	.....	.....	2k	8s	.....	.....	0.41	10.4	Cloudy	
Galveston, Tex.	.....	.....	30.04	763.0	79	26.1	86	SE	2	0.9	.....	0	8ks	.....	SE	1.14	29.0	Cloudy	
Grand Haven, Mich.	.....	.....	29.90	759.4	79	26.1	78	S	6	2.7	.....	4c	0	W	.....	0	0	Fair	
Indianapolis, Ind.	.....	.....	29.96	761.0	75	23.9	90	SE	1	0.4	.....	0	Sm'e	.....	SE	0	0	Clear	
Jacksonville, Tex.	.....	.....	30.01	762.2	81	27.2	87	SE	3	1.3	.....	5ck	5ks	S	S	1.90	48.3	Cloudy	
Keokuk, Iowa	.....	.....	30.04	763.0	77	25.0	82	W	4	1.8	.....	10k	0	.....	.....	0	0	Cloudy	
Key West, Fla.	.....	.....	29.90	759.4	71	21.7	85	N	2	0.9	.....	.....	10s	.....	N	0	0	Cloudy	
Kittyhawk, N. C.	.....	.....	30.00	762.0	81.0	27.2	78	E	6	2.7	.....	1k,cs	2ks,hz.	E	E	Inap.	Inap	Fair	
Knoxville, Tenn.	.....	.....	30.03	762.7	79	26.1	78	E	2	0.9	.....	0	5ks	.....	E	0	0	Fair	
La Crosse, Wis.	.....	.....	30.04	762.7	70	21.1	95	S	1	0.4	.....	.....	Fog	.....	.....	Inap	Inap	Dense fog	
Leavenworth, Kan.	.....	.....	29.97	761.2	70	21.1	90	N	1	0.4	.....	.....	10s	.....	.....	1.25	31.7	Cloudy	
Louisville, Ky.	.....	.....	29.93	760.2	73	22.8	85	S	5	2.2	.....	.....	10s	.....	.....	0.44	11.2	Cloudy	
Lynchburg, Va.	.....	.....	29.98	761.5	78	25.6	82	SW	4	1.8	.....	0	Fog	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	30.03	762.7	72	22.2	95	N	2	0.9	.....	.....	10s	.....	NE	1.12	28.4	Cloudy	
Marquette, Mich.	.....	.....	30.03	762.7	77	25.0	69	S	4	1.8	.....	2c	0	N	.....	0	0	Fair	
Memphis, Tenn.	.....	.....	29.88	758.9	70	21.1	84	NW	2	0.9	.....	.....	10s	.....	.....	0.05	1.3	Cloudy	
Milwaukee, Wis.	.....	.....	30.04	763.0	74	23.3	90	S	4	1.8	.....	0	5s	.....	SE	0.08	2.0	Fair	
Mobile, Ala.	.....	.....	29.91	759.7	75	23.9	95	W	1	0.4	.....	.....	10ks	.....	W	0	0	Cloudy	
Montgomery, Ala.	.....	.....	30.07	763.8	76	24.4	86	S	2	0.9	.....	5c	Sm'e	.....	.....	0	0	Fair	
Morgantown, W. Va.	.....	.....	30.07	763.8	74	23.3	88	N	2	0.9	.....	10cs	Haze	.....	.....	Inap.	Inap	Cloudy	
Mt. Washington, N. H.	29.00	736.6	30.02	762.5	71	21.7	82	E	2	0.9	.....	0	0	.....	.....	Inap.	Inap	Clear	
Nashville, Tenn.	24.12	612.6	30.48	774.2	61	16.1	66	NE	15	6.7	.....	0	Haze	.....	.....	0	0	Fair	
New Haven, Conn.	.....	.....	30.01	762.2	73	22.8	90	Calm	0	0	.....	10k	Fog	W	.....	0	0	Cloudy	
New London, Conn.	.....	.....	30.12	765.0	74.0	23.3	90	NE	5	2.2	.....	.....	10s,fog	.....	.....	0	0	Cloudy	
New Orleans, La.	.....	.....	30.16	766.1	71	21.7	95	E	4	1.8	.....	.....	Fog	.....	b.	0.01	0.3	Foggy	
Newport, R. I.	.....	.....	30.07	763.8	80	26.7	78	Calm	0	0	.....	5ck	1k	N	N	Inap.	Inap	Fair	
New York, N. Y.	.....	.....	30.15	765.8	74	23.3	90	SE	4	1.8	.....	.....	10s	.....	SE	0	0	Cloudy	
Norfolk, Va.	.....	.....	30.13	765.3	75	23.9	90	NE	8	3.6	.....	.....	10ks,f'g	.....	NE	Inap.	Inap	Cloudy	
North Platte, Neb.	.....	.....	30.01	763.0	79	26.1	82	E	5	2.2	.....	5ck	0	.....	.....	0.04	1.0	Fair	
Omaha, Neb.	27.25	692.1	29.78	756.4	59	15.0	76	NE	12	5.4	.....	.....	10ks	.....	.....	0	0	Cloudy	
Oswego, N. Y.	28.98	736.1	30.03	762.7	66	18.9	97	NW	7	3.1	.....	.....	Fog	.....	.....	1.20	30.5	Foggy	
Pembina, Dakota	.....	.....	30.08	764.0	79	26.1	63	S	4	1.8	.....	Haze	Haze	.....	.....	0	0	Hazy	
Philadelphia, Penn.	.....	.....	30.10	764.5	53	11.7	79	NW	2	0.9	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Pike's Peak, Colorado	18.02	457.7	30.10	764.5	73	22.8	90	E	7	3.1	.....	5ck	5ks	.....	NE	0.03	0.8	Cloudy	
Pittsburgh, Penn.	.....	.....	30.23	767.8	35	1.7	100	SW	20	8.9	.....	.....	Fog	.....	.....	0.11	2.8	Foggy	
Port Huron, Mich.	.....	.....	30.02	762.5	73	22.8	76	E	7	3.1	.....	0	Fog	.....	.....	Inap.	Inap.	Fair	
Portland, Me.	.....	.....	29.98	761.5	74	23.3	85	S	0	2.7	.....	0	0	.....	.....	0	0	Clear	
Portland, Oregon	.....	.....	30.12	765.0	68	20.0	90	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Dense fog	
Punta Rassa, Fla.	.....	.....	29.87	758.7	61	16.1	71	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Rochester, N. Y.	.....	.....	30.05	763.5	78.5	25.8	84	NE	4	1.8	.....	8ck	0	NE	.....	0.24	6.1	Fair	
Salt Lake City, Utah	.....	.....	30.05	763.3	74	23.3	72	SW	8	3.6	.....	0	Haze	.....	.....	0	0	Clear	
Sandy Hook, N. J.	25.49	647.4	29.82	757.4	67	19.4	37	SE	10	4.5	.....	2k	0	.....	.....	0	0	Clear	
San Diego, Cal.	.....	.....	30.10	764.5	75	23.9	95	NE	5	2.2	.....	.....	10ks	.....	NE	0	0	Cloudy	
San Francisco, Cal.	.....	.....	29.92	760.0	66	18.9	84	SW	4	1.8	.....	.....	10s	.....	S	0	0	Cloudy	
Santa Fé, N. M.	.....	.....	29.88	758.9	56	13.3	87	SW	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Savannah, Ga.	23.38	593.8	29.92	760.0	59	15.0	100	Calm	0	0	.....	.....	10s	.....	.....	0.38	9.7	Cloudy	
Shreveport, La.	.....	.....	30.02	762.5	76	24.4	86	Calm	0	0	.....	.....	10ks	.....	SW	1.12	28.4	Cloudy	
Smithville, N. C.	.....	.....	30.09	764.3	75	23.9	90	S	3	1.3	.....	.....	10s	.....	S	Inap.	Inap.	Cloudy	
Springfield, Mass.	.....	.....	30.01	762.2	77	25.0	86	SE	8	3.6	.....	.....	10s	.....	SE	0.19	4.8	Cloudy	
St. Louis, Mo.	.....	.....	30.12	765.0	73	22.8	85	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Dense fog	
St. Marks, Fla.	.....	.....	29.97	761.2	77	25.0	85	S	2	0.9	.....	.....	10s	.....	.....	0.03	0.8	Cloudy	
St. Paul, Minn.	.....	.....	30.06	763.5	75	23.9	90	Calm	0	0	.....	5cs	5s	N	.....	0.09	2.3	Cloudy	
St. Paul's Island, Alaska	.....	.....	29.99	761.7	65	18.3	94	NW	6	2.7	.....	.....	10s	.....	.....	0.79	20.1	Cloudy	
Thatcher's Island, Mass.	.....	.....	30.13	765.3	41	5.0	91	NW	14	6.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Toledo, Ohio	.....	.....	30.12	765.0	67	19.4	100	SW	5	2.2	.....	.....	.....	.....	.....	0	0	Dense fog	
Tucson, Arizona	.....	.....	29.95	760.7	76	24.4	81	SE	2	0.9	.....	0	Haze	.....	.....	0	0	Clear	
Tybee Island, Ga.	27.53	699.2	30.14	765.5	73	22.8	.....	SE	.....	.....	.....	.....	8ks	.....	S	0.58	14.7	Cloudy	
Vicksburg, Miss.	.....	.....	30.02	762.5	78	25.6	86	Calm	0	0	.....	.....	10s	.....	SW	1.50	38.1	Cloudy	
Virginia City, M. T.	.....	.....	30.10	764.5	76.5	24.7	90	Calm	0	0	.....	8ck	0	N	.....	0	0	Cloudy	
Washington, D. C.	24.32	617.7	29.80	756.9	44	6.7	92	Calm	0	0	.....	.....	10n	.....	NE	0.26	6.6	Light rain	
Wilmington, N. C.	.....	.....	30.09	764.3	73.5	23.1	88	NE	8	3.6	.....	.....	10s	.....	NE	0	0	Cloudy	
	.....	.....	30.00	762.0	74	23.3	95	Calm	0	0	.....	0	8s	.....	.....	0.42	10.7	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.
Woods Holl, Mass.			30.18	766.6	75	23.9	90	S	4	1.8		2c	0			0	0	Clear	
Yankton, Dakota	28.89	733.8	30.17	766.3	58	14.4	76	N	13	5.8			1c8			0	0	Cloudy	
Yuma, Arizona			29.88	758.9	86	30.0		SE				2c8	0	W		0	0	Fair	
Sub-Series.																			
Kingston, Jamaica, W. I.																0.35	8.9		James Gall.
St. Georges, Bermudas			30.22	767.6	83.5	28.6	73	SE	8	3.6		0	2k			0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa W. I.																			
Paramaribo, D. Guiana S. A.			30.00	762.0	80	26.7	87	E			3	3c	2c?			0	0	Clear	C. J. Hering.
Batavia, Dutch Guiana S. A.	30.07	763.7			86.0	30.0		N								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.16	639.0			62.0	16.7	75	Calm	0	0		0	0			0	0	Clear	Thomas Herran
York Factory, B. A.			30.06	763.5	52	11.1	83	S	5	2.2		2c	0	S		0	0		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.03	762.7	76	24.0		NE			1					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
*Schooner Adelaide Fuller N. 36° 15′, W. 75° 30′.			30.02	762.5	82	27.8		Calm			0	2c	2k			Heavy swells.		Clear	Capt. James Jorgensen.
Steamer Hibernian. N. 50° 31′, W. 38° 05′.	S77 W	10½	29.54	750.3	50	10.0		W			6		..ck			Smooth		Dull	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.; Denver, 5,135 ft., or 1,565. m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,559 (?) ft., or 472.5 m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 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, 4,262.2 ft., or 1,299.2 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. * Rain-fall in 24 hours 0.08 inches, or 2.0 milimeters.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			29.96	761.0	82.2	27.9	73	NE			1		1			0	0	Clear	Charnot.
Algiers			29.95	760.8	82.0	27.8	73	NNW			3		8			0	0	Cloudy	Peter.
La Calle			29.98	761.4	79.5	26.4	79	NE			3		2			0	0	Clear	Kunts.
Tunis			30.04	762.8	94.6	34.8	36	SE			3		4			0	0	Fair	Jacques.
Sfax			30.11	764.9	87.1	30.6	44	E			4		2			0	0	Clear	Chauvey.
Sal.ia			30.02	762.5	89.6	32.0	19	NW			1		2			0	0	Clear	Millot.
Tebessa			30.05	763.2	86.9	30.5		SW			5		10			0.039	1.0	Hidden	Colin.
Geriville			30.03	762.8	84.1	29.1	32	NW			3		3			0	0	Fair	Lemaillot.
Laghouat			30.08	764.0	84.2	29.0	34	S			2		6			0	0	Fair	Guyot.
Biskra			30.05	763.3	95.4	35.2		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			29.95	760.7	83.3	28.5	47	SW			1		0			0	0		Prof. Ivan Stosir.
Cracow, I. R. Observatory			29.96	761.0	77.0	25.0	51	E			1		1			0	0		Dr. Wierzbiski.
Eperies			29.94	760.4	74.1	23.4	52	N			3		5c,s		S	0	0		Julius Mikolik.
Gratz	28.76	730.5	29.90	759.5	77.0	25.0	56	SSW			3		0			0	0		Andreas Rospini.
Hermannstadt	28.54	724.7	29.93	760.3	58.6	14.8	83	SW			3		10			0.319	8.10		Prof. Reissenberger.
Kremsmünster	28.66	727.9	29.93	760.2	77.4	25.2	35	E			1		0			0	0		Prof. C. Wagner.
Lemberg			29.89	759.1	68.5	20.3	81	NE			3		5			0	0		Dr. T. Stanecki.
Nylregyhaza																			Habesuda Daniel.
Pola			29.98	761.6	83.7	28.7	61	WNW			2		1cs			0	0		I.R.Hydrographic Office.
Szegedin			29.92	759.9	77.4	25.2	40	S			1		0			0	0		Karl Stancel.
Trieste			29.99	761.7	83.5	28.6	59	Calm			0		2k			0	0		Prof. V. Farolfi.
Vienna			29.92	759.9	84.7	29.3	33	N			1		1			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 348.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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	760.1	82.6	28.1	40	W			1	0	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			30.05	763.3	64.1	17.8		ESE	10	4.5			0			0.010	0.25	Blue sky	William Boswell.
Ardrossan			29.98	761.5	66	18.9		SW			2		0					Hazy	William McNeil.
Armagh, Observatory			29.97	761.2	69.0	20.6		S	6	2.7			2					*D. clouds	S. Cail, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.93	760.2	72.0	22.2		SSE			1		8					*D. clouds	J. Dreyer.
Bradford			29.97	761.2	76.5	24.7		E			0		0			0	0	Hazy	J. McLandsborough.
Bridgetown, (Barbados)			30.03	762.7	83.0	28.3		E			0		5					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			29.96	761.0	89.9	32.2		N			1		1						H. Todd.
Cardington			29.98	761.5	85.0	29.4		W			1		2					Blue sky	John McLaren.
Carlisle																			T. Bel, for J. Carmichael.
Chatham, School M. E.			29.97	761.2	84.0	28.9		Calm			0		8					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.62	726.9	30.07	763.8	70.4	21.3		Calm			0		5					*D. clouds	R. E. Power.
Donaghadee			29.98	761.5	62	16.7		SE			2		5					*D. clouds	J. Mac Cowan.
Dover			29.97	761.2	70	21.1		SW			1		0					Clear	J. Costello.
Eccles (near Manchester.)			30.03	762.7	74.0	23.3		WSW	2.4	1.1			0					Blue sky	Thomas Mackereth.
Falmouth, Observatory			30.00	762.0	66.7	19.3		SE			1		4					Hazy	The Staff.
Fort Napier, (Natal)	27.73	704.3	29.97	761.2	74.6	23.7		N			4		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.04	763.0	83	28.3		W			4		5					D. clouds	
Galway, Queen's College			29.92	760.0	70	21.1		SW			6		3					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.95	760.7	84.0	28.9		E			2		2					*D. clouds	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.95	760.7	77.2	25.1		NE			1		4					Hazy	Lewis Stuart.
Great Yarmouth			30.00	762.0	72	22.2		NE			2		0					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			29.98	761.5	83.5	31.4		SW			1		4					*D. clouds	The Staff, for G. B. Airy
Guernsey			29.99	761.7	72	22.2		NNE			1		4					*D. clouds	Dr. S. E. Hoskins.
Helston			29.98	761.5	72	22.2		E			2		0			0	0	Clear	M. P. Moyle.
Holyhead			30.01	762.2	68	20.0		SW			1		1					Blue sky	John Tinston.
Kew, Observatory			29.98	761.5	83.3	28.5		SSW	7	3.1			4					Hazy	The Staff.
Kingstown			29.99	761.7	66	18.9		SSE			4		1					Blue sky	George Mitchell.
Leicester Museum			29.98	761.5	81.5	27.5		Calm			0		0					Blue sky	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			30.01	763.0	85.4	29.7		SE			1		6k					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			30.01	762.0	75.6			Calm			0							Hazy	W. D. Penny.
Nassau, (Bahamas)			30.12	765.0	83.6	28.7		SE			4		8					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.97	761.2	89.6	32.0		SSW			2		0			0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.99	761.7	74.0	23.3		NW			1		0					Hazy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.96	761.0	81	27.2		Calm			0		2					Blue sky	J. Lucas.
Plymouth			30.01	762.0	68	20.0		S			1		2					Foggy	John Merrifield.
Roche's Point			29.94	760.5	68	20.0		SSE			4		10					Overcast	W. Kennedy.
Saint Ann's Head			30.01	762.0	67	19.4		Calm			0		3					*D. clouds	John C. Walker.
Saint Helier, Jersey			30.00	762.0	70.0	21.1		W			2		5					½ clouded	A. P. Amy.
Sandwick Manse, Orkneys			30.05	763.3	65.9	18.8		SE	17	7.6			0					Blue sky	Rev. C. Clouston, LL.D.
Scarborough			30.03	762.7	64.1	17.8		ESE			1		3					Blue sky	F. Shaw.
Scutari Cemetery, Turkey			29.86	758.4	81.0	27.2		SW			2		2					Hazy	Sergt. W. H. Lyne.
Sheffield			29.97	761.2	79.0	26.1		ESE			1		3			0	0	Hazy	W. F. Cooper.
Silloth Rectory			30.01	762.0	71.2	21.8	66	S			1		0			0	0	Blue sky	Rev. Francis Redford.
Stonyhurst, Observatory			29.98	761.5	69.6	20.9		SW			1								Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			29.93	760.2	71	21.7		NE			1		0					Blue sky	John Smith.
Strathfield Turgiss			30.00	762.0	83.0	28.3		Calm			0		0					Blue sky	Rev. Charles H. Griffith.
Thurso			30.00	762.0	73	22.8		ESE			2		0					Blue sky	John Trotter.
Truro, Royal Institution			30.02	762.5	75	23.9		SE			4		3					*D. clouds	W. Newcombe.
Valencia, Observatory			29.85	758.2	64.6	18.1		SE	29	13.0			10					Misty	The Staff.
Sub-stations.																			
Calf of Man, Isle of Man					59	15.0		SE			1		10						Thomas Dawson.
Cape Good Hope, Obs'y			30.08	764.0	56.0	13.3	91	WNW	10	4.5		5	5						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.54	750.3	59.5	15.3	81	N			1		4k			0	0		Francis Abbott, F.R.A.S.
Leith, Restaurig Para.			30.00	762.0	70.6	21.4		NE			2					0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.13	765.3				SSE	3.5	2.0						0	0		C. Meldrum
Melbourne, Observatory			30.03	762.7	49.0	9.4	86	W	4	1.8			3			0.01	1.0	Fine	R. L. J. Ellery.
Monach Lighthouse, Hebrides			30.05	763.3	66	18.9		SE				0	0			0	0		J. Youngelouse.
North Unst, (Shetland Is.)			30.14	765.5	55	12.8		E			4	0	0						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local times; Mauritius, unknown. 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			30.00	762.0	73.4	23.0	65	ESE			2		0						
Faroe			29.97	761.3	76.1	24.5	53	W			4		1						
Godthaab, Greenland			29.65	753.1	39.0	3.9	90	WSW			2		10						
Stykkisholm, Iceland			29.85	758.3	56.7	13.7	89	Calm			0		5						
Thorshavn, Faröe			30.12	765.1	52.5	11.4	92	ENE			4		10					Misty	
Vestervig			29.97	761.2	75.6	24.2	71	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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.08	763.9	80.6	27	53	SSW			1		5k			0	0	Cloudy	Normal School.
Amiens																			Normal School.
Avignon			30.08	763.9	68.0	20	94	N			1		8		SW	0.248	6.3	Very cloudy	Normal School.
Bar-sur-Seine			29.98	761.6	86.0	30	40	S			1		5kn		+	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.93	760.3	83.5	28.6	46	W	2.2	1.0					SW	0	0		Beaumette Observatory
Beauvais			29.97	761.2	82.8	28.2	41	E			1		5		SE	0	0	Cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.07	763.8	80.6	27.3	56	SE			1		5kn		NW			Cloudy	Normal School.
Bourges			30.03	762.8	72.3	22.4	89	SSE			2		5		SSE	0.16	4.	Cloudy	Normal School.
Brest			29.93	760.3	82.9	28.3	60	SW			1		2			0	0	Stormy	Naval Observatory.
Carcassonne			29.95	760.8	79.5	26.4	49	E			2		2		W	0	0	Slightly cl'dy	Normal School
Caen																			Normal School.
Chartres			29.96	761.0	82.4	28	76	NE			1		1		NW	0	0	Clear	Normal School.
Châlons-sur-Marne			29.95	760.6	87.8	31.0	39	NW			2		0			0	0	Clear	Normal School.
Clermont			29.95	760.7	77.2	25.1	64	NNE			1		8		W	0.039	1.0	Very cloudy	Puy de Dome Obs'y
Commercy			29.97	761.2	79.5	26.4	54	W			2		28		W	0	0	Slightly cl'dy	Normal School
Commune de Greasque*			30.13	765.4	76.3	24.6	49	NW			4		10		SW	0	0		M. Kina.
Grenoble			30.00	761.9	65.3	18.5	53	NW			2		2		SW	0.016	0.4	Slightly cl'dy	Normal School.
La Roche-sur-Yon					82.8	28.2	58	SSE			2		8		S	0.016	0.4	Very cloudy	Normal School.
Le Mans			29.97	761.3	80.8	27.1	54	SW			2		5		SW	0	0	Cloudy	Normal School.
Lons-Le-Saulnier			30.05	763.2	78.8	26	60	NW			1		0			0.827	21.	Clear	Normal School.
Mâcon			30.17	766.2	81.1	27.3	66	N			2		5		NE	0	0	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			29.96	760.9	78.8	26.0	53	SW			1		5		SW	0	0	Cloudy	Normal School.
Nismes			30.11	764.9	88.9	31.6	36	E			2		10		E	0.51	13.	Covered	Normal School.
Orleans																			Normal School.
Paris, Observatory			29.96	760.9	84.9	29.4	41	E			1		5k		E	0	0	Cloudy	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			29.99	761.8	85.3	29.6	50	E			2		0			0	0	Blue sky	Naval Observatory.
Rouen			29.97	761.1	86.0	30.0	41	NNW			1		5		S	0	0	Cloudy	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School
Villefranche			29.95	760.6	77.0	25	42	N			1		2			0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.87	758.7	81.0	27.2													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.27	768.9	66.7	19.3	77	SSW	9.3	4.17			8		W	0.835	21.2		—. Falguère.
Montsouris, Paris			29.97	761.1	83.8	28.8	40	N			1		5k		SSE	Imap.	Imap.		Montsouris Observatory.
Perpignan			29.97	761.2	78.3	25.7	43	SE	11.2	5.00			6		SW	Imap.	Imap.		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.45	544.9			45.1	7.3		W			3		10					Stormy	M. Baylac.
Pic du Midi, (Plantade)	22.70	576.5			51.4	10.8		W			1		10			0.150	3.8	Stormy	General de Nansouty.
Saint Maur, (near Paris)			29.96	761.0	89.2	31.8	39	S			1		3			0	0		E. Renou.
Toulouse			30.00	762.0	87.1	30.6	40	NE			3		0			0.035	0.9		Toulouse Observatory
Tours			29.98	761.4	82.8	28.2	44	ENE			1		4		W	0	0		C. Marquet.
Versailles, (near Paris)			29.98	761.4	87.8	31.0	39	SW			1		7			0	0	Fair	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai																			H. Le Lec, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.94	760.5	84.2	29.0	30	Calm			0		1	W		0	0		Prof. T. Hoh.
Berlin			29.95	760.7	84.2	29.0	28	S			1		7			0	0		Prof. Arndt.
Breslau			30.02	762.4	82.0	27.8	32	SSE			1		2			0	0		Dr. P. Neugebauer.
Carlsruhe			29.90	759.5	87.1	30.6	46	N			1		1			0	0		A. Senz.
Cassel			29.91	759.6	88.9	31.6	35	ESE			2		0			0	0		Dr. H. Möhl.
Emden			29.78	756.5	88.0	31.1	24	SE			1		0			0	0		Prof. Prestel.
Frankfort on the Main			29.91	759.8	88.9	31.6	25	E			2		0			0	0		Physical Society.
Friedrichshafen			29.93	760.3	77.4	25.2	70	WSW			1		2			0	0		M. Wilhelm.
Hamburg			29.96	760.9	82.4	28.0	41	SE			2		2es,k			0	0	Clear	Captain F. Hegemann
Kiel			29.95	760.7	77.0	25.0	49	NNE			2		2			0	0		Prof. G. Karsten.
Königsberg, (Prussia.)			29.88	758.9	76.0	24.8	58	NW			2		5			0	0		Prof. E. Luther.
Köslin			30.00	762.0	69.6	20.9		NW			4		4			0	0		H. Müller.
Leipsic			29.91	760.5	86.5	30.3	24	W			1		2			0	0		Prof. Bruhns.
Memel			29.91	759.8	75.4	24.1	48	NE			3		..es	NNW		0	0		Reinbrecht & Skalweit
Münster			29.93	760.1	89.6	32.0	42	S			3		0			0	0		Prof. E. Heis.
Neufahrwasser			29.95	760.7	69.6	20.9	81	NNE			2		10			0	0		A. Lothes.
Posen			29.95	760.8	85.1	29.5	27	NW			0		10			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.93	760.1	86.9	30.5	44	NE			1		3			0	0		Dr. Schur.
Stuttgart			29.91	759.7	86.0	30.0	35	SE			2		1			0	0		Prof. Schoder.
Thorn			29.90	759.5	88.3	31.3	20	W			3		3			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.89	759.2	88.3	31.3	29	W			4		1			0.020	0.5		Prof. Flesch.
Wustrow, Naval School			30.06	763.4	77.2	25.1	50	ENE			1		0			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.95	760.6	82.6	28.1		S					k			Inap.	Inap.	Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	83.8	28.8	34	S	2.5	1.1			7			0	0		
Padua			29.93	760.3	83.5	28.6	52	SSW	4.3	1.9			2			0	0		
Vicenza			29.93	760.3	86.5	30.3	40	SW	3.8	1.7			1			0	0		
Verona			29.95	760.7	91.4	33.0	34	E			4		4			0	0		
Bergamo																			
Domodossola	28.94	735.1	29.93	760.1	81.0	27.2	60	S			2		5			0	0		
Milan			29.97	761.1	88.7	31.5	57	WNW			2		3	NW		0	0		
Pavia			29.98	761.4	84.2	29.0	50	SW			4		2	SW		0	0		
Moncalieri			29.99	761.7	78.3	25.7	61	WSW	3.1	1.4			8	NE		0	0		
Mondovi	28.17	715.6	30.01	762.3	74.7	23.7	64	NW			8		4	N		0.071	1.8		
Porto Maurizio			30.07	763.8	80.8	27.1	77	SE			2		7			0	0		
Genoa			30.03	762.8	79.5	26.4	68	SE	5.6	2.5			10	S		0.173	4.4	Showery	
Piacenza																			
Parma			29.98	761.6	86.7	30.4	45	E			2		2			0.193	4.9		
Bologna			29.99	761.8	86.7	30.4	40	NW			1		0			0	0		
Florence			30.02	762.6	86.0	30.0	39	WNW			2		0			0	0		
Leghorn			30.04	763.0	82.0	27.8	66	S	8.1	3.6			2			0	0		
Siena	28.83	732.3	29.98	761.6	83.7	28.7	41	NNW	0.7	0.3			6	N		0	0		
Urbino	28.52	724.4	30.02	762.4	83.7	28.7	39	WSW			2		3			0	0		
Ancona			29.99	761.8	85.3	29.6	50	SE			4		1			0	0		
Grosseto			30.06	763.5	86.0	30.0	44	NW			2		4	S		0	0		
Rome			30.04	763.1	85.8	29.9	51	SW	6.9	3.1			3			0	0		
Naples, O. U.			30.07	763.8	85.6	29.8	60	WSW			2		3	NW		0	0		
Lecce			30.03	762.7	85.3	29.6	40	NE	11.2	5.0			3	W		0	0		
Cosenza			30.07	763.6	84.6	29.2	70	NW	7.4	3.3			1			0	0		
Riposto, (Sicily)			30.01	762.2	86.2	30.1	67	NE			4		1	NE		0	0		
Palermo			30.02	762.6	80.6	27.0	63	NE	3.1	1.4			6			0	0		
Caltanissetta	28.14	714.7	30.01	762.2	76.1	24.5	45	SSW			4		2	E		0	0		
Sub-Series.																			
Naples, S. R.			30.09	764.3	82.0	27.8	55	SSW	5.1	2.5			4	SW		0	0		Prof. F. Brioschi.
Pesaro			30.04	763.1	80.1	26.7	66	E	19.5	8.72			1k	N		0	0		L. Guidi.

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	73.8	23.2		WNW			3								
Groningen			29.87	758.8	84.2	29.0		SE			2								
Helder			29.99	761.7	67.3	19.6		NW			2								
Utrecht			29.91	759.6	85.5	29.7	37	NNW			2		0					Clear	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.01	762.3	68.4	20.2	66	WNW	6.3	2.8			0			0	0		
Brono			30.24	768.0	55.0	12.8	68	NNW	11	5			2			0	0		
Christiania			30.08	763.9	72.7	22.6	48	ENE	2.5	1.1			5			0	0		
Tromsö			30.03	762.7	48.6	9.2		NE	11	5			10			0.299	7.6	Raining	

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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,)			29.95	760.7	72.1	22.3	82	W	8.6	3.83			5			0.118	3.0		Dr. J. A. N. Sampaio.
Campo Major			29.90	759.4	91.0	32.8	25	SW	5.8	2.58			1			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.08	763.9	75.0	23.9	66	SW	7.8	3.49			9			0	0		Capt. D. A. da Cunha.
Lisbon			29.96	761.0	79.3	26.3	54	SW	8.7	3.9			0			0	0		The Observatory.

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

RUSSIAN SERIES

Furnished by 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			29.90	759.5	79.2	26.2	40	WSW	7	3			4						Astronomical Obs.
Wilna			29.87	758.7	77.9	25.5	46	W	2	1			8						Astronomical Obs.
Dorpat			29.89	759.3	67.3	19.6	48	NE	9	4			4						Physical Cabinet.
St. Petersburg			29.84	757.9	65.7	18.7	45	NNW	13	6			5						Central Physical Obs.
Kuopio			29.88	759.0	59.0	15.0	58	N	22	10			5						Ch. Forsten.
Kieff			29.83	757.7	64.4	18.0	70	NE	13	6			8					Raining	Physical Cabinet.
Nikolaiev			29.87	758.7	79.2	26.2	50	NW	4	2			7						Kurdakof.
Kertch			29.92	759.9	81.5	27.5	61	Calm	0	0			1						Lagorio.
Moscow			29.76	756.0	74.1	23.4	61	NW	9	4			6						Meteorological Obs.
Lugan			29.73	755.2	85.3	29.6	32	SW	4	2			2						Meteorological Obs.
Archangel			29.59	751.5	52.0	11.1	75	NW	29	13			10						Ogorodnikof.
Tiflis	28.39	721.2	29.70	754.4	95.7	35.4	19	SE	9	4			0						Physical Observatory.
Astrakhan			29.73	755.2	85.5	29.7	54	Calm	0	0			9			Blank	Blank		Sebastianof.
Kasan			29.62	752.4	78.3	25.7	52	W	9	4			3						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.69	728.8	29.59	751.5	73.4	23.0	45	SSW	13	6			2						Meteorological Obs.
Nukuss			29.71	754.5	94.1	34.5	43	N?	2	1			0						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul			29.67	753.7	65.7	18.7	46	N	4	2			3						Meteorological Obs.
Yeniseisk			29.61	752.2	56.5	13.6	90	WNW	2	1			7						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.98	761.5	74.1	23.4	86	NE	9	4			8			Blank	Blank		Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.91	759.7	65.8	18.8	99	Calm	0	0			10						
Nikolaievsk, on the Amoor																			

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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 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			29.85	758.1	93.0	34.4	27	S	2.2	1.00		0	1			0	0	Almost clear	Royal Observatory.
San Fernando			29.97	761.1	80.2	26.8	74	WSW	7.6	3.4		0	0			0	0		The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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			30.00	762.0	56.8	13.8	55	NNW			4		7			0	0		
Umea			30.08	764.1	58.6	14.8	54	SW			2		4			0	0		
Hernosand			30.10	764.6	63.0	17.2	37	NE			2		0			0	0		
Stockholm			30.01	763.0	64.0	17.8	47	N			4		5			0	0		
Wisby			30.09	764.3	63.0	17.2	84	NE			7		3			0.012	0.3		
Sub-Series.																			
Upsala			30.08	763.9	62.6	17.0	39	N	11.6	5.2			1		N	0	0		Dr. Hildebrandsson.

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

SWISS SERIES.

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

Stations	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	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	28.61	726.7	29.96	761.0	81.7	27.6	45	WSW	.....	.....	3	.....	2	.....	.....	0.287	7.3	Clouds	The Observatory.
Zurich	28.40	721.4	29.95	760.7	82.8	28.2	58	E	.....	.....	1	.....	3	.....	.....	0.579	14.7	Bright	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE—For Geneva the corresponding departures from the normal values are: Barometer, —1.1 mm; Thermometer, +5.8 cent.; Relative Humidity, —10 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 480 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

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

Stations	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	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	79.7	26.5	45	ENE	10	4.5	.....	.....	3	.....	NE	0	0	.....	
Fao, (Persian Gulf)	.....	.....	29.58	751.2	98.6	37.0	.....	NW	.....	.....	3	.....	10	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.94	760.4	74.8	23.8	.....	E	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	30.07	763.6	79.7	26.5	.....	W	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	29.84	758.0	80.6	27.0	.....	NE	.....	.....	2	.....	0	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.82	757.5	87.8	31.0	52	W	.....	.....	2	.....	1k	.....	.....	.....	.....	.....	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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

Stations	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	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.	.....	.....	29.66	753.4	76.0	24.4	76	SW	16	7.2	.....	.....	0	.....	.....	0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.86	758.4	82	27.8	.....	SW	1	0.4	.....	0	0	.....	.....	0	0	Clear	W. R. Bigg.
*Chatham, N. B.	.....	.....	29.78	756.4	70	21.1	87	SW	13	5.8	.....	.....	10ks	.....	.....	0	0	Cloudy	G. A. Blair.
Charlottetown P. E. Island	.....	.....	29.86	758.4	73	22.8	82	SW	8	3.6	.....	0	5ks	.....	.....	0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.88	758.9	81.5	27.5	60	SW	.....	.....	3	0	0	.....	.....	Inap.	Inap.	Bright	James Smith, M. A.
Dalhousie, N. B.	.....	.....	29.68	753.9	73	22.8	84	NW	.....	.....	1	.....	.....	.....	.....	0	0	Hazy, sultry.	H. A. Johnson.
Esquimault, B. C.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Bevis.
Fredericton, N. B.	.....	.....	29.85	758.2	74.1	23.4	77	W	8	3.6	.....	.....	10ks	.....	.....	0.48	12.2	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.05	763.3	45	7.2	100	W	3	1.3	.....	0	0	.....	.....	0	0	Clear	James Stewart.
Goderich, Ontario	.....	.....	29.94	760.5	71.1	21.7	83	NW	.....	.....	2	.....	8n	.....	.....	Inap	Inap	Threatening	H. J. Strang, M. A.
Granton, Ontario	28.87	733.3	29.92	760.0	68	20.0	.....	W	.....	.....	1	.....	10n	.....	.....	0	0	Cloudy	James Grant.
*Halifax, N. S.	.....	.....	29.90	759.4	74	23.3	86	W	10	4.5	.....	.....	5ks	.....	W	0	0	Fair	F. Allison, M. A.
*Kingston, Ontario	.....	.....	29.88	758.9	78	25.6	78	W	1	0.4	.....	0	0	.....	.....	0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.	.....	.....	29.83	757.7	75.0	23.9	73	W	10	4.5	.....	0	0	.....	.....	0	0	Fair	C. H. Rigby.
*Montreal, Quebec	.....	.....	29.75	755.6	75	23.9	73	SW	18	8.0	.....	0	Sm'e	.....	.....	Inap.	Inap.	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.80	756.9	81	27.2	60	SW	5	2.2	.....	5k	Sm'e	SW	SW	0	0	Smoky.	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.95	760.7	61	16.1	91	N	16	7.2	.....	.....	10n	.....	N	0.06	1.5	Cloudy	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	29.90	759.4	71	21.7	95	NW	6	2.7	.....	8k	0	W	.....	0	0	Fair	H. Morgan.
Port Hastings N. S.	.....	.....	29.92	760.0	74.3	23.5	.....	SW	6	2.7	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	29.92	760.0	71	21.7	92	NW	8	3.6	.....	8k	0	NW	.....	0	0	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	29.74	755.4	76	24.4	82	Calm	0	0	.....	8k	0	.....	.....	0	0	Fair	Capt. Ashe, R. N.
St. John, N. B.	.....	.....	29.90	759.4	60	15.6	94	S	1	0.4	.....	.....	Fog	.....	.....	0.12	3.0	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.92	760.0	66	18.9	84	NE	7	3.1	.....	.....	10n	.....	.....	0	0	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	29.87	758.7	70	21.1	95	NW	11	4.9	.....	.....	10n	.....	NW	Inap	Inap.	Threatening	R. J. Cole.
Stratford, Ontario	28.68	728.5	29.91	759.7	67.2	19.6	91	NW	9	4.0	.....	.....	10n	.....	.....	0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.	.....	.....	29.89	759.2	76	24.4	75	SW	15	6.7	.....	0	2ks	.....	W	0	0	Clear	T. C. Hill.
*Toronto, Ontario	.....	.....	29.88	758.9	73	22.8	77	W	7	1.3	.....	.....	10ks	.....	N	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.93	760.2	70.0	21.1	89	NW	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	I. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	29.92	760.0	79	26.1	64	NW	.....	.....	.....	0	0	.....	.....	0	0	Clear	John Delaney.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.			29.82	757.4	79	26.1	69	Calm	0	0		5k	Haze	S		0	0	Fair	
Alpena, Mich			30.01	762.2	60	15.6	82	N	8	3.6			10s		N	0.92	23.4	Cloudy	
Atlantic City, N. J			29.92	760.0	76	24.4	81	W	6	2.7		1cs	0	W		0	0	Clear	
Augusta, Ga.			29.98	761.5	74	23.3	81	NW	5	2.2		2ck	0	NW		0	0	Fair	
Baltimore, Md			29.94	760.5	75	23.9	81	S	4	1.8		2ck	Sm'e			0.04	1.0	Smoky	
Barnegat, N. J			29.80	759.2	82	27.8	67	W	10	4.5		2ck	0			0	0	Clear	
Bismarck, Dakota	28.32	719.3	29.94	760.5	56	13.3	74	SE	7	3.1		2ck	8s	NE	SE	Inap.	Inap.	Cloudy	
Boston, Mass			29.78	756.4	71	21.7	95	N	9	4.0			Fog			Inap.	Inap.	Foggy	
Breckenridge, Minn			30.12	765.0	55	12.8	79	NE	4	1.8		10cs	0			0	0	Cloudy	
Buffalo, N. Y			29.85	758.2	75.5	24.2	76	SW	6	2.7		0	1ks		SW	0	0	Clear	
Burlington, Vt			29.89	759.9	78	25.6	69	S	2	0.9		2c	Sm'e			0	0	Fair	
Cairo, Ill			29.97	761.2	77	25.0	95	Calm	0	0			Fog			0	0	Foggy	
Cape Hatteras, N. C			29.84	757.9	79	26.1	86	SW	8	3.6			8ks		W	0.92	23.4	Cloudy	
Cape Henry, Va			29.86	758.4	80	26.7	78	E	8	3.6		2ck	2ks		E	0	0	Fair	
Cape Lookout, N. C			29.92	760.0	76	24.4	90	W	4	1.8		2c	2ks			1.46	37.1	Fair	
Cape May, N. J			29.94	760.2	76	24.4	85	W	7	3.1		0	0			0	0	Clear	
Charleston, S. C			29.97	761.2	77	25.0	86	N	4	1.8		1c	Haze			0.16	4.1	Clear	
Cheyenne, Wyoming	24.09	611.9	30.03	762.7	54	12.2	97	S	8	3.6			Fog		S	0.01	0.3	Foggy	
Chicago, Ill			29.94	760.5	69	20.6	75	N	12	5.4		0	8s		N	0	0	Fair	
Cincinnati, Ohio			29.86	758.4	77	25.0	82	N	6	2.7		0	Sm'e			0	0	Clear	
Cleveland, Ohio			29.88	758.9	72.6	22.6	83	SE	2	0.9		0	Sm'e		SE	0	0	Smoky	
Corsicana, Tex			29.98	761.5	75	23.9	90	S	4	1.8		2cs	2k		S	0	0	Fair	
Davenport, Iowa			30.04	763.0	70	21.1	84	E	8	3.6			8ks		NW	Inap.	Inap.	Cloudy	
Denison, Tex			29.99	761.7	76	24.4	85	S	5	2.2			10s		S	0	0	Cloudy	
Denver, Col.	24.86	631.4	30.08	764.0	56	13.3	87	N	2	0.9			10s			Inap.	Inap.	Cloudy	
Detroit, Mich			29.91	759.7	71	21.7	85	NE	6	2.7			10s		NE	0.09	2.3	Cloudy	
Dodge City, Kan	27.43	696.7	29.62	752.3	70	21.1	100	ENE	4	1.8		5c	5s		NE	0.08	2.0	Cloudy	
Dubuque, Iowa			30.04	763.0	68	20.0	84	NE	4	1.8			10s		NE	0	0	Cloudy	
Duluth, Minn			30.12	765.0	58	14.4	69	N	4	1.8		5c	0	SW		0	0	Fair	
Eastport, Me			29.86	758.4	63	17.2	94	S	4	1.8			Fog			0	0	Foggy	
Erie, Pa			29.86	758.4	77	25.0	69	SW	3	1.3		2c	2k			0	0	Fair	
Escanaba, Mich			30.11	764.8	58	14.4	87	N	12	5.4			10s			0.20	5.1	Cloudy	
Fort Gibson, Indian Ter			29.91	759.7	77	25.0	82	E	2	0.9		0	2s			0	0	Fair	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T	28.77	730.7	29.83	757.7	72	22.2	95	Calm	0	0			10s			0.40	10.2	Cloudy	
Fort Sully, Dakota	28.34	720.3	29.99	761.7	57	13.9	94	SE	12	5.4			10n			0.14	3.6	Heavy rain	
Florence, Arizona	28.37	720.6	29.82	757.4	74	23.3		Calm				0	0			0	0	Clear	
Galveston, Tex			30.03	762.7	79	26.1	78	W	3	1.3		0	8n,ks		SE	0.71	18.0	Cloudy	
Grand Haven, Mich			30.02	762.5	65	18.3	78	NE	10	4.5		0	4s		N	0	0	Fair	
Indianapolis, Ind			29.94	760.5	72	22.2	90	N	5	2.2			10s		N	0	0	Threatening	
Indianola, Tex			30.01	762.2	81	27.2	87	SE	3	1.3		0	5ks			0.11	2.8	Fair	
Jacksonville, Fla			29.99	761.7	80	26.7	78	SW	5	2.2		0	0			3.63	92.2	Clear	
Keokuk, Iowa			29.94	760.5	71	21.7	85	NE	8	3.6			10s		NE	0	0	Cloudy	
Key West, Fla			30.04	763.0	82.3	27.9	74	Calm	0	0		2cs	1ks,hz.			1.06	26.9	Hazy	
Kittyhawk, N. C			29.92	760.0	77	25.0	90	SE	4	1.8		8k	0	S		0.08	2.0	Fair	
Knoxville, Tenn			29.97	761.2	69	20.6	95	Calm	0	0			Fog			0.01	0.3	Dense fog	
La Crosse, Wis			30.00	762.5	62	16.7	88	N	4	1.8		5cs	0			0	0	Fair	
Leavenworth, Kan			29.97	761.2	73	22.8	85	NE	1	0.4			10s		NE	0	0	Cloudy	
Louisville, Ky			29.91	759.7	80	26.7	78	Calm	0	0		0	Sm'e			0	0	Clear	
Lynchburg, Va			29.91	759.7	77	25.0	76	W	2	0.9		2c	0	W		0.07	1.8	Clear	
Malone, N. Y			29.75	755.6	77	25.0	69	SW	7	3.1		5k	0			0	0	Fair	
Marquette, Mich			30.13	765.3	58	14.4	87	N	4	1.8			10s		N	0	0	Cloudy	
Memphis, Tenn			30.01	762.0	77	25.0	95	SW	4	1.8			Fog			0	0	Foggy	
Milwaukee, Wis			30.09	764.3	63	17.2	74	N	15	6.7		0	5ks		N	0	0	Fair	
Mobile, Ala			30.02	762.5	74	23.3	90	N	3	1.3		0	Haze			0.19	4.8	Clear	
Montgomery, Ala			30.01	762.2	72.5	22.5	95	NW	5	2.2			Fog		NW	0.01	0.3	Foggy	
Morgantown, W. Va	28.92	734.6	29.92	760.0	73	22.8	81	Calm	0	0		0	0			0	0	Clear	
Mt. Washington, N. H	23.86	606.0	30.22	767.6	58	14.4	81	NW	7	3.1		8k	Haze	NW		0	0	Fair	
Nashville, Tenn			29.93	760.2	79	26.1	82	Calm	0	0		8ck	0	N		0	0	Fair	
New Haven, Conn			29.83	757.7	78.0	25.6	78	W	5	2.2		8ck	Haze	W		0	0	Cloudy	
New London, Conn			29.83	757.7	76	24.4	81	NW	5	2.2		5ck	2s	NW	NW	Inap.	Inap.	Fair	
New Orleans, La			30.03	762.7	79	26.1	82	W	6	2.7		7ck	0	W		0	0	Fair	
Newport, R. I			29.78	756.4	72	22.2	95	NW	8	3.6			10n		NW	0.05	1.3	Light rain	
New York, N. Y			29.88	758.9	74	23.3	68	W	5	2.2		5ck	2ks	SW		Inap.	Inap.	Fair	
Norfolk, Va			29.93	760.2	78	25.6	86	E	3	1.3		5c	2ks	SW	E	0.24	6.1	Fair	
North Platte, Neb	27.11	689.3	29.61	752.8	61	16.1	94	SE	10	4.5			10s			0.06	1.5	Cloudy	
Omaha, Neb	28.98	736.1	30.03	762.7	66	18.9	84	NE	4	1.8		10cs	0			0	0	Cloudy	
Oswego, N. Y			29.86	758.4	76	24.4	76	W	6	2.7		1cs	Haze			0	0	Hazy	
Pembina, Dakota			30.11	764.8	50	10.0	92	SE	1	0.4		5ck	0			0	0	Fair	
Philadelphia, Penn			29.91	759.7	76	24.4	76	NW	3	1.3		2ck	Fog			Inap.	Inap.	Clear	
Pike's Peak, Colorado	18.01	457.4	30.22	767.6	34	1.1	90	SW	4	1.8		2c	5s			0.15	3.8	Fair	
Pittsburgh, Penn			29.90	759.4	70	21.1	84	Calm	0	0			Fog			0	0	Foggy	
Port Huron, Mich			29.93	760.2	66	18.9	84	NE	11	4.9			10s		NE	0.07	1.8	Cloudy	
Portland, Me			29.84	757.9	71	21.7	90	NE	4	1.8			10n			0.04	1.0	Light rain	
Portland, Oregon			30.01	762.2	62	16.7	71	S	10	4.5			10s			0	0	Cloudy	
Punta Rassa, Fla			30.03	762.7	83.5	28.6	74	S	9	4.0		2cs	2ks	NE	S	0	0	Fair	
Rochester, N. Y			29.84	757.9	75	23.9	72	W	7	3.1		2ck	0	N		0	0	Fair	
Salt Lake City, Utah	25.55	649.0	29.88	758.9	68	20.0	38	SE	4	1.8		2k	0	SW		Inap.	Inap.	Fair	
Sandy Hook, N. J			29.84	758.4	76	24.4	76	W	15	6.7		2k	2s	W	W	0.02	0.5	Fair	
San Diego, Cal.			29.93	760.2	61	16.1	100	N	8	3.6		0	0			0	0	Clear	
San Francisco, Cal			30.00	762.0	59	15.0	81	NW	2	0.9			10s			0.01	0.3	Cloudy	
Santa Fé, N. M	23.36	593.3	29.93	759.4	56	13.3	100	Calm	0	0		8c	0			0.05	1.3	Fair	
Savannah, Ga.			29.98	761.5	79	26.1	73	W	2	0.9		2cs	2s			0.05	1.3	Fair	
Shreveport, La			30.03	763.5	77	25.0	86	Calm	0	0		0	0			0	0	Clear	
Smithville, N. C			29.94	760.5	76	24.4	86	NW	3	1.3		2c,k	0			1.57	39.9	Fair	
Springfield, Mass.			29.82	757.4	75	23.9	76	E	4	1.8		10ck	0			0	0	Cloudy	
St. Louis, Mo.			29.94	760.5	75	23.9	90	E	4	1.8		0	0			0.08	2.0	Clear	
St. Marks, Fla			30.00	762.0	76	24.4	86	NW	4	1.8		0	2ks			0	0	Fair	
St. Paul, Minn			30.07	764.8	59	15.0	81	N	4	1.8		2c	8s	W	W	0	0	Cloudy	
St. Paul's Island, Alaska			30.19	766.8	41	5.0	91	SE	12	5.4			10s			0	0	Cloudy	
Thatcher's Island, Mass			29.79	756.7	66	18.9	100	NE	9	4.0						0	0	Dense fog	
Toledo, Ohio			29.89	759.2	73	22.8	90	N	10	4.5			10s		N	0	0	Cloudy	
Tucson, Arizona	27.52	699.0	30.13	765.3	71	21.7		Calm				0	0			0.03	0.8	Clear	
Tybee Island, Ga			29.96	761.0	75	23.9	90	Calm	0	0		2c	Sm'e			0	0	Fair	
Vicksburg, Miss			30.04	763.0	75.5	24.2	88	Calm	0	0		8ck	0	S		0.01	0.3	Cloudy	
Virginia City, M. T	24.20	614.7	29.68	753.9	51	10.6	86	SE	17	7.6		1k	8ks,fog	SW	SW	0.27	6.9	Cloudy	
Washington, D. C			29.95	760.7	73	22.8	92	S	1	0.4		Haze	Fog		S	0.99	25.1	Foggy	
Wilmington, N. C			29.94	760.5	72	22.2	95	N	4	1.8			Fog			0.77	19.6	Foggy	

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
Wood's Holl, Mass			29.72	754.9	73	22.8	95	NW	16	7.2			10n		NW	0.48	12.2	Light rain	
Yankton, Dakota	28.82	732.0	30.09	764.3	60	15.6	82	E	6	2.7			10s			0	0	Cloudy	
Yuma, Arizona			29.84	757.9	85	29.4		S				0	0			0	0	Clear	
Sub Series.																			
Kingston, Jamaica, W. I.			30.14	765.5	77	25.0	86	Calm	0	0		2k	2s	N	N	0.36	9.1		James Gall.
St. Georges, Bermudas			30.14	765.5	85.0	29.4	78	SE	10	4.5		0	1k			0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa W. I.																			
Paramaribo, D. Guiana S.A			30.02	762.5	82	27.8	79	E			3	6ks?	5ks	E		0	0	½ Cloudy	C. J. Hering.
Batavia, Dutch Guiana S.A.	30.09	764.3			86.9	30.5		E								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1			62.5	16.9	88	Calm	0	0		10cs	0			0.58	14.7	Cloudy	Thomas Herran.
York Factory, B. A			29.90	759.4	48	8.9	96	S	2	0.9		4k	0	W		0	0		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.01	763.0	76	24.4		NE			1					0	0		Daniel Smith.
Makawao, Maui, H. I.																			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
*Schooner Adelie Fuller. N. 36° 18′, W. 75° 00′.	SSW	½	29.89	759.2	80	26.7		SE			1	5ck	2ks	SW	SE	Long Swells		Clearing	Capt. James Jorgensen.
Steamer Hibernian. N 49° 23′, W. 44° 09′.	S 74 W	10	29.73	755.1	52	11.1		NW			3		.k		SE	Smooth		Clear	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.; Denver, 5,135 ft., or 1,565. m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.8 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, 4,262.2 ft., or 1,299.2 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, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. * Rain-fall in 24 hours 0.28 inches, or 7.1 millimeters.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			29.99	761.7	83 3	28.5	69	Calm			0		0			0	0	Clear	Charnot.
Algiers			29.98	761.5	84.2	29.0	62	N			3		0			0	0	Clear	Peter.
La Calle			29.98	761.4	79.0	26.1	78	NE			3		5			0	0	Fair	Kunts.
Tunis			30.01	762.2	91.0	32.8	54	NE			2		7			0	0	Cloudy	Jacques.
Sfax			30.07	763.7	87.8	31.0	65	SE			3		4			0	0	Clear	Chauvey.
Saida			30.03	762.8	89.6	32.0	19	NNW			2		1			0	0	Clear	Millot.
Tebessa			30.03	762.8	80.4	26.9		S			4		9			0.039	1.0	Hidden	Colin.
Geriville			30.05	763.2	87.1	30.6	29	NNW			2		2			0	0	Clear	Lemaillot.
Laghouat			30.08	764.0	95.0	35.0		SW			2		0			0	0	Clear	Guyot.
Biskra			30.02	762.6	100.6	38.1		S			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 8	84.6	29.2	16	SW			2		1			0.228	5.8		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.94	760.4	72.7	22.6	62	W			3		7			0	0		Dr. Wierzbiski.
Eperies			29.83	757.6	78.4	25.8	46	N			4		6cs		S	0	0		Julius Mikolik.
Gratz	28.69	728.8	29.83	757.6	78.6	25.9	54	SW			2		6			0	0		Andreas Rospini.
Hermannstadt	28.47	723.2	29.83	757.7	75.9	24.4	41	WNW			3		3			0.008	0.20		Prof. Reissenberger.
Kremsmünster	28.61	726.6	29.87	758.7	81 3	27.4	53	WNW			3		3			0	0		Prof. C. Wagner.
Lemberg			29.73	755.1	70.2	21.2	82	NW			3		5			Blank	Blank		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.97	761.2	81.3	27.4	64	S.			1		2cs			0	0		I.R.Hydrographic Office.
Szegedin			29.89	759.1	75.2	24.0		SE			2		5			0	0		Karl Stancel.
Trieste			29.97	761.3	81.3	27.4	70	W			1		2ks			0	0		Prof. V. Farolfi.
Vienna			29.83	757.7	86.4	30.2	32	Calm			0		2			0	0		I. R. Central Met. Ob'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1.258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			29.95	760.6	81.7	27.6	38	N			1	1c	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			30.12	765.0	63.5	17.5		ESE	8	3.6			0			0	0	Blue sky	William Boswell.
Ardrossan			30.02	762.5	75	23.9		NE			1		5					Hazy	William McNeil.
Armagh, Observatory			29.99	761.7	73.9	23.3		ESE	7	3.1			2					*D. clouds	S. Cal, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.92	760.0	75.6	24.2		SE			1–3		3					*D. clouds	J. Dreyer.
Bradford			30.02	762.5	74.7	23.7		NE			0		0			0	0	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.07	763.8	84.5	29.2		SE			1		5					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			30.00	762.0	82.0	27.8		E			1		1			Blank	Blank	*D. clouds	H. Todd.
Cardington			30.00	762.0	81.0	27.2		E			1		1			Blank	Blank	Blue sky	John McLaren.
Carlisle																			T. Bel, for J. Carmell.
Chatham, School M. E			30.03	762.5	77.0	25.0		NE			2		2			Blank	Blank	*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.59	726.2	30.03	762.7	73.5	23.1		E			2		6					*D. clouds	R. E. Power.
Donaghadee			30.01	762.0	67	19.4		NNE			2		5					*D. clouds	J. Mac Gowan.
Dover			29.99	761.7	70	21.1		ENE			3		2					½ clouded	J. Costello.
Eccles (near Manchester.)			29.99	761.7	78.7	25.9		E	2.6	1.2								Blue sky	Thomas Mackereth.
Falmouth, Observatory			29.96	761.0	66.5	19.2		ESE			2		1					*D. clouds	The Staff.
Fort Napier, (Natal)	27.69	703.3	29.94	760.5	76.1	24.5		E			1		8					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.07	763.8	83.0	28.3		W			1		4					*D. clouds	
Galway, Queen's College			29.81	757.2	70	21.1		SW			2		4					D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.97	761.2	85.2	29.6		E			1		0					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			30.03	762.7	72.4	22.4		NE			1		3					Fine	Lewis Stuart.
Great Yarmouth			30.01	763.0	67	19.4		NNE			2		4					Hazy	G. T. Watson.
Greenwich, Royal Obs'y			29.99	761.7	86.2	30.1		E			1		1					Blue sky	The Staff, for G. B. Airy
Guernsey			29.96	761.0	72	22.2		NE			2		0					Blue sky	Dr. S. E. Hoskins.
Helston			29.96	761.0	72	22.2		NE			2		0			0	0	Clear	M. P. Moyle.
Holyhead			29.95	760.7	70	21.1		WNW			2		2						John Tilston.
Kew, Observatory			29.98	761.5	81.8	27.7		E	8	3.6			8					Threatening	The Staff.
Kingstown			29.98	761.5	66	18.9		E			2		1					Blue sky	George Mitchell.
Leicester Museum			30.01	762.2	81.0	27.2		E			1		1					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.97	761.2	84.8	29.3		SE			1		4k					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			30.05	763.5	70	21.1		Calm			0		0					Clear	W. D. Penny.
Nassau, (Bahamas)			30.12	765.0	86.4	30.2		SE			3		7					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.00	762.0	83.9	28.8		ESE			3		3ck		SSE	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.98	761.5	79.1	26.2		E			2		6					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.96	761.0	85	29.4		S			1		7					*D. clouds	J. Lucas.
Plymouth			29.95	760.7	75.2	24.0		S			1		0					Blue sky	John Merrifield.
Roche's Point			29.94	760.5	66	18.9		SSE			4							Foggy	W. Kennedy.
Saint Ann's Head			29.96	761.0	70	21.1		Calm			0		0					Blue sky	John C. Walker.
Saint Helier, Jersey			29.94	760.5	85.0	29.4		E			2		2					½ clouded	A. P. Amy.
Sandwick Manse Orkneys			30.10	764.5	67.1	19.5		SE	21	9.4			0					Blue sky	Rev. C. Clouston, LL.D.
Scarborough																			F. Shaw.
Scutari Cemetery, Turkey			29.87	758.7	75.0	23.9		SW			2		7					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.03	762.7	78.7	25.9		ESE			2		2			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			30.01	762.2	79.4	26.3	48	SE			2		1			0	0	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			30.09	762.0	74.9	23.8		E			1		6			Blank	Blank	*D. clouds	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			30.02	762.5	70	21.1		Calm			0		2					Blue sky	John Smith.
Stratfield Turgiss			30.00	762.0	84.0	28.9		Calm			0		1					*D. clouds	Rev. Charles H. Griffith.
Thurso			30.06	763.5	75	23.9		ESE			2		0					Blue sky	John Trotter.
Truro, Royal Institution			29.97	761.2	78	25.6		E			4		4					*D. clouds	W. Newcombe.
Valencia, Observatory			29.82	757.4	69.3	20.7		SE	30	13.4			10					Overcast	The Staff.
SUB-STATIONS.																			
Calf of Man, (Isle of Man					61	16.1		E			1		5						Thomas Dawson.
Cape Good Hope, Obs'y			30.15	765.8	57.8	14.3	86	NW	15	6.7		5	5						The Staff, for Dr. Stone.
Hobart Town, (Tasmania			29.54	750.3	55.0	12.8	100	Calm			0		10n			0.08	2.0	Raining	Francis Abbott, F.R.A.S.
Leith, Restaurig Parks			30.08	764.0	65.0	18.3		NE			3					0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.17	766.3				E	24.8	9.3						0.08	2.0		C. Meldrum
Melbourne, Observatory			29.82	757.4	42.9	6.1	80	W	11	4.9			10			0.19	2.3	Showery	R. L. J. Ellery.
Monach Lighthouse, Hebrides			30.04	763.0	68	20.0		Calm			0	0	0			0	0		J. Youngclaus.
North Unst, (Shetland Is.)			30.19	766.8	56	13.3		E			4	0	0						Robert Burnett.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Dartmoor and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m.; local time; Mauritius, unknown. 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			30.15	765.9	68.9	20.5	56	SSW			2		4						
Faroe			30.08	764.1	76.6	24.8	37	SE			6		0						
Gouthaab, Greenland			29.69	754.1	42.6	5.9	78	NE			2		8						
Stykkisholm, Iceland			29.87	758.8	60.6	15.9	85	SE			2		8						
Thorshavn, Faröe			30.15	765.7	55.4	13.0	85	NE			2		0						
Vestervig			30.12	765.0	78.8	26.0	64	ESE			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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.04	762.9	89.6	32	33	SSW			1		2k			0	0	Slightly cl'dy	Normal School.
Amiens																			Normal School.
Avignon			29.97	761.3	85.3	29.6	49	N			2		0			0.067	1.7	Very clear	Normal School.
Bar-sur-Seine			29.96	760.9	85.6	29.8	38	S			1		5kn		E	0.386	9.8	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.89	759.2	88.0	31.1	33	SE	2.7	1.2					S	0	0		Beaumette Observatory
Beauvais			29.97	761.2	81.1	27.3	45	E			1		2		SSE	0.276	7.00	Slightly cl'dy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.03	762.7	89.6	32	38	SW			1		2cn	...	W	0	0	Slightly cl'dy	Normal School.
Bourges			29.93	760.3	79.2	26.2	58	N			2		2		N	0	0	Slightly cl'dy	Normal School.
Brest			29.84	758.0	86.9	30.5	52	SSE			1		3			0	0	Stormy	Naval Observatory.
Carcassonne			29.91	759.8	80.8	27.1	48	E			1		1		W	0	0	Clear	Normal School.
Caen																			Normal School.
Chartres			30.17	766.3	87.8	31	72	E			1		5		S	0	0		Normal School.
Châlons-sur-Marne			29.97	761.1	88.7	31.5	42	SE			2		5k		W	0	0	Cloudy	Normal School.
Clermont			29.91	759.7	84.2	29.0	52	N			2		2		WSW	0	0	Slightly cl'dy	Puy de Dome Obs'y.
Commercy			29.98	761.5	78.4	25.8	56	W			2		2kn		W	0	0	Slightly cl'dy	Normal School.
Commune de Greasque*			30.06	763.5	88.7	31.5	44	W			2		8		W	0	0		M. Kina.
Grenoble			29.95	760.7	74.8	23.8	71	SW			2		5		W	0.069	1.75	Cloudy	Normal School.
La Roche-sur-Yon					83.3	28.5	57	SW			2		5		NE	0	0	Cloudy	Normal School.
Le Mans			29.93	760.1	81.6	29.2	35	SSW			2		5		SSW	0	0	Cloudy	Normal School.
Lons-Le-Saulnier			30.01	762.2	78.4	25.8	67	NW			1		0			0.150	3.8	Clear	Normal School.
Mâcon			30.17	766.5	80.2	26.8	65	Calm			0		5		W	0	0	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			29.94	760.4	81.3	27.4	35	SSE			2		5		SSE	0	0	Cloudy	Normal School.
Nismes			30.04	762.9	90.7	32.6	50	S			2		0			0	0	Clear	Normal School.
Orleans																			Normal School.
Paris, Observatory			29.95	760.6	84.4	29.1	42	NE			1		4			0	0	Cloudy	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			29.92	760.0	78.3	25.7	64	SE			3		8		NW	0.079	2.0	3/4 covered	Naval Observatory.
Rouen			29.94	760.5	87.8	31.0	35	SE			1		2		S	0	0	Slightly cl'dy	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School
Villefranche			29.93	760.2	80.6	27	56	SE			1		2			0.16	4.	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.96	760.9	81.3	27.4													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.25	768.4	70.3	21.3	78	E	14.9	6.66			4		SE	0.157	4.0		—. Falguère.
Montsouris, Paris			29.95	760.7	86.0	30.0	50	Calm			0		3k		SSE	Inap.	Inap.		Montsouris Observ'tory.
Perpignan			29.97	761.1	82.8	28.2	47	SE	5.6	2.50			2		SW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.46	545.2			58.6	14.8		W			1		8					Fair	M. Baylac.
Pic du Midi, (Plantade)	22.71	576.7			61.2	16.2		W			3		8			0	0	Fair	General de Nansouty.
Saint Maur, (near Paris)			29.95	760.8	86.7	30.4	38	NE			1		2			0	0	Slightly cl'dy	E. Renou.
Toulouse			29.98	761.5	88.7	31.5	41	ESE			3		0			Inap	Inap.		Toulouse Observatory
Tours			29.93	760.3	88.2	31.2	37	NNW			1		3		WNW	0	0		C. Marquet.
Versailles, (near Paris)			29.97	761.4	87.4	30.8	40	ESE			2		7			0	0	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai																			H. Le Lec, S. J.

NOTE.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont Louis is 1,586.40 meters, or 5,204.8 feet; Clermont 388 m., or 1,272.3 ft; Commune de Greasque, 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.95	760.7	81.7	29.3	32	E			2		1	E		0	0		Prof. T. Hoh.
Berlin			30.08	764.1	75.6	24.2	58	NE			2		2			0	0		Prof. Arndt.
Breslau			30.09	764.2	72.3	22.4	37	NNE			6		6			0	0		Dr. P. Neugebauer.
Carlsruhe			29.90	759.5	86.7	30.4	42	W			1		1			0	0		A. Senz.
Cassel			29.96	761.0	90.1	32.3	39	N			2		0			0	0		Dr. H. Möhl.
Emden			29.85	758.1	86.0	30.0	36	E			3		1			0	0		Prof. Prestel.
Frankfort on the Main			29.94	760.4	87.4	30.8	35	E			3		3			0	0		Physical Society.
Friedrichshafen			29.94	760.5	76.3	24.6	75	WSW			5		3			0	0		M. Wilhelm.
Hamburg			30.09	764.2	77.4	25.2	33	ESE			5		0			0	0	Clear	Captain F. Hegemann.
Kiel			30.09	764.2	74.8	23.8	46	E			3		0			0	0		Prof. G. Karsten.
Königsberg, (Prussia.)			30.02	762.6	66.9	19.4	48	N			5		4			0	0		Prof. E. Luther.
Köslin			30.15	765.8	66.0	18.9		NE			4		0			0.008	0.2		H. Müller.
Leipsic			30.04	762.9	80.4	26.9	29	E			3		0			0	0		Prof. Bruhns.
Memel			30.04	763.0	62.8	17.1	63	NNW			5		1ck			0	0		Reinbrecht & Skalweit.
Münster			29.96	761.0	88.7	31.5	41	E			5		0			0	0		Prof. E. Heis.
Neufahrwasser			30.14	765.6	65.8	18.8	58	NE			5		4			0	0	Squally	A. Lothes.
Posen			30.09	764.3	70.9	21.6	28	N			6		1			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.94	760.4	85.5	29.7	44	NE			1		3	E		0	0		Dr. Schur.
Stuttgart			29.89	759.3	85.6	29.8	39	N			1		2			0	0		Prof. Schoder.
Thorn			30.04	763.1	71.4	21.9	42	NE			5		4			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.90	759.5	88.5	31.4	34	SE			5		2			0	0		Prof. Flesch.
Wustrow, Naval School			30.23	767.7	70.0	21.1	53	ENE			2		0			0	0		E. F. Schütz.

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	88.5	31.4		S										Clear	

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

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			29.92	759.9	85.1	29.5	48	S	3.8	1.7			3			0	0		
Padua			29.92	760.0	81.1	27.3	60	SW	1.8	0.8			3	W		0	0		
Vicenza			29.92	760.0	82.4	28.0	54	E	0	0			2	W		0	0		
Verona			29.91	759.7	89.2	31.8	36	W			2		3			0	0		
Bergamo																			
Domodossola	28.91	734.4	29.90	759.4	81.1	27.3	54	S			6		5			0	0		
Milan			29.95	760.7	88.7	31.5	48	S			2		4	SE		0	0		
Pavia			29.98	761.4	84.2	29.0	50	SW			4		2	SW		0	0		
Moncalieri			29.95	760.7	80.1	26.7	57	WSW	3.8	1.7			1			0	0		
Mondovi	28.17	715.4	30.00	762.1	79.0	26.1	45	NE			2		3			0	0		
Porto Maurizio			30.05	763.3	78.6	25.9	66	E			2		6	SE		0	0		
Genoa			29.99	761.8	80.6	27.0	59	SW	3.8	1.7			0			0.394	10.0		
Piacenza																			
Parma			29.92	759.9	84.2	29.0	52	W			4		4			0	0		
Bologna			29.98	761.4	83.1	28.4	48	NW			1		4	S		0	0		
Florence			30.03	762.8	74.3	23.5	69	SE			2		10			0	0		
Leghorn			30.02	762.4	79.5	26.4	63	SW	6.3	2.8			9			0	0		
Siena	28.84	732.5	29.99	761.8	72.7	22.6	70	W	3.8	1.7			10	W		0.106	2.7	Showery	
Urbino	28.49	723.7	29.99	761.7	79.2	26.2	49	WSW			1		7			0	0		
Ancona			29.97	761.2	84.6	29.2	62	SE			4		3			0	0		
Grosseto			30.00	762.1	87.1	30.6	47	SE			2		6	NW		0.028	0.7		
Rome			30.01	762.2	85.8	29.9	42	SW	7.4	3.3			2			0	0		
Naples, O. U.			30.02	762.4	84.9	29.4	59	WSW			1		2	S		0	0		
Lecce			29.99	761.7	82.0	27.8	43	NNE	7.4	3.3			5	SW		0	0		
Cosenza			30.01	762.2	88.5	31.4	68	N	6.9	3.1			7			0	0		
Riposto, (Sicily)			30.01	762.2	87.8	31.0	63	E			2		3	SE		0	0		
Palermo			29.97	761.3	80.4	26.9	59	NE	6.9	3.1			1			0	0		
Caltanissetta	28.09	713.4	29.96	760.9	80.2	26.8	43	SW			2		5	SE		0	0		
Sub-Series.																			
Naples, S. R			30.03	762.8	83.1	28.4	50	SW	6.3	2.8			8	SW		0	0		Prof. F. Brioschi.
Pesaro			30.04	763.1	79.7	26.5	61	NNE	26.0	11.63			2k	N		0	0		L. Guidi.

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	74.8	23.8		NE			2								
Groningen			29.92	760.0	83.1	28.4		E			4								
Helder			29.99	761.7	67.3	19.6		NW			2								
Utrecht			29.95	760.6	83.1	28.4	52	NNW			2		2					Light cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.12	765.0	73.4	23.0	59	SSW	9.8	4.4			0			0	0		
Brönö			30.24	768.1	55.4	13.0	67	NNW	18	8			2			0	0		
Christiania			30.14	765.5	75.6	24.2	62	S	2.7	1.2			2			0	0		
Tromsö			30.12	765.1	49.8	9.9		NW	2	1			10			0.122	3.1		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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,)			30.04	762.9	75.0	23.9	80	W	13.5	6.02			5			0.055	1.4		Dr. J. A. N. Sampaio.
Campo Major			29.92	760.0	87.1	30.6	25	SW	8.1	3.6			2			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.10	764.4	77.5	25.3	66	SW	6.9	3.1			1			0	0		Capt. D. A. da Cunha.
Lisbon			30.00	761.9	73.2	22.9	71	SW	21.0	9.4			5	SW		0	0		The Observatory.

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

RUSSIAN SERIES.

Furnished by 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	760.7	68.5	20.3	44	NNW	16	7			7						Astronomical Obs.
Wilna			29.89	759.1	63.9	17.7	52	N	20	9			9						Astronomical Obs.
Dorpat			29.99	761.7	55.4	13.0	73	NNE	9	4			9			Blank	Blank		Physical Cabinet.
St. Petersburg			29.94	760.4	59.5	15.3	48	NE	11	5			5						Central Physical Obs.
Kuopio			30.00	761.9	56.8	13.8	69	N	13	6			5						Ch. Forsten.
Kieff			29.62	752.4	66.2	19.0	73	N	18	8			8					Thunder-storm.	Physical Cabinet.
Nikolaiev			29.75	755.6	69.8	21.0	70	SW	9	4			7						Kurdakof.
Kertch			29.76	755.8	71.6	22.0	77	NW	9	4			5						Lagorio.
Moscow			29.69	754.0	59.4	15.2	92	SW	7	3			10					Raining	Meteorological Obs.
Lugan			29.51	749.6	79.5	26.4	38	SW	34	15			9			Blank	Blank		Meteorological Obs.
Archangel			29.80	756.8	52.7	11.5	76	NNW	27	12			8						Ogorodnikof.
Tiflis	28.26	717.7	29.56	750.8	94.3	34.6	25	SSE	13	6			0						Physical Observatory.
Astrakhan			29.65	753.2	84.9	29.3	46	Calm	0	0			10			Blank	Blank		Sebastianoi.
Kasan			29.59	751.6	70.2	21.2	67	NE	4	2			7						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.61	726.7	29.52	749.7	64.0	17.8	81	W	4	2			8					Raining	Meteorological Obs.
Nukuss			29.62	752.4	102.0	38.9	25	ENE	2	1			0						
Kasaly																			Robrof.
Tashkend																			Michelson.
Barnaul			29.61	752.2	71.1	21.7	75	Calm	0	0			10						Meteorological Obs.
Yeniseisk			29.66	753.3	65.1	18.4	69	SE	2	1			1						Marks.
Irkutsk																			Usolzef.
Oorga																			Messin.
Peking, (China)			29.95	760.7	81.5	27.5	67	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.85	758.3	66.7	19.3	96	Calm	0	0			10			Blank	Blank		
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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 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			29.85	758.1	93.7	34.3	26	SW	8.9	4.00		0	1			0	0	Almost clear	Royal Observatory
San Fernando			30.02	762.5	78.4	25.8	70	SW	9.6	4.3		0	0						The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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			30.08	764.0	58.3	14.6	52	N			2		7			0	0		
Umea			30.14	765.6	60.4	15.8	59	SE			2		4			0	0		
Hernosand			30.13	765.4	61.5	16.4	47	NE			2		8			0	0		
Stockholm			30.09	764.3	70.9	21.6	32	WNW			2		5			0	0		
Wisby			30.18	766.5	59.4	15.2	68	NNE			7		3			0	0		
SUB-SERIES.																			
Upsala			30.11	764.9	67.3	19.6	36	N	10.7	4.8			2	N	NNW	0.001	0.02		Dr. Hildebrandsson.

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

SWISS SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.60	726.5	29.96	761.0	79.2	26.2	47	N			2		2			0	0	Clear	The Observatory.
Zurich	28.39	721.2	29.94	760.5	82.2	27.9	54	N			1		1			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, —1.3 lam; Thermometer, +4.5 cent.; Relative Humidity, —8 per cent.

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

TURKISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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	77.4	25.2	60	SSW	4	2.0			6		NW	0	0		
Fao, (Persian Gulf)																			
Salonica			29.95	760.6	89.2	31.8		W			2		0						
Valona			30.04	762.9	79.2	26.2		W			1		0						
Varna			30.02	762.5	80.6	27.0		N			2		5			Blank	Blank		
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			29.74	755.3	88.0	31.1	55	W			2		3k	E	W				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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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.			29.92	760.0	59.9	15.5	64	NW	16	7.2			0			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.12	765.0	61	16.1		N	1	0.4		2c	0	NW		0.29	7.4	Fair	W. R. Bige.
*Chatham, N. B.			29.90	759.4	57	13.9	71	N	13	5.8		2ck	0	N		0.46	11.7	Fair	G. A. Blair.
Charlottetown, P. E. Island			29.81	757.2	59	15.0	65	N	18	8.0			8ks		N	1.060	26.92	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.04	763.0	64.2	17.9	56	E			1	0	0			0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			29.97	761.2	55.8	13.2	64	W			1					0.17	4.3	Clear	H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			29.96	761.0	58.2	14.6	64	NE	10	4.5		0	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			30.07	763.8	48	8.9	100	W	4	1.8		0	0			0.70	1.78	Clear	James Stewart.
Goderich, Ontario			30.07	763.8	64.2	17.9	79	Calm			0	8k	0	NW		0	0		H. J. Strang, M. A.
Granton, Ontario	28.98	736.1	30.05	763.3	61	16.1		Calm			0	2cs	0			0	0	Clear	James Grant.
*Halifax, N. S.			29.72	754.9	65	18.3	79	NW	11	4.9			8n		NW	0.630	16.00	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.11	764.8	61	16.1	66	NE	6	2.7		2c	0			0.34	8.6	Fair	S. Woods, M. A.
Little Glace Bay, N. S.			29.59	751.6	62.0	16.7	100	NE	10	4.5			10n			0.75	19.1	Raining	C. H. Rigby.
*Montreal, Quebec			30.06	763.5	62	16.7	62	N	10	4.5		0	0			0.85	21.6	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.08	764.0	61	16.1	74	N	4	1.8		0	0			0.12	3.0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.09	764.3	63	17.2	67	S	6	2.7		2cs	0	SE		0	0	Fair	Rev. R. Mosley.
Port Dover, Ontario			30.07	763.8	61	16.1	83	N	7	3.1		8k	0	N		0	0	Fair	H. Morgan.
Port Hastings, N. S.			29.68	753.9	64.3	17.9		NW	14	6.3						1.10	27.9	Fine	Peter Grant.
Port Stanley, Ontario			30.07	763.8	58	14.4	90	NW	4	1.8		8k	0	NW		0	0	Fair	M. Payne.
*Quebec, Quebec			30.07	763.8	62	16.7	83	NE	3	1.3		2k	0			0	0	Fair	Capt. Ashe, R. N.
St. John, N. B.			29.91	759.7	59	15.0	68	N	9	4.0		1k	0			0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			30.05	763.3	61	16.1	86	NE	2	0.9			10ks		W	0	0	Cloudy	K. Stewart.
Stayner, Ontario			30.06	763.5	62	16.7	77	SE	3	1.3		5c	0	W		0	0	Fair	R. J. Cole.
Stratford, Ontario	28.81	731.8	30.07	763.8	57.2	14.0	65	S	4	1.8		4cs	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.64	752.8	63	17.2	98	N	7	3.1			10n		N	0.94	23.9	Light rain	T. C. Hill.
*Toronto, Ontario			30.09	764.3	63	17.2	61	NE	5	2.2		8ck	2n	W	W	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.05	763.3	59.6	15.3	85	E	5	2.2		3ck	4ks	W		0	0	Gloomy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			29.81	757.2	78	25.6	66	SE				0	5ks			0	0	Clear	John Delaney.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.			29.99	761.7	67	19.4	64	NW	12	5.4		2cs	0	NW		Inap.	Inap.	Clear	
Alpena, Mich.			30.06	763.5	58	14.4	87	NW	6	2.7			10s		NW	0	0	Cloudy	
Atlantic City, N. J.			29.95	760.7	79	26.1	65	N	12	5.4		0	0			Inap.	Inap.	Clear	
Augusta, Ga.			30.03	762.7	79	26.1	82	Calm	0	0		0	0			0	0	Clear	
Baltimore, Md.			29.99	761.7	78	25.6	69	SE	6	2.7		2c	Fog			0	0	Foggy	
Barnegat, N. J.			29.94	760.5	78	25.6	69	N	17	7.6		0	2s			0	0	Fair	
Bismarck, Dakota	28.30	718.8	29.92	760.0	56	13.3	93	Calm	0	0			10s			0.02	0.5	Cloudy	
Boston, Mass.			29.95	760.7	74	23.3	56	NE	15	6.7		1cs	Haze			0.37	9.4	Hazy	
Breckenridge, Minn.			30.01	762.2	57	13.9	93	N	4	1.8			10n			0.31	7.9	Light rain	
Buffalo, N. Y.			30.00	762.0	64	17.8	70	E	10	4.5		8c	0	W		0.01	0.3	Fair	
Burlington, Vt.			30.01	763.0	64	17.8	73	N	4	1.8		2k	0			0.84	21.3	Fair	
Cairo, Ill.			30.01	762.2	79	26.1	86	E	1	0.4		0	0			0	0	Clear	
Cape Hatteras, N. C.			29.94	760.5	81	27.2	82	NE	6	2.7		0	5s		NE	0	0	Fair	
Cape Henry, Va.			29.95	760.7	82	27.8	79	W	6	2.7		0	0			Inap.	Inap.	Clear	
Cape Lookout, N. C.			30.02	762.5	81	27.2	74	N	8	3.6		1k	0			0	0	Clear	
Cape May, N. J.			29.95	760.7	80	26.7	70	NE	10	4.5		0	0			0	0	Clear	
Charleston, S. C.			30.05	763.3	79	26.1	82	NW	2	0.9		0	0			0	0	Clear	
Cheyenne, Wyoming	24.09	611.9	30.03	762.7	58	14.4	53	NW	12	5.4		2ck	0	SW		0	0	Fair	
Chicago, Ill.			30.00	762.0	68	20.0	84	N	1	0.4		2cs	5s			0	0	Fair	
Cincinnati, Ohio			29.98	761.5	73	22.8	85	E	4	1.8			10s			0	0	Cloudy	
Cleveland, Ohio			30.02	762.5	68.3	20.2	84	NE	2	0.9		2ck	2s	W	W	0	0	Fair	
Corsicana, Tex.			30.04	763.0	75	23.9	85	S	6	2.7		0	0			0	0	Clear	
Davenport, Iowa			30.04	763.0	67	19.4	79	SE	4	1.8			1pn			Inap.	Inap.	Light rain	
Denison, Tex.			30.05	763.3	79	26.1	82	S	5	2.2		0	0			0	0	Clear	
Denver, Col.	24.84	630.9	30.06	763.5	64	17.8	62	Calm	0	0		0	5s		SW	0	0	Fair	
Detroit, Mich.			30.05	763.3	61	16.1	82	N	4	1.8		8ck	0			0	0	Fair	
Dodge City, Kan.	27.38	695.4	29.56	750.8	72	22.2	90	S	12	5.4		2c	0	W		0	0	Fair	
Dubuque, Iowa			30.01	762.2	68	20.0	64	SE	8	3.6		10k	0	W		0	0	Cloudy	
Duluth, Minn.			30.02	762.5	59	15.0	87	NE	4	1.8			10s			0.16	4.1	Cloudy	
Eastport, Me.			29.93	760.2	60	15.6	66	N	14	6.3		0	0			0.09	2.3	Clear	
Erie, Pa.			29.98	761.5	71	21.7	67	Calm	0	0		4c	Haze			0	0	Fair	
Escanaba, Mich.			30.04	763.0	61	16.1	88	W	4	1.8			10s		W	0.03	0.8	Cloudy	
Fort Gibson, Indian Ter.			29.95	760.7	79	26.1	82	E	6	2.7		2c	0			0.07	1.8	Clear	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.81	731.8	29.86	758.4	77	25.0	82	SE	4	1.8		2k	2s	S	S	0.07	1.8	Fair	
Fort Sully, Dakota	28.21	716.5	29.81	757.2	62	16.7	94	SW	2	0.9		8k	0	SE		0.16	4.1	Cloudy	
Florence, Arizona	28.33	719.6	29.76	755.9	77	25.0		NE				2c	0			0	0	Fair	
Galveston, Tex.			30.08	764.0	80	26.7	82	SE	1	0.4		2k	0	SE		0	0	Fair	
Grand Haven, Mich.			30.03	762.7	66	18.9	73	E	6	2.7		0	8s		W	0	0	Cloudy	
Indianapolis, Ind.			30.00	762.0	72	22.2	85	NE	2	0.9		2ck	5cs			0	0	Fair	
Indianola, Tex.			30.06	763.5	81	27.2	82	SE	4	1.8		2k	0			0	0	Fair	
Jacksonville, Fla.			30.10	764.5	81	27.2	74	SW	4	1.8		0	0			0.08	2.0	Clear	
Keokuk, Iowa			29.93	760.2	69	20.6	90	E	10	4.5			10s			0	0	Cloudy	
Key West, Fla.			30.14	765.5	81.5	27.5	78	SE	7	3.1		Haze	2k	E	SE	0	0	Hazy	
Kittyhawk, N. C.			30.00	762.0	79	26.1	86	NE	8	3.6		0	0			0	0	Clear	
Knoxville, Tenn.			30.05	763.3	71	21.7	95	S	1	0.4			Fog			0	0	Dense fog	
La Crosse, Wis.			29.99	761.7	66	18.9	68	S	8	3.6		5k	2s		S	0	0	Cloudy	
Leavenworth, Kan.			29.92	760.0	77	25.0	86	Calm	0	0			10n			0.01	0.3	Light rain	
Louisville, Ky.			30.00	762.0	78	25.6	78	N	4	1.8		2c	0			0	0	Clear	
Lynchburg, Va.			29.98	761.5	79	26.1	78	Calm	0	0		2c	0	W		0	0	Clear	
Malone, N. Y.			29.92	760.0	60	15.6	65	NE	2	0.9		2c	0	W		0	0	Fair	
Marquette, Mich.			30.04	763.0	58	14.4	93	W	2	0.9			10s			0	0	Threatening	
Memphis, Tenn.			30.04	763.0	83	28.3	83	Calm	0	0		2k	Fog			0	0	Fair	
Milwaukee, Wis.			30.06	763.5	62	16.7	88	N	5	2.2		5ks	Smk	W		0	0	Fair	
Mobile, Ala.			30.10	764.5	77	25.0	86	SW	3	1.3		0	0			0.35	8.9	Clear	
Montgomery, Ala.			30.08	764.0	75.5	24.2	88	W	3	1.3		0	0			0.02	0.5	Clear	
Morgantown, W. Va.	28.90	736.3	30.00	762.0	71	21.7	88	N	1	0.4			10s		N	0	0	Threatening	
Mt. Washington, N. H.	23.88	606.5	30.24	768.1	41	5.0	91	NW	20	8.9		2k	1k	NW	NW	0	0	Fair	
Nashville, Tenn.			30.01	762.2	79	26.1	82	Calm	0	0		0	Haze			0	0	Clear	
New Haven, Conn.			29.94	760.5	75.0	23.9	69	N	12	5.4		Haze	Smk			Inap.	Inap.	Fair	
New London, Conn.			29.95	760.7	75	23.9	64	N	6	2.7		2ck	Haze	W		0.01	0.3	Clear	
New Orleans, La.			30.10	764.5	79.5	26.4	80	W	2	0.9		1ck	0	N		0	0	Clear	
Newport, R. I.			29.93	760.2	72	22.2	75	N	10	4.5			10ks		NW	0.18	4.6	Threatening	
New York, N. Y.			29.9[illegible]	761.5	76	24.4	64	NW	8	3.6		2c	Smk	W		0.08	2.0	Fair	
Norfolk, Va.			30.00	762.0	81	27.2	78	SW	4	1.8		0	0			1.35	34.3	Clear	
North Platte, Neb.	27.07	687.6	29.52	749.8	68	20.0	95	E	2	0.9			10s			0	0	Cloudy	
Omaha, Neb.	28.87	733.3	29.90	759.4	73	22.8	90	SE	1	0.4		5ck	0	SW		0	0	Fair	
Oswego, N. Y.			30.05	763.5	63.8	17.7	65	NE	5	2.2		8c,ks	0	NW		0	0	Fair	
Pembina, Dakota			30.02	762.5	48	8.9	96	Calm	0	0		10k	0			Inap.	Inap.	Cloudy	
Philadelphia, Penn.			29.98	761.5	76	24.4	64	E	17	7.6		0	Haze			0	0	Clear	
Pike's Peak, Colorado	18.06	458.7	30.[illegible]7	768.8	37	2.8	80	W	4	1.8		5ck	4s	W		Inap.	Inap.	Fair	
Pittsburgh, Penn.			30.00	762.0	68	20.0	84	N	3	1.3		1ck	Smk			0.03	0.8	Smoky	
Port Huron, Mich.			30.06	763.5	60	15.6	88	NW	5	2.2		5c	5s	SW		0	0	Cloudy	
Portland, Me.			29.97	761.2	67	19.4	64	NE	8	3.6		0	0			0.42	10.7	Clear	
Portland, Oregon			30.09	764.3	53	11.7	93	Calm	0	0		0	0			0	0	Clear	
Punta Rassa, Fla.			30.14	765.5	84.5	29.2	69	S	7	3.1		2cs	2k	NE	SW	0	0	Fair	
Rochester, N. Y.			30.04	763.0	67	19.4	64	E	4	1.8		5ck	2s	NW		Inap.	Inap.	Cloudy	
Salt Lake City, Utah	25.65	651.5	29.98	761.5	58	14.4	47	NW	2	0.9		0	0			0	0	Clear	
Sandy Hook, N. J.			29.96	761.0	75	23.9	72	N	14	6.3		0	Haze			0.01	0.3	Clear	
San Diego, Cal.			29.91	759.7	60	15.6	100	N	4	1.8		0	0			0	0	Clear	
San Francisco, Cal.			29.96	761.0	52	11.1	90	NW	10	4.5			Fog			0	0	Foggy	
Santa Fe, N. M.	23.38	593.8	29.92	760.0	58	14.4	93	Calm	0	0		2c	2s			0.05	1.3	Fair	
Savannah, Ga.			30.06	763.5	81	27.2	74	SW	4	1.8		0	Haze			0.31	7.9	Clear	
Shreveport, La.			30.10	764.5	80	26.7	82	Calm	0	0		0	0			0	0	Clear	
Smithville, N. C.			30.03	762.7	79	26.1	78	N	4	1.8		0	0			0.85	21.6	Clear	
Springfield, Mass.			29.96	761.0	74.5	23.6	59	N	8	3.6		2ck	2s,hz			0	0	Fair	
St. Louis, Mo.			29.98	761.5	77	25.0	85	S	8	3.6		0	0			0	0	Clear	
St. Marks, Fla.			30.09	764.3	77	25.0	82	Calm	0	0		0	2ks			0	0	Fair	
St. Paul, Minn.			29.94	760.5	61	16.1	94	NW	12	5.4			10n			0.23	5.8	Light rain	
St. Paul's Island, Alaska			29.76	755.9	42	5.6	91	SE	15	6.7			10n			0.37	9.4	Light rain	
Thatcher's Island, Mass.			29.94	760.5	67	19.4	79	NE	15	6.7		0	0			0	0	Clear	
Toledo, Ohio			30.0[illegible]	762.5	64	17.8	78	NW	6	2.7		2ck	2ks	SW	NW	0	0	Fair	
Tucson, Arizona	27.50	699.5	30.11	764.8	76	24.4		S					10s		S	0	0	Cloudy	
Tybee Island, Ga.			30.04	763.0	77	25.0	90	NW	6*	2.7*		0	0			0.51	12.7	Clear	
Vicksburg, Miss.			30.09	764.3	75.5	24.2	90	Calm	0	0		2k	0	W		0.19	4.8	Fair	
Virginia City, M. T.	24.37	619.0	29.85	758.2	42	5.6	83	Calm	0	0		8k	0	SW		0.15	3.8	Cloudy	
Washington, D. C.			29.99	761.7	78	25.6	73	NE	6	2.7		2c	Haze			0	0	Fair	
Wilmington, N. C.			30.03	762.7	77	25.0	86	NW	2	0.9		0	0			0.05	1.3	Clear	

UNITED STATES SERIES.—CONTINUED.

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Wood's Holl, Mass			29.95	760.7	72	22.2	75	NE	6	2.7		0	5s		NE	0.21	5.3	Fair	
Yankton, Dakota	28.68	728.5	29.91	759.7	72	22.2	80	NE	2	0.9		2cs	0	SW		Inap.	Inap.	Fair	
Yuma, Arizona			29.81	757.2	83	28.3		NE				5cs	0	NE		0	0	Fair	
Sub-Series.																			
Kingston, Jamaica, W. I.			30.20	767.1	79	26.1	78	Calm	0	0		8c	0			0	0		James Gall.
St. Georges, Bermudas			30.05	763.3	83.0	28.3	69	SSW	10	4.5		0	2k			0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Paramaribo, D. Guiana, S. A.			30.07	763.6	82	27.8	83	E			2	0	4k			0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.12	765.0			86.5	30.3		N								.984	25.00		Dr. H. Groot.
Medellin, Colombia, S. A.	25.24	641.1			63.5	17.5	82	Calm	0	0		3cs	0			0.03	0.8	Fair	Thomas Herran.
York Factory, B. A.			29.76	755.9	50	10.0	96	NW	20	8.9			10s			1.60	40.6		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.04	763.0	76	24.4		NE			1					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Addie Fuller. N. 36° 00′, W. 75° 08′.	S	1½	30.00	762.0	81	27.2		N			1	0	0			Smooth		Clear	Capt. James Jorgensen.
Steamer Hibernian. N. 48° 15′, W. 49° 40′.	373 W	9¾	29.76	755.9	54	12.2		WSW			4		0n		NE	Smooth		Misty	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.; Denver, 5,135 ft., or 1,565. m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,912 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, 4,262.2 ft., or 1,299.2 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. * Estimated velocity.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			30.00	762.0	85.8	29.9	61	Calm			0		2			0	0	Clear	Charnot.
Algiers			29.99	761.8	86.0	30.0	65	N			1		0			0	0	Clear	Peter.
La Calle			29.98	761.6	77.2	25.1	85	NE			3		1			0	0	Clear	Kunts.
Tunis			30.02	762.5	88.0	31.1	54	E			3		0			0	0	Clear	Jacques.
Sfax			30.08	763.9	86.2	30.1	53	NE			4		1			0	0	Clear	Chauvey.
Saïda			30.05	763.3	91.4	33.0		NNW			2		2			0	0	Clear	Millot.
Tebessa			30.03	762.7	88.2	31.2		E			1		2			0	0	Clear	Colin.
Gerlville			30.05	763.3	87.1	30.6	25	NW			2		2			Inap.	Inap.	Clear	Lemaillot.
Laghouat			30.08	764.0	95.0	35.0	24	NE			1		2			0	0	Clear	Guyot.
Biskra			30.05	763.2	90.0	32.2		NE			2		4			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			29.96	760.9	79.0	26.1	43	Calm			0		2			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.07	763.7	67.6	19.8	41	W			3		4			0	0		Dr. Wierzbiski.
Eperies			29.99	761.7	68.2	20.1	50	N			4		5cks		S	0	0		Julius Mikolik.
Gratz	28.81	731.8	29.96	760.9	74.8	23.8	69	NW			2		2			0.098	2.5		Andreas Rospini.
Hermannstadt	28.47	723.1	29.82	757.4	76.3	24.6	49	NE			3		5			0	0		Prof. Reissenberger.
Kremsmünster	28.71	729.1	30.00	761.9	71.8	22.1	37	ENE			4		0			0	0		Prof. C. Wagner.
Lemberg			29.92	759.9	64.0	17.8	69	NE			2		6			Blank	Blank		Dr. T. Stanecki.
Nyiregyhaza																			Habasuda Daniel.
Pola			29.96	760.9	81.7	27.6	70	WNW			1		4ks			0	0		I.R.Hydrographic Office.
Szegedin			29.93	760.1	73.8	23.2	50	E			1		1			0.059	1.50		Karl Stancel.
Trieste			29.96	760.9	79.7	26.5	70	WNW			1		2			Inap.	Inap.		Prof. V. Farolfi.
Vienna			29.98	761.4	75.6	24.2	41	Calm			0		0			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			29.92	760.0	86.0	30.0	36	E			3		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			30.14	765.5	61.9	16.6		ENE	8	3.6			1			0.015	0.38	Blue sky	William Boswell.
Ardrossan																			William McNeil.
Armagh, Observatory			29.93	760.2	71.3	21.8		ENE	12	5.4			1					*D. clouds	S. Cail, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.81	757.2	73.5	23.1		SE			1		10					Overcast	J. Dreyer.
Bradford			30.02	762.5	68.2	20.1		E			2		0			0	0	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.05	763.3	84.0	28.9		NE			2		6					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory.			29.94	760.5	81.5	27.5		NE			1		0					Blue sky	H. Todd.
Cardington			29.96	761.0	78.0	25.6		E			1		0					Blue sky	John McLaren.
Carlisle																			T. Bel, for J. Carmell.
Chatham, School M. E			29.92	760.0	70.0	21.1		NNE			3							*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.47	723.1	29.92	760.0	64.0	17.8		SE			6		10					Thunder-storm	R. E. Power.
Donaghadee			29.95	760.7	67	19.4		NE			3		0					Blue sky	J. Mac Gowan.
Dover			29.92	760.0	74	23.3		NE			3		0					Clear	J. Costello.
Eccles (near Manchester.)			29.93	760.2	77.6	25.3		E	4.0	1.8								Blue sky	Thomas Mackereth.
Falmouth, Observatory			29.78	756.4	65.6	18.7		E			3		10					Foggy	The Staff.
Fort Napier, (Natal)	27.52	699.0	29.96	761.0	68.9	20.5		N			1		3					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.98	761.5	79.0	26.1		W			1		5					*D. clouds	
Galway, Queen's College			29.81	757.2	68	20.0		SE			4		10					Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.00	762.0	86.5	30.3		W			6		0					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			30.04	762.7	61.5	16.4		ENE			2		10					Gloomy	Lewis Stuart.
Great Yarmouth			30.01	762.2	70	21.1		ENE			2		4					Hazy	G. T. Watson.
Greenwich, Royal Ob's'y			29.95	760.7	81.5	27.5		E			1		0					Blue sky	The Staff, for G. B. Airy
Guernsey																			Dr. S. E. Boskha.
Helston			29.83	757.7	70	21.1		NE			2		10n					Showery	M. P. Moyle.
Holyhead			29.85	758.2	74	23.3		E			5		2					Blue sky	John Tilston.
Kew, Observatory			29.91	759.7	79.7	26.5		ENE	22	9.8								Hazy	The Staff.
Kingstown			29.88	758.9	66	18.9		ENE			1		5					*D. clouds	George Mitchell.
Leicester Museum			29.97	761.2	73.0	22.8		E			1		0					Blue sky	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.94	760.2	82.0	27.8		SE			1		8k					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			30.05	763.5	68	20.0		ENE			1		0					Clear	W. D. Penny.
Nassau, (Bahamas			30.20	767.1	85.5	29.7		E			5		6					*D clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.98	761.5	78 7	25.9		ENE			4		2ck		SE	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.94	760.5	76.9	24.9		ENE			4		0					Blue sky	Rev. Stephen Whitty.
Oxford, Radcliffe Ob's'y			29.90	759.4	78	25.6		ENE			2		0			Blank	Blank	Blue sky	J. Lucas.
Plymouth			29.80	756.9	67	19.4		E			3		10					Thunder-storm	John Merrifield.
Roche's Point			29.82	757.4	67	19.4		SE			4		10					Thunder-storm	W. Kennedy.
Saint Ann's Head			29.77	756.1	73	22.8		SSE			6		8					Raining	John C. Walker.
Saint Helier, Jersey			29.75	755.6	87.8	31.0		SE			3		8					¾ clouded	A. P Amy.
Sandwick Manse Orkneys			30.17	766.3	60.6	15.9		SE	20	8 9			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery Turkey			29.65	758.2	85.0	29.4		NE			2		0					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.99	761.7	73.0	22.8		ENE			3		2			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			29.98	761.5	75.5	24.2	48	E			3		0			0	0	Blue sky	Rev. Francis Redford.
Stonyhurst, Observatory			29.96	761.0	72.8	22.7		NE			1							Hazy	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			30.03	762.7	67	19.4		ENE			1		0					Blue sky	John Smith.
Stratfield Turgiss			29.95	760.7	80.0	26.7		E			1		0					Blue sky	Rev. Charles H. Griffith.
Thurso			30.13	765.3	59	15.0		ESE			3		10					Overcast	John Trotter.
Truro, Royal Institution			29.81	757.2	70	21.1		SE			4		10			Blank	Blank	Gloomy	W. Newcombe.
Valencia, Observatory			29.70	754.4	67.6	19.8		ESE	24	10 7			10					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, Isle of Man					60	15.6		E			4		5						Thomas Dawson.
Cape Good Hope Ob's'y			29.99	761.7	57.5	14.2	81	WNW	21	9 4		4	5						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			30.04	763.0	50.0	10.0	93	S			5		10n			0.40	10.2	Hail, rain, snow	Francis Abbott F.R.A.S.
Leith, Restaurig Parks			30.09	764 3	59.9	15.5		E			1	10s				0	0	Foggy	Andrew Gibb.
Mauritius, Observatory			30.23	767.8				E	23.5	10.5						0	0		C. Meldrum
Melbourne, Observatory			30.19	766.8	40.0	4.4	72	SE	3	1.3			8			0.30	7.6	Rain & hail	R. L. J. Ellery.
Monach Lighthouse, Hebrides			30.00	762.0	72	22 2		ESE			3	0	0			0	0		J. Youngclause.
North Unst, (Shetland Is.)			30.22	767.6	62	16.7		E			1	0	0						Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,2 0 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			30.17	766.4	68.9	20.5	48	NNE			2		0						
Faroe			30.21	767.3	73.2	22.9	43	S			2		1						
Godthaab, (Greenland)			29.45	748.0	41.7	5.4	80	NNE			4		8						
Stykkisholm, (Iceland)			30.01	762.2	62.8	17.1	88	S			2		8						
Thorshavn, (Faröe)			30.20	767 0	59.0	15.0	81	Calm			0		0						
Vestervig			30.22	767.6	74.5	23.6	67	NW			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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.91	759.6	90.5	32.5	29	NW			2	2c				0	0	Slightly cl'dy	Normal School.
Amiens																			Normal School.
Avignon			29.97	761.2	86.0	30	55	S			2		2n		S	0	0	Partly cloudy	Normal School.
Bar-sur-Seine			29.84	757.9	88.5	31.4	28	S			2		5		E	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.77	756.1	92.1	33.4	25	SSE	10.7	4.8					S	0.028	0.7		Beaumette Observatory.
Beauvais			29.92	760.0	88.7	31.5	30	ESE			1		2		SE	0	0	Slightly cl'dy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			29.97	761.2	93.2	34	36	S			2		2cn		W	0	0	Slightly cl'dy	Normal School.
Bourges			29.87	758.7	82.8	28.2	53	ESE			2		2		ESE	0	0	Slightly cl'dy	Normal School.
Brest			29.72	754.8	83.3	28.5	59	W			2		8			0	0	Stormy	Naval Observatory.
Carcassonne			29.88	759.0	79.0	26.1	61	E			4		8		W	0	0	Very cloudy	Normal School.
Caen																			Normal School.
Chartres			30.04	762.9	89.6	32	60	S			4		0			0	0	Clear	Normal School.
Châlons-sur-Marne			29.92	760.0	91.6	33.1	50	SE			2		2k		NW	0	0	Slightly cl'dy	Normal School.
Clermont			29.82	757.4	88.2	31.2	36	NNE			1		2			0	0	Slightly cl'dy	Puy de Dome Obs'y.
Commercy			29.97	761.2	80.2	26.8	47	E			2		0			0	0	Clear	Normal School
Commune de Greasque*			30.06	763.4	87.8	31.0	44	SW			4		5		SW	0	0		M. Kina.
Grenoble			29.88	758.9	68.7	20.4	41	NW			6		2			0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon					81.0	27.2	63	SE			4		5		ENE	0	0	Cloudy	Normal School.
Le Mans			29.81	757.1	91.0	32.8	37	S			2		2		S	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier			30.01	762.2	82.0	27.8	58	NE			1		0			0.169	4.3	Clear	Normal School.
Mâcon			30.13	765.4	81.5	27.5	73	SE			2		0			0	0	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			29.94	760.5	81.5	27.5	50	SE			2		5		SE	0	0	Cloudy	Normal School.
Nismes			30.00	761.9	88.9	31.6	52	S			2		0			0	0	Clear	Normal School.
Orleans																			Normal School.
Paris, Observatory			29.87	758.8	89.8	32.1	34	E			2		5			0	0	Cloudy	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			29.82	757.5	89.1	31.7	47	SW			3		8		NE	0.157	4.0	¾ Covered	Naval Observatory.
Rouen			29.84	758.0	95.0	35.0	25	SE			2		2		S	0	0	Slightly cl'dy	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School.
Villefranche			29.87	758.8	91.4	33	49	SE			1		2			0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.93	760.2	82.4	28													L'Abbé Marchesi.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.16	766.0	74.7	23.7	50	W	26.1	11.67			5		W	0.165	4.2		—. Falguère.
Montsouris, Paris			29.88	759.0	93.2	34.0	28	ESE			2		3k		SSE	0	0		Montsouris Observ'tory.
Perpignan			29.91	759.6	83.1	28.4	49	SE	5.6	2.50			7		SW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.41	543.9			51.6	10.9		SW			2		9					Fair	M. Baylac.
Pic du Midi, (Plantade)	22.67	575.8			59.0	15.0		SW			4		9			0	0	Fair	General de Nansouty.
Saint Maur, (near Paris)			29.88	759.0	92.8	33.8	28	ENE			1		0			0	0	Clear	E. Renou.
Toulouse			29.88	758.9	81.6	29.2	50	SSE			6		7			0	0		Toulouse Observatory
Tours			29.82	757.4	93.6	34.2	34	SE			2		3		SSW	0	0		C. Marquet.
Versailles, (near Paris)			29.88	759.0	91.8	33.2	28	SE			3		4			0	0	Fair	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai																			H. Le Leo, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Hamburg			30.02	762.6	77.9	25.5	24	NE			3		1			0	0		Prof. T. Hoh.
Berlin			30.16	766.1	71.6	22.0	40	E			1		0			0	0		Prof. Arndt.
Breslau			30.19	766.7	67.8	19.9	36	NE			5		1			0	0		Dr. P. Neugebauer.
Carlsruhe			29.93	760.1	81.6	29.2	37	NE			4		0			0	0		A. Senz.
Cassel			30.04	763.1	81.1	27.3	29	E			4		0			0	0		Dr. H. Möhl.
Emden			30.04	762.9	75.7	24.3	33	E			1		0			0	0		Prof. Prestel.
Frankfort on the Main			30.01	762.3	83.5	28.6	27	NE			3		0			0	0		Physical Society.
Friedrichshafen			29.95	760.8	74.8	23.8	73	SW			3		2			0	0		M. Wilhelm.
Hamburg			30.19	766.8	72.0	22.2	39	E			5		0			0	0		Captain F. Hegemann.
Kiel			30.20	767.0	71.4	21.9	45	ENE			3		0			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			30.08	764.1	63.5	17.5	50	N			2		4			0.059	1.5		Prof. E. Luther.
Köslin			30.18	766.6	66.4	19.1		NW			4		2			0	0		H. Müller.
Leipsic			30.13	765.2	74.1	23.4	29	NE			3		1			0	0		Prof. Bruhns.
Memel			30.11	764.9	61.9	16.6	69	Calm			0		4k	NNE		Blank	Blank		Reinbrecht & Skalweit
Münster			30.08	763.9	80.6	27.0	39	E			5		0			0	0		Prof. E. Heis.
Neufahrwasser			30.13	765.4	61.8	18.2	57	NNE			4		3			0	0		A. Lothes.
Posen			30.18	766.5	69.8	21.0	33	N			6		3			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.94	760.4	85.3	29.6	34	NE			3		1			0	0		Dr. Schur.
Stuttgart			29.94	760.5	82.0	27.8	34	NE			1		0			0	0		Prof. Schoder
Thorn			30.10	764.4	68.9	20.5	46	NE			4		8			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.93	760.3	86.9	30.5	27	SE			4		0			0	0		Prof. Flesch.
Wustrow, Naval School			30.28	769.1	68.4	20.2	53	NNW			2		0			0	0		E. F. Schütz

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.91	759.6	87.1	30.6		SW										Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	82.6	28.1	46	S	0.7	0.3			5			0	0		
Padua			29.91	759.6	83.5	28.6	58	NE	1.7	0.8			5	W		0	0		
Vicenza			29.92	760.0	84.6	29.2	52	SE	1.8	0.8			3	W		0	0		
Verona			29.90	759.5	89.6	32.0	43	W			1		0			0	0		
Bergamo																			
Domodossola	28.93	734.7	29.91	759.7	79.3	26.3	52	S			6		5			0	0		
Milan			29.97	761.3	83.3	28.5	55	E			1		5	NNE		0	0		
Pavia			29.95	760.7	84.2	29.0	44	NW			1		0			0	0		
Moncalieri			29.94	760.5	83.5	28.6	52	SE	4.3	1.9			4			0	0		
Mondovi	28.11	714.0	29.95	760.7	79.3	26.3	50	SE			4		7	SE		0	0		
Porto Maurizio			30.06	763.4	73.2	22.9	92	WNW			2		2	NE		0	0		
Genoa			29.99	761.8	78.8	26.0	70	SW	0.7	0.3			10	SW		0	0		
Piacenza																			
Parma			29.96	761.0	85.6	29.8	49	SSW			4		5			0	0		
Bologna			29.97	761.1	86.0	30.0	46	NW			1		4	E		0.236	6.0	Showery	
Florence			29.97	761.1	86.6	30.0	41	N			2		8			0	0		
Leghorn			30.00	761.9	81.7	27.6	64	SW	3.8	1.7			3			0	0		
Siena	28.78	731.0	29.93	760.3	79.2	26.2	54	WSW	0	0			7	E		0	0		
Urbino	28.49	723.6	29.98	761.6	77.5	25.3	55	NE			1		6			0	0		
Ancona			29.94	760.5	82.0	27.8	58	SE			4		4			0	0		
Grosseto			30.01	762.3	86.0	30.0	40	NNE			4		3	NW		0	0		
Rome			29.98	761.6	77.9	25.5	71	SW	6 3	2.8			6	NE		0.47	12.0	Showery	
Naples, O. U.			29.99	761.7	86 0	30.0	49	SW			6		2			0	0		
Lecce			29.97	761.2	81.3	27.4	56	NE	3.8	1.7			6	W		0	0		
Cosenza			29.98	761.4	89.2	31.8	69	NW	9.4	4.2			1			0	0		
Riposto, (Sicily)			30.04	763.1	85.6	29.8	51	E			2		1	SE		0	0		
Palermo			29.97	761.1	81.5	27.5	64	NE	8.1	3.6			4			0	0		
Caltanissetta	28.04	712.3	29.91	759.8	80.1	26.7	50	SSW			1		3	E		0	0		
Sub-Series.																			
Naples, S. R.			29 99	761.8	84.9	29.4	39	SW	7.4	3 3			6	SW		0	0		Prof. F. Brioschi.
Pesaro			30.02	762.4	78.6	25.9	64	NE	19.5	8.72			2kn	NE	SW	0	0		L. Guidi.

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	761.6	84.7	29.3		ESE			3								
Groningen			30.07	763.7	76.1	24.5		ENE			4								
Helder			30.07	763.8	78.8	26.0		NE			4								
Utrecht			29.98	761.6	85.5	29.7	65	E			3		0					Clear	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	73.8	23.2	61	Calm	0	0			0			0	0		
Brönö			30.25	768.4				Calm	0	0			1			0	0		
Christiania			30.20	767.1	78.8	26.0	35	SSW	2 9	1.3			2			0	0		
Tromsö			30.08	764.0	52.2	11.2		SW	2	1			10			0	0		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	75.6	24.2	83	W	8.2	3.67			4			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.97	761.3	77.7	25.4	46	SW	8.1	3.6			10	SW		0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.13	765.4	76.3	24.6	72	Calm	0	0			10			0	0		Capt. D. A. da Cunha.
Lisbon			29.99	761.7	72.1	22.3	82	SSW	22.4	10.0			10			Inap.	Inap.		The Observatory.

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

RUSSIAN SERIES.

Furnished by 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			30.04	762.0	66.0	18.9	41	NNW	11	5			6						Astronomical Obs.
Wilna			29.99	761.7	61.0	16.1	48	N	9	4			3						Astronomical Obs.
Dorpat			30.05	763.3	60.6	15.9	44	NNE	7	3			5						Physical Cabinet.
St. Petersburg			30.01	762.2	59.0	15.0	49	NE	9	4			7						Central Physical Obs.
Kiopio			30.03	762.8	59.4	15.2	61	NNW	7	3			5						Ch. Forsten.
Kieff			29.76	755.8	58.3	14.6	67	NW	13	6			8						Physical Cabinet.
Nikolaiev			29.83	757.8	74.1	23.4	30	W	20	9			6						Kurdekof.
Kertch			29.89	759.1	75.6	24.2	58	W	13	6			2						Lagorio.
Moscow			29.63	752.7	50.2	10.1	94	NNW	9	4			10					Raining	Meteorological Obs.
Lugan			29.47	748.5	71.2	21.8	64	WSW	34	15			8			Blank	Blank		Meteorological Obs.
Archangel			29.89	759.1	50.9	10.5	76	NW	22	10			10						Ogorodnikof.
Tiflis	28.41	721.7	29.74	755.5	82.8	28.2	36	N	25	11			0						Physical Observatory
Astrakhan			29.68	753.8	85.1	29.5	33	WSW	16	7			2			Blank	Blank		Sebastianoi.
Kasan			29.54	750.2	72.3	22.4	54	ENE	16	7			9						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.72	729.5	29.63	752.5	67.6	19.8	51	W	2	1			7						Meteorological Obs.
Nukuss			29.60	751.9	102.7	39.3	19	ESE	4	2			0						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul			29.47	748.5	67.8	19.9	81	SW	4	2			10						Meteorological Obs.
Yeniseisk			29.45	747.9	71.6	22.0	61	E	7	3			4						Marks.
Irkutsk																			Usolvef.
Oorga																			Mossin.
Peking, (China)			30.05	763.3	80.2	26.8	77	Calm	0	0			5						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.91	759.8	67.8	19.9	93	SE	11	5			10						
Nikolaievsk, on the Amoor																			

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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 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			29.87	758.6	85.1	29.5	36	SW	22.4	10.00		1	1	SW		0	0	Light clouds	Royal Observatory
San Fernando			30.07	763.8	78.8	26.0	66	WSW	11.2	5.0		2	2	W	NW				The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	764.8	59.7	15.4	64	N			2		10			0	0		
Umea			30.12	765.1	69.8	21.0	55	NW			2		5			0	0		
Hernosand			30.15	765.7	66.6	19.2	50	SW			2		9			0	0		
Stockholm			30.16	766.1	65.7	18.7	38	ENE			2		3			0	0		
Wisby			30.22	767.5	59.4	15.2	66	NNE			4		3			0	0		
Sub-Series.																			
Upsala			30.17	766.3	68.0	20.5	33	NNW	4.5	2.0			1	N		0	0		Dr. Hildebrandsson

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

SWISS SERIES.

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

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From —	Clouds. 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	Observers.
Geneva	28.57	725.6	29.92	760.0	79.9	26.6	50	N	.....	.....	4	.....	5	.....	.....	0	0	Clouds	The Observatory.
Zurich	28.39	721.1	29.94	760.5	81.5	27.5	54	NE	.....	.....	1	.....	2	.....	.....	0	0	Clear	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note—For Geneva the corresponding departures from the normal values are: Barometer, —2.2 mm; Thermometer, +4.9 cent.; Relative Humidity, —5 per cent.

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

TURKISH SERIES.

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

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From —	Clouds. 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	Observers.
Constantinople	.....	.....	29.92	760.0	81.0	27.2	44	ENE	4	2 0	.....	.....	1	.....	E	0	0	.....	
Fao, (Persian Gulf)	.....	.....	29.69	754.0	93.2	34.0	.....	SE	.....	.....	3	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.95	760.7	86.4	30.2	.....	NE	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	30.00	762.0	78.4	25.8	.....	W	.....	.....	1	.....	5	.....	.....	.....	.....	.....	
Varna	.....	.....	29.80	757.0	80.6	27.0	.....	NE	.....	.....	1	.....	10	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.76	756.0	85.8	29.9	63	NW	.....	.....	1	.....	28	SW	NE	.....	.....	.....	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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From —	Clouds. 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	Observers.
Bathurst, N. B	.....	.....	30.01	762.2	61.9	16.6	61	SW	16	7.2	.....	.....	0	.....	.....	0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.11	764.8	66	18.9	.....	N	1	0 4	.....	.....	8s	.....	NE	0	0	Cloudy	W. R Bigg.
*Chatham, N. B	.....	.....	30.09	764.3	59	15.0	70	S	10	4.5	.....	8ck	0	S	.....	0	0	Fair	G. A. Blair.
Charlottetown P. E. Island	.....	.....	30.08	764.0	61	16.1	61	S	5	2.2	.....	5k	0	.....	.....	0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.04	763.0	66.0	18.9	68	E	.....	.....	1	10ck	0	.....	.....	0	0	Fair	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.06	763.5	56.9	13.8	86	N	.....	.....	1	.....	.....	.....	.....	0	0	Clear	H. A. Johnson.
Esquimault, B. C	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Bevis.
Fredericton, N. B	.....	.....	30.12	765.0	59.2	15.1	73	SE	7	3.1	.....	.....	Sin'e	.....	.....	0.05	1.3	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.05	763.3	47	8.3	98	SW	2	0.9	.....	5k	2s	W	.....	0	0	Cloudy	James Stewart.
Goderich, Ontario	.....	.....	30.04	763.0	68.5	20.3	71	Calm	.....	.....	0	8k	0	W	.....	0	0	.....	H. J. Strang, M. A.
Granton, Ontario	28.99	736.3	30.04	763.0	65	18.3	.....	Calm	.....	.....	0	3cs	0	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S.	.....	.....	30.10	764.5	59	15.0	70	N	2	0.9	.....	.....	8ks	.....	.....	0	0	Cloudy	F. Allison, M. A.
*Kingston, Ontario	.....	.....	30.10	764.5	65	18.3	86	Calm	0	0	.....	10cs	0	W	.....	0	0	Fair	S. Woods, M. A.
Little Glace Bay, N. S.	.....	.....	30.09	764.3	60.0	15.6	55	N	8	3.6	.....	4k	..n	.....	.....	0.02	0.5	Fair	C. H. Rigby
*Montreal, Quebec	.....	.....	30.06	763.5	60	15.6	88	Calm	0	0	.....	10k	0	NE	.....	0.01	0.3	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.07	763.8	62	16.7	72	N	1	0.4	.....	10k	0	W	.....	0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.09	764.3	61	16.1	99	N	5	2.2	.....	.....	10n	.....	N	0.07	1.8	Light rain	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.06	763.5	65	18.3	89	NW	2	0.9	.....	10k	0	W	.....	0	0	Fair	H. Morgan.
Port Hastings, N. S	.....	.....	30.04	763.0	59.0	15.0	.....	Calm	0	0	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	30.07	763.8	64	17.8	89	N	3	1.3	.....	5k	0	W	.....	0	0	Fair	M. Payne.
*Quebec, Quebec	.....	.....	30.07	763.8	62	16.7	88	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.	.....	.....	30.14	765.5	59	15.0	70	SE	4	1.8	.....	0	0	.....	.....	0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.03	762.7	62	16.7	83	Calm	0	0	.....	.....	10n	.....	.....	0	0	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	30.04	763.0	64	17.8	87	Calm	0	0	.....	.....	10ks	.....	.....	0	0	Cloudy	R. J. Cole.
Stratford, Ontario	28.79	731.3	30.04	763.0	62.9	17.2	89	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.14	765.5	61	16.1	59	NE	6	2 7	.....	8ck	2ks	W	.....	Inap.	Inap.	Fair	T. C. Hill.
*Toronto, Ontario	.....	.....	30.07	763.8	66	18.9	77	NE	1	0.4	.....	.....	10n	.....	W	Inap.	Inap.	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.03	762.7	63.0	17.2	88	E	2	0.9	.....	.....	9ks	.....	.....	0	0	Gloomy	J. Montgomery
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	30.18	766.6	57	13.9	93	NE	.....	.....	.....	.....	10n	.....	.....	0.20	5.1	Cloudy	John Delaney.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.			30.02	762.5	66	18.9	68	NW	2	0.9			10s		SW	0	0	Cloudy	
Alpena, Mich			30.02	762.5	63	17.2	83	NE	4	1.8			10s		NE	0.02	0.5	Cloudy	
Atlantic City, N. J			30.02	762.5	76	24.4	95	S	8	3.6			10n		SE	0.03	0.8	Light rain	
Augusta, Ga.			30.07	763.8	80	26.7	80	Calm	0	0		0	0			0.08	2.0	Clear	
Baltimore, Md			30.00	762.0	79	26.1	82	S	4	1.8		2c	Sm'e			0.01	0.3	Smoky	
Barnegat, N. J			30.01	762.2	75	23.9	95	S	17	7.6			10n			0.14	3.6	Light rain	
Bismarck, Dakota	28.27	718.0	29.87	758.7	61	16.1	82	E	7	3.1			10s			0	0	Cloudy	
Boston, Mass			30.05	763.3	68	20.0	90	S	6	2.7		10s	Fog	S		0	0	Foggy	
Breckenridge, Minn			29.99	761.7	64	17.8	88	E	4	1.8		0	8ks			0.06	1.5	Cloudy	
Buffalo, N. Y			30.04	763.0	63.5	17.5	73	E	1	0.4			10ks		W	0	0	Cloudy	
Burlington, Vt			30.05	763.5	62	16.7	72	E	2	0.9		5ck	5s			0	0	Cloudy	
Cairo, Ill			30.04	763.0	77	25.0	86	S	3	1.3		5c	0	N		0	0	Fair	
Cape Hatteras, N. C			29.99	761.7	81	27.2	82	Calm	0	0		0	Haze			0	0	Clear	
Cape Henry, Va			29.97	761.2	84	28.9	71	SW	6	2.7		0	0			0	0	Clear	
Cape Lookout, N. C			30.06	763.5	82	27.8	83	Calm	0	0		0	Haze			0	0	Fair	
Cape May, N. J			29.97	761.2	79	26.1	90	S	24	10.7			10s		W	0	0	Threatening	
Charleston, S. C			30.08	764.0	82	27.8	83	SW	2	0.9		0	Haze			0	0	Clear	
Cheyenne, Wyoming	24.10	612.1	30.04	763.0	60	15.6	91	SW	4	1.8		8ck	1s	W		0	0	Fair	
Chicago, Ill			29.98	761.5	74	23.3	81	SE	2	0.9			10s			0	0	Cloudy	
Cincinnati, Ohio			29.94	760.5	77	25.0	86	Calm	0	0		2ck	Sm'e			0.13	3.3	Clear	
Cleveland, Ohio			30.02	762.5	67	19.4	85	SE	4	1.8			10ks		W	Inap.	Inap.	Cloudy	
Corsicana, Tex			30.08	764.0	75	23.9	90	S	3	1.3		0	0			0	0	Clear	
Davenport, Iowa			29.96	761.0	75	23.9	85	E	4	1.8			10ks		E	0.16	4.1	Cloudy	
Denison, Tex			30.09	764.3	80	26.7	78	S	8	3.6		0	0			0	0	Clear	
Denver, Col.	24.86	631.4	30.08	764.0	62	16.7	83	S	2	0.9		0	5s		SW	0.08	2.0	Fair	
Detroit, Mich			30.00	762.0	69	20.6	79	E	2	0.9		5ck	0	N		0	0	Fair	
Dodge City, Kan	27.37	695.2	29.53	750.0	75	23.9	81	S	23	10.3		8c	0			0	0	Fair	
Dubuque, Iowa			29.96	761.0	70	21.1	90	NE	1	0.4			10s			Inap.	Inap.	Cloudy	
Duluth, Minn			30.03	762.7	62	16.7	82	NW	4	1.8		0	0			0	0	Clear	
Eastport, Me			30.11	764.8	62	16.7	66	S	6	2.7		5c	0	S		0	0	Fair	
Erie, Pa			30.01	762.2	68	20.0	74	Calm	0	0		9ck	Haze	W		0	0	Fair	
Escanaba, Mich			30.05	763.3	64	17.8	81	NE	12	5.4			10s		NE	0	0	Cloudy	
Fort Gibson, Indian Ter			30.01	762.2	78	25.6	86	E	4	1.8		8c	0			0	0	Fair	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T	28.84	732.5	29.90	759.4	75	23.9	76	Calm	0	0		5cs	0			0	0	Fair	
Fort Sully, Dakota	28.28	718.3	29.88	758.9	64	17.8	94	SE	8	3.6		8k	Fog		SE	0.05	1.3	Cloudy	
Florence, Arizona	28.48	723.4	29.92	760.0	79	26.1		S					08		S	0	0	Threatening	
Galveston, Tex			30.12	765.0	82	27.8	78	S	2	0.9		2k	0	S		0	0	Fair	
Grand Haven, Mich			29.98	761.5	70	21.1	87	Calm	0	0		0	9s		NW	0	0	Cloudy	
Indianapolis, Ind			29.98	761.5	74	23.3	90	Calm	0	0			10s			0.61	15.5	Threatening	
Indianola, Tex			30.12	765.0	84	28.9	79	SE	4	1.8		2k	0			0	0	Fair	
Jacksonville, Fla			30.12	765.0	83	28.3	70	SW	5	2.2		0	0			0	0	Clear	
Keokuk, Iowa			29.90	759.4	73	22.8	100	NW	5	2.2			10n		NW	2.30	58.4	Light rain	
Key West, Fla			30.18	766.6	81.7	27.6	74	E	6	2.7		3ck,k	Haze	NE, E	E	0	0	Fair	
Kittyhawk, N. C			30.05	763.3	82	27.8	78	W	4	1.8		0	Haze			0	0	Clear	
Knoxville, Tenn			30.07	763.8	75	23.9	90	NE	1	0.4		1c	0	NE		0	0	Clear	
La Crosse, Wis			29.99	761.7	66	18.9	94	N	4	1.8			10s		N	0.78	19.8	Threatening	
Leavenworth, Kan			29.98	761.5	71	21.7	95	S	8	1.8			10n			1.54	39.1	Heavy rain	
Louisville, Ky			29.99	761.7	80	26.7	82	Calm	0	3.6		5k	Haze			0.02	0.5	Fair	
Lynchburg, Va			30.00	762.0	79	26.1	78	Calm	0	0		0	0			0	0	Clear	
Malone, N. Y			30.02	762.5	63	17.2	78	S	4	1.8		8c,k	0	NW		0	0	Cloudy	
Marquette, Mich			30.07	763.8	58	14.4	93	NE	3	1.3			Fog			0	0	Foggy	
Memphis, Tenn			30.07	763.8	82	27.8	83	SW	4	1.8		2c	Fog	S		0	0	Fair	
Milwaukee, Wis			30.03	762.7	65	18.3	89	NE	4	1.8			10n			0.38	9.7	Light rain	
Mobile, Ala			30.14	765.5	78	25.6	82	SW	5	2.2		5ck	0	S		0.71	18.0	Fair	
Montgomery, Ala			30.13	765.3	76.5	24.7	84	W	6	2.7		0	1ks		W	0	0	Clear	
Morgantown, W. Va	29.00	736.6	30.01	762.2	73	22.8	85	Calm	0	0			10s		W	Inap.	Inap.	Foggy	
Mt. Washington, N. H	23.95	608.3	30.31	769.6	45	7.2	76	NW	12	5.4		8ks	Haze	NW		0	0	Fair	
Nashville, Tenn			30.02	762.5	83	28.3	74	W	2	0.9		2c	0			0	0	Clear	
New Haven, Conn			30.01	762.2	74.0	23.3	90	S	10	4.5		5k	5s	W	W	0.05	1.3	Cloudy	
New London, Conn			30.05	763.3	70	21.1	90	E	7	3.1		5ck	5s	W	W	Inap.	Inap.	Cloudy	
New Orleans, La			30.14	765.5	80	26.7	80	W	4	1.8		2ck	4cs			0	0	Fair	
Newport, R. I			30.06	763.5	68	20.0	94	SE	14	6.3			10ks		SE	0	0	Threatening	
New York, N. Y			30.02	762.5	72	22.2	90	SE	4	1.8			10n		SE	0.30	7.6	Heavy rain	
Norfolk, Va			30.04	763.0	83	28.3	74	S	3	1.3		0	0			0	0	Clear	
North Platte, Neb	27.07	687.6	29.52	749.8	69	20.6	95	E	12	5.4			10s			0.63	16.0	Cloudy	
Omaha, Neb	28.90	734.0	29.92	760.0	73	22.8	95	Calm	0	0			10s			Inap.	Inap.	Cloudy	
Oswego, N. Y			30.06	763.5	68.5	20.3	70	S	2	0.9			10s			Inap.	Inap.	Cloudy	
Pembina, Dakota			30.01	762.0	52.5	11.4	93	Calm	0	0		8k	0		W	0	0	Fair	
Philadelphia, Penn			29.99	761.7	73	22.8	90	E	7	3.1			10ks		S	0.42	10.7	Cloudy	
Pike's Peak, Colorado	18.09	459.5	30.30	769.6	41	5.0	73	SW	12	5.4		5ck	0			0	0	Fair	
Pittsburgh, Penn			29.99	761.7	70	21.1	84	NW	2	0.9		2c	Fog	W		0	0	Foggy	
Port Huron, Mich			30.02	762.5	65	18.3	73	SE	2	0.9		8cs	2s	NW		0	0	Cloudy	
Portland, Me			30.06	763.5	68	20.0	84	S	4	1.8			10n		S	Inap.	Inap.	Light rain	
Portland, Oregon			30.05	763.3	53	11.7	93	Calm	0	0		0	0			0	0	Clear	
Punta Rassa, Fla			30.18	766.6	83.0	28.3	74	NE	5	2.2		Haze	0			0	0	Clear	
Rochester, N. Y			30.05	763.3	63	17.2	83	SW	1	0.4			10s		W	Inap.	Inap	Cloudy	
Salt Lake City, Utah	25.61	650.5	29.94	760.5	60	15.6	24	SE	4	1.8		0	0			0	0	Clear	
Sandy Hook, N. J			30.00	762.0	74	23.3	95	S	8	3.6			10n			0.29	7.4	Light rain	
San Diego, Cal			29.91	759.7	66	18.9	79	NW	4	1.8			10s		S	0	0	Cloudy	
San Francisco, Cal			29.96	761.0	52	11.1	93	SW	8	3.6			Fog		NW	0	0	Foggy	
Santa Fé, N. M	23.40	594.4	29.94	760.5	58	14.4	87	E	1	0.4		2c	2k			Inap.	Inap.	Fair	
Savannah, Ga.			30.09	764.3	81	27.2	78	W	3	1.3		2ck	Sm'e	W		0.81	20.6	Fair	
Shreveport, La			30.14	765.5	79	26.1	86	Calm	0	0		0	0			Inap.	Inap.	Clear	
Smithville, N. C			30.08	764.0	80	26.7	78	Calm	0	0		0	0			0	0	Clear	
Springfield, Mass.			30.02	762.5	72	22.2	85	S	4	1.8			10s			0	0	Cloudy	
St. Louis, Mo			29.91	759.7	75	23.9	100	NW	4	1.8			10n			0.49	12.4	Light rain	
St. Marks, Fla			30.14	765.5	77	25.0	90	Calm	0	0		0	2ks			0.12	3.0	Fair	
St. Paul, Minn			29.97	761.2	65	18.3	94	NE	3	1.3			10s			0.30	7.6	Cloudy	
St. Paul's Island, Alaska			29.92	760.0	43	6.1	92	W	18	8.0			10s			0.19	4.8	Cloudy	
Thatcher's Island, Mass			30.07	763.8	66	18.9	90	S	8	3.6			10s		W	0	0	Cloudy	
Toledo, Ohio			29.97	761.2	72	22.2	80	E	2	0.9		2cs	2ks		SE	0.10	2.5	Fair	
Tucson, Arizona	27.57	700.3	30.17	766.3	72	22.2		N				2ck	5s	S	S	0.77	19.6	Fair	
Tybee Island, Ga			30.07	763.8	78	25.6	86	NW	4*	1.8*		5c	0			0	0	Fair	
Vicksburg, Miss			30.15	765.8	77.5	25.3	86	S	3	1.3		2c	0			0	0	Clear	
Virginia City, M. T	24.36	618.7	29.84	757.9	43	6.1	75	Calm	0	0		1k	0	W		0	0	Clear	
Washington, D. C			30.00	762.0	80	26.7	82	SW	3	1.3		2ck	Haze	W		0	0	Fair	
Wilmington, N. C			30.07	763.8	78	25.6	90	SW	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.
Wood's Holl, Mass			30.06	763.5	68	20.0	79	S	4	1.8		8c	0	SW		0	0	Fair	
Yankton, Dakota	28.72	729.5	29.95	760.7	69	20.6	92	E	5	2.2			10s			0.52	13.2	Cloudy	
Yuma, Arizona			29.88	758.9	86	30.0		NE				2ck	8s	NE	NE	0	0	Cloudy	
Sub Series.																			
Kingston, Jamaica, W. I.			30.21	767.3	79	76.1	78	Calm	0	0		2c	2s		N	0	0		James Gall.
St. Georges, Bermudas			30.13	765.3	81.5	27.5	79	SSW	9	4.0		0	5k			0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Paramaribo, D. Guiana S.A			30.10	764.5	78	25.6	86	SE			1	5ks	6s	SE		1.210	30.73	Cloudy	C. J. Hering.
Batavia, Dutch Guiana S.A.	30.12	765.0			77.4	25.2		N								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.24	641.1			64.5	18.1	81	Calm	0	0		0	2s			0	0	Fair	Thomas Herran
York Factory, B. A			29.68	753.9	53	11.7	90	SW	9	4.0		4k	0	N		0	0	Clear	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.03	762.7	77	25.0		NE			3					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Adelaide Fuller N. 35° 58′, W. 74° 58′	W	½	30.04	763.0	82	27.8		S			1	Haze	Haze			Smooth		Hazy	Capt. James Jorgensen.
Steamer Hibernian, At St. Johns, N. F.			29.98	761.5	49	94		Var.			3		8c			Smooth		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.; Denver, 5,135 ft., or 1,565. m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,912 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, 4,262.2 ft., or 1,299.2 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. * Estimated velocity.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			30.02	762.6	86.2	30.1	50	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.02	762.4	86.0	30.0	53	N			2		0			0	0	Clear	Peter.
La Calle			29.99	761.8	86.2	30.1	66	WNW			2		1			0	0	Clear	Kunts.
Tunis			30.04	763.1	90.1	32.3	33	E			3		0			0	0	Clear	Jacques.
Sfax			30.11	764.8	86.7	30.4	49	SE			3		1			0	0	Clear	Chauvey.
Saida			30.08	764.0	93.2	34.0		N			1		1			0	0	Clear	Millot.
Tebessa			30.05	763.2	90.5	32.5		N			3		2			0	0	Clear	Colin.
Geriville			30.00	763.5	89.8	32.1	25	NW			3		2			Inap.	Inap.	Clear	Lemaillot.
Laghouat			30.08	763.9	95.0	35.0		E			1		2			0	0	Clear	Guyot.
Biskra			30.07	763.7	97.2	36.2		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			30.08	763.9	74.7	23.7	35	NE			2		1			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.17	766.4	68.7	20.4	51	W			3		8			0	0		Dr. Wierzbiski.
Eperies			30.10	764.5	69.1	20.6	50	N			4		6cks		S	0	0		Julius Mikolik.
Gratz	28.85	732.8	30.02	762.5	69.8	21.0	49	SSW			3		0			0	0		Andreas Rospini.
Hermannstadt	28.62	727.0	29.99	761.7	70.7	21.5	40	NNE			3		4			0	0		Prof. Reissenberger.
Kremsmünster	28.78	731.0	30.08	764.0	70.2	21.2	31	E			3		0			0	0		Prof. C. Wagner.
Lemberg			30.07	763.6	60.8	16	76	NE			2		6			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habszuda Daniel.
Pola			30.00	761.9	81.1	27.3	38	ESE			2		1ks			0	0		I.R.Hydrographic Office.
Szegedin								E			2		3			0	0		Karl Stancel.
Trieste			30.02	762.6	83.8	28.8	33	ENE			2		0			0	0		Prof. V. Farolfi.
Vienna			30.11	764.8	74.5	23.6	33	Calm			0		3			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			29.94	760.5	81.3	27.4	33	SSE			1	2c	0	WNW		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			30.20	767.1	63.0	17.2		SE	13	5.8			0			0	0	Blue sky	William Boswell.
Ardrossan			29.99	761.7	79	26.1		NE			4		4					*D. clouds	William McNeil.
Armagh, Observatory			29.96	761.0	61.9	16.6		E	10	4.5			10					Raining	S. Cail, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.86	758.4	69.4	20.8		SE			1-2		10					*D. clouds	J. Dreyer.
Bradford			29.99	761.7	74.2	23.4		E			2		3			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.07	763.8	84.0	28.9		NE			2		5					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			29.96	761.0	78.2	25.7		SW			2		10					Overcast	H. Todd.
Cardington			29.98	761.5	72.0	22.2		E			1		9					Overcast	John McLaren.
Carlisle																			T. Bel, for J. Carmell.
Chatham, School M. E			29.98	761.5	69.5	20.8		Calm			0		10					Raining	Capt. J. Fellowes, R.E.
Dartmoor	28.58	725.9	30.04	763.0	67.0	19.4		S			4		5			Blank	Blank	*D. clouds	R. E. Power.
Donaghadee			29.97	761.2	64	17.8		SSE			3		8					*D. clouds	J. Mac Gowan.
Dover			29.96	761.0	68	20.0		Calm			0		7					Raining	J. Costello.
Eccles (near Manchester)			29.96	761.0	70.6	21.4		S	4.4	2.0			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			29.91	759.7	67.0	19.4		SSE			3		6					Overcast	The Staff.
Fort Napier, (Natal)	27.46	697.5	29.69	754.1	80.8	27.1		NW			6		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.05	763.3	80	26.7		W			4		9			Blank	Blank	Overcast	
Galway, Queen's College			29.82	757.4	70	21.1		SE			3		3					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.04	763.0	89.7	32.1		W			5		0					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			30.02	762.5	70.9	21.6		NE			4		1					Fine	Lewis Stuart.
Great Yarmouth			30.01	762.2	69	20.6		SE			5		3					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			29.98	761.5	67.5	19.7		W			1		10					Showery	The Staff, for G. B. Airy.
Guernsey																			Dr. S. E. Hoskins.
Helston			29.91	759.7	70	21.1		S			2		3k			0.22	5.6	Fine	M. P. Moyle.
Holyhead			29.94	760.5	66	18.9		Calm			0		5					Misty	John Tilston.
Kew, Observatory			29.97	761.2	68.8	20.4		SW	3	1.3			10					Raining	The Staff.
Kingstown			29.93	760.2	65	18.3		ESE			3		10					Overcast	George Mitchell.
Leicester Museum			30.01	762.2	69.4	20.8		E			1		10					Showery	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.99	761.7	82.8	28.2		NE			1		2k					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			30.12	765.0	79	26.1		ESE			4		0					Clear	W. D. Penny.
Nassau, (Bahamas			30.12	765.0	83.4	28.6		E			2		6					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.98	761.5	79.3	26.3		SSE			3		ck, k		SE	0.021	0.53	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.00	762.0	63.7	17.6		SE			0-1		10					Raining	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.95	760.7	68	20.0		Calm			0		10					Raining	J. Lucas.
Plymouth			29.92	760.0	71	21.7		S			2		5					*D. clouds	John Merrifield.
Roche's Point			29.84	757.9	68	20.0		SE			4		5					Cloudy	W. Kennedy.
Saint Ann's Head			29.90	759.4	67	19.4		ESE			3		5						John C. Walker.
Saint Helier, Jersey			29.95	760.7	78.5	25.8		SSE			3		2					¼ clouded	A. P. Amy.
Sandwick Manse Orkneys			30.19	766.8	66.2	19.0		SE	27	12.1			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery Turkey																			Sergt. W. H. Lyne.
Sheffield			29.98	761.5	79.2	26.2		SE			2		3			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			29.98	761.5	79.5	26.4	47	SE			3		1			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.96	761.0	73.6	23.1		E			1		5					*D. clouds	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			30.03	762.7	71	21.7		ESE			1		0					Blue sky	John Smith.
Strathfield Turgiss			30.00	762.0	67.0	19.4		NE			1		1					Blue sky	Rev. Charles H. Griffith.
Thurso			30.14	765.5	73	22.8		SE			5		0					Blue sky	John Trotter.
Truro, Royal Institution			29.92	760.0	73	22.8		SE			4		6					*D. clouds	W. Newcombe.
Valencia, Observatory			29.78	756.4	69.4	20.8		E	25	11.2			5					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, Isle of Man					59	15.0		SE			4		5						Thomas Dawson.
Cape Good Hope, Obs'y			30.14	765.5	61.4	16.3	66	W	11	4.9		1	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.03	762.7	54.0	12.2	86	W			1		0			0.61	15.5		Francis Abbott, F.R.A.S.
Leith, Restaurig Park			30.10	764.5	66.0	18.9		E			3					0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.25	768.3				E	21.5	9.6						0.13	3.3		C. Meldrum
Melbourne, Observatory			30.33	770.4	45.0	7.2	92	WSW	12	5.4			6			0.12	3.0	Showery	R. L. J. Ellery.
Monach Lighthouse, Hebrides			30.01	762.2	71	21.7		SE			3	0	0			0	0		J. Youngebane.
North Unst, (Shetland Is.)			30.28	769.1	66	18.9		E			1	0	0						Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in Mauritius, unknown. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,2 0 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			30.23	767.7	70.7	21.5	49	SSW			2		0						
Fanoe			30.21	768.0	73.8	23.2	49	S			4		0						
Godthaab, Greenland			29.50	749.4	38.7	3.7	98	WNW			4		10					Raining	
Stykkisholm, Iceland			29.89	759.1	71.4	21.9	68	Calm			0		5						
Thorshavn, Faröe			30.19	766.9	59.4	15.2	71	Calm			0		0						
Vestervig			30.24	768.0	73.4	23.0	49	NNW			2		0						

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

FRENCH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.07	763.6	77.9	25.5	65	S			1		10n			0.492	12.5	Covered	Normal School.
Amiens																			Normal School.
Avignon			29.98	761.6	86.4	30.2	58	E			1		5	W	SE	0	0	Cloudy	Normal School.
Bar-sur-Seine			29.93	760.3	82.9	28.3	43	N			2		8		S	0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)			29.94	760.4	77.9	25.5	55	NW	2.2	1.0					SW	0.2.0	5.6		Beaumette Observatory.
Beauvais			29.98	761.6	73.8	23.2	72	NW			1		8			0	0	Very cloudy	Normal School.
Besançon			30.08	763.9	87.8	31	32	S			2	2c		NE		0	0		Normal School.
Bourg en Bresse			30.00	761.9	75.2	24	83	ENE			3		10		ENE	0.087	2.2	Slightly cl'dy	Normal School.
Bourges			29.87	758.8	76.5	24.7	66	SW			3		7		SW	0	0	Covered	Normal School.
Brest			29.92	760.0	79.3	26.3	56	E			1		5		W	0	0	Stormy	Naval Observatory.
Carcassonne																		Cloudy	Normal School
Caen			29.89	759.3	75.2	24	100	E			1		10		N	0	0		Normal School.
Chartres			29.96	761.0	80.8	27.1	56	Calm			0		2k		NW	0	0	Covered	Normal School.
Châlons-sur-Marne			29.95	760.7	74.6	23.6	70	NE			2		10		S	0.051	1.3	Slightly cl'dy	Normal School.
Clermont			29.93	760.1	79.2	26.2	47	E			2		0			0	0	Covered	Puy de Dome Obs'y.
Commercy			30.13	765.3	87.3	30.7	40	SW			2		5		SW	0	0	Clear	Normal School.
Commune de Greasque*			29.89	759.2	69.4	20.8	48	N			2		0			0	0		M. Kins.
Grenoble					77.4	25.2	74	W			2		5		NNE	0.063	1.6	Clear	Normal School.
La Roche-sur-Yon			29.98	761.6	76.8	24.9	82	SSW			4		8		SW	0.47	12.	Cloudy	Normal School.
Le Mans			29.93	760.5	82.6	28.1	57	W			4		0			0.291	7.4	Very cloudy	Normal School.
Lons-Le-Saulnier			30.15	765.8	85.5	29.7	82	SSE			2		0			0	0	Clear	Normal School.
Macon																		Clear	Normal School.
Metz			29.93	760.2	78.3	25.7	39	SE			2		5		S	0	0		M. Schuster.
Mirecourt			30.00	762.0	81.0	27.2	78	E			2		0			0	0	Cloudy	Normal School.
Nismes																		Clear	Normal School.
Orleans			29.97	761.3	70.2	21.2	86	E			2		10			0.301	7.65		Normal School.
Paris, Observatory																		Rainy	National Observatory.
Parthenay																			Normal School.
Privas			29.98	761.5	74.8	23.8	72	W			3		10		E	0	0		Normal School.
Rochefort, Observatory			29.98	761.4	75.0	23.9	65	NNW			2		10		SE	0.185	4.7	Covered	Naval Observatory.
Rouen																		Covered	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School
Villefranche			30.04	763.1	84.2	29	58	SE			1		5			0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.93	760.2	82.8	28.2													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.19	766.7	69.6	20.9	87	SE	11.2	5.00			2		NE	0	0		—. Falguère.
Montsouris, Paris			29.99	761.7	69.1	20.6	91	SE			2		10kn,n		SSW	0.350	8.9	Raining	Montsouris Observ'tory.
Perpignan			29.94	760.5	82.0	27.8	46	SE	5.6	2.50			3		NW	0.020	0.5		Dr. Fines.
Pic du Midi, (Plantade)	21.41	543.8			56.5	13.6		S			2		10					Cloudy	M. Baylac.
Pic du Midi, (Summit) H.P.	22.67	575.7			59.0	15.0		S			1		10			8	0	Cloudy	General de Nansouty.
Saint Maur, (near Paris)			30.00	761.9	67.6	19.8	93	E			2		10					Very cloudy	E. Renou.
Toulouse			30.01	762.2	83.3	28.5	57	S			1		7			0	0		Toulouse Observatory
Tours			29.98	761.6	73.2	22.9	74	SSE			1		9		SW	0.130	3.3		C. Marquet.
Versailles, (near Paris)			30.00	761.9	72.3	22.4	82	SE			1		10			0.772	19.61	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lee, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Hamberg			30.07	763.6	76.6	24.8	30	E			5		0			0	0		Prof. T. Hoh.
Berlin			30.23	767.8	70.3	21.3	38	E			3		6			0	0		Prof. Arndt.
Breslau			30.26	768.6	68.0	20.0	36	NE			6		0			0	0		Dr. P. Neugebauer.
Carlsruhe			29.99	761.8	82.4	28.0	31	NE			4		0			0	0		A. Senz.
Cassel			30.13	765.3	77.5	25.3	34	NE			4		0			0	0		Dr. H. Möhl.
Emden			30.08	764.1	77.0	25.0	44	E			4		0			0	0		Prof. Prestel.
Frankfort on the Main			30.17	766.3	81.1	27.3	24	E			4		0			0	0		Physical Society.
Friedrichshafen			30.02	762.4	76.8	24.9	54	WSW			2		6			0	0		M. Wilhelm.
Hamburg			30.20	767.0	71.4	21.9	40	ESE			4		0			0	0	Very clear	Captain F. Hegemann.
Kiel			30.22	767.6	71.4	21.9	43	NE			3		0			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			30.20	767.1	65.7	18.7	46	N			2		2			0	0		Prof. E. Luther.
Köslin			30.28	769.1	66.4	19.1		N			2		0			0	0		H. Müller.
Leipsic			30.19	766.7	73.6	23.1	29	E			3		0			0	0		Prof. Bruhns.
Memel			30.21	767.4	63.1	17.3	68	NW			3		4ks	NNE		0.122	3.1		Reinbrecht & Skalwen.
Münster			30.12	765.0	80.4	26.9	38	NE			2		0			0	0		Prof. E. Heis.
Neufahrwasser			30.26	768.6	63.7	17.6	63	E			1		0			0	0		A. Lothes.
Posen			30.26	768.6	69.1	20.6	31	NNW			5		1			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.98	761.6	84.2	29.0	29	NE			1		1			0	0		Dr. Schur.
Stuttgart			30.01	762.2	80.1	26.7	27	E			2		0			0	0		Prof. Schoder
Tilorn			30.22	767.6	70.9	21.6	37	NE			2		2			0	0		Dr. Hasenbalg
Treves, (Trier)			29.96	761.0	86.0	30.0	24	E			6		0			0	0		Prof. Flesch.
Wustrow, Naval School			30.31	770.6	65.1	18.4	73	N			2		0			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.85	758.3	88.5	31.4		NE										Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	761.9	81.1	27.3	31	E	4.3	1.9			1			0	0		
Padua			29.98	761.5	80.4	26.9	50	E	3.8	1.7			3	W		0	0		
Vicenza			29.99	761.8	80.1	26.7	46	E	1.8	0.8			1	E		0	0		
Verona			29.88	759.0	87.3	30.7	38	E			1		0			0	0		
Bergamo																			
Domodossola	28.97	735.8	29.95	760.8	78.8	26.0	53	S			6		4			0	0		
Milan			29.98	761.6	87.1	30.6	57	S			2		6			0	0		
Pavia			29.99	761.8	80.6	27.0	51	NE			1		0			0	0		
Moncalieri			29.99	761.8	81.7	27.6	52	SSW	4.9	2.2			6	E		0	0		
Mondovi	28.14	714.7	29.98	761.4	77.4	25.2	57	NNW			4		4	SSE		0	0		
Porto Maurizio			30.06	763.4	81.0	27.2	73	SW			2		2	NE		0	0		
Genoa			30.00	762.0	81.5	27.5	61	SW	2.5	1.1			0			0	0		
Piacenza																			
Parma			30.02	762.6	84.2	29.0	58	E			4		2			0	0		
Bologna			30.02	762.5	76.1	24.5	46	NE			6		7	W		0.591	15.0	Showery	
Florence			29.99	761.8	86.0	30.0	47	NW			2		8			0	0		
Leghorn			30.00	762.1	80.2	26.8	74	W	1.8	0.8			3			0	0		
Siena	28.80	731.4	29.95	760.7	81.0	27.2	43	NNE	0	0			6	W		0	0		
Urbino	28.53	724.6	30.02	762.6	76.6	24.8	54	NE			2		8			0	0		
Ancona			30.01	762.3	82.0	27.8	62	ESE			4		2			0	0		
Grosseto			29.98	761.6	84.6	29.2	49	NNW			4		4	NW		0	0		
Rome			29.97	761.2	84.9	29.4	47	W	7.4	3.3			6			0	0		
Naples, O. U.			29.99	761.7	82.9	28.3	58	WSW			4		8	NNW		0	0		
Lecce			29.95	760.8	81.3	27.4	55	NNW	15.0	6.7			3			0	0		
Cosenza			29.97	761.3	88.9	31.6	68	NW	7.4	3.3			8			0	0		
Riposto, (Sicily)			29.97	761.3	85.8	29.9	66	E			4		1	ESE		0.322	8.2		
Palermo			29.95	760.7	80.6	27.0	65	NE	6.3	2.8			1			0	0		
Caltanissetta	28.03	711.9	29.91	759.8	81.7	27.6	25	NW			4		3	S		0	0		
Sub-Series.																			
Naples, S. R.			30.01	762.3	83.1	28.4	56	WSW	4.3	1.9			10	SW		0	0		Prof. F. Brioschi.
Pesaro			30.07	763.6	78.3	25.7	67	NE	19.5	8.72			9cs,k,n	NE	SW	0	0		L. Guidi.

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	762.1	81.5	27.5		SE			3								
Groningen			30.08	764.0	76.3	24.6		E			5								
Helder			30.08	763.9	77.0	25.0		E			5								
Utrecht			30.00	762.1	81.5	27.5	41	SE			4		0					Clear	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.23	767.7	75.2	24.0	57	NW	6.5	2.9			0			0	0		
Brönö			30.23	767.9	53.2	11.8	86	SW	18	8			7			0	0		
Christiania			30.17	766.4	81.9	27.7	34		0.7	0.3			0			0	0		
Tromsö			29.95	760.6	56.8	13.8		SW	13	6			10			0.024	0.6		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	75.6	24.2	80	W	8.2	3.67			4			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.07	763.7	77.0	25.0	43	SW	6.9	3.1			7	WNW		0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.19	766.7	77.0	25.0	68	SW	3.1	1.4			10			0	0		Capt. D. A. da Cunha.
Lisbon			30.11	764.7	72.9	22.7	56	SW	19.9	8.9			2			0.004	0.1		The Observatory.

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

RUSSIAN SERIES.

Furnished by 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			30.19	766.7	63.7	17.6	47	NNW	9	4			8						Astronomical Obs.
Wilna			30.10	764.6	64.0	17.8	48	WNW	9	4			10						Astronomical Obs.
Dorpat			30.05	763.2	62.6	17.0	62	NNE	7	3			7						Physical Cabinet.
St. Petersburg			30.00	761.9	58.6	14.8	51	NE	13	6			5						Central Physical Obs.
Kuopio			30.01	762.2	57.6	14.2	68	WNW	13	6			10						Ch. Forsten.
Kieff			29.95	760.7	55.2	12.9	58	NNW	13	6			10						Physical Cabinet.
Nikolaiev			29.99	761.8	70.2	21.2	42	NW	20	9			7						Kurdakof.
Kertch			29.99	761.8	69.4	20.8	55	WNW	7	3			6						Lagorio.
Moscow			29.70	754.4	55.6	13.1	63	N	18	8			7						Meteorological Obs.
Lugan			29.64	752.8	62.8	17.1	43	W	47	21			8						Meteorological Obs.
Archangel			29.92	759.9	49.1	9.5	64	NNW	18	8			10						Ogorodnikof.
Tiflis	28.43	722.2	29.76	755.9	87.1	30.6	36	SE	7	3			8						Physical Observatory.
Astrakhan			29.77	756.2	83.8	28.8	27	WSW	11	5			3						Sebastianof.
Kasan			29.31	744.4	54.9	12.7	96	Calm	0	0			10						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.45	722.5	29.35	745.4	64.4	18.0	88	SE	9	4			8						Meteorological Obs.
Nukuss			29.70	754.4	90.9	32.7	47	NNE	13	6			0						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul													1						Meteorological Obs.
Yeniseisk			29.76	755.9	73.2	22.9	50	Calm	0	0			2					Thunder-storm.	Marks.
Irkutsk			29.52	749.9	67.5	19.7	84	NW	2	1									Uschef.
Oorga																			Mossin.
Peking, (China)			30.02	762.5	80.2	26.8	81	Calm	0	0			4						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.95	760.6	66.4	19.1	98	Calm	0	0			10						
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 396.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and 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			29.95	760.8	82.0	27.8	32	SW	20.9	9.34		0	0			0	0	Clear.	Royal Observatory.
San Fernando			30.12	765.1	77.9	25.5	65	WNW	13.2	5.9		0	0						The Naval Observatory.

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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			29.98	761.4	61.9	16.6	68	S			2		0			0	0		
Umea			30.03	762.8	76.6	24.8	43	NW			2		0			0	0		
Hernosand			30.08	764.0	75.9	24.4	34	SW			2		0			0	0		
Stockholm			30.11	764.7	76.1	24.5	29	NNW			4		2			0	0		
Wisby			30.19	766.8	61.4	18.0	75	NW			4		0			0	0		
SUB-SERIES.																			
Upsala			30.13	765.2	75.9	24.4	38	NNW	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; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall is measured at 8 a. m., local time.

SWISS SERIES.

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

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. 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	28.59	726.2	29.94	760.5	81.3	27.4	47	NNE	.....	.....	2	.....	2	.....	.....	0	0	Clear	The Observatory.
Zurich	28.59	721.1	29.94	760.5	81.5	27.5	43	E	.....	.....	1	.....	1	.....	.....	0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, —1.6 mm; Thermometer, +5.8 cent.; Relative Humidity, —8 per cent.

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

TURKISH SERIES.

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

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. 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	.....	.....	29.93	760.2	79.2	26.2	55	NNE	17	7.5	.....	.....	2	.....	NE	0	0	.....	
Fao, (Persian Gulf)	.....	.....	29.67	753.6	102.2	39.0	.....	NW	.....	.....	3	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.97	761.1	98.4	36.9	.....	S	.....	.....	1	.....	2	.....	.....	.....	.....	.....	
Valona	.....	.....	29.97	761.2	78.8	26.0	.....	W	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	29.94	760.5	64.4	18.0	.....	N	.....	.....	3	.....	10	.....	.....	Blank	Blank	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.	.....	.....	29.77	756.1	89.8	32.1	63	W	.....	.....	1	.....	3k	.....	W	.....	.....	.....	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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. 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	.....	.....	29.91	759.7	65.9	18.8	63	NW	3	1.3	.....	.....	0	.....	.....	0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.06	763.5	72	22.2	.....	N	1	0.4	.....	0	0	.....	.....	0	0	Clear	W. R. Bigg.
*Chathain, N. B	.....	.....	29.94	760.5	63	17.2	69	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	G. A. Blair.
Charlottetown P. E. Island	.....	.....	29.95	760.7	62	16.7	77	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.99	761.7	69.5	20.8	68	S	.....	.....	1	0	0	.....	.....	0	0	Bright	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.97	761.2	60	15.6	76	W	.....	.....	1	.....	.....	.....	.....	0	0	Clear	H. A. Johnson
Esquimault, B. C	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Bevis.
Fredericton, N. B	.....	.....	30.02	762.5	56.0	13.3	91	NW	6	2.7	.....	.....	9s	.....	.....	0	0	Foggy	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.76	755.9	58	14.4	100	N	6	2.7	.....	0	2s	.....	W	0.140	3.56	Fair	James Stewart.
Goderich, Ontario	.....	.....	29.92	760.0	69.5	20.8	73	Calm	.....	.....	0	8k	0	W	.....	Threatening		H. J. Strang, M. A.
Granton, Ontario	28.86	733.0	29.92	760.0	69	20.6	.....	Calm	.....	.....	0	2cs	0	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S.	.....	.....	29.96	761.0	64	17.8	72	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	F. Allison, M. A.
*Kingston, Ontario	.....	.....	30.02	762.5	70	21.1	76	Calm	0	0	.....	2c	0	.....	.....	0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.	.....	.....	29.95	760.7	64.0	17.8	67	W	5	2.2	.....	5k	..n	.....	.....	0	0	Fair	C. H. Rigby.
*Montreal, Quebec	.....	.....	30.00	762.0	65	18.3	83	NE	4	1.8	.....	2c	0	W	.....	Inap.	Inap.	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.00	762.0	63	17.2	75	S	2	0.9	.....	0	0	.....	.....	0	0	Clear	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.95	760.7	66	18.9	89	SE	10	4.5	.....	2cs	0	W	.....	0.02	0.5	Fair	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	29.96	761.0	67	19.4	79	NE	4	1.8	.....	10k	0	NW	.....	0	0	Fair	H. Morgan.
Port Hastings, N. S.	.....	.....	30.02	762.5	60.8	16.0	.....	Calm	0	0	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	29.97	761.2	66	18.9	90	E	2	0.9	.....	5k	0	W	.....	0	0	Fair	M. Payne.
*Quebec, Quebec	.....	.....	30.02	762.5	65	18.3	89	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.	.....	.....	30.02	762.5	58	14.4	87	Calm	0	0	.....	0	0	.....	.....	0	0	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.89	759.2	69	20.6	73	SE	4	1.8	.....	2ks	2s	.....	.....	0.02	0.5	Fair	K. Stewart.
Stayner, Ontario	.....	.....	29.91	759.7	72	22.2	78	SE	5	2.2	.....	8k	0	NW	.....	0	0	Cloudy	R. J. Cole.
Stratford, Ontario	24.68	728.5	29.92	760.0	66.1	18.9	83	SE	2	0.9	.....	10cs	0	.....	.....	0	0	Cloudy	C. J. Macgregor, M. A.
*Sydney, C. B	.....	.....	29.99	761.7	68	20.0	69	SW	6	2.7	.....	2k	2ks	.....	.....	0	0	Fair	T. C. Hill.
*Toronto, Ontario	.....	.....	29.94	760.5	72	22.2	65	E	8	3.6	.....	2k	2s	W	.....	Inap.	Inap.	Fair	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.94	760.5	65.8	18.8	89	E	5	2.2	.....	.....	9ks	.....	.....	0	0	Gloomy	J. Montgomery
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	30.21	767.3	57	13.9	75	S	.....	.....	.....	.....	10n	.....	.....	0	0	Cloudy	John Delaney.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.			30.02	762.5	63	17.2	83	Calm	0	0		10k	0	SW		0.01	0.3	Cloudy	
Alpena, Mich.			29.86	758.4	66	18.9	84	SE	4	1.8		10ck	0	SW		0	0	Cloudy	
Atlantic City, N. J.			29.96	761.0	74	23.3	85	NE	15	6.7			10s		NE	2.02	51.3	Cloudy	
Augusta, Ga.			29.99	761.7	80	26.7	82	NW	2	0.9		0	0			0	0	Clear	
Baltimore, Md.			29.98	761.5	74	23.3	76	NE	8	3.6			10s			0	0	Cloudy	
Barnegat, N. J.			29.95	760.7	76	24.4	81	NE	13	5.8		2c	2s	SW	NE	0.96	24.4	Fair	
Bismarck, Dakota	28.15	715.0	29.76	755.9	53	11.7	93	Calm	0	0		0	0			0.80	20.3	Clear	
Boston, Mass.			30.01	762.2	65	18.3	83	E	2	0.9		10s	Fog	E		0.68	17.3	Cloudy	
Breckenridge, Minn.			29.79	756.7	69	20.6	90	W	4	1.8		0	0			0.48	12.2	Clear	
Buffalo, N. Y.			29.93	760.2	66	18.9	68	E	4	1.8		10k	0	W		Inap.	Inap.	Cloudy	
Burlington, Vt.			30.01	762.2	63	17.2	67	E	3	1.3		0	Sm'e			0	0	Smoky	
Cairo, Ill.			29.97	761.2	77	25.0	90	SW	4	1.8		Haze	0			0.31	7.9	Clear	
Cape Hatteras, N. C.			29.86	758.4	82	27.8	87	SW	11	4.9		Haze	5ks		SW	0	0	Fair	
Cape Henry, Va.			29.88	758.9	81	27.2	83	NE	8	3.6		8c	0	W		0	0	Fair	
Cape Lookout, N. C.			29.95	760.7	84	28.9	79	W	8	3.6		Haze	Haze			0	0	Fair	
Cape May, N. J.			29.94	760.5	74	23.3	85	NE	12	5.4		10k	0	NW		Inap.	Inap.	Fair	
Charleston, S. C.			29.99	761.7	82	27.8	78	NW	4	1.8		0	0			2.98	75.7	Clear	
Cheyenne, Wyoming	24.18	614.2	30.12	765.0	55	12.8	62	NW	16	7.2		1ck	0	N		0	0	Clear	
Chicago, Ill.			29.84	757.9	73	22.8	76	SE	6	2.7			10s			0	0	Cloudy	
Cincinnati, Ohio			29.86	758.4	78	25.6	86	SW	3	1.3			10ks		SW	1.62	41.1	Cloudy	
Cleveland, Ohio			29.92	760.0	67	19.4	74	E	4	1.8		2c	Sm'e	W	E	0	0	Smoky	
Corsicana, Tex.			30.04	763.0	76	24.4	90	S	5	2.2		2cs	0			0	0	Clear	
Davenport, Iowa			29.82	757.4	73	22.8	85	SW	4	1.8			10n			0.32	8.1	Light rain	
Denison, Tex.			30.02	762.5	81	27.2	78	S	13	5.8		0	0			0	0	Clear	
Denver, Col.	24.92	633.0	30.14	765.5	62	16.7	61	NE	1	0.4		2ck	0	SW		0	0	Clear	
Detroit, Mich.			29.88	758.9	72	22.2	75	S	3	1.3		1ck	0	W		0	0	Clear	
Dodge City, Kan.	27.32	693.9	29.47	748.5	76	24.4	76	S	8	3.6		0	0			0	0	Clear	
Dubuque, Iowa			29.76	755.9	72	22.2	90	SE	8	3.6			10s			Inap.	Inap.	Cloudy	
Duluth, Minn.			29.70	754.4	59	15.0	87	NE	2	0.9			10s			0.55	14.0	Cloudy	
Eastport, Me.			30.01	762.2	61	16.1	82	Calm	0	0			10s			0	0	Cloudy	
Erie, Pa.			29.91	759.7	69	20.6	60	SE	6	2.7		4c	Sm'e	W		0	0	Fair	
Escanaba, Mich.			29.79	756.7	67	19.4	90	S	12	5.4			10n		S	0.02	0.5	Light rain	
Fort Gibson, Indian Ter.			29.91	759.7	83	28.3	63	E	4	1.8		0	0			0	0	Clear	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.76	730.5	29.81	757.2	77	25.0	72	S	4	1.8		2cs	0	S		0	0	Clear	
Fort Sully, Dakota	28.23	717.5	29.85	758.2	63	17.2	89	Calm	0	0		0	0			1.74	44.2	Clear	
Florence, Arizona	28.49	723.6	29.96	761.0	74	23.3		Calm				2c	5s			Inap.	Inap.	Fair	
Galveston, Tex.			30.11	764.8	81	27.2	78	SW	6	2.7		2c,k	0			0	0	Fair	
Grand Haven, Mich.			29.84	757.9	70	21.1	77	S	5	2.2			10s		W	0	0	Cloudy	
Indianapolis, Ind.			29.87	758.7	77	25.0	86	SW	4	1.8		Haze	Haze			0.81	20.6	Fair	
Indianola, Tex.			30.11	764.8	85	29.4	75	S	6	2.7		0	0			0	0	Clear	
Jacksonville, Fla.			30.04	763.0	83	28.3	74	SW	4	1.8		0	0			0	0	Clear	
Keokuk, Iowa			29.77	756.1	76	24.4	90	S	5	2.2		8k	0	S		0.06	1.5	Fair	
Key West, Fla.			30.13	765.3	80.8	27.1	74	SE	6	2.7		5k	Haze	SE	SE	0	0	Fair	
Kittyhawk, N. C.			29.92	760.0	81	27.2	82	W	8	3.6		2ck	2s	W		0	0	Fair	
Knoxville, Tenn.			30.01	762.0	73	22.8	90	NE	1	0.4		1ck	Fog	SW		Inap.	Inap.	Fair	
La Crosse, Wis.			29.74	755.4	74	23.3	90	S	3	1.3		5k	0	S		0	0	Fair	
Leavenworth, Kan.			29.87	758.7	73	22.8	85	SE	6	2.7		5c	0			0.35	8.9	Fair	
Louisville, Ky.			29.91	759.7	78	25.6	86	S	6	2.7			10s		S	0.39	9.9	Threatening	
Lynchburg, Va.			29.92	760.0	77.5	25.3	77	W	2	0.9		10k	0	W		Inap.	Inap.	Cloudy	
Malone, N. Y.			29.95	760.7	63	17.2	71	S	6	2.7		Haze	0	S		0	0	Hazy	
Marquette, Mich.			29.76	755.9	65	18.3	89	SE	5	2.2			10s			0	0	Cloudy	
Memphis, Tenn.			30.03	762.7	80	26.7	86	Calm	0	0		5c	Fog			0	0	Fair	
Milwaukee, Wis.			29.85	758.2	68	20.0	94	SW	6	2.7		10s	Fog	W		0.01	0.3	Cloudy	
Mobile, Ala.			30.08	764.0	78	25.6	86	W	6	2.7		5ck	0	W		0	0	Fair	
Montgomery, Ala.			30.09	764.3	75.5	24.2	88	W	6	2.7			10s		W	0	0	Cloudy	
Morgantown, W. Va.	28.90	731.5	29.96	759.4	73	22.8	88	Calm	0	0			10s		W	0.86	21.8	Cloudy	
Mt. Washington, N. H.	23.92	607.7	30.28	769.1	46	7.8	68	Calm	0	0		0	Haz			0	0	Fair	
Nashville, Tenn.			29.97	761.2	83	28.3	74	Calm	0	0		2c	Haze			0.08	2.0	Fair	
New Haven, Conn.			30.00	762.0	68.0	20.0	84	NE	5	2.2			10s		SE	1.15	29.2	Cloudy	
New London, Conn.			30.02	762.5	69	20.6	79	N	1	0.4		2c	5s	W	NE	0.46	11.7	Fair	
New Orleans, La.			30.11	764.8	80.5	26.9	80	W	5	2.2		4k	0	W		0	0	Fair	
Newport, R. I.			30.00	762.0	68	20.0	84	NE	7	3.1		2c	5ks		E	0.51	13.0	Cloudy	
New York, N. Y.			29.99	761.7	71	21.7	80	N	8	3.6		5c	5ks	W	NE	1.97	50.0	Cloudy	
Norfolk, Va.			29.92	760.0	82	27.8	83	NE	4	1.8		5ck	5ks	NW	NW	0.03	0.8	Cloudy	
North Platte, Neb.	27.07	687.6	29.90	749.3	71	21.7	75	E	16	7.2			10ks		E	0.03	0.8	Cloudy	
Omaha, Neb.	28.84	732.5	29.87	758.7	68	20.0	100	N	6	2.7			10n			2.18	55.4	Heavy rain	
Oswego, N. Y.			29.98	761.5	67	19.4	78	SE	4	1.8		5ck	2s	NW	NW	0	0	Fair	
Pembina, Dakota			29.72	754.9	61	16.1	94	Calm	0	0		0	0			0	0	Clear	
Philadelphia, Penn.			29.99	761.7	69	20.6	90	E	11	4.9			10ks		NE	0.06	1.5	Cloudy	
Pike's Peak, Colorado	18.09	459.5	30.30	769.6	39	3.9	72	S	7	3.1		8k	0	S		0.54	13.7	Fair	
Pittsburgh, Penn.			29.91	759.7	67	19.4	90	Calm	0	0		2c	Fog	N		Inap.	Inap.	Foggy	
Port Huron, Mich.			29.88	758.9	67	19.4	84	SE	2	0.9		5c,ck	2s	NW		0	0	Cloudy	
Portland, Me.			30.03	762.7	65	18.3	83	NE	4	1.8			10s			0.03	0.8	Cloudy	
Portland, Oregon			30.19	766.5	57	13.9	75	S	5	2.2			10s			0	0	Cloudy	
Punta Rassa, Fla.			30.11	764.8	84.5	29.2	74	Calm	0	0		2k	Haze	SE		0	0	Fair	
Rochester, N. Y.			29.94	760.5	67	19.4	64	S	2	0.9		8ck	Haze	NW		0	0	Cloudy	
Salt Lake City, Utah			29.97	761.2	59	15.0	33	SE	4	1.8		2c	0			0	0	Clear	
Sandy Hook, N. J.	25.61	651.2	29.98	761.5	71	21.7	85	NE	12	5.4		8c	2ks	W	NE	1.36	34.5	Cloudy	
San Diego, Cal.			30.01	762.2	68	20.0	84	SW	4	1.8			10s		SW	0	0	Cloudy	
San Francisco, Cal.			29.97	761.2	54	12.2	87	SW	8	3.6			10s			0	0	Cloudy	
Santa Fé, N. M.	23.39	594.1	29.94	760.2	56	13.3	93	SE	6	2.7		0	0			0	0	Clear	
Savannah, Ga.			30.00	762.0	83	28.3	74	W	8	3.6		Haze	Sm'e			0	0	Hazy	
Shreveport, La.			30.19	766.5	80	26.7	87	SW	3	1.3		2c	0	W		0	0	Fair	
Smithville, N. C.			29.96	761.0	83	28.3	74	W	6	2.7		0	0			0	0	Clear	
Springfield, Mass.			30.04	762.0	69	20.6	75	W	4	1.8		2c	8ks	SW	N	0.83	21.1	Cloudy	
St. Louis, Mo.			29.93	760.2	79	26.1	82	W	12	5.4		10c	0	W		0.43	10.9	Cloudy	
St. Marks, Fla.			30.08	764.0	77	25.0	86	NW	6	2.7		2k	0	NW		0.36	9.1	Fair	
St. Paul, Minn.			29.70	754.4	69	20.6	90	SW	8	3.6		5c	Fog	SW		0.03	0.8	Fair	
St. Paul's Island, Alaska			29.64	752.8	40	4.4	91	NE	8	3.6			10s			0	0	Cloudy	
Thatcher's Island, Mass.			30.02	762.5	65	18.3	94	Calm	0	0			10s		NE	0.32	8.1	Foggy	
Toledo, Ohio			29.87	758.7	72	22.2	80	SE	1	0.4		2ck	Haze	SW		0	0	Fair	
Tucson, Arizona	27.61	701.3	30.22	767.6	73	22.8		S				2c	5ks		S	1.52	38.6	Cloudy	
Tybee Island, Ga.			30.00	762.0	80	26.7	82	E	1*	0.4*		2k	Sm'e	SW		0	0	Fair	
Vicksburg, Miss.			30.10	764.5	80	26.7	84	SW	6	2.7		5ck,cs	0			0.01	0.3	Fair	
Virginia City, M. T.	24.35	618.5	29.83	757.7	47	8.3	62	Calm	0	0		0	0			0	0	Clear	
Washington, D. C.			29.96	761.0	74	23.3	85	NE	9	4.0			10s			0	0	Cloudy	
Wilmington, N. C.			29.95	760.7	83	28.3	74	W	6	2.7		1cs	0	W		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
Wood's Holl, Mass			30.03	762.7	69	20.6	84	Calm	0	0		0	5s		SE	0.15	3.8	Fair	
Yankton, Dakota	28.60	726.4	29.82	757.4	70	21.1	87	N	2	0.9		8cs	0	W		1.50	38.1	Fair	
Yuma, Arizona			29.92	760.0	84	28.9		E				0	2s			0	0	Fair	
Sub Series.																			
Kingston, Jamaica, W. I.			30.22	767.6	80	26.7	82	Calm	0	0		5c	2s		SE	0.26	6.6		James Gall.
St. Georges, Bermudas			30.00	762.0	80.0	26.7	83	SW	7	3.1		2c	5k	E		0.15	3.8	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Paramaribo, D. Guiana, S. A			30.05	763.3	81	27.2	83	E			2	4c	3s			1.152	29.26	Fair	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.08	763.9			85.1	29.5		N								0.591	15.00		Dr. H. Groot.
Medellin, Colombia, S. A.	25.23	640.8			65.0	18.3	80	Calm	0	0		9cs	0			0.02	0.5	Cloudy	Thomas Herran
York Factory, B. A			29.60	751.8	49	9.4	96	N	10	4.5			10n			1.20	30.5		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.05	763.3	77	25.0		NE			3					0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Addie Fuller † Off Cape Hatteras.	SSW	3	29.92	760.0	83	28.3		W			2	2cs	Haze			Smooth		Clear	Capt. James Jorgensen.
Steamer Hibernian. N. 45° 34′, W. 56° 49′.	S 69 W	10	30.07	763.8	52	11.1		Var.			3		c			Smooth		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.; Denver, 5,135 ft., or 1,565. m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,912 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, 4,262.2 ft., or 1,299.2 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, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. * Estimated velocity. † Rain-fall in 24 hours 0.02 in., or 0.5 mm.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			30.02	762.6	86.4	30.2	50	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.02	762.6	86.0	30.0	44	N			2		0			0	0	Clear	Peter.
La Calle			30.02	762.4	86.0	30.0	68	WNW			2		1			0	0	Clear	Kunts.
Tunis			30.05	765.3	89.8	32.1	48	E			3		2			0	0	Clear	Jacques.
Sfax			30.13	763.2	87.8	31.0	53	E			4		1			0	0	Clear	Chauvey.
Sajda			30.05	763.3	86.5	30.3	22	NNW			2		2			0	0	Clear	Millot.
Tebessa			30.06	763.4	91.6	33.1		NW			1		2			0	0	Clear	Colin.
Geriville			30.05	763.2	84.7	29.3	24	N			3		3			0	0	Fair	Lemaillot.
Laghouat			30.07	763.6	95.0	35.0	28	S			2		2			0	0	Clear	Guyot.
Biskra			30.07	763.6	97.5	36.4		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			30.08	764.0	75.9	24.4	59	SW			3		2			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.16	766.1	69.3	20.7	52	NE			1		1			0	0		Dr. Wierzbiski.
Eperies			30.10	764.4	68.0	20.0	59	N			1		8cs			0	0		Julius Mikolik.
Gratz	28.87	733.4	30.04	763.0	71.8	22.1	52	S			3		0			0	0		Andreas Rospini.
Hermannstadt	28.63	727.3	30.01	762.3	68.0	20.0	40	NNE			3		4			0	0		Prof. Reissenberger.
Kremsmünster	28.70	729.0	29.99	761.8	71.6	22.0	41	E			4		0			0	0		Prof. C. Wagner.
Lemberg			30.07	763.8	61.5	16.4	74	NE			1		8			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.04	764.1	79.3	26.3	39	SE			2		2c			0	0		I.R.Hydrographic Office.
Szegedin								NE			2		3			0	0		Karl Stancel.
Trieste			30.06	763.5	79.7	26.5	54	W			1		1			0	0		Prof. V. Farolfi.
Vienna			30.07	763.8	74.8	23.8	33	E			2		0			0	0		I. R. Central Met. Ob'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.0 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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	758.8	79.3	26.3	41	S			0	9c,ck	0	SSE		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			30.16	766.1	63.0	17.2		E	8	3.6			1			0.010	0.25	Blue sky	William Boswell.
Ardrossan			30.01	762.2	70	21.1		ENE			3		8					Overcast	William McNeil.
Armagh, Observatory			29.98	761.5	66.5	19.2		NE	6	2.7			8					Overcast	S. Cail, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.90	759.4	73.7	23.2		ENE			1		9					Hazy	J. Dreyer.
Bradford			29.96	761.0	71.1	21.7		E			1		10			0	0	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	83.0	28.3		E			1		6					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			29.96	761.0	71.0	21.7		E			1		10					Raining	H. Todd.
Cardington			29.92	760.0	72.0	22.2		E			1		9					Overcast	John McLaren.
Carlisle																			T. Bel, for J. Carmell.
Chatham, School M. E			29.87	758.7	69.5	20.8		E			1		10					Raining	Capt. J. Fellowes, R.E.
Dartmoor	28.48	723.4	29.93	760.2	68.8	20.4		E			4		5					*D. clouds	R. L. Power.
Donaghadee			29.98	761.5	64	17.8		NNW			1		10					Overcast	J. Mac Gowan.
Dover			29.88	758.9	67	19.4		NNE			2		6					½ clouded	J. Costello.
Eccles (near Manchester.)			29.90	759.4	67.1	19.5		NE	2.0	0.9			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			29.82	757.4	67.5	19.7		ESE			3		9					Overcast	The Staff.
Fort Napier, (Natal)	27.81	706.4	30.05	763.3	56.9	13.8		SE			2		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.[illegible]7	763.8	80	26.7		W			4		7					D. clouds	
Galway, Queen's College			29.86	758.4	72	22.2		SE			2		3					D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.04	762.7	77.2	25.1		W			6		0					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			30.02	762.5	69.0	20.6		ENE			2		8					Fine	Lewis Stuart.
Great Yarmouth			29.95	760.7	69	20.6		SE			3		4					Blue sky	G. T. Watson.
Greenwich, Royal Ob'y			29.90	759.4	72.5	22.5		ENE			1		10			Blank	Blank	Overcast	The Staff, for G. B. Airy
Guernsey																			Dr. S. E. Hoskins.
Helston			29.84	757.9	70	21.1		SE			4		3k			0	0	Fair	M. P. Moyle.
Holyhead			29.91	759.7	65	18.3		ENE			3		4					Hazy	John Tilston.
Kew, Observatory			29.88	758.9	72.2	22.3		E	14	6.3			10					Misty	The Staff.
Kingstown			29.96	761.0	63	17.2		NNE			2		9					Foggy	George Mitchell.
Leicester Museum			29.93	760.2	71.0	21.7		Calm			0		8					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			30.00	762.0	81.8	27.7		NE			1		4k					D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			30.08	764.0	71	21.7		Calm			0		0					Clear	W. D. Penny.
Nassau, (Bahamas			30.14	765.5	84.6	29.2		SE			4		7					D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.93	760.2	70.5	21.4		ENE			4		c,k,ck	ESE	SE	0.068	1.73	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.90	759.4	67.2	19.6		ENE			3		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Ob'y			29.[illegible]6	758.4	73	22.8		Calm			0		10					Gloomy	J. Lucas.
Plymouth			29.83	757.7	72.4	22.4		SE			3		5					D. clouds	John Merrifield.
Roche's Point			29.85	758.2	66	18.9		ESE			5		8					Cloudy	W. Kennedy.
Saint Ann's Head			29.84	757.9	69	20.6		E			2		10					Thunder	John C. Walker.
Saint Helier, Jersey			29.83	757.7	74.8	23.8		N			1		8					¾ clouded	A. P. Amy.
Sandwick Manse Orkneys			30.16	766.1	66.7	19.3		SSE	18	8.0			0					Blue sky	Rev. C. Clouston, Ll. D.
Scarborough																			F. Shaw.
Scutari Cemetery Turkey			29.96	761.0	68.0	20.0		ENE			2		9			Blank	Blank	Gloomy	Sergt. W. H. Lyne.
Sheffield			29.95	760.7	69.9	21.1		NE			2		9			0.024	0.61	Gloomy	W. F. Cooper.
Silloth Rectory			29.96	761.0	78.8	26.0	43	SE			4		4			0	0	D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.92	760.0	68.2	20.1		NE			1		10			Blank	Blank	Threatening	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			30.06	763.5	69	20.6		ENE			1		2					Blue sky	John Smith.
Strathfield Turgiss			29.83	757.7	72.0	22.2		Calm			0		0					Blue sky	Rev. Charles H. Griffith.
Thurso			30.12	765.0	73	22.8		SSE			2		1					Blue sky	John Trotter.
Truro, Royal Institution			29.85	758.2	73	22.8		SE			3		8					Gloomy	W. Newcombe.
Valencia, Observatory			29.85	758.2	66.5	19.2		SE	24	10.7			10					*D. clouds	The Staff.
Sub-Stations.																			
Calf of Man, Isle of Man					61	16.1		E			3		3						Thomas Dawson.
Cape Good Hope, Ob'y			30.22	767.6	59.9	15.5	72	WNW	17	7.6		1	4						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			30.22	767.6	56.0	13.3	93	Calm			0		4k			0.02	0.5		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			30.08	764.0	62.2	16.8		E			3	6c		E		0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.21	767.3				SE	22.9	10.2						0.12	3.0		C. Meldrum
Melbourne, Observatory			30.46	773.7	47.8	8.8	88	SSE	3	1.3			8			0.03	0.8	Dull, fine	R. L. J. Ellery.
Monach Lighthouse, Hebrides			30.03	762.7	68	20.0		NE			3	0	0			0	0		J. Youngclause.
North Unst, (Shetland Is.)			30.14	765.5	60	15.6		E			1	0	0						Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,260 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			30.17	766.3	71.4	21.9	48	Calm			0		0						
Fanoe			30.14	765.6	76.1	24.5	48	SE			2		0						
Godthaab, Greenland			29.80	757.0	44.1	6.7	86	SSW			7		10					Raining	
Stykkisholm, Iceland			29.89	759.3	55.2	12.9	89	W			6		8						
Thorshavn, Faröe			30.11	765.6	56.8	13.8	85	Calm			0		0						
Vestervig			30.16	766.1	72.3	22.4	56	W			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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. 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			29.92	760.0	76.1	24.5	72	SW			1		10ck			0.04	1.	Covered	Normal School.
Amiens																			Normal School.
Avignon			29.95	760.6	73.9	23.3	88	SE			1		8		SW	0	0	Very cloudy	Normal School.
Bar-sur-Seine			29.82	757.4	81.7	27.6	43	S			2		8		SW	0.256	6.5	Very cloudy	C. Saillard.
Beaumette, (near Angers)			29.83	757.6	72.3	22.4	58	SW	21.0	9.4					S	0.091	2.3	Thunder-storm.	Beaumette Observatory.
Beauvais			29.86	758.4	77.9	25.5	64	SSE			1		8		S	0.335	8.50	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.04	763.0	82.4	28	31	SE			2		10p		NE	0	0	Covered	Normal School.
Bourges			30.20	767.1	78.8	26	71	S			2		10		S	0	0	Covered	Normal School.
Brest			29.74	755.4	68.2	20.1	85	SSE			2		8		SSE	0.177	4.50	Stormy	Naval Observatory.
Carcassonne			29.87	758.8	78.1	25.6	65	E			3		2		W	0.547	13.9	Slightly cl'dy	Normal School
Caen																			Normal School.
Chartres			30.06	763.5	79.5	26.4	83	S			1		8		N	0	0		Normal School.
Châlons-sur-Marne			29.89	759.2	82.4	28.0	53	SE			2		58		NW	0	0	Cloudy	Normal School.
Clermont			29.84	758.0	73.0	22.8	79	WNW			2		10		SW	0.220	5.6	Covered	Puy de Dome Obs'y.
Commercy			29.93	760.2	76.3	24.6	61	SE			2		5cs,k		SE	0	0	Cloudy	Normal School
Commune de Greasque*			30.05	763.2	84.2	29.0	51	SE			4		8		SE	0.307	7.8		M. Kina.
Grenoble			29.88	759.0	73.0	22.8	67	N			1		5		SW	0	0	Cloudy	Normal School.
La Roche-sur-Yon					83.1	28.4	62	W			2		5		NNE	0	0	Cloudy	Normal School.
Le Mans			29.82	757.3	73.0	22.8	74	SSW			2		5		SSW	0	0	Cloudy	Normal School.
Lons-Le-Saulnier			29.88	758.9	79.3	26.3	66	NW			1		5			0.063	1.6	Cloudy	Normal School.
Mâcon			30.09	764.2	83.1	28.4	67	SSE			4		5		S	0.016	0.4	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			29.93	760.1	75.6	24.2	49	SE			1		2		SW	0.16	4.	Slightly cl'dy	Normal School.
Nismes			29.93	760.1	72.3	22.4	86	E			2		2		SE	0.12	3.	Slightly cl'dy	Normal School.
Orleans																			Normal School.
Paris, Observatory			29.84	758.0	80.1	26.7	64	SW			3		5ck		S	0.474	12.06	Cloudy	National Observatory.
Parthonay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			29.91	759.7	66.7	19.3	78	SSW			3		10		NE	0.240	6.1	Rainy	Naval Observatory.
Rouen			29.82	757.5	78.4	25.8	60	SE			2		8		S	0.102	2.6	Very cloudy	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School
Villefranche			29.99	761.8	91.4	33	72	SE			3		5		S	0.51	13.	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.7	82.4	28													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.17	766.4	69.8	21.0	64	SW	18.6	8.33			4		E	0	0		—, Falguère.
Montsouris, Paris			29.85	758.2	82.6	28.1	60	SSW			3		ck kn		S	0.406	10.3		Montsouris Observatory.
Perpignan			29.85	758.1	99.3	32.4	28	SE	14.9	6.66			4		NW	0	0		Dr. Flues.
Pic du Midi, (Summit) H.P.	21.38	543.1			47.7	8.7		SW			3		10					Fair	M. Baylac.
Pic du Midi, (Plantade)	22.63	574.9			54.1	12.3		SW			4		10			0	0	Fair	General de Nansouty.
Saint Maur, (near Paris)			29.85	758.3	80.4	26.9	55	SSE			3		8			0.551	14.0	Covered	E. Renou.
Toulouse			29.95	760.8	83.3	28.5	49	WSW			1		3			0.028	0.7		Toulouse Observatory
Tours			29.85	758.1	79.2	26.2	53	S			1		9		SSW	0.106	2.7		C. Marquet.
Versailles, (near Paris)			29.85	758.3	82.0	27.8	54	S			2		7			0.194	4.94	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai																			H. Le Lee, S. J.

NOTE.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observat'ons for altitude, the constant 135. mm. has been added. * 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. 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			30.03	762.8	77.7	25.4	31	E			4		0			0	0		Prof. T. Hoh.
Berlin			30.14	765.6	76.3	24.6	30	SE			1		0			0	0		Prof. Arndt.
Breslau			30.23	767.9	73.0	22.8	38	SE			2		1			0	0		Dr. P. Neugebauer.
Carlsruhe			29.92	759.9	83.5	28.6	29	NE			3		8			0	0		A. Senz.
Cassel			30.05	763.2	82.4	28.0	29	E			4		0			0	0		Dr. H. Möhl.
Emden			29.90	759.4	77.4	25.2	37	SE			4		0			0	0		Prof. Prestel.
Frankfort on the Main			29.99	761.8	81.7	27.6	22	ESE			4		1			0	0		Physical Society
Friedrichshafen			29.99	761.8	71.1	21.7	70	S			1		5			0	0		M. Wilhelm.
Hamburg			30.14	765.5	74.7	23.7	40	SE			4		0			0	0	Clear	Captain F. Hegemann
Kiel			30.13	765.3	73.6	23.1	42	E			4		0			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			30.09	764.2	74.5	23.6	41	NW			2		2			0	0		Prof. E. Luther
Koslin			30.19	766.9	70.5	21.4		NW			2		0			0	0		H. Müller.
Leipsic			30.11	764.8	78.3	25.7	27	E			3		0			0	0		Prof. Bruhns.
Memel			30.11	764.7	65.7	18.7	81	WNW			3		..c			0	0		Reinbrecht & Skalweit.
Münster			30.07	763.6	81.5	27.5	68	E			2		0			0	0		Prof. E. Heis.
Neuahrwasser			30.15	765.8	72.0	22.2	67	NE			1		8			0	0		A. Lothes.
Posen			30.18	766.5	75.7	24.3	50	N			2		1			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.95	760.8	79.9	26.6	35	Calm			0		5			0	0		Dr. Schur.
Stuttgart			29.93	760.3	79.7	26.5	28	E			2		2			0	0		Prof. Schoder.
Thorn			30.13	765.3	79.3	26.3	32	NW			3		1			6	0		Dr. Hasenbalg.
Treves, (Trier)			29.91	759.8	81.2	29.0	20	SE			6		8			0	0		Prof. Flesch.
Wustrow, Naval School			30.32	770.2	74.5	23.6	47	E			4		0			0	0		E. F. Schütz.

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.95	760.8	81.0	27.2		NE			Strong		..k					Clear	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.02	762.4	79.0	26.1	29	NE	2.5	1.1			7			0	0		
Padua			30.02	762.4	78.6	25.9	40	E	4.3	1.9			5	W		0	0		
Vicenza			30.03	762.7	79.3	26.3	44	SSW	0	0			3	W		0	0		
Verona			29.90	759.4	86.4	30.2	43	E			1		4			0	0		
Bergamo																			
Domodossola	29.00	736.6	29.98	761.6	74.3	23.5	62	S			6		10			0	0		
Milan			30.00	762.1	82.22	27.92	65	ENE			2		8	ENE		0	0		
Pavia			30.02	762.6	76.8	24.9	62	E			1		9	NE		0	0		
Moncalieri			30.02	762.6	73.9	23.3	76	ESE	3.1	1.4			9	NE		0.150	3.8		
Mondovi	28.17	715.6	30.01	762.3	70.0	21.1	81	W			2		10			0.102	2.6		
Porto Maurizio			30.08	763.9	77.4	25.2	64	S			2		8	SW		0	0		
Genoa			30.01	762.2	80.6	27.0	64	SW	2.5	1.1			10			0	0		
Piacenza																			
Parma			30.06	763.4	81.5	27.5	41	SSE			2		8			0	0		
Bologna			30.07	763.8	82.9	28.3	36	SE			6		4	E		0	0		
Florence			30.01	762.2	86.0	30.0	35	NE			2		5			0	0		
Leghorn			30.02	762.6	82.9	28.3	52	SW	4.9	2.2			3			0	0		
Siena	28.82	732.0	29.97	761.3	83.5	28.6	35	SE	0	0			6	NE		0	0		
Urbino	28.56	725.5	30.06	763.5	77.0	25.0	48	N			2		0			0	0		
Ancona			30.08	763.9	80.6	27.0	47	SE			4		2			0	0		
Grosseto			30.03	762.8	84.2	29.0	47	SSW			4		4	NW		0.059	1.5		
Rome			30.02	762.6	83.3	28.5	48	SW	4.9	2.2			6			0	0		
Naples, O. U.			30.03	762.7	86.7	30.4	43	SW			2		0			0	0		
Lecce			30.01	762.3	79.3	26.3	31	NNW	12.5	5.6			1			0	0		
Cosenza			30.00	762.1	87.1	30.6	69	WNW	9.8	4.4			1			0	0		
Riposto, (Sicily)			29.95	760.7	84.6	29.2	61	SE			4		8	ENE		0	0		
Palermo			29.97	761.1	81.5	27.5	62	NE	8.1	3.6			3			0	0		
Caltanissetta	28.06	712.8	29.93	760.3	79.3	26.3	46	NNW			4		8	SE		0.063	1.6		
Sub-Series.																			
Naples, S. R.			30.04	763.0	84.2	29.0	42	SSW	4.3	1.9			3	SW		0	0		Prof. F. Brioschi.
Pesaro			30.18	766.6	77.5	25.3	65	NE	19.5	8.72			3c			0	0		L. Guidi.

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	760.1	81.3	27.4		SE			2								
Groningen			29.98	761.4	77.2	25.1		E			5								
Helder			29.97	761.3	75.2	24.0		E			3								
Utrecht			29.92	759.9	82.6	28.1	22	SE			4		2					Light cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.14	765.6	73.4	23.0	59	WNW	4.0	1.8			0			0	0		
Brönö			30.21	768.0	52.2	11.2	88	SW	2	1			10			0	0		
Christiania			30.11	764.9	82.4	28.0	24		0.2	0.1			0			0	0		
Tromsö			29.89	759.3	51.3	10.7		W	2	1			10			0.496	12.6		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	76.8	24.9	79	W	8.2	3.67			3			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.09	764.2	79.7	26.5	46	WNW	9.8	4.4			9	WNW		0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.22	767.6	77.5	25.3	72	SW	7.4	3.3			2			0	0		Capt. D. A. da Cunha.
Lisbon			30.14	765.6	72.9	22.7	78	SW	18.6	8.3			8			0	0		The Observatory.

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

RUSSIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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			30.09	764.3	71.6	22.0	45	NW	9	4			0						Astronomical Obs.
Wilna			30.07	763.8	64.8	18.2	63	Calm	0	0			10						Astronomical Obs.
Dorpat			29.94	760.5	72.5	22.5	52	NW	7	3			3						Physical Cabinet.
St. Petersburg			29.85	758.3	65.1	18.4	72	WNW	16	7			3						Central Physical Obs.
Kuopio			29.80	756.8	71.4	21.9	55	NW	18	8			5						Ch. Forsten.
Kieff			29.96	760.9	59.5	15.3	47	N	9	4			4						Physical Cabinet.
Nikolaiev			30.01	762.2	70.9	21.6	36	NW	11	5			5						Kurdukof.
Kertch			30.04	762.9	66.2	19.0	57	NNW	7	3			5						Lagorio.
Moscow			29.91	759.6	51.8	11.0	65	NNW	9	4			8						Meteorological Obs.
Lugan			29.84	757.9	64.8	18.2	37	W	18	8			6						Meteorological Obs.
Archangel			29.52	749.9	52.7	11.5	76	NW	34	15			9						Ogorodnikof.
Tiflis	28.37	720.7	29.69	754.2	90.0	32.2	39	S	9	4			4						Physical Observatory.
Astrakhan			29.86	758.5	75.7	24.3	30	WNW	21	5			0						Sebastianof.
Kasan			29.52	749.7	57.2	14.0	62	N	11	5			10						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.36	720.4	29.28	743.6	56.1	13.4	70	SW	9	4			8						Meteorological Obs.
Nukuss			29.71	754.6	90.9	32.7	43	NNE	13	6			0						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul			29.63	752.6	74.7	23.7	48	SE	2	1			1						Meteorological Obs.
Yeniseisk			29.70	754.4	70.9	21.6	56	NW	2	1			0						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.98	761.4	82.0	27.8	80	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.95	760.6	66.0	18.9	99	SE	7	3			10						
Nikolaievsk, on the Amoor																			

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk 592.0? m., or 1,942.2? ft.; 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 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			29.94	760.5	84.6	29.2	32	SW	14.2	6.33		2	1	NW		0	0	Light clouds	Royal Observatory
San Fernando			30.12	765.0	78.6	25.9	60	W	14.8	6.6		0	0						The Naval Observatory

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

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and 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.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	758.7	71.6	22.0		NW			6		5			0	0		
Umea			30.11	764.8	75.6	24.2		NNW			2		0			0	0		
Hernosand			30.04	763.1	77.0	25.0	36	N			4		0			0	0		
Stockholm			30.05	763.3	79.9	26.6	35	NNW			2		0			0	0		
Wisby			30.13	765.2	65.5	18.6	75	NE			4		0			0	0		
Sub-Series.																			
Upsala			30.07	763.7	78.4	25.8	33	NNW	10.5	4.7			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; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall is measured at 8 a. m., local time.

SWISS SERIES.

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

Stations	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. 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	28.59	726.1	29.96	761.0	72.7	22.6	66	NNW	.....	.....	2	.....	3	.....	.....	0.689	17.5	Clouds	The Observatory.
Zurich	28.43	722.0	30.00	762.1	71.8	22.1	67	NW	.....	.....	1	.....	8	.....	.....	0.016	0.4	Raining	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE—For Geneva the corresponding departures from the normal values are: Barometer, —1.7 mm; Thermometer, +1.1 cent.; Relative Humidity, +10 per cent.

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

TURKISH SERIES.

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

Stations	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. 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	69.8	21.0	63	ENE	17	7.5	.....	.....	9	.....	NE	0	0	.....	
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.03	762.8	86.4	30.2	.....	S	.....	.....	2	.....	2	.....	.....	.....	.....	.....	
Valona	.....	.....	30.02	762.4	79.2	26.2	.....	NW	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	29.96	761.0	71.6	22.0	.....	N	.....	.....	2	.....	5	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.	.....	.....	29.74	755.3	91.8	33.2	56	W	.....	.....	1	.....	0	.....	.....	.....	.....	Clear	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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

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

Stations	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. 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	.....	.....	29.96	761.0	60.9	16.1	100	Calm	0	0	.....	.....	4	.....	.....	0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.71	754.6	68	20.0	.....	NW	1	0.4	.....	.....	10s	.....	NW	0.25	6.3	Cloudy	W. R. Bigg.
*Chatham, N. B	.....	.....	30.01	762.2	63	17.2	88	E	3	1.3	.....	8c	0	E	.....	0	0	Fair	G. A. Blair.
Charlottetown P. E. Island	.....	.....	30.00	762.0	64	17.8	70	NE	5	2.2	.....	0	0	.....	.....	0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.73	755.1	69.7	20.9	88	SE	.....	.....	2	.....	10ks	.....	.....	0.779	19.79	Thunder-storm	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.99	761.7	60.5	15.8	67	SE	.....	.....	1	.....	.....	.....	.....	0	0	Cloudy	H. A. Johnson
Esquimault, B. C	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Bevis.
Fredericton, N. B	.....	.....	29.99	761.7	52.2	11.2	99	E	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.08	764.0	47	8.3	88	N	6	2.7	.....	0	0	.....	.....	0.400	10.16	Clear	James Stewart.
Goderich, Ontario	.....	.....	29.75	755.6	72.2	22.3	89	Ca'm	.....	.....	0	7ck	0	W	.....	0.229	5.82	Fine	H. J. Strang, M. A.
Granton, Ontario	28.68	728.5	29.73	755.1	69	20.6	.....	N	.....	.....	1	10k	0	.....	.....	0	0	Cloudy	James Grant.
*Halifax, N. S.	.....	.....	29.95	760.7	63	17.2	83	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	F. Allison, M. A.
*Kingston, Ontario	.....	.....	29.76	755.9	72	22.2	90	S	11	4.9	.....	10ck	0	S	.....	0	0	Fair	S. Woods, M. A.
Little Glace Bay, N. S.	.....	.....	29.96	761.0	62.8	17.1	78	.....	.....	.....	.....	6k	..n	.....	.....	0	0	Fair	C. H. Rigby.
*Montreal, Quebec	.....	.....	29.78	756.4	65	18.3	97	SE	5	2.2	.....	.....	10n	.....	.....	0.51	13.0	Light rain	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.69	754.1	63	17.2	84	SE	1	0.4	.....	.....	10n	.....	SE	0.70	17.8	Threatening	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.74	755.4	66	18.9	89	N	9	4.0	.....	2k	5ks	N	N	2.93	74.4	Fair	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	29.77	756.1	68	20.0	90	N	3	1.3	.....	Haze	Haze	.....	.....	Inap.	Inap.	Hazy	H. Morgan.
Port Hastings, N. S.	.....	.....	29.99	761.7	63.0	17.2	.....	NW	3	1.3	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	29.75	755.6	68	20.0	98	W	2	0.9	.....	.....	Fog	.....	W	0.01	0.3	Foggy	M. Payne.
*Quebec, Quebec	.....	.....	29.89	759.2	63	17.2	83	N	18	8.0	.....	2c	0	.....	.....	0	0	Fair	Capt. Ashe, R. N.
St. John, N. B.	.....	.....	30.01	762.2	54	12.2	93	S	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.72	754.9	71	21.7	84	Calm	0	0	.....	5k	0	.....	.....	0.64	16.3	Fair	K. Stewart.
Stayner, Ontario	.....	.....	29.71	754.6	70	21.1	82	NW	6	2.7	.....	5k	0	NW	.....	0.07	1.8	Fair	R. J. Cole.
Stratford, Ontario	28.51	724.1	29.72	754.9	69.0	20.6	98	W	2	0.9	.....	.....	10s	.....	.....	Inap	Inap	Foggy	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.99	761.7	63	17.2	80	NE	5	2.2	.....	0	2ks	.....	NE	0.04	1.0	Fair	T. C. Hill.
*Toronto, Ontario	.....	.....	29.74	754.4	71	21.7	75	W	5	2.2	.....	2ck	Haze	W	.....	Inap.	Inap.	Fair	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.75	754.6	68.5	20.3	97	W	4	1.8	.....	.....	10s	.....	.....	0	0	Gloomy	J. Montgomery
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	30.15	765.8	59	15.0	75	E	.....	.....	.....	.....	10n	.....	.....	0	0	Cloudy	John Delaney.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.			29.84	757.9	72	22.2	67	SE	6	2.7		10k	0	SW		0	0	Cloudy	
Alpena, Mich.			29.75	755.6	64	17.8	89	NW	9	4.0			10s		NW	1.15	29.2	Cloudy	
Atlantic City, N. J.			29.82	757.4	75	23.9	81	E	13	5.8			10n		E	Inap.	Inap.	Light rain	
Augusta, Ga.			29.90	759.4	82	27.8	75	NW	4	1.8		2cs	0			0	0	Fair	
Baltimore, Md.			29.81	757.2	74	23.3	90	E	4	1.8			10n		E	0.11	2.8	Light rain	
Barnegat, N. J.			29.81	757.2	72	22.2	85	SE	16	7.2			10n			0.01	0.3	Light rain	
Bismarck, Dakota	28.29	718.6	29.90	759.4	58	14.4	87	NE	10	4.5			10s			0	0	Threatening	
Boston, Mass.			29.91	759.7	66	18.9	84	SE	6	2.7		5k	2ks	W	SE	0	0	Cloudy	
Breckenridge, Minn.			29.98	761.5	61	16.1	88	Calm	0	0		2c	0			0	0	Clear	
Buffalo, N. Y.			29.70	754.4	73.5	23.1	76	SW	5	2.2		Haze	Haze	SW		0	0	Fair	
Burlington, Vt.			29.80	756.9	69	20.6	70	S	12	5.4			10s			0	0	Cloudy	
Cairo, Ill.			29.94	760.5	78	25.6	86	SW	1	0.4		5c	0			0	0	Fair	
Cape Hatteras, N. C.			29.71	754.6	80	26.7	82	NW	11	4.9		0	5s			0.36	9.1	Fair	
Cape Henry, Va.			29.73	755.1	79	26.1	86	E	3	1.3		8k	0	NW		0.17	4.3	Fair	
Cape Lookout, N. C.			29.79	756.7	83	28.3	79	W	7	3.1		5c	0	NW		0.18	4.6	Fair	
Cape May, N. J.			29.81	757.2	76	24.4	81	E	11	4.9			10s		E	0	0	Cloudy	
Charleston, S. C.			29.87	758.7	83	28.3	79	NW	9	4.0		2c	5cs	N		0	0	Fair	
Cheyenne, Wyoming	24.10	612.1	30.04	763.0	59	15.0	76	SW	4	1.8		5c	2s			0	0	Fair	
Chicago, Ill.			29.84	757.9	70	21.1	75	N	5	2.2		0	0			0	0	Clear	
Cincinnati, Ohio			29.80	756.9	77	25.0	86	W	3	1.3		1k	0	NW		0.57	14.5	Clear	
Cleveland, Ohio			29.75	755.6	71.3	21.8	95	SW	6	2.7			10ks		SW	1.61	40.9	Cloudy	
Corsicana, Tex.			29.99	761.7	76	24.4	86	S	5	2.2		2cs	2s		S	0	0	Fair	
Davenport, Iowa			29.91	759.7	70	21.1	79	NE	4	1.8		1c	0			Inap.	Inap.	Clear	
Dubuque, Iowa			29.95	760.7	79	26.1	73	S	13	5.8		0	0			0	0	Clear	
Denver, Col.	24.85	631.2	30.07	763.8	64	17.8	67	SE	2	0.9			10s			Inap.	Inap.	Cloudy	
Detroit, Mich.			29.74	755.4	70	21.1	90	NW	5	2.2		5k	0	NW		0.21	5.3	Fair	
Dodge City, Kan.	27.31	693.7	29.48	748.8	71	21.7	80	E	9	4.0		2k	0	E		0	0	Fair	
Dubuque, Iowa			29.90	759.4	67	19.4	84	Calm	0	0		2cs	Fog	W		0	0	Fair	
Duluth, Minn.			29.83	757.7	67	19.4	74	NW	16	7.2		0	5ks		W	0	0	Fair	
Eastport, Me.			29.96	761.0	56	13.3	93	Calm	0	0			Fog			0	0	Foggy	
Erie, Pa.			29.71	754.6	75	23.9	76	S	4	1.8		4k	Sm'e			0	0	Fair	
Escanaba, Mich.			29.82	757.4	63	17.2	83	W	4	1.8		0	0			1.40	35.6	Clear	
Fort Gibson, Indian Ter.			29.88	758.9	81	27.2	70	E	5	2.2		0	0			0	0	Clear	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.70	729.0	29.76	755.9	74	23.3	67	S	4	1.8		0	0			0	0	Clear	
Fort Sully, Dakota	28.26	717.8	29.86	758.4	64	17.8	89	SE	2	0.9		8k	0			0	0	Cloudy	
Florence, Arizona																			
Galveston, Tex.			30.06	763.5	82	27.8	78	SW	4	1.8		2ck	0			0	0	Fair	
Grand Haven, Mich.			29.83	757.7	65	18.3	89	NW	10	4.5			10s		N	0.24	6.1	Cloudy	
Indianapolis, Ind.			29.84	757.9	75	23.9	85	SW	3	1.3		0	0			0.05	1.3	Clear	
Indianola, Tex.			30.04	763.0	83	28.3	79	S	12	5.4		1k	Haze			0	0	Clear	
Jacksonville, Fla.			29.96	761.0	85	29.4	72	SW	5	2.2		4c	0			0	0	Fair	
Keokuk, Iowa			29.83	757.7	74	23.3	81	NE	4	1.8		0	0			0	0	Clear	
Key West, Fla.			30.08	764.0	83.4	28.6	67	N	3	1.3		2k	Haze	N	N	0	0	Hazy	
Kittyhawk, N. C.			29.77	756.1	78	25.6	90	W	8	3.6		5k	5s	NW	NW	0.42	10.7	Cloudy	
Knoxville, Tenn.			29.90	759.4	76	24.4	86	SW	3	1.3		1c	0	SW		0	0	Clear	
La Crosse, Wis.			29.88	758.9	65	18.3	89	S	4	1.8		0	Fog			0	0	Foggy	
Leavenworth, Kan.			29.81	757.2	78	25.6	86	Calm	0	0		5k	0	SW		0	0	Fair	
Louisville, Ky.			29.85	758.2	79	26.1	86	SW	2	0.9		0	Sm'e			0.01	0.3	Clear	
Lynchburg, Va.			29.78	756.4	74	23.3	90	W	2	0.9			10s		SW	0.67	17.0	Cloudy	
Malone, N. Y.			29.72	754.9	67	19.4	90	S	5	2.2			10s		SW	0.02	0.5	Cloudy	
Marquette, Mich.			29.79	756.7	63	17.2	83	Calm	0	0		0	0			0.70	17.8	Clear	
Memphis, Tenn.			29.98	761.5	82	27.8	83	SW	4	1.8		2ck	Fog	SW		0	0	Fair	
Milwaukee, Wis.			29.89	759.2	64	17.8	83	N	4	1.8		0	0			0.12	3.0	Clear	
Mobile, Ala.			30.04	763.0	78	25.6	86	NW	5	2.2		0	0			0.35	8.9	Clear	
Montgomery, Ala.			30.02	762.5	76.5	24.7	90	NW	6	2.7			10s		NW	0	0	Cloudy	
Morgantown, W. Va.	28.78	731.0	29.76	755.9	75	23.9	90	SW	4	1.8			10s		SW	0.12	3.0	Cloudy	
Mt. Washington, N. H.	23.82	605.0	30.18	766.6	45	7.2	92	SW	30	13.4		10s	2s	SW	SW	0	0	Cloudy	
Nashville, Tenn.			29.9	759.4	82	27.8	78	W	4	1.8		5ck	0	W		0	0	Fair	
New Haven, Conn.			29.88	758.9	70.0	21.1	80	E	15	6.7		5ck	Fog	W		0	0	Fair	
New London, Conn.			29.90	759.4	69	20.6	75	E	6	2.7		5ck	0	W		0	0	Fair	
New Orleans, La.			30.05	763.3	80	26.7	82	W	6	2.7		5ck	0	W		0.07	1.8	Fair	
Newport, R. I.			29.91	759.7	68	20.0	75	E	8	3.6		5ck	0	E		0	0	Fair	
New York, N. Y.			29.86	758.4	68	20.0	84	NE	11	4.9			10ks		SW	0.02	0.5	Cloudy	
Norfolk, Va.			29.78	756.4	79	26.1	90	E	2	0.9			10ks		NE	0.23	5.8	Cloudy	
North Platte, Neb.	27.03	687.3	29.50	749.3	69	20.6	90	NE	16	7.2			10n			0.06	1.5	Light rain	
Omaha, Neb.	28.86	733.0	29.88	758.9	73	22.8	85	Calm	0	0		8ck	0	SW		0.39	9.9	Fair	
Oswego, N. Y.			29.76	755.9	71.8	22.1	85	SE	4	1.8			10s		W	0.45	11.4	Cloudy	
Pembina, Dakota			30.01	762.2	53	11.7	93	N	7	3.1		0	0			0.86	21.8	Clear	
Philadelphia, Penn.			29.83	757.7	69	20.6	95	SE	5	2.2			10n		E	0.04	1.5	Light rain	
Pike's Peak, Colorado	18.01	457.4	30.22	767.6	33	0.6	100	NW	2	0.9		8c	5ks	NW		0.50	12.7	Cloudy	
Pittsburgh, Penn.			29.74	755.4	73	22.8	81	NW	5	2.2			10s		NW	0.02	0.5	Cloudy	
Port Huron, Mich.			29.72	754.9	68	20.0	94	NW	6	2.7			10s		W	0.08	2.0	Cloudy	
Portland, Me.			29.92	760.0	67	19.4	84	Calm	0	0		5k	Sm'e	S		0	0	Fair	
Portland, Oregon			30.04	763.0	58	14.4	81	S	4	1.8			10s			0	0	Cloudy	
Punta Rassa, Fla.			30.05	763.3	80.5	26.9	82	N	4	1.8		2k	5ks	W	SW	0.02	0.5	Clearing	
Rochester, N. Y.			29.71	754.6	73	22.8	76	S	6	2.7		2k	Haze	N		0.10	2.5	Fair	
Salt Lake City, Utah	25.60	650.2	29.93	760.2	64	17.8	48	S	4	1.8		5c	0			0	0	Fair	
Sandy Hook, N. J.			29.84	757.9	72	22.2	85	SE	16	7.2			10ks		SE	Inap.	Inap.	Threatening	
San Diego, Cal.			30.03	764.0	66	18.9	90	Calm	0	0			10s			0.06	1.5	Cloudy	
San Francisco, Cal.			30.02	762.5	55	12.8	87	W	8	3.6			10s			0	0	Cloudy	
Santa Fé, N. M.	23.35	593.1	29.89	759.2	56	13.3	74	NE	6	2.7			10s			0.19	4.8	Cloudy	
Savannah, Ga.			29.91	759.7	83	28.3	70	W	4	1.8		2c	Haze			0	0	Fair	
Shreveport, La.			30.07	763.8	79	26.1	82	SW	1	0.4		1c	0			0	0	Clear	
Smithville, N. C.			29.82	757.4	83	28.3	74	Calm	0	0		8c	0	W		0	0	Cloudy	
Springfield, Mass.			29.89	759.2	70	21.1	70	S	4	1.8		8ck	0			0	0	Fair	
St. Louis, Mo.			29.88	758.9	80	26.7	78	W	4	1.8		0	0			0	0	Clear	
St. Marks, Fla.			29.99	761.7	81	27.2	82	W	9	4.0		2c	2ks	E		0	0	Fair	
St. Paul, Minn.			29.86	758.4	64	17.8	89	W	4	1.8		2c	0	W		0	0	Clear	
St. Paul's Island, Alaska			30.06	763.5	43	6.1	92	W	21	9.4			10s			0.08	2.0	Cloudy	
Thatcher's Island, Mass.			29.94	760.5	69	20.6	84	Calm	0	0		0	2k		S	0	0	Foggy	
Toledo, Ohio			29.74	755.4	73	22.8	90	W	3	1.3		0	5ks		W	0.03	0.8	Fair	
Tucson, Arizona	27.58	700.5	30.19	766.8	71	21.7		Calm				0	8ks		S	0.07	1.8	Fair	
Tybee Island, Ga.			29.89	759.2	80	26.7	82	NW	8*	3.6*		5c	Sm'e			0	0	Fair	
Vicksburg, Miss.			30.05	763.3	79.5	26.4	86	W	4	1.8		2ck	0	SW		0.10	2.5	Fair	
Virginia City, M. T.	24.29	617.0	29.77	756.1	51	12.2	43	SE	4	1.8		0	0			0	0	Clear	
Washington, D. C.			29.79	756.7	74.5	23.6	90	E	1	0.4			10s		SE	0.01	0.3	Cloudy	
Wilmington, N. C.			29.82	757.4	82	27.8	83	W	6	2.7		10cs	0	N		0.27	6.9	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.
Wood's Holl, Mass.	.....	.....	29.92	760.0	70	21.1	79	E	6	2.7	.....	5c	0	SE	.....	0	0	Fair.	
Yankton, Dakota	28.70	729.0	29.93	760.2	63	17.2	80	Calm	0	0	.....	8cs	0	W	.....	0	0	Fair.	
Yuma, Arizona	.....	.....	29.93	760.2	80	26.7	.....	NW	.....	.....	.....	8cs	0	W	.....	0	0	Fair.	
Sub Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.19	766.8	80	26.7	82	Calm	0	0	.....	5c	2s	.....	SE	0	0	.....	James Gall.
St. Georges, Bermudas	.....	.....	29.90	759.4	83.0	28.3	77	W	11	4.9	.....	2c	2fk	W	.....	0	0	Fair.	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Paramaribo, D. Guiana, S. A.	.....	.....	30.06	763.5	78	25.6	91	SE	.....	.....	2	5ck	6ks	E	.....	0.868	22.04	Cloudy.	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.11	764.9	.....	.....	83.3	28.5	.....	E	.....	.....	.....	.....	.....	.....	.....	0.542	13.75	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.21	640.3	.....	.....	66.0	18.9	87	S	1	0.4	.....	8cs	2s	.....	.....	0	0	Cloudy.	Thomas Herran.
York Factory, B. A.	.....	.....	29.69	754.1	42	5.6	100	W	18	8.0	.....	3k	6s	NW	.....	0.90	22.9	.....	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.06	763.5	77	25.0	.....	NE	.....	.....	2	.....	.....	.....	.....	0	0	Clear.	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Adelie Fuller † N 34° 56′, W. 74° 54′.	WSW	3	29.76	755.9	82	27.8	.....	NW	.....	.....	3	2ck	2s	W	NW	Rough	.....	Fair.	Capt. James Jorgensen.
Steamer Hibernian. N. 41° 39′, W. 62° 16′.	-73½W	10½	29.98	761.5	61	16.1	.....	NW	.....	.....	3	.....	0c	.....	.....	Smooth	.....	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.; Denver, 5,135 ft., or 1,565. m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 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, 4,262.2 ft., or 1,299.2 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. * Estimated velocity. † Rain-fall in 24 hours 0.73 in., or 18.5 mm.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

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

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

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

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

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			29.97	761.3	86.9	30.5	40	Calm			0		0			0	0	Clear	Charnot.
Algiers			29.96	761.0	84.2	29.0	71	NNE			2		0			0	0	Clear	Peter.
La Calle			29.98	761.5	80.8	27.1	79	NE			3		8			0	0	Cloudy	Kunts.
Tunis			30.04	763.1	92.1	33.4	43	E			3		0			0	0	Clear	Jacques.
Sfax			30.15	765.9	87.8	31.0	58	SE			4		1			0	0	Clear	Chauvey.
Salda			29.99	761.7	89.6	32.0	19	N			1		2			0	0	Clear	Millot.
Tebessa			30.06	763.5	91.4	33.0		NW			2		2			0	0	Clear	Colin.
Geriville			30.03	762.8	89.1	31.7	27	SSW			1		3			Inap.	Inap.	Fair	Lemailiot.
Laghouat			30.07	763.6	89.6	32.0	33	E			1		6			0	0	Fair	Guyot.
Biskra			30.05	763.3	94.1	34.5		NE			3		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			30.08	764.0	76.8	24.9	40	NE			1		1			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.08	764.1	75.6	24.2	49	W			1		0			0	0		Dr. Wierzbiski.
Eperies			30.03	762.8	75.2	24.0	49	Calm			0		5es			0	0		Julius Mikolik.
Gratz	28.86	733.0	30.02	762.6	72.3	22.4	52	SSW			3		0			0	0		Andreas Rospini.
Hermannstadt	28.66	727.9	30.04	763.1	70.3	21.3	40	NNE			2		1			0	0		Prof. Reissenberger.
Kremsmünster	28.65	727.8	29.93	760.3	75.6	24.2	49	E			2		2			0	0		Prof. C. Wagner.
Lemberg			29.98	761.4	72.9	22.7	78	SE			2		6			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habasuda Daniel.
Pola			30.06	763.5	79.9	26.6	45	SW			1		2ck			0	0		I.R.Hydrographic Office.
Szegedin													2			0	0		Karl Stancel.
Trieste			30.07	763.7	79.5	26.4	48	Calm			0		1			0	0	Clear	Prof. V. Farolfi.
Vienna			29.99	761.8	81.3	27.4	27	S			1		0			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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	759.3	75.9	24.4	49	SW			5		4k		SSW	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			30.04	763.0	59.0	15.0		ENE	13	5.8			0			0	0	Foggy	William Boswell.
Ardrossan																			William McNeil.
Armagh, Observatory			29.92	760.0	69.8	21.0		NNE	6	2.7									S. Cail, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.87	758.7	73.9	23.3		NNW			1		1					*D. clouds	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			30.05	763.3	83.2	28.4		SE			0		7					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			29.74	755.4	71.2	21.8		E			3		7					Showery	H. Todd.
Cardington			29.75	755.6	67.0	19.4		E			1		9					Showery	John McLaren.
Carlisle																			T. Bell, for J. Carmell.
Chatham, School M. E			29.77	756.1	66.0	18.9		NE			1		8					Raining	Capt. J. Fellowes, R.E.
Dartmoor	28.37	720.6	29.83	757.7	61.0	16.1		E			3		9					Showery	R. E. Power.
Donaghadee			29.91	759.7	64	17.8		NNW			4		0					Blue sky	J. Mac Gowan.
Dover			29.82	757.4	65	18.3		SSE			3		6					Showery	J. Costello.
Eccles (near Manchester.)			29.77	756.1	77.8	25.4		NE	5.2	2.3			3					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			29.74	755.4	64.5	18.1		WNW			1		10					Foggy	The Staff.
Fort Napier, (Natal)	27.66	702.6	29.99	759.4	76.4	24.7		E			1		1					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.07	763.8	81	27.2		N			0		5					*D. clouds	
Galway, Queen's College			29.86	758.4	71	21.7		SE			1		0					Blue sky	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.87	758.7	86.3	30.2		W			6		4					*D. clouds	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.96	761.0	70.2	21.2		NE			1							Fine	Lewis Stuart.
Great Yarmouth			29.85	758.2	67	19.4		SE			5		4					*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y			29.76	755.9	65.3	18.5		S			1		10			Blank	Blank	Overcast	The Staff, for G. B. Airy.
Guernsey																			Dr. S. E. Hoskins.
Helston			29.76	755.9	66	18.9		NW			8		10n			Blank	Blank	Overcast	M. P. Moyle.
Holyhead			29.81	757.2	65	18.3		NE			5		0					Blue sky	John Tilston.
Kew, Observatory			29.75	755.6	68.2	20.1		SW	15	6.7			10					Raining	The Staff.
Kingstown			29.96	761.0	62	16.7		NNE			4		0					Blue sky	George Mitchell.
Leicester Museum			29.76	755.9	72.0	22.2		E			2		8					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.99	761.7	85.6	29.8		NE			1		4k					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			30.02	762.5	62	16.7		NE			1							Foggy	W. D. Penny.
Nassau, (Bahamas			30.01	763.0	85.4	29.7		W			4		7					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.78	756.4	75.8	24.3		ENE			6		7c.k.ks	ESE	ENE	0.092	2.34	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.75	755.6	69.2	20.7		NE			3		9			Blank	Blank	*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.71	754.6	68	20.0		E			2		10			Blank	Blank	Gloomy	J. Lucas.
Plymouth			29.72	754.9	66.2	19.0		SSE			1		10			Blank	Blank	Overcast	John Merrifield.
Roche's Point			29.82	757.4	71	21.7		NE			3		2					Fine	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, Jersey			29.78	756.4	68.0	20.0		WSW			4		8					¾ clouded	A. P. Amy.
Sandwick Manse Orkneys			30.00	763.5	66.5	19.2		SSE	12	5.4			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery Turkey			30.01	762.2	71.8	22.1		ENE			2		8					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.79	756.7	77.6	25.3		ENE			3		5			0	0	*D. clouds	W. F. Cooper.
Silloth Rectory			29.88	758.9	77.3	25.2	56	E			3		0			0	0	Blue sky	Rev. Francis Redford.
Stonyhurst, Observatory			29.79	756.7	74.4	23.6		E			3		1			Blank	Blank	Blue sky	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			29.96	761.0	67	19.4		NE			1		0					Blue sky	John Smith.
Strathfield Turgiss			29.73	755.1	66.2	19.0		E			1		9					Threatening	Rev. Charles H. Griffith.
Thurso			30.01	762.2	71	21.7		SSE			1		0					Blue sky	John Trotter.
Truro, Royal Institution			29.75	755.6	67	19.4		NW			4		6					*D. clouds	W. Newcombe.
Valencia, Observatory			29.86	758.4	69.7	20.9		ENE	17	7.6			3					Hazy	The Staff.
SUB-SERIES.																			
Calf of Man, Isle of Man					67	19.4		NE			3		0						Thomas Dawson.
Cape Good Hope, Obs'y			30.21	767.3	60.2	15.7	77	WNW	9	4.0									The Staff, for E. J. Stone.
Hobart Town, (Tasmania			30.10	764.5	57.0	13.9	87	Calm			0		10kn					Covered	Francis Abbott, F.R.A.S.
Leith, Restaurig Park			30.09	762.0	59.2	15.1		E			2	10s				0	0	Foggy	Andrew Gibb.
Mauritius, Observatory			30.19	766.8				E	19.5	8.7						0.075	1.91		C. Meldrum
Melbourne, Observatory			30.29	769.4	46.0	7.8	89	E	8	3.6			2			0	0	Fine, h'y dew	R. L. J. Ellery.
Monach Lighthouse, Hebrides			29.98	761.5	65	18.3		NE			3	0	0			0	0		J. Youngclause.
North Unst, (Shetland Is.)			30.08	764.0	65	18.3		E			1	0	0						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Carlington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,260 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			30.05	763.2	72.3	22.4	61	Calm			0		0					
Fanoe			30.02	762.4	79.7	26.5	39	SE			4		1					
Godthaab, Greenland			30.02	762.4	43.5	6.4	86	S			6		1					
Stykkisholm, (Iceland)			29.86	758.5	54.1	12.3	77	SW			2		0					
Thorshavn, (Faröe			30.06	763.4	61.2	16.2	71	Calm			0		2					
Vestervig			30.05	763.2	77.4	25.2	56	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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	760.7	71.6	22	74	SW			2		10k		SSE	0.83	21.	Covered	Normal School.
Amiens																			Normal School.
Avignon			29.98	761.4	84.6	29.2	60	S			3		5		S	0.213	5.4	Cloudy	Normal School.
Bar-sur-Seine			29.91	759.8	73.9	23.3	52	SSW			2		5		SW	0.618	15.7	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.85	758.1	70.2	21.2	73	S	11.2	5.0			10		SW	0.008	0.2	Raining	Beaumette Observatory.
Beauvais			29.89	759.1	73.4	23.0	66	SW			3					0.541	13.75		Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.06	763.4	80.6	27	49	SW			2		10cn		NE	0.138	3.5	Covered	Normal School.
Bourges			29.92	760.0	74.8	23.8	69	E			2		8		E	0.47	12.	Very cloudy	Normal School.
Brest			29.74	755.5	75.0	23.9	78	SW			3		6		SW	0.404	10.25	Stormy	Naval Observatory.
Carcassonne			29.95	760.6	79.0	26.1	78	E			3		8		W	0	0	Very cloudy	Normal School
Caen																			Normal School.
Chartres			29.95	760.8	70.2	21.2	80	SW			1		10		N	0	0	Covered	Normal School.
Châlons-sur-Marne			29.98	761.6	73.8	23.2	55	E			2		5k		W	0.472	12.0	Cloudy	Normal School.
Clermont			29.93	760.1	70.9	21.6	77	NW			1		10		WSW	1.236	31.4	Covered	Puy de Dome Obs'y.
Commercy			29.99	761.7	70.2	21.2	44	W			2		2c8		W	0.28	7.	Slightly cl'dy	Normal School
Commune de Greasque*			30.10	764.4	84.4	29.1	48	SE			4		2		SE	0.017	1.2		M. Kina.
Grenoble			29.89	759.1	73.6	23.1	72	E			6		5		W	0.256	6.5	Cloudy	Normal School.
La Roche-sur-Yon					70.5	21.4	84	SSE			2		5		NNW	0.465	11.8	Cloudy	Normal School.
Le Mans			29.86	758.5	74.5	23.6	61	SW			2		5		SW	0.846	21.5	Cloudy	Normal School.
Lons-Le-Saulnier			29.98	761.4	76.3	24.6	46	SW			1		2			0.130	3.3	Slightly cl'dy	Normal School.
Mâcon			30.09	764.2	82.2	27.9	72	SSE			2		5		S	0	0	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			29.99	761.7	75.7	24.3	64	SSW			1		2		SW	0.016	0.4	Slightly cl'dy	Normal School.
Nîmes			30.01	762.3	84.2	29	70	S			2		2		SE	0	0	Slightly cl'dy	Normal School.
Orleans																			Normal School.
Paris, Observatory			29.90	759.5	72.3	22.4	66	S			3		9kn		SSW	0.262	6.66	Almost cov'd	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			29.91	759.6	75.2	24.0	60	SW			4		10		NE	0.118	3.0	Covered	Naval Observatory.
Rouen			29.84	758.0	75.9	24.4	53	S			2		5		SW	0.610	15.5	Cloudy	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School.
Villefranche			29.90	759.5	86.0	30	67	SSE			4		0			0	0	Clear	Normal School.
Sub-Series.																			
Port de France, Martinique			29.91	759.7	82.4	28													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.19	766.7	68.0	20.0	67	W	14.9	6.66			5		N	0	0		—. Faïguère.
Montsouris, Paris			29.99	759.4	73.6	23.1	64	SSW			2		9k		SW	0.370	9.4		Montsouris Observ'tory.
Perpignan			29.95	760.7	90.1	32.3	28	SE	13.0	5.83			5		SW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.36	542.6			48.6	9.2		SW			3		9					Stormy	M. Baylac.
Pic du Midi, (Plantade) H.P.	22.61	574.3			52.7	11.5		SW			4–6		8			0.067	1.7	Stormy	General de Nansouty.
Saint Maur, (near Paris)			29.91	759.8	72.7	22.6	65	S			2		10			0.122	3.1	Very cloudy	E. Renou.
Toulouse			30.01	762.2	80.1	26.7	52	NE			2		3				0		Toulouse Observatory
Tours			29.91	759.6	69.1	20.6	75	SSW			2		10		WSW	0.366	9.3		C. Marquet.
Versailles, (near Paris)			29.91	759.7	74.8	23.8	60	SW			4		9			0.255	6.48	Almost cov'd	Dr. A. Bérigny.
Zi-Ka-Wei (near Shanghai)																			H. Le Lee, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.99	761.7	79.3	26.3	43	E			3		9	S		0	0		Prof. T. Hoh.
Berlin			30.02	762.6	80.6	27.0	29	SE			1		3			0	0		Prof. Arndt.
Breslau			30.13	765.4	78.4	25.8	32	ESE			6		0			0	0		Dr. P. Neugebauer.
Carlsruhe			29.98	761.4	75.2	24.0	72	SW			1		9			0.157	4.0		A. Senz.
Cassel			29.98	761.6	81.5	27.5	38	SSE			2		1	SSW		0	0		Dr. H. Möhl.
Emden			29.88	758.9	73.6	23.1	49	S			1		10			0.008	0.2		Prof. Prestel.
Frankfort on the Main			29.99	761.8	77.9	25.5	53	W			1		6			Inap.	Inap.		Physical Society.
Friedrichshafen			29.96	761.0	77.0	25.0	66	W			1		6			0.130	3.3	Raining	M. Wilhelm.
Hamburg			30.03	762.8	78.8	26.0	39	ESE			4		3c			0	0	Clear	Captain F. Hogemann.
Kiel			30.01	762.3	76.1	24.5	47	ENE			5		5			0	0		Prof. G. Karsten.
Königsberg, (Prussia.)			30.02	762.6	74.8	23.8	41	W			2		0			0.004	0.1		Prof. E. Luther.
Koslin			30.08	764.0	74.1	23.4		NW			2		0			0	0		H. Müller.
Leipsic			30.00	761.9	84.6	29.2	20	SE			3		6			0	0		Prof. Bruhns.
Memel			30.04	762.9	66.2	19.0	82	WNW			2		1cs,k			0	0	Smoke-haze.	Reinbrecht & Skalweit.
Munster			30.00	762.1	77.9	25.5	60	SE			1		10			0	0		Prof. E. Heis.
Neufahrwasser			30.08	763.9	73.4	23.0	61	ESE			1		0			0	0		A. Lothes.
Posen			30.16	766.1	80.4	26.9	34	NW			1		0			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.00	762.1	77.5	25.3	64	SE			3		8			Inap.	Inap.		Dr. Schur.
Stuttgart			29.97	761.2	76.1	24.5	55	W			1		8			Inap.	Inap.		Prof. Schoder.
Thorn			30.04	763.1	84.4	29.1	28	NW			3		3			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.95	760.7	78.6	25.9	40	SW			6		2			0	0		Prof. Flesch.
Wustrow, Naval School			30.12	765.0	77.2	25.1	45	ENE			2		8			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	78.8	26.0		NE										Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.02	762.6	81.3	27.4	31	SW	1.3	0.6			3			0	0		
Padua			30.03	762.8	79.3	26.3	50	SW	2.5	1.1			3	SW		0	0		
Vicenza			30.04	763.1	81.5	27.5	46	SSE	2.5	1.1			4	W		0	0		
Verona			30.00	761.9	86.0	30.0	55	E			1		4			0	0		
Bergamo																			
Domodossola	29.09	738.9	30.08	763.9	68.9	20.5	80	Calm			0		10			0	0		
Milan			30.04	763.0	81.0	27.2	78	E			2		7	W		0	0		
Pavia			30.05	763.2	76.6	24.8	62	NE			1		9	NE		0	0		
Moncalieri			30.07	763.7	69.4	20.8	79	NW	2.5	1.1			10	E		0.657	16.7	Showery	
Mondovi	28.21	716.5	30.05	763.2	66.0	18.9	88	NNW			4		10			0	0		
Porto Maurizio			30.09	764.2	83.5	28.6	60	E			2		3			0	0		
Genoa			30.04	763.0	79.2	26.2	62	SE	8.7	3.9			4	W		0	0		
Piacenza																			
Parma			30.05	763.2	84.9	29.4	46	E			4		3			0	0		
Bologna			30.08	763.9	84.2	29.0	44	SE			1		4	N		0	0		
Florence			30.06	763.5	86.9	30.5	38	W			4		8			0	0		
Leghorn			30.03	762.7	83.7	28.7	60	S	9.8	4.4			2			0	0		
Siena	28.86	733.0	30.01	762.3	84.4	29.1	41	SW	0	0			6	N		0	0		
Urbino	28.57	725.7	30.07	763.7	81.0	27.2	53	E			2		2			0	0		
Ancona			30.06	763.5	81.3	27.4	57	SE			4		2			0	0		
Grosseto			30.07	763.8	85.3	29.6	55	SSE			2		3	S		0	0		
Rome			30.06	763.5	84.9	29.4	35	SSW	6.3	2.8			2			0	0		
Naples, O. U.			30.08	763.9	86.2	30.1	57	WSW			4		1			0	0		
Lecce			30.05	763.3	80.2	26.8	32	N	15.0	6.7			1			0	0		
Cosenza			30.07	763.6	88.2	31.2	71	NW	7.4	3.3			4			0	0		
Riposto, (Sicily)			29.97	761.1	82.4	28.0	65	ENE			2		0			0	0		
Palermo			30.00	762.1	81.0	27.2	65	NE	4.3	1.9			1			0	0		
Caltanissetta	28.12	714.1	29.98	761.6	78.8	26.0	49	SE			4		4	SW		0	0		
Sub-Series.																			
Naples, S. R.			30.09	764.2	84.7	29.3	55	SW	9.8	4.4			3	WSW		0	0		Prof. F. Brioschi.
Pesaro			30.11	764.8	78.6	25.9	62	E	22.8	10.18			5c	NW		Blank	Blank		L. Guidi.

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			29.92	759.9	75.6	24.2		S			5								
Groningen			29.90	759.5	72.9	22.7		SE			2								
Helder			29.92	759.9	71.6	22.0		E			1								
Utrecht			29.89	759.3	78.3	25.7	41	SSW			3		2					Light cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter and omit the rain-fall; for Utrecht, they give the the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.04	763.1	72.0	22.2	71	NNW	4.3	1.9			0			0	0		
Bróno			30.12	765.0	66.2	19.0	54	N	2	1			0			0	0		
Christiania			30.05	763.2	82.0	27.8	32	SSW	2.2	1.0			1			0	0		
Tromsö			30.00	762.0	50.9	10.5		Calm	0	0			10			0	0	Foggy	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Angra, (Azores,)			30.26	768.5	76.8	24.9	82	SW	5.7	2.56			2			0	0		Dr. J. A. N. Sampaio.
Campo Major			30.00	762.1	78.1	25.6	50	WNW	11.9	5.3			8	SW		0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.19	766.7	77.2	25.1	68	SW	8.1	3.6			3			0	0		Capt. D. A. da Cunha.
Lisbon			30.06	763.5	77.4	25.2	53	NNW	11.2	5.0			6	WSW		0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level, excepting Lisbon. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia at St. Petersburg.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.01	762.3	77.9	25.5	40	WNW	11	5			1						Astronomical Obs.
Wilna			29.92	760.0	73.2	22.9	56	Calm	0	0			3						Astronomical Obs.
Dorpat			29.84	758.0	72.0	22.2	49	NNW	4	2			10						Physical Cabinet.
St. Petersburg			29.76	755.9	62.1	16.7	68	NE	13	6			8						Central Physical Obs.
Kuopio			29.88	759.0	57.9	14.4	55	NNE	27	12			0						Ch. Forsten.
Kieff			29.95	760.6	66.0	18.9	50	W	7	3			5						Physical Cabinet.
Nikolaiev			30.05	763.2	72.0	22.2	33	NW	9	4			4						Kurdakof.
Kertch			30.02	762.5	66.9	19.4	74	NW	9	4			2						Lagorio.
Moscow			29.60	751.8	65.1	18.4	69	S	9	4			8						Meteorological Obs.
Lugan			29.82	757.5	66.0	18.9	41	SW	9	4			8			Blank	Blank		Meteorological Obs.
Archangel			29.55	750.6	47.3	8.5	73	NW	40	18			10						Ogorodnikof.
Tiflis	28.45	722.5	29.80	756.8	74.5	23.6	56	N	7	3			10						Physical Observatory.
Astrakhan			29.92	759.9	68.9	20.5	43	SE	7	3			10						Sebastianof.
Kasan			29.56	750.9	52.5	11.4	83	W	9	4			10					Light rain	Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.53	724.7	29.46	748.2	52.9	11.6	59	WSW	9	4			10						Meteorological Obs.
Nukuss			29.71	754.5	92.5	33.6	54	N?	4	2			0						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul			29.54	750.4	65.5	18.6	62	SW	4	2			9						Meteorological Obs.
Yeniseisk			29.41	747.1	73.2	22.9	64	E	7	3			1						Marks.
Irkutsk																			Usoizef.
Oorga																			Mossin.
Peking, (China)			29.98	761.4	76.3	24.6	98	Calm	0	0			8			Blank	Blank		Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.91	759.7	73.2	22.9	89	Calm	0	0			1						
Nikolaievsk, on the Amoor																			

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	758.6	86.2	30.1	34	SW	10.4	4.66		2	2	SW		0	0	Light clouds	Royal Observatory.
San Fernando			30.01	762.3	80.2	26.8	69	W	6.5	2.9		2	4	W	W				The Naval Observatory.

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Haparanda			30.04	763.0	58.3	14.6	46	N			4		0			0	0		
Umea			30.06	763.4	63.7	17.6	61	SE			2		1			0	0		
Hernosand			30.06	763.4	73.0	22.8	47	ESE			4		2			0	0		
Stockholm			29.99	761.8	77.0	25.0	32	NNW			4		0			0	0		
Wisby			30.05	763.3	66.9	19.4	74	NE			4		0			0	0		
Sub-Series.																			
Upsala			30.03	762.8	73.5	23.2	36	N	11.0	4.9			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; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower From —	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	28.61	726.8	29.98	761.6	74.5	23.6	61	NE			1		5			1.429	36.3	Clouds	The Observatory.
Zurich	28.43	722.2	30.00	762.0	75.9	24.4	63	W			2		8			0.075	1.9	Raining	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, —1.0 mm; Thermometer, +2.2 cent.; Relative Humidity, +5 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower From —	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	763.6	71.1	21.7	49	ENE	16	7.0			7		NE	0	0		
Fao, (Persian Gulf)			29.74	755.4	100.4	38.0		NW			4		0						
Salonica			30.10	764.5	87.4	30.8		SE			1		0						
Valona			30.09	764.3	80.1	26.7		W			1		0						
Varna			29.98	761.5	77.0	25.0		N			1		8						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.76	756.0	88.5	31.4	47	SW			3		18		SW				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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower From —	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			30.01	762.2	56	13.3		N	5	2.2			10s		N	0.03	0.8	Cloudy	W. R. Bigg.
*Chatham, N. B.			29.78	756.4	57	13.9	90	S	6	2.7			10ks		S	0.02	0.5	Light rain	G. A. Blair.
Charlottetown P. E. Island			29.85	758.2	64	17.8	81	S	13	5.8			10s			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.90	759.4	59.7	15.4	58	NE			5	0	0			1.195	30.36	Stormy	James Smith, M. A.
Dalhousie, N. B.			29.54	750.3												0.38	9.7	Clear	H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			29.76	755.9	55.2	12.9	96	S	4	1.8			10n			0.597	15.17	Raining	Prof. Harrison.
*Fort Garry, Manitoba			30.19	766.8	42	5.6	91	S	7	3.1		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.17	766.3	61.3	16.3	55	N			3	1k	0	N		0	0		H. J. Strang, M. A.
Granton, Ontario	29.01	736.8	30.11	764.8	51	10.6		N			2	0	0			0	0	Clear	James Grant.
*Halifax, N. S.			29.82	757.4	65	18.3	89	SE	8	3.6		0	2ks		SE	0	0	Fair	F. Allison, M. A.
*Kingston, Ontario			30.01	762.2	59	15.0	72	N	18	8.0		2k	0	NW		0.02	0.5	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			29.88	758.9	66.5	19.2	63	S	12	5.4		7k	0	S		0	0	Fair	C. H. Rigby.
*Montreal, Quebec			29.87	758.7	58	14.4	68	NW	16	7.2		8k	0	N		0.46	11.7	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.96	761.0	59	15.0	71	NW	22	9.8		5k	0	NW		Inap.	Inap.	Fair	J. B. Haney.
*Parry Sound, Ontario			30.17	766.3	54	12.2	74	N	9	4.0		0	0			0	0	Clear	Rev. R. Mosley.
Port Dover, Ontario			30.05	763.3	60	15.6	65	N	16	7.2		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.			29.87	758.7	59.2	15.1		SE	12	5.4						0.80	20.3	Fine	Peter Grant.
Port Stanley, Ontario			30.08	764.0	60	15.6	75	N	10	4.5		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			29.74	755.4	60	15.6	82	W	13	5.8		8k	2n	W	W	0.83	21.1	Cloudy	Capt. Ashe, R. N.
St. John, N. B.			29.81	757.2	58	14.4	94	SE	3	1.3			10n			0.850	21.59	Raining	G. Murdoch, C. E.
*Saugeen, Ontario			30.13	765.3	57	13.9	60	E	3	1.3		2k	0	N		0	0	Clear	K. Stewart.
Stayner, Ontario																			R. J. Cole.
Stratford, Ontario	24.84	732.5	30.10	764.5	56.1	13.4		NW	10	4.5		0	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.93	760.2	66	18.9	81	SE	1	0.4		2ck	2ks		SE	0	0	Fair	T. C. Hill.
*Toronto, Ontario			30.07	763.8	60	15.6	56	NW	17	7.6		2ck	0	NW		0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.10	764.5	58.4	14.7	69	N	10	4.5		2k	0	N		0	0	Fine	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			30.18	766.6	62	16.7	82	S					10n			0	0	Cloudy	John Delaney.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.			29.76	755.9	73	22.8	81	NW	8	3.6		2k	0	W		0.10	2.5	Clear	
Alpena, Mich.			30.18	766.6	58	14.4	42	N	10	4.5		1k	0	N		0	0	Clear	
Atlantic City, N. J.			29.82	757.4	73	22.8	95	NW	4	1.8			10s		NW	0.03	0.8	Cloudy	
Augusta, Ga.			29.91	759.7	81	27.2	75	NW	2	0.9		2cs	0	NW		0	0	Fair	
Baltimore, Md.			29.88	758.9	74	23.3	81	NW	6	2.7		2cs	Haze			0.21	5.3	Fair	
Barnegat, N. J.			29.81	757.2	73	22.8	90	S	3	1.3			10s		NW	0.03	0.8	Cloudy	
Bismarck, Dakota	28.25	717.5	29.88	758.9	52	11.1	78	Calm	0	0		0	0			Inap.	Inap.	Clear	
Boston, Mass.			29.77	756.1	63	17.2	100	W	3	1.3		10s	Fog	W		0.18	4.6	Cloudy	
Breckenridge, Minn.			30.12	765.0	53	11.7	86	E	8	3.6		0	5ks			0	0	Fair	
Buffalo, N. Y.			29.99	761.7	63	17.2	67	N	14	6.3		0	8ks		N	0	0	Fair	
Burlington, Vt.			29.81	757.2	63	17.2	78	N	11	4.9		2k	5s	N		0.47	11.9	Cloudy	
Cairo, Ill.			29.99	761.7	75	23.9	90	N	5	2.2			10s			0.01	0.3	Cloudy	
Cape Hatteras, N. C.			29.78	756.4	78	25.6	86	N	5	2.2		0	5s			0.01	0.3	Fair	
Cape Henry, Va.			29.79	756.7	83	28.3	75	NW	8	3.6		0	0			0.04	1.0	Fair	
Cape Lookout, N. C.			29.84	757.9	84	28.9	79	W	6	2.7		8ck	0	NW		0	0	Fair	
Cape May, N. J.			29.82	757.4	76	24.4	86	NW	19	8.5		8k	0	NW		0.58	14.7	Fair	
Charleston, S. C.			29.89	759.2	84	28.9	75	N	6	2.7		1ck	0			0	0	Clear	
Cheyenne, Wyoming	24.04	610.6	29.98	761.5	56	13.3	81	SE	12	5.4			Fog			0	0	Foggy	
Chicago, Ill.			30.30	769.6	67	19.4	74	N	6	2.7		5c	0			0	0	Fair	
Cincinnati, Ohio			29.95	760.7	72	22.2	74	NE	4	1.8		0	0			0	0	Clear	
Cleveland, Ohio			30.02	762.5	67.3	19.6	69	N	12	5.4			10k		NE	0	0	Cloudy	
Corsicana, Tex.			29.97	761.2	76	24.4	90	SE	3	1.3		0	0			0	0	Clear	
Davenport, Iowa			30.15	765.8	67	19.4	74	E	12	5.4		5cs	0	W		0	0	Fair	
Denison, Tex.			29.95	760.7	81	27.2	78	SW	6	2.7		0	0			0	0	Clear	
Denver, Col.	24.78	629.4	30.00	762.0	62	16.7	83	Calm	0	0			10s			0	0	Cloudy	
Detroit, Mich.			30.09	764.3	63	17.2	67	N	12	5.4		1k	0	N		0	0	Clear	
Dodge City, Kan.	27.39	695.7	29.60	751.8	65	18.3	100	E	9	4.0			10n			0.03	0.8	Light rain	
Dubuque, Iowa			30.16	766.1	63	17.2	78	NE	8	3.6		2cs	0			0	0	Fair	
Duluth, Minn.			30.22	767.6	57	13.9	57	N	4	1.8		0	0			0.02	0.5	Clear	
Eastport, Me.			29.75	755.6	59	15.0	93	S	8	3.6			10n			0.47	11.9	Heavy rain	
Erie, Pa.			30.02	762.5	66	18.9	68	N	16	7.2		4k	0	N		0	0	Fair	
Escanaba, Mich.			30.25	768.3	54	12.2	73	N	4	1.8		0	0			0.27	6.9	Clear	
Fort Gibson, Indian Ter.			29.94	760.5	77	25.0	77	NE	14	6.3		2k	0	NE		0	0	Clear	
Fort St. Michael, Alaska																			
Fort Sill, Indian T.	28.73	729.7	29.78	756.4	78	25.6	72	S	8	3.6		5k	2s	S	S	0	0	Cloudy	
Fort Sully, Dakota	28.32	719.3	29.93	760.2	62	16.7	88	SE	10	4.5		2k	0	SE		0	0	Clear	
Florence, Arizona																			
Galveston, Tex.			30.04	763.0	83	28.3	74	SW	6	2.7		5k	0	SW		0	0	Fair	
Grand Haven, Mich.			30.17	766.3	60	15.6	70	NE	8	3.6		4c	0	W		0	0	Fair	
Indianapolis, Ind.			30.03	762.7	67	19.4	79	NE	6	2.7		2cs	0			0	0	Clear	
Indianola, Tex.			30.02	762.5	83	28.3	78	S	11	4.9		1k	0			0	0	Clear	
Jacksonville, Fla.			29.91	759.7	86	30.0	72	SW	5	2.2		4k	0	W		0	0	Fair	
Keokuk, Iowa			30.02	762.5	71	21.7	80	E	6	2.7		8c	0	N		0	0	Fair	
Key West, Fla.			30.04	763.0	81.6	27.6	70	NW	14	6.3		2cs, hz.	2k	E	NW	0	0	Fair	
Kittyhawk, N. C.			29.86	758.4	80	26.7	82	N	12	5.4		2c	2k	N	N	0.32	8.1	Fair	
Knoxville, Tenn.			29.95	760.7	74	23.3	95	N	1	0.4			Fog			Inap.	Inap.	Dense fog	
La Crosse, Wis.			30.19	766.8	60	15.6	76	NE	6	2.7		0	0			0	0	Clear	
Leavenworth, Kan.			29.93	760.2	71	21.7	85	NE	6	2.7			10s			0.16	4.1	Cloudy	
Louisville, Ky.			29.98	761.5	73	22.8	72	N	8	3.6		2k	0	NW		0	0	Clear	
Lynchburg, Va.			29.87	758.7	81	27.2	62	SW	1	0.4		8c	0	W		0	0	Fair	
Malone, N. Y.			29.86	758.4	58	14.4	64	N	15	6.7			10ks		N	0.03	0.8	Cloudy	
Marquette, Mich.			30.26	768.6	53	11.7	68	W	4	1.8		0	0			0.21	5.3	Clear	
Memphis, Tenn.			29.96	761.0	77	25.0	95	NE	4	1.8			Fog			0	0	Foggy	
Milwaukee, Wis.			30.21	767.3	63	17.2	57	NE	11	4.9		5c	2k	NW	NE	0	0	Fair	
Mobile, Ala.			29.99	761.7	78	25.6	86	W	4	1.8		0	0			0.09	2.3	Clear	
Montgomery, Ala.			29.98	761.5	81	27.2	82	W	2	0.9		0	Haze			0.08	2.0	Clear	
Morgantown, W. Va.	28.94	735.1	29.96	761.0	68	20.0	70	N	8	3.6		0	2s		N	0	0	Fair	
Mt. Washington, N. H.	23.64	600.4	30.00	762.0	46	7.8	100	NW	44	19.7			Fog			0.55	14.0	Foggy	
Nashville, Tenn.			29.93	760.2	79	26.1	78	Calm	0	0		0	0			0	0	Clear	
New Haven, Conn.			29.79	756.7	70.0	21.1	90	Calm	0	0		5ck	Fog	W		0	0	Cloudy	
New London, Conn.			29.80	756.9	68	20.0	90	Calm	0	0			10s		W	0	0	Cloudy	
New Orleans, La.			30.02	762.5	81	27.2	78	W	6	2.7		4c	0	S		0	0	Fair	
Newport, R. I.			29.79	756.7	67	19.4	90	NW	6	2.7			10ks		NW	0	0	Threatening	
New York, N. Y.			29.82	757.4	70	21.1	70	W	6	2.7		5ck	0	W		Inap.	Inap.	Fair	
Norfolk, Va.			29.86	758.4	79	26.1	78	N	5	2.2		2c	0			0.25	6.3	Fair	
North Platte, Neb.	27.11	688.6	29.59	751.6	63	17.2	88	E	6	2.7			10ks		E	0.07	1.8	Cloudy	
Omaha, Neb.	28.96	735.6	30.00	762.0	69	20.6	84	Calm	0	0		10cs	0			0	0	Cloudy	
Oswego, N. Y.			29.91	759.5	65.5	18.6	73	N	19	8.5			10ks		N	0	0	Cloudy	
Pembina, Dakota			30.13	765.3	45	7.2	96	SE	3	1.3		5c	0	NW		0	0	Fair	
Philadelphia, Penn.			29.83	757.7	73	22.8	85	NW	8	3.6		1c	5k		NW	0.12	3.0	Fair	
Pike's Peak, Colorado	17.92	455.2	30.13	765.3	33	0.6	100	SW	24	10.7			Fog			0.57	14.5	Cloudy	
Pittsburgh, Penn.			29.95	760.7	69	20.6	70	N	5	2.2		0	0			0	0	Clear	
Port Huron, Mich.			30.11	764.8	61	16.1	61	NE	22	9.8		2c	2ks	NE	NE	0	0	Fair	
Portland, Me.			29.74	755.4	67	19.4	73	W	8	3.6		5k	0	NW		0.05	1.3	Fair	
Portland, Oregon			30.10	764.5	56	13.3	87	Calm	0	0			10s			0.02	0.5	Cloudy	
Punta Rassa, Fla.			30.00	762.0	80.0	26.7	88	W	15	6.7			10n		W	0.14	3.6	Light rain	
Rochester, N. Y.			29.95	760.7	64	17.8	73	NW	16	7.2			8ks		N	0.01	0.3	Cloudy	
Salt Lake City, Utah	25.48	647.2	29.81	757.2	70	21.1	43	SE	4	1.8			10s			0	0	Cloudy	
Sandy Hook, N. J.			29.80	756.9	72	22.2	85	W	5	2.2		8cs	0	W		0	0	Cloudy	
San Diego, Cal.			30.03	762.7	66	18.9	68	SW	4	1.8			10s		SW	0	0	Cloudy	
San Francisco, Cal.			29.98	761.5	53	11.7	86	W	20	8.9		0	0			0	0	Clear	
Santa Fé, N. M.	23.31	592.1	29.85	758.2	56	13.3	87	Calm	0	0			10s			0.87	22.1	Cloudy	
Savannah, Ga.			29.90	759.4	83	28.3	74	NW	4	1.8		2c	Haze			0	0	Fair	
Shreveport, La.			30.07	763.8	80	26.7	82	SW	3	1.3		0	0			0	0	Clear	
Smithville, N. C.			29.87	758.7	81	27.2	78	W	2	0.9		1c	0			0	0	Fair	
Springfield, Mass.			29.77	756.1	68	20.0	84	S	4	1.8		2ck	5ks		SW	0	0	Fair	
St. Louis, Mo.			30.03	762.7	73	22.8	67	NE	8	3.6		2cs	2s			1.58	40.1	Fair	
St. Marks, Fla.			29.95	760.7	81	27.2	82	NW	6	2.7		5ck	2s	NW	NW	0	0	Fair	
St. Paul, Minn.			30.14	765.5	58	14.4	81	NE	4	1.8		2cs	Haze			0	0	Fair	
St. Paul's Island, Alaska			30.22	767.6	42	5.6	91	W	12	5.4			10s			0.03	0.8	Cloudy	
Thatcher's Island, Mass.			29.75	755.6	64	17.8	94	SW	2	0.9		2c	5s	NW	NW	0.05	1.3	Clearing	
Toledo, Ohio			30.05	763.3	65	18.3	68	N	14	6.3		2ck	0	NW		0	0	Clear	
Tucson, Arizona	27.54	699.5	30.14	765.5	70	21.1		SE				2ck	5k	S	S	0	0	Fair	
Tybee Island, Ga.			29.88	758.9	83	28.3	79	N	4*	1.8*		5c	0			0	0	Fair	
Vicksburg, Miss.			30.02	762.5	79.5	26.4	90	SW	1	0.4		5c	0	S		Inap.	Inap.	Fair	
Virginia City, M. T.	24.12	612.6	29.69	751.8	60	15.6	44	SE	4	1.8		10k	0	SW		0	0	Cloudy	
Washington, D. C.			29.88	758.9	74.5	23.6	81	NW	12	5.4		2c	Haze	W		0.52	13.2	Fair	
Wilmington, N. C.			29.86	758.4	81	27.2	78	W	6	2.7		2cs	0	NE		0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

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Wood's Holl, Mass			29.80	756.9	68	20.0	90	NW	4	1.8			10s			0	0	Cloudy	
Yankton, Dakota	28.79	731.3	30.05	763.3	63	17.2	91	NE	3	1.3		5c	0	W		0	0	Fair	
Yuma, Arizona			29.90	759.4	77	25.0		NW				0	0			0	0	Clear	
Sub Series.																			
Kingston, Jamaica, W. I.			30.17	766.3	78	25.6	78	Calm	0	0		0	0			0	0		James Gall.
St. Georges, Bermudas			29.88	758.9	81.5	27.5	85	SSW	26	11.6			10n			0	0	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa W. I.																			
Paramaribo, D. Guiana S.A.			30.06	763.5	79	26.1	87	SE			2	5k	5k	SE		0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana S.A.	30.11	764.7			86.9	30.5		E								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.24	641.1			66.5	19.2	85	S	1	0.4		9cs	0			0.56	14.2	Cloudy	Thomas Herran.
York Factory, B. A.			29.91	759.7	47	8.3	96	SW	6	2.7		2k	0	S		0.10	2.5		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.			30.07	763.8	76	24.4		NE			2					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner A. J. Fuller, N. 31° 48′. W. 75° 06′.	WbyS	2	29.79	756.7	84	28.9		N			1	0	2ks		NE	Smooth		Clear	Capt. James Jorgensen.
Steamer Hibernian, At Halifax, N. S.			29.87	758.7	66	18.9		SW			6		..s		NE	Rough		Dull	Lieut. F. Archer, R. N. R.
Steamer Leipzig, N. 49° 45′, W. 6° 28′.	N84W		29.73	755.1	66.9	19.4		WNW			3		..d			Smooth		Raining	Capt. R. Hoffmann.

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.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,912 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, 4,362.2 ft., or 1,329.6 m.; Santa Fè, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,533 (?) 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. * Estimated velocity.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

Furnished by coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request, and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto-pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^d.,) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			29.99	761.7	85.5	29.7	50	NE			1		3			0	0	Fair	Charnot.
Algiers			29.95	760.7	86.7	30.4	49	N			1		8			0	0	Cloudy	Peter.
La Calle			29.97	761.2	102.9	39.4		S			3		5			0	0	Fair	Kunts.
Tunis			30.06	763.4	99.3	37.4	24	SSE			3		0			0	0	Clear	Jacques.
Sfax			30.19	766.8	88.5	31.4	52	SE			2		1			0	0	Clear	Chauvey.
Salda			30.00	761.9	91.4	33.0	21	SE			4		4			0.055	1.4	Fair	Millot.
Tebessa			30.09	764.2	92.5	33.6		SW			2		7			0	0	Cloudy	Colin.
Geriville			30.04	763.0	87.3	30.7	26	S			4		3			Inap.	Inap.	Fair	Lemaillot.
Laghouat			30.09	764.3	91.4	33.0	25	E			2		2			0	0	Clear	Guyot.
Biskra			30.10	764.5	96.3	35.7		NE			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			30.02	762.5	82.6	28.1	50	Calm			0		2			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.05	763.3	80.4	26.9	44	W			1		1			0	0		Dr. Wierzbiski.
Eperies			30.02	762.5	78.8	26.0	46	Calm			0		3cs		S	0	0		Julius Mikolik.
Gratz	28.81	731.8	29.96	760.9	79.5	26.4	52	SW			2		0			0	0		Andreas Rospini.
Hermannstadt	28.69	728.7	30.06	763.4	74.7	23.7	41	NNE			1		0			0	0		Prof. Reissenberger.
Kremsmünster	28.66	728.0	29.93	760.1	81.0	27.2	34	E			2		2			0	0		Prof. C. Wagner.
Lemberg			29.96	761.0	77.4	25.2	67	NE			2		2			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.10	764.4	80.8	27.1	52	SSW			2		2cs			0	0		I.R.Hydrographic Office.
Szegedin			30.08	764.1	79.0	26.1	37	Calm			0					0	0		Karl Stancel.
Trieste			30.10	764.4	79.9	26.6	53	Calm			0		1			0	0	Almost clear	Prof. V. Farolfi.
Vienna			29.98	761.6	82.8	28.2	37	SE			1		1			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Grutz 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 J. C. Houzeau, 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			29.90	759.4	70.3	21.3	83	S			1	5c	4k	SSW	SW	0.112	2.85		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.85	758.2	63.9	17.7		SSE	21	9.4			3			0	0	Blue sky	William Boswell.
Ardrossan			29.89	758.9	64	17.8		WSW			1		7					Hailing	William McNeil.
Armagh, Observatory			29.94	760.5	63.0	17.2		ENE	3	1.3			9					Overcast	S. Cal, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.93	760.2	69.0	20.6		NW			1		6					*D. clouds	J. Dreyer.
Bradford			29.86	758.4	73.7	22.9		SW			1		4			0.04	1.0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	86.0	30.0		NE			2		5					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			29.85	758.2	78.5	25.8		SW			1		2					*D. clouds	H. Todd.
Cardington			29.88	758.9	78.4	25.8		E			1		6					*D. clouds	John McLaren.
Carlisle																			T. Bell, for J. Carmichael.
Chatham, School M. E			29.89	759.2	69.8	21.0		SE			1		6					Gloomy	Capt. J. Fellowes, R.E.
Dartmoor	28.52	724.4	29.98	761.5	65.5	18.6		Calm			0		9			Blank	Blank	Threatening	R. E. Power.
Donaghadee			29.91	759.7	62	16.7		NNE			2		10					Misty	J. Mac Gowan.
Dover			29.90	759.4	68	20.0		SW			1		5					½ clouded	J. Costello.
Eccles, (near Manchester.)			29.85	758.2	76.7	24.8		S	2.4	1.1			5					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			29.88	758.9	68.0	20.0		SE			1		7					Foggy	The Staff.
Fort Napier, (Natal)	27.75	704.8	29.99	761.7	77.6	25.3		NE			3		9					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	82	27.8		W			0		6					*D. clouds	
Galway, Queen's College			29.91	759.7	69	20.6		SE			1		10					Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.88	758.9	83.5	28.6		W			3		4					*D. clouds	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.86	758.4	66.7	19.3		W			1		9					Misty	Lewis Stuart.
Great Yarmouth			29.89	759.2	69	20.6		ESE			1		0					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			29.89	759.2	70.5	21.4		SSW			1		10					Showery	The Staff, for G. B. Airy
Guernsey																			Dr. S. E. Hoskins.
Helston			29.90	759.4	71	21.7		NW			4		1c			0.43	10.9	Fine	M. P. Moyle.
Holyhead			29.88	758.9	63	17.2		N			3		4					*D. clouds	John Tilston.
Kew, Observatory			29.89	759.2	70.9	21.6		SW	5	2.2			7					Raining	The Staff.
Kingstown			29.93	760.2	62	16.7		NE			3		10					Misty	George Mitchell.
Leicester Museum			29.87	758.7	75.9	24.4		SE			1		5					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			30.10	764.5	83.8	28.8		NE			1		4k					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			29.84	757.9	70	21.1		Calm			0		10					Overcast	W. D. Penny.
Nassau, (Bahamas			30.05	763.3	85.6	29.8		NW			4		8					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.87	758.7	79.1	26.2		S			2		7ck,k,1s		SE	0.114	2.89	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.87	758.7	71.0	21.7		S			0–1		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.86	758.4	72	22.2		SSE			1		2					Blue sky	J. Lucas.
Plymouth			29.85	758.2	69.4	20.8		S			1		4					*D. clouds	John Merrifield.
Roche's Point			29.90	759.4	69	20.6		NNE			3		2					Fine	W. Kennedy.
Saint Ann's Head			29.87	758.7	65	18.3		NW			2		5					Misty	John C. Walker.
Saint Helier, Jersey			29.90	759.4	69.2	20.7		SE			2		2					¼ clouded	A. P. Amy.
Sandwick Manse, Orkneys			29.84	757.9	57.7	14.3		W	14	6.3			10					Hailing	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, Turkey)			30.03	762.7	78.8	26.0		NNE			2		2					*D. clouds	Sergt. W. H. Lyne.
Sheffield								SW								0.119	3.02	Blue sky	W. F. Cooper.
Silloth Rectory			29.88	758.9	74.0	23.3	66	E			1		4			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.86	758.4	71.0	21.7		W			1		8					Threatening	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.)			29.89	759.2	62	16.7		NNW			2		10					Drizzling	John Smith.
Stratfield Turgiss			29.88	758.9	71.6	22.0		S			1		7					*D. clouds	Rev. Charles H. Griffith.
Thurso			29.85	758.2	58	14.4		WNW			2		10					Overcast	John Trotter.
Truro, Royal Institution			29.89	759.2	76	24.4		SW			4		4					*D. clouds	W. Newcombe.
Valencia, Observatory			29.96	761.0	65.8	18.8		N	20	8.9			4					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, Isle of Man					65	18.3		NE			3		10						Thomas Dawson.
Cape Good Hope, Obs'y			30.31	769.9	61.4	16.3	67	W	9	4.0		5	5						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			29.74	755.4	61.0	16.1	88	NW			2		10kn			0	0	Covered	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.87	758.7	63.0	17.2		E			2	8ck		W		0	0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.18	766.6				ENE	23.8	10.6						0.22	5.6		C. Meldrum
Melbourne, Observatory			30.03	762.7	48.0	8.9	66	NNE	10	4.5			0			0	0	Very fine	R. L. J. Ellery.
Monach L'thouse, Hebrides			29.94	760.5	65	18.3		N			4		10			0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.81	757.2	66.5	19.2		S			6	5	2	S					Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; exceptin lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. 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			29.97	761.3	76.5	24.7	54	ESE			2		7						
Faröe			29.91	759.7	72.7	22.6	72	W			4		7						
Godthaab, Greenland			30.13	765.4	46.8	8.2	82	NNE			2		0						
Stykkisholm, Iceland			30.01	762.2	51.3	10.7	89	Calm			0		0						
Thorshavn, Faröe			29.86	758.5	54.0	12.2	76	Calm			0		4						
Vestervig			29.88	759.0	80.6	27.0	35	SSE			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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			30.00	762.0	74.3	23.5	59	SSW			1		5k			0.39	10.	Cloudy	Normal School.
Amiens																			Normal School.
Avignon			30.02	762.6	80.6	27	67	N			2		2		SW	0	0	Slightly cl'dy	Normal School.
Bar-sur-Seine			29.96	760.9	74.1	23.4	65	W			2		5		SW	0.177	4.5	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.94	760.5	71.6	22.0	65	SW	8.3	3.7					SSW	0	0		Beaumette Observatory.
Beauvais			29.93	760.3	72.0	22.2	77	S			1		8		SW	0.039	1.00	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.08	763.9	79.7	26.5	53	S			2		5kn		S	0.16	4.	Cloudy	Normal School.
Bourges			30.21	767.3	74.5	23.6	80	S			2		10		S	0.16	4.	Covered	Normal School.
Brest			29.85	758.2	71.8	22.1	74	SW			2		8		SW	0	0	Misty	Naval Observatory.
Carcassonne			30.17	766.3	77.0	25	71	E			2		5		W	0.20	5.	Cloudy	Normal School
Caen																			Normal School.
Chartres			30.12	765.1	73.2	22.9	77	SW			1		9		W	0	0		Normal School.
Châlons-sur-Marne			29.96	761.0	70.5	21.4	87	SE			2		5k		NW	0.551	14.0	Cloudy	Normal School.
Clermont			29.93	760.2	73.8	23.2	60	SE			2		8		SSW	0.563	14.3	Very cloudy	Puy de Dome Obs'y
Commercy			29.96	761.0	74.5	23.6	82	SW			4		5kn		SW	0.089	2.25	Cloudy	Normal School
Commune de Greasque*			30.11	764.8	88.7	31.5	32	SE			4		5		SW	0	0		M. Kina.
Grenoble			29.94	760.4	73.4	23.0	76	NNW			2		5		W	0.04	1.	Cloudy	Normal School.
La Roche-sur-Yon					70.3	21.3	75	S			4		8		N	0.012	0.3	Very cloudy	Normal School.
Le Mans			29.93	760.1	72.9	22.7	65	SW			2		5		SW	0.20	5.	Cloudy	Normal School.
Lons-Le-Saulnier			30.01	762.3	74.3	23.5	75	NW			4		5			0.866	22.0	Cloudy	Normal School.
Mâcon			30.13	765.4	79.5	26.4	72	SSE			4		0			0.126	3.2	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			29.98	761.4	72.5	22.5	60	S			4		5		SW	0.327	8.3	Cloudy	Normal School.
Nîmes			29.99	761.8	73.4	23	74	N			2		5		SW	1.634	41.5	Cloudy	Normal School.
Orleans																			Normal School.
Paris, Observatory			29.94	760.4	69.8	21.0	82	SSW			1		9ck		SW	0.292	7.43	Almost cov'd	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			29.97	761.2	77.7	25.4	61	SW			3		8		NE	0.039	1.0	¾ Covered	Naval Observatory.
Rouen			29.91	759.6	76.5	24.7	57	S			1		5		S	0.04	1.1	Cloudy	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School
Villefranche																			Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.7	82.4	28													L'Abbé Marchesi.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.23	767.8	66.9	19.4	88	E	11.2	5.00			6		NE	0.087	2.2		—, Falguère.
Montsouris, Paris			29.93	760.3	72.5	22.5	78	SSW			1		9k			0.756	19.2		Montsouris Observatory.
Perpignan			29.93	760.3	81.7	29.3	37	SE	26.1	11.67			2		S	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.36	542.6			46.4	8.0		SW			1		6					Stormy	M. Baylac.
Pic du Midi, (Plantade) H.P.	22.61	574.2			52.2	11.2		SW			1		6			1.180	30.2	Stormy	General de Nansouty.
Saint Maur, (near Paris)			29.95	760.6	69.6	20.9	89	S			1		10			0.283	7.2	Very cloudy	E. Renou.
Toulouse			30.01	762.2	75.0	23.9	71	SE			1		8			1.059	26.9		Toulouse Observatory
Tours			29.95	760.6	75.2	24.0	66	SSW			1		8		W	0.516	13.1		C. Marquet.
Versailles, (near Paris)			29.94	760.5	72.3	22.4	77	S			1		9			0.467	11.86	Almost cov'd	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai																			H. Le Leo, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.98	761.4	79.5	26.4	41	NE			2		3	SW		0.012	0.3		Prof. T. Hoh.
Berlin			29.95	760.9	85.5	29.7	28	SE			1		3			0	0		Prof. Arndt.
Breslau			30.09	764.3	82.6	28.1	24	SE			6		0			0	0		Dr. P. Neugebauer.
Carlsruhe			29.96	760.9	67.6	19.8	92	W			3		10			0.437	11.1	Thunder-storm.	A. Senz.
Cassel			29.91	759.8	86.0	30.0	41	S			2		8	SW		0	0		Dr. H. Möhl.
Emden			29.81	757.1	79.2	26.2	80	SE			1		10			0.098	2.5		Prof. Prestel.
Frankfort on the Main			29.98	761.6	84.2	29.0	44	W			3		6			1nap.	1nap.		Physical Society.
Friedrichshafen			29.97	761.2	76.1	24.5	70	W			5		7			0	0		M. Wilhelm.
Hamburg			29.93	760.2	79.7	26.5	57	SW			1		6ck	SW		0	0	Fair	Captain F. Hegemann.
Kiel			29.90	759.5	79.0	26.1	42	SW			1		8			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			30.05	763.3	74.5	23.6	56	E			2		2			0.001	0.1		Prof. E. Luther.
Köslin			30.04	763.0	84.7	29.3		S			2		2			0	0		H. Müller.
Leipsic			29.95	760.8	87.4	30.8	27	S			2		3			0	0		Prof. Bruhns.
Memel			30.09	764.3	63.9	17.7	88	WNW			1		10k			0.008	0.2		Reinbrecht & Skalweit.
Münster			29.98	761.6	76.1	24.5	68	SW			5		10			0.055	1.4		Prof. E. Heis.
Neufahrwasser			30.11	764.7	67.8	19.9	78	NE			1		1			0	0		A. Lothes.
Posen			30.04	763.0	83.5	28.6	27	E			2		0			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.95	760.8	85.6	29.8	40	SW			3		10	SW		0.079	2.0		Dr. Schur.
Stuttgart			29.89	759.3	87.4	30.8	35	SE			1		6			0.016	0.4	Light rain	Prof. Schoder.
Thorn			30.05	763.2	81.7	29.3	26	NE			3		2			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.99	759.5	76.6	24.8	70	SW			7		10			0.138	3.5		Prof. Flesch.
Wustrow, Naval School			30.05	763.2	81.7	27.6	46	S			1		4			0	0		E. F. Schütt.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	80.8	27.1		NE										Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Udine			30.04	763.1	81.9	27.7	51	S	4.9	2.2			8			0	0		
Padua			30.04	762.9	82.2	27.9	55	SW	1.8	0.8			3	W		0	0		
Vicenza			30.04	762.9	84.9	29.4	45	S	6.9	3.1			1	W		0	0		
Verona			30.03	762.8	88.7	31.5	39	E			2		4			0	0		
Bergamo																			
Domodossola	29.04	737.7	30.01	763.1	75.2	24.0	63	SW			4		6			0	0		
Milan			30.06	763.4	88.7	31.5	57	NE			2		7			0	0		
Pavia			30.07	763.6	81.5	27.5	54	W			1		4	S		0	0		
Moncalieri			30.07	763.8	78.1	25.6	65	SSE	1.3	0.6			2	SW		0	0		
Mondovi	28.21	716.4	30.06	763.4	77.2	25.1	59	NW			4		2	SSE		0	0		
Porto Maurizio			30.11	764.9	82.2	27.9	68	E			4		1			0	0		
Genoa			30.09	764.3	80.6	27.0	65	SW	2.9	1.3			0			0	0		
Piacenza			30.06	763.4	79.2	26.2	63	NW			4		6			0	0		
Parma			30.04	763.0	84.2	29.0	52	W			2		1			0	0		
Bologna			30.10	764.4	84.7	29.3	44	NW			1		2	E		0	0		
Florence			30.10	764.4	87.3	30.7	43	W			2		1	WSW		0	0		
Leghorn			30.07	763.6	83.5	28.6	80	SW	8.1	3.6			2			0	0		
Siena	28.90	734.0	30.07	763.7	86.0	30.0	43	SW	0	0			3	W		0	0		
Urbino	28.61	726.7	30.12	765.1	83.3	28.5	42	SW			2		1			0	0		
Ancona			30.07	763.7	86.0	30.0	46	SE			4		0			0	0		
Grosseto			30.11	764.8	86.0	30.0	54	SE			2		6	SW		0	0		
Rome			30.11	764.9	85.6	29.8	56	SW	6.9	3.1			1			0	0		
Naples, O. U.			30.13	765.3	86.2	30.1	58	SSW			2		0			0	0		
Lecce			30.13	765.2	82.2	27.9	39	NNW	12.5	5.6			1			0	0		
Cosenza			30.13	765.3	87.6	30.9	69	WNW	7.4	3.3			2			0	0		
Riposto, (Sicily)			30.07	763.6	84.2	29.0	68	E			1		1			0	0		
Palermo			30.07	763.6	82.0	27.8	70	NE	5.6	2.5			0			0	0		
Caltanissetta	28.17	715.5	30.03	762.8	82.4	28.0	45	SSW			4		3	E		0	0		
Sub-Series.																			
Naples, S. R.			30.11	765.5	84.9	29.4	56	SW	1.3	0.6			3	SE		0	0		Prof. F. Brioschi.
Pesaro			30.14	765.5	79.7	26.5	71	E	19.5	8.72			0			0	0		L. Guidi.

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			29.92	760.0	73.8	23.2		SE			1								
Groningen			29.86	758.5	74.3	23.5		E			1								
Helder			29.90	759.4	73.4	23.0		E			1								
Utrecht			29.89	759.1	70.3	21.3	80	S			2		10					Overcast	

Note.—The originals give the wind-pressure in kilograms per square meter and omit the rain-fall; for Utrecht, they give the the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.91	759.6	76.6	24.8	48	SSW	8.5	3.8			0			0.118	3.0		
Bróno			29.88	758.9	68.0	20.0	64	S	7	3			0			0	0		
Christiania			29.93	760.2	81.0	27.2	36	SW	4.3	1.9			3			0	0		
Tromsö			29.85	758.1	63.3	17.4		SW	2	1			2			0.126	3.2		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 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,)			30.25	768.4	76.3	24.6	82	W	4.9	2.19			4			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.92	760.0	83.1	28.4	37	WNW	4.3	1.9			5	WSW		0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.08	764.1	77.0	25.0	68	Calm ?	2.5?	1.1?			8			0	0		Capt. D. A. da Cunha.
Lisbon			30.00	762.0	73.4	23.0	73	WSW	16.1	7.2			8			0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level, excepting Lisbon. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia at St. Petersburg.

Warsaw			30.02	762.4	78.6	25.9	34	NNW	4	2			0						Astronomical Obs.
Wilna			30.05	763.2	68.7	20.4	32	NNE	4	2			0						Astronomical Obs.
Dorpat			30.08	764.1	63.1	17.3	46	NNW	7	3			7						Physical Cabinet.
St. Petersburg			30.03	762.8	60.1	15.6	47	N	9	4			6						Central Physical Obs.
Kuopio			30.02	762.5	59.7	15.4	55	NNW	13	6			0						Ch. Forsten.
Kieff			29.89	759.3	70.7	21.5	70	N	7	3			9						Physical Cabinet.
Nikolaiev			29.94	760.5	83.1	28.4	33	NNW	13	6			5						Kurdakof.
Kertch			30.04	763.1	74.7	23.7	41	WNW	11	5			0						Lagorio.
Moscow			29.91	759.6	46.4	8.0	69	N	18	8			8						Meteorological Obs.
Lugan			29.65	753.2	77.0	25.5	34	WSW	47	21			6			Blank	Blank		Meteorological Obs.
Archangel			29.87	758.7	45.5	7.5	74	NNW	34	15			9						Ogorodnikof.
Tiflis	28.45	722.6	29.79	756.7	79.2	26.2	53	N	25	11			1						Physical Observatory.
Astrakhan			29.82	757.4	76.3	24.6	28	W	9	4			4			Blank	Blank		Sebastianoi.
Kasan			29.47	748.5	50.7	10.4	70	N	11	5			10						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.57	725.6	29.48	748.9	57.2	14.0	53	SSW	9	4			10						Meteorological Obs.
Nukuss			29.56	750.8	104.2	40.1	26	SE	4	2			0						
Kasaly																			Bolrof.
Tashkend																			Michelson.
Barnaul			29.62	752.3	67.1	19.5	74	Calm	0	0			8						Meteorological Obs.
Yeniseisk			29.52	749.7	67.6	19.8	70	Calm	0	0			2			Blank	Blank		Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.84	758.0	75.6	24.2	97	Calm	0	0			9						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.84	758.0	68.2	20.1	96	SE	9	4			10			Blank	Blank		
Nikolaievsk, on the Amoor																			

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 892 m., or 1,286 ft.; Nertchinsk, 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			29.86	758.4	82.8	28.2	39	SW	5.2	2.33		0	6			0	0	Cloudy	Royal Observatory.
San Fernando			29.97	761.1	78.3	25.7	64	WNW	10.1	4.5		4	3	NW	W				The Naval Observatory.

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda			30.04	763.0	59.0	15.0	78	SW			4		3			0	0		
Umea			30.02	762.5	64.8	18.2	75	SW			2		0			0	0		
Hernosand			29.98	761.4	71.2	21.8	56	S			2		1			0	0		
Stockholm			30.04	763.0	74.5	23.6	41	SE			4		2			0	0		
Wisby			30.10	764.4	68.0	20.0	66	NE			4		3			0	0		
Sub-Series.																			
Upsala			30.02	762.6	78.1	25.6	37	SW	7.2	3.2			3	N		0	0		Dr. Hildebrandsson.

Note.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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	28.64	727.4	30.01	762.2	74.7	23.7	64	N			2		8			0.555	14.1	Covered	The Observatory.
Zurich	28.43	722.2	29.99	761.8	78.6	25.9	59	W			2		6			0.008	0.2	Cloudy	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, —0.4 mm; Thermometer, +2.5 cent.; Relative Humidity, +8 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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	73.4	23.0	40	NNE	16	7.0			3		NNE	0	0		
Fao, (Persian Gulf)																			
Salonica			30.10	764.6	82.0	27.8		E			1		0						
Valona			30.15	765.7	81.0	27.2		W			1		0						
Varna			30.00	762.0	82.4	28.0		NE			2		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.80	756.9	89.1	31.7	53	W			2		1ks		SW				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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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			29.66	753.4	53.1	11.7	59	NW	11	4.9			0			0	0		Hon. J. Ferguson.
Brockville, Ontario			30.27	768.8	62	16.7		Calm	0	0		2c	0	N		0	0	Fair	W. R. Bigg.
*Chatham, N. B.			29.72	754.9	52	11.1	62		18	8.0		0	0			0.93	23.6	Clear	G. A. Blair.
Charlottetown P. E. Island			29.65	753.1	52	11.1	65	W	9	4.0			10ks			1.340	34.04	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.14	765.5	58.2	14.6	55	NW			2	8c	0			0	0	Fair	James Smith, M. A.
Dalhousie, N. B.			29.72	754.9	51	10.6	85	NW			4					0.64	16.3	Clear	H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			29.86	758.4	50.0	10.0	62	NW	17	7.6		0	0			0.020	0.51	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.78	756.4	68	20.0	98	SW	14	6.3		5k	5n	SW	SW	0	0	Threatening	James Stewart.
Goderich, Ontario			30.27	768.8	58.1	14.5	76	NW			2	0	0			0	0		H. J. Strang, M. A.
Granton, Ontario	29.16	740.7	30.26	768.6	52	11.1		N			1	0	0			0	0	Clear	James Grant.
*Halifax, N. S.			29.72	754.9	55	12.8	88	N	21	9.4		0	0			0.183	4.65	Clear	F. Allison, M. A.
*Kingston, Ontario			30.28	769.1	56	13.3	70	Calm	0	0		0	0			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			29.50	749.3	60.2	15.7	73	N	10	4.5		6k	0	N		2.13	54.1	Fair	C. H. Rigby.
*Montreal, Quebec			30.15	765.8	53	11.7	67	NW	9	4.0		10k	0	N		0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.21	767.3	52	11.1	73	W	9	4.0		2ck	0	W		0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.24	768.1	57	13.9	80	S	3	1.3		0	0			0	0	Clear	Rev. R. Mosley.
Port Dover, Ontario			30.28	769.1	51	10.6	79	N	8	3.6		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.			29.57	751.1	55.7	13.2		NW	16	7.2						0	0	Fine	Peter Grant.
Port Stanley, Ontario			30.26	768.6	56	13.3	75	NE	4	1.8		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			30.02	762.5	53	11.7	86	SW	9	4.0		2c	0	SW		0.02	0.5	Clear	Capt. Ashe, R. N.
St. John, N. B.			29.86	758.4	50	10.0	65	W	13	5.8		0	0			0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			30.25	768.3	55	12.8	66	Calm	0	0		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.21	767.3	62	16.7	56	N	3	1.3		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario	29.00	736.6	30.29	769.4	47.2	8.4		E	1	0.4		0	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			29.54	750.3	59	15.0	78	W	13	5.8		0	5ks		W	2.33	59.2	Fair	T. C. Hill.
*Toronto, Ontario			30.27	768.8	58	14.4	53	NE	3	1.3		0	0			0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.28	769.1	50.3	10.2	81	E	1	0.4		0	0			0	0	Fine	J. Montgomery
Sub-Series.																			
St. Johns, Newfoundland			30.00	762.0	57	13.9	68	SE					10n					Heavy rain	John Delaney.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.			30.16	766.1	54	12.2	67	NW	2	0.9		5es	0	W		0	0	Fair	
Alpena, Mich			30.22	767.6	52	11.1	66	SW	1	0.4		0	0			0	0	Clear	
Atlantic City, N. J			30.17	766.3	64	17.8	52	N	13	5.8		0	0			0	0	Clear	
Augusta, Ga.			30.05	763.3	82	27.8	63	E	5	2.2			10ks		E	0	0	Cloudy	
Baltimore, Md			30.24	768.1	62	16.7	50	N	4	1.8		2es	Haze			0	0	Fair	
Barnegat, N. J			30.17	766.3	63	17.2	52	N	14	6.3		0	0			0	0	Clear	
Bismarck, Dakota	27.97	710.4	29.53	750.0	63	17.2	90	SW	13	5.8			10n		SE	0.06	1.5	Light rain	
Boston, Mass			30.08	764.0	55	12.8	55	NW	18	8.0		1ce	1k	W		0	0	Cloudy	
Breckenridge, Minn			29.96	761.0	64	17.8	98	SE	16	7.2			10s		SE	0	0	Cloudy	
Buffalo, N. Y			30.24	768.1	56	13.3	59	E	3	1.3		0	Sm'e		E	0	0	Clear	
Burlington, Vt			30.16	766.1	53	11.7	67	N	7	3.1		2k	0	N		0	0	Fair	
Cairo, Ill			30.06	763.5	73	22.8	81	N	2	0.9		0	0			0	0	Clear	
Cape Hatteras, N. C			29.98	761.5	80	26.7	61	NE	24	10.7		0	5s		NE	0	0	Fair	
Cape Henry, Va			30.08	764.0	71	21.7	71	N	18	8.0		2e	0	NW		0	0	Fair	
Cape Lookout, N. C			30.03	762.7	80	26.7	71	NE	17	7.6		5k	Haze	NE		0.05	1.3	Fair	
Cape May, N. J			30.17	766.3	62	16.7	45	NE	15	6.7		0	0			0	0	Clear	
Charleston, S. C			30.03	762.7	84	28.9	75	E	17	7.6		5ek	1ks	NE		0	0	Fair	
Cheyenne, Wyoming	23.98	609.1	29.92	760.0	55	12.8	73	SW	4	1.8		0	0			0	0	Clear	
Chicago, Ill			30.16	766.1	66	18.9	64	SE	10	4.5		0	5s			0	0	Fair	
Cincinnati, Ohio			30.12	765.0	65	18.3	58	E	6	2.7		5es	Haze			0	0	Fair	
Cleveland, Ohio			30.25	768.3	55	12.8	68	SE	4	1.8		0	Sm'e		SE	0	0	Smoky	
Corsicana, Tex			29.99	761.7	75	23.9	85	S	6	2.7		2es	0			0	0	Clear	
Davenport, Iowa			30.12	765.0	63	17.2	78	E	8	3.6		5es	0	NE		0	0	Fair	
Denison, Tex			29.96	761.0	79	26.1	82	S	7	3.1		0	0			0	0	Clear	
Denver, Col.	24.73	628.1	29.95	760.7	56	13.3	80	Calm	0	0		0	0			0.40	10.2	Clear	
Detroit, Mich			30.24	768.1	53	11.7	79	N	6	2.7		0	Haze			0	0	Clear	
Dodge City, Kan	27.31	693.7	29.49	749.0	69	20.6	95	SE	1	0.4		5e	2s	W		0.58	14.7	Fair	
Dubuque, Iowa			30.11	764.8	61	16.1	77	SE	4	1.3		5e	0			0	0	Fair	
Duluth, Minn			30.07	763.8	59	15.0	76	NE	2	0.9		0	0			0	0	Clear	
Eastport, Me			29.89	759.2	52	11.1	59	NW	16	7.2		0	0			1.51	38.4	Clear	
Erie, Pa			30.22	767.6	59	15.0	59	SE	8	3.6		1k	Sm'e			0	0	Clear	
Escanaba, Mich			30.19	766.8	55	12.8	73	Calm	0	0		0	0			0	0	Clear	
Fort Gibson, Indian Ter.			29.92	760.0	79	26.1	78	E	6	2.7		0	0			0	0	Clear	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.72	729.5	29.76	755.9	78	25.6	78	S	8	3.6		2ek	0	S		0.03	0.8	Clear	
Fort Sully, Dakota	28.05	712.5	29.61	752.1	70	21.1	90	SE	6	2.7		8k	2ks		S			Cloudy	
Florence, Arizona	28.31	719.8	29.80	756.9	67	19.4		S				0	0			0	0	Clear	
Galveston, Tex			30.05	763.3	82	27.8	78	SW	4	1.8		2k	0	SW		0	0	Fair	
Grand Haven, Mich			30.21	767.3	58	14.4	60	SE	6	2.7		1e	0			0	0	Clear	
Indianapolis, Ind			30.16	766.1	64	17.8	62	E	5	2.2		5es	0			0	0	Fair	
Indianola, Tex			30.04	763.0	81	27.2	82	S	7	3.1		2k	0			0	0	Fair	
Jacksonville, Fla			29.98	761.5	83	28.3	74	Calm	0	0		0	0			0	0	Clear	
Keokuk, Iowa			30.02	762.5	67	19.4	79	SE	7	3.1		2e	0	S		0	0	Clear	
Key West, Fla			30.01	763.0	81.8	27.7	78	W	11	4.9		1k	8s	W		0	0	Cloudy	
Kittyhawk, N. C			30.09	764.3	77	25.0	65	NE	28	12.5		5k	0	E		0	0	Fair	
Knoxville, Tenn			30.09	764.3	71	21.7	71	N	4	1.8		2ek	0	SW		0	0	Fair	
La Crosse, Wis			30.12	765.0	57	13.9	81	Calm	0	0		0	0			0	0	Clear	
Leavenworth, Kan			29.95	759.4	72	22.2	90	SE	2	0.9		0	8s		SE	0.50	12.7	Fair	
Louisville, Ky			30.12	765.0	67	19.4	64	NE	8	3.6		2e	0	N		0	0	Clear	
Lynchburg, Va			30.21	767.3	67.5	19.7	41	NE	9	4.0		5e,ek	0	SW		0	0	Fair	
Malone, N. Y			30.16	766.1	49	9.4	71	NW	4	1.8		2e	0	N		0	0	Fair	
Marquette, Mich			30.15	765.8	58	14.4	69	SW	12	5.4		0	0			0	0	Clear	
Memphis, Tenn			30.03	762.7	77	25.0	86	NE	4	1.8		0	Sm'e			0	0	Clear	
Milwaukee, Wis			30.20	767.4	64	17.8	78	SE	6	2.7		5e	Fog	NW		0	0	Fair	
Mobile, Ala			30.01	762.2	77	25.0	90	NW	4	1.8		0	0			0.60	15.2	Clear	
Montgomery, Ala			30.01	762.2	70	26.1	86	N	2	0.9		2e	Haze			0.59	15.0	Fair	
Morgantown, W. Va	29.15	740.4	30.20	767.1	61	16.1	55	E	3	1.3		0	0			0	0	Clear	
Mt. Washington, N. H	23.70	602.0	30.06	763.5	23	− 5.0	100	NW	45	20.1			Fog			0	0	Foggy	
Nashville, Tenn			30.00	762.0	76	24.4	69	NE	4	1.8		0	0			0.21	5.3	Clear	
New Haven, Conn			30.16	766.1	59.0	15.0	66	N	10	4.5		2e	Fog			0	0	Fair	
New London, Conn			30.15	765.8	62	16.7	45	NW	4	1.8		2e	0	NW		0	0	Fair	
New Orleans, La			30.02	762.5	82	27.8	78	NW	7	3.1		1ek	5k	N	NW	0	0	Fair	
Newport, R. I			30.11	764.8	59	15.0	53	NW	12	5.4		5es	0	NW		0	0	Fair	
New York, N. Y			30.20	767.1	60	15.6	48	NW	5	2.2		0	0			0	0	Clear	
Norfolk, Va			30.13	765.3	70	21.1	66	NE	16	7.2		2e	0	N		0	0	Fair	
North Platte, Neb	26.91	683.3	29.37	746.0	67	19.4	94	SE	6	2.7			10ks		SE	0.02	0.5	Threatening	
Omaha, Neb	28.85	732.8	29.88	758.9	69	20.6	95	S	10	4.5			10n		S	0.60	15.2	Heavy rain	
Oswego, N. Y			30.25	768.3	58	14.4	50	E	4	1.8		0	Haze			0	0	Clear	
Pembina, Dakota			29.75	755.6	66.5	19.2	92	S	14	6.3			10s		S	0	0	Cloudy	
Philadelphia, Penn			30.22	767.6	61	16.1	50	NE	12	5.4		0	Haze			0	0	Clear	
Pike's Peak, Colorado	17.94	455.7	30.15	765.8	31.5	− 0.3	94	W	6	2.7		1s	0			0.06	1.5	Clear	
Pittsburgh, Penn			30.22	767.6	54	12.2	73	NE	5	2.2		0	Sm'e			0	0	Smoky	
Port Huron, Mich			30.27	768.8	53	11.7	68	E	1	0.4		Haze	0			0	0	Clear	
Portland, Me			30.06	763.5	56	13.3	43	NW	12	5.4		0	0			0	0	Clear	
Portland, Oregon			30.04	763.0	59	15.0	81	S	4	1.8			10s			0	0	Cloudy	
Punta Rassa, Fla			30.01	762.2	84.0	28.9	74	S	4	1.8		Haze	2s		SE	0.60	15.2	Fair	
Rochester, N. Y			30.22	767.6	59	15.0	59	W	1	0.4		0	Haze			0	0	Clear	
Salt Lake City, Utah	28.48	647.2	29.81	757.2	60	15.6	39	NE	4	1.8		0	0			0	0	Clear	
Sandy Hook, N. J			30.18	766.6	62	16.7	50	N	14	6.3		0	0			0	0	Clear	
San Diego, Cal.			30.00	762.0	63	17.2	73	SW	8	3.6		0	5s		SE	0	0	Fair	
San Francisco, Cal.			29.94	760.5	53	11.7	86	SW	12	5.4			10s			0	0	Cloudy	
Santa Fé, N. M	23.30	591.8	29.84	757.9	54	12.2	79	E	6	2.7		5k	0			Inap.	Inap.	Fair	
Savannah, Ga.			30.02	762.5	81	27.2	87	N	3	1.3			10ks		NW	0	0	Cloudy	
Shreveport, La			30.06	763.5	81	27.2	83	SW	4	1.8		0	0			0.33	0.8	Clear	
Smithville, N. C			30.04	763.0	78	25.6	73	N	12	5.4		2e	0			0	0	Fair	
Springfield, Mass.			30.14	765.5	56.5	13.6	56	NW	4	1.8		8es	0			0	0	Cloudy	
St. Louis, Mo			30.06	763.5	71	21.7	84	E	4	1.8		0	0			0	0	Clear	
St. Marks, Fla			29.97	761.2	81	27.2	82	NE	3	1.3		0	2ks			0	0	Fair	
St. Paul, Minn			30.02	762.5	59	15.0	76	SE	11	6.3		1e	5s	S	S	0	0	Fair	
St. Paul's Island, Alaska			30.17	766.3	39	3.9	91	NE	11	4.9			10s			0	0	Cloudy	
Thatcher's Island, Mass			30.07	763.8	54	12.2	68	NW	16	7.2		0	0			0	0	Clear	
Toledo, Ohio			30.20	767.1	56	13.3	74	NW	5	2.2		2k	0	NW		0	0	Clear	
Tucson, Arizona	27.49	698.2	30.09	764.3	68	20.0		SE				0	0			0	0	Clear	
Tybee Island, Ga			29.99	761.7	82	27.8	83	NE	12*	5.4*		10ek	0			0	0	Cloudy	
Vicksburg, Miss			30.04	763.0	79.5	26.4	87	Calm	0	0		2e	0			0	0	Clear	
Virginia City, M. T	24.19	614.4	29.67	753.6	48	8.9	62	SE	4	1.8		0	0			0	0	Clear	
Washington, D. C			30.23	767.8	61.5	16.4	46	N	8	3.6		1es	0	S		0	0	Clear	
Wilmington, N. C			30.06	763.5	78	25.6	65	NE	10	4.5		1e	0	W		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
Wood's Holl, Mass.			30.11	764.8	60	15.6	54	NW	11	4.9		0	0			0	0	Clear	
Yankton, Dakota	28.58	725.9	29.80	756.9	70	21.1	85	SE	9	4.0			10s		SE	0	0	Cloudy	
Yuma, Arizona			29.89	759.2	67	19.4		NW				0	0			0	0	Clear	
Sub Series.																			
Kingston, Jamaica, W. I.			30.19	766.8	79	26.1	74	Calm	0	0		5c	2s		SE	0	0		James Gall.
St. Georges, Bermudas			29.90	759.4	84.0	28.9	75	NW	7	3.1		1c	1k			0.02	0.5	Hazy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa W. I.																			
Paramaribo, D. Guiana S.A			30.06	763.5	81	27.2	83	SE			1	0	3c?			0.066	1.52	Fair	C. J. Hering.
Batavia, Dutch Guiana S.A	30.10	764.6			87.4	30.8		NE								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.25	641.3			64.0	17.8	85	NE	1	0.4			10n			0.10	2.5	Cloudy	Thomas Herran.
York Factory, B. A			29.66	753.4	57.5	14.2	76	S	10	4.5		1c	0	S		0	0		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.08	764.0	74	23.3		NE			2					0.37†	9.4†	Cloudy	Daniel Smith.
Makawao, Maui, H. I.																			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
Schooner Adelie Fuller N 35° 50′. W. 17° 09′.	SW by W	8	30.09	762.0	83	28.3		NE			4	2k	0			Short sea.		‡D. clouds	Capt. James Jorgensen.
Steamer Hibernian. N 44° 27′, W. 63° 30′.	S 28 W	10	29.79	756.7	54	12.2		WNW			5		..ck		E	Rough		Clear	Lieut. F. Archer, R. N. R.
Steamer Leipzig. N. 50° 12′, W. 13° 28′.	N 85 W		30.05	763.3	63.5	17.5		NNW			3		..d			Smooth		Overcast	Capt. R. Hoffmann.

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.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,912 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, 4,362.2 ft., or 1,329.6 m.; Santa Fè, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,533 (?) 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. * Estimated velocity. † Rain-fall from 12 p. m. of the 20th, to 3 a. m. of the 21st. ‡ Detached clouds.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

Furnished by coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The *barometric readings in the first two columns* are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto-pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^d.,) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			30.04	762.9	85.8	29.9	64	NNW			2		8			0.067	1.7	Cloudy	Charnot.
Algiers			30.02	762.4	89.6	32.0	52	N			1		2			0	0	Clear	Peter.
La Calle			29.99	761.8	90.1	32.3	61	W			2		2			0	0	Clear	Kunts.
Tunis			30.02	762.6	101.7	38.7	21	SW			3		0			0	0	Clear	Jacques.
Sfax			30.17	766.2	87.8	31.0	53	SE			3		1			0	0	Clear	Chauvey.
Saïda			30.04	763.1	93.2	34.0		WSW			3		3			0.024	0.6	Fair	Millot.
Tebessa			30.09	764.2	92.5	33.6		W			1		3			0	0	Fair	Colin.
Gerlville			30.09	764.3	88.3	31.3	27	SSW			3		2			0	0	Clear	Lemaillot.
Laghouat			30.11	764.8	93.2	34.0	27	W			1		2			0	0	Clear	Guyot.
Biskra			30.11	764.7	95.0	35.0		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			29.91	759.6	85.6	29.8	43	SW			2		4			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.90	759.5	83.5	28.6	46	W			1		2			0	0		Dr. Wierzbiski.
Eperies			29.93	760.1	80.6	27.0	48	S			3		3cs			0	0		Julius Mikolik.
Gratz	28.68	728.4	29.82	757.3	79.5	26.4	58	S			2		0			0	0		Andreas Rospini.
Hermannstadt	28.63	727.2	29.97	761.3	78.3	25.7	43	ENE			2		0			0	0		Prof. Reissenberger.
Kremsmünster	28.60	726.4	29.86	758.5	80.8	27.1	47	NNE			2		3			0	0		Prof. C. Wagner.
Lemberg			29.91	759.6	79.7	26.5	72	S			1		2			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.02	762.4	84.7	29.3	61	SSE			1		3cks			0	0		I.R.Hydrographic Office.
Szegedin			29.95	760.7	80.4	26.9	45	NE			2		1			0	0		Karl Stancel.
Trieste			30.01	763.0	82.9	28.3	69	W			1		6			0.055	1.4	Drizzling	Prof. V. Farolfi.
Vienna			29.88	759.0	84.4	29.1	43	SE			2		2			0	0		I. R. Central Met. Obs'y.

Note.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			29.84	757.8	72.3	22.4	69	WSW			1		10ks		SW	0.041	1.05		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.75	755.6	57.0	13.9		WNW	22	9.8			5			0.090	2.29	Blue sky	William Boswell.
Ardrossan			29.85	758.2	61	16.1		WNW			4		4					*D. clouds	William McNeil.
Armagh, Observatory			29.97	761.2	60.8	16.0		NW	6	2.7			7					*D. clouds	S. Cail, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.99	761.7	61.1	16.2		NNW			1		10					Overcast	J. Dreyer.
Bradford			29.82	757.4	65.2	18.4		W			2		3			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.02	762.5	85.0	29.4		E			1		6					*D. clouds	Sergt. J. F. Halanon, A. H. C.
Cambridge, Observatory			29.84	757.9	72.0	22.2		NW			1		10					Overcast	H. Todd.
Cardington			29.86	758.4	70.4	21.3		WNW			1		8					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E			29.86	758.4	68.0	20.0		SW			2		9					Overcast	Capt. J. Fellowes, R.E.
Dartmoor	28.55	725.2	30.02	762.5	65.0	18.3		NW			4		7					*D. clouds	R. E. Power.
Donaghadee			29.91	759.7	61	16.1		N			4		2					Blue sky	J. Mac Gowan.
Dover			29.86	758.4	66	18.9		WSW			2		5					½ clouded	J. Costello.
Eccles (near Manchester.)			29.86	758.4	68.3	20.2		W	7.2	3.2			5					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			29.97	761.2	68.1	20.0		NW			2		9					Overcast	The Staff.
Fort Napier, (Natal)	27.95	709.9	30.18	766.6	62.1	16.7		E			1		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.95	760.7	80	26.7		W			2		8					Overcast	
Galway, Queen's College			29.92	760.0	67	19.4		SE			1		2					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.98	761.5	84.3	29.1		E			2		0					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.81	757.2	60.6	15.9		W			2		2					Fine	Lewis Stuart.
Great Yarmouth			29.81	757.2	69	20.6		W			3		6					Hazy	G. T. Watson.
Greenwich, Royal Ob'y			29.88	758.9	67.7	19.8		WSW			1		10			Blank	Blank	Overcast	The Staff, for G. B. Airy
Guernsey																			Dr. S. E. Hoskins.
Helston			29.98	761.5	70	21.1		W			4		3c			0	0	Fine	M. P. Moyle.
Holyhead			29.94	760.5	59	15.0		WNW			4		4					*D. clouds	John Tilston.
Kew, Observatory			29.87	758.7	66.5	19.2		WSW	6	2.7			10					Misty	The Staff.
Kingstown			29.97	761.2	60	15.6		NNW			4		9					Overcast	George Mitchell.
Leicester Museum			29.89	759.2	62.0	16.7		NW			1		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			30.07	763.8	83.6	28.7		NE			1		2k					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			29.78	756.4	58	14.4		W			4		10					Showery	W. D. Penny.
Nassau, (Bahamas			30.04	763.0	84.2	29.0		NW			2		10					Overcast	Surg. Maj. Henry.
Nottingham, Observatory			29.88	758.9	67.3	19.6		WNW			3		4k		WNW	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.90	759.4	60.4	15.8		WNW			3		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Ob's'y			29.86	758.4	68	20.0		NW			1		7					*D. clouds	J. Lucas.
Plymouth			29.91	759.7	72.9	22.7		WSW			2		8					*D. clouds	John Merrifield.
Roche's Point			29.99	761.7	63	17.2		NNW			3		8					Dull	W. Kennedy.
Saint Ann's Head			29.95	760.7	62	16.7		N			1		5					*D. clouds	John C. Walker.
Saint Helier, Jersey			29.95	760.7	70.0	21.1		W			3		10					Overcast	A. P. Amy.
Sandwick Manse Orkneys			29.73	755.1	53.5	11.9		NNW	25	11.2			10					Showery	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery Turkey)			30.00	762.0	82.0	27.8		NE			2		0					Blue sky	Sergt. W. H. Lyne.
Sheffield								NW										Blue sky	W. F. Cooper.
Silloth Rectory			29.84	757.9	72.7	22.6	76	NE			3		2			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.85	758.2	61.3	16.3		W			3		6						Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.)			29.84	757.9	54	12.2		NNW			5		5					*D. clouds	John Smith.
Stratfield Turgiss			29.88	758.9	69.0	20.6		W			0–1		10					Overcast	Rev. Charles H. Griffith.
Thurso			29.74	755.4	51	10.6		NW			4		8					Gloomy	John Trotter.
Truro, Royal Institution			29.97	761.2	70	21.1		NW			6		7					*D. clouds	W. Newcombe.
Valencia, Observatory			30.00	762.0	59.6	15.3		NNW	19	8.5			10					Raining	The Staff.
SUB-SERIES.																			
Calf of Man, Isle of Man					57	13.9		NE			4		3						Thomas Dawson.
Cape Good Hope, Ob's'y			30.30	769.6	61.8	16.6	67	S	22	9.8		0	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			29.74	755.4	64.0	17.8	82	NW			2		4k			0	0		Francis Abbott, F.R.A.S.
Leith, Restaurig Park			29.80	756.9	64.0	17.8		W			3		4k			0	0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.24	768.1				E	20.6	9.2						0.065	1.65		C. Meldrum
Melbourne, Observatory			29.85	758.2	52.4	11.3	66	NE	2	0.9			4			0	0	Very fine	R. L. J. Ellery.
Monach L'ihouse, Hebrides			29.92	760.0	59	15.0		N			4	3	0	N		0	0		J. Youngelause.
North Unst, (Shetland Is.)			29.56	750.8	52	11.1		NW			4								Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. 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			29.74	755.5	73.2	22.9	64	SSW			2		3						
Faröe			29.69	754.2	72.0	22.2	76	WSW			4		9						
Godthaab, (Greenland)			30.07	763.7	45.9	7.7	82	NNE			4		8					Aurora?	
Stykkisholm, (Iceland)			29.97	761.2	48.4	9.1	95	Calm			0		10					Misty	
Thorshavn, (Faröe)			29.81	757.2	49.1	9.5	65	N			2		10						
Vestervig			29.65	753.1	67.3	19.6	83	SW			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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	764.5	73.4	23	66	SW			1		10k			0	0	Covered	Normal School.
Amiens																			Normal School.
Avignon			30.00	761.9	76.5	24.7	75	N			2		5		SW	0.567	14.4	Cloudy	Normal School.
Bar-sur-Seine			29.96	760.9	73.4	23.0	60	SW			3		5		W	0.189	4.8	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.95	760.8	72.1	22.3	59	W	6.0	2.7					SW	0	0		Beaumette Observatory.
Beauvais			29.91	759.8	76.6	24.8	49	W			3		8		WSW	0.217	5.5	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.08	764.0	76.6	24.8	71	S			2		8kn		S	0.59	15.	Very cloudy	Normal School.
Bourges			29.97	761.2	67.6	19.8	85	SW			2		8		SW	0.291	7.4	Very cloudy	Normal School.
Brest			29.96	760.9	72.9	22.7	79	WSW			2		10		WSW	0	0	Misty	Naval Observatory.
Carcassonne			30.07	763.7	70.7	21.5	64	W			2		2		E	0.976	24.8	Slightly cl'dy	Normal School
Caen																			Normal School.
Chartres			30.36	771.2	73.0	22.8	89	SW			2		10		W	0	0	Covered	Normal School.
Châlons-sur-Marne			29.93	760.2	75.2	24.0	67	Calm			0		5k		NE	0.079	2.0	Cloudy	Normal School.
Clermont			30.02	762.5	70.0	21.1	59	E			2		8		WSW	0.500	12.7	Very cloudy	Puy de Dome Obs'y.
Commercy			29.94	760.5	79.0	26.6	74	W			2		5kn		W	0	0	Cloudy	Normal School
Commune de Greasque*			30.07	763.7	79.7	26.5	42	NE			2		8		SW	0.055	1.4		M. Kina.
Grenoble			30.02	762.5	65.5	18.6	89	NNW			1		8		SW	0.08	2.	Very cloudy	Normal School.
La Roche-sur-Yon					71.2	21.8	74	W			2		8		E	0.075	1.9	Very cloudy	Normal School.
Le Mans			29.96	761.0	72.9	22.7	66	W			2		5		W	0	0	Cloudy	Normal School.
Lons-Le-Saulnier			30.01	762.3	74.1	23.4	66	SE			1		10			0	0	Covered	Normal School.
Mâcon			30.01	762.3	66.6	19.2	81	SW			4		0			0	0	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			29.96	760.9	72.7	22.6	69	SW			3		5		WSW	0.110	2.8	Cloudy	Normal School.
Nismes			30.00	762.0	75.6	24.2	74	E			1		8		SW	0.91	23.	Very cloudy	Normal School.
Orleans																			Normal School.
Paris, Observatory			29.93	760.1	74.3	23.5	62	SSW			3		5ck	N	SW	0.440	11.18	Cloudy	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			30.01	763.1	75.9	24.4	63	W			3		8		E	0.079	2.0	¾ covered	Naval Observatory.
Rouen			29.91	759.6	73.8	23.2	62	S			1		8		SW	0	0	Very cloudy	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School
Villefranche																			Normal School.
Sun-Series.																			
Fort de France, Martinique			29.89	759.3	80.6	27													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.24	768.1	61.6	18.1	78	SW	26.1	11.67			4		NE	0.260	6.6		—. Falguère.
Montsouris, Paris			29.93	760.2	76.3	24.6	56	SSW			3	..c	7k.cs	SW		Inap.	Inap		Montsouris Observ'tory.
Perpignan			30.01	764.2	78.6	25.9	68	NE	14.9	6.66			2		W	0.004	0.1		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.45	544.7			41.0	5.0		W			2		8					Cloudy	M. Baylac.
Pic du Midi, (Plantade) H.P.	22.60	576.3			46.4	8.0		W			3		9			0.343	8.7	Cloudy	General de Nansouty.
Saint Maur, (near Paris)			29.93	760.3	74.8	23.8	59	SW			2		5			0.374	9.5	Fair	E. Renou.
Toulouse			30.15	765.7	70.3	21.3	70	WNW			2		9			0.358	9.1		Toulouse Observatory
Tours			29.97	761.2	74.8	23.8	60	SSW			2		8		WSW	0.134	3.4		C. Marquet.
Versailles, (near Paris)			29.95	760.6	75.2	24.0	54	SW			2		7			0	0	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lee, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.95	760.6	80.2	26.8	57	W			3		8	W		0.048	0.2		Prof. T. Hoh.
Berlin			29.74	755.5	77.9	25.5	54	W			3		5			0	0		Prof. Arndt.
Breslau			29.94	760.5	85.1	29.5	37	SSE			2		4			0	0	Smoke-haze	Dr. P. Neugebauer.
Carlsruhe			29.90	759.4	76.6	24.8	60	SW			5		7			0.055	1.4		A. Senz.
Cassel			29.87	758.6	75.7	24.3	69	SSW			2		3	SW		0.024	0.6		Dr. H. Möhl.
Emden			29.86	758.5	74.7	23.7	61	WSW			3		5			0	0		Prof. Prestel.
Frankfort on the Main			29.91	759.7	79.3	26.3	50	WSW			2		4			0.039	1.0		Physical Society.
Friedrichshafen			29.95	760.6	76.3	24.6	65	SW			1		4			0.260	6.6		M. Wilhelm.
Hamburg			29.80	756.9	75.0	23.9	69	SSW			2		9ks,n	SW		0.366	9.3	Showery	Captain F. Hegemann.
Kiel			29.77	756.1	73.6	23.1	67	SW			2		10			0.087	2.2		Prof. G. Karsten.
Königsberg, (Prussia.)			29.85	758.1	74.1	23.4	51	SE			4		9			0.004	0.1		Prof. E. Luther.
Köslin			29.82	757.4	74.8	23.8		W			4		2			0	0		H. Müller.
Leipsic			29.88	758.9	82.4	28.0	42	SW			3		8	W		Inap.	Inap.	Sprinkling	Prof. Bruhns.
Memel			29.92	759.9	71.1	21.7	62	SE			2		10cs,n			0.012	0.3		Reinbrecht & Skalweit.
Münster			29.85	758.1	74.5	23.6	88	SW			2		10			0.039	1.0		Prof. E. Heis.
Neufahrwasser			29.80	756.9	82.4	28.0	41	SSE			3		8			0.020	0.5		A. Lothes.
Posen			29.86	758.4	86.0	30.0	37	SW			6		4			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.93	760.2	78.8	26.0	61	SW			1		5	SW		0.043	1.1		Dr. Schur.
Stuttgart			29.89	759.3	80.6	27.0	44	SW			2		4			Inap.	Inap.		Prof. Schoder.
Thorn			29.83	757.6	83.8	28.8	36	W			4		7			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.87	758.8	76.6	24.8	58	SW			6		3			0.028	0.7		Prof. Flesch.
Wustrow, Naval School			29.91	759.7	68.2	20.1	77	W			2		6			0.063	1.6		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	82.0	27.8		NE										Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.99	761.7	81.7	27.6	58	S	4.3	1.9			8			0	0		
Padua			30.02	762.5	78.6	25.9	81	NW	11.9	5.3			10	SW		0	0		
Vicenza			30.02	762.5	75.4	24.1	80	SW	2.5	1.1			10	W		0.123	3.1		
Verona			29.97	761.1	81.5	27.5	64	E			2		6			0.118	3.0		
Bergamo																			
Domodossola	29.00	736.5	30.00	761.9	70.2	21.2	83	SW			6		10			0	0		
Milan			30.02	762.5	82.6	28.1	50	ENE			2		7			0	0		
Pavia			30.00	762.0	74.5	23.6	72	E			4		9	SW		0.177	4.5		
Moncalieri			29.99	761.8	73.4	23.0	83	ESE	4.3	1.9			10	SW		0.126	3.2		
Mondovi	28.12	714.3	29.97	761.3	67.3	19.6	94	NW			6		10			0.315	8.0	Showery	
Porto Maurizio			30.00	762.1	68.0	20.0	70	NW			6		9	NE		0.039	1.0		
Genoa			29.97	761.2	75.7	24.3	65	E	0.7	0.3			10	E		0.929	23.6	Showery	
Piacenza			30.00	762.1	73.4	23.0	68	E			4		10	SE		0	0		
Parma			29.98	761.6	78.8	26.0	61	E			4		10			0.067	1.7		
Bologna			30.08	763.9	83.1	28.4	43	NW			1		4	E		0	0		
Florence			30.01	762.2	91.0	32.8	34	S			2		9	S		0	0		
Leghorn			30.00	762.1	83.1	28.4	59	S	19.9	8.9			8			0	0		
Siena	28.84	732.4	30.00	762.1	85.8	29.9	35	S	3.8	1.7			7	W		0.016	0.4		
Urbino	28.57	725.6	30.08	763.9	82.9	28.3	36	SW			2		3			0	0		
Ancona			29.98	761.5	84.9	29.4	58	SE			4		6			0	0		
Grosseto			30.08	764.0	88.2	31.2	42	SW			2		2	NW		0	0		
Rome			30.08	763.9	85.6	29.8	51	SW	9.8	4.4			4	W		0	0		
Naples, O. U.			30.10	764.6	86.4	30.2	58	SW			2		0			0	0		
Lecce			30.11	764.8	82.4	28.0	34	NNW	1.8	0.8			0			0	0		
Cosenza			30.09	764.2	91.0	32.8	68	WNW	4.9	2.2			0			0	0		
Riposto, (Sicily)			30.08	764.1	83.8	28.8	66	SE			2		1			0	0		
Palermo			30.04	763.1	82.6	28.1	65	ENE	7.4	3.3			0			0	0		
Caltanissetta	28.14	714.8	30.09	762.1	84.7	29.3	34	W			4		0			0	0		
Sub-Series.																			
Naples, S. R.			30.12	765.1	86.0	30.0	52	SSW	1.8	0.8			2	W		0	0		Prof. F. Brioschi.
Pesaro			30.06	763.5	83.7	28.7	55	ESE	26.0	11.6			5c,k	SW		0	0		L. Guidi.

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			29.89	759.3	68.0	20.0		WNW			3								
Groningen			29.74	755.5	73.4	23.0		SW			4								
Helder			29.80	756.9	70.0	21.1		SW			4								
Utrecht			29.79	756.7	77.0	25.0	57	W			4		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter and omit the rain-fall; for Utrecht, they give the the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	64.4	18.0	85	SSW	6.0	2.7			10			1.004	25.5	Raining	
Brönö			29.60	751.7	67.6	19.8	61	Calm	0	0			6			0	0		
Christiania			29.69	754.2	66.6	19.2	76	Calm	0	0			10			0	0		
Tromsö			29.63	752.7	53.2	11.8		NE	2	1			5			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Angra, (Azores,)	.....	.....	30.29	769.4	76.1	24.5	83	W	13.9	6.22	.....	.....	2	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.98	761.4	90.7	32.6	26	NW	1.8	0.8	.....	.....	3	.....	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.07	763.7	79.7	26.5	53	SW	8.7	3.9	.....	.....	1	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.04	763.0	80.6	27.0	43	ENE	9.8	4.4	.....	.....	2	NE	.....	0	0	.....	The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level, excepting Lisbon. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia at St. Petersburg.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	84.0	28.9	39	SSE	7	3	.....	.....	9	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.02	762.5	71.4	21.9	33	SSE	2	1	.....	.....	7	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.00	762.0	69.3	20.7	41	SSW	4	2	.....	.....	0	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.99	761.8	65.5	18.6	43	W	4	2	.....	.....	1	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.89	759.3	68.0	20.0	66	SSE	7	3	.....	.....	0	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.02	762.6	66.6	19.2	87	ESE	2	1	.....	.....	2	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.13	765.3	76.6	24.8	39	NE	4	2	.....	.....	2	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.09	764.3	72.0	22.2	67	NE	9	4	.....	.....	4	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.03	762.8	51.6	10.9	62	N	9	4	.....	.....	7	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.01	762.2	62.6	17.0	39	NW	18	8	.....	.....	5	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.82	757.4	54.1	12.3	63	NW	22	10	.....	.....	7	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.62	726.9	30.02	762.6	60.4	15.8	87	Calm	0	0	.....	.....	9	.....	.....	.....	.....	Raining	Physical Observatory.
Astrakhan	.....	.....	29.95	761.0	69.3	20.7	33	N	9	4	.....	.....	1	.....	.....	.....	.....	.....	Sebastianot.
Kasan	.....	.....	29.63	752.6	47.8	8.8	71	NW	4	2	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.30	718.8	29.22	742.1	51.8	11.0	86	WSW	4	2	.....	.....	10	.....	.....	.....	.....	Light rain	Meteorological Obs.
Nukuss	.....	.....	29.83	757.7	73.6	23.1	60	W?	9	4	.....	.....	8	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.68	753.8	67.3	19.6	57	SE	0	0	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.50	749.4	67.2	19.0	73	NW	2	1	.....	.....	7	.....	.....	Blank	Blank	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.86	758.5	76.3	24.6	94	Calm	0	0	.....	.....	9	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	29.79	756.6	72.5	22.5	97	SE	7	3	.....	.....	10	.....	.....	Blank	Blank	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 303.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	88.0	31.1	32	NW	8.5	3.78	.....	1	1	NE	.....	0	0	Light clouds	Royal Observatory.
San Fernando	.....	.....	29.96	761.0	87.6	30.9	47	WNW	10.1	4.5	.....	0	2	.....	W	.....	.....	.....	The Naval Observatory.

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	.....	.....	29.84	757.9	61.5	16.4	71	S	.....	.....	2	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	29.81	757.1	63.0	17.2	82	SSW	.....	.....	4	.....	3	.....	.....	0	0	.....	
Hernosand	.....	.....	29.77	756.1	60.4	15.8	85	S	.....	.....	6	.....	9	.....	.....	0	0	.....	
Stockholm	.....	.....	29.79	756.7	61.5	16.4	83	ESE	.....	.....	4	.....	10	.....	.....	0.079	2.0	Raining	
Wisby	.....	.....	29.57	758.8	64.4	18.0	90	S	.....	.....	4	.....	10	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.80	756.8	62.2	16.8	89	SE	8.1	3.6	.....	.....	10	.....	S	0.112	2.85	.....	Dr. Hildebrandsson.

Note.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower From —	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Geneva	28.66	727.9	30.06	763.4	64.2	17.9	89	NW			1		10			0.764	19.4	Covered	The Observatory.
Zurich	28.39	721.2	29.96	760.9	77.2	25.1	55	W			2		9			0	0	Covered	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +0.2 mm; Thermometer, —3.3 cent.; Relative Humidity, +33 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower From —	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			30.08	764.0	76.8	24.9	49		12	5.5			1		NE	0	0		
Fao, (Persian Gulf)			29.74	755.3	96.8	36.0		NW			3		0						
Salonica			30.17	766.2	84.9	29.4		NW			6		0						
Valona			30.15	765.7	79.3	26.3		W			1		0						
Varna			29.96	761.0	86.0	30.0		E			2		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.80	757.0	86.0	30.0	63	W			2		0					Clear	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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower From —	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.			29.64	752.8	53.7	12.1	68	NW	9	4.0			10			0	0		Hon. J. Ferguson.
Brockville, Ontario			30.10	764.5	64	17.8		W	1	0.4		0	2s		W	0	0	Fair	W. R. Bigg.
*Chatham, N. B.			29.62	752.3	51	0.6	80	NW	22	9.8		5k	5ks	NW	NW	0.06	1.5	Cloudy	G. A. Blair.
Charlottetown P. E. Island			29.64	752.1	52	11.1	83	W	5	2.2			8ks			0.020	0.51	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.04	762.2	63.7	17.6	64	S			1	3ck	0			0	0	Fair	James Smith, M. A.
Dalhousie, N. B.			29.68	753.9	55	12.8	84	N			3					0.09	2.3	Clear	H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			29.70	754.4	52.5	11.4	71	NW	14	6.3		0	0			0.120	3.05	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			29.70	754.4	68	20.0	100	SW	2	0.9		Haze	Fog	SW	SW	2.360	59.94	Foggy	James Stewart.
Goderich, Ontario			30.10	764.5	64.3	17.9	66	Calm			0	4c	3s	NW		0	0		H. J. Strang, M. A.
Granton, Ontario	29.01	736.8	30.10	764.5	55	12.8		Calm			0	2cs	0			0	0	Clear	James Grant.
*Halifax, N. S.			29.65	753.1	53	11.7	77	W	7	3.1			5ks			0	0	Fair	F. Allison, M. A.
*Kingston, Ontario			30.11	764.8	62	16.7	72	NW	3	1.3		8ck	0	NW		0	0	Fair	S. Woods, M. A.
Little Glace Bay, N. S.			29.69	754.1	59.5	15.3	70	SW	4	1.8		4k	0	SW		0	0	Fair	C. H. Rigby.
*Montreal, Quebec			29.99	761.7	60	15.6	60	NW	9	4.0		2cs	0	N		Inap.	Inap.	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.04	763.0	61	16.1	65	N	3	1.3		8ck	0	N		0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario			30.08	764.0	61	16.1	83	SW	4	1.8		2cs	0	W		0	0	Fair	Rev. R. Mosley.
Port Dover, Ontario			30.14	765.5	53	11.7	80	NW	6	2.7		8c	0	NW		0	0	Fair	H. Morgan.
Port Hastings, N. S.			29.66	753.4	54.9	12.7		SE	10	4.5						1.30	33.0	Fine	Peter Grant.
Port Stanley, Ontario			30.13	765.3	54	12.2	87	N	3	1.3		8ck	0	NW		0	0	Fair	M. Payne.
*Quebec, Quebec			29.92	760.0	54	12.2	87	SW	9	4.0		0	0			0.03	0.8	Clear	Capt. Ashe, R. N.
St. John, N. B.			29.68	753.9	55	12.8	93	W	16	7.2		3k	0			0.06	1.5	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			30.07	763.8	61	16.1	63	SW	2	0.9		2ks	2s			0	0	Fair	K. Stewart.
Stayner, Ontario			30.09	764.3	59	15.0	76	Calm	0	0		5c	0	NW		0	0	Fair	R. J. Cole.
Stratford, Ontario	28.82	732.0	30.10	764.5	51.0	10.6		Calm	0	0		3cs	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.70	754.4	63	17.2	71	SW	4	1.8		2ck	0	S		Inap	Inap.	Clear	T. C. Hill.
*Toronto, Ontario			30.13	765.3	56	13.3	55	W	5	2.2		8c	0	W		0	0	Fair	Magnetic Observatory.
Woodstock, Ontario			30.13	765.3	54.3	12.4	89	NW	1	0.4		4cs	1ks			0	0	Fine	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			29.88	758.9	55	12.8	100	SE					10n					Mis'ty	John Delaney.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.			30.02	762.5	62	16.7	56	W	1	0.4		0	Haze			0	0	Clear	
Alpena, Mich.			30.01	762.2	60	15.6	82	Calm	0	0			10s		W	0	0	Cloudy	
Atlantic City, N. J.			30.09	764.3	65	18.3	53	N	1	0.4		1c	0	N		0	0	Clear	
Augusta, Ga.			30.09	764.3	79	26.1	74	SE	4	1.8			10ks		E	0.03	0.8	Cloudy	
Baltimore, Md.			30.14	765.5	64	17.8	72	Calm	0	0		5cs	Sm'e			0	0	Smoky	
Barnegat, N. J.			30.08	764.0	68	20.0	50	NW	4	1.8		2cs	2s	W		0	0	Fair	
Bismarck, Dakota	27.95	709.9	29.49	749.0	69	20.6	95	NW	9	4.0			10s			Inap.	Inap.	Threatening	
Boston, Mass.			29.96	761.0	61	16.1	60	W	10	4.5		1c	Haze	NW		0	0	Clear	
Breckenridge, Minn.			29.64	752.8	68	20.0	94	E	8	3.6			10s			0	0	Cloudy	
Buffalo, N. Y.			30.09	764.3	58	14.4	72	E	2	0.9		8c	Sm'e	W		0	0	Fair	
Burlington, Vt.			30.00	762.0	58	14.4	70	Calm	0	0		2c	0			0	0	Fair	
Cairo, Ill.			30.00	762.0	74	23.3	81	NE	1	0.4		0	0			0	0	Clear	
Cape Hatteras, N. C.			30.05	763.3	72	22.2	63	NE	5	2.2		0	2s			0	0	Fair	
Cape Henry, Va.			30.10	764.5	73	22.8	42	N	10	4.5		2c	0			0	0	Fair	
Cape Lookout, N. C.			30.12	765.0	74	23.3	51	NE	10	4.5		0	Haze			0.25	6.3	Fair	
Cape May, N. J.			30.10	764.5	65	18.3	44	NE	1	0.4		2c	0	NW		0	0	Fair	
Charleston, S. C.			30.09	764.3	80	26.7	70	NE	6	2.7		0	0			0	0	Clear	
Cheyenne, Wyoming	23.87	606.3	29.81	757.2	54	12.2	68	NW	2	0.9		0	1s			0.20	5.1	Clear	
Chicago, Ill.			29.98	761.5	70	21.7	61	S	10	4.5		5ck	2s	SW		0	0	Fair	
Cincinnati, Ohio			30.01	762.2	65	18.3	83	E	2	0.9		Haze	Fog			0	0	Clear	
Cleveland, Ohio			30.10	764.5	55.6	13.1	77	SE	5	2.2		0	1s			0	0	Clear	
Corsicana, Tex.			29.95	760.7	74	23.3	85	S	1	0.4		2cs	0			0	0	Clear	
Davenport, Iowa			29.90	759.4	73	22.8	76	S	12	5.4		1cs	0	SW		Inap.	Inap.	Clear	
Denison, Tex.			29.95	760.7	78	25.6	81	S	6	2.7		0	0			0	0	Clear	
Denver, Col.	24.63	625.6	29.85	758.2	55	12.8	80	S	6	2.7		0	0			0.85	21.6	Clear	
Detroit, Mich.			30.07	763.8	61	16.1	71	SW	1	0.4		2ck	Haze	N		0	0	Fair	
Dodge City, Kan.	27.25	692.1	29.42	747.3	68	20.0	84	SE	16	7.2		2c	0	SW		0	0	Clear	
Dubuque, Iowa			29.84	757.9	73	22.8	81	SE	8	3.6		5cs	5s	W		0	0	Cloudy	
Duluth, Minn.			29.70	754.4	62	16.7	94	NE	4	1.8			10s			0.20	5.1	Cloudy	
Eastport, Me.			29.71	754.6	56	13.3	51	NW	16	7.2		8ck,cs	2s	NW,NE	W	0	0	Cloudy	
Erie, Pa.			30.07	763.8	63	17.2	67	S	3	1.3		5c	Sm'e			0	0	Fair	
Escanaba, Mich.																Blank	Blank		
Fort Gibson, Indian Ter.			29.88	758.9	79	26.1	78	E	6	2.7		0	0			0	0	Clear	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.69	728.7	29.74	755.4	75	23.9	76	S	4	1.8		0	0			0	0	Clear	
Fort Sully, Dakota	27.94	709.7	29.50	749.3	66	18.9	94	NW	10	4.5			10n			0.14	3.6	Light rain	
Florence, Arizona	28.42	721.9	29.90	759.4	64	17.8		W				0	0			0	0	Clear	
Galveston, Tex.			30.00	762.0	81	27.2	87	W	3	1.3		5c	2k	SE		0	0	Cloudy	
Grand Haven, Mich.			30.00	762.0	63	17.2	69	SE	8	3.6			10s		W	0	0	Cloudy	
Indianapolis, Ind.			30.03	762.7	65	18.3	68	E	1	0.4		0	0			0	0	Clear	
Indianola, Tex.			29.98	761.5	79	26.1	86	S	5	2.2		5c	0			0	0	Fair	
Jacksonville, Fla.			30.03	762.7	84	28.9	75	NE	5	2.2		9k	0	NE		0	0	Fair	
Keokuk, Iowa			29.86	758.4	74	23.3	81	S	4	1.8		0	0			0	0	Clear	
Key West, Fla.			30.01	762.2	82.2	27.9	74	NW	7	3.1		5k	0	NW		0	0	Fair	
Kittyhawk, N. C.			30.13	765.3	72	22.2	49	NE	4	1.8		0	2s			0	0	Fair	
Knoxville, Tenn.			30.05	763.3	71	21.7	90	E	6	2.7			10ks		W	0.13	3.3	Cloudy	
La Crosse, Wis.			29.76	755.9	70	21.1	100	SE	3	1.3			1n		SE	1.41	35.8	Heavy rain	
Leavenworth, Kan.			29.83	757.7	74	23.3	81	S	6	2.7		0	0			0.14	3.6	Clear	
Louisville, Ky.			30.02	762.5	64	17.8	83	N	3	1.3		0	0			0	0	Clear	
Lynchburg, Va.			30.11	764.8	68	20.0	69	Calm	0	0		0	0			0	0	Clear	
Malone, N. Y.			29.99	761.7	56	13.3	69	SW	5	2.2		2c	0	NW		0	0	Fair	
Marquette, Mich.			29.87	758.7	62	16.7	88	Calm	0	0			10s		S	Inap.	Inap.	Cloudy	
Memphis, Tenn.			29.98	761.5	78	25.6	78	NE	4	1.8		5c	Sm'e			0	0	Fair	
Milwaukee, Wis.			29.96	761.0	67	19.4	78	S	6	2.7			10ks		W	0	0	Cloudy	
Mobile, Ala.			29.99	761.7	79	26.1	82	N	3	1.3		5ck	5s	E		0	0	Cloudy	
Montgomery, Ala.			30.04	763.0	78.5	25.8	84	SE	12	5.4		Haze	2ks	SE	SE	0	0	Fair	
Morgantown, W. Va.	29.07	738.4	30.12	765.0	56	13.3	80	N	3	1.3			Fog			0	0	Foggy	
Mt. Washington, N. H.	23.51	597.1	29.87	758.7	27	— 2.8	100	NW	70	31.3			Fog			0	0	Foggy	
Nashville, Tenn.			29.97	761.2	79	26.1	78	NE	3	1.3		0	0			0	0	Clear	
New Haven, Conn.			30.02	762.5	61.0	17.8	45	NW	10	4.5		2ck	Haze			0	0	Clear	
New London, Conn.			30.03	762.7	66	18.9	45	NW	8	3.6		2c	0	NW		0	0	Fair	
New Orleans, La.			29.99	761.7	79.5	26.4	82	NE	4	1.8		5cs	2s	SE		0.08	2.0	Fair	
Newport, R. I.			29.99	761.7	62	16.7	57	W	15	6.7		2c	0	W		0	0	Clear	
New York, N. Y.			30.08	764.0	61	16.1	50	NW	7	3.1		0	Sm'e			0	0	Clear	
Norfolk, Va.			30.13	765.3	70	21.1	75	SW	2	0.9		2c	Haze			0	0	Fair	
North Platte, Neb.			29.23	742.4	68	20.0	84	Calm	0	0		0	2s			0	0	Clear	
Omaha, Neb.	26.82	681.2	29.70	754.4	76	24.4	86	S	10	4.5		0	0			0.37	9.4	Clear	
Oswego, N. Y.	28.69	728.7	30.08	764.0	63	17.2	69	W	7	3.1		8cs	Haze	N		0	0	Fair	
Pembina, Dakota			29.66	753.4	67	19.4	97	Calm	0	0			10s			0.19	4.8	Cloudy	
Philadelphia, Penn.			30.11	764.8	65	18.3	48	NW	3	1.3		5cs	Fog	NW		0	0	Fair	
Pike's Peak, Colorado	17.78	451.6	29.99	761.7	28	— 2.2	100	W	32	14.3			Fog			0.13	3.3	Foggy	
Pittsburgh, Penn.			30.12	765.0	51	10.6	93	NE	3	1.3			Fog			0	0	Foggy	
Port Huron, Mich.			30.08	764.0	59	15.0	81	S	3	1.3		5cs	1s	NW		0	0	Fair	
Portland, Me.			29.91	759.7	60	15.6	48	W	12	5.4		1c	0	N		0	0	Clear	
Portland, Oregon			30.02	762.5	55	12.8	80	Calm	0	0			10s			0.05	1.3	Cloudy	
Punta Rassa, Fla.			30.01	762.2	81.5	27.5	80	NE	6	2.7		2k	0	NE		Inap.	Inap.	Fair	
Rochester, N. Y.			30.09	764.3	56	13.3	68	SW	6	2.7		2c	0	NE		0	0	Fair	
Salt Lake City, Utah	25.52	648.2	29.85	758.2	55	12.8	87	E	1	0.4			10n			0.33	8.4	Light rain	
Sandy Hook, N. J.			30.07	763.8	65	18.3	53	NW	22	9.8		0	0			0	0	Clear	
San Diego, Cal.			30.01	762.2	64	17.8	68	E	4	1.8			10s		S	0	0	Cloudy	
San Francisco, Cal.			29.96	761.0	56	13.3	81	S	6	2.7			10s		S	0	0	Cloudy	
Santa Fé, N. M.	23.27	591.0	29.81	757.2	52	11.1	86	SE	2	0.9		0	5s			0.01	0.3	Fair	
Savannah, Ga.			30.08	764.0	80	26.7	78	NE	4	1.8		2k	0			3.40	86.4	Clear	
Shreveport, La.			30.01	762.2	80	26.7	82	S	1	0.4		5c	0	SW		0	0	Fair	
Smithville, N. C.			30.11	764.8	76	24.4	56	NE	8	3.6		1k	0	NE		0	0	Clear	
Springfield, Mass.			30.01	762.2	60	15.6	64	S	4	1.8		2cs	0			0	0	Clear	
St. Louis, Mo.			29.96	761.0	73	22.8	80	S	7	3.1		0	0			0	0	Clear	
St. Marks, Fla.			30.04	763.0	78	25.6	86	E	8	3.6		0	2ks		SE	0.34	8.6	Fair	
St. Paul, Minn.			29.64	752.8	71	21.7	95	S	4	1.8			10n			0.75	19.1	Light rain	
St. Paul's Island, Alaska			30.18	766.6	40	4.4	82	N	17	7.6			10s			Inap.	Inap.	Cloudy	
Thatcher's Island, Mass.			29.95	760.7	60	15.6	59	NW	22	9.8		0	0			0	0	Clear	
Toledo, Ohio			30.07	763.8	63	17.2	72	S	3	1.3		5ck	Haze	SW		0	0	Fair	
Tucson, Arizona	27.52	699.0	30.12	765.0	61	16.1		S				0	0			0	0	Clear	
Tybee Island, Ga.			30.06	763.5	82	27.8	67	E	12*	5.4*		2k	0	SE		0.10	2.5	Fair	
Vicksburg, Miss.			30.01	762.2	77.5	25.3	86	SE	1	0.4		5c,ck	0	SE		0	0	Fair	
Virginia City, M. T.	24.10	612.1	29.58	751.3	51	10.6	52	E	6	2.7		10k	0	W		0	0	Cloudy	
Washington, D. C.			30.13	765.3	64	17.8	66	Calm	0	0		2c	Fog	W		0	0	Fair	
Wilmington, N. C.			30.12	765.0	74	23.3	72	NE	6	2.7		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.
Wood's Holl, Mass			29.99	761.7	64	17.8	52	NW	13	5.8		0	0			0	0	Clear	
Yankton, Dakota	28.42	721.9	29.61	752.1	75	23.9	93	S	4	1.8		0	2s			0.10	2.5	Fair	
Yuma, Arizona			29.90	759.4	67	19.4		E				0	0			0	0	Clear	
Sub Series.																			
Kingston, Jamaica, W. I.			30.19	766.8	79	26.1	74	Calm	0	0		8c	2s			0	0		James Gall.
St. Georges, Bermudas			29.97	761.2	78.5	25.8	84	NNE	18	8.0			10n			0.02	0.5	Sprinkling	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa W. I.																			
Paramaribo, D. Guiana S.A			30.02	762.5	81	27.2	78	E			2	5k	5k	E		0.020	0.51	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.06	763.5			87.4	30.8		NE								0.384	9.75		Dr. H. Groot.
Medellin, Colombia, S. A.	25.24	641.1			63.2	17.3	90	S	1	0.4		9c8	0			0.01	0.3	Cloudy	Thomas Herran.
York Factory, B. A			29.70	754.4	60	15.6	77	S	9	4.0		2c	0	E		0	0		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.07	763.8	75	23.9		NE			1					0.21	5.3	Squally	Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Ad. le Fuller N 31° 50′, W. 78° 50′.	SW	6	30.01	762.2	83	28.3		NE			3	2k	0	NE		Rough.		Clear	Capt. James Jorgensen.
Steamer Hibernian. N. 41° 41′, W. 66° 15′.	S 39 W	9¾	29.88	758.9	55	12.8		WNW			4	..c		ENE		Smooth		Blue sky	Lieut. F. Archer, R. N. R.
Steamer Leipzig. N. 50° 25′, W. 19° 51′.	N 85 W		29.78	756.4	62.4	16.9		WNW			5		.k			Rough.		Clearing	Capt. R. Hoffmann.

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.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 857.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fè, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,533 (?) 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. * Estimated velocity. † Observation not simultaneous.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

Furnished by coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto-pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assgd.), Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			30.01	762.2	86.0	30.0	65	Calm			0		0			0	0	Clear	Charnot.
Algiers			29.98	761.6	66.92	19.42	80	NNE			2		7			0	0	Cloudy	Peter.
La Calle			29.93	760.3	88.0	31.1	64	NE			2		2			0	0	Clear	Kunts.
Tunis			29.95	760.8	91.0	32.8	54	E			3		0			0	0	Clear	Jacques.
Sfax			30.07	763.6	87.1	30.6	55	S			4		1			0	0	Clear	Chauvey.
Saida			30.04	763.1	94.1	34.5		NW			3		3			0	0	Fair	Millot.
Tebessa			30.02	762.5	87.8	31.0		N			3		4			0	0	Fair	Colin.
Geriville			30.11	764.8	90.1	32.3	25	NNW			3		2			0	0	Clear	Lemaillot.
Laghouat			30.07	763.8	98.6	37.0		S			3		2			0	0	Clear	Guyot.
Biskra			30.01	762.3	95.5	35.3	33	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			29.75	755.7	70.3	21.3	62	SW			4		10			0.620	0.5		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.67	753.7	78.4	25.8	60	W			2		10			0.390	9.9		Dr. Wierzbiski.
Eperies			29.68	753.8	82.6	28.1	57	S			5		6es			0	0		Julius Mikolik.
Gratz	28.52	724.5	29.66	753.4	75.7	24.3	61	SE			2		9			0	0		Andreas Rospini.
Hermannstadt	28.45	722.6	29.78	756.5	82.8	28.2	42	SE			2		0			0	0		Prof. Reissenberger.
Kremsmünster	28.48	723.3	29.77	756.2	64.8	18.2	78	W			2		10			0.180	4.8		Prof. C. Wagner.
Lemberg			29.65	753.2	80.8	27.1	70	S			3		5			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			29.81	757.2	75.4	24.1	70	SE			2		10ks			0.141	3.58		I.R.Hydrographic Office.
Szegediu																			Karl Stancel.
Trieste			29.78	756.3	79.7	26.5	57	SSW			1		10			0.295	7.5	Raining	Prof. V. Farolfi.
Vienna			29.74	755.3	67.6	19.8	87	W			1		10			0.646	16.4	Raining	I. R. Central Met. Ob's'y.

Note.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Grutz 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 J. C. Houzeau, 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			29.73	755.1	64.0	17.8	72	W			2		9k,ks		NW	0.236	6.00		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.69	754.1	53.2	11.8		WNW	37	16.5			6			0.040	1.02	Squally	William Boswell.
Ardrossan			29.81	757.2	60	15.6		NW			5		3					Blue sky	William McNeil.
Armagh, Observatory			29.94	760.5	61.9	16.6		NW	11	4.9			6					*D. clouds	S. Cail, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.00	762.0	64.0	17.8		NW			2–4		2					*D. clouds	J. Dreyer.
Bradford			29.77	756.1	62.2	16.8		W			2		7			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	84.2	29.0		NE			2		5					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			29.80	756.9	68.0	20.0		NNW			2		5					*D. clouds	H. Todd.
Cardington			29.82	757.4	65.0	18.3		N			1		5					*D. clouds	John McLaren.
Carlisle																			T. Bell, for J. Carmichael.
Chatham, School M. E.			29.80	756.9	65.0	18.3		SE			2		0					Blue sky	Capt. J. Fellowes, R.E.
Dartmoor	28.43	723.4	29.95	760.7	59.2	15.1		N			6		5					*D. clouds	R. E. Power.
Donaghadee			29.85	758.2	59	15.0		NNW			5		5					*D. clouds	J. Mac Gowan.
Dover			29.78	756.4	63	17.2		NW			2		2					¼ clouded	J. Costello.
Eccles (near Manchester)			29.80	756.9	57.7	14.3		W	6.8	3.0			8					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			29.89	759.2	63.7	17.6		NNE			3		2					*D. clouds	The Staff.
Fort Napier, (Natal)	27.90	708.6	30.14	765.5	74.4	23.6		E			2		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.98	761.5	78	25.6		W			3		8					Overcast	
Galway, Queen's College			29.92	760.0	64	17.8		E			3		4					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.03	762.7	85.6	29.8		E			2		0					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.77	756.1	59.4	15.2		NW			1		3					Fine	Lewis Stuart.
Great Yarmouth			29.77	756.1	63	17.2		NW			3		3					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			29.82	757.4	68.0	20.0		N			1		2					Blue sky	The Staff, for G. B. Airy
Guernsey																			Dr. S. E. Hoskins.
Helston			29.96	761.0	65	18.3		NE			4		3c			0.35	8.9	Fine	M. P. Moyle.
Holyhead			29.89	759.2	59	15.0		N			4		3					*D. clouds	John Tilston.
Kew, Observatory			29.82	757.4	62.5	16.9		NW	11	4.9			4					*D. clouds	The Staff.
Kingstown			29.94	760.2	61	16.1		NNW			5		5					*D. clouds	George Mitchell.
Leicester Museum			29.82	757.4	61.2	16.2		NW			2		8					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.97	761.2	87.0	30.6		SW			1		0						Corp'l F. Fraser, A. M. C.
Nairn			29.79	756.7	54	12.2		W			4		8					¾ clouded	W. D. Penny.
Nassau, (Bahamas)			29.99	761.7	76.2	24.6		NW			5		10					Raining	Surg. Maj. Henry.
Nottingham, Observatory			29.81	757.2	64.0	17.8		WNW			3		8k.d		WNW	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.83	757.7	61.6	16.4		NW			5		7					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.82	757.4	62	16.7		NW			2		3					Blue sky	J. Lucas.
Plymouth			29.87	758.7	66	18.9		NE			2		0					Blue sky	John Merrifield.
Roche's Point			29.97	761.2	61	16.1		NNE			4		2					Fine	W. Kennedy.
Saint Ann's Head			29.94	760.5	59	15.0		NNW			1		2					Blue sky	John C. Walker.
Saint Helier, Jersey			29.82	757.4	65.0	18.3		E			3		10					Overcast	A. P. Amy.
Sandwick Manse, Orkneys			29.71	754.6	51	10.6		NW	37	16.5			10					Hailing	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, Turkey			29.91	759.7	83.6	28.7		NE			2		0					Blue sky	Sergt. W. H. Lyne.
Sheffield								NW										*D. clouds	W. F. Cooper.
Silloth Rectory			29.78	756.4	70.7	21.5	46	NE			4		3			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.79	756.7	58.5	14.7		W			4		5						Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			29.86	758.4	55	12.8		NW			4		5					*D. clouds	John Smith.
Stratfield Turgiss			29.84	757.9	65.3	18.5		NW			2		1					Squally	Rev. Charles H. Griffith.
Thurso			29.72	754.9	51	10.6		NW			7		10					Gloomy	John Trotter.
Truro, Royal Institution			29.90	759.4	67	19.4		N			6		3					*D. clouds	W. Newcombe.
Valencia, Observatory			30.05	763.5	60.2	15.7		NNW	6	2.7			3					*D. clouds	The Staff.
Sub-Stations.																			
Calf of Man, (Isle of Man)					57	13.9		N			6		0						Thomas Dawson.
Cape Good Hope, Obs'y			30.01	762.2	76.6	24.8	56	SSE	8	3.6		0	0						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.54	750.3	64.0	17.8	88	N			1		0			0	0		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.78	756.4	63.0	17.2		W			3		3k			0	0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.23	767.8				E	19.5	8.7						0.01	0.3		C. Meldrum
Melbourne, Observatory			29.75	755.6	55.0	12.8	68	NNE	12	5.4			0			0	0	Fine	R. L. J. Ellery.
Monach Lighthouse, Hebrides			29.91	759.7	56	13.3		N			4	3	3	N		0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.42	747.3	50	10.0		N			8		10			Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. 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			29.57	751.1	65.5	18.6	60	WSW			2		10						
Faröe			29.56	750.8	57.8	14.5	74	W			6		8						
Godthaab, Greenland			30.25	768.3	48.2	9.0	81	Calm			0		0						
Stykkisholm, (Iceland)			30.09	764.3	54.1	12.3	80	Calm			0		0						
Thorshavn, (Faröe)			29.84	758.0	48.9	9.4	63	N			6		10						
Vestervig			29.43	747.6	56.8	13.8	76	W			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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	758.9	61.7	16.5	89	W			1		10ck			0.28	7.	Covered	Normal School.
Amiens																			Normal School.
Avignon			29.94	760.4	77.0	25	53	NNW			1		2		NW	0.031	0.8	Slightly cl'dy	Normal School.
Bar-sur-Seine			29.84	757.9	62.8	17.1	87	SW			2		10		WNW	Inap.	Inap.	Covered	C. Saillard.
Beaumette, (near Angers)			29.78	756.3	66.4	19.1	96	SW	4.5	2.0					SSW	0.386	9.8		Beaumette Observatory.
Beauvais			29.83	757.7	63.7	17.6	69	N			2		10		NW	0.197	5.00	Covered	Normal School.
Besançon																			Normal School.
Bourg en Bresse			29.97	761.2	66.2	19	86	S			2		10		S	0.126	3.2	Raining	Normal School.
Bourges			29.92	760.0	64.8	18.2	88	SW			2		10		SW	0.20	5.	Covered	Normal School.
Brest			29.71	754.6	61.3	16.3	98	NE			4		10		NE	0.689	17.50	Raining	Naval Observatory.
Carcassonne			30.08	764.0	72.3	22.4	71	W			1		5		E	0	0	Cloudy	Normal School
Caen																			Normal School.
Chartres			30.35	771.0	64.4	18	94	NW			1		10		W	0	0	Covered	Normal School.
Châlons-sur-Marne			29.81	757.2	62.6	17.0	89	SW			2		10			0.315	8.0	Raining	Normal School.
Clermont			29.89	759.2	67.1	19.5	76	W			2		8		W	0.039	1.0	Very cloudy	Puy de Dome Obs'y.
Commercy			29.83	757.6	64.0	17.8	84	W			4		5k		W	0.138	3.5	Cloudy	Normal School
Commune de Greasque*			29.99	761.8	77.4	25.2	42	NW			4		2		NW	0.04	1.		M. Rina.
Grenoble			29.89	759.1	66.6	19.2	77	NNW			2		10		W	1.230	31.25	Covered	Normal School.
La Roche-sur-Yon					64.4	18.0	96	SSW			2		8		NNE	0.209	5.3	Very cloudy	Normal School.
Le Mans			29.84	757.8	64.0	17.8	92	W			2		8		W	0.167	4.25	Very cloudy	Normal School.
Lons-Le-Saulnier			29.92	760.0	65.1	18.4	88	NW			1		10			0.110	2.8	Raining	Normal School.
Mâcon			30.00	761.9	66.9	19.4	85	NNW			4		0			0.045	1.1	Clear	Normal School.
Metz																			M. Schuster.
Mirecourt			29.85	758.3	66.7	19.3	82	SSW			2		10		SW	0.858	21.8	Covered	Normal School.
Nismes			29.94	760.4	70.9	21.6	71	NW			4		2		SW	0	0	Slightly cl'dy	Normal School.
Orleans																			Normal School.
Paris, Observatory			29.82	757.4	61.7	16.5	89	NW			2		10p		W	0.201	5.11	Raining	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			29.91	759.6	68.0	20.0	81	SW			3		10		NE	0.433	11.0	Rainy	Naval Observatory.
Rouen			29.82	757.4	63.9	17.7	69	NNW			1		8		SW	0.134	3.4	Very cloudy	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School
Villefranche																			Normal School.
Sub-Series.																			
Fort de France, Martinique			29.87	758.7	80.6	27													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.20	767.1	68.0	20.0	61	SW	14.9	6.66			8		SE	0	0		—. Falguère.
Montsouris, Paris			29.81	757.2	63.9	17.7	83	WNW			1		10			0.177	4.5	Sprinkling	Montsouris Observ'tory.
Perpignan			29.96	761.0	78.1	25.6	72	N	3.7	1.67			2		W	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.41	543.7			51.8	11.0		W			2		9					Cloudy	M. Baylac.
Pic du Midi, (Plantade) H.P.	22.66	575.5			58.6	14.8		W			3		8			0	0	Cloudy	General de Nansouty.
Saint Maur, (near Paris)			29.82	757.3	63.0	17.2	83	NW			1		10			0.248	6.3	Showery	E. Renou.
Toulouse			30.04	763.0	73.8	23.2	60	SW			1		7			0	0		Toulouse Observatory
Tours			29.81	757.9	65.7	18.7	90	WSW			2		10		W	0.063	1.6		C. Marquet.
Versailles, (near Paris)			29.82	757.4	62.2	16.8	92	WNW			1		10			0.287	7.30	Showery	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Hamberg			29.75	755.6	77.0	25.0	44	SW			6		9	SW		0	0		Prof. T. Hoh.
Berlin			30.03	762.8	73.0	22.8	63	NW			1		8			0.492	12.5	Raining	Prof. Arndt.
Breslau			29.75	755.7	70.9	21.6	75	NW			3		10			0.815†	20.7†		Dr. P. Neugebauer.
Carlsruhe			29.74	755.3	68.0	20.0	82	SW			2		10			0.110	2.8		A. Senz.
Cassel			29.71	754.5	68.0	20.0	75	NW			2		9	W		0.012	0.3		Dr. H. Möhl.
Emden			29.60	751.9	65.8	18.8	44	NNW			5		5	W		0	0		Prof. Prestel.
Frankfort on the Main			29.74	755.5	68.5	20.3	75	SW			2		10			0.075	1.9	Raining	Physical Society.
Friedrichshafen			29.82	757.3	69.1	20.6	75	S			2		8			0.850	21.6	Rainy	M. Wilhelm.
Hamburg			29.66	753.3	61.0	16.1	88	Calm			0		10n	WSW		0.236	6.0	Drizzling	Captain F. Hegemann.
Kiel			29.61	752.0	65.8	18.8	52	W			3		10			0.055	1.4		Prof. G. Karston.
Königsberg, (Prussia.)			29.62	752.3	76.5	24.7	63	SE			2		5			0.016	0.4	Thunder, lightn'g	Prof. E. Luther.
Koslin			29.63	752.7	66.7	19.3		NW			2		3			0.177	4.5		H. Müller.
Leipsic			29.66	753.4	76.1	24.5	49	WSW			2		9	W		Inap.	Inap.	Sprinkling	Prof. Bruhns.
Memel			29.63	753.3	66.2	19.0	91	S			2		10n			0.130	3.3	Smoke-haze.	Reinbrecht & Skalweit.
Münster			29.69	754.0	63.3	17.4	85	SW			2		10			0.059	1.5		Prof. E. Heis.
Neufahrwasser			29.62	752.3	73.0	23.1	80	NNE			1		8			0.260	6.6	Showery	A. Lothes.
Posen			29.65	753.1	79.0	26.1	53	WNW			5		4			0.024	0.6		Dr. Magener.
Strassburg, (In Alsace)			29.78	756.4	69.6	20.9	80	SW			2		10			0.362	9.2	Raining	Dr. Schur.
Stuttgart			29.83	757.7	72.5	22.5	53	W			2		8			0.059	1.5	Rainy	Prof. Schoder.
Thorn			29.62	752.3	85.1	29.5	40	W			2		7			0.028	0.7		Dr. Hasenbalg.
Treves, (Trier)			29.68	753.9	61.6	18.1	88	W			3		10			0.268	6.8		Prof. Flesch.
Wustrow, Naval School			29.71	754.5	61.7	16.5	86	WSW			2		10			0.020	0.5		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation. † Rainfall on the 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			29.93	760.3	88.9	31.6		NE										Very clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Udine			29.77	756.2	73.6	23.1	63	SW	0.7	0.3			9			0.087	2.2		
Padua			29.78	756.3	74.1	23.4	66	SW	2.5	1.1			10	SW		0	0		
Vicenza			29.78	756.5	73.9	23.3	69	SE	3.8	1.7			5	SW		0	0		
Verona			29.74	755.5	77.0	25.0	54	E			1		10			0	0		
Bergamo																			
Domodossola	28.76	730.5	29.76	756.0	72.1	22.3	67	SW			4		8			0	0		
Milan			29.81	757.1	82.0	27.8	53	S			2		3			0	0		
Pavia			29.79	756.6	74.1	23.4	64	S			1		4	E		0.472	12.0		
Moncalieri			29.80	756.8	74.5	23.6	65	SSE	3.8	1.7			3	NW		0	0		
Mondovi	27.95	709.9	29.80	756.9	74.8	23.8	43	ESE			2		2	NW		0	0		
Porto Maurizio			29.86	758.5	77.7	25.4	62	S			2		2			0.087	2.2		
Genoa			29.80	757.0	78.1	25.6	61	SE	6.9	3.1			4	SE		0	0		
Piacenza			29.78	756.5	73.0	22.8	60	SE			2		6	SW		0	0		
Parma			29.79	756.7	75.2	24.0	67	W			4		1			0	0		
Bologna			29.85	758.3	77.9	25.5	48	W			1		6	N		0.591	15.0	Showery	
Florence			29.82	757.5	79.7	26.5	62	W			2		5			0	0		
Leghorn			29.82	757.5	83.7	28.7	50	SSW	0	0			4			0	0		
Siena	28.63	727.3	29.80	757.0	76.6	21.8	61	SW	0	0			4	W		1.559	39.6		
Urbino	28.33	719.5	29.84	757.9	75.9	24.4	52	SW			4		5			0.433	11.0		
Ancona			29.77	756.2	78.8	26.0	60	SE			4		6			0.059	1.5		
Grosseto			29.81	757.2	82.8	28.2	48	SE			4		2	NW		0.291	7.4		
Rome			29.84	757.8	81.0	27.2	68	SSW	1.3	0.6			5	SW		0.004	0.1		
Naples, O. U.			29.89	759.2	81.0	27.2	71	SSW			6		10	SE		0.075	1.9	Showery	
Lecce			29.95	760.6	84.6	29.2	35	SSW	16.1	7.2			0			0	0		
Cosenza			29.95	760.7	91.0	32.8	68	NW	4.3	1.9			0			0	0		
Riposto, (Sicily)			29.91	760.4	84.2	29.0	66	E			1		0			0	0		
Palermo			29.87	758.8	92.8	33.8	32	SW	13.7	6.1			4			0	0		
Caltanissetta	28.06	712.6	29.92	759.9	83.1	28.4	35	WSW			4		0			0	0		
Sub-Series.																			
Naples, S. R			29.91	759.7	77.5	25.3	76	SW	8.1	3.6			10	SSW		0	0		Prof. F. Brioschi.
Pesaro			29.86	758.4	74.3	23.5	65	NE	16.3	7.27			9k.cs	SW		Blank	Blank		L. Guidi.

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			29.78	756.5	64.8	18.2		N			3								
Groningen			29.64	752.8	64.4	18.0		NW			4								
Helder			29.73	755.1	61.2	16.2		WNW			4								
Utrecht			29.69	754.1	68.2	20.1	49	NW			3		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter and omit the rain-fall; for Utrecht, they give the the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.31	744.5	60.8	16.0	60	SSW	5.5	2.5			5			0.925	23.5		
Brönö			29.28	743.8	66.6	19.2	61	NE	2	1			8			0	0		
Christiania			29.29	744.0	64.8	18.2	44	S	16.8	7.5			1			0.059	1.5		
Tromsö			29.48	748.7	47.5	8.6		NE	13	6			10			0.217	5.5		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	770.7	77.5	25.3	80	SE	4.9	2.19			4			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.97	761.3	95.9	35.5	13	SW	1.8	0.8			0			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.11	764.9	76.8	24.9	63	SW	4.3	1.9			4			0	0		Capt. D. A. da Cunha.
Lisbon			30.07	763.6	82.8	28.2	44	N	9.8	4.4			0			0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level, excepting Lisbon. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia at St. Petersburg.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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			29.63	752.6	81.7	27.6	49	Calm	0	0			10						Astronomical Obs.
Wilna			29.71	754.5	71.1	21.7	71	S	2	1			10						Astronomical Obs.
Dorpat			29.71	754.5	63.7	17.6	68	SSE	9	4			6						Physical Cabinet.
St. Petersburg			29.80	756.8	69.4	20.8	43	S	13	6			10						Central Physical Obs.
Kuopio			29.68	753.9	68.4	20.2	55	SE	27	12			0						Ch. Forsten.
Kieff			29.82	757.3	79.9	26.6	54	WSW	4	2			3						Physical Cabinet
Nikolaiev			30.01	762.3	81.0	27.2	34	S	20	9			0						Kuridakof.
Kertch			30.11	764.9	72.0	22.2	57	ENE	4	2			2						Lagorio.
Moscow			29.97	761.2	62.8	17.1	58	NNW	9	4			3						Meteorological Obs.
Lugan			29.99	761.7	64.6	18.1	36	N	11	5			1						Meteorological Obs.
Archangel			29.84	757.8	68.4	20.2	65	Calm	0	0			0						Ogorodnikof.
Tiflis	28.54	724.9	29.89	759.2	77.4	25.2	35	N	20	9			3						Physical Observatory.
Astrakhan			29.98	761.5	73.6	23.1	35	Calm	0	0			7			Blank	Blank		Sebastianot.
Kasan			29.89	757.0	48.2	9.0	80	NW	11	5			10						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.53	724.6	29.47	748.4	45.7	7.6	91	WSW	18	8			10					Light rain	Meteorological Obs
Nukuss			29.86	758.4	70.3	21.3	60	W?	7	3			10						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul			29.56	750.8	67.8	19.9	35	SW	31	14			3						Meteorological Obs.
Yeniseisk			29.45	748.0	64.4	18.0	74	ESE	4	2			5			Blank	Blank		Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.87	758.7	66.7	19.3	95	Calm	0	0			10			Blank	Blank		Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.82	757.5	73.6	23.1	98	SE	11	5			10						
Nikolaievsk, on the Amoor																			

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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			29.91	759.6	91.9	33.3	23	W	12.7	5.67		4	0			0	0	Light clouds	Royal Observatory.
San Fernando			30.04	763.1	87.4	30.8	40	WSW	9.6	4.3		0	0						The Naval Observatory.

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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			29.64	752.8	58.6	14.8	83	S			2		10			0.08	2.	Raining	
Umea			29.50	749.2	57.2	14.0	98	S			2		10					Raining	
Hernosand			29.42	747.3	59.0	15.0	96	S			4		10			0.217	5.5		
Stockholm			29.43	747.6	73.6	23.1	58	SSE			2		5			0.024	0.6		
Wisby			29.60	751.8	68.7	20.4	85	SW			4		5			0.047	1.2		
Sub-Series.																			
Upsala			29.41	747.0	72.0	22.2	61	SSW	11.6	5.2			8	SSW	SW	0.366	9.31		Dr. Hildebrandsson.

Note.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. 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	29.93	760.3	65.5	18.6	77	SSW			5		10			0.217	5.5	Covered	The Observatory.
Zurich	28.28	718.4	29.89	759.1	64.9	18.3	96	W			4		8			0.218	6.3	Raining	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, —2.8 mm.; Thermometer, —2.5 cent.; Relative Humidity, +21 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. 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	761.4	78.4	25.8	49	NE	10	4.5			0			0	0		
Fao, (Persian Gulf)			29.74	755.3	98.6	37.0		NW			4		0						
Salonica			30.02	762.4	75.6	21.2		SW			6		0						
Valona			30.00	761.9	86.2	30.1		S			3		0						
Varna			29.92	760.0	86.0	30.0		NE			2		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.80	757.0	86.4	30.2	56	NW			1		0					Clear	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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. 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.			30.12	765.0	56.9	13.8	70	N	9	4.0			7			0	0		Hon. J. Ferguson.
Brockville, Ontario			30.10	764.5	65	18.3		SW	1	0.4		2c	2s	SW	N	0	0	Fair	W. R. Bigg.
*Chatham, N. B.			30.00	762.0	54	12.2	83	N	13	5.8		2k	0	N		0.18	4.6	Fair	G. A. Blair.
Charlottetown P. E. Island			29.91	759.7	57	13.9	76	N	13	5.8		0	5ks		N	0.33	8.38	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			30.05	763.3	66.7	19.3	47	E			2	0	0			0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			30.06	763.5	56	13.3	78	NW			2					0	0	Clear	H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			30.07	763.8	54.0	12.2	74	NW	3	1.3		3c	0			0.010	0.25	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.27	743.4	68	20.0	100	SE	16	7.2		5k	5n	SE	SE	0.310	7.87	Cloudy	James Stewart.
Goderich, Ontario			30.02	762.5	61.1	16.2	93	Calm			0	10k	0			0	0	Unsettled	H. J. Strang, M. A.
Granton, Ontario	28.94	753.1	30.02	762.5	59	15.0		SE			1		10n			0.18	4.6	Cloudy	James Grant.
*Halifax, N. S.			29.87	758.7	58	14.4	78	N	9	4.0		0	2ks		N	0.104	2.64	Fair	F. Allison, M. A.
*Kingston, Ontario			30.08	764.0	67	19.4	72	NE	1	0.4		Haze	0			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			29.80	756.9	50.0	10.0	100	W	7	3.1			9n			1.60	40.6	Raining	C. H. Rigby.
*Montreal, Quebec			30.12	765.0	60	15.6	68	NE	8	3.6		0	0			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.09	764.3	62	16.7	72	E	12	5.4		2cs	0	E		0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.03	762.7	65	18.3	78	E	10	4.5		2k	5ks	SW	SW	0	0	Fair	Rev. R. Mosley.
Port Dover, Ontario			30.07	763.8	61	16.1	95	Calm	0	0			10n			0.11	2.8	Light rain	H. Morgan.
Port Hastings, N. S.			29.82	757.4	58.5	14.7		NW	6	2.7						0	0	Fine	Peter Grant.
Port Stanley, Ontario			30.05	763.3	62	16.7	96	E	8	3.6			10n		E	0.90	22.9	Light rain	M. Payne.
*Quebec, Quebec			30.14	765.5	54	12.2	93	Calm	0	0		2k	2ks			0	0	Fair	Capt. Ashe, R. N.
St. John, N. B.			30.04	763.0	53	11.7	73	NW	8	3.6		0	0			0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			29.99	761.7	64	17.8	80	Calm	0	0			10ks			0.02	0.5	Cloudy	K. Stewart.
Stayner, Ontario			30.00	762.0	67	19.4	68	SE	6	2.7		8c	0	NW		0	0	Fair	R. J. Cole.
Stratford, Ontario	28.76	730.5	30.01	762.2	57.9	14.4		SE	2	0.9			10n			0.286	7.26	Rainy	C. J. MacGregor, M. A.
*Sydney, C. B.			29.84	757.9	51	10.6	100	S	2	0.9		2k	8n		N	0.58	14.7	Clearing	T. C. Hill.
*Toronto, Ontario			30.04	763.0	68	20.0	54	NE	3	1.3		2ck	8ks	NW		0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.04	763.0	60.3	15.7	90	E	8	3.6			10ks			0.26	6.6	Gloomy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			29.96	761.0	56	13.3	70	SE				0	5k			1.26	32.0	Fair	John Delaney.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.			30.03	762.7	62	16.7	77	Calm	0	0		8k	Haze	W		0	0	Cloudy	
Alpena, Mich			29.90	759.4	65	18.3	94	SE	8	3.6			10s		SE	0.91	23.1	Cloudy	
Atlantic City, N. J			30.05	763.3	67	19.4	79	NW	4	1.8			10s		NW	0	0	Cloudy	
Augusta, Ga.			30.11	764.8	75	23.9	81	Calm	0	0			10s		NW	0	0	Cloudy	
Baltimore, Md			30.08	764.0	68	20.0	74	W	2	0.9			10n			Inap	Inap.	Light rain	
Barnegat, N. J			30.03	762.7	67	19.4	68	N	2	0.9			10s		N	0	0	Cloudy	
Bismarck, Dakota	27.86	707.6	29.43	747.5	58	14.4	81	NW	16	7.2			10s		NW	2.30	58.4	Cloudy	
Boston, Mass			30.07	763.8	63	17.2	62	SE	6	2.7		1k	Haze	NW		0	0	Hazy	
Breckenridge, Minn			29.44	747.8	64	17.8	73	SW	24	10.7		5k	0	SW		2.90	73.7	Fair	
Buffalo, N. Y			30.01	762.2	69	20.6	48	SW	4	1.8			10ks			0	0	Cloudy	
Burlington, Vt			30.09	764.3	63	17.2	67	Calm	0	0		0	2s			0	0	Fair	
Cairo, Ill			30.02	762.5	78	25.6	86	S	6	2.7		0	0			0	0	Clear	
Cape Hatteras, N. C			30.03	762.7	75	23.9	68	SE	2	0.9		2cs	0			0	0	Fair	
Cape Henry, Va			30.06	763.5	71	21.7	71	SW	11	4.9		8c	0	W		0	0	Fair	
Cape Lookout, N. C			30.11	764.8	77	25.0	52	S	1	0.4		2c	Haze	S		0	0	Fair	
Cape May, N. J			30.04	763.0	73	22.8	81	W	8	3.6			10s		W	0	0	Cloudy	
Charleston, S. C			30.10	764.5	77	25.0	73	N	5	2.2		2c	2cs			0	0	Fair	
Cheyenne, Wyoming	24.06	611.1	30.00	762.0	47	8.3	60	W	4	1.8		0	0			0.02	0.5	Clear	
Chicago, Ill			29.91	759.7	75	23.9	76	SW	10	4.5		0	0			0	0	Clear	
Cincinnati, Ohio			29.98	761.5	69	20.6	90	Calm	0	0		0	Fog			0	0	Foggy	
Cleveland, Ohio			30.00	762.0	61.7	16.5	84	SE	10	4.5			10n		NW	0.08	2.0	Light rain	
Corsicana, Tex			29.99	761.7	74	23.3	85	S	2	0.9		2cs	0			0	0	Clear	
Davenport, Iowa			29.91	759.7	77	25.0	82	SW	2	0.9		0	0			0	0	Clear	
Denison, Tex			29.97	761.2	77	25.0	81	S	5	2.2		0	0			0	0	Clear	
Denver, Col.	24.86	631.4	30.08	764.0	52	11.1	53	S	4	1.8		0	0			0	0	Clear	
Detroit, Mich			29.94	760.5	69	20.6	79	S	3	1.3		0	9s			0	0	Cloudy	
Dodge City, Kan	27.34	694.4	29.52	749.8	68	20.0	74	NW	8	3.6		0	2s		W	0	0	Fair	
Dubuque, Iowa			29.85	758.2	77	25.0	82	S	4	1.8		2c	0	S		0	0	Fair	
Duluth, Minn			29.69	754.1	60	15.6	94	NE	10	4.5			10n			0.07	1.8	Light rain	
Eastport, Me			30.03	762.7	54	12.2	73	NW	12	5.4		5c	0	NE		0	0	Fair	
Erie, Pa			30.04	763.0	64	17.8	78	S	6	2.7			10n			Inap.	Inap.	Light rain	
Escanaba, Mich			29.84	757.9	68	20.0	94	Calm	0	0			Fog			0.59	15.0	Foggy	
Fort Gibson, Indian Ter			29.93	760.2	78	25.6	77	SE	4	1.8		5ck	0	E		0	0	Fair	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T	28.74	730.0	29.78	756.4	77	25.0	72	S	4	1.8		0	0			0	0	Clear	
Fort Sully, Dakota	28.08	713.2	29.66	753.4	63	17.2	78	NW	10	4.5		2k	0	NW		0.45	11.4	Clear	
Florence, Arizona	28.41	721.6	29.88	758.9	71	21.7		SW				0	0			0	0	Clear	
Galveston, Tex			30.02	762.5	81	27.2	82	W	3	1.3		0	2ks			0	0	Fair	
Grand Haven, Mich			29.91	759.7	74	23.3	87	S	8	3.6		0	1s		SW	0.14	3.6	Clear	
Indianapolis, Ind			30.00	762.0	70	21.1	79	Calm	0	0		5c	Haze			0	0	Fair	
Indianola, Tex			30.01	762.0	83	28.3	79	SE	3	1.3		1k	0			0	0	Clear	
Jacksonville, Fla			30.04	763.0	76	24.4	95	NE	4	1.8			10n			1.25	31.7	Heavy rain	
Keokuk, Iowa			29.82	757.4	82	27.8	70	SW	8	3.6		0	Haze			0	0	Clear	
Key West, Fla			30.01	762.2	83.8	28.8	71	NW	8	3.6		2k,hz.	0	NW		0	0	Fair	
Kittyhawk, N. C			30.10	764.5	74	23.3	68	W	15	6.7		5c	2s	N		0	0	Cloudy	
Knoxville, Tenn			30.09	764.3	73	22.8	90	S	4	1.8		2ck	0	SW		0	0	Fair	
La Crosse, Wis			29.78	756.4	76	24.4	86	S	14	6.3		0	0			0.12	3.0	Clear	
Leavenworth, Kan			29.86	758.4	76	24.4	81	S	6	2.7		0	0			0	0	Clear	
Louisville, Ky			30.01	762.2	75	23.9	72	Calm	0	0			Fog			0	0	Foggy	
Lynchburg, Va			30.03	762.7	75	23.9	74	S	2	0.9		8c,ck	0	W		0	0	Fair	
Malone, N. Y			30.03	762.7	63	17.2	59	S	6	2.7		0	Sm'e		S	0	0	Smoky	
Marquette, Mich			29.80	756.9	70	21.1	90	S	7	3.1		0	0			0.80	20.3	Clear	
Memphis, Tenn			30.03	762.7	77	25.0	90	SE	2	0.9		5c	Fog	SW		0.02	0.5	Fair	
Milwaukee, Wis			29.90	759.4	76	24.4	86	W	12	5.4		0	Fog			0.40	10.2	Clear	
Mobile, Ala			30.05	763.3	80	26.7	86	S	4	1.8		2c	2s		SE	0.06	1.5	Fair	
Montgomery, Ala			30.09	764.3	80	26.7	78	SE	4	1.8		0	Haze			0.01	0.3	Clear	
Morgantown, W. Va	29.03	737.3	30.06	763.5	64	17.8	83	Calm	0	0			10s		NW	0	0	Threatening	
Mt. Washington, N. H	23.87	606.3	30.23	767.8	34	1.1	69	NW	16	7.2		0	0			0.02	0.5	Clear	
Nashville, Tenn			30.02	762.5	79	26.1	86	SE	2	0.9		8k	0	SW		0	0	Cloudy	
New Haven, Conn			30.05	763.3	69.0	20.6	60	NE	5	2.2		5ck	Fog	W		0	0	Fair	
New London, Conn			30.07	763.8	68	20.0	46	NE	3	1.3		5ck	0	NW		0	0	Fair	
New Orleans, La			30.00	762.0	80.5	26.9	80	E	5	2.2		1c	0	N		0.08	2.0	Clear	
Newport, R. I			30.06	763.5	65	18.3	52	NE	6	2.7		0	5ks		NW	0	0	Fair	
New York, N. Y			30.05	763.3	72	22.2	49	N	5	2.2		5ck	ks	W		0	0	Fair	
Norfolk, Va			30.08	764.0	72	22.2	67	SW	7	3.1		8c	0			0	0	Fair	
North Platte, Neb			30.04	763.0	58	14.4	69	Calm	0	0		0	0			0	0	Clear	
Omaha, Neb.	27.04	686.8	29.54	750.3	75	23.9	85	S	4	1.8		0	0			0	0	Clear	
Oswego, N. Y	28.76	730.5	29.78	756.4	66.5	19.2	76	S	1	0.4		10cs	Haze	N		0	0	Cloudy	
Pembina, Dakota			30.04	763.0	67	19.4	94	S	19	8.5			1s		S	0.44	11.2	Cloudy	
Philadelphia, Penn			29.26	743.2	68	20.0	65	Calm	0	0			10s			0	0	Cloudy	
Pike's Peak, Colorado	17.94	455.7	30.05	763.3	26	— 3.3	48	SW	26	11.6		0	0			0	0	Cloudy	
Pittsburgh, Penn			30.15	765.8	65	18.3	68	E	4	1.8			10n		N	0.03	0.8	Light rain	
Port Huron, Mich			30.06	763.5	60	15.6	94	SE	4	1.8			10s		S	1.72	43.7	Cloudy	
Portland, Me			29.96	761.0	59	15.0	66	N	8	3.6		0	0			0	0	Clear	
Portland, Oregon			30.10	764.5	52	11.1	86	Calm	0	0			10s		S	0.34	8.4	Cloudy	
Punta Rassa, Fla			30.27	768.8	80.0	26.7	86	N	8	3.6		Haze	Haze			0.12	3.0	Clear	
Rochester, N. Y			30.02	762.5	69	20.6	51	SW	4	1.8		2ck	0	NW		0	0	Fair	
Salt Lake City, Utah	25.53	648.4	29.86	758.4	63	17.2	33	S	10	4.5			10s			0.02	0.5	Cloudy	
Sandy Hook, N. J			30.04	763.0	72	22.2	58	N	2	0.9		10ck	Haze	NW		0	0	Cloudy	
San Diego, Cal.			30.02	762.5	66	18.9	78	S	4	1.8			10s		S	0	0	Cloudy	
San Francisco, Cal			30.05	763.3	56	13.3	87	Calm	0	0		0	0			0	0	Clear	
Santa Fé, N. M	23.34	592.8	29.88	758.9	47	8.3	62	N	6	2.7		0	0			0	0	Clear	
Savannah, Ga.			30.09	764.3	79	26.1	73	Calm	0	0		2c	2s	E		0	0	Fair	
Shreveport, La			30.06	763.5	77	25.0	91	E	1	0.4			10s		E	0.14	3.6	Cloudy	
Smithville, N. C			30.10	764.5	76	24.4	64	SE	1	0.4		8c	0	N		0	0	Cloudy	
Springfield, Mass			30.07	763.8	66.5	19.2	63	NE	4	1.8		5ck	0			0	0	Fair	
St. Louis, Mo			29.97	761.2	78	25.6	77	S	3	1.3		2c	0			0	0	Clear	
St. Marks, Fla			30.08	764.0	77	25.0	82	NE	4	1.8		0	2ks			0	0	Fair	
St. Paul, Minn			29.63	752.6	77	25.0	76	S	16	7.2		2k	Haze	SW		0	0	Fair	
St. Paul's Island, Alaska			30.25	768.3	39	3.9	82	N	6	2.7			10s			0	0	Cloudy	
Thatcher's Island, Mass			30.08	764.0	61	16.1	66	NE	8	3.6		0	0			0	0	Clear	
Toledo, Ohio			29.95	760.7	69	20.6	75	SW	10	4.5			10ks		W	0	0	Cloudy	
Tucson, Arizona	27.57	700.3	30.17	766.3	66	18.9		S				0	0			0	0	Clear	
Tybee Island, Ga			30.08	764.0	82	27.8	55	E	12*	5.4*		1k	0	E		0	0	Clear	
Vicksburg, Miss			30.06	763.5	76	24.4	90	SE	1	0.4		2c	5ck			0	0	Fair	
Virginia City, M. T	23.98	609.1	29.46	748.3	57	13.9	30	S	8	3.6		10k	0	SW		Inap	Inap.	Cloudy	
Washington, D. C			30.10	764.5	68	20.0	84	Calm	0	0			10n			Inap.	Inap.	Light rain	
Wilmington, N. C			30.11	764.8	72	22.2	75	E	2	0.9		8c	0	NE		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
Wood's Holl, Mass			30.08	764.0	64	17.8	62	NE	6	2.7		0	8s		N	0	0	Fair	
Yankton, Dakota	28.54	724.9	29.77	756.1	65	18.3	63	W	14	6.3		0	0			0	0	Clear	
Yuma, Arizona			29.94	760.5	60	15.6		E				0	0			0	0	Clear	
Sub Series.																			
Kingston, Jamaica, W. I.			30.16	766.1	80	26.7	78	Calm	0	0		2c	2s			0	0		James Gall.
St. Georges, Bermudas			30.01	763.0	79.5	26.4	82	NE	10	4.5		0	1ks			0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Nava-sa, W. I.																			
Paramaribo, D. Guiana S.A			30.04	763.0	82	27.8	79	E			2	3c	5k			0.070	1.78		C. J. Hering.
Batavia, Dutch Guiana S.A.	30.06	763.5			86.0	30.0		NE								0.098	2.50		Dr. H. Groot.
Medellin, Colombia, S. A.	25.21	640.3			66.2	19.0	78	Calm	0	0		3cs	5s			0	0	Cloudy	Thomas Herran.
York Factory, B. A			29.89	759.2	55.5	13.1	72	E	3	1.3		5cs	0	E		0	0		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.03	762.7	76	24.4		NE			2					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.

Marine Series	True course towards.	Hourly rate in knots.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	State of ocean.	Direction of swell from—	Weather.	Observer
Schooner Ad leFuller. At Brunswick, Ga.			30.04	763.0	80	26 7		NE			2	2ck	0					Clear	Capt. James Jorgensen.
Steamer Hibernian. N 39° 01′, W. 70° 17′.	S54 W	10	30.04	763.0	73	22.8		WNW			4	..ck		ENE		Smooth		†D. clouds	Lieut. F. Archer, R. N. R.
Steamer Leipzig. N. 5.° 50′, W 26° 9′.	W		30.21	767.3	62.4	16.9		WNW			3		Haze			Swells.	N		Capt. R. Hoffmann,

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.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,235 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fè, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,533 (?) 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. * Estimated velocity. † Detached clouds.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

Furnished by coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request, and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto-pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assgd.,) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			29.94	760.4	87.6	30.9	56	Calm			0		0			0	0	Clear	Charnot.
Algiers			29.91	759.8	96.4	35.8	83	NW			3		0			0.020	0.5	Clear	Peter.
La Calle			29.84	758.0	84.7	29.3	61	NE			2		1			0	0	Clear	Kunts.
Tunis			29.84	757.8	89.2	31.8	51	E			3		0			0	0	Clear	Jacques.
Biax			29.92	760.0	87.8	31.0	55	ESE			2		1			0	0	Clear	Chauvey.
Saida			29.93	760.3	93.2	34.0		NNW			2		2			0	0	Clear	Millot.
Tebessa			29.95	760.7	93.2	34.0		SW			1		1			0	0	Clear	Colin.
Geriville			30.04	762.9	86.0	30.0	33	NNW			2		2			0	0	Clear	Lemaillot.
Laghouat			29.99	761.8	96.8	36.0		NNW			2		2			0	0	Clear	Guyot.
Biskra			29.89	759.2	100.6	38.1		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			29.60	751.9	79.5	26.4	54	SW			3		10			0.835	21.2		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.61	752.1	67.3	19.6	94	NE			1		10			0.752	19.1		Dr. Wierzbiski.
Eperies			29.57	751.1	72.7	22.6	86	W			2		9k,8		E	0.508	12.90		Julius Mikolik.
Gratz	28.39	721.1	29.52	749.9	73.4	23.0	60	SW			3		7			0.008	0.2		Andreas Rospini.
Hermannstadt	28.27	718.0	29.60	751.9	79.2	26.2	55	ESE			3		5			0.018	0.45		Prof. Reissenberger.
Kremsmünster	28.22	716.8	29.49	749.1	72.3	22.4	55	WNW			2		10			0.866	22.0		Prof. C. Wagner.
Lemberg			29.55	750.5	74.8	23.8	80	SW			3		5			Blank	Blank		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.67	753.5	68.9	20.5	100	SE			1		10s			1.532	38.80		I.R.Hydrographic Office.
Szegedin			29.84	757.9	77.4	25.2	67	Calm			0					0.322	8.20		Karl Stancel.
Trieste			29.67	753.6	72.7	22.6	84	ESE			1		9			4.272	108.5	Rain & hail.	Prof. V. Farolfi.
Vienna			29.52	749.8	77.5	25.3	48	SSW			3		8			0.232	5.9		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Grutz 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 J. C. Houzeau, 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	62.2	16.8	48	WNW			3		9k		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.79	756.7	53.4	11.9		NW	23	10.3			5			0.010	0.25	Blue sky	William Boswell.
Ardrossan			29.84	757.9															William McNeil.
Armagh, Observatory			29.94	760.5	54.4	12.4		NNW	7	3.1			10					Showery	S. Cal, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.97	761.2	60.0	15.6		NW			1		10					Overcast	J. Dreyer.
Bradford			29.77	756.1	56.0	13.3		W			1		8			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.03	762.7	85.0	29.4		NE			1		6					*D. clouds	A. Sergt. J. F. Halanen, [H. C.
Cambridge, Observatory			29.82	757.4	62.5	16.9		NW			1		10			Blank	Blank	Overcast	H. Todd.
Cardington			29.83	757.7	63.0	17.2		W			1		8					*D. clouds	John McLaren.
Carlisle																			T. Bel, for J. Cartmell.
Chatham, School M. E			29.84	757.7	63.5	17.5		NE			1		7					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.55	725.2	30.04	763.0	54.0	12.2		NW			6		5					*D. clouds	R. E. Power.
Donaghadee			29.88	758.9	57	13.9		N			5		5					*D. clouds	J. Mac Gowan.
Dover			29.80	756.9	63	17.2		NW			2		1					¼ clouded	J. Costello.
Eccles (near Manchester)			29.80	756.9	52.8	11.6		WNW	9.4	4.2			10					Showery	Thomas Mackereth.
Falmouth, Observatory			30.01	762.2	60.0	15.6		NW			4		5					Squally	The Staff.
Fort Napier, (Natal)	27.77	705.4	30.00	762.0	89.6	32.0		N			3		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.07	763.8	78	25.6		W			1		8					Overcast	
Galway, Queen's College			29.93	760.2	65	18.3		E			5		8					Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.93	760.2	90.7	32.6		W			3		0					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.81	757.2	53.9	12.2		N			1		9					Wet	Lewis Stuart.
Great Yarmouth			29.79	756.7	62	16.7		WNW			1		6					*D. clouds	G. T. Watson.
Greenwich, Royal Ob's'y			29.84	757.9	63.2	17.3		NW			1		8					*D. clouds	The Staff, for G. B. Airy
Guernsey																			Dr. S. E. Hoskins.
Helston			30.03	762.7	65	18.3		NW			4		4k			0	0	Fine	M. P. Moyle.
Holyhead			29.88	758.9	55	12.8		NW			5		3					*D. clouds	John Tilston.
Kew, Observatory			29.85	758.2	61.9	16.6		WNW	12	5.4			9					Threatening	The Staff.
Kingstown			29.91	760.5	58	14.4		NW			5		8					Overcast	George Mitchell.
Leicester Museum			29.84	757.9	57.0	13.9		W			1		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)			29.87	758.7	87.8	31.0		SW			1		0						Corp'l F. Fraser, A. M. C.
Nairn			29.81	757.2	55	12.8		WNW			6		10					Overcast	W. D. Lenny.
Nassau, (Bahamas			29.97	761.2	81.4	27.4		NE			6		10					Overcast	Surg. Maj. Henry.
Nottingham, Observatory			29.83	757.7	58.5	14.7		WNW			2		10d		W	0.110	2.79	Raining	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.84	757.9	58.0	14.4		WNW			3		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Ob's'y			29.81	757.9	61	16.1		WNW			2		8					Overcast	J. Lucas.
Plymouth			29.95	761.0	64	17.8		NW			4		7					*D. clouds	John Merrifield.
Roche's Point			30.04	762.7	59	15.0		NNW			5		10					Overcast	W. Kennedy.
Saint Ann's Head			29.95	760.7	58	14.4		WNW			3		5					*D. clouds	John C. Walker.
Saint Helier, Jersey			29.92	760.0	64.6	18.1		N			3		8					¾ clouded	A. P. Amy.
Sandwick Manse Orkneys			29.78	756.4	48.8	9.3		NW	36	16.1			1					Showery	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery Turkey)			29.74	755.4	80.0	26.7		S			1		1					Blue sky	Sergt. W. H. Lyne.
Sheffield								NW										Showery	W. F. Cooper.
Silloth Rectory			29.82	757.4	62.5	16.9	55	NE			1		2			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.78	756.4	55.9	13.3		W			3		4			Blank	Blank	Threatening	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			29.90	759.4	52	11.1		N			6		8					*D. clouds	John Smith
Strathfield Turgiss			29.88	758.9	62.1	16.7		NW			2		8					*D. clouds	Rev. Charles H. Griffith.
Thurso			29.79	756.7	49	9.4		NNW			6		7					*D. clouds	John Trotter.
Truro, Royal Institution			30.00	762.0	64	17.8		NW			6		8					Gloomy	W. Newcombe.
Valencia, Observatory			30.06	763.5	57.3	14.1		N	11	4.9			10					Misty	The Staff.
SUB-STATIONS																			
Calf of Man, Isle of Man					57	13.9		N			7		0						Thomas Dawson.
Cape Good Hope, Ob's'y			30.07	763.8	61.3	16.3	70	W	17	7.6		0	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			29.34	745.9	63.0	17.2	87	W			2		7kn						Francis Abbott, F.R.A.S.
Leith, Restaurig Park			29.82	757.4	59.9	15.5		N			2		4k					Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.25	768.6				ESE	26.8	12.0						0	0		C. Meldrum
Melbourne, Observatory			29.77	756.1	42.2	5.7	76	NW	13	5.8			4			0.05	1.3	Fine	R. L. J. Ellery.
Monach L'thouse, Hebrides			29.98	761.5	54	12.2		N			6	5	3	N		0.21	5.3		J. Youngclause.
North Unst, (Shetland Is.)			29.56	750.8	44	6.7		N			8		10			0	0		Robert Burnet.
																Blank	Blank		

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. 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			29.52	749.9	62.2	16.8	46	NW			4		8						
Fanöe			29.61	752.0	59.4	15.2	54	WNW			6		5						
Godthaab, (Greenland)			30.13	765.2	47.5	8.6	74	Calm			0		2						
Stykkisholm, (Iceland)			30.04	763.1	52.3	11.3	78	Calm			0		0						
Thorshavn, (Faröe)			29.85	758.3	49.3	9.6	47	N			6		4						
Vestervig			29.50	749.4	57.2	14.0	65	WNW			6		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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.01	759.8	65.3	18.5	53	ENE			1		10ck			0.12	3.	Covered	Normal School.
Amiens																			Normal School.
Avignon			29.09	754.2	77.4	25.2	69	S			2		5		WSW	0.24	6.	Cloudy	Normal School.
Bar-sur-Seine			29.75	755.6	64.2	17.9	54	N			2		5n		NNE	0.764	19.4	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.86	758.4	64.8	18.2	39	NW	14.3	6.4					NW	0.024	0.6		Beaumette Observatory.
Beauvais			29.82	757.5	64.0	17.8	55	NW			2		8		NW	0	0	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			29.72	755.0	69.8	21	77	S			2		5n		S	0	0	Cloudy	Normal School.
Bourges			29.79	756.6	63.7	17.6	78	NW			3		10		NNW	1.240	31.5	Covered	Normal School.
Brest			29.96	760.9	62.4	16.9	67	NNE			4		4k		NNE	0.108	2.75		Naval Observatory.
Carcassonne			29.69	754.1	69.8	21	66	W			3		8		E	0.31	8.	Very cloudy	Normal School.
Caen																			Normal School.
Chartres			30.10	764.6	65.1	18.4	71	N			2				N	0	0		Normal School.
Châlons-sur-Marne			29.75	756.0	66.2	19.0	46	N			4		5k		S	0.433	11.0	Cloudy	Normal School.
Clermont			29.72	755.0	62.1	16.7	83	NW			2		10		W	0.039	1.0	Covered	Puy de Dome Obs'y
Coëmmercy			29.78	756.4	61.9	16.6	67	N			2		2k		N	0.142	3.6	Slightly cl'dy	Normal School
Commune de Greasque*			29.78	756.5	79.5	26.4	55	W			2		8		W	0	0		M. Kina.
Grenoble			29.58	751.2	69.8	21	69	NW			2		5		N	0.16	4.	Cloudy	Normal School.
La Roche-sur-Yon					66.6	19.2	55	NNW			4		5		SSE	0.547	13.9	Cloudy	Normal School.
Le Mans			29.85	758.3	65.3	18.5	88	NW			4		8		NW	0.453	11.5	Very cloudy	Normal School.
Lons-Le-Saulnier			29.69	754.1	62.6	17	88	N			2		5		N	0.47	12.	Partly cloudy	Normal School.
Mâcon			29.92	760.0	65.5	18.6	88	NW			2		5		NE	0.322	8.2	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			29.71	754.7	64.4	18.0	75	N			2		8		NE	0	0	Very cloudy	Normal School.
Nîmes			29.71	754.6	74.1	23.4	73	SE			2		8		W	0.217	5.5	Very cloudy	Normal School.
Orleans																			Normal School.
Paris, Observatory			29.81	757.1	63.7	17.6	47	NNW			3		5k		N	0.028	0.7	Cloudy	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			29.80	759.2	73.6	23.1	51	N			3		8		S	0.004	0.1	¾ covered	Naval Observatory.
Rouen			29.82	757.3	66.0	18.9	60	S			1		5		SW	0	0	Cloudy	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School
Villefranche																			Normal School.
Sub-Series.																			
Fort de France, Martinique			29.87	758.8	81.3	27.4													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.04	763.1	59.0	15.0	81	NE	11.2	5.00			10		NE	0	0		—. Falguère.
Montsouris, Paris			29.89	757.0	61.8	18.2	48	NNW			3		6k		N	0.035	0.9		Montsouris Observ'tory.
Perpignan			29.71	754.5	82.6	28.1	65	NW	22.4	10.00			9		SW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.21	538.8			33.8	1.0		NW			4		10					Rain & snow	M. Baylac.
Pic du Midi, (Plantade) H.P.	22.46	570.6			39.7	4.3		NW			4		10			0.709	18.0	Rain & snow	General de Nansouty.
Saint Maur, (near Paris)			29.81	757.2	66.7	19.3	46	NNW			2		3			0.075	1.9		E. Renou.
Toulouse			29.84	757.8	66.9	19.4	88	W			5		10			0.181	4.6		Toulouse Observatory
Tours			29.84	757.8	68.0	20.0	47	NE			2		7		N	1.229	31.0		C. Marquet.
Versailles, (near Paris)			29.82	757.4	65.1	18.4	50	N			2		6			0.039	1.00	Fair	Dr. A. Béringy.
Zi-Ka-Wei, (near Shanghai)			29.75	755.6	77.0	25.0	97	ESE	2.7	1.2			3			0	0		Marc Dechevrens, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.68	753.8	62.8	17.1	63	NW			5		9	N		0.01	0.3		Prof. T. Hoh.
Berlin			29.63	752.6	67.8	19.9	54	NW			1		9			0.063	1.6		Prof. Arndt.
Breslau			29.70	754.3	60.6	15.9	70	NNW			4		10						Dr. P. Neugebauer.
Carlsruhe			29.66	753.4	62.6	17.0	76	N			3		10			0.882	22.4		A. Senz.
Cassel			29.69	754.1	68.0	20.3	53	WNW			2		5	WNW		0.177	4.5		Dr. H. Möhl.
Emden			29.66	753.3	61.3	16.3	50	NW			3		4			0.276	7.0		Prof. Prestel.
Frankfort on the Main			29.71	754.6	65.3	18.5	45	NE			2		4			0.441	11.2		Physical Society.
Friedrichshafen			29.66	753.4	61.7	16.5	91	NNW			2		10			0.268	6.8		M. Wilhelm.
Hamburg			29.64	752.9	61.9	16.6	57	WNW			3		4k	W		0.421	10.7	Showery	Captain F. Hegemann.
Kiel			29.60	751.8	64.2	17.9	46	W			5		7			0	0		Prof. G. Karsten.
Königsberg, (Prussia.)			29.56	750.8	66.0	18.9	67	W			2		5			1.906	48.4		Prof. E. Luther.
Koslin			29.60	751.9	62.2	16.8		W			4		4			1.119	28.2		H. Müller.
Leipsic			29.67	753.7	63.0	17.7	50	NW			1		9			0.220	5.6		Prof. Bruhns.
Memel			29.55	750.5	67.6	19.8	70	W			2		4ck,k			0.236	6.0		Reinbrecht & Skalweit.
Münster			29.74	755.5	64.9	18.3	75	W			2		3			0.114	2.9		Prof. E. Heis.
Neuhahrwasser			29.57	751.1	69.4	20.8	50	WNW			2		7	SW		0.110	2.8		A. Lothes.
Posen			29.61	752.2	71.4	21.9	38	NW			2		2			Inap.	Inap.		Dr. Mageuer.
Strasburg, (in Alsace)			29.69	754.1	61.9	16.6	74	NE			1		10	NE		0.591	15.0		Dr. Schur.
Stuttgart			29.65	753.0	58.1	14.5	86	N			1		10			0.547	13.9		Prof. Schoder.
Thorn			29.59	751.5	73.0	22.8	48	SW			4		5			0.055	1.4		Dr. Hasenbalg.
Treves, (Trier)			29.69	754.1	64.9	18.3	42	W			5		2			0	0		Prof. Flesch.
Wustrow, Naval School			29.68	753.9	63.3	17.4	59	W			3		4			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	85.1	29.5		S										Very clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.65	753.1	66.9	19.4	87	E	0.7	0.3			10			0.217	5.5		
Padua			29.60	751.8	70.9	21.6	81	NW	8.7	3.9			10	E		0.008	0.2		
Vicenza			29.65	752.5	69.1	20.6	82	NE	1.3	0.6			10	S		0.075	1.9		
Verona			29.58	751.4	75.4	24.1	54	NE			4		6			0	0		
Bergamo																			
Domodossola	28.57	725.7	29.57	751.1	71.2	21.8	73	S			6		9			0	0		
Milan			29.58	751.3	79.7	26.5	51	E			2		10			0	0		
Pavia			30.57	751.0	74.5	23.6	69	E			1		10			0	0		
Moncalieri			30.57	751.1	69.4	20.8	94	SE	3.1	1.4			6	NW		0	0		
Mondovi	27.70	703.6	29.55	750.6	74.8	23.8	66	WNW			2		7	W		0	0		
Porto Maurizio			29.63	752.5	79.2	26.2	57	WSW			6		6	NE		0	0		
Genoa			29.60	751.7	78.4	25.8	63	SE	13.7	6.1			10	SE		0	0		
Piacenza			29.57	751.1	73.0	22.8	76	N			4		10			0	0		
Parma			29.58	751.4	79.5	26.4	49	WSW			4		5			0	0		
Bologna			29.65	753.0	79.7	26.5	39	SW			2		4	N		0.157	4.0		
Florence			29.68	753.9	82.4	28.0	52	SW			4		10	SW		0.047	1.2		
Leghorn			29.69	754.1	80.1	26.7	60	SSW	13.7	6.1			7			0	0		
Siena	28.53	724.7	29.70	754.4	80.2	26.8	49	SW	1.3	0.6			8	W		0	0		
Urbino	28.21	716.5	29.72	754.9	76.1	24.5	56	SW			6		7			0	0		
Ancona			29.65	753.1	81.0	27.2	64	SSE			4		6			0	0		
Grosseto			29.71	754.6	86.7	30.4	48	NW			2		3	SE		0	0		
Rome			29.78	756.5	82.6	28.1	61	SW	6.9	3.1			9	SW		0	0		
Naples, O. U.			29.82	757.5	82.4	28.0	65	W			4		7	WNW		0	0		
Lecce			29.84	757.8	82.4	28.0	38	NNW	9.4	4.2			1			0	0		
Cosenza			29.87	758.8	89.6	32.0	70	NW	8.1	3.6			6			0	0		
Riposto, (Sicily)			29.82	757.3	83.8	28.8	67	NE			2		1			0	0		
Palermo			29.81	757.1	85.5	29.7	52	NE	4.3	1.9			1			0	0		
Caltanissetta	27.93	709.5	29.80	756.8	83.3	28.5	42	W			4		0			0	0		
Sub-Series.																			
Naples, S. R			29.82	757.3	79.5	26.4	63	SW	3.1	1.4			8	WSW		0.626	15.9		Prof. F. Brioschi.
Pesaro			29.71	754.5	81.1	27.3	56	SW	22.8	10.18			10k	SW		Blank	Blank		L. Guidi.

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	757.1	63.7	17.6		NNW			4								
Groningen			29.65	753.2	61.5	16.4		NW			4								
Helder			29.74	755.4	59.4	15.2		NW			4								
Utrecht			29.71	754.6	63.9	17.7	52	NW			2		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter and omit the rain-fall; for Utrecht, they give the the weather as published from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.30	744.1	47.8	8.8	88	NW	15.4	6.9			10			1.161	29.5	Raining	
Brönø			29.08	738.6	61.5	16.4	52	Calm	0	0			2			0	0		
Christiania			29.20	741.6	59.5	15.3	51		7.8	3.5			9			0.102	2.6		
Tromsö			29.35	745.5	52.5	11.4		Calm	0	0			10			0.039	1.0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Angra, (Azores,)			30.29	769.4	74.8	23.8	83	ENE	13.9	6.22			3			0.157	4.0		Dr. J. A. N. Sampaio.
Campo Major			29.95	760.8	85.1	29.5	42	WSW	15.6	6.7			4	SW		0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.11	764.7	75.6	24.2	69	Calm	0	0			10			0	0		Capt. D. A. da Cunha.
Lisbon			30.07	763.8	76.3	24.6	66	NW	13.7	6.1			6			0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level, excepting Lisbon. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia at St. Petersburg.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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			29.57	751.1	71.8	22.1	66	Calm	0	0			10						Astronomical Obs.
Wilna			29.53	750.0	66.9	19.4	90	W	4	2			10					Raining	Astronomical Obs.
Dorpat			29.46	748.3	64.8	18.2	76	S	7	3			10			Blank	Blank		Physical Cabinet.
St. Petersburg			29.53	750.0	69.3	20.7	63	SSE	27	12			9						Central Physical Obs.
Kuopio			29.40	746.7	59.0	15.0	96	SE	22	10			10					Raining	Ch. Forsten.
Kieff			29.67	753.5	82.2	27.9	41	SSW	18	8			1						Physical Cabinet.
Nikolaiev			29.90	759.4	82.0	27.8	45	SSE	16	7			4						Kurdakof.
Kertch			29.99	761.7	74.5	23.6	57	ESE	13	6			0						Lagorio.
Moscow			29.93	760.1	65.7	18.7	60	S	7	3			0						Meteorological Obs.
Lugan			29.93	760.1	76.8	24.9	31	SW	9	4			5						Meteorological Obs.
Archangel			29.75	755.6	72.0	22.2	43	S	18	8			0						Ogorodnikof.
Tiflis	23.61	726.7	29.96	760.9	81.3	27.4	42	E	9	4			3						Physical Observatory.
Astrakhan			30.04	762.8	71.8	22.1	32	NE	7	3			1						Sebastianof.
Kasan			29.94	760.4	58.6	14.8	61	NNE	7	3			7						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.87	733.4	29.82	757.3	52.3	11.3	74	W	4	2			10						Meteorological Obs.
Nukuss			29.97	761.3	73.9	23.3	48	W?	4	2			2						
Kasaly																			Rebrof.
Tashkend																			Michelson.
Barnaul			29.67	753.7	55.4	13.0	58	SW	4	2			2						Meteorological Obs.
Yeniseisk			29.40	746.8	60.8	16.0	69	S	2	1			7			Blank	Blank		Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.76	755.8	67.8	19.9	98	NE	25	11			10			Blank	Blank		Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.75	755.7	74.3	23.5	97	SE	11	5			10						
Nikolaievsk, on the Amoor																			

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,311.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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			29.86	758.4	72.7	22.6	61	NW	19.0	8.50			10			0.008	0.2	Rainy	Royal Observatory.
San Fernando			30.01	763.0	80.8	27.1	55	WNW	7.6	3.4		0	0						The Naval Observatory.

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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			29.31	744.4	58.6	14.8	98	SE			4		10			0.31	8.	Raining	
Umea			29.26	743.1	60.4	15.8	64	S			7		1			0.013	23.2		
Hernosand			29.21	741.9	61.7	16.5	72	S			4		5			0.177	4.5		
Stockholm			29.30	744.2	66.4	19.1	51	S			4		7			0	0		
Wisby			29.42	747.3	65.8	18.8	56	SW			6		0			0.004	0.1		
Sub-Series.																			
Upsala			29.28	743.6	59.4	15.2	74	SW	11.2	5.0			9		SW	0.009	0.22	Raining	Dr. Hildebrandsson.

Note.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From -	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From -	Clouds. 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	28.27	718.0	29.65	753 2	67.8	19.9	75	SW	.....	.....	1	.....	9	.....	.....	0.354	9.0	Covered	The Observatory.
Zurich	28.06	712.8	29.69	754.2	56.7	13.7	98	N	.....	.....	1	.....	10	.....	.....	0.394	10.0	Thunder-storm	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE—For Geneva the corresponding departures from the normal values are: Barometer, —9.7 mm; Thermometer, —1.1 cent.; Relative Humidity, +18 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From -	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From -	Clouds. 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	.....	.....	29.80	756.9	78.6	25.9	48	ESE	7	3 0	.....	....	2	.....	WSW	0	0	.....	
Fao, (Persian Gulf)	.....	.....	29.69	754.1	97.5	36.4	.....	NW	.....	.....	4	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.80	756.9	94.3	34.6	.....	SE	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	29.89	759.3	85.6	29.8	.....	S	.....	.....	3	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	29.76	756.0	84.2	29.0	.....	N	.....	.....	2	.....	0	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.81	757.1	86.7	30.4	57	W	.....	.....	1	.....	0	.....	.....	.....	.....	Clear	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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From -	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From -	Clouds. 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.	.....	.....	30.09	762.0	61.9	16.6	59	Calm	0	0	.....	.....	0	.....	.....	0	0	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.18	766.6	61	16.1	.....	NE	4	1.8	.....	2c	Haze	.....	.....	0	0	Hazy	W. R. Bigg.
*Chatham, N. B.	.....	.....	30.01	763.0	57	13.9	72	SW	1	0.4	.....	8ck	0	SW	.....	0.01	0.3	Fair	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.01	762.2	55	12.8	84	N	5	2.2	.....	.....	10s	.....	.....	0.020	0.51	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.13	765.3	64.7	18.2	66	E	.....	.....	2	9c	0	.....	.....	0	0	Fair	James Smith, M. A.
Dalhousie, N. B.	.....	.....	30.07	763.8	57.5	14.2	75	NW	.....	.....	2	.....	.....	.....	.....	0	0	Clear	H. A. Johnson.
Esquimault, B. C.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Bevis.
Fredericton, N. B.	.....	.....	30.12	765.0	56.5	13.6	67	NW	9	4.0	.....	0	0	.....	.....	0	0	Fair.	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.78	756.4	54	12.2	93	NW	9	4.0	.....	2ck	2ks	NW	NW	0.170	4.32	Fair	James Stewart.
Goderich, Ontario	.....	.....	30.01	762.2	74.1	23.4	80	S	.....	.....	1	3ck	2s	W	.....	0	0	Fine	H. J. Strang, M. A.
Granton, Ontario	28.98	736.1	30.04	763.0	68	20.0	.....	SE	.....	.....	1	1k	0	E	.....	0	0	Clear	James Grant.
*Halifax, N. S.	.....	.....	30.03	762.7	59	15.0	73	W	17	7.6	.....	.....	5n	.....	.....	0.090	2.29	Fair	F. Allison, M. A.
*Kingston, Ontario	.....	.....	30.16	766.1	62	16.7	77	E	1	0.4	.....	Haze	Sm'e	.....	E	0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.	.....	.....	29.90	759.4	56.2	13.4	80	N	6	2.7	.....	8k	0	N	.....	0.26	6.6	Cloudy	C. H. Rigby.
*Montreal, Quebec	.....	.....	30.16	766.1	59	15.0	87	NE	6	2.7	.....	8c	0	NE	.....	0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.17	766.3	61	16.1	68	E	8	3.6	.....	10ck	0	E	.....	0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.07	763.8	66	18.9	86	S	7	3.1	.....	2cs	2ks	NW	NW	0	0	Fair	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.07	763.8	65	18.3	89	Calm	0	0	.....	10k	0	NW	.....	0.04	1.0	Fair	H. Morgan.
Port Hastings, N. S.	.....	.....	29.99	761.7	54.5	12.5	.....	NW	7	3.1	.....	.....	.....	.....	.....	0.80	20.3	Dull	Peter Grant.
Port Stanley, Ontario	.....	.....	30.05	763.3	69	20 6	95	E	4	1 8	.....	2c	9	W	.....	0.01	0.3	Clear	M. Payne.
*Quebec, Quebec	.....	.....	30.18	766.6	60	15.6	82	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.	.....	.....	30.12	765.0	56	13.3	68	NW	4	1.8	.....	0	0	.....	.....	0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.00	762.0	70	21.1	78	SE	3	1.3	.....	2ks	0	.....	.....	0	0	Clear	K. Stewart.
Stayner, Ontario	.....	.....	30.04	763.0	68	20.0	84	SE	5	2.2	.....	2ck	0	NW	.....	0	0	Fair	R. J. Cole.
Stratford, Ontario	28.79	731.3	30.03	762.7	65 3	18.5	.....	SE	3	1.3	.....	.....	3ks	.....	.....	0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.	.....	.....	29.96	761.0	58	14.4	76	W	8	3.6	.....	8c	2ks	NW	NW	0.07	1.8	Fair	T. C. Hill.
*Toronto, Ontario	.....	.....	30.08	764.0	68	20.0	74	E	6	2.7	.....	5cs	0	W	.....	0	0	Fair	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.04	763.0	66.8	19.3	95	SE	5	2.2	.....	1ck	2s	.....	.....	0.20	5.1	Fine	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	30.07	763.8	59	15.0	88	S	.....	.....	.....	0	5ck	.....	.....	0.29	7.4	Fair	John Delaney.
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NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.			30.14	765.5	66	18.9	73	S	2	0.9		5c	Haze			0	0	Fair	
Alpena, Mich.			29.96	761.0	70	21.1	95	NW	8	3.6			10n		NW	0.50	12.7	Light rain	
Atlantic City, N. J.			30.16	766.1	75	23.9	76	SE	8	3.6		1c	0	NW		0	0	Clear	
Augusta, Ga.			30.11	764.8	78	25.6	73	Calm	0	0		0	0			0.06	1.5	Clear	
Baltimore, Md.			30.16	766.1	71	21.7	80	SE	4	1.8		2ck	5s			Inap.	Inap.	Fair	
Barnegat, N. J.			30.15	765.8	76	24.4	76	S	11	4.9		2c	0			0	0	Clear	
Bismarck, Dakota	28.28	718.3	29.92	760.0	52	11.1	86	N	15	6.7			10n			0.84	21.3	Heavy rain	
Boston, Mass.			30.18	766.6	61	16.1	82	S	6	2.7		10ks	Fog	SW		0	0	Foggy	
Breckenridge, Minn.			29.99	754.1	64	17.8	88	S	18	8.0		5k	0	S		0	0	Fair	
Buffalo, N. Y.			30.04	763.0	70	21.1	66	S	3	1.3		5ck	Sm'e	NW		0	0	Fair	
Burlington, Vt.			30.16	766.1	59	15.0	70	N	1	0.4		2c	Sm'e			0	0	Fair	
Cairo, Ill.			30.09	764.3	80	26.7	86	S	1	0.4		0	0			0	0	Clear	
Cape Hatteras, N. C.			30.06	763.5	80	26.7	70	Calm	0	0			10s			0	0	Cloudy	
Cape Henry, Va.			30.11	764.8	73	22.8	85	SW	2	0.9			10s			0	0	Cloudy	
Cape Lookout, N. C.			30.15	765.8	78	25.6	69	N	6	2.7		5k	5ks	N	N	0	0	Cloudy	
Cape May, N. J.			30.15	765.8	75	23.9	72	SE	6	2.7		2c	0	W		0	0	Fair	
Charleston, S. C.	24.29	617.0	30.12	765.0	79	26.1	69	SW	2	0.9		1cs	Sm'e			0	0	Clear	
Cheyenne, Wyoming			30.23	767.8	46	7.8	24	N	24	10.7		0	0			0	0	Clear	
Chicago, Ill.			29.97	761.2	78	25.6	82	SW	6	2.7		0	0			0	0	Clear	
Cincinnati, Ohio			30.02	762.5	76	24.4	86	S	2	0.9		2k	Sm'e	NW		0	0	Fair	
Cleveland, Ohio			30.03	762.7	71.3	21.8	82	SE	4	1.8		1k	Sm'e		SE	0.06	1.5	Clear	
Corsicana, Tex.			30.03	762.7	76	24.4	81	Calm	0	0		0	0			0	0	Clear	
Davenport, Iowa			30.00	762.0	76	24.4	81	Calm	0	0		1k	5ks	SW	SW	0	0	Fair	
Denison, Tex.			30.04	763.0	79	26.1	82	SE	4	1.8		1ck	1s			0	0	Clear	
Denver, Col.	25.95	636.3	30.27	768.8	50	10.0	58	S	4	1.8		0	0			0	0	Clear	
Detroit, Mich.			29.99	761.7	73	22.8	90	SE	2	0.9		2ck	Sm'e	W		0.01	0.3	Fair	
Dodge City, Kan.	27.44	697.0	29.62	752.3	72	22.2	71	NW	6	2.7		0	2s			0	0	Clear	
Dubuque, Iowa			29.96	761.0	73	22.8	81	S	4	1.8		0	Haze			0.20	5.1	Clear	
Duluth, Minn.			29.84	757.9	64	17.8	83	Calm	0	0		0	0			0.01	0.3	Clear	
Eastport, Me.			30.12	765.0	61	16.1	60	N	4	1.8		0	0			0	0	Clear	
Erie, Pa.			30.02	762.5	70	21.1	71	SE	12	5.4		4ck	Fog	W		0.05	1.3	Fair	
Escanaba, Mich.			29.92	760.0	70	21.1	90	Calm	0	0		0	2s		SW	0	0	Fair	
Fort Gibson, Indian Ter.			30.11	764.8	78	25.6	78	NE	2	0.9		2ck	0	E		0	0	Clear	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.83	732.3	29.88	758.9	79	26.1	69	S	4	1.8		2cs	0			0	0	Clear	
Fort Sully, Dakota	28.21	717.3	29.98	761.5	55	12.8	70	NW	14	6.3		1k	0	NW		0	0	Clear	
Florence, Arizona	28.43	722.1	29.91	759.7	66	18.9		Calm				0	0			0	0	Clear	
Galveston, Tex.			30.05	763.3	81	27.2	82	NW	9	4.0		2cs	5s	SE		0	0	Cloudy	
Grand Haven, Mich.			29.95	760.7	74	23.3	85	SW	9	4.0		1ck	4s	W	W	0	0	Fair	
Indianapolis, Ind.			30.03	762.7	79	26.1	82	Calm	0	0		8ck	2s	W		Inap.	Inap.	Cloudy	
Indianola, Tex.			30.04	763.0	83	28.3	78	S	4	1.8		1k	0			0.02	0.5	Clear	
Jacksonville, Fla.			30.10	764.5	80	26.7	80	NE	4	1.8		0	0			0.51	13.0	Clear	
Keokuk, Iowa			29.95	760.7	74	23.3	81	S	7	3.1		0	0			0	0	Clear	
Key West, Fla.			29.97	761.2	82.8	28.2	83	E	8	3.6		0	2ks,hz.		E	0.03	0.8	Fair	
Kittyhawk, N. C.			30.15	765.8	76	24.4	76	Calm	0	0			1s			0	0	Cloudy	
Knoxville, Tenn.			30.12	765.0	73	22.8	90	SW	2	0.9		1k	0	NE		0.01	0.3	Clear	
La Crosse, Wis.			29.92	760.0	72	22.2	90	S	2	0.9		8k	0	S		0	0	Fair	
Leavenworth, Kan.			29.94	760.5	78	25.6	82	S	2	0.9		2k	0	SW		0	0	Clear	
Louisville, Ky.			30.05	763.3	79	26.1	82	S	1	0.4		0	5ks		S	0.45	11.4	Fair	
Lynchburg, Va.			30.12	765.0	72.5	22.5	73	N	2	0.9		Haze	0			Inap.	Inap.	Clear	
Malone, N. Y.			30.13	765.3	58	14.4	64	SE	6	2.7		2c	Sm'e	N	S	0	0	Smoky	
Marquette, Mich.			29.91	759.7	70	21.1	75	SW	4	1.8		0	0			0	0	Clear	
Memphis, Tenn.			30.11	764.8	79	26.1	82	Calm	0	0		5ck	Fog	S		0	0	Fair	
Milwaukee, Wis.			29.99	761.7	77	25.0	77	W	5	2.2		2k	0	W		0	0	Clear	
Mobile, Ala.			30.11	764.8	77	25.0	95	S	5	2.2		0	0			0	0	Clear	
Montgomery, Ala.			30.11	764.8	78.5	25.8	90	NW	2	0.9		8c	Haze			Inap.	Inap.	Fair	
Morgantown, W. Va.	29.95	737.9	30.06	763.5	73	22.8	81	Calm	0	0		0	Haze			Inap.	Inap.	Clear	
Mt. Washington, N. H.	23.97	609.3	30.36	771.1	41	5.0	83	NW	15	6.7		0	Haze			0	0	Clear	
Nashville, Tenn.			30.08	764.0	77	25.0	90	Calm	0	0		8k	Fog	S		0.81	20.6	Cloudy	
New Haven, Conn.			30.18	766.6	66.0	18.9	78	Calm	0	0		8k	Fog	W		6	0	Cloudy	
New London, Conn.			30.21	767.3	64	17.8	83	Calm	0	0			10s		NW	0	0	Cloudy	
New Orleans, La.			30.07	763.8	81	27.2	80	SE	2	0.9		1cs	0			Inap.	Inap.	Clear	
Newport, R. I.			30.20	767.1	65	18.3	73	SE	4	1.8			10ks		W	0	0	Cloudy	
New York, N. Y.			30.18	766.6	71	21.7	79	SW	5	2.2		2k	5ks	W	S	0	0	Fair	
Norfolk, Va.			30.13	765.3	73	22.8	85	S	2	0.9			10ks		S	0.17	4.3	Cloudy	
North Platte, Neb.	27.25	692.1	29.78	756.4	58	14.4	64	NW	8	3.6		0	0			0	0	Clear	
Omaha, Neb.	28.85	732.8	29.86	758.4	76	24.4	86	S	7	3.1		0	0			0	0	Clear	
Oswego, N. Y.			30.12	765.0	64.2	17.9	75	SE	4	1.8		8cs	Fog	N		0	0	Fair	
Pembina, Dakota			29.78	756.4	52	11.1	93	Calm	0	0			10s			Inap.	Inap.	Cloudy	
Philadelphia, Penn.			30.17	766.3	68	20.0	90	E	4	1.8		2c	Fog			0	0	Clear	
Pike's Peak, Colorado	18.08	459.2	30.29	769.4	31	— 0.6	59	SW	20	8.9		0	0			0	0	Clear	
Pittsburgh, Penn.			30.05	763.3	67	19.4	84	E	1	0.4		1k	Fog	N		0.04	1.0	Foggy	
Port Huron, Mich.			29.99	761.7	70	21.1	90	S	5	2.2		5cs	2ks	W		0	0	Fair	
Portland, Me.			30.18	766.6	59	15.0	76	S	4	1.8		0	0			0	0	Clear	
Portland, Oregon			30.21	767.3	48	8.9	92	N	2	0.9		0	0			0	0	Clear	
Punta Rassa, Fla.			30.01	762.2	79.5	26.4	80	NE	14	6.3		5cs	0	NE		0.23	5.8	Fair	
Rochester, N. Y.			30.07	763.8	68	20.0	65	S	4	1.8		8ck	Haze	N		0	0	Cloudy	
Salt Lake City, Utah	25.89	657.6	30.22	767.6	47	8.3	41	NE	2	0.9		0	0			0	0	Clear	
Sandy Hook, N. J.			30.16	766.1	74	23.3	76	S	9	4.0		2k	0	S		0	0	Fair	
San Diego, Cal.			29.99	761.7	65	18.3	83	N	4	1.8			10s		N	0	0	Cloudy	
San Francisco, Cal.			29.97	761.2	55	12.8	87	Calm	0	0		0	0			0	0	Clear	
Santa Fé, N. M.	23.42	594.9	29.96	761.0	47	8.3	69	NE	5	2.2		0	0			0	0	Clear	
Savannah, Ga.			30.13	765.3	79	26.1	73	Calm	0	0		2c	5cs	NE	NE	0	0	Fair	
Shreveport, La.			30.10	764.5	78	25.6	86	E	2	0.9		0	0			0	0	Clear	
Smithville, N. C.			30.13	765.3	78	25.6	65	S	1	0.4		10k	0	N		0	0	Cloudy	
Springfield, Mass.			30.18	766.6	63	17.2	83	S	4	1.8			10ks		W	0	0	Cloudy	
St. Louis, Mo.			30.03	762.7	81	27.2	78	SW	4	1.8			10s			0	0	Cloudy	
St. Marks, Fla.			30.11	764.8	77	25.0	82	NE	4	1.8		2k	0	NE		0	0	Fair	
St. Paul, Minn.			29.83	757.7	66	18.9	84	SE	2	0.9		Haze	2s		SW	0	0	Fair	
St. Paul's Island, Alaska			29.98	761.5	39	3.9	82	E	16	7.2			10s			0	0	Cloudy	
Thatcher's Island, Mass.			30.18	766.6	61	16.1	82	SW	4	1.8		2c	8s	NW	NW	0	0	Cloudy	
Toledo, Ohio			29.98	761.5	77	25.0	82	SW	4	1.8		5ck	Haze	W		0	0	Fair	
Tucson, Arizona	27.58	700.5	30.18	766.6	65	18.3		S				0	0			0	0	Clear	
Tybee Island, Ga.			30.09	764.3	79	26.1	65	E	8	3.6		2c	0			0	0	Clear	
Vicksburg, Miss.			30.11	764.8	76.5	24.7	90	SE	4	1.8		0	0			0	0	Clear	
Virginia City, M. T.	24.60	624.8	30.08	764.0	35	1.7	75	Calm	0	0		1c	0	W		0.08	2.0	Clear	
Washington, D. C.			30.14	765.5	71	21.7	85	N	2	0.9		5ck	2s	W		0.01	0.3	Cloudy	
Wilmington, N. C.			30.13	765.3	74	23.3	76	W	4	1.8			10s		N	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
Wood's Holl, Mass			30.22	767.6	64	17.8	73	S	5	2.2			10s		S	0	0	Cloudy	
Yankton, Dakota	28.74	730.2	29.99	761.7	64	17.8	57	NW	16	7.2		0	0			0	0	Clear	
Yuma, Arizona			29.93	760.2	80	26.7		E				0	0			0	0	Clear	
Sub-Series.																			
Kingston, Jamaica, W. I.			30.14	765.5	79	26.1	74	Calm	0	0		2c	2s		SE	0	0		James Gall.
St. Georges, Bermudas			30.09	764.3	79.5	26.4	66	NE	25	11.2		1ck	1s	NE		0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Paramaribo, D. Guiana S.A			30.02	762.5	82	27.8	82	E			2	4k	1k	E		0.67	1.7		C. J. Hering.
Batavia, Dutch Guiana S.A.	30.11	764.7			86.0	30.0		E								0	0		Dr. H. Groot.
Medellin, Colombia. S. A.	25.19	639.8			65.0	18.3	75	Calm	0	0		7cs	0			0.58	14.7	Cloudy	Thomas Herran
York Factory, B. A			29.92	744.7	47	8.3	100	N	20	8.9			10n			3.60	91.4		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.04	763.0	76	24.4		NE			2					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.

Marine Series	True course towards.	Hourly rate in knots.	Barometer	Temperature	Wind	Force	Clouds	Rain-fall	State of ocean.	Direction of swell from—	Weather	Observer
Schooner Ad leFuller. At Brunswick, Ga.			30.09	764.3	NE	2	2ck 0	E			Clear	Capt. James Jorgensen.
Steamer Hibernian. N 37° 09′, W. 74° 51′.	8 68 W	10½	30.16	766.1	SW	3	..ck		Smooth		Overcast	Lieut. F. Archer, R. N. R.
Steamer Leipzig. N. 50° 54′, W. 32° 26′.	8 84 W		30.26	768.6	SW	2	Fog		Smooth		Fog & mist	Capt. R. Hoffmann.

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.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,912 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, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,533 (?) 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the Secretary of the Navy.

Furnished by coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

Note.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

Collated at the Office of the CHIEF SIGNAL OFFICER OF THE ARMY, Washington, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request, and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto-pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assgd.,) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			29.91	760.5	88.5	31.4	54	Calm			0		0			0	0	Clear	Charnot.
Algiers			29.94	760.5	83.5	28.6	54	N			2		2			0	0	Clear	Peter.
La Calle			29.85	758.1	80.6	27.0	65	N			2		3			0	0	Fair	Kunts.
Tunis			29.84	757.8	86.2	30.1	51	N			4		6			0	0	Fair	Jacques.
Sfax			29.90	759.4	91.9	33.3	54	SE			1		1			0	0	Clear	Chauvey.
Saida			29.89	759.3	90.5	32.5		NW			2		1			0	0	Clear	Millot.
Tebessa			29.93	760.1	84.2	29.0		NE			2		2			0	0	Clear	Colin.
Geriville			29.98	761.4	87.3	30.7	25	N			4		2			0	0	Clear	Lemaillot.
Laghouat			29.95	760.8	93.2	31.0	27	W			3		0			0	0	Clear	Guyot.
Biskra			29.88	759.0	94.8	34.9		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			29.46	748.2	62.2	16.8	96	SW			4		10			0.646	16.4	Raining	Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.57	751.0	59.4	15.2	93	W			2		10			0.476	12.1		Dr. Wierzbiski.
Eperies			29.52	749.7	73.9	23.3	85	Calm			0		6cs		N	0	0		Julius Mikolik.
Gratz	28.30	718.7	29.48	748.8	54.3	12.4	84	NW			5		10			0	0		Andreas Rospini.
Hermannstadt	28.21	717.4	29.57	751.0	80.6	27.0	45	SE			3		5			0.187	4.75		Prof. Reissenberger.
Kremsmunster	28.35	720.2	29.09	751.0	52.2	11.2	93	WNW			2		10			1.678	42.5		Prof. C. Wagner.
Lemberg			29.50	749.4	79.7	26.5	74	SE			2		7			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.43	747.6	67.3	19.6	83	WNW			4		10ks			1.135	28.83		I.R.Hydrographic Office.
Szegedin			29.41	746.9	85.8	29.9	38	NE			2		7			0	0		Karl Stancel.
Trieste			29.39	746.4	64.8	18.2	79	WSW			1		10			0.413	10.5	Raining	Prof. V. Farolfi.
Vienna			29.55	750.6	54.7	12.6	93	NW			1		10			1.024	26.0	Raining	I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.6 m., or 1.258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			29.83	757.6	59.9	15.5	54	NW			4		8k,0		NNW	0.228	5.80		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.92	760.0	56.1	13.4		NW	28	12.5			3			0.040	1.02	Blue sky	William Boswell.
Ardrossan			30.01	762.2	60	15.6		NW			4		3					Blue sky	William McNeil.
Armagh, Observatory			30.12	765.0	57.6	14.2		NW	9	4.0			7					*D. clouds	S. Cail, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.19	766.8	57.1	13.9		NW			1–3		10					*D. clouds	J. Dreyer.
Bradford			29.99	761.7	57.9	14.4		NW			1		8			0.22	5.9	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.03	762.7	85.0	29.4		SE			0		7					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			29.98	761.5	59.5	15.3		N			2		5					*D. clouds	H. Todd.
Cardington																			John McLaren.
Carlisle																			T. Bel, for J. Carmell.
Chatham, School M. E.			29.95	760.7	59.2	15.1		NE			3		6					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	8.64	727.4	30.11	765.5	55.5	13.1		NW			4		4					*D. clouds	R. E. Power.
Donaghadee			30.07	763.8	58	14.4		NNW			5		3					*D. clouds	J. Mac Gowan.
Dover			29.93	760.2	59	15.0		N			3		2					¼ clouded	J. Costello.
Eccles (near Manchester)			30.00	762.0	58.6	14.8		NW	3.6	1.6			4					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.10	765.5	58.2	14.6		NNW			4		7					Overcast	The Staff.
Fort Napier, (Natal)	27.66	702.6	29.90	759.4	87.0	30.6		NE			1		0					Blue sky	Lt. G. Salmon, A. H. C.
Free Town, (Sierra Leone			30.05	763.3	83	28.3		W			3		6					*D. clouds	
Galway, Queen's College			29.92	760.0	63	17.2		SE			3		5					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.92	760.0	76.7	24.8		SW			6		2					*D. clouds	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.99	761.7	57.9	14.4		NNW			1		5					Fine	Lewis Stuart.
Great Yarmouth			29.92	760.0	53	11.7		NNW			3		6					*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y			29.98	761.5	61.1	16.2		NNW			3		6			Blank	Blank	*D. clouds	The Staff, for G. B. Airy
Guernsey																			Dr. S. E. Hoskins.
Helston			30.11	764.8	61	16.1		NW			6		8k			0.2	5.1	Fair	M. P. Moyle.
Holyhead			30.08	764.0	57	13.9		NW			5		2					Blue sky	John Tilston.
Kew, Observatory			29.98	761.5	58.8	14.9		NNW	18	8.0			4					Hazy	The Staff.
Kingstown			30.14	765.5	56	13.3		NW			5		5			Blank	Blank	*D. clouds	George Mitchell.
Leicester Museum			30.01	762.2	58.6	14.8		W			2		4					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.72	754.9	89.0	31.7		SE			1		2k					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			29.95	760.7	62	16.7		NW			5		2					¼ clouded	W. D. Penny.
Nassau, (Bahamas			30.04	763.0	83.6	28.7		SE			3		7					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.01	762.2	59.8	15.4		WNW			3		5k		W	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.00	762.0	58.0	14.4		N			4		5					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.98	761.5	60	15.6		NW			3		7					*D. clouds	J. Lucas.
Plymouth			30.05	763.3	62.2	16.8		NW			3		5					*D. clouds	John Merrifield.
Roche's Point			30.19	766.8	59	15.0		NNW			4		2					Fine	W. Kennedy.
Saint Ann's Head			30.13	765.3	57	13.9		N			4		4					*D. clouds	John C. Walker.
Saint Helier, Jersey			30.02	762.5	64.0	17.8		NE			3		2					¼ clouded	A. P. Amy.
Sandwick Manse Orkneys			29.91	759.7	53	11.7		NW	23	10.3			1					Blue sky	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery Turkey)			29.71	754.6	85.0	29.4		Calm			0		0					Blue sky	Sergt. W. H. Lyne.
†Sheffield																0.63	1.60		W. F. Cooper.
Silloth Rectory			30.00	762.0	63.0	17.2	55	NE			1		2			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.99	761.7	56.4	13.6		N			1		6			Blank	Blank		Rev. S. J. Perry.
Stornoway Lewis C. Hebr.			29.98	761.5	57	13.9		WNW			5		5					D. clouds	John Smith.
Stratfield Turgiss			30.00	762.0	60.4	15.8		N			2		9					*D. clouds	Rev. Charles H. Griffith.
Thurso			29.99	759.2	59	15.0		NW			5		5					*D. clouds	John Trotter.
Truro, Royal Institution			30.12	765.0	63	17.2		N			5		5					*D. clouds	W. Newcombe.
Valencia, Observatory			30.26	768.6	59.5	15.3		W	12	5.4			4					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, Isle of Man					59	15.0		N			4		0						Thomas Dawson.
Cape Good Hope, Obs'y			30.23	767.8	66.0	18.9	51	W	6	2.7		2	2						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			29.61	752.1	55.5	13.1	86	NW			2		7k			0.08	2.0	Hazy	Francis Abbott, F.R.A.S.
Leith, Restaurig Parks			29.98	761.5	60.6	15.9		NW			2		6k			0	0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.20	767.1				E	26.1	11.7						0.01	0.3		C. Meldrum
Melbourne, Observatory			29.94	760.2	44.0	6.1	90	WNW	9	4.0			10			0.08	2.0	Drizzling	R. L. J. Ellery.
Monach Lighthouse, Hebrides			29.99	761.7	53	11.7		NW			4		10			0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.77	756.1	50	10.0		N			6	7	5	NW					Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Carlington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in Mauritius, unknown. 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; rain-fall lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; since 21st.

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. Centigrade.	Relative Humidity.	Wind. Direction.	Wind. Velocity.	Wind. Force.	Clouds. Amount. Up'er	Clouds. Amount. Low'r	Clouds. Direction. Upper.	Clouds. Direction. Lower.	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Copenhagen			29.63	752.5	63.0	17.2	44	SW		2		3						
Fanöe			29.65	753.2	58.6	14.8	68	W		4		7						
Godthaab, (Greenland)			29.93	760.3	46.4	8.0	71	NNE		2		2						
Stykkisholm, (Iceland)			29.76	756.0	50.2	10.1	91	Calm		0		8						
Thorshavn, (Faröe)			29.87	758.7	50.4	10.2	59	SSE		4		0						
Vestervig			29.53	750.1	58.3	14.6	78	W		6		6						

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds

FRENCH SERIES.

Furnished by the 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	59.0	15	67	N			2		5k			0.020	0.5	Cloudy	Normal School.
Amiens																			Normal School.
Avignon			29.80	756.9	66.6	19.2	51	NNW			3		2		W	0.059	1.5	Slightly cl'dy	Normal School.
Bar-sur-Seine			29.84	758.0	60.3	15.7	64	N			2		8		N	0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)			29.93	760.1	59.9	15.5	66	NW	4.3	1.9					NW	0	0		Beaumette Observatory.
Beauvais			29.96	760.9	60.4	15.8	49	N			3		8		N	0.039	1.00	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			29.84	758.0	57.4	14.1	67	S			2		5kn		S	0.67	17.	Cloudy	Normal School.
Bourges			29.88	758.9	63.0	17.2	74	N			3		8		SSW	0	0	Very cloudy	Normal School.
Brest			30.01	762.2	59.5	15.3	78	NNE			5		1k		NNE	0	0		Naval Observatory.
Carcassonne			29.93	760.3	65.8	18.8	51	W			3		5		E	1.599	40.6	Cloudy	Normal School
Caen																			Normal School.
Chartres			30.01	762.3	59.0	15	68	NW			4		5			0	0		Normal School.
Châlons-sur-Marne			29.84	758.0	62.6	17.0	61	N			4		8k		S	0.169	4.3	Very cloudy	Normal School.
Clermont			29.86	758.4	61.3	16.3	49	WNW			4		8		NW	0.071	1.8	Very cloudy	Puy de Dome Obs'y
Commercy			29.83	757.7	61.2	16.2	69	W			4		5s,k		W	0	0	Cloudy	Normal School
Commune de Greasque*			29.78	756.5	66.6	19.2	32	NW			8		2		NW	0	0		M. Kina.
Grenoble			29.79	756.7	55.0	12.8	76	N			6		5		NE	0.367	9.25	Cloudy	Normal School.
La Roche-sur-Yon					66.9	19.4	54	NNW			2		8		SSE	0.059	1.5	Very cloudy	Normal School.
Le Mans			29.87	758.8	57.9	14.4	67	NNW			4		5		NNW	0	0	Cloudy	Normal School.
Lons-Le-Saulnier			29.93	760.1	56.1	13.4	82	N			1		10			0.528	13.4	Raining	Normal School.
Mâcon			29.94	760.4	59.7	15.4	87	NW			2		5		NE	0.045	1.1	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			29.81	757.1	63.0	17.2	61	N			1		2		W	0	0	Slightly cl'dy	Normal School.
Nismes			29.80	756.8	71.6	22	29	NW			4		2		NW	0	0	Slightly cl'dy	Normal School.
Orleans																			Normal School.
Paris, Observatory			29.89	759.2	59.5	15.3	52	NNW			4		7ck		N	0.009	0.22	Cloudy	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			29.96	761.0	66.7	19.3	61	E			3		5		SW	0.157	4.0	½ covered	Naval Observatory.
Rouen			29.94	760.1	58.8	14.9	68	N			3		10		N	0.020	0.5	Covered	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School
Villefranche																			Normal School.
Sub-Series.																			
Fort de France, Martinique			29.90	759.5	80.6	27													L'Abbé Marchâsi.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.08	764.1	54.7	12.6	69	N	11.2	5.0			7		W	0.130	3.3		—. Faiguère.
Montsouris, Paris			29.88	759.0	60.1	15.6	56	N			3		8k kn		N	0.028	0.7		Montsouris Observ'tory.
Perpignan			29.89	759.2	79.9	26.6	39	NW	22.4	10.00			2		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.22	539.1			26.8	— 2.9		NW			3		10					Snowy	M. Baylac.
Pic du Midi, (Plantade) H.P.	22.48	570.9			30.2	— 1.0		NW			2		10			0.579	14.7	Snowy	General de Nansouty.
Saint Maur, (near Paris)			29.89	759.1	61.9	16.6	56	NW			2		5			0.035	0.9	Cloudy	F. Renou.
Toulouse			29.98	761.6	64.8	18.2	62	W			3		8			0.129	3.2		Toulouse Observatory
Tours			29.91	759.7	61.6	18.1	59	NW			2		7		NNW	0	0		C. Marquet.
Versailles, (near Paris)			29.90	759.4	59.7	15.4	62	NNE			4		8			Inap.	Inap.	Very cloudy	Dr. A. Bérigny
Zi-Ka-Wei, (near Shangha			29.67	753.5	79.0	26.1	96	S	5.1	2.3			10			0	0	Misty	Marc Dechevrens, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.68	753.8	61.7	16.5	65	WNW			4		9			0	0		Prof. T. Hoh.
Berlin			29.71	754.6	66.6	19.2	45	NW			1		8			0	0		Prof. Arndt.
Breslau			29.69	754.1	57.2	14.0	99	NNW			6		10			1.469	37.3	Raining	Dr. P. Neugebauer.
Carlsruhe			29.76	756.0	51.8	11.0	100	NE			1		10					Thunder-storm.	A. Senz.
Cassel			29.76	755.9	66.2	19.0	57	NW			2		6	NW		0	0		Dr. H. Möhl.
Emden			29.72	754.8	65.5	18.6	37	NW			3		5			0.098	2.5		Prof. Prestel.
Frankfort on the Main			29.78	756.5	61.0	16.1	56	NE			2		7			0.043	1.1		Physical Society.
Friedrichshafen			29.79	756.7	57.2	14.0	83	WSW			3		10			0.539	13.7		M. Wilhelm.
Hamburg			29.71	754.6	61.0	16.1	52	WNW			2		5k	NW		0.012	0.3	Cloudy	Captain F. Hegemann.
Kiel			29.68	753.8	60.1	15.6	55	W			3		4			0.028	0.7		Prof. G. Karston.
Königsberg, (Prussia.)			29.63	752.5	58.6	14.8	89	NE			2		9			0.236	6.0		Prof. E. Luther.
Köslin			29.70	754.4	61.8	16.0		W			2		5			0.020	0.5		H. Müller.
Leipsic			29.74	754.9	63.1	17.3	51	N			1		9			0.012	0.3		Prof. Bruhns.
Memel			29.66	753.4	61.0	16.1	79	NE			1		10n			0.783	19.9		Reinbrecht & Skalweit.
Münster			29.63	752.5	64.2	17.9	81	NW			1		10			0.004	0.1		Prof. E. Heis.
Neufahrwasser			29.65	753.2	64.2	17.9	66	ENE			2		10			0.717	18.2		A. Lothes.
Posen			29.57	751.1	65.5	18.6	51	NW			3		10			0.075	1.9		Dr. Magener.
Strassburg, (in Alsace)			29.78	756.3	64.0	17.8	49	N			3		8	NW		0.063	1.6		Dr. Schur.
Stuttgart			29.75	755.7	61.3	16.3	60	N			1		6			0.008	0.2	Raining	Prof. Schoder.
Thorn			30.01	762.3	62.2	16.8	73	NE			3		10			0.295	7.5		Dr. Hasenbalg.
Treves, (Trier)			29.76	756.0	61.0	16.1	69	NNW			4		9			0.059	1.5		Prof. Flesch.
Wustrow, Naval School			29.77	756.1	61.5	16.4	74	W			2		4			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.77	756.2	88.3	31.3		S										Very clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.40	746.8	55.9	13.3	80	N	5.6	2.5			10			0.032	51.6	Showery	
Padua			29.45	748.0	60.6	15.9	81	NW	11.9	5.3			10			0.098	2.5		
Vicenza			29.47	748.5	61.2	16.2	55	NW	8.1	3.6			10	W		0.051	1.3		
Verona			29.47	748.4	69.8	21.0	65	NE			4		10			0.680	17.6		
Bergamo																			
Domodossola	28.50	723.8	29.50	749.2	69.8	21.0	31	N			6		3			0	0		
Milan			29.47	748.5	74.5	23.6	36	WNW			4		7			0	0		
Pavia			29.48	748.8	73.4	23.0	31	NW			4		3	W		0.425	10.8		
Moncalieri			29.49	749.1	72.9	22.7	21	WNW	15.0	6.7			0			0	0		
Mondovi	27.65	702.2	29.50	749.2	68.9	20.5	45	N			2		1	WSW		0	0		
Porto Maurizio			29.56	750.7	73.8	23.2	47	SW			4		2			0.087	2.2		
Genoa			29.50	749.4	75.6	24.2	50	SW	1.3	0.6			2	N		0.622	15.8		
Piacenza			29.48	748.7	68.0	20.0	67	NW			6		10			0	0		
Parma			29.51	749.5	68.4	20.2	71	E			2		9			0	0		
Bologna			29.49	749.0	65.7	18.7	57	W			6		8	S		1.200	32.0		
Florence			29.53	750.0	70.7	21.5	55	NW			4		7	NW		0.142	3.6		
Leghorn			29.50	749.4	74.1	23.4	47	W	11.2	5.0			6			0	0		
Siena	28.35	720.2	29.52	749.9	69.1	20.6	63	W	13.7	6.1			6	W		1.559	39.6		
Urbino	28.01	711.5	29.52	749.9	64.8	18.2	73	SW			4		10			0.981	25.0		
Ancona			29.58	751.2	69.1	20.6	68	NW			6		4			0.276	7.0		
Grosseto			29.58	751.2	76.6	24.8	57	S			4		3	SSW		1.161	29.5		
Rome			29.65	753.1	75.2	24.0	57	WNW	19.9	8.9			7	SW		0.161	4.1		
Naples, O. U.			29.71	754.5	80.1	26.7	50	NW			8		4	WSW		0.157	4.0		
Lecce			29.71	754.7	83.7	28.7	55	S	37.4	16.7			1			0	0		
Cosenza			29.75	755.7	93.6	34.2	70	WNW	9.8	4.4			5			0.039	1.0		
Riposto, (Sicily)			29.77	756.2	84.9	29.4	66	N			1		2	SE		0	0		
Palermo			29.69	754.1	84.0	28.9	52	W	18.6	8.3			8			0	0		
Caltanissetta	27.86	707.5	29.72	754.8	84.7	29.3	34	SW			4		2	N		0	0		
Sub-Series.																			
Naples, S. R.			29.70	754.3	75.7	24.3	58	SW	15.4	6.9			8	NNW				Rainy	Prof. F. Brioschi.
Pesaro			29.48	748.8	67.8	19.9	86	WNW	22.8	10.18			10n	WNW		0.047	1.2	Raining	L. Guidi.

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			29.90	759.5	59.4	15.2		N			4								
Groningen			29.72	754.8	57.9	14.4		NW			4								
Helder			29.82	757.3	55.4	13.0		NNW			5								
Utrecht			29.78	756.5	59.7	15.4	56	NNW			4		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter and omit the rain-fall; for Utrecht, they give the the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	51.0	12.2	57	N	30.3	13.7			5			0	0		
Brönö			29.17	740.9	50.4	10.2	93	WSW	18	8			10			0.185	4.7	Light rain	
Christiania			29.42	747.2	63.3	17.4	39	WNW	3.1	1.4			9			0.008	0.2		
Tromsö			29.17	741.0	48.6	9.2		NE	13	6			10			0.398	10.1	Raining	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Angra, (Azores,)			30.29	769.4	74.8	23.8	72	E	17.2	7.69			6			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.98	761.4	81.5	27.5	18	NNE	4.3	1.9			4	WNW		0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.12	765.0	77.0	25.0	67	SW	4.9	2.2			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.06	763.4	77.7	25.4	28	N	15.0	6.7			3	W		Inap.	Inap.		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level, excepting Lisbon. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia at St. Petersburg.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	749.9	64.9	18.3	87	WNW	2	1			10						Astronomical Obs.
Wilna			29.61	752.0	73.6	23.1	66	SE	2	1			9						Astronomical Obs.
Dorpat			29.66	753.4	68.2	20.1	60	S	2	1			4						Physical Cabinet.
St. Petersburg			29.67	753.5	69.8	21.0	58	NW	2	1			4						Central Physical Obs.
Knopio			29.51	750.3	62.2	16.8	70	SE	18	8			8						Ch. Forsten.
Kieff			29.71	754.5	79.2	26.2	47	SSE	13	6			6						Physical Cabinet.
Nikolaiev			29.83	757.7	85.6	29.8	30	SSW	9	4			4						Kurdakof.
Kertch			29.90	759.4	79.5	26.4	55	SE	4	2			6						Lagorio.
Moscow			29.86	758.5	72.1	22.3	69	S	9	4			7						Meteorological Obs.
Lugan			29.90	759.5	81.3	27.4	22	SE	34	15			1						Meteorological Obs.
Archangel			29.69	754.2	66.6	19.2	51	S	34	15			10						Ogorodnikof.
Tiflis	28.55	725.2	29.90	759.4	80.6	27.0	43	S	7	3			2						Physical Observatory.
Astrakhan			30.07	763.8	71.4	21.9	24	NE	11	5			2						Sebastianot.
Kasan			30.03	762.7	63.7	17.6	59	N	4	2			6						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	29.94	737.5	29.97	761.3	55.4	13.0	63	W	4	2			10						Meteorological Obs.
Nikuss			30.02	762.5	75.7	24.3	39	W?	4	2			0						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul			29.79	756.6	63.5	17.5	53	W	0	0			3						Meteorological Obs.
Yeniseisk			29.56	750.7	56.1	13.4	83	SW	4	2			3			Blank	Blank		Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.78	756.1	74.1	23.4	82	Calm	0	0			2						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.71	754.5	75.6	24.2	95	SE	13	6			9						
Nikolaievsk, on the Amoor																			

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	75.6	24.2	32	NE	2.2	1.00		2	0	WNW		0	0	Light clouds	Royal Observatory.
San Fernando			30.00	762.1	75.9	24.4	65	WNW	10.7	4.8		3	5	W	W				The Naval Observatory.

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	58.6	14.8	78	S			6		5			0	0		
Umea			29.40	746.7	59.0	15.0	66	SW			6		3			0	0		
Hernosand			29.38	746.2	58.5	14.7	64	SSW			6		2			0	0		
Stockholm			29.52	749.9	64.4	18.0	43	SSW			4		4			0	0		
Wisby			29.64	752.9	60.8	16.0	52	WNW			4		5			0	0		
Sub-Series.																			
Upsala			29.51	749.6	63.0	17.2	35	SSW	16.3	7.3			5		SW	0.001	0.02		Dr. Hildebrandsson.

Note.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower From —	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	721.7	29.84	758.0	53.8	12.1	92	SSW			1		9			0.091	2.3	Covered	The Observatory.
Zurich	28.19	716.0	29.82	757.4	55.9	13.3	71	N			1		8			1.343	34.1	Raining.	The Observatory.

NOTE—For Geneva the corresponding departures from the normal values are: Barometer, —6.0 mm.; Thermometer, —8.8 cent.; Relative Humidity, +35 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower From —	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	84.6	29.2	43	SW	4	2.0			0			0	0		
Fao, (Persian Gulf)																			
Salonica			29.77	756.1	86.4	30.2		SW			2		0						
Valona			29.82	757.5	92.8	33.8		S			6		2						
Varna			29.72	755.0	86.0	30.0		SE			3		0						
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y			29.83	757.6	84.6	29.2	55	WNW			1		1s		SE				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 as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower From —	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	60.9	16.1	68	Calm	0	0			2			0	0		Hon. J. Ferguson.
Brockville, Ontario			29.92	760.0	75	23.9		W	4	1.8		8c	0	W		0	0	Fair	W. R. Bigg.
*Chatham, N. B.			29.99	761.7	53	11.7	89	SW	5	2.2		10ck	0	SW		0	0	Fair	G. A. Blair.
Charlottetown P. E. Island			30.02	762.5	59	15.0	80	S	8	3.6		0	0			0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			29.89	759.2	60.7	15.9	90	E			1		10n			0.036	0.91	Rainy	James Smith, M. A.
Dalhousie, N. B.			29.99	761.7	50.7	10.4	86	N			1					0	0	Clear	H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			30.06	763.5	48.0	8.9	91	N	1	0.4			Fog			0.565	14.35	Foggy	Prof. Harrison.
*Fort Garry, Manitoba			30.20	767.1	47	8.3	96	W	12	5.4		5k	2ks	NW	NW	0.390	9.91	Cloudy	James Stewart.
Goderich, Ontario			29.88	758.9	70.9	21.6	93	SW			3		10p			0.153	3.89	Threatening	H. J. Strang, M. A.
Granton, Ontario	28.83	732.3	29.88	758.9	71	21.7		SW			1	2cs	0	E		0.92	23.4	Clear	James Grant.
*Halifax, N. S.			30.02	762.5	57	13.9	81	NW	5	2.2		5c	0			0	0	Fair	F. Allison, M. A.
*Kingston, Ontario			29.94	760.5	72	22.2	94	S	5	2.2		10cs	Sm'e	SW	SW	0	0	Cloudy	S. Woods, M. A.
Little Glace Bay, N. S.			29.98	761.5	56.5	13.6	85	W	6	2.7		8ks	0	W		0.33	8.4	Dark	C. H. Rigby.
*Montreal, Quebec			29.91	759.7	64	17.8	82	S	4	1.8		5k	Sm'e	NW		0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.89	759.2	62	16.7	76	E	2	0.9		5ck	0	S		0.01	0.3	Fair	J. B. Haney.
*Parry Sound, Ontario			29.82	757.4	70	21.1	95	SW	11	4.9		5k	5ks	SW	SW	0.21	5.3	Cloudy	Rev. R. Mosley.
Port Dover, Ontario			29.91	759.7	73	22.8	95	SW	12	5.4		8ck	0	SW		0.03	0.8	Fair	H. Morgan.
Port Hastings, N. S.			30.02	762.5	58.5	14.7		NW	3	1.3						0	0	Fine	Peter Grant.
Port Stanley, Ontario			29.93	760.2	74	23.3	96	W	4	1.8		5ck	0	W		0.03	0.8	Fair	M. Payne.
*Quebec, Quebec			29.96	761.0	61	16.1	83	Calm	0	0		Haze	Haze			0	0	Hazy	Capt. Ashe, R. N.
St. John, N. B.			30.07	763.8	56	13.3	81	SE	3	1.3		1ck	0			0.02	0.5	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			29.86	758.4	65	18.3	90	NW	3	1.3			10ks			0.08	2.0	Cloudy	K. Stewart.
Stayner, Ontario			29.80	756.9	75	23.9	85	NW	10	4.5		5ck	0	W		1.20	30.5	Fair	R. J. Cole.
Stratford, Ontario	28.63	727.2	29.85	758.2	71.0	21.7		SW	8	3.6		2cs	3ks	NW		0.267	6.78	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			30.03	762.7	54	12.2	91	W	4	1.8		8k	2s	NW		0.31	7.9	Cloudy	T. C. Hill.
*Toronto, Ontario			29.87	758.7	74	23.3	88	SW	7	3.1		2c	2ks	W	SW	0	0	Fair	Magnetic Observatory.
Woodstock, Ontario			29.90	759.4	74.0	23.3	85	W	12	5.4		3ck	4ks			0	0	Fine	J. Montgomery.
SUB-SERIES.																			
St. Johns, Newfoundland			30.19	766.8	62	16.7	55	W					10n			0	0	Cloudy	John Delaney.

NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.			29.95	760.7	72	22.2	75	S	3	1.3			10s		SW	0	0	Cloudy	
Alpena, Mich			29.87	758.7	65	18.3	68	NW	10	4.5		1k	0	NW		0.53	13.5	Clear	
Atlantic City, N. J			30.07	763.8	76	24.4	86	SW	12	5.4		1cs	5s	W	SW	0	0	Fair	
Augusta, Ga.			30.13	765.3	75	23.9	81	S	1	0.4		2cs	0	N		0.03	0.8	Fair	
Baltimore, Md			30.07	763.8	73	22.8	90	S	2	0.9			10s			0	0	Cloudy	
Barnegat, N. J			30.05	763.3	78	25.6	82	S	13	5.8		2ck	2k	NW	SW	0	0	Fair	
Bismarck, Dakota	28.59	726.2	30.30	769.6	43	6.1	91	Calm	0	0		0	0			0.17	4.3	Clear	
Boston, Mass			30.00	762.0	73	22.8	76	SW	7	3.1		1cs	Haze	W		0	0	Hazy	
Breckenridge, Minn			30.29	769.4	45	7.2	85	W	10	4.5		0	0			Inap	Inap.	Clear	
Buffalo, N. Y			29.88	758.9	74	23.3	78	SW	10	4.5			10ks		SW	0	0	Cloudy	
Burlington, Vt			29.92	760.0	69	20.6	70	S	5	2.2		2k	5s			0	0	Cloudy	
Cairo, Ill			30.10	764.5	77	25.0	77	N	8	3.6			10s		N	0	0	Cloudy	
Cape Hatteras, N. C			30.07	763.8	78	25.6	69	SE	8	3.6			8s			0	0	Cloudy	
Cape Henry, Va			30.08	764.0	76	24.4	73	SW	6	2.7		5c	0			0	0	Fair	
Cape Lookout, N. C			30.15	765.8	80	26.7	61	S	8	3.6		5ck	5s	S		0	0	Cloudy	
Cape May, N. J			30.07	763.8	77	25.0	82	SW	14	6.3		5c	0	NW		0	0	Fair	
Charleston, S. C			30.14	765.5	79	26.1	78	E	3	1.3		0	1ks		E	0.16	4.1	Clear	
Cheyenne, Wyoming	24.33	618.0	30.27	768.8	43	6.1	83	S	12	5.4		0	0			0	0	Clear	
Chicago, Ill			30.09	764.3	63	17.2	72	NW	10	4.5		2cs	0	W		0.88	22.4	Fair	
Cincinnati, Ohio			29.98	761.5	74	23.3	85	SW	4	1.8			10ks		SW	0.73	18.5	Cloudy	
Cleveland, Ohio			29.94	760.5	72.3	22.4	85	S	7	3.1		0	5ks		W	0.32	8.1	Fair	
Corsicana, Tex			30.07	763.8	78	25.6	82	N	6	2.7			10s			0	0	Cloudy	
Davenport, Iowa			30.24	768.1	59	15.0	76	NW	4	1.8		2cs	0			1.24	31.5	Clear	
Denison, Tex			30.16	766.1	72	22.2	90	E	7	3.1			10n			0.10	2.5	Light rain	
Denver, Col.	25.10	637.5	30.32	770.1	47	8.3	61	Calm	0	0		0	0			0	0	Clear	
Detroit, Mich			29.89	759.2	73	22.8	85	SW	6	2.7		5k	0	SW		0.02	0.5	Fair	
Dodge City, Kan	27.78	705.6	30.11	764.8	53	11.7	79	NE	8	3.6		0	0			0	0	Clear	
Dubuque, Iowa			30.20	767.1	58	14.4	69	NW	12	5.4		0	0			0.35	8.9	Clear	
Duluth, Minn			30.10	764.5	53	11.7	67	W	18	8.0		1c	0	SW		0.01	0.3	Clear	
Eastport, Me			30.03	762.7	60	15.6	76	Calm	0	0		0	Sm'e			0	0	Clear	
Erie, Pa			29.90	759.4	76	24.4	76	S	8	3.6		2c	5k		W	0	0	Fair	
Escanaba, Mich			30.01	762.2	57	13.9	57	NW	14	6.3		8k	0	NW		0	0	Fair	
Fort Gibson, Indian Ter			30.09	764.3	70	21.1	84	N	4	1.8		0	10ks		N	0.79	20.1	Cloudy	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T	28.98	736.1	30.06	763.5	69	20.6	84	N	8	3.6		0	5ks			1.70	43.2	Clearing	
Fort Sully, Dakota	28.69	728.7	30.39	771.9	49	9.4	93	NW	2	0.9		1c	0	NW		0	0	Clear	
Florence, Arizona	28.42	721.9	29.85	758.2	82	27.8		E				5k	0	E		0	0	Fair	
Galveston, Tex			30.09	764.3	80	26.7	91	N	8	3.6		0	8ks			0	0	Cloudy	
Grand Haven, Mich			30.01	762.2	65	18.3	68	NW	18	8.0		2c	1s	W	NW	0.03	0.8	Fair	
Indianapolis, Ind			30.01	762.2	73	22.8	90	NW	7	3.1		5k	0	NW		1.40	35.6	Fair	
Indianola, Tex			30.08	764.0	80	26.7	86	W	4	1.8		2k	0			0	0	Fair	
Jacksonville, Fla			30.10	764.5	80	26.7	74	NE	3	1.3		5k	0	E		0	0	Fair	
Keokuk, Iowa			30.18	766.6	59	15.0	70	N	11	4.9		8c	0	N		0.07	1.8	Fair	
Key West, Fla			29.97	761.2	79.8	26.6	86	SE	8	3.6		5cs,k	2ks	SE		0.90	22.9	Cloudy	
Kittyhawk, N. C			30.13	765.3	77	25.0	77	SW	6	2.7		2k	0	SW		0	0	Fair	
Knoxville, Tenn			30.07	763.8	77	25.0	82	NW	4	1.8		2ck	0	SW		0	0	Fair	
La Crosse, Wis			30.20	767.1	57	13.9	75	NW	10	4.5		0	0			0	0	Clear	
Leavenworth, Kan			30.29	769.4	60	15.6	70	N	10	4.5			10s			0	0	Cloudy	
Louisville, Ky			30.04	762.7	75	23.9	86	S	1	0.4		0	5ks,fog			0.46	11.7	Fair	
Lynchburg, Va			30.04	763.0	75.5	24.2	83	S	1	0.4			10s			0	0	Cloudy	
Malone, N. Y			29.86	758.4	70	21.1	65	S	5	2.2			10s		SW	0	0	Cloudy	
Marquette, Mich			29.98	761.5	57	13.9	57	W	18	8.0		5k	0	W		0	0	Fair	
Memphis, Tenn			30.08	764.0	81	27.2	87	Calm	0	0		5ck	Fog	NE		0	0	Foggy	
Milwaukee, Wis			30.12	765.0	59	15.0	70	NW	16	7.2		2c	2k	NW	NW	0	0	Fair	
Mobile, Ala			30.09	764.3	76	24.4	90	S	4	1.8		0	0			Inap.	Inap.	Clear	
Montgomery, Ala			30.10	764.5	77	25.0	88	E	2	0.9		2c	Haze			0.01	0.3	Clear	
Morgantown, W. Va	29.00	736.6	30.0	762.0	74	23.3	85	S	3	1.3			10s		S	0.24	6.1	Cloudy	
Mt. Washington, N. H	23.91	607.3	30.27	768.8	48	8.9	85	NW	30	13.4		5c	Haze	N		0	0	Fair	
Nashville, Tenn			30.04	763.0	77	25.0	90	Calm	0	0		5k	0			2.65	67.3	Fair	
New Haven, Conn			30.03	762.7	73.0	22.8	85	SW	10	4.5		Fog	10s		SW	0	0	Cloudy	
New London, Conn			30.07	763.8	71	21.7	90	SW	6	2.7			10s		SW	0	0	Cloudy	
New Orleans, La			30.08	764.0	82.5	28.1	76	N	6	2.7		4k	0	E		Inap	Inap.	Fair	
Newport, R. I			30.06	763.5	70	21.1	95	SW	12	5.4			10ks		W	0	0	Cloudy	
New York, N. Y			30.06	763.5	71	21.7	85	SW	11	4.9		5k	Haze	W		0	0	Fair	
Norfolk, Va			30.12	765.0	77	25.0	77	S	10	4.5		0	0			Inap.	Inap.	Clear	
North Platte, Neb	27.18	690.0	30.09	764.3	49	9.4	77	Calm	0	0		0	0			0	0	Clear	
Omaha, Neb	29.26	743.2	30.35	770.9	55	12.8	84	NW	4	1.8		0	0			0	0	Clear	
Oswego, N. Y			29.90	759.4	74	23.3	76	SE	4	1.8		8ck	2s	W		0	0	Cloudy	
Pembina, Dakota			30.11	764.8	50	10.0	93	NW	3	1.3		0	0			0.32	8.1	Clear	
Philadelphia, Penn			30.05	763.3	73	22.8	85	SW	7	3.1		2ck	8ks	SE	SW	0	0	Cloudy	
Pike's Peak, Colorado	18.12	460.2	30.33	770.4	31	—0.6	69	SW	22	9.8		0	0			0	0	Clear	
Pittsburgh, Penn			29.96	761.0	73	22.8	85	SW	6	2.7		1c	2ks	NW	W	0.07	1.8	Fair	
Port Huron, Mich			29.87	758.7	72	22.2	85	W	8	3.6		Haze	2s		SW	Inap	Inap.	Fair	
Portland, Me			29.99	761.7	63	17.2	88	Calm	0	0			10s,fog			0	0	Cloudy	
Portland, Oregon			30.20	767.1	55	12.8	80	SE	1	0.4			8s		SW	0	0	Cloudy	
Punta Rassa, Fla			30.00	762.0	78.5	25.8	73	NE	12	5.4		Haze	2s			0	0	Fair	
Rochester, N. Y			29.86	758.4	76	24.4	72	SW	8	3.6		5ck	0	W		0	0	Fair	
Salt Lake City, Utah	25.74	653.8	30.07	763.8	55	12.8	55	Calm	0	0		2c	0			0	0	Clear	
Sandy Hook, N. J			30.05	763.3	74	23.3	85	SW	12	5.4		2ck	0	NW		0	0	Fair	
San Diego, Cal.			30.00	762.0	64	17.8	88	N	4	1.8			10s		N	0	0	Cloudy	
San Francisco, Cal			29.97	761.2	54	12.2	86	SW	6	2.7		0	0			0	0	Clear	
Santa Fé, N. M	23.54	597.9	30.02	762.5	55	12.8	68	Calm	0	0		2k	5s			0	0	Fair	
Savannah, Ga.			30.12	765.0	78	25.6	82	Calm	0	0			10ks		E	0	0	Cloudy	
Shreveport, La			30.11	764.8	80	26.7	87	Calm	0	0		0	0			0	0	Clear	
Smithville, N. C			30.14	765.5	78	25.6	73	S	4	1.8		8k	0	NW		0	0	Cloudy	
Springfield, Mass			30.00	762.0	72	22.2	82	S	4	1.8		2k	Fog			0	0	Fair	
St. Louis, Mo			30.13	765.3	68	20.0	69	N	16	7.2		2c	2s			0	0	Fair	
St. Marks, Fla			30.10	764.5	76	24.4	72	E	4	1.8		0	0			0	0	Clear	
St. Paul, Minn			30.20	767.1	53	11.7	79	Calm	0	0		0	0			0	0	Clear	
St. Paul's Island, Alaska			29.89	759.2	40	4.4	91	NE	12	5.4		2c	0			0	0	Fair	
Thatcher's Island, Mass			30.02	762.5	65	18.3	94	SW	4	1.8		0	0			0	0	Foggy	
Toledo, Ohio			29.91	759.7	74	23.3	90	SW	7	3.1			10s		SW	0.03	0.8	Cloudy	
Tucson, Arizona	27.58	700.5	30.10	766.8	71	21.7		SE				5ck	0	SE		0	0	Fair	
Tybee Island, Ga			30.11	764.8	82	27.8	64	Calm	0	0		5ck	0	E		0	0	Fair	
Vicksburg, Miss			30.11	764.8	79.5	26.4	86	Calm	0	0		2ck	0	E		0	0	Fair	
Virginia City, M. T	24.41	620.0	29.89	759.2	40	4.4	47	Calm	0	0		0	0			0	0	Clear	
Washington, D. C			30.05	763.3	74.5	23.6	85	S	4	1.8			10s			0	0	Cloudy	
Wilmington, N. C			30.14	765.5	77	25.0	76	S	1	0.4		0	8s		N	0.03	0.8	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.
Wood's Holl, Mass.			30.08	764.0	71	21.7	95	SW	8	3.6		0	10s			0	0	Fair	
Yankton, Dakota	29.09	738.9	30.40	772.1	52	11.1	79	SW	1	0.4		0	0			0	0	Clear	
Yuma, Arizona			29.92	760.0	75	23.9		NE				0	0			0	0	Clear	
Sub Series.																			
Kingston, Jamaica, W. I.			30.15	765.8	79	26.1	78	Calm	0	0		8c	2s		NE	0	0		James Gall.
St. Georges, Bermudas			30.12	765.0	79.5	26.4	60	NE	20	8.9		0	2k			0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Paramaribo, D. Guiana S.A			30.01	762.2	81	27.2	78	E			2	3k	5k	E		0.630	16.00	Fair	C. J. Hering.
Batavia, Dutch Guiana S.A	30.10	764.6			86.0	30.0		E								0.354	9.00		Dr. H. Groot.
Medellin, Colombia. S. A.	25.19	639.8			65.0	18.3	80	Calm	0	0		3c	1s			0.11	2.8	Fair	Thomas Herran
York Factory, B. A			29.68	753.9	42	5.6	100	N	46	20.6			10n			4.30	109.2		J. Forteseue, W. Wood
Honolulu, Oahu, H. I.			30.09	764.3	76	24.4		NE			2					0.12	3.0	Overcast	Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Adelie Fuller At Brunswick, Ga.			30.09	764.3	80	26.7		E			2	2ck	0	NE				Clear	Capt. James Jorgensen.
Steamer Hibernian. At Baltimore, Md.			30.07	763.8	78	25.6		SW			4		4ks					Overcast	Lieut. F. Archer, R. N. R.
Steamer Leipzig. N. 50° 22′, W. 35° 50′.	8.74 W		30.20	767.1	62.4	16.9		Calm			0		Fog			Smooth		Fog & mist	Capt. R. Hoffmann.

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.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,235 ft., or 1,901.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fè, 6,362.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,533 (?) 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

Furnished by coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request, and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto-pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg'd.), Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			30.02	762.5	85.8	29.9	59	NNW			1		4			0	0	Fair	Charnot.
Algiers			30.05	763.3	80.2	26.8	54	N			2		2			0	0	Clear	Peter.
La Calle			29.98	761.6	81.0	27.2	58	NW			3		4			0.039	1.0	Fair	Kunts.
Tunis			30.00	761.9	84.2	29.0	47	E			3		4			0	0	Fair	Jacques.
Sfax			30.01	762.2	83.1	28.4	55	NE			4		1			0	0	Clear	Chauvey.
Sakia			30.0[illegible]	762.1	76.5	24.7	37	NNE			3		3			0	0	Fair	Millot.
Tebessa			29.98	761.6	64.4?	18.0?		W			1		10			0.433	11.0	Hidden	Colin.
Geriville			30.02	762.6	75.2	24.0	40	WSW			1		2			0	0	Clear	Lemaillot.
Laghouat			30.05	763.5	84.2	29.0	34	S			4		2			0	0	Clear	Guyot.
Biskra			30.03	762.7	98.3	31.3	23	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			29.89	759.2	66.9	19.4	56	NE			2		10			0.205	5.2		Prof. Ivan Stostr.
Cracow, I. R. Observatory			29.91	759.7	61.5	16.4	73	W			3		8			0.020	0.5		Dr. Wierzbiski.
Eperies			29.87	758.8	60.4	15.8	77	Calm			0		10n			0.499	12.68		Julius Mikolik.
Gratz	28.65	727.7	29.84	757.7	60.8	16.0	60	NW			2		8			0.913	23.2		Andreas Rospini.
Hermannstadt	28.39	721.2	29.74	755.4	75.2	24.0	52	N			1		4			0	0		Prof. Reissenberger.
Kremsmünster	28.61	726.8	29.95	761.0	54.0	12.2	76	WNW			2		10			0	0		Prof. C. Wagner.
Lemberg			29.82	757.4	62.2	16.8	87	NW			5		8			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			29.80	757.0	67.6	19.8	54	E			4		9k8			0.170	4.33		I.R.Hydrographic Office.
Szegedin			29.86	758.5	68.5	20.3	55	SE			4		1			0	0		Karl Stancel.
Trieste			29.85	758.2	65.3	18.5	51	ENE			3		2			0.071	1.8		Prof. V. Farolfi.
Vienna			29.89	759.3	64.4	18.0	56	Calm			0		8			0.031	0.8		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.0 feet; Hermannstadt, 407.8 m., or 1,337.0 ft.; Kremsmünster, 383.6 m., or 1.258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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	57.7	14.3	62	W			3		10		W	0.106	2.70	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.59	751.6	57.0	13.9		S	17	7.6			9					Drizzling	William Boswell.
Ardrossan			29.68	753.9	55	12.8		SW			4		8					Raining	William McNeil.
Armagh, Observatory			29.76	755.9	59.2	15.1		SW	16	7.2			10					Squally	S. Cal, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.86	758.4	59.0	15.0		SW			3		10					Overcast	J. Incyer.
Bradford			29.45	758.2	57.6	14.2		W			3		10			0	0	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.33	762.7	86.2	30.1		NE			1		9					Overcast	Sergt. J. F. Balanen, A. H. C.
Cambridge, Observatory			29.94	760.5	61.0	16.1		W			1		10					Overcast	H. Todd.
Cardington			29.96	761.0	65.0	18.3		W			1		9					Overcast	John McLaren.
Carlisle																			T. Bel, for J. Carmell.
Chatham, School M. E			29.98	761.5	61.0	16.1		N			4		9					Overcast	Capt. J. Fellowes, R.E.
Dartmoor	28.67	728.2	30.17	766.3	55.0	12.8		W			6		10					Gloomy	R. E. Power.
Donaghadee			29.72	754.9	63	17.2		W			5		8					*D. clouds	J. Mac Gowan.
Dover			29.97	761.2	64	17.8		WSW			3		3					¼ clouded	J. Costello.
Eccles (near Manchester)			29.85	758.2	58.7	14.8		SW	8.8	3.9			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			30.11	764.8	61.4	16.3		WNW			3		10					Overcast	The Staff.
Fort Napier, (Natal)	27.81	706.4	30.04	763.0	61.1	16.2		SE			3		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone			29.97	761.2	79	26.1		W			2		8					Overcast	
Galway, Queen's College			29.93	760.2	60	15.6		S			6		10					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.00	762.0	81.3	27.4		W			2		1					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.74	755.4	53.7	12.1		SW			2		10					Threatening	Lewis Stuart.
Great Yarmouth			29.92	760.0	59	15.0		WNW			3		3					Hazy	G. T. Watson.
Greenwich, Royal Obs'y			30.00	762.0	61.3	16.3		W			2		10					Overcast	The Staff, for G. B. Airy
Guernsey																			Dr. S. E. Hoskins.
Helston			30.15	765.8	61	16.1		W			4		8k			0	0	Gloomy	M. P. Moyle.
Holyhead			29.84	757.7	56	13.3		SSW			6		10					Raining	John Tirton.
Kew, Observatory			30.00	762.0	60.9	16.1		WSW	14	6.3			9					Threatening	The Staff.
Kingstown			29.84	757.9	60	15.6		W			4		7					*D. clouds	George Mitchell.
Leicester Museum			29.95	760.7	57.8	14.3		W			4		10					Threatening	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.87	758.7	87.8	31.0		SW			1		0						Corpl F. Fraser, A. M. C.
Nairn			29.47	748.5	58	14.4		WSW			3		10					Showery	W. D. Lenny.
Nassau, (Bahamas			30.07	763.8	86.0	30.0		SE			1		6					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.90	759.4	60.3	15.7		WSW			4		10k		WSW	0	0	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.91	760.5	57.1	13.9		W			4		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.96	761.0	61	16.1		SW			2		10					Overcast	J. Lucas.
Plymouth			30.08	764.0	64	17.8		W			3		10					Showery	John Merrifield.
Roche's Point			29.87	758.7	62	16.7		W			4		8					Cloudy	W. Kennedy.
Saint Ann's Head			30.04	763.0	60	15.6		WSW			5		10					Overcast	John C. Walker.
Saint Helier, Jersey			30.11	764.8	64.4	18.0		W			4		10					Overcast	A. P. Amy.
Sandwick Manse, Orkneys			29.51	749.5	51.8	11.0		S	15	6.7			10					Raining	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery Turkey)			29.75	755.0	81.4	29.1		SSW			1		0					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.87	758.7	59.0	15.0		W			3		10			0	0	Gloomy	W. F. Cooper.
Silloth Rectory			29.74	755.4	57.0	13.9	87	SW			4		10			0.085	2.16	Overcast	Rev. Francis Redford.
Stonyhurst, Observatory			29.83	757.7	56.8	13.8		SW			4		10					Threatening	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.																			John Smith.
Stratfield Turgiss			30.02	762.5	62.1	16.7		NW			2		9					*D. clouds	Rev. Charles H. Griffith.
Thurso			29.47	748.5	53	11.7		S			2		10					Raining	John Trotter.
Truro, Royal Institution			30.09	764.3	64	17.8		W			7		8					Gloomy	W. Newcombe.
Valencia, Observatory			29.97	761.2	59.6	15.3		NNW	14	6.3			10					Drizzling	The Staff.
Sub-Series																			
Calf of Man, Isle of Man					57	13.9		W			6		10						Thomas Dawson.
Cape Good Hope, Obs'y			30.26	768.6	61.2	16.2	63	SW	8	3.6		0	0						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.84	757.9	58.0	14.4	87	N			2		8kn			0.01	0.3	Hazy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.67	753.6	57.1	13.9		W			4		10ks			0	0	Cloudy	Andrew Gibb.
Mauritius, Observatory			30.13	765.3					24.0	10.7						0.02	0.5		C. Meldrum
Melbourne, Observatory			30.17	766.3	47.1	8.4	84	WNW	10	4.5			7			0.13	3.3	Rain-squalls	R. L. J. Ellery.
Monach L'thouse, Hebrides			29.59	751.6	57	13.9		W			6		10			0.3	7.6		J. Youngclause.
North Unst, (Shetland Is.)			29.57	751.1	48	8.9		S			4		10						Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in Mauritius, unknown. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. 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			29.60	751.8	56.1	13.4	77	NW			2		9					Raining	
Fanoe			29.72	754.8	57.4	14.1	62	W			4		8						
Godthaab, (Greenland)			29.76	755.8	47.7	8.4	73	NNE			4		0						
Stykkisholm, (Iceland)			29.71	754.5	51.3	10.7	89	N			4		5						
Thorshavn, (Faröe)			29.46	748.3	49.3	9.6	92	SE			6		10					Raining	
Vestervig			29.64	752.8	58.6	14.8	58	NNW			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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	59.0	15	58	W			2		10			0.08	2.	Covered	Normal School.
Amiens																			Normal School.
Avignon			29.95	760.8	66.4	19.1	47	NNW			6		0			0	0	Very clear	Normal School.
Bar-sur-Seine			30.08	764.0	57.7	14.3	55	N			2		8		W	0.287	7.3	Very cloudy	C. Saillard.
Beaumette, (near Angers)			30.10	764.6	60.1	15.6	58	W	3.6	1.6					W	0	0		Beaumette Observatory.
Beauvais			30.07	763.7	62.1	16.7	48	WSW			3		8		NW	0	0	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.09	764.3	59.5	15.3	65	S			2		..kn		S	0	0		Normal School.
Bourges			30.11	764.7	60.8	16	56	NW			3		8		NW	0.059	1.5	Very cloudy	Normal School.
Brest			30.11	764.8	67.1	19.5	63	WNW			3		6n		WNW	0	0		Naval Observatory.
Carcassonne			29.88	759.0	62.6	17	60	W			6		5		E	1.713	43.5	Cloudy	Normal School
Caen																			Normal School.
Chartres			30.13	765.2	60.6	15.9	85	N			1		10			0	0	Covered	Normal School.
Châlons-sur-Marne			30.07	763.6	61.3	16.3	39	N			2		5k		S	0.043	1.1	Cloudy	Normal School.
Clermont			30.06	763.4	61.9	16.6	41	SW			4		8		W	0	0	Very cloudy	Puy de Dome Obs'y.
Commercy			30.06	763.5	57.2	14	69	NW			4		5k		NW	0.102	2.6	Cloudy	Normal School
Commune de Greasque*			29.94	760.4	70.5	21.4	32	NW			4		5		NW	0	0		M. Kina.
Grenoble			29.95	760.8	54.0	12.2	69	NW			6		5		NE	0.04	1.	Cloudy	Normal School.
La Roche-sur-Yon					65.7	18.7	58	NW			2		5		SE	0.016	0.4	Cloudy	Normal School.
Le Mans			30.13	765.2	59.7	15.4	56	NNW			2		5		NNW	0	0	Cloudy	Normal School.
Lons-Le-Saulnier			30.06	763.4	58.5	14.7	61	NE			2		8			0	0	Very cloudy	Normal School.
Mâcon			30.15	765.7	61.5	16.4	85	SW			4		5		NE	0	0	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			30.05	763.3	60.1	15.6	72	N			4		8		SSW	0	0	Very cloudy	Normal School.
Nîmes			29.94	760.4	68.0	20	39	NW			6		0			0	0	Clear	Normal School.
Orleans																			Normal School.
Paris, Observatory			30.08	763.9	60.3	15.7	49	W			1		6ck		N	0	0	Partial halo.	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			30.11	765.5	68.4	20.2	54	W			3		8		E	0	0	¾ covered	Naval Observatory.
Rouen			30.04	763.9	59.9	15.5	55	WSW			1		10		W	0	0	Covered	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School
Villefranche																			Normal School.
Sub-Series.																			
Fort de France, Martinique			29.89	759.2	82.4	28													L'Abbé Marchési.
Marseilles					48.4	9.1	69	NNE	7.4	3.33			8		N	0.098	2.5		Marseilles Observatory.
Mont-Louis			30.25	768.1	61.7	16.5	53	WSW			2	..c	..ck		W	0	0		—. Faïguère.
Montsouris, Paris			30.07	763.7	87.3	30.7	29	NW	22.4	10.00			2		NW	0	0		Montsouris Observ'tory.
Perpignan			29.99	761.7	35.6	2.0		N			2		10					Cloudy	Dr. Fines.
Pic du Midi, (Summit) H.P.	21.32	541.4			39.2	4.0		N			1		10			1.925	48.9	Cloudy	M. Baylac.
Pic du Midi, (Plantade) H.P.	22.56	57.2.9			59.4	15.2	53	W			1		9			0	0	Very cloudy	General de Nansouty.
Saint Maur, (near Paris)			30.08	763.9	62.6	17.0	46	WNW			3		7			0.756	19.2		E. Renou.
Toulouse			30.17	766.2	61.5	16.4	61	NW			1		8		NNW	0	0		Toulouse Observatory
Tours			30.10	764.6	60.8	16.0	42	NW			2		7			0	0	Lightly cov.	C. Marquet.
Versailles, (near Paris)			30.08	764.0	73.2	22.9	95	SW	3.1	1.4			10			0.110	2.8	Misty	Dr. A. Régnev.
Zi-Ka-Wei, (near Shanghai)			29.79	756.6															Marc Dechevrens, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day; the weather in general terms as published. The altitude of Mont Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	57.7	14.3	52	NW			5		6	W		0.197	5.0		Prof. T. Hoh.
Berlin			29.82	757.5	65.3	18.5	42	NW			4		6			0	0		Prof. Arndt.
Breslau			29.93	760.2	60.6	15.9	46	W			6		7			0	0		Dr. P. Neugebauer.
Carlsruhe			29.97	761.3	60.4	15.8	61	NW			1		9			0.335	8.5		A. Senz.
Cassel			29.93	760.2	63.3	17.4	59	WNW			2		8	W		0.098	2.5		Dr. H. Möhl.
Emden			29.83	757.7	51.5	12.5	87	WSW			1		9			0.264	6.7		Prof. Prestel.
Frankfort on the Main			29.99	761.7	62.2	16.8	59	W			2		7			Inap.	Inap.		Physical Society.
Friedrichshafen			30.00	761.9	59.0	15.0	83	SW			1		8			0.102	2.6	Rainy	M. Wilhelm.
Hamburg			29.80	756.8	58.1	14.5	74	WSW			3		6c,k	WSW		0.150	3.8	Showery	Captain F. Hegemann.
Kiel			29.72	755.0	61.7	16.5	48	WNW			5		8			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			29.69	754.1	60.3	15.7	66	W			5		4			1.776	45.1		Prof. E. Luther.
Köslin			29.74	755.5	60.8	16.0		W			4		2			0.071	1.8		H. Müller.
Leipsic			29.90	759.4	62.4	16.9	48	WSW			3		6	W		0.004	0.1		Prof. Bruhns.
Memel			29.63	752.7	56.5	13.6	90	W			1		10ks	NW		1.043	26.5	Light rain	Reinbrecht & Skalweit.
Münster			29.81	756.8	61.9	16.6	57	W			2		4			0.154	3.9		Prof. E. Heis.
Neuhahrwasser			29.71	754.7	61.3	16.3	60	WNW			5		8			1.008	25.6		A. Lothes.
Posen			29.84	757.8	66.2	19.0	41	W			6		8			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.02	762.6	61.9	16.6	47	N			3		9	NW		0	0		Dr. Schur.
Stuttgart			29.98	761.4	59.0	15.0	55	NW			2		8			0	0		Prof. Schoder.
Thorn			29.78	756.4	63.5	17.5	57	W			6		7			0.902	22.9		Dr. Hasenbalg.
Treves, (Trier)			29.97	761.1	58.6	14.8	57	SW			4		7			0	0		Prof. Flesch.
Wustrow, Naval School			29.80	756.8	60.1	15.6	62	W			5		5			0.437	11.1		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.80	756.9	88.3	31 3		S										Very clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	65.8	18.8	49	E	6.9	3.1			10			0	0		
Padua			29.83	757.6	65.8	18.8	50	NE	8.7	3.9			10			0	0		
Vicenza			29.84	757.8	67.3	19.6	49	E	1.3	0.6			8	E		0	0		
Verona			29.83	757.6	69.8	21.0	65	NE			2		0			0	0		
Bergamo																			
Domodossola	28.77	730.7	29.77	756.1	67.8	19.9	47	S			4		8			0	0		
Milan			29.85	758.2	73.6	23.1	40	SSE			2		3			0	0		
Pavia			29.85	758.2	66.6	19.2	49	E			4		3	NE		0	0		
Moncalieri			29.84	758.0	68.4	20.2	52	SE	5.6	2.5			8	NE		0	0		
Mondovi	28.00	711.1	29.85	758.1	57.9	14.4	63	NW			4		10			0.285	7.2		
Porto Maurizio			29.86	758.5	76.3	24.6	30	E			2		6	SE		0	0		
Genoa			29.82	757.3	73.6	23.1	34	E	5.6	2.5			4	N		0	0		
Piacenza			29.86	758.4	63.0	17.2	68	SE			4		10			0	0		
Parma			29.85	758.1	66.9	19.4	74	NNE			4		9			0	0		
Bologna			29.85	758.2	60.4	15.8	59	WNW			1		7	E		0.351	9.0		
Florence			29.81	757.8	67.1	19.5	56	N			2		10	NW		0.374	9.5		
Leghorn			29.80	756.8	69.1	20.6	49	ENE	15.0	6.7			3			0	0		
Siena	28.61	726.6	29.78	756.3	62.6	17.0	60	NNE	1.8	0.8			7	W		0.114	2.9		
Urbino	28.32	719.2	29.83	757.6	57.7	14.3	87	NE			2		10			0.839	21.3		
Ancona			29.84	758.0	65.3	18.5	74	WNW			6		10			0.898	22 8		
Grosseto			29.79	756.7	73.8	23.2	48	NE			4		3	N		0	0		
Rome			29.84	757.9	75.0	23.9	46	WSW	11.9	5.3			5	SW		0	0		
Naples, O. U.			29.88	759.0	78.1	25.6	45	WNW			6		3	NW		0	0		
Lecce			29.82	757.3	80.6	27.0	56	NE	16.8	7.5			2			0	0		
Cosenza			29.88	759.0	84.2	29.0	71	NW	9.4	4.2			3			0.031	0.8		
Riposto, (Sicily)			29.78	756.4	84.6	29.2	55	ENE			4		3	SW		0	0		
Palermo			29.81	757.9	87.6	30.9	46	NE	8.1	3.6			2			0	0		
Caltanissetta	29.72	709.1	29.78	756.4	80.4	26.9	30	NW			4		1	SE		0	0		
Sub-Series.																			
Naples, S. R.			29.90	759.4	75 7	24.3	43	WSW	8.7	3 9			6	SW		0.091	2.3		Prof. F. Brioschi.
Pesaro			29.90	759.4	62.8	17.1	85	WNW	22.8	10.18			10n	W		0.016	0.4	Raining	L. Guidi.

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	59.0	15.0		W			3								
Groningen			29.79	756.6	56.8	13.8		NW			3								
Helder			29.87	758.8	60.8	16.0		W			4								
Utrecht			29.89	759.2	62.4	16.9	59	WSW			2		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter and omit the rain-fall; for Utrecht, they give the the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.60	751.7	52.3	11.3	55	W	7.2	3.2			3			0	0		
Brönö			29.60	751.9	49.6	9.8	52	NNW	18	8			8			0	0		
Christiania			29.56	750.7	60.8	16.0	34	SSW	3 1	1.4			7			0.020	0.5		
Tromsö			29.59	751.5	47.5	8.6		NE	2	1			2			0.047	1.2		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 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	769.7	74.5	23.6	77	ESE	10.6	4.75	.....	.....	4	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.02	762.6	82.8	28.2	19	ESE	2.5	1.1	.....	.....	2	.....	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.15	765.8	76.8	24.9	69	SW	9.8	4.4	.....	.....	10	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.09	764.2	74.1	23.4	35	N	19.9	8.9	.....	.....	1	NNW	.....	0	0	Squally.	The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level, excepting Lisbon. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia at St. Petersburg.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 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	.....	.....	29.82	757.3	61.9	16.6	55	WSW	16	7	.....	.....	8	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.66	753.4	58.1	14.5	64	WSW	40	18	.....	.....	10	.....	.....	...	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.22	742.1	73.6	23.1	65	S	16	7	.....	.....	10	.....	.....	Blank	Blank	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.36	745.7	70.3	21.3	41	SSE	31	14	.....	.....	9	.....	.....	.....	.....	.....	Central Physical Obs.
Kiopio	.....	.....	29.37	746.0	59.4	15.2	100	SSE	18	8	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.73	755.1	81.3	27.4	52	NW	4	2	.....	.....	9	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.85	758.3	85.6	29.8	51	S	16	7	.....	.....	0	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.91	759.7	82.8	28.2	71	E	4	2	.....	.....	0	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.93	760.1	74.8	23.8	52	S	13	6	.....	.....	3	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.92	759.9	81.3	27.4	17	ESE	40	18	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.73	755.1	64.4	18.0	81	S	13	6	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.51	724.1	29.84	757.9	85.5	29.7	38	SE	13	6	.....	.....	2	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.09	761.2	72.6	22.5	28	S..	4	2	.....	.....	0	.....	.....	.....	.....	.....	Sebastianoi.
Kasan	.....	.....	30.15	765.9	68.0	20.0	50	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischet.
Ekaterinburg	29.11	739.4	30.04	762.9	64.7	17.6	47	NNW	9	4	.....	.....	5	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.95	760.6	83.3	28.5	33	E	2	1	.....	.....	1	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.89	759.9	63.9	17.7	57	W	0	0	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.63	752.5	58.8	14.9	88	S	2	1	.....	.....	6	.....	.....	Blank	Blank	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.84	757.9	76.1	24.5	75	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	29.84	757.9	7[illegible]	23.1	88	SE	18	8	.....	.....	10	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 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	.....	.....	30.05	763.3	72.1	22.3	31	NE	5.2	2.33	.....	2	0	NW	.....	0	0	Clear	Royal Observatory.
San Fernando	.....	.....	30.05	763.2	77.2	25.1	73	SSE	4.9	2.2	.....	0	8	.....	S	.....	.....	.....	The Naval Observatory.

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 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	.....	.....	29.52	749.7	54.7	12.6	87	S	.....	.....	2	.....	10	.....	.....	0.39	10.	Raining	
Umea	.....	.....	29.45	748.0	57.9	14.4	61	NNE	.....	.....	2	.....	7	.....	.....	0	0	.....	
Hernosand	.....	.....	29.44	747.7	56.5	13.6	52	N	.....	.....	2	.....	9	.....	.....	0	0	.....	
Stockholm	.....	.....	29.47	748.5	57.9	14.4	61	NW	.....	.....	4	.....	8	.....	.....	0	0	.....	
Wisby	.....	.....	29.59	751.5	59.4	15.2	66	NW	.....	.....	4	.....	5	.....	.....	0	0	.....	
SUB-SERIES.																			
Upsala	.....	.....	29.48	748.8	54.7	12.6	60	N	11.2	5.0	.....	.....	8	.....	.....	0	0	.....	Dr. Hildebrandsson.

NOTE.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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	28.61	726.7	30.04	763.0	53.2	11.8	80	NNE			3		10			0.256	6.5	Covered	The Observatory.
Zurich	28.40	721.4	30.05	763.3	51.3	10.7	90	NE			1		10			0.827	21.0	Raining	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, —0.9 mm.; Thermometer, —0.0 cent.; Relative Humidity, +23 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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	82.4	28.0	54	S	6	2.5			0			0	0		
Fao, (Persian Gulf)			29.64	752.9	93.6	34.2		SE			3		0						
Salonica			29.82	757.5	86.5	30.3		SE			2		0						
Valona			29.95	760.6	70.2	21.2		W			2		10					Thunder-storm	
Varna			29.88	759 0	86.0	30.0		S			2		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.79	756.7	83.8	28.8	56	NW			1		0					Clear	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, by Lind's anemometer when strong, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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.			29.66	753.4	58.9	14.9	93	Calm	0	0			10			0	0		Hon. J. Ferguson.
Brockville, Ontario			30.00	762.0	64	17.8		W	5	2.2		0	2ks		W	0.07	1.8	Clear	W. R. Bigg.
*Chatham, N. B.			29.68	753.9	62	16.7	97	SW	1	0.4		2k	8ks	SW	SW	0.41	10.4	Cloudy	G. A. Blair.
Charlottetown P. E. Island			29.76	755.9	64	17.8	94	S	10	4.5			10n			0.210	5.33	Light rain	H. J. Cundall, C. E.
Cornwall, Ontario			29.93	760.2	64.7	18.2	59	SW			2	0	0			0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			29.66	753.4	54.2	12.3	99	E			1					0.20	5.1	Gloomy	H. A. Johnson.
Esquimault, B. C.																			W. H. Bevis.
Fredericton, N. B.			29.76	755.9	62.0	16.7	94	Calm	0	0			10s					Showery	Prof. Harrison.
*Fort Garry, Manitoba			30.28	769.1	36	2.2	97	N	2	0.9		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.04	763.0	64.6	18.1	70	NW			1	4ck	0	NW		0	0	Fine	H. J. Strang, M. A.
Granton, Ontario	28.95	735.3	30.04	763.0	56	13.3		Calm			0	0	0			0	0	Clear	James Grant.
*Halifax, N. S.			29 79	756.7	64	17.8	94	W	12	5 4			10n			0.039	0.09	Light rain	F. Allison, M. A.
*Kingston, Ontario			30.04	763.0	62	16.7	79	W	8	3 6		0	0			Inap.	Inap.	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			29.80	756.9	65.8	18.8	91	S	4	1.8			10n			0	0	Overcast	C. H. Rigby
*Montreal, Quebec			29.91	759.7	69	15.0	65	SW	14	6.3		0	0			Inap.	Inap.	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			29.95	760.7	57	13 9	66	W	12	5.4		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			29.96	761.0	61	16.1	66	W	24	10.7		2ck		W		0	0	Fair	Rev. R. Mosley.
Port Dover, Ontario			30.07	763.8	59	15.0	82	W	6	2.7		0	0			1.70	43.2	Clear	H. Morgan.
Port Hastings, N. S.			29.86	758.4	63.8	17.7		SE	4	1.8						2.00	50.8	Raining	Peter Grant.
Port Stanley, Ontario			30.09	764.3	58	14.4	74	W	6	2 7		0	0			0.05	1.3	Clear	M. Payne.
*Quebec, Quebec			29.82	757.4	63	17.2	67	SW	8	3.6		0	0			0.12	3.0	Clear	Capt. Ashe, R. N.
St. John, N. B.			29.78	756.4	57	13.9	97	S	4	1.8			Fog			0.18	4.6	Raining	G. Murdoch, C. E.
*Saugeen, Ontario			29.98	761.5	61	16.1	54	W	3	1.3		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario			29.97	761.2	59	15.0	70	NW	10	4.5		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario	28.76	730.5	30.03	762.7	55.3	12.9		W	5	2.2		3ck	0	W		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.85	758.2	64	17.8	98	S	4	1.8			10n		S	Inap.	Inap	Cloudy	T. C. Hill.
*Toronto, Ontario			30.05	763.3	56	13.3	74	W	5	2.2		0	0			0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.07	763.8	55.5	13.1	90	W	9	4.0		0	0			0	0	Fine	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			30.14	765.5	63	17.2	46	W				0	5cs			0.06	1.5	Fair	John Delaney.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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	63	17.2	57	NW	20	8.9	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Alpena, Mich	.....	.....	29.99	761.7	56	13.3	68	W	11	4.9	.....	0	0	.....	.....	0	0	Clear	
Atlantic City, N. J	.....	.....	29.97	761.2	72	22.2	90	N	2	0.9	.....	.....	10s	.....	N	Inap.	Inap.	Threatening	
Augusta, Ga.	.....	.....	30.07	763.8	78	25.6	78	Calm	0	0	.....	.....	10ks	.....	.....	Inap.	Inap.	Cloudy	
Baltimore, Md	.....	.....	30.02	762.5	75	23.9	72	N	10	4.5	.....	Haze	2s	.....	.....	0.42	10.7	Fair	
Barnegat, N. J	.....	.....	29.95	760.7	73	22.8	81	N	12	5.4	.....	.....	10s	.....	NW	0	0	Cloudy	
Bismarck, Dakota	28.32	719.3	29.97	761.2	50	10.0	71	E	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass	.....	.....	29.86	758.4	72	22.2	63	W	18	8.0	.....	5cs	Haze	W	.....	0	0	Fair	
Breckenridge, Minn	.....	.....	30.28	769.1	41	5.0	83	E	4	1.8	.....	0	5s	.....	.....	0	0	Fair	
Buffalo, N. Y	.....	.....	30.02	762.5	63.5	17.5	67	SW	8	3.6	.....	0	0	.....	.....	0.04	1.0	Clear	
Burlington, Vt	.....	.....	29.95	760.7	61	16.1	71	W	5	2.2	.....	2k	0	W	.....	0	0	Fair	
Cairo, Ill	.....	.....	30.21	767.3	66	18.9	64	NE	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Cape Hatteras, N. C	.....	.....	30.00	762.0	80	26.7	70	SW	16	7.2	.....	0	5ks	.....	SW	0	0	Fair	
Cape Henry, Va	.....	.....	30.01	762.2	71	21.7	95	S	13	5.8	.....	.....	10s	.....	.....	0.60	15.2	Cloudy	
Cape Lookout, N. C	.....	.....	30.07	763.8	80	26.7	74	SW	14	6.3	.....	.....	10s	.....	W	0.01	0.3	Cloudy	
Cape May, N. J	.....	.....	29.97	761.2	76	24.4	90	W	14	6.3	.....	.....	10s	.....	W	0.01	0.3	Cloudy	
Charleston, S. C	.....	.....	30.09	764.3	80	26.7	74	W	2	0.9	.....	2ks	8s	NE	.....	0	0	Cloudy	
Cheyenne, Wyoming	24.13	612.9	30.07	763.8	53	11.7	68	SW	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Chicago, Ill	.....	.....	30.16	766.1	60	15.6	65	NW	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	30.12	765.0	62	16.7	61	N	4	1.8	.....	2c	Sm'c	N	.....	0.08	2.0	Fair	
Cleveland, Ohio	.....	.....	30.08	764.0	67	19.4	49	W	6	2.7	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Corsicana, Tex	.....	.....	30.07	763.8	69	20.6	90	N	6	2.7	.....	5cs	Haze	.....	.....	0.29	7.4	Fair	
Davenport, Iowa	.....	.....	30.25	768.3	55	12.8	73	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Denison, Tex	.....	.....	30.11	764.8	69	20.6	100	NW	4	1.8	.....	.....	10s	.....	.....	0.17	4.3	Cloudy	
Denver, Col.	24.91	632.7	30.13	765.3	59	15.0	53	Calm	0	0	.....	.....	8s	.....	W	0	0	Cloudy	
Detroit, Mich	.....	.....	30.03	764.0	55	12.8	74	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Dodge City, Kan	27.61	701.3	29.91	759.7	53	11.7	93	E	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	30.23	767.8	55	12.8	73	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Duluth, Minn	.....	.....	30.24	768.1	48	8.9	77	SW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me	.....	.....	29.75	755.9	63	17.2	94	SW	3	1.3	.....	.....	Fog	.....	W	0.20	5.1	Foggy	
Erie, Pa	.....	.....	30.04	763.0	64	17.8	62	S	4	1.8	.....	1k	Haze	.....	.....	Inap.	Inap.	Clear	
Escanaba, Mich	.....	.....	30.11	764.8	50	10.0	71	W	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Fort Gibson, Indian Ter	.....	.....	30.12	765.0	69	20.6	79	NE	1	0.4	.....	10cs	0	.....	.....	0	0	Cloudy	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T	28.91	735.1	30.02	762.5	66	18.9	78	NW	8	3.6	.....	.....	10s	.....	NW	0	0	Cloudy	
Fort Sully, Dakota	28.18	720.8	30.01	762.2	58	14.4	88	SE	10	4.5	.....	2c	0	NW	.....	0	0	Clear	
Florence, Arizona	28.30	721.1	29.93	757.7	77	25.0	.....	NE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex	.....	.....	30.05	763.3	80	26.7	82	N	16	7.2	.....	2c	0	.....	.....	1.64	41.7	Fair	
Grand Haven, Mich	.....	.....	30.11	764.8	62	16.7	71	NW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Indianapolis, Ind	.....	.....	30.17	766.3	59	15.0	76	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Indianola, Tex	.....	.....	30.05	763.3	78	25.6	86	NE	16	7.2	.....	2c	5kg	.....	.....	0	0	Cloudy	
Jacksonville, Fla	.....	.....	30.07	763.8	79	26.1	82	NE	4	1.8	.....	0	4cs	.....	NE	0	0	Fair	
Keokuk, Iowa	.....	.....	30.19	766.8	62	16.7	71	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla	.....	.....	30.34	763.0	84	28.9	79	E	4	1.8	.....	2c	0	.....	.....	0	0	Clear	
Kittyhawk, N. C	.....	.....	30.07	763.8	71	23.3	85	W	14	6.3	.....	.....	10n	.....	W	Inap.	Inap.	Light rain	
Knoxville, Tenn	.....	.....	30.06	763.5	73	22.8	76	NW	8	3.6	.....	.....	10k	.....	SW	0.53	13.5	Cloudy	
La Crosse, Wis	.....	.....	30.25	768.3	54	12.2	79	W	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan	.....	.....	30.25	768.3	57	13.9	84	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Louisville, Ky	.....	.....	30.18	766.6	60	15.6	76	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Lynchburg, Va	.....	.....	29.90	761.7	79	26.1	78	NW	2	0.9	.....	8cs	0	W	.....	Inap.	Inap.	Fair	
Malone, N. Y	.....	.....	29.93	760.2	58	14.4	53	W	9	4.0	.....	0	0	.....	.....	0.54	13.0	Clear	
Marquette, Mich	.....	.....	30.07	763.8	53	11.7	66	W	15	6.7	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn	.....	.....	30.14	765.5	71	21.7	71	NE	6	2.7	.....	8ck,cs	0	SW	.....	0	0	Cloudy	
Milwaukee, Wis	.....	.....	30.20	767.1	55	12.8	68	NW	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Mobile, Ala	.....	.....	30.06	763.5	77	25.0	86	NW	3	1.3	.....	0	0	.....	.....	0.15	3.8	Clear	
Montgomery, Ala	.....	.....	30.08	764.0	76.5	24.7	81	NE	4	1.8	.....	2c	Haze	.....	.....	0.01	0.3	Clear	
Morgantown, W. Va	29.01	737.6	30.06	763.5	67	19.4	79	N	6	2.7	.....	0	0	.....	.....	0.02	0.5	Clear	
Mt. Washington, N. H	24.67	601.2	30.03	762.7	37	2.8	100	NW	60	26.8	.....	.....	Fog	.....	.....	1.63	41.4	Foggy	
Nashville, Tenn	.....	.....	30.12	765.0	69	20.6	75	N	7	3.1	.....	10k	0	NW	.....	0.01	0.3	Cloudy	
New Haven, Conn	.....	.....	29.95	760.7	69.0	20.6	56	N	12	5.4	.....	2ck	Fg,sm'	N	.....	0	0	Fair	
New London, Conn	.....	.....	29.93	760.2	71	21.7	52	NW	7	3.1	.....	2ck	5s	W	SW	0	0	Fair	
New Orleans, La	.....	.....	30.04	763.0	82	27.8	78	E	7	3.1	.....	1ck	0	E	.....	0	0	Clear	
Newport, R. I	.....	.....	29.90	759.4	72	22.2	75	W	7	3.1	.....	0	5ks	.....	W	0.08	2.0	Fair	
New York, N. Y	.....	.....	29.98	761.5	69	20.6	56	NW	10	4.5	.....	.....	10ks	.....	NW	0	0	Cloudy	
Norfolk, Va	.....	.....	30.01	762.7	74	23.3	90	S	15	6.7	.....	.....	10ks	.....	W	0.22	5.6	Cloudy	
North Platte, Neb	27.28	692.9	29.82	757.4	58	14.4	64	E	11	4.9	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb	29.16	740.7	30.24	768.1	57	13.9	93	Calm	0	0	.....	0	Fo	.....	.....	0	0	Fair	
Oswego, N. Y	.....	.....	30.01	763.0	64	17.8	60	W	7	3.1	.....	0	2ks	.....	NW	0	0	Fair	
Pembina, Dakota	.....	.....	30.24	768.1	37.5	3.1	95	Calm	0	0	.....	0	0	.....	.....	0	0	Clear, frost	
Philadelphia, Penn	.....	.....	30.00	762.0	70	21.1	75	N	11	4.9	.....	0	8ks	.....	NW	0.20	5.1	Cloudy	
Pike's Peak, Colorado	18.01	158.2	30.24	768.1	32	0.0	50	SW	30	13.4	.....	5ck	1s	W	.....	0	0	Fair	
Pittsburgh, Penn	.....	.....	30.07	763.8	63	17.2	83	N	2	0.9	.....	2c	Fog	NW	.....	0.30	7.6	Fair	
Port Huron, Mich	.....	.....	30.05	763.3	56	13.3	80	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Portland, Me	.....	.....	29.82	757.4	71	21.7	45	NW	12	5.4	.....	2ck	2ks	W	.....	0	0	Fair	
Portland, Oregon	.....	.....	30.22	767.6	48	8.9	85	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Punta Rassa, Fla	.....	.....	30.05	763.3	80.5	26.9	88	E	6	2.7	.....	Haze	2k	.....	SE	0.01	0.3	Fair	
Rochester, N. Y	.....	.....	30.03	762.7	59	15.0	64	SW	4	1.8	.....	0	Haze	.....	.....	Inap.	Inap.	Clear	
Salt Lake City, Utah	25.63	651.0	29.96	761.0	66	18.9	45	S	4	1.8	.....	10k	0	W	.....	0	0	Cloudy	
Sandy Hook, N. J	.....	.....	29.95	760.7	70	21.1	57	NW	25	11.2	.....	.....	10ks	.....	NW	0	0	Cloudy	
San Diego, Cal.	.....	.....	29.94	760.5	64	17.8	83	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
San Francisco, Cal	.....	.....	29.89	759.2	55	12.8	80	SW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M	23.44	595.4	29.98	761.5	55	12.8	80	SE	4	1.8	.....	5k	0	.....	.....	0	0	Fair	
Savannah, Ga.	.....	.....	30.08	764.0	80	26.7	78	Calm	0	0	.....	2c	Haze	.....	.....	0	0	Fair	
Shreveport, La	.....	.....	30.12	765.0	75	23.9	95	NE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Smithville, N. C	.....	.....	30.08	764.0	81	27.2	70	SW	6	2.7	.....	.....	10ks	.....	SW	0	0	Cloudy	
Springfield, Mass.	.....	.....	29.94	760.5	65	18.3	67	NW	8	3.6	.....	2k	2s	.....	.....	Inap.	Inap.	Fair	
St. Louis, Mo	.....	.....	30.23	767.8	64	17.8	67	NE	3	1.3	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla	.....	.....	30.06	763.5	77	25.0	77	E	4	1.8	.....	0	0	.....	.....	0	0	Clear	
St. Paul, Minn	.....	.....	30.25	768.3	50	10.0	78	Calm	0	0	.....	Haze	Fog	.....	.....	0	0	Hazy	
St. Paul's Island, Alaska	.....	.....	29.66	753.4	41	5.0	91	E	20	8.9	.....	.....	Fog	.....	.....	0	0	Foggy	
Thatcher's Island, Mass	.....	.....	29.83	757.7	71	21.7	85	SW	8	3.6	.....	2ck	5s	NW	NW	0	0	Fair	
Toledo, Ohio	.....	.....	30.09	764.3	60	15.6	70	SW	5	2.2	.....	0	Haze	.....	SW	0	0	Clear	
Tucson, Arizona	27.52	699.0	30.13	765.3	70	21.1	.....	S	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga	.....	.....	30.07	763.8	78	25.6	86	SW	4	1.8	.....	2c	2ks	.....	SW	0	0	Fair	
Vicksburg, Miss	.....	.....	30.10	764.5	75	23.9	90	Calm	0	0	.....	2ck	0	E	.....	0.65	16.5	Fair	
Virginia City, M. T	24.32	617.7	29.80	756.9	45	7.2	60	Calm	0	0	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Washington, D. C	.....	.....	30.02	762.5	75.5	24.2	81	N	8	3.6	.....	5k	0	N	.....	0.07	1.8	Fair	
Wilmington, N. C	.....	.....	30.08	764.0	76	24.4	81	NW	6	2.7	.....	.....	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
Wood's Holl, Mass			29.90	759.4	74	23.3	85	W	7	3.1		0	5s		W	0	0	Fair	
Yankton, Dakota	28.56	735.6	30.26	768.6	53	11.7	80	Calm	0	0		0	0			0	0	Clear	
Yuma, Arizona			29.84	757.9	83	28.3		NE				0	0			0	0	Clear	
Sub Series.																			
Kingston, Jamaica, W. I.			30.15	765.8	81	27.2	70	Calm	0	0		5c	2s			0	0		James Gall.
St. Georges, Bermudas			30.11	764.8	80.5	26.9	61	E	22	9.8		0	1s			0	0	Clear	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Paramaribo, D. Guiana S.A			30.01	762.2	82	27.8	82	SE			2	5k	5k	SE		0.02	0.51	Fair	C. J. Hering.
Batavia, Dutch Guiana S.A.	30.05	763.3			86.0	30.0		NE								0.030	0.76		Dr. H. Groot.
Medellin, Colombia, S. A.	25.18	639.6			66.5	19.2	86	SE	2	0.9		4ck	4s			0	0	Cloudy	Thomas Herran.
York Factory, B. A			30.04	763.0	44	6.7	84	N	24	10.7		1c	0	N		0.80	20.3		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.			30.07	763.8	75.5	24.2		NE			5					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Ad. le Fuller At Brunswick, Ga.			30.06	763.5	80	26.7		NW			2	2c	Haze					Clear	Capt. James Jorgensen.
Steamer Leipzig. N. 49° 20', W. 45° 37'.	S 61 W		29.94	760.2	54.5	12.5		SW			5		.k			Smooth		*D. clouds	Capt. R. Hoffmann.

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.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,235 ft., or 1,901.6 m.; North Platte, 2,849 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,531 (?) 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. * Detached clouds.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

Furnished by coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request, and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto-pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assgd.,) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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	764.1	82.8	28.2	54	N			1		0			0	0	Clear	Charnot.
Algiers			30.14	765.5	78.8	26.0	60	N			3		4			0	0	Fair	Peter.
La Galle			30.10	764.6	74.7	23.7	66	NE			3		7			0.118	3.0	Cloudy	Kunts.
Tunis			30.07	764.7	80.6	27.0	45	NE			4		9			0	0	Hidden	Jacques.
Biaz			30.13	765.3	82.4	28.0	57	N			4		4			0	0	Fair	Chauvey.
Saïda			30.08	763.9	79.2	26.2	34	NNE			4		2			0	0	Clear	Millot.
Tébessa			30.07	763.8	73.4	23.0		NNW			3		10			0.118	3.0	Hidden	Colin.
Geriville			30.09	764.3	75.2	24.0	29	NNW			1		2			0	0	Clear	Lemaillot.
Laghouat			30.12	765.1	84.2	29.0	33	E			2		2			0	0	Clear	Guyot.
Biskra			30.15	765.8	87.4	30.8	38	NW			2		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			29.91	760.5	60.8	16.0	79	SW			1		10			0.028	0.7	Drizzling	Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.91	759.8	64.0	17.8	72	W			1		10			0.110	2.8		Dr. Wierzbiski.
Eperies			29.82	757.5	66.7	19.3	71	Calm			0		6cs		N	0	0		Julius Mikolik.
Gratz	28.71	729.1	29.89	759.1	59.9	15.5	74	NE			2		10			0.878	22.3		Andreas Rospini.
Hermannstadt	28.44	722.3	29.78	756.5	74.8	23.8	58	NW			2		5			0	0		Prof. Reissenberger.
Kremsmünster	28.58	725.9	29.90	759.4	59.7	15.4	64	ESE			2		5			0	0		Prof. C. Wagner.
Lemberg			29.88	759.0	61.0	16.1	85	N			1		8			Blank	Blank		Dr. T. Stanecki.
Nyiregyhaza																			Habsauda Daniel.
Pola			29.93	760.1	64.0	18.3	68	ENE			1		6ks			1.024	25.99		I.R. Hydrographic Office.
Szegedin			29.80	757.0	83.8	28.8	19	SE			2		3			0	0		Karl Stancel.
Trieste			29.93	760.6	60.0	10.4	53	E			1		6			0.189	4.8	Drizzling	Prof. V. Farolfi.
Vienna			29.92	760.0	60.8	16.0	63	S			1		0			0	0		I. R. Central Met. Ob'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			29.66	753.3	62.1	16.7	57	WNW			4		9ks		WNW	0.331	8.40		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.74	755.4	56.0	13.3		NNW	19	8.5			3			0.060	1.52	Squally	William Boswell.
Ardrossan																			William McNeil.
Armagh, Observatory			29.87	758.7	59.0	15.0		WNW	11	4.9									S. Cail, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.91	760.5	62.2	16.8		NW			1–2		7					*D. clouds	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			30.02	762.5	85.0	29.4		NE			1		7					*D. clouds	Sergt. J. F. Halanen, A. [H. C.
Cambridge, Observatory			29.70	754.4	61.5	16.4		WNW			3		7					*D. clouds	H. Todd.
Cardington			29.73	755.1	64.0	17.8		NW			3		7					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E			29.79	756.7	62.0	16.7		N			4		8			Blank	Blank	Gloomy	Capt. J. Fellowes, R.E.
Dartmoor	28.53	724.6	30.04	762.7	53.4	11.9		NW			5		8					Squally	R. E. Power.
Donaghadee			29.82	757.4	62	16.7		N			4		3					*D. clouds	J. Mac Gowan.
Dover			29.72	754.9	62	16.7		NW			3		5					½ clouded	J. Costello.
Eccles (near Manchester)			29.71	754.6	58.7	14.8		NW	6.8	3.0			10					Showery	Thomas Mackereth.
Falmouth, Observatory			29.96	761.0	59.0	15.0		NW			4		10					Squally	The Staff.
Fort Napier, (Natal)	27.77	702.8	29.89	759.2	75.4	24.1		NW			6		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone			29.98	761.5	77	25.0		W			2		9					Overcast	
Galway, Queen's College			29.92	760.0	61	16.1		NW			5		4					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.04	763.0	80.2	26.8		E			2		1					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.72	754.9	60.8	16.0		W			2		9					*D. clouds	Lewis Stuart.
Great Yarmouth			29.62	752.3	59	15.0		WNW			3		8					Drizzling	G. T. Watson.
Greenwich, Royal Ob'y			29.74	755.4	64.2	17.9		WNW			3		10			Blank	Blank	Overcast	The Staff, for G. B. Airy
Guernsey																			Dr. S. E. Hoskins.
Helston			30.02	762.5	62	16.7		W			4		10k			0.10	2.5	Gloomy	M. P. Moyle.
Holyhead			29.85	758.2	61	16.1		WNW			6		4					*D. clouds	John Tilston.
Kew, Observatory			29.74	755.4	63.4	17.4		WNW	16	7.2			9					Threatening	The Staff.
Kingstown			29.87	758.7	60	15.6		WNW			5		9					Overcast	George Mitchell.
Leicester Museum			29.74	755.4	59.0	15.0		W			4		10					Raining	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			30.01	762.2	81.2	27.3		NW			1		4					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			29.76	755.9	55	12.8		NW			2		10					Overcast	W. D. Penny.
Nassau, (Bahamas			30.04	763.0	84.5	29.2		NW			1		6					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.72	754.9	63.0	17.2		NW			4		7e,k		NW	0.10	2.60	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.75	755.6	55.8	13.2		NW			4–5		9					Showery	Rev. Stephen Whitty.
Oxford, Radcliffe Ob'y			29.75	755.6	64	17.8		WNW			4		7					*D. clouds	J. Lucas.
Plymouth			29.90	759.4	64.1	17.8		WNW			4		7					*D. clouds	John Merrifield.
Roche's Point			29.95	761.0	61	16.1		NNW			5		5					Cloudy	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, Jersey			29.90	759.4	61.8	16.6		NNW			6		10					Overcast	A. P. Amy.
Sandwick Manse Orkneys			29.77	756.1	52.1	11.2		NNE	16	7.2			1					Blue sky	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery Turkey)			29.77	756.1	99.0	32.2		NE			2		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.72	754.9	62.3	16.8		NNW			3		7					Overcast	W. F. Cooper.
Silloth Rectory			29.71	754.6	65.6	18.7	70	W			3		5			0.500	12.70	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.70	754.4	58.9	14.9		W			3		8			Blank	Blank	Threatening	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			29.77	756.1	55	12.8		NNE			3		8					*D. clouds	John Smith.
Strathfield Turgiss			29.76	755.9	65.3	18.5		NW			3		6					Squally	Rev. Charles H. Griffith.
Tiree			29.76	755.9	56	13.3		NNE			5		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.95	760.7	63	17.2		NW			7		6					*D. clouds	W. Newcombe.
Valencia, Observatory			30.05	763.3	61.2	16.2		SW	25	11.2			6					*D. clouds	The Staff.
Sub-series.																			
Calf of Man, (Isle of Man					56	13.3		NW			6		5						Thomas Dawson.
Cape Good Hope, Ob'y			29.91	760.5	56.6	13.7	79	NW	22	9.8		5	4						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			30.12	765.0	57.0	13.9	81	SW			2		8k			0.02	0.5		Francis Abbott, F.R.A.S.
Leith, Restaurig Park			29.77	756.1	60.2	15.7		E			2		8k			0	0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.13	765.3				ESE	19.1	8.5						0.02	0.5		C. Meldrum
Melbourne, Observatory			30.31	770.6	45.9	7.7	86	NE	6	2.7			3			0	0	Fine, hazy	R. L. J. Ellery.
Monach L'thouse, Hebrides			29.82	757.4	59	15.0		NE			3	0	0			0.2	5.1		J. Youngclaus.
North Unst, (Shetland Is.)			29.78	756.4	50	10.0		N			2	1	2	N					Robert Burnett.

Note.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in Mauritius, unknown. 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			29.66	753.4	59.2	15.1	56	SSE			4		10						
Faröe			29.46	748.3	53.1	11.7	97	S			7		10					Raining	
Godthaab, (Greenland)			29.55	750.5	47.7	8.6	81	NW			2		0					Foggy	
Stykkisholm, (Iceland)			29.69	754.2	51.6	10.9	89	SE			4		8						
Thorshavn, (Faröe)			29.89	759.1	51.6	10.9	61	ENE			2		5						
Vestervig			29.45	748.1	54.0	12.2	96	SE			6		10					Raining	

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. 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			29.95	760.6	64.4	18	62	NW			3		10k			0.04	1.	Covered	Normal School.
Amiens																			Normal School.
Avignon			30.07	763.6	69.4	20.8	41	NNW			2		0			0	0	Very clear	Normal School.
Bar-sur-Seine			29.82	757.5	57.4	14.1	91	SW			2		10		SW	Inap.	Inap.	Raining	C. Saillard.
Beaumette, (near Angers)			29.90	759.5	70.2	21.2	50	W	22.4	10.0					W	0.028	0.7		Beaumette Observatory.
Beauvais			29.78	756.4	62.6	17.0	61	W			4		8		W	0.049	1.25	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.05	763.3	60.8	16	58	N			2		8,n		N	0	0		Normal School.
Bourges			30.09	764.3	54.0	12.2	90	SW			6		10		SW	0	0	Covered	Normal School.
Brest			29.94	760.5	66.7	19.3	70	WNW			4		8		NW	0.108	2.75	Misty	Naval Observatory.
Carcassonne			30.10	764.6	64.4	18	80	W			6		2		E	0	0	Slightly cl'dy	Normal School
Caen																			Normal School.
Chartres			30.36	771.2	65.8	18.8	83	NW			4		9		NW	0	0		Normal School.
Châlons-sur-Marne			29.81	757.2	60.8	16.0	79	SW			4		8k		NE	0.024	0.6	Very cloudy	Normal School.
Clermont			29.98	761.4	61.0	16.1	58	SW			4		8		W	0.252	6.4	Very cloudy	Puy de Dome Obs'y.
Commercy			29.87	758.8	56.8	13.8	86	S			6		5k		S	0	0	Cloudy	Normal School
Commune de Greasque*			30.09	764.2	69.1	20.6	24	NW			4		0			0	0		M. Kina.
Grenoble			30.01	762.2	55.0	12.8	58	NW			2		2		N	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon					71.1	21.7	74	W			4		5		E	0.020	0.5	Cloudy	Normal School.
Le Mans			29.94	760.5	63.9	17.7	77	NNW			2		5		NW	0	0	Cloudy	Normal School.
Lons-Le-Saulnier			30.00	761.9	61.5	16.5	67	S			4		10			0.402	10.2	Covered	Normal School.
Mâcon			30.10	764.4	62.6	17	70	W			4		10		W	0.047	1.2	Covered	Normal School.
Metz																			M. Schuster.
Mirecourt			29.87	758.6	58.6	14.8	78	SSW			6		10		SW	0	0	Covered	Normal School.
Nismes			30.07	763.8	69.8	21	36	NW			2		0			0	0	Clear	Normal School.
Orleans																			Normal School.
Paris, Observatory			29.80	757.0	65.3	18.5	44	NW			6		5k		W	0.024	0.60	Cloudy	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			30.01	762.2	67.6	19.8	74	SW			6		10		NE	0.079	2.0	Rainy	Naval Observatory.
Rouen			29.78	756.5	63.3	17.4	52	W			3		8		W	0.051	1.3	Very cloudy	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School
Villefranche																			Normal School.
Sub-Series.																			
Fort de France, Martinique			29.87	758.7	82.4	28													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.29	769.4	57.9	14.4	47	SSW	7.4	3.33			2		NNW	0	0		—. Faignère.
Montsouris, Paris			29.80	757.0	66.9	19.4	52	W			4		7k	kn	WNW	0.039	1.0		Montsouris Observatory.
Perpignan			30.10	764.6	86.0	30.0	41	NE	13.0	5.83			1		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.41	543.9			41.0	5.0		NW			3		6					Rainy	M. Bayiac.
Pic du Midi, (Plantade) H.P.	22.65	575.3			44.6	7.0		NW			2		6			0.051	1.3	Rainy	General de Nansouty.
Saint Maur, (near Paris)			29.81	757.1	65.8	18.8	52	WNW			4		2			Blank	Bla k		E. Renou.
Toulouse			30.19	766.8	67.3	19.6	50	WNW			3		8			0	0		Toulouse Observatory
Tours			29.88	759.0	68.5	20.3	72	W			4		6		WNW	0	0		C. Marquet.
Versailles, (near Paris)			29.81	757.2	65.5	18.6	52	W			6		8			0.057	1.45	Showery	Dr. A. Béringy.
Zi-Ka-Wei, (near Shanghai)			29.88	758.9	75.4	24.1	90	SSE	5.4	2.4			10			0	0		Marc Dechevrens, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. 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	758.3	64.0	17.8	49	SW			7		9	SW		0	0		Prof. T. Hoh.
Berlin			29.86	758.4	64.9	18.3	37	S			3		9			0	0		Prof. Arndt.
Breslau			29.95	760.8	64.8	18.2	40	SSW			4		3			0	0		Dr. P. Neugebauer.
Carlsruhe			29.82	757.3	61.5	16.4	56	SW			5		10			0.106	2.7	Raining	A. Senz.
Cassel			29.75	755.1	56.3	13.5	72	SSW			7		8	SW		0.012	0.3		Dr. H. Möhl.
Emden			29.48	748.9	58.6	14.8	84	W			3		10			0.720	18.3	Lightning	Prof. Prestel.
Frankfort on the Main			29.81	757.1	55.6	13.1	78	SW			2		10			0.071	1.8	Raining	Physical Society.
Friedrichshafen			29.93	760.1	61.2	16.2	57	SW			4		6			0.236	6.0	Showery	M. Wilhelm.
Hamburg			29.61	752.0	51.8	11.0	96	S			6		10n	SSW		0.043	1.1	Light rain	Captain F. Hegemann
Kiel			29.57	751.0	54.0	12.2	86	SSE			5		10			0.071	1.8		Prof. G. Karston.
Königsberg, (Prussia.)			29.90	759.5	65.8	18.8	45	SW			2		4			0.039	1.0		Prof. E. Luther.
Köslin			29.83	757.7	64.2	17.9		S			6		4			0.031	0.8		H. Müller.
Leipsic			29.82	757.4	64.0	17.8	39	SSW			2		8	WSW		0	0		Prof. Bruhns.
Memel			29.94	760.5	61.9	16.6	66	SW			3		..k	WSW		0.614	15.6		Reimbrecht & Skalweit.
Münster			29.76	755.8	55.9	13.3	91	SW			1		10			0.425	10.8		Prof. E. Heis.
Neufahrwasser			29.89	759.3	66.7	19.3	51	WSW			4		8			0	0		A. Lothes.
Posen			29.89	759.1	68.9	20.5	38	S			3		7			0	0		Dr. Magener.
Strassburg, (In Alsace)			29.86	758.5	61.0	16.1	57	SW			4		10					Raining	Dr. Schur.
Stuttgart			29.85	758.2	60.8	16.0	48	W			2		9			0.059	1.5	Raining	Prof. Schoder.
Thorn			29.90	759.5	66.9	19.4	44	SW			3		5			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.71	754.6	55.6	13.1	87	SW			8		10			0.374	9.5		Prof. Flesch.
Wustrow, Naval School			29.74	755.5	61.0	16.1	58	S			4		10			0.028	0.7		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.83	757.7	91.4	33.0		S										Very clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	65.7	18.7	46	E	1.3	0.6			8			0	0		
Padua			29.92	760.0	68.5	20.3	49	S	4.9	2.2			5	NW		0	0		
Vicenza			29.91	759.8	70.7	21.5	51	SW	6.3	2.8			3	W		0	0		
Verona			29.95	760.7	71.6	22.0	50	E			1		0			0	0		
Bergamo																			
Domodossola	28.88	733.6	29.88	759.0	67.0	19.8	47	SW			6		7			0	0		
Milan			29.95	760.6	73.0	22.8	38	NW			1		5			0	0		
Pavia			29.94	760.4	70.3	21.3	47	SW			1		0			0	0		
Moncalieri			29.93	760.1	69.1	20.6	49	SE	6.3	2.8			2			0	0		
Mondovi	28.05	712.4	29.90	759.4	65.8	18.8	59	NW			4		2	NW		0	0		
Porto Maurizio			30.0	762.4	72.7	22.6	51	SW			4		4	SW		0	0		
Genoa			30.97	761.2	73.4	23.0	39	SW	6.3	2.8			0			0	0		
Piacenza			29.94	760.5	72.0	22.2	40	N			2		3			0	0		
Parma			29.92	760.0	70.5	21.4	62	ENE			2		2			0	0		
Bologna			29.98	761.4	69.1	20.6	44	SE			1		3	N		0.679	2.0		
Florence			30.00	761.9	71.6	22.0	47	WSW			2		3	W		0	0		
Leghorn			29.97	761.2	69.6	20.9	50	ENE	0.7	0.3			3			0	0		
Siena	28.78	731.0	29.95	760.7	67.3	19.6	46	NNW	0	0			4	W		0	0		
Urbino	28.46	722.8	29.97	761.2	63.1	17.3	63	NE			2		8			0.197	5.0		
Ancona			29.97	761.2	74.5	23.6	61	NW			4		2			0	0		
Grosseto			30.00	762.0	74.8	23.8	46	S			4		2	SW		0	0		
Rome			29.99	761.7	75.0	24.2	40	W	8.7	3.9			1			0	0		
Naples, O. U.			30.00	761.9	78.3	25.7	36	WSW			6		1	NW		0.008	0.2		
Lecce			29.97	761.3	79.5	26.4	44	E	18.6	8.3			2			0	0		
Cosenza			30.00	762.1	83.5	28.6	72	NW	6.9	3.1			4			0	0		
Riposto, (Sicily)			29.91	760.5	84.6	29.2	60	SE			4		2			0	0		
Palermo			29.95	760.8	77.7	25.4	45	NNW	20.6	9.2			2			0	0		
Caltanissetta	28.04	712.3	29.91	759.6	79.0	26.1	20	SW			4		1	NE		0	0		
Sub-Series.																			
Naples, S. R.			30.00	762.1	75.9	24.4	40	SW	6.9	3.1			3	NW		0.075	1.9		Prof. F. Brioschi.
Pesaro			30.03	762.7	66.4	19.1	64	N	22.8	10.18			4k	W		0	0		L. Guidi.

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	754.2	59.9	15.5		WNW			5								
Groningen			29.43	747.6	59.5	15.3		W			5								
Helder			29.51	749.6	59.0	15.0		W			6								
Utrecht			29.55	750.5	62.6	17.0	67	W			4		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter and omit the rain-fall; for Utrecht, they give the the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.54	750.2	58.5	14.7	46	NNW	6.3	2.8			5			0	0		
Brönö			29.69	754.1	50.0	10.0	72	W	7	3			8			0.063	1.6		
Christiania			29.65	753.1	56.8	13.8	60	ENE	0	0			10			0	0		
Tromsö			29.60	751.8	45.7	7.6		NE	9	4			10			0.122	3.1	Light rain	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	771.0	75.4	24.1	78	SE	9.0	4.03	.....	.....	4	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.09	764.3	83.3	28.5	18	E	5.6	2.5	.....	.....	2	.....	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.15	765.9	75.7	24.3	56	SW	8.7	3.9	.....	.....	1	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.14	765.6	79.5	26.4	22	N	12.5	5.6	.....	.....	1	.....	.....	0	0	.....	The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level, excepting Lisbon. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia at St. Petersburg.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	.....	.....	29.93	760.1	65.5	18.6	61	SE	7	3	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.98	761.5	65.8	18.8	45	SW	2	1	.....	.....	4	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.93	760.1	62.6	17.0	69	SSW	9	4	.....	.....	7	.....	.....	.....	.....	Raining	Physical Cabinet.
St. Petersburg	.....	.....	29.91	759.7	67.1	19.5	43	SSW	16	7	.....	.....	7	.....	.....	.....	.....	.....	Central Physical Obs.
Knopio	.....	.....	29.71	754.7	58.8	14.9	60	WSW	27	12	.....	.....	10	.....	.....	.....	.....	Thunder-storm	Ch. Forsten.
Kieff	.....	.....	29.86	758.4	60.8	16.0	95	N	7	3	.....	.....	10	.....	.....	.....	.....	Misty	Physical Cabinet.
Nikolaiev	.....	.....	29.93	760.1	90.0	32.2	48	SSW	20	9	.....	.....	0	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.95	760.7	81.1	27.3	66	NNE	4	2	.....	.....	0	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.10	764.4	72.1	22.3	65	SSW	0	0	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.96	761.0	83.6	28.6	17	ESE	34	15	.....	.....	0	.....	.....	.....	.....	.....	Meteoro ogical Obs.
Archangel	.....	.....	29.78	756.4	63.5	17.5	49	SW	34	15	.....	.....	8	.....	.....	.....	.....	.....	Ogorodnikoff.
Tiflis	23.58	726.0	29.92	759.9	87.8	31.0	35	SE	11	5	.....	.....	2	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.15	765.9	74.3	23.5	30	SE	7	3	.....	.....	0	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.25	768.3	71.1	21.7	45	WSW	7	3	.....	.....	1	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.21	741.8	30.12	765.1	69.1	20.6	52	N	7	3	.....	.....	4	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.99	761.7	74.3	23.5	41	N ?	13	6	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.88	759.0	63.1	17.3	47	NW	4	2	.....	.....	1	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.67	753.7	57.4	14.1	87	S	2	1	.....	.....	3	.....	.....	Blank	Blank	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.91	759.8	79.7	26.5	77	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	29.76	755.9	72.1	22.3	95	SE	20	9	.....	.....	10	.....	.....	Blank	Blank	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 300.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	.....	.....	30.11	764.7	76.1	24.5	34	SE	3.0	1.33	.....	1	0	SW	.....	0	0	Light clouds	Royal Observatory.
San Fernando	.....	.....	30.08	763.9	88.3	31.3	37	ESE	13.7	6.1	.....	2	1	S	SE	.....	.....	.....	The Naval Observatory.

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	751.9	45.7	7.6	77	NW	.....	.....	6	.....	10	.....	.....	0	0	.....	
Umea	.....	.....	29.60	753.3	59.2	15.1	62	SW	.....	.....	2	.....	8	.....	.....	0	0	.....	
Sernosand	.....	.....	29.68	753.9	59.4	15.2	85	W	.....	.....	2	.....	5	.....	.....	0	0	.....	
Stockholm	.....	.....	29.71	754.6	60.1	15.6	70	Calm	.....	.....	0	.....	8	.....	.....	0.122	3.1	.....	
Wisby	.....	.....	29.82	757.5	62.6	17.0	51	W	.....	.....	4	.....	3	.....	.....	0	0	.....	
SUB-SERIES.																			
Upsala	.....	.....	29.70	754.3	61.7	16.5	58	SW	4.9	2.2	.....	.....	9	.....	SW	0.105	2.67	.....	Dr. Hildebrandsson.

NOTE.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. 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	28.62	726.9	30.02	762.5	62.6	17.0	63	SSW			4		3			0.043	1.1	Clouds	The Observatory.
Zurich	28.34	719.8	29.95	760.7	62.4	16.9	50	W			4		7		W	0.260	6.6	Cloudy	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, —0.7 mm.; Thermometer, —3.7 cent.; Relative Humidity, +6 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

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.	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. Mill meters.	Weather	Observer.
Constantinople			29.84	757.9	84.6	29.2	60	NE	10	4.5			0			0	0		
Fao, (Persian Gulf)			29.76	756.0	94.6	34.8		SW			3		0						
Salonica			29.84	757.9	91.8	33.2		SE			1		0						
Valona			30.02	762.5	75.6	24.2		W			2		0						
Varna			29.84	758.0	86.0	30.0		NE			2		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.78	756.4	90.0	32.2	56	W			2		1k		W				Prof. C.V.A.Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 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.																			Hon. J. Ferguson.
Brockville, Ontario			30.05	763.3	65	18.3		W	10	4.5		2ck	2ks	NW	W	0	0	Fair	W. R. Bigg.
*Chatham, N. B.			29.73	755.1	60	15.6	79	W	4	1.8		8ck	0	W		0.02	0.5	Fair	G. A. Blair.
Charlottetown, P. E. Island			29.75	755.6	65	18.3	84	W	3	1.3		8k	0			Inap.	Inap.	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.89	759.2	60.7	15.9	57	W			3	9k				0	0	Dull	James Smith, M. A.
Dalhousie, N. B.			29.61	752.1	52.5	11.4	89	NW			1					0	0	Cloudy	H. A. Johnson.
Esquimault, B. C.			29.96	761.0	52.3	11.3	97	W	4	1.8		0	0			0.07	1.8	Clear	W. H. Bevis.
Fredericton, N. B.			29.81	757.2	52.2	11.2	85	Calm	0	0		0	0			Inap.	Inap.	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			29.84	757.9	55	12.8	97	SW	9	4.0		2c	2s	W	W	Inap.	Inap.	Fair	James Stewart.
Goderich, Ontario			30.18	766.6	63.9	17.7	70	NW			1	0	0			0	0	Clear	H. J. Strang, M. A.
Granton, Ontario	29.08	738.6	30.18	766.6	52.4	11.3		SW			1	0	0			0	0	Clear	James Grant.
*Halifax, N. S.			29.76	755.9	63	17.2	73	W	5	2.2		0	0			0.465	11.81	Clear	F. Allison, M. A.
*Kingston, Ontario			30.07	763.8	60	15.6	74	W	15	6.7		0	0			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			29.71	754.6	70.5	21.4	78	SW	5	2.2		5k	0	SW		0.38	9.7	Fair	C. H. Rigby.
*Montreal, Quebec			29.90	759.4	54	12.2	80	NW	16	7.2			2ks.hz		NE	0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.96	761.0	58	14.4	73	W	20	8.9		10ck	0	W		0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario			30.08	764.0	57	13.9	72	W	14	6.3		0	0			0	0	Clear	Rev. R. Mosley.
Port Dover, Ontario			30.19	766.8	52	11.1	79	W	8	3.6		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.																			Peter Grant.
Port Stanley, Ontario			30.20	767.1	50	10.0	98	W	4	1.8		5ck	0	W		0	0	Fair	M. Payne.
*Quebec, Quebec			29.80	756.9	52	11.1	93	SW	2	0.9			10n			0.01	0.3	Light rain	Capt. Ashe, R. N.
St. John, N. B.			29.83	757.7	55	12.8	80	W	1	0.4			10ks			0	0	Cloudy	G. Murdoch, C. E.
*Saugeen, Ontario			30.11	764.8	59	15.0	70	N	2	0.9		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario																			R. J. Cole.
Stratford, Ontario	28.87	733.3	30.16	766.1	48.9	9.4	92	W	8	3.6		3cs	0	NW		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.76	755.9	69	20.6	85	SW	6	2.7		2k	2ks	SW	SW	0.31	8.6	Fair	T. C. Hill.
*Toronto, Ontario			30.13	765.3	55	12.8	59	S	15	6.7		0	0			0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.15	765.8	49.7	9.8	98	W	5	2.2		3c	1s			0	0	Fine	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			29.96	761.0	65	18.3	84	SW					10n			0.79	20.1	Cloudy	John Delaney.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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	63	17.2	57	NW	14	6.3		5k	0	W		0	0	Fair	
Alpena, Mich.			30.14	765.5	52	11.1	60	W	5	2.2		0	0			0	0	Clear	
Atlantic City, N. J.			30.05	763.3	66	18.9	59	NW	10	4.5		0	0			0	0	Clear	
Augusta, Ga.			30.06	763.5	76	24.4	91	Calm	0	0			10s			0.62	15.7	Cloudy	
Baltimore, Md.			30.13	765.3	67	19.4	54	NW	5	2.2		0	Fog			0	0	Clear	
Barnegat, N. J.			30.03	762.7	66	18.9	59	NW	12	5.4		0	0			0	0	Clear	
Bismarck, Dakota	28.20	716.3	29.81	757.2	55	12.8	80	SE	4	1.8		5k	2s			0	0	Fair	
Boston, Mass.			29.91	759.7	65	18.3	48	W	11	4.9		Haze	Haze			0	0	Hazy	
Breckenridge, Minn.			29.91	759.7	60	15.6	83	SE	18	8.0		2k	0			0	0	Clear	
Buffalo, N. Y.			30.12	765.0	56.5	13.6	56	NW	8	3.6		0	0			0	0	Clear	
Burlington, Vt.			29.94	760.5	58	14.4	76	W	11	4.9		2k	5s	W		0	0	Cloudy	
Cairo, Ill.			30.18	766.6	66	18.9	73	NE	2	0.9		0	0			0	0	Clear	
Cape Hatteras, N. C.			29.97	761.2	78	25.6	61	NE	26	11.6		0	2s		NE	2.26	57.4	Fair	
Cape Henry, Va.			30.05	763.3	74	23.3	60	N	24	10.7		2c	0	NW		0	0	Clear	
Cape Lookout, N. C.			30.01	762.2	76	24.4	95	N	14	6.3		0	5ks			2.05	52.1	Fair	
Cape May, N. J.			30.06	763.5	68	20.0	60	N	24	10.7		0	0			0	0	Clear	
Charleston, S. C.			30.04	763.0	79	26.1	82	N	4	1.8			10s		NW	0.01	0.3	Cloudy	
Cheyenne, Wyoming	24.08	611.6	30.02	762.5	46	7.8	77	W	4	1.8		0	1s			0	0	Clear	
Chicago, Ill.			30.20	767.1	59	15.0	59	S	4	1.8		0	0			0	0	Clear	
Cincinnati, Ohio			30.15	765.8	60	15.6	66	NE	4	1.8		0	Haze			0	0	Clear	
Cleveland, Ohio			30.10	766.8	57.8	14.3	71	E	4	1.8		1c	0	W		0	0	Clear	
Corsicana, Tex.			30.05	763.3	74	23.3	90	Calm	0	0		2cs	5s		SE	0.29	7.4	Fair	
Davenport, Iowa			30.22	767.6	56	13.3	87	E	1	0.4		0	0			0	0	Clear	
Denison, Tex.			30.10	764.5	73	22.8	90	E	8	3.6			10s		E	0	0	Cloudy	
Denver, Col.	24.84	630.9	30.06	763.5	57	13.9	81	Calm	0	0		5c	0	SW		0.31	8.6	Fair	
Detroit, Mich.			30.19	766.8	53	11.7	73	NW	4	1.8		2ck	Sm'e			0	0	Fair	
Dodge City, Kan.	27.49	698.2	29.70	754.4	67	19.4	94	SSE	12	5.4		10k	0	SE		0	0	Cloudy	
Dubuque, Iowa			30.23	767.8	50	10.0	93	Calm	0	0			10s			0	0	Cloudy	
Duluth, Minn.			30.11	764.8	57	13.9	80	Calm	0	0			10s		W	0	0	Cloudy	
Eastport, Me.			29.80	756.9	62	16.7	61	NW	3	1.3		5ck	Sm'e	W		0	0	Fair	
Erie, Pa.			30.15	765.8	61	16.1	44	NW	8	3.6		0	0			0	0	Clear	
Escanaba, Mich.			30.18	766.6	48	8.9	71	W	4	1.8		0	0			0	0	Clear	
Fort Gibson, Indian Ter.			30.07	763.8	72	22.2	63	E	8	3.6		8ck	2ks	SE	SW	0	0	Cloudy	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.87	733.3	29.93	760.2	73	22.8	90	S	4	1.8			10s		SW	0	0	Cloudy	
Fort Sully, Dakota	28.21	717.3	29.84	757.9	63	17.2	72	Calm	0	0		1c	0			0	0	Clear	
Florence, Arizona	28.40	721.3	29.84	757.9	80	26.7		NE				0	0			0	0	Clear	
Galveston, Tex.			30.04	763.0	77	25.0	90	N	14	6.3		8cs	2n	SE	SE	0	0	Threatening	
Grand Haven, Mich.			30.24	767.1	50	10.0	93	SW	3	1.3		5ck	Fog	NW		0	0	Fair	
Indianapolis, Ind.			30.20	767.1	55	12.8	73	NE	5	2.2		0	0			0	0	Clear	
Indianola, Tex.			30.05	763.3	75	23.9	90	E	12	5.4			10n			0.30	7.6	Light rain	
Jacksonville, Fla.			30.03	762.7	78	25.6	86	SW	8	3.6		10k	0	SW		0	0	Cloudy	
Keokuk, Iowa			30.13	765.3	63	17.2	62	SE	7	3.1		0	0			0	0	Clear	
Key West, Fla.			30.06	763.5	82	27.8	83	SE	6	2.7		0	8ks			0	0	Cloudy	
Kittyhawk, N. C.			30.06	763.5	76	24.4	49	NE	24	10.7		2k	0	N		0.85	21.6	Fair	
Knoxville, Tenn.			30.10	764.5	65	18.3	68	N	8	3.6		0	0			0	0	Clear	
La Crosse, Wis.			30.21	767.3	52	11.1	86	S	4	1.8			10s			0	0	Cloudy	
Leavenworth, Kan.			30.11	765.5	59	15.0	87	Calm	0	0		0	0			0	0	Clear	
Louisville, Ky.			30.16	766.1	59	15.0	76	N	8	3.6		0	0			0	0	Clear	
Lynchburg, Va.			30.10	764.5	73	22.8	56	NE	1	0.4		0	0			0	0	Clear	
Malone, N. Y.			29.91	759.7	55	12.8	55	W	19	8.5		8k	0	NW		0	0	Cloudy	
Marquette, Mich.			30.15	765.8	55	12.8	68	W	8	3.6		0	0			0	0	Clear	
Memphis, Tenn.			30.14	765.5	67	19.4	68	NE	4	1.8		1c	Haze			0	0	Clear	
Milwaukee, Wis.			30.22	767.6	55	12.8	73	W	2	0.9		2c	Fog	NW		0	0	Fair	
Mobile, Ala.			30.05	763.3	79	26.1	82	S	5	2.2		0	0			0	0	Clear	
Montgomery, Ala.			30.06	763.5	77	25.0	77	N	4	1.8		0	Haze			0	0	Clear	
Morgantown, W. Va.	29.12	739.6	30.17	766.3	58	14.4	75	NW	2	0.9		0	Haze			0	0	Clear	
Mt. Washington, N. H.	23.61	599.7	29.97	761.2	33	0.6	100	NW	56	25.0			Fog			0	0	Foggy	
Nashville, Tenn.			30.11	764.8	66	18.9	73	N	1	0.4		0	0			0	0	Clear	
New Haven, Conn.			29.98	761.5	67.0	19.4	56	W	10	4.5		Haze	Fog			Inap.	Inap.	Fair	
New London, Conn.			29.98	761.5	68	20.0	50	NW	4	1.8		Haze	Haze			0	0	Hazy	
New Orleans, La.			30.04	763.0	81.5	27.5	78	NE	9	4.0		1k	0	E		0	0	Clear	
Newport, R. I.			29.95	760.7	66	18.9	52	NW	10	4.5		0	Haze			0	0	Clear	
New York, N. Y.			30.02	762.5	64	17.8	52	W	16	7.2		0	Haze			0	0	Clear	
Norfolk, Va.			30.07	763.8	74	23.3	59	N	10	4.5		0	0			0.34	8.6	Clear	
North Platte, Neb.	27.09	688.1	29.56	750.8	65	18.3	81	SE	12	5.4			10ks		SE	0	0	Cloudy	
Omaha, Neb.	29.02	737.1	30.08	764.0	61	16.1	82	S	4	1.8		2c	0	W		0	0	Clear	
Oswego, N. Y.			30.08	764.0	61.5	16.4	53	W	12	5.4		Haze	0			0	0	Clear	
Pembina, Dakota			29.80	756.9	55.5	13.1	93	SW	4	1.8		0	0			Inap.	Inap.	Clear	
Philadelphia, Penn.			30.07	763.8	66	18.9	54	N	10	4.5		0	Haze			0	0	Clear	
Pike's Peak, Colorado	17.95	455.9	30.10	766.1	31	— 0.6	89	SW	28	12.5			Fog			0.22	5.6	Foggy	
Pittsburgh, Penn.			30.18	766.6	55	12.8	86	NW	4	1.8		0	Fog			0	0	Fair	
Port Huron, Mich.			30.18	766.6	53	11.7	73	W	4	1.8		5c	0	NW		0	0	Fair	
Portland, Me.			29.86	758.4	60	15.6	61	W	8	3.6		8ck	2ks	SW	SW	0	0	Cloudy	
Portland, Oregon			30.02	762.5	62	16.7	83	SE	3	1.3			10s			0	0	Cloudy	
Punta Rassa, Fla.			30.04	763.0	81.5	27.5	82	N	7	3.1		Haze	0			0	0	Clear	
Rochester, N. Y.			30.09	764.3	57	13.9	63	W	10	4.5		0	0			Inap.	Inap.	Clear	
Salt Lake City, Utah	25.65	651.5	29.98	761.5	61	16.1	40	NE	8	3.6			10s			0	0	Cloudy	
Sandy Hook, N. J.			30.01	762.2	66	18.9	54	NW	28	12.5		0	0			0	0	Clear	
San Diego, Cal.			29.92	760.0	63	17.2	88	N	4	1.8			10s		N	0	0	Cloudy	
San Francisco, Cal.			29.88	758.9	53	11.7	86	W	16	7.2		0	Fog		W	0	0	Fair	
Santa Fé, N. M.	23.41	594.6	29.95	760.7	54	12.2	93	Calm	0	0			10s		S	0.15	3.8	Cloudy	
Savannah, Ga.			30.04	763.0	77	25.0	86	Calm	0	0			10ks		W	0	0	Cloudy	
Shreveport, La.			30.13	765.3	75	23.9	86	NE	4	1.8		1c	0			0	0	Clear	
Smithville, N. C.			30.02	762.5	77	25.0	82	N	5	2.2		5k	5ks	NW	NW	0.03	0.8	Cloudy	
Springfield, Mass.			29.97	761.2	63	17.2	51	W	4	1.8			10ks		W	0	0	Cloudy	
St. Louis, Mo.			30.19	766.8	63	17.2	67	NE	4	1.8		0	0			0	0	Clear	
St. Marks, Fla.			30.04	763.0	78	25.6	82	Calm	0	0		2c	0	E		0	0	Fair	
St. Paul, Minn.			30.09	764.3	54	12.2	73	SE	2	0.9		5c	2s	W	W	0	0	Fair	
St. Paul's Island, Alaska			28.97	735.8	43	6.1	92	E	20	8.9			Fog			1.32	33.5	Foggy	
Thatcher's Island, Mass.			29.90	759.4	64	17.8	52	W	10	4.5		0	0			0	0	Hazy	
Toledo, Ohio			30.18	766.6	55	12.8	68	NW	5	2.2		2ck	Haze	NW		0	0	Fair	
Tucson, Arizona	27.54	699.5	30.14	765.5	73	22.8		SE				0	0			0	0	Clear	
Tybee Island, Ga.			30.02	762.5	76	24.4	90	Calm	0	0			10ks		E	0	0	Cloudy	
Vicksburg, Miss.			30.10	764.5	75	23.9	82	Calm	0	0		Haze	0			0	0	Clear	
Virginia City, M. T.	24.32	617.7	29.80	756.9	44	6.7	52	Calm	0	0		0	0			0	0	Clear	
Washington, D. C.			30.13	765.3	65	18.3	57	NW	6	2.7		0	0			0	0	Clear	
Wilmington, N. C.			30.02	762.5	76	24.4	86	N	6	2.7		2cs	2s		NE	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
Wood's Holl, Mass			29.95	760.7	69	20.6	52	NW	10	4 5		0	0			0	0	Clear	
Yankton, Dakota	28.79	731.3	30.05	763 3	62	16.7	77	Calm	0	0			10s		W	0	0	Cloudy	
Yuma, Arizona			29.81	757.2	79	26.1		E				0	0			0	0	Clear	
Sub Series.																			
Kingston, Jamaica, W. I.			30.13	765.3	79	26 1	74	Calm	0	0		5c	2s		NE	0	0		James Gall.
St. Georges, Bermudas			29.97	761.2	81.5	27.5	79	N	10	4.5		0	1k			0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Paramaribo, D. Guiana S.A			30.02	762.5	80	26.7	82	E			2	4c	5k	E		0.020	0.51	Fair	C. J. Hering.
Batavia, Dutch Guiana S.A.	30.08	763.9			81.5	27.5		E								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.19	639.8			61.0	16.1	75	Calm	0	0		0	5s			0	0	Fair	Thomas Herran
York Factory, B. A			29.97	761.2	38	3 3	95	N	10	4.5		1c	0	NE		0	0		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.05	763.3	75.5	24.2		NE			5					0.14	3.6		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.

Marine Series	True course towards.	Hourly rate in knots.												State of ocean.	Direction of swell from—		
Schooner Adelie Fuller At Brunswick, Ga.			30.01	762.2	80	26.7		Calm			0		10s		E	Overcast	Capt. James Jorgensen.
Steamer Leipzig. N. 47° 30′, W. 51° 10′.	SW	¾ W	29.91	759.7	60.1	15.6		SW			5		k	Heavy sea.		Overcast	Capt. R. Hoffmann.

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.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,559 (?) ft., or 472.5 m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,848 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fè, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,533 (?) 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

Furnished by coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request, and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assgd.,) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			30.08	764.1	82.2	27.9	54	NNE			2		0			0	0	Clear	Charnet.
Algiers			30.14	765.6	80.6	27.0	52	N			1		0			0	0	Clear	Peter.
La Calle			30.14	765.6	82.4	28.0	48	NE			2		1			0	0	Clear	Kunts.
Tunis			30.16	766.0	86.0	30.0	36	NW			2		5			0	0	Fair	Jacques.
Sfax			30.23	767.8	80.6	27.0	49	E			3		2			0	0	Clear	Chauvey.
Salda			30.07	763.8	88.3	31.3	18	NE			1		0			0	0	Clear	Millot.
Tebessa			30.12	765.1	73.4	23.0		NW			1		2			0	0	Clear	Colin.
Geriville			30.10	764.6	82.9	28.3	18	NE			2		1			0	0	Clear	Lemaillot.
Laghouat			30.17	766.2	80.6	27.0	43	SE			2		0			0	0	Clear	Guyot.
Biskra			30.19	766.8	86.4	30.2	42	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.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.93	760.1	64.0	17.8	78	SW			2		10			0.303	7.7	Raining	Prof. Ivan Stonir.
Gracow, I. R. Observatory			29.87	758.7	67.6	19.8	61	W			1		3			0.020	0.5		Dr. Wierzbiski.
Eperies			29.85	758.3	66.2	19.0	78	Calm			0		10s			0	0		Julius Mikolik.
Gratz	28.74	729.9	29.93	760.3	55.4	13.0	84	WSW			1		10			0.118	3.0		Andreas Rospini.
Hermannstadt	28.45	722.7	29.82	757.3	74.1	23.4	44	SSE			2		3			0	0		Prof. Reissenberger.
Kremsmünster	28.67	728.2	30.00	762.1	55.8	13.2	82	W			3		10			0.339	8.6		Prof. C. Wagner.
Lemberg			29.84	758.0	65.8	18.8	84	NW			1		8			Blank	Blank		Dr. T. Stanecki.
Nyiregyhaza																			Habsauda Daniel.
Pola			29.89	759.2	68.0	20.0	77	SW			1		6ks			0.021	0.54		I.R.Hydrographic Office.
Szegedin			29.91	759.8	75.6	24.2	57	Calm			0		9			0	0		Karl Stancel.
Trieste			29.93	760.2	62.8	17.1	55	ENE			3		10			0.476	12.1	Drizzling	Prof. V. Farolfi.
Vienna			29.92	759.9	57.9	14.4	70	W			3		1			0.012	0.3		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.6 m., or 1.258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			29.98	761.6	62.2	16.8	64	W			2		10s		WNW	0.260	6.60	Covered	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.73	755.1	55.1	12.8		SSE	20	8.9			7			0.010	0.25	*D. clouds	William Boswell.
Ardrossan			29.75	755.6	59	15.0		NW			3		6					*D. clouds	William McNeil.
Armagh, Observatory			29.83	757.7	60.0	15.6		WNW	8	3.6			8					*D. clouds	S. Cail, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.89	759.2	61.8	16.6		WNW			1		5					*D. clouds	J. Dreyer.
Bradford			29.83	757.7	59.7	15.4		W			2		10			0.11	2.8	Raining	J. McLandsborough.
Bridgetown, (Barbados)			30.02	762.5	86.0	30.0		E			1		6					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			29.94	760.5	59.0	15.0		SSW			1		10					Raining	H. Todd.
Cardington			29.94	760.5	59.4	15.2		SW			1		10					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Carmichael.
Chatham, School M. E			29.96	761.0	64.2	17.9		SW			1		10			Blank	Blank	Overcast	Capt. J. Fellowes, R.E.
Dartmoor	28.58	725.9	30.06	763.5	59.0	15.0		SW			4		10					Foggy	R. E. Power.
Donaghadee			29.79	756.7	62	16.7		W			3		10					Overcast	J. Mac Gowan.
Dover			29.99	761.7	62	16.7		WSW			3		7					¾ clouded	J. Costello.
Eccles (near Manchester.)			29.82	757.4	59.2	15.1		S	2.0	0.9			10					Raining	Thomas Mackereth.
Falmouth, Observatory			30.06	763.5	65.7	18.7		WSW			4		10					Foggy	The Staff.
Fort Napier, (Natal)	27.54	699.5	29.77	756.1	88.4	31.3		NW			3		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.95	760.7	82	27.8		W			1		7					*D. clouds	
Galway, Queen's College			29.91	759.7	64	17.8		NW			1		5					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.06	763.5	80.2	26.8		E			4		1					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.71	754.6	59.4	15.2		W			3		9					Threatening	Lewis Stuart.
Great Yarmouth			29.93	760.2	61	16.1		WSW			3		6					*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y			29.97	761.2	65.0	18.3		WSW			1		10					Overcast	The Staff, for G. B. Airy
Guernsey																			Dr. S. E. Hoskins.
Helston			30.08	764.0	65	18.3		SW			2		10k			0	0	Misty	M. P. Moyle.
Holyhead			29.83	757.7	64	17.8		W			3		4					*D. clouds	John Tilston.
Kew, Observatory			29.98	761.5	63.2	17.3		SW	14	6.2			10					Threatening	The Staff.
Kingstown			29.86	758.4	64	17.8		W			4		6					*D. clouds	George Mitchell.
Leicester Museum			29.90	759.4	59.4	15.2		SW			2		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.05	763.3	80.0	26.7		NW			1		6k					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			29.65	753.1	58	14.4		Calm			0		10					Showery	W. D. Penny.
Nassau, (Bahamas			30.04	763.0	86.2	30.1		W			2		7					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.86	758.4	60.3	15.7		SSW			3		10n		SSW	0.206	5.23	Raining	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.88	758.9	61.9	16.6		SW			4		10					Drizzling	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.93	760.2	64	17.8		SW			1		10					Drizzling	J. Lucas.
Plymouth			30.03	762.7	66	18.9		SW			3		10					Overcast	John Merrifield.
Roche's Point			29.94	760.5	63	17.2		W			4		5					Cloudy	W. Kennedy.
Saint Ann's Head			29.91	759.7	61	16.1		WSW			4		10					Foggy	John C. Walker.
Saint Helier, Jersey			30.11	764.8	64.0	17.8		WSW			5		10					Overcast	A. P. Amy.
Sandwick Manse (Orkneys)			29.68	753.9	51	10.6		SE	23	10.3			10					Drizzling	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery (Turkey)			29.77	756.1	86.0	30.0		NE			2		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.84	757.9	61.5	16.4		SW			1		10			0.185	4.70	Drizzling	W. F. Cooper.
Silloth Rectory			29.75	755.6	68.7	20.4	63	NW			1		6			0.830	21.08	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.81	757.2	58.1	14.5		SW			2		10					Raining	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.)			29.60	751.8	55	12.8		W			5		10					Showery	John Smith.
Strathfield Purgiss			29.98	761.6	64.6	18.1		W			2		5					*D. clouds	Rev. Charles H. Griffith.
Thurso			29.65	753.1	54	12.2		SSE			2		8					Overcast	John Trotter.
Truro, Royal Institution			30.05	763.3	67	19.4		W			6		10					Raining	W. Newcombe.
Valencia, Observatory			29.96	761.0	61.8	16.6		NW	14	6.3			8					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man					59	15.0		W			3		10			0.10	2.5		Thomas Dawson.
Cape Good Hope, Obs'y			29.97	761.2	60.1	15.6	71	NW	19	8.5		1	2						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.72	754.9	59.0	15.0	81	NW			2		7k			0	0		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.72	754.9	58.4	14.7		SW			2		10ks			0.06	1.5	Showery	Andrew Gibb.
Mauritius, Observatory			30.19	766.8				ESE	26.8	12.0						0	0		C. Meldrum
Melbourne, Observatory			30.15	765.8	53.1	11.7	57	NNW	16	7.2			8			0	0	Fine, dull	R. L. J. Ellery.
Monach L'thouse, Hebrides			29.64	752.8	58	14.4		W			3	5	5	W		0.4	10.2		J. Youngclause.
North Unst, (Shetland Is.)			29.72	754.9	51	10.6		E			4		10			Blank	Blank		Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. 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.	Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0–10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.	Weather.	Observer.
Copenhagen			29.78	756.5	61.9	16.6	81	S			2		8						
Fanöe			29.78	756.3	58.5	14.7	83	SW			2		5						
Godthaab, Greenland			29.87	758.8	49.3	9.6	43	NE			4		0						
Stykkisholm, Iceland			29.52	749.7	52.3	11.3	83	Calm			0		8						
Thorshavn, (Faröe)			29.71	754.5	49.6	9.8	78	SE			4		10					Raining	
Vestervig			29.78	756.5	61.5	16.4	85	Calm			0		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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.19	766.9	68.0	20	55	W			1		10k			0	0	Covered	Normal School.
Amiens																			Normal School.
Avignon			30.09	764.2	69.4	20.8	43	N			4		2		N	0	0	Partly cloudy	Normal School.
Bar-sur-Seine			30.13	765.2	61.9	16.6	64	W			2		8		NW	0.346	8 8	Very cloudy	C. Saillard.
Beaumette, (near Angers)			30.10	764.5	67.5	19.7	47	SW	7.2	3.2					SW	0	0		Beaumette Observatory.
Beauvais			30.09	764.2	68.4	20.2	49	WNW			2		8		WNW	0.039	1.00	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.17	766.4	62.6	17	70	S			2		..kn		S	0.31	8.		Normal School.
Bourges			30.15	765.9	53.4	11.9	78	SW			3		5		SW	0.228	5.8	Cloudy	Normal School.
Brest			30.10	764.5	66.4	19.1	84	WSW			3		10		WSW	0	0	Misty	Naval Observatory.
Carcassonne			30.12	765.1	64.2	17.9	69	W			4		2		E	0	0	Slightly cl'dy	Normal School
Caen																			Normal School.
Chartres			30.08	764.0	65.8	18.8	77	NW			1		10		W	0	0	Covered	Normal School.
Châlons-sur-Marne			30.10	764.5	66.2	19.0	54	NW			2		5k		SE	0	0	Cloudy	Normal School.
Clermont			30.13	765.3	64.8	18.2	49	NW			3		8		NW	0	0	Very cloudy	Puy de Dome Obs'y.
Commercy			29.70	754.4	60.4	15.8	66	W			4		2kn		W	0.16	4.	Slightly cl'dy	Normal School.
Commune de Greasque*			30.08	763.9	66.4	19.1	32	NW			6		5		NW	0	0		M. Kina.
Grenoble			30.07	763.7	56.8	13.8	70	N			6		5		W	0.24	6.	Cloudy	Normal School.
La Roche-sur-Yon					68.5	20.3	62	W			2		5		E	0.098	2.5	Cloudy	Normal School.
Le Mans			29.94	760.5	64.0	17.8	74	W			2		5		W	0	0	Cloudy	Normal School.
Lons-Le-Saulnier			30.15	765.8	64.0	17.8	64	NW			2		5		NW	0.283	7.2	Cloudy	Normal School.
Mâcon			30.24	768.2	64.8	18.2	80	SE			6		5		N	0.047	1.2	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			30.08	763.9	63.1	17.3	52	W			2		2		W	0.130	3.3	Slightly cl'dy	Normal School.
Nismes			29.66	753.4	69.8	21	59	NW			2		0			0	0	Clear	Normal School.
Orleans																			Normal School.
Paris, Observatory			30.10	764.5	66.9	19.4	53	W			2		8ck		W	0.059	1.51	Very cloudy	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			30.23	767.0	72.5	22.5	42	WSW			2		2		E	0	0	¼ covered	Naval Observatory.
Rouen			30.07	763.8	66.9	19.4	57	W			2		2		W	0	0	Slightly cl'dy	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School
Villefranche																			Normal School.
Sub-Series.																			
Fort de France, Martinique			29.87	758.7	70.2	26.2													L'Abbé Marchesi.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.35	771.0	59.7	15.4	58	NNW	7.4	3.33			4		WNW	0	0		—. Faiguère.
Montsouris, Paris			30.09	764.3	67.8	19.9	56	W			3		sk,kn		WNW	Inap.	Inap.		Montsouris Observatory.
Perpignan			30.11	764.8	95.0	35.0	30	N	29.8	13.33			2		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.59	549.1			43.5	6.4		W			2		1					Clear	M. Baylac.
Pic du Midi, (Plantade) H.P.	22.74	577.5			50.9	10.5		W			1		1			0.094	2.4	Clear	General de Nansouty.
Saint Maur, (near Paris)			30.10	764.5	66.2	19.0	54	WSW			2		10			0.130	3.3	Cloudy	E. Renou.
Toulouse			30.26	768.5	66.7	19.3	53	NW			3		7			0	0		Toulouse Observatory
Tours			30.16	766.0	68.4	20.2	53	WNW			1		7		NW	0	0		C. Marquet.
Versailles, (near Paris)			30.10	764.6	68.0	20.0	50	NW			1		8			0.007	0.19	Cloudy	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai)			29.82	757.3	73.4	23.0	91	ENE	3.4	1.5			0			0	0	Clear	Marc Dechevrens, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * Bouches-du-Rhône.

GERMAN SERIES.

Furnished by the coöperation of Geo. Neumayer, Superintendent Imperial Hydrographic Office, Berlin.

Stations.	Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Bamberg			29.85	758.3	58.1	14.5	85	W			4		9	W		0.551	14.0		Prof. T. Hob.
Berlin			29.82	757.3	62.1	16.7	71	SW			1		8			0.110	2.8		Prof. Arndt.
Breslau			29.91	759.8	64.6	18.1	56	SSW			5		9			Inap.	Inap.		Dr. P. Neugebauer.
Carlsruhe			30.00	762.0	63.0	17.2	62	SW			5		9			0.142	3.6		A. Senz.
Cassel			29.91	759.8	61.3	16.3	75	WNW			4		8	W		0.469	11.9		Dr. H. Möhl.
Emden			29.80	756.9	63.7	17.6	74	NW			3		6	W		0.291	7.4		Prof. Prestel.
Frankfort on the Main			29.98	761.5	63.3	17.4	45	W			2		8			0.4[illegible]	10.4		Physical Society.
Friedrichshafen			30.01	764.2	57.6	14.2	82	W			7		10			0.015	0.9	Rainy	M. Wilhelm.
Hamburg			29.77	756.1	64.2	17.9	65	WSW			1		7c,k	WSW	WNW	0.031	0.8	Fair	Captain F. Hegemann.
Kiel			29.75	755.6	62.8	17.1	67	NE			2		8			0.039	1.0		Prof. G. Karsten.
Königsberg, (Prussia.)			29.88	758.9	64.2	17.9	63	SW			2		9			0.004	0.1	Thunder, lightn'g	Prof. E. Luther.
Köslin			29.85	758.1	64.0	17.8		SW			1		4			0	0		H. Müller.
Leipsic			29.84	758.0	60.1	15.6	76	WSW			2		9	W		0.157	4.0	Rainy	Prof. Bruhns.
Memel			29.95	760.8	66.6	19.2	59	NNW			1		..ks	SSW		0	0		Reinbrecht & Skalweit.
Münster			29.91	759.6	59.9	15.5	70	W			5		10			0.512	13.0		Prof. E. Heis.
Neufahrwasser			29.88	758.9	63.9	17.7	69	SSE			1		8			Inap.	Inap.		A. Lothes.
Posen			29.86	758.4	64.4	18.0	67	SSE			5		10			0.098	2.5		Dr. Magener.
Strassburg, (in Alsace)			30.07	763.7	65.3	18.5	51	W			1		9	WNW		0.197	5.0		Dr. Schur.
Stuttgart			29.98	761.6	62.6	17.0	50	NW			3		4			0.016	0.4	Rainy	Prof. Schoder.
Thorn			29.84	757.9	67.3	19.6	62	SE			4		6	SW		0	0		Dr. Hasenbalg.
Treves, (Trier)			29.98	761.6	63.5	17.5	47	NW			7		8			0	0		Prof. Flesch.
Wustrow, Naval School			29.85	758.2	61.5	16.4	72	N			2		7			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	89.4	31.9		S										Very clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.90	759.4	63.1	17.3	62	E	5.6	2.5			5			0.217	5.5		
Padua			29.91	759.6	67.3	19.6	63	SE	2.[illegible]	1.1			4	W		0	0		
Vicenza			29.91	759.8	69.6	20.9	63	SE	3.1	1.4			2	SW		0	0		
Verona			29.89	759.1	71.8	22.1	60	E			1		5			0	0		
Bergamo																			
Domodossola	28.87	733.4	29.87	758.8	70.5	21.4	36	N			6		3			0	0		
Milan			29.89	759.3	81.1	27.3	27	N			2		0			0	0		
Pavia			29.89	759.2	72.5	22.5	47	NW			1		0			0	0		
Moncalieri			29.92	759.9	70.2	21.2	57	SSW	2.5	1.1			3	SE		0	0		
Mondovi	28.05	712.5	29.90	759.5	65.8	18.8	58	N			4		1			0	0		
Porto Maurizio			29.94	760.4	75.2	24.0	59	E			4		4	SE		0	0		
Genoa			29.87	758.8	76.6	24.8	51	SE	6.3	2.8			0			0	0		
Piacenza			29.90	759.5	70.3	21.3	59	NW			8					0	0		
Parma			29.92	759.9	71.4	21.9	69	WSW			4		2			0	0		
Bologna			29.93	760.2	70.7	21.5	44	SW			1		4	E		0	0		
Florence			29.97	761.2	68.0	20.0	71	ENE			2		5	NE		0.391	10.0		
Leghorn			29.89	759.3	75.7	24.3	51	WSW	9.4	4.2			2			0	0		
Siena	28.75	730.2	29.92	759.9	57.7	14.3	92	ENE	0.7	0.3			9	NW		0.463	11.5		
Urbino	28.39	721.2	29.91	759.6	63.3	17.4	61	SW			2		6			0	0		
Ancona			29.91	760.4	69.1	20.6	60	SW			4		10			0	0		
Grosseto			29.95	760.6	69.4	20.8	73	NE			4		2	N		0	0		
Rome			29.91	759.8	76.6	24.8	51	W	7.4	3.3			3	SW		0	0		
Naples, O. U.			29.98	761.6	76.3	24.6	53	WSW			2		10	SW		0	0		
Lecce			29.95	760.6	80.2	26.8	32	W	15.5	5.6			5			0	0		
Cosenza			29.96	761.0	76.8	24.9	82	NW	8.1	3.6			9			0.059	1.5		
Riposto, (Sicily)			29.94	760.5	80.8	27.1	48	ENE			2		2			0	0		
Palermo			29.99	761.7	77.4	25.2	42	WNW	10.5	4.7			2			0	0		
Caltanissetta	28.07	712.9	29.93	760.2	75.6	24.2	28	WNW			6		4	S		0	0		
Sub-Series.																			
Naples, S. R.			29.99	761.8	70.3	21.3	62	SW	4.3	1.9			3	SW		0	0		Prof. F. Brioschi.
Pesaro			30.00	762.0	68.2	20.1	71	W	19.5	8.72			9k	W		0	0	Misty	L. Guidi.

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	762.5	62.1	16.7		W			4								
Groningen			29.78	756.5	61.3	16.3		NW			4								
Helder			29.89	759.3	59.7	15.4		WNW			4								
Utrecht			29.90	759.4	64.4	18.0	56	W			4		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter and omit the rain-fall; for Utrecht, they give the the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.72	755.0	59.0	15.0	74	SSE	7.2	3.2			5			0.134	3.4		
Brönö			29.80	756.8	58.6	14.8	70	NNW	9	4			3			0.008	0.2		
Christiania			29.83	757.7	58.3	14.6	67	Calm	0	0			10			0.067	1.7		
Tromsö			29.93	760.3	48.9	9.4		NE	2	1			5			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	73.9	23.3	86	SSE	3.2	1.45			8			0.031	0.8	Misty	Dr. J. A. N. Sampaio.
Campo Major			30.04	763.0	91.4	33.0	11	ESE	2.5	1.1			0			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.16	766.1	75.2	24.0	66	SW	5.6	2.5			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.10	764.6	85.3	29.6	30	ENE	8.7	3.9			0			0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level, excepting Lisbon. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia at St. Petersburg.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 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			29.84	757.8	63.1	17.3	73	WSW	2	1			3						Astronomical Obs.
Wilna			29.90	759.4	67.3	19.6	53	E	2	1			9						Astronomical Obs.
Dorpat			29.97	761.2	67.1	19.5	43	ENE	4	2			4						Physical Cabinet.
St. Petersburg			29.98	761.4	67.3	19.6	43	SE	9	4			3						Central Physical Obs.
Kuopio			29.97	761.2	60.8	16.0	77	S	22	10			2						Ch. Forsten.
Kieff			29.06	758.4	71.4	21.9	70	WSW	4	2			8						Physical Cabinet.
Nikolaiev			29.89	759.2	86.4	30.2	39	NW	4	2			1						Kurdakof.
Kertch			29.93	760.2	84.2	29.0	66	Calm	0	0			0						Lagorio.
Moscow			30.08	764.1	68.9	20.5	65	SE	7	3			10						Meteorological Obs.
Lugan			29.94	760.4	84.2	29.0	14	ESE	40	18			1						Meteoro ogical Obs.
Archangel			30.12	765.1	62.4	16.9	52	NW	9	4			8						Ogorodnikof.
Tiflis	28.60	726.5	29.94	760.4	87.1	30.6	35	S	13	6			1						Physical Observatory.
Astrakhan			30.23	767.8	76.8	24.9	32	SE	13	6			0						Sebastianoi.
Kasan			30.30	769.7	74.5	23.6	37	SSW	4	2			0						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	29.22	742.1	30.13	765.3	72.0	22.2	42	NW	9	4			3						Meteorological Obs.
Nukuss			30.08	764.0	72.5	22.5	38	N?	9	4			0						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul			29.76	755.8	57.9	14.4	73	Calm	0	0			9						Meteorological Obs.
Yeniseisk			29.70	754.4	59.9	15.5	80	NW	2	1			8			Blank	Blank		Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.86	758.4	78.1	25.6	74	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.72	754.8	73.6	23.1	88	Calm	0	0			10						
Nikolaievsk, on the Amoor																			

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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 Nava 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. Inches.	Rain-fall. Millimeters.	Weather	Observer.
Madrid			30.07	763.6	83.8	28.8	25	N	5.2	2.33		0	0			0	0	Clear	Royal Observatory.
San Fernando			30.06	763.5	89.8	32.1	25	E	21.0	9.4		0	0						The Naval Observatory.

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 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			29.99	761.8	56.8	13.8	73	SE			2		5			0	0		
Umea			29.97	761.3	61.0	16.1	48	SW			2		6			0	0		
Hernosand			29.93	760.1	57.6	14.2	80	E			2		9			0	0		
Stockholm			29.91	759.6	62.2	16.8	74	NE			4		8			0.303	7.7	Raining	
Wisby			29.97	761.2	62.6	17.0	68	ENE			6		7			0.028	0.7		
Sub-Series.																			
Upsala			29.90	759.5	57.6	14.2	77	SE	6.0	2.7			10		SW	0.047	1.19		Dr. Hildebrandsson.

Note.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force 0 10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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	30.13	765.4	61.5	16.4	56	N			3		9			0.154	3.9	Covered	The Observatory.
Zurich	28.48	723.4	30.10	764.5	59.5	15.3	71	W			2		7			0.622	15.8	Cloudy	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +2.1 mm; Thermometer, —4.2 cent.; Relative Humidity, —2 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force 0 10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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	80.8	27.1	57	N	12	5.5			2		NE	0	0		
Fao, (Persian Gulf)																			
Salonica			29.87	758.6	88.2	31.2		S			2		0						
Valona			30.01	762.3	78.4	25.8		W			2		2						
Varna			29.82	757.5	84.2	29.0		NW			3		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			29.78	756.4	84.9	29.4	64	NW			1		0					Clear	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force 0 10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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	53.1	11.7	77	NW	5	2.2			10			0	0	Dark	Hon. J. Ferguson.
Brockville, Ontario			30.19	766.8	66	18.9		Calm	0	0		0	0			0	0	Clear	W. R Bigg.
*Chatham, N. B.			29.79	756.7	52	11.1	82	W	6	2.7		5c	0	W		0.03	0.8	Fair	G. A. Blair.
Charlottetown, P. E. Island.			29.79	756.7	57	13.9	76	W	10	4.5			8ks			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.07	763.8	58.9	14.9	76	N			1	0	0			0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			29.82	757.4	44.2	6.8	87	W			2					0	0	Cloudy	H. A. Johnson.
Esquimault, B. C.			30.10	764.5	47.8	8.8	96	Calm	0	0		0	0			0	0	Clear	W. H. Bevis.
Fredericton, N. B.			29.88	758.9	51.0	10.6	77	NW	11	4.9		0	4ks			0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			29.96	761.0	50	10.0	98	S	2	0.9		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.15	765.8	56.9	13.8	85	Calm			0	8ck	0	NW		0	0	Fine	H. J. Strang, M. A.
Granton, Ontario	29.05	737.9	30.15	765.8	53	11.7		Calm			0	0	0			0	0	Clear	James Grant.
*Halifax, N. S.			29.82	757.4	58	14.4	73	W	8	3.6		0	0			0	0	Clear	F. Allison, M. A.
*Kingston, Ontario			30.16	766.1	58	14.4	89	Calm	0	0		0	0			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			29.76	755.9	64.0	17.8	89	SW	4	1.8		6k	0	SW		0.05	1.3	Fair	C. H. Rigby.
*Montreal, Quebec			30.08	764.0	56	13.3	69	NW	7	3.1		2c	0	NW		Inap.	Inap.	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.12	765.0	56	13.3	70	Calm	0	0		2c	0	W		0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.15	765.8	54	12.2	93	Calm	0	0		2cs	5ks	NW	NW	0	0	Fair	Rev. R. Mosley.
Port Dover, Ontario			30.18	766.6	50	10.0	79	Calm	0	0		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.			29.79	756.7	60.0	15.6		W	6	2.7						0	0	Fine	Peter Grant.
Port Stanley, Ontario			30.18	766.6	52	11.1	89	N	2	0.9		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			29.98	761.5	56	13.3	87	Calm	0	0		8k	0	N		0.05	1.3	Fair	Capt. Ashe, R. N.
St. John, N. B.			29.90	759.4	52	11.1	73	NW	3	1.3		0	0			0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			30.11	764.8	56	13.3	70	Calm	0	0		0	0			0	0	Clear	R. Stewart.
Stayner, Ontario			30.12	765.0	58	14.4	82	Calm	0	0		5ck	0	NW		0	0	Fair	R. J. Cole.
Stratford, Ontario	28.86	733.0	30.15	765.8	48.0	8.9	94	Calm	0	0		0	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.78	756.4	66	18.9	81	SW	8	3.6		0	5ks		SW	0	0	Fair	T. C. Hill.
*Toronto, Ontario			30.16	766.1	58	14.4	51	W	6	2.7		5ck	0	NW		0	0	Fair	Magnetic Observatory.
Woodstock, Ontario			30.15	765.8	49.5	9.7	86	E	1	0.4		2k	3ks			0	0	Fine	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			29.99	761.7	64	17.8	89	S					10n			0.02	0.5	Cloudy	John Delaney.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.			30.11	764.8	59	15.0	64	Calm	0	0		Haze	Haze			0	0	Hazy	
Alpena, Mich			30.08	764.0	54	12.2	73	W	3	1.3		2ck	0	NW		0	0	Fair	
Atlantic City, N. J			30.13	765.3	65	18.3	58	N	6	2.7		0	Haze			0	0	Clear	
Augusta, Ga.			30.11	764.8	79	26.1	82	E	6	2.7		5k	0	E		Inap.	Inap.	Fair	
Baltimore, Md			30.17	766.3	66	18.9	49	N	8	3.6		2c	Sm'e	NW		0	0	Fair	
Barnegat, N. J			30.11	764.8	64	17.8	62	NW	7	3.1		0	Haze			0	0	Clear	
Bismarck, Dakota	28.11	714.0	29.69	754.1	62	16.7	82	E	4	1.8			10s			0	0	Threatening	
Boston, Mass			30.04	763.0	61	16.1	50	NW	14	6.3		Haze	Haze			0	0	Hazy	
Breckenridge, Minn			29.80	756.9	62	16.7	88	E	8	3.6		8c	0			0	0	Cloudy	
Buffalo, N. Y			30.14	765.5	56.5	13.6	65	Calm	0	0		0	Sm'e			0	0	Clear	
Burlington, Vt			30.08	764.0	55	12.8	68	Calm	0	0		2k	0			0	0	Fair	
Cairo, Ill			30.13	765.3	66	18.9	73	N	1	0.4		0	0			0	0	Clear	
Cape Hatteras, N. C			30.05	763.3	74	23.3	59	NE	7	3.1		0	2s			0	0	Fair	
Cape Henry, Va			30.12	765.0	74	23.3	51	N	10	4.5		0	0			0	0	Clear	
Cape Lookout, N. C			30.13	765.3	69	20.6	79	NE	12	5.4		0	Haze			0.02	0.5	Clear	
Cape May, N. J			30.13	765.3	66	18.9	54	N	8	3.6		2c	0	NW		0	0	Fair	
Charleston, S. C			30.09	764.3	80	26.7	78	E	9	4.0			10s		E	Inap.	Inap.	Cloudy	
Cheyenne, Wyoming	24.03	610.4	29.97	761.2	55	12.8	43	W	16	7.2		0	0			0	0	Clear	
Chicago, Ill			30.12	765.0	61	16.1	77	S	4	1.8		2cs	Sm'e			0	0	Fair	
Cincinnati, Ohio			30.11	764.8	62	16.7	78	NE	1	0.4		0	Sm'e			0	0	Smoky	
Cleveland, Ohio			30.18	766.6	52.7	11.5	77	SE	7	3.1		2c	Sm'e	W	SE	0	0	Fair	
Corsicana, Tex			30.01	762.2	74	23.3	90	E	1	0.4		2cs	2k	W	S	0	0	Fair	
Davenport, Iowa			30.14	765.5	62	16.7	66	SE	1	0.4		0	0			0	0	Clear	
Denison, Tex			30.02	762.5	73	22.8	95	SE	5	2.2		0	0			0	0	Clear	
Denver, Col.	24.82	630.4	30.04	763.0	55	12.8	80	S	8	3.6		0	0			0	0	Clear	
Detroit, Mich			30.13	765.3	58	14.4	75	Calm	0	0		1c	Sm'e			0	0	Clear	
Dodge City, Kan	27.32	693.9	29.50	749.3	69	20.6	90	S	14	6.3		0	0			0	0	Clear	
Dubuque, Iowa			30.10	764.5	61	16.1	77	S	4	1.8			10s			0	0	Cloudy	
Duluth, Minn			30.00	762.0	64	17.8	83	Calm	0	0		5c	0	SW		0	0	Fair	
Eastport, Me			29.89	759.2	56	13.3	52	NW	4	1.8		0	0			0	0	Clear	
Erie, Pa			30.13	765.3	59	15.0	64	S	4	1.8		1k	Sm'e			0	0	Clear	
Escanaba, Mich			30.05	763.3	62	16.7	71	S	4	1.8		8c	0	NW		0	0	Fair	
Fort Gibson, Indian Ter.			30.01	762.2	74	23.3	72	E	4	1.8		0	0			0	0	Clear	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.80	731.5	29.86	758.4	71	21.7	95	S	4	1.8		2cs	Fog			0	0	Fair	
Fort Sully, Dakota	28.13	714.5	29.70	754.4	67	19.4	89	SE	12	5.4		1c	2s		SE	0	0	Fair	
Florence, Arizona	28.37	720.6	29.82	757.4	74	23.3		W				2ck	0			0	0	Fair	
Galveston, Tex			30.03	762.7	82	27.8	74	S	12	5.4		2k	0	S		0.01	0.3	Fair	
Grand Haven, Mich			30.13	765.3	55	12.8	83	SE	3	1.3		5ck	Sm'e	NW	SE	0	0	Fair	
Indianapolis, Ind			30.15	765.8	59	15.0	76	NE	1	0.4		0	0			0	0	Clear	
Indianola, Tex			29.98	761.5	78	25.6	90	S	4	1.8		2c	2ks		S	0.66	16.8	Fair	
Jacksonville, Fla			30.05	763.3	78	25.6	86	Calm	0	0		8k	0	NE		0	0	Fair	
Keokuk, Iowa			30.05	763.3	61	16.1	77	SE	7	3.1		5c	0	S		0	0	Fair	
Key West, Fla			30.03	762.7	86	30.0	75	NW	2	0.9		0	5k			0.20	5.1	Fair	
Kittyhawk, N. C			30.12	765.0	73	22.8	50	NE	12	5.4		0	0			0	0	Clear	
Knoxville, Tenn			30.10	764.5	67	19.4	94	NW	2	0.9		1ck	0	SW		0	0	Clear	
La Crosse, Wis			30.08	764.0	63	17.2	83	S	6	2.7			10s			0	0	Cloudy	
Leavenworth, Kan			29.97	761.2	68	20.0	84	S	2	0.9		0	2s		SW	0	0	Clear	
Louisville, Ky			30.13	765.3	61	16.1	82	N	6	2.7		0	0			0	0	Clear	
Lynchburg, Va			30.16	766.1	67	19.4	64	Calm	0	0		0	0			0	0	Clear	
Malone, N. Y.			30.07	763.8	54	12.2	80	W	4	1.8		2k	0	NW		0	0	Fair	
Marquette, Mich			30.01	762.2	65	18.3	73	W	8	3.6		5c	0	W		0	0	Fair	
Memphis, Tenn			30.11	764.8	68	20.0	75	NE	4	1.8		1c	Sm'e			0	0	Clear	
Milwaukee, Wis			30.14	765.5	59	15.0	64	W	5	2.2		8ks	Fog	W		0	0	Cloudy	
Mobile, Ala			30.06	763.5	75	23.9	90	NW	1	0.4		5c	0			0.63	16.0	Fair	
Montgomery, Ala			30.08	764.0	74.5	23.6	76	N	3	1.3		2c	Haze		SE	0	0	Fair	
Morgantown, W. Va	29.13	739.9	30.19	766.8	53	11.7	79	Calm	0	0		0	Fog			0	0	Foggy	
Mt. Washington, N. H	23.75	603.2	30.11	764.8	29	— 1.7	100	NW	40	17.9			Fog			0	0	Foggy	
Nashville, Tenn			30.09	764.3	64	17.8	78	Calm	0	0		0	0			0	0	Clear	
New Haven, Conn			30.09	764.3	65.0	18.3	57	NW	5	2.2		Haze	Fog			0	0	Fair	
New London, Conn			30.08	764.0	66	18.9	54	N	1	0.4		Haze	Haze			0	0	Hazy	
New Orleans, La			30.06	763.5	80	26.7	82	NW	5	2.2		1cs	0			0	0	Clear	
Newport, R. I			30.05	763.3	64	17.8	61	NW	4	1.8		0	0			0	0	Clear	
New York, N. Y			30.12	765.0	61	16.1	55	NW	3	1.3		Haze	Haze			0	0	Hazy	
Norfolk, Va			30.15	765.8	69	20.6	75	NE	4	1.8		0	0			0	0	Clear	
North Platte, Neb	26.93	684.0	29.37	746.0	65	18.3	78	E	4	1.8		0	2s			0	0	Clear	
Omaha, Neb.	28.83	732.3	29.86	758.4	68	20.0	90	S	9	4.0		5k	2s		S	Inap.	Inap.	Cloudy	
Oswego, N. Y			30.14	765.5	50.5	10.3	70	W	1	0.4		0	Sm'e			0	0	Smoky	
Pembina, Dakota			29.91	759.7	52	11.1	93	SE	4	1.8		0	0			0	0	Clear	
Philadelphia, Penn			30.15	765.8	65	18.3	53	N	13	5.8		0	Fog			0	0	Clear	
Pike's Peak, Colorado	17.94	455.7	30.15	765.8	30	— 1.1	100	SW	17	7.6		5c	0	SW		0.08	2.0	Fair	
Pittsburgh, Penn			30.19	766.8	50	10.0	93	N	3	1.3			Fog			0	0	Foggy	
Port Huron, Mich			30.14	765.5	56	13.3	74	SW	3	1.3		2c	Haze	NW		0	0	Hazy	
Portland, Me			30.01	762.2	57	13.9	57	NW	4	1.8		0	0			0	0	Clear	
Portland, Oregon			30.16	766.1	44	6.7	92	Calm	0	0		0	Fog			Inap.	Inap.	Foggy	
Punta Rassa, Fla			30.01	763.0	81.0	27.2	82	E	4	1.8		Haze	0	NE		0.35	8.9	Clear	
Rochester, N. Y			30.13	765.3	57	13.9	63	SW	6	2.7		0	Sm'e			0	0	Smoky	
Salt Lake City, Utah	25.54	648.7	29.87	758.7	63	17.2	52	SE	2	0.9		0	0			0	0	Clear	
Sandy Hook, N. J			30.10	764.5	63	17.2	62	N	15	6.7		0	Haze		N	0	0	Hazy	
San Diego, Cal.			29.93	760.2	65	18.3	83	N	4	1.8			10s		N	0	0	Cloudy	
San Francisco, Cal			29.84	757.9	55	12.8	87	SW	8	3.6			10ks		SW	0	0	Cloudy	
Santa Fé, N. M	23.34	592.8	29.88	758.9	46	7.8	85	E	1	0.4		5c	0			0	0	Fair	
Savannah, Ga.			30.07	763.8	78	25.6	86	NE	6	2.7		2cs	2s	NE	NE	0.09	2.3	Fair	
Shreveport, La			30.10	764.5	78	25.6	78	E	3	1.3		0	0			0	0	Clear	
Smithville, N. C			30.12	765.0	76	24.4	69	NE	8	3.6		2k	0	NE		0.04	1.0	Fair	
Springfield, Mass			30.06	763.5	63	17.2	57	W	8	3.6		1ck	Fog			0	0	Fair	
St. Louis, Mo			30.13	765.3	65	18.3	67	SE	6	2.7		0	0			0	0	Clear	
St. Marks, Fla			30.05	763.3	76	24.4	90	NE	3	1.3		0	2ks			0.19	4.8	Fair	
St. Paul, Minn			29.97	761.2	64	17.8	78	SE	1	0.4			10s			0	0	Cloudy	
St. Paul's Island, Alaska			29.26	743.2	42	5.6	100	N	8	3.6			Fog			Inap.	Inap.	Foggy	
Thatcher's Island, Mass			30.03	762.7	58	14.4	69	NW	20	8.9		0	0			0	0	Clear	
Toledo, Ohio			30.13	765.3	59	15.0	70	SW	3	1.3		2cs	Haze			0	0	Hazy	
Tucson, Arizona	27.53	699.2	30.13	765.3	68	20.0		SE				0	0			0	0	Clear	
Tybee Island, Ga			30.06	763.5	78	25.6	86	NE	8	3.6		0	8ks		NE	1.25	31.7	Cloudy	
Vicksburg, Miss			30.09	764.3	74	23.3	74	E	3	1.3		2cs	0	W		0	0	Fair	
Virginia City, M. T	24.12	612.6	29.60	751.8	53	11.7	42	Calm	0	0		8k	0	SW		0	0	Cloudy	
Washington, D. C			30.18	766.6	62	16.7	66	W	1	0.4		5ck	0	NW		0	0	Fair	
Wilmington, N. C			30.12	765.0	74	23.3	63	NE	6	2.7		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
Wood's Holl, Mass			30.06	763.5	67	19.4	49	NW	10	4.5		0	0			0	0	Clear	
Yankton, Dakota	28.48	723.4	29.71	754.6	65	18.3	89	SE	6	2.7		8cs	5s	W	W	2.38	60.5	Cloudy	
Yuma, Arizona			29.84	757.9	86	30.0		E				0	0			0	0	Clear	
Sub Series.																			
Kingston, Jamaica, W. I.			30.14	765.5	78	25.6	72	Calm	0	0		2c	2s		SE	0	0		James Gall.
St. Georges, Bermudas			29.87	758.7	81.0	27.2	83	N	5	2.2		0	1k			0	0	Clear	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Paramaribo, D. Guiana, S. A			30.02	762.5	80	26.7	87	SE			2	4k	4k	E		0.02	0.51	Fair	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.09	764.2			85.1	29.5		NE								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.18	639.6			63.5	17.5	73	S	1	0.4		4c	0			0	0	Fair	Thomas Herran
York Factory, B. A			30.00	762.0	46	7.8	66	S	8	3.6		2c	0	S		0	0		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.05	763.3	75	23.9		NE			5					0.10*	2.5*	Squally	Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Adelie Fuller. At Brunswick, Ga.			30.01	763.0	80	26.7		E			1	0	8ks		E			Cloudy	Capt. James Jorgensen.
Steamer Leipzig. N. 45° 24′, W. 55° 30′.	S 59 W		29.90	759.4	60.1	15.6		S			2		.k			Smooth		†D. clouds	Capt. R. Hoffmann.

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.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,912 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, 4,362.2 ft., or 1,329.6 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. * Rain-fall from 1 to 3 a. m. of the 28th. † Detached clouds.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

Furnished by coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request, and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto-pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^d.,) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			30.07	763.6	82.4	28.0	53	NNE			2		0			0	0	Clear	Charnot.
Algiers			30.10	764.4	80.6	27.0	67	NE			3		0			0	0	Clear	Peter.
La Calle			30.09	764.2	77.9	25.5	71	NE			3		1			0	0	Fair	Kunts.
Tunis			30.15	765.9	84.9	29.4	43	E			3		2			0	0	Clear	Jacques.
Sfax			30.20	767.0	84.2	29.0	52	SE			3		2			0	0	Clear	Chauvey.
Saida			30.02	762.6	86.0	30.0	18	NNW			2		1			0	0	Clear	Millot.
Tebessa			30.10	764.5	82.4	28.0		W			1		2			0	0	Clear	Colin.
Geriville			30.08	764.1	83.3	28.5	29	SW			2		3			Inap.	Inap.	Fair	Lemaillot.
Laghouat			30.12	765.0	89.6	32.0	28	S			3		2			0	0	Clear	Guyot.
Biskra			30.14	765.5	87.8	31.0	43	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			30.17	766.4	68.2	20.1	53	SW			2		3			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.97	761.1	63.7	17.6	67	WNW			3		9			0.035	0.9		Dr. Wierzbiski.
Eperies			29.93	760.1	62.6	17.0	82	Calm			0		8cks			0.622	0.55		Julius Mikolik.
Gratz	28.84	732.6	30.03	762.8	60.8	16.0	60	SE			2		2			0	0		Andreas Rospini.
Hermannstadt	28.54	724.8	29.92	759.9	66.6	19.2	44	NW			5		1			0	0		Prof. Reissenberger.
Kremsmünster	28.67	728.2	29.97	761.3	65.5	18.6	55	W			1		3			0	0		Prof. C. Wagner.
Lemberg			29.89	759.2	59.0	15	96	S			1		8			Blank	Blank		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.11	764.9	70.3	21.3	56	W			1		1ks			0	0		I.R.Hydrographic Office.
Szegedin			29.98	761.5	79.2	26.2	50	Calm			0					0	0		Karl Stancel.
Trieste			30.14	765.5	70.3	21.3	61	Calm			0		0			0	0	Clear	Prof. V. Farolfi.
Vienna			29.99	761.7	69.1	20.6	45	W			2		3			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 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 J. C. Houzeau, 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			29.70	754.3	63.7	17.6	88	SW			3		10		SW	0.681	17.30	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen			29.54	750.3	54.6	12.6		NW	13	5.8			4					Showery	William Boswell.
Ardrossan			29.60	751.8	60	15.6		NW			3		5						William McNeil.
Armagh, Observatory			29.73	755.1	58.2	14.6		NW	9	4.0			7					*D. clouds	S. Cad, for Dr. Robinson
Birr Castle, (Parsonstown)			29.81	757.2	61.2	16.2		WNW			1–3		8					*D. clouds	J. Dreyer.
Bradford			29.57	751.1	59.8	15.4		W			4		4					*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.02	762.5	85.0	29.4		SE			2		7			.35	8.9	*D. clouds	Sergt. J. F. Halanen, A. [H C
Cambridge, Observatory			29.66	753.4	64.0	17.8		W			3		10			Blank	Blank	Overcast	H. Todd.
Cardington			29.69	754.1	65.0	18.3		W			6		7					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Carmell.
Chatham, School M. E			29.70	754.4	64.2	17.9		SW			3		4					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.48	723.4	29.97	761.2	56.8	13.8		NW			6		5					*D. clouds	R. L. Power.
Donaghadee			29.66	753.4	62	16.7		NNW			4		8					*D. clouds	J. Mac Gowan.
Dover			29.68	753.9	66	18.9		WSW			3		5					½ clouded	J. Costello.
Eccles (near Manchester.)			29.62	752.3	57.0	13.9		W	2.4	1.1			10					Squally	Thomas Mackereth.
Falmouth, Observatory			29.91	759.7	62.0	16.7		WNW			5		6					*D. clouds	The Staff.
Fort Napier, (Natal)	27.42	696.6	29.65	753.1	87.8	31.0		NW			5		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.95	760.7	81	27.2		W			2		6					*D. clouds	
Galway, Queen's College			29.91	759.7	65	18.3		W			2		4					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.08	764.0	77.2	25.1		E			4		4					*D. clouds	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.58	751.3	57.5	14.2		W			1		8					Fine	Lewis Stuart.
Great Yarmouth			29.60	751.8	63	17.2		WNW			4		5			Blank	Blank	*D clouds	G. T. Watson.
Greenwich, Royal Ob'y			29.72	754.9	64.3	17.9		WNW			4		10			Blank	Blank	Overcast	The Staff, for G. B. Airy
Guernsey																			Dr. S. E. Hoskins.
Helston			29.96	761.0	61	17.8		NW			2		6k			0.64	16.3	Fair	M. P. Moyle.
Holyhead			29.72	754.9	60	15.6		W			6		3					*D. clouds	John Tilston.
Kew, Observatory			29.72	754.9	65.0	18.3		SW	10	8.5			8					Threatening	The Staff.
Kingstown			29.76	755.9	60	15.6		WNW			5		5					*D. clouds	George Mitchell.
Leicester Museum			29.68	753.9	58.8	14.9		W			5		10					Threatening	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			30.12	765.0	81.8	27.7		NW			1		6k					*D. clouds	Corp'l F. Fraser, A.M.C.
Nairn			29.55	750.6	58	11.4		Calm			0		10					Overcast	W. D. Penny.
Nassau, (Bahamas			30.05	763.3	86.4	30.2		SE			3		6					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.66	753.4	59.0	15.0		WSW			3		7d		WSW	0.060	1.52	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.68	753.9	61.9	16.6		W			6		8					*D clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Ob's'y			29.71	754.6	62	16.7		WNW			4		8					Overcast	J. Lucas.
Plymouth			29.86	758.4	67	19.4		NW			3		5					*D. clouds	John Merrifield.
Roche's Point			29.86	758.4	61	16.1		WNW			4		5					Cloudy	W. Kennedy.
Saint Ann's Head			29.81	757.2	59	15.0		WNW			6		3						John C. Walker.
Saint Helier, Jersey			29.91	759.7	64.5	18.1		NW			6		5					½ clouded	A. P Amy.
Sandwick Manse, Orkneys)			29.56	750.8	55	12.8		WNW	11	4.9			8					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery (Turkey)			29.88	758.9	77.2	25.1		NE			2		4					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.60	751.8	60.0	15.6		W			4		9			0.110	2.94	Raining	W. F. Cooper.
Silloth Rectory			29.61	752.1	56.3	13.5	83	W			2		6			0.040	1.02	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.60	751.8	55.0	12.8		W			4		10			Blank	Blank	Threatening	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			29.59	751.6	57	13.9		NW			3		5					*D. clouds	John Smith.
Strathfield Turgiss			29.73	755.1	63.5	17.5		NW			2		5					*D. clouds	Rev. Charles H. Griffith.
Thurso			29.53	750.0	57	13.9		WNW			2		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.89	759.2	65	18.3		NW			6		5					*D. clouds	W. Newcombe.
Valencia, Observatory			29.91	759.7	60.4	15.8		W	17	7.6			6					*D. clouds	The Staff.
Sub-Stations.																			
Calf of Man, Isle of Man					56	13.3		NW			6		0			0.12	3.0		Thomas Dawson.
Cape Good Hope, Ob's'y			29.97	761.2	52.7	11.5	72	W	19	8.5		0	5						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.52	749.8	60.5	15.8	100	SW			5		6n			0.03	0.8		Francis Abbott, F.R.A.S.
Leith, Restaurig Park			29.60	751.8	55.0	12.8		NW			2		10ks			0.24	6.1	Raining	Andrew Gibb.
Mauritius, Observatory			30.26	768.6				SE	25.6	11.4						0.19	4.8		C. Meldrum
Melbourne, Observatory			30.07	763.8	53.3	11.8	79	NW	11	4.9			10			0.08	2.0	Dull	R. L. J. Ellery.
Monach L'thouse, Hebrides			29.62	752.3	57	13.9		NW			4	5	5	W		0	0		J. Youngclause.
North Unst, Shetland Is.			29.61	752.1	52	11.1		E			4	2	4	E		Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,409 feet, or 426.7 meters; Fort Napier, 2,203 ft., or 670.8 m. *Detached clouds.

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.69	754.1	61.2	16.2	75	SSE			6		10						
Faröe			29.50	749.2	61.7	16.5	88	SW			4		9						
Godthaab, Greenland			30.09	764.3	46.4	8.0	44	NE			7		0						
Stykkisholm, Iceland			29.57	751.1	50.5	10.3	93	SE			2		10					Raining	
Thorshavn, Faröe			29.62	752.4	52.5	11.4	76	E			2		5						
Vestervig			29.40	746.7	58.3	14.6	93	SE			6		10					Raining	

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds

FRENCH SERIES.

Furnished by the 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. 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			30.03	762.8	64.4	18	90	SW			2		10k			0.063	1.6	Covered	Normal School.
Amiens																			Normal School.
Avignon			30.12	765.0	78.8	26	54	NW			2		0			0	0	Very clear.	Normal School.
Bar-sur-Seine			29.98	761.5	62.4	16.9	84	SW			2		10		W			Raining	C. Saillard.
Beaumette, (near Angers)			29.95	760.8	64.8	18.2	86	SW	22.8	10.2					W	0.185	4.7		Beaumette Observatory.
Beauvais			29.83	757.7	66.6	19.2	77	W			3		10		W	0.177	4.50	Covered	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.06	763.4	64.4	18	64	E			2		..8n		E	0	0		Normal School.
Bourges			30.02	762.6	67.6	19.8	72	SW			3		10		SW	0	0	Covered	Normal School.
Brest			29.93	760.3	67.1	19.5	66	W			4		7		W	0.197	5.00	Misty	Naval Observatory.
Carcassonne			30.16	766.0	67.5	19.7	39	W			1		1		E	0	0	Clear	Normal School
Caen																			Normal School.
Chartres			30.27	768.9	62.6	17	98	NW			4		10		W	0	0	Covered	Normal School.
Châlons-sur-Marne			29.88	758.9	64.4	18.0	82	SW			6		10			0.252	6.4	Raining	Normal School.
Clermont			30.02	762.6	71.8	22.1	44	W			3		5		SW	0.150	3.8	Cloudy	Puy de Dome Obs'y.
Commercy			29.99	761.7	61.5	16.4	85	SW			6		10kn		SW	0	0	Covered	Normal School.
Commune de Greasque*			30.19	766.7	79.5	26.4	33	SW			2		2		SW	0	0		M. Kina.
Grenoble			30.04	762.0	63.1	17.3	66	NNE			2		5		NW	0	0	Cloudy	Normal School.
La Roche-sur-Yon					67.3	19.6	83	SSW			6		10		NE	0.039	1.0	Covered	Normal School.
Le Mans			30.19	766.9	67.1	19.5	54	W			4		2		W	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier			30.07	763.8	71.1	21.7	55	SW			2		5			0	0	Partly cloudy	Normal School.
Mâcon			30.21	767.2	70.9	21.6	66	SE			6		5		NW	0	0	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			29.95	760.8	61.9	16.6	74	SW			4		8		SW	0	0	Very cloudy	Normal School.
Nismes			30.12	765.1	81.3	27.4	46	S			2		0			0	0	Clear	Normal School.
Orleans																			Normal School.
Paris, Observatory			29.87	758.6	64.2	17.9	86	SW			3		10kn		SW	0.120	3.05	Covered	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			30.09	764.3	71.6	22.0	66	SW			6		8		NE	0.433	11.0	¾ Covered	Naval Observatory.
Rouen			29.85	758.1	62.4	16.9	88	WSW			2		10		SW	0.268	6.8	Covered	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School
Villefranche																			Normal School.
Sub-Series.																			
Fort de France, Martinique			29.88	759.0	79.3	26.3													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.35	770.9	64.4	18.0	66	E	9.3	4.17			2		SW	0	0		—. Falguère.
Montsouris, Paris			29.87	758.6	63.7	17.6	91	SW			3		10kn		SW	0.150	3.8	Rainy	Montsouris Observ'tory.
Perpignan			30.13	765.3	81.5	27.5	43	E	13.0	5.83			0			0	0		Dr. Pines.
Pic du Midi, (Summit) H.P.	21.49	545.8			48.0	8.9		W			2		2					Clear	M. Baylac.
Pic du Midi, (Plantade) H.P.	22.72	577.2			54.7	12.6		W			1		2			0	0	Clear	General de Nansouty.
Saint Maur, (near Paris)			29.87	758.8	63.5	17.5	92	SSW			3		10			0.043	1.1	Covered	E. Renou.
Toulouse			30.19	766.8	71.2	21.8	47	NW			1		0			0	0		Toulouse Observatory
Tours			29.92	760.0	68.5	20.3	72	SW			3		10		WSW	0	0		C. Marquet.
Versailles, (near Paris)			29.87	758.8	63.7	17.6	94	W			6		10			0.217	5.50	Light rain	Dr. A. Béringy
Zi-Ka-Wei, (near Shanghai			29.76	756.0	73.6	23.1	90		2.2	1.0			5		W	0	0	Fair	Marc Dechevrens, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. 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			29.90	759.4	66.7	19.3	54	SW			7		8	WSW		0.020	0.5		Prof. T. Hoh.
Berlin			29.80	756.9	64.4	18.0	70	S			2		10					Raining	Prof. Arndt.
Breslau			29.99	761.7	65.1	18.4	52	SW			5		6			0	0		Dr. P. Neugebauer.
Carlsrune			29.92	759.9	67.6	19.8	64	SW			8		10			0	0		A. Senz.
Cassel			29.81	757.2	59.5	15.3	97	S			6		10	S		0.083	2.1		Dr. H. Möhl.
Emden			29.64	752.8	61.8	18.2	71	W			3		2			1.075	27.3		Prof. Prestel.
Frankfort on the Main			29.88	759.0	62.2	16.8	80	SSW			4		10			0.220	5.6	Raining	Physical Society.
Friedrichshafen			30.02	762.4	65.5	18.6	69	W			5		7			0.335	8.5		M. Wilhelm.
Hamburg			29.66	753.3	59.2	15.1	98	S			4		10			0.240	6.1	Raining	Captain F. Hegemann.
Kiel			29.58	751.4	59.9	15.5	92	SSE			3		10			0.039	1.0		Prof. G. Karston.
Königsberg, (Prussia.)			29.89	759.1	65.3	18.5	71	S			2		4			0.512	13.0		Prof. E. Luther.
Köslin			29.84	758.0	65.5	18.6		S			4		0			0	0		H. Müller.
Leipsic			29.85	758.1	64.6	18.1	71	SW			4		10	SW		0.358	9.1	Stormy	Prof. Bruhns.
Memel			29.90	759.5	63.0	17.2	81	SW			2		..ek			0.189	4.8		Reinbrecht & Skalweit.
Münster			29.82	757.4	61.3	16.3	94	SW			2		10			0.543	13.8		Prof. E. Heis.
Neufahrwasser			29.86	758.4	69.1	20.6	53	SSW			2		5			0	0		A. Lothes.
Posen			29.91	759.6	67.1	19.5	57	SW			6		2			0.059	1.5		Dr. Magener.
Strassburg, (in Alsace)			29.98	761.4	65.8	18.8	64	SW			4		10	WSW		0.008	0.2		Dr. Schur.
Stuttgart			29.95	760.7	66.2	19.0	57	W			3		9			0.059	1.5		Prof. Schoder.
Thorn			29.90	759.4	64.9	18.3	64	SW			4		3			0.024	0.6		Dr. Hasenbalg.
Treves, (Trier)			29.82	757.4	62.2	16.8	83	SW			8		10			0.417	10.6		Prof. Flesch.
Wustrow, Naval School			29.76	756.0	64.6	18.1	54	SSW			4		10			0	0		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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	760.2	87.8	31 0		NE					k					Very clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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			30.02	762.4	68.5	20.3	61	W	1.3	0.6			5			0	0		
Padua			30.09	764.2	70.0	21.1	60	E	3 8	1.7			7	W		0	0		
Vicenza			30.08	764.1	72.9	22.7	51	SW	2.5	1.1			2	W		0	0		
Verona			30.07	763.7	73.4	23.0	54	E			1		10			0.630	16.0		
Bergamo																			
Domodossola	29.06	738.0	30.06	763.4	68.5	20.3	53	SW			4		7			0	0		
Milan			30.09	764.2	82.6	28.1	40	ENE			1		6			0	0		
Pavia			30.08	764.1	72.9	22.7	51	NE			1		7	SW		0	0		
Moncalieri			30.08	764.0	69.3	20.7	69	ENE	1.8	0.8			6	NW		0	0		
Mondovi	28.21	716.6	30.07	763.6	68.4	20.2	59	NNW			2		9	NW		0	0		
Porto Maurizio			30.16	766.1	74.3	23.5	68	SW			2		6	NE		0	0		
Genoa			30.11	764.7	75.2	24.0	57	SE	8.1	3.6			8	SE		0	0		
Piacenza			30.08	764.1	71.6	22 0	50	N			2		3	SE		0	0		
Parma			30.07	763.8	75.4	24.1	59	E			4		3			0	0		
Bologna			30.10	764.4	71.6	22.0	43	ESE			1		2	N		0	0		
Florence			30.13	765.3	73.4	23.0	41	NW			2		0			0	0		
Leghorn																			
Siena	28.92	734.6	30.09	764.3	71.4	21.9	35	SE	0	0			2	NW		0	0		
Urbino	28.63	727.2	30.14	765.6	68.2	20.1	59	SW			2		1			0	0		
Ancona			30.11	764.7	72.0	22.2	50	SE			4		1			0	0		
Grosseto			30.14	765.5	79.2	26.2	34	N			2		2	NE		0	0		
Rome			30.10	764.6	78.4	25.8	55	SW	4 3	1.9			4	W		0	0		
Naples, O. U.			30.11	764.8	79.7	26.5	46	SSW			2		1	NE		0.228	5.8		
Lecce			30.11	764.8	80 8	27.1	51	NNE	15.0	6.7			2			0	0		
Cosenza			30.10	764.4	80.6	27.0	70	NW	8.7	3.9			6			0.039	1.0		
Riposto, (Sicily)			30.02	762.6	78.4	25.8	59	ENE			1		4			0	0		
Palermo			30.05	763.2	81.5	27.5	47	W	3.1	1.4			3			0	0		
Caltanissetta	28.15	715.1	30.02	762.4	76.5	24.7	39	W			4		4	SE		0	0		
Sub-Series.																			
Naples, S. R			30.13	765.3	75.4	24.1	62	NW	1.8	0.8			10			0.252	6.4		Prof. F. Brioschi.
Pesaro			30.19	766.7	70.0	21.1	64	E	3.3	1.46			0			0	0		L. Guidi.

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	754.7	65.1	18.4		W			5								
Groningen			29.53	750.0	63.3	17.4		SW			5								
Helder			29.56	750.9	64.6	18.1		SW			5								
Utrecht			29.60	751.7	67.8	19.9	68	WSW			5		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter and omit the rain-fall; for Utrecht, they give the the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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			29.51	749.6	59.4	15.2	83	Calm	0	0			10			0.157	4.0	Raining	
Brönö			29.68	753.8	59.0	15.0	76	NNE	9	4			7			0.020	0.5		
Christiania			29.67	753.5	63.7	17.6	63	SSE	3 1	1.4			10			0	0		
Tromsö			29.80	756.8	48.6	9.2		Calm	0	0			10			0.059	1.5	Light rain	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	772.4	74.3	23.5	86	S	8.6	3.83			6			0.039	1.0		Dr. J. A. N. Sampaio.
Campo Major			30.00	762 0	95.7	35.4	10	NW	2.5	1.1			0			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.18	766.6	76.1	24.5	64	SW	6.9	3.1			0			0	0		Capt. D. A. da Cunha.
Lisbon			30.08	764.1	84.7	29 3	36	N	13.7	6.1			1			0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level, excepting Lisbon. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia at St. Petersburg.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	759.3	63.9	17.7	68	WSW	9	4			10						Astronomical Obs.
Wilna			29.85	758.3	69.1	20.6	61	S	2	1			5						Astronomical Obs.
Dorpat			29.93	760.2	66.6	19.2	53	ESE	2	1			8						Physical Cabinet.
St. Petersburg			29.94	760.4	56.3	13.5	63	N	7	3			8						Central Physical Obs.
Kuopio			29.90	759.5	63.7	17.6	74	Calm	0	0			3						Ch. Forsten.
Kieff			29.76	755.8	60.8	16.0	100	N	9	4			10					Raining	Physical Cabinet.
Nikolaiev			29.74	755.4	88.5	31.4	39	SW	18	8			3						Kurdakof.
Kertch			29.85	758.1	78.3	25.7	82	SSE	11	5			1						Lagorio.
Moscow			30.03	762.7	69.4	20.8	54	SSE	9	4			7						Meteorological Obs.
Lugan			29.78	756.3	88.9	31.6	18	SE	47	21			0						Meteorological Obs.
Archangel			29.84	758.0	52 7	11.5	96	ENE	18	8			10						Ogorodnil of.
Tiflis	28.74	730.0	30.03	764.2	81.9	27.7	36	S	4	2			9						Physical Observatory.
Astrakhan			30.19	766.9	77.4	25.2	32	SE	13	6			0						Sebastianof.
Kasan			30.25	768.3	77.5	25.3	42	SSW	9	4			8						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	29.31	744.4	30.22	767 5	76.1	24.5	49	Calm	0	0			6						Meteorological Obs.
Nukuss			30 07	763.8	73.9	23.3	41	N ?	11	5			0						
Kasaly																			Robrof.
Tashkend																			Michelson.
Barnaul			29.89	759.2	56.3	13.5	88	Calm	0	0			9						Meteorological Obs.
Yeniseisk			29.69	754.2	63.0	17.2	78	NW	2	1			6						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.74	755.4	81.7	27.6	80	WNW	9	4			3						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.60	751.7	68..	20.5	97	Calm	0	0			10						
Nikolaievsk, on the Amoor																			

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	87.8	31.0	32	SE	4.5	2.00		0	0			0	0	Clear	Royal Observatory.
San Fernando			30.08	763.9	87.6	30.9	38	ESE	14.8	6.6		0	1		SE				The Naval Observatory

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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			29.91	759.8	59.0	15.0	81	E			2		0			0	0		
Umea			29.88	759.0	60.4	15.8	79	SW			4		5			0	0		
Hernosand			29.84	757.8	58.6	14.8	80	S			4		8			0	0		
Stockholm			29.82	757.5	66.0	19.2	56	SE			4		7			0	0		
Wisby			29.87	758.7	63.3	17.4	82	SE			6		7			0.728	18.5		
Sub-Series.																			
Upsala			29.80	757.0	63.7	17.6	61	ESE	9.8	4.4			10		SSE	0.001	0.11		Dr. Hildebrandsson

Note.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Stations	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0 - 10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower From —	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	728.6	30.07	763.6	71.2	21.8	45	SSW	.....	.....	4	.....	9	.....	.....	0	0	Covered	The Observatory.
Zurich	28.44	722.3	30.04	762.9	66.0	18.9	60	W	.....	.....	3	.....	6	.....	.....	0	0	Cloudy	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE—For Geneva the corresponding departures from the normal values are: Barometer, +1.0 mm; Thermometer, +1.3 cent.; Relative Humidity, —13 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Stations	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0 - 10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower From —	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	75.6	24.2	70	NNW	18	8.0	.....	.....	7	.....	WSW	0	0	.....	
Fao, (Persian Gulf)	.....	.....	29.80	757.0	87.8	31.0	.....	SE	.....	.....	3	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.98	761.6	91.4	33.0	.....	NW	.....	.....	8	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	30.12	765.1	73.4	23.0	.....	NW	.....	.....	2	.....	2	.....	.....	.....	.....	.....	
Varna	.....	.....	29.92	760.0	78.8	26.0	.....	N	.....	.....	6	.....	5	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.83	757.6	89.1	31.7	58	W	.....	.....	2	.....	0	.....	.....	.....	.....	Clear	Prof. C.V. A.Van Dyck.

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Stations	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0 - 10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower From —	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.	.....	.....	29.84	757.9	57.1	13.9	79	NW	2	0.9	.....	0	9	.....	.....	0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.14	765.5	62	16.7	.....	Calm	0	0	.....	.....	8ks	.....	NW	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B.	.....	.....	29.85	758.2	58	14.4	83	W	5	2.2	.....	5k	5ks	W	W	0.01	0.3	Cloudy.	G. A. Blair.
Charlottetown P. E. Island	.....	.....	29.81	757.2	56	13.3	88	N	6	2.7	.....	.....	10n	.....	.....	0.07	1.8	Light rain	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.10	764.5	59.7	15.4	73	E	.....	.....	1	0	Sm'e	.....	.....	0	0	Fair	James Smith, M. A.
Dalhousie, N. B.	.....	.....	29.90	759.4	56.3	13.5	84	NW	.....	.....	2	.....	.....	.....	.....	0	0	Cloudy	H. A. Johnson.
Esquimault, B. C.	.....	.....	30.14	765.5	49.3	9.6	93	Calm	0	0	.....	10cs	0	.....	.....	0	0	Cloudy	W. H. Bevis.
Fredericton, N. B.	.....	.....	29.90	759.4	59.0	15.0	78	W	8	3.6	.....	0	5ks	.....	.....	0.09	2.3	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.83	757.7	61	16.1	100	S	3	1.3	.....	2cs	2ks	W	W	0.940	23.88	Fair.	James Stewart.
Goderich, Ontario	.....	.....	30.06	763.5	66.2	19.0	69	SW	.....	.....	1	8k	0	NW	.....	0	0	Cloudy.	H. J. Strang, M. A.
Granton, Ontario	29.02	737.1	30.10	764.5	57	13.9	.....	Calm	.....	.....	0	.....	10n	.....	.....	0	0	Cloudy	James Grant.
*Halifax, N. S.	.....	.....	29.82	757.4	58	14.4	80	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear	F. Allison, M. A.
*Kingston, Ontario	.....	.....	30.10	764.5	64	17.8	74	Calm	0	0	.....	5c	Sm'e	.....	.....	0	0	Fair	S. Woods, M. A.
Little Glace Bay, N. S.	.....	.....	29.72	754.9	59.5	15.3	85	SW	4	1.8	.....	7k	0	SW	.....	0	0	Fair	C. H. Rigby.
*Montreal, Quebec	.....	.....	30.07	763.8	59	15.0	69	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.10	764.5	60	15.6	65	E	3	1.3	.....	5ck	0	W	.....	0	0	Fair	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.09	764.3	60	15.6	88	S	2	0.9	.....	2cs	0	W	.....	0	0	Fair	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.11	764.8	61	16.1	77	NW	3	1.3	.....	10k	0	NW	.....	0	0	Cloudy	H. Morgan.
Port Hastings, N. S.	.....	.....	29.76	755.9	57.5	14.2	.....	NW	5	2.2	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	30.12	765.0	62	16.7	86	NW	1	0.4	.....	10k	0	W	.....	0	0	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	30.01	762.2	58	14.4	88	Calm	0	0	.....	.....	10n	.....	.....	0	0	Cloudy	Capt. Ashe, R. N.
St. John, N. B.	.....	.....	29.93	760.2	57	13.9	81	W	3	1.3	.....	9k	0	.....	.....	0.10	2.5	Fine	G. Murdoch, C. E.
*Sarnia, Ontario	.....	.....	30.05	763.3	62	16.7	83	NW	0	0	.....	10cs	0	.....	.....	0	0	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	30.07	763.8	58	14.4	84	N	1	0.4	.....	2c	0	NW	.....	0	0	Fair	R. J. Cole.
Stratford, Ontario	28.82	732.0	30.08	764.0	58.9	14.9	85	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.	.....	.....	29.75	755.6	58	14.4	97	SW	3	1.3	.....	2k	2ks	W	.....	Inap.	Inap.	Clear	T. C. Hill.
*Toronto, Ontario	.....	.....	30.10	764.5	63	17.2	57	Calm	0	0	.....	2cs	0	W	.....	0	0	Fair	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.09	764.3	59.8	15.4	82	SW	1	0.4	.....	.....	9ks	.....	.....	0	0	Gloomy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	29.55	750.6	62	16.7	100	SE	.....	.....	.....	.....	10n	.....	.....	1.52	38.6	Heavy rain	John Delaney.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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	60	15.6	70	Calm	0	0		10k	0	W		0	0	Cloudy	
Alpena, Mich.			30.03	762.7	60	15.6	82	Calm	0	0		5ck	Haze	NW		0	0	Fair	
Atlantic City, N. J.			30.10	764.5	67	19.4	59	NW	4	1.8		1cs	Haze	W		0	0	Hazy	
Augusta, Ga.			30.14	765.5	76	24.4	81	SE	3	1.3		5ck	0	E		0.02	0.5	Fair	
Baltimore, Md.			30.13	765.3	65	18.3	68	Calm	0	0		2ck	Sm'e	W		0	0	Smoky	
Barnegat, N. J.			30.09	764.3	65	18.3	68	N	7	3.1		2k	Sm'e	N		0	0	Fair	
Bismarck, Dakota	28.03	713.2	29.66	753.4	63	17.2	83	SW	6	2.7		0	0			0.57	14.5	Clear	
Boston, Mass.			30.01	763.0	62	16.7	61	W	7	3.1		Haze	Haze			0	0	Hazy	
Breckenridge, Minn.			29.81	757.2	62	16.7	94	Calm	0	0			Fog			Inap.	Inap.	Foggy	
Buffalo, N. Y.			30.04	763.5	63.5	17.5	72	Calm	0	0		5c	Sm'e	W		0	0	Fair	
Burlington, Vt.			30.09	764.3	57	13.9	69	N	2	0.9		2c	0			0	0	Fair.	
Cairo, Ill.			30.09	764.3	71	21.7	80	Calm	0	0		0	0			0	0	Clear	
Cape Hatteras, N. C.			30.08	764.0	73	22.8	71	NE	4	1.8		0	Haze			0	0	Clear	
Cape Henry, Va.			30.11	764.8	73	22.8	67	SW	9	4.0		0	0			0	0	Clear	
Cape Lookout, N. C.			30.16	766.1	73	22.8	67	NE	5	2.2		0	Haze			0	0	Clear	
Cape May, N. J.			30.11	764.8	71	21.7	71	N	6	2.7		2ck	0	NW		0	0	Fair	
Charleston, S. C.			30.14	765.5	75	23.9	64	E	8	3.6		0	0			Inap.	Inap.	Clear	
Cheyenne, Wyoming	24.06	611.1	30.00	762.0	46	7.8	60	W	4	1.8		1ck	1s	SW		0	0	Clear	
Chicago, Ill.			30.00	762.0	65	18.3	58	S	6	2.7		2cs	5s	W		0	0	Fair	
Cincinnati, Ohio			30.06	763.5	62	16.7	83	SE	3	1.3		0	Fog			0	0	Foggy	
Cleveland, Ohio			30.10	764.5	62.3	16.8	73	E	6	2.7		2ck	Sm'e	W	E	0	0	Fair	
Corsicana, Tex.			30.02	762.5	75	23.9	90	S	6	2.7		0	2s			0.06	1.5	Fair	
Davenport, Iowa			29.96	761.0	68	20.0	74	S	5	2.2		5cs	7s	W	S	0	0	Cloudy	
Denison, Tex.			30.02	762.5	76	24.4	85	S	8	3.6			10s		S	0	0	Cloudy	
Denver, Col.	24.81	630.2	30.03	762.7	55	12.8	68	S	4	1.8		0	0			0	0	Clear	
Detroit, Mich.			30.04	763.0	65	18.3	68	Calm	0	0		10cs	Haze	NW		0	0	Cloudy	
Dodge City, Kan.	27.34	694.4	29.52	749.8	69	20.6	84	S	8	3.6		0	0			0	0	Clear	
Dubuque, Iowa			29.90	759.4	67	19.4	79	S	12	5.4			10s			Inap.	Inap	Cloudy	
Duluth, Minn.			29.88	758.9	60	15.6	88	NE	17	7.6			10s			0.03	0.8	Threatening	
Eastport, Me.			29.91	759.7	60	15.6	65	W	7	3.1		0	8s		NW	Inap.	Inap.	Fair	
Erie, Pa.			30.07	763.8	65	18.3	68	SW	4	1.8		9ck	Fog			0	0	Cloudy	
Escanaba, Mich.			30.02	762.5	63	17.2	78	SW	6	2.7			10s			Inap.	Inap.	Cloudy	
Fort Gibson, Indian Ter.			29.96	761.0	77	25.0	82	SE	6	2.7		0	2s			0	0	Clear	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.77	730.7	29.83	757.7	75	23.9	85	S	4	1.8			10s		S	0	0	Cloudy	
Fort Sully, Dakota	28.15	715.0	29.73	755.1	67	19.4	95	SE	13	5.8			Fog			0	0	Foggy	
Florence, Arizona	28.35	720.1	29.80	756.9	75	23.9		SE				8c	0	S		0	0	Fair	
Galveston, Tex.			30.01	762.2	81	27.2	82	S	2	0.9		2k	0	S		0	0	Fair	
Grand Haven, Mich.			30.05	763.3	61	16.1	79	E	4	1.8		0	8s		W	0	0	Cloudy	
Indianapolis, Ind.			30.08	764.0	62	16.7	77	E	1	0.4		8cs	0	N		0	0	Fair	
Indianola, Tex.			30.05	763.3	80	26.7	86	S	4	1.8		0	0			0.09	2.3	Clear	
Jacksonville, Fla.			30.07	763.8	78	25.6	86	NE	4	1.8			10s			0	0	Threatening	
Keokuk, Iowa			29.93	760.2	73	22.8	81	SW	6	2.7		0	Haze			0	0	Clear	
Key West, Fla.			30.01	762.2	85	29.4	75	E	2	0.9		5cs	0			0	0	Fair	
Kittyhawk, N. C.			30.14	765.5	71	21.7	67	S	2	0.9		0	0			0	0	Clear	
Knoxville, Tenn.			30.09	764.3	70	21.1	84	NW	2	0.9		3k	0	SW		0	0	Fair	
La Crosse, Wis.			29.88	758.9	62	16.7	100	SE	8	3.6			10n		SE	1.53	38.9	Heavy rain.	
Leavenworth, Kan.			29.97	761.2	74	23.3	85	S	6	2.7		0	0			0	0	Clear	
Louisville, Ky.			30.08	764.0	63	17.2	89	Calm	0	0		0	Fog			0	0	Clear	
Lynchburg, Va.			30.11	764.8	69.5	20.8	70	S	1	0.4		0	0			0	0	Clear	
Malone, N. Y.			30.05	763.3	56	13.3	75	S	5	2.2		0	0			0	0	Clear	
Marquette, Mich.			29.97	761.2	63	17.2	83	SW	2	0.9		5ck	5s			0	0	Cloudy	
Memphis, Tenn.			30.09	764.3	72	22.2	75	Calm	0	0		0	Sm'e			0	0	Clear	
Milwaukee, Wis.			30.04	763.0	65	18.3	89	SE	4	1.8		10ks	Fog	W		0	0	Cloudy	
Mobile, Ala.			30.06	763.5	80	26.7	78	E	3	1.3		0	0			0	0	Clear	
Montgomery, Ala.			30.10	764.5	77.5	25.3	82	SE	4	1.8		0	Haze			0.01	0.3	Clear	
Morgantown, W. Va.	29.08	738.6	30.13	765.3	56	13.3	87	Calm	0	0			Fog			0	0	Foggy	
Mt. Washington, N. H.	23.78	604.0	30.14	765.5	32	0.0	100	NW	40	17.9			Fog			0	0	Foggy	
Nashville, Tenn.			30.06	763.5	67	19.4	84	NW	1	0.4		0	Fog			0	0	Clear	
New Haven, Conn.			30.08	764.0	64.0	17.8	61	N	2	0.9		Haze	5s			0	0	Fair	
New London, Conn.			30.08	764.0	66	18.9	64	Calm	0	0		0	Haze			0	0	Clear	
New Orleans, La.			30.05	763.3	83	28.3	74	N	4	1.8		1cs	0			0	0	Clear	
Newport, R. I.			30.05	763.3	65	18.3	64	NW	4	1.8		0	Haze			0	0	Clear	
New York, N. Y.			30.11	764.8	66	18.9	45	NW	6	2.7		Haze	Sm'e			0	0	Smoky	
Norfolk, Va.			30.14	765.5	70	21.1	75	SW	7	3.1		0	0			0	0	Clear	
North Platte, Neb.	26.97	685.0	29.42	747.3	65	18.3	78	Calm	0	0			10ks		W	0	0	Cloudy	
Omaha, Neb.	28.77	733.8	29.78	756.4	75	23.9	85	S	5	2.2		2ck	0	S		0	0	Clear	
Oswego, N. Y.			30.10	764.5	60	15.6	76	S	4	1.8		5k	2s, sm'e	NW		0	0	Fair	
Pembina, Dakota			29.79	756.7	58	14.4	94	SE	1	0.4		5c	0			0	0	Fair	
Philadelphia, Penn.			30.12	765.0	68	20.0	55	N	1	0.4		0	Fog			0	0	Foggy	
Pike's Peak, Colorado	17.98	456.7	30.10	765.8	33	0.6	50	W	12	5.4		0	8s			0	0	Fair	
Pittsburgh, Penn.			30.11	764.8	57	13.9	87	NW	1	0.4			Fog			0	0	Foggy	
Port Huron, Mich.			30.05	763.3	64	17.8	83	SW	2	0.9		5c	5s, hz	NW		0	0	Hazy	
Portland, Me.			30.02	762.5	58	14.4	70	Calm	0	0		0	0			0	0	Clear	
Portland, Oregon			30.21	767.3	45	7.2	100	Calm	0	0			Fog			0	0	Foggy	
Punta Rassa, Fla.			30.04	763.0	80.5	26.9	82	NE	6	2.7		1c	Haze	NE		1.32	33.5	Clear	
Rochester, N. Y.			30.07	763.8	60	15.6	76	W	3	1.3		Haze	Sm'e			0	0	Smoky	
Salt Lake City, Utah	25.54	648.7	29.87	758.7	65	18.3	39	S	1	0.4		5k	0			0	0	Fair	
Sandy Hook, N. J.			30.09	764.3	67	19.4	54	N	8	3.6		0	Haze		N	0	0	Hazy	
San Diego, Cal.			29.92	760.0	64	17.8	78	S	4	1.8			10s			0	0	Cloudy	
San Francisco, Cal.			29.73	755.1	55	12.8	80	SE	6	2.7		5k	0			0	0	Fair	
Santa Fé, N. M.	23.30	591.8	29.84	757.9	51	10.6	78	E	3	1.3		5c	0			0.05	1.3	Fair	
Savannah, Ga.			30.12	765.0	79	26.1	74	NE	6	2.7		2ck	0			0.03	0.8	Clear	
Shreveport, La.			30.12	765.0	82	27.8	75	Calm	0	0		0	0			0.13	3.3	Clear	
Smithville, N. C.			30.15	765.8	73	22.8	67	N	6	2.7		0	0			0	0	Clear	
Springfield, Mass.			30.06	763.5	61	16.1	76	Calm	0	0		5ck	Fog			0.005	0.13	Fair	
St. Louis, Mo.			30.07	763.8	69	20.6	74	S	6	2.7		0	0			0	0	Clear	
St. Marks, Fla.			30.08	764.0	77	25.0	86	NE	8	3.6		5c	0	N		0.04	1.0	Fair	
St. Paul, Minn.			29.79	756.7	62	16.7	94	SE	16	7.2			10s			2.23	56.6	Cloudy	
St. Paul's Island, Alaska			29.90	759.4	40	4.4	91	NE	2	0.9			Fog			0	0	Foggy	
Thatcher's Island, Mass.			30.03	762.7	61	16.1	66	NW	10	4.5		0	0			0	0	Hazy	
Toledo, Ohio			30.05	763.3	65	18.3	78	Calm	0	0		5ck	Haze	W		0	0	Fair	
Tucson, Arizona	27.52	699.0	30.12	765.0	69	20.6		SE				2c	0	S		0.05	1.3	Clear	
Tybee Island, Ga.			30.09	764.3	78	25.6	72	NE	12	5.4		8k	2s	S		0.53	13.5	Cloudy	
Vicksburg, Miss.			30.11	764.8	75.5	24.2	86	SE	1	0.4		0	0			0.65	16.5	Clear	
Virginia City, M. T.	24.30	617.2	29.78	756.4	43.5	6.4	87	Calm	0	0			10ks, f'g		W	0.18	4.6	Cloudy	
Washington, D. C.			30.12	765.0	64	17.8	78	W	1	0.4		1ck	Haze	W		0	0	Fair	
Wilmington, N. C.			30.15	765.8	72	22.2	67	NE	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
Wood's Holl, Mass.			30.06	763.5	67	19.4	64	NW	4	1.8		0	0			0	0	Clear	
Yankton, Dakota	28.52	724.4	29.74	755.4	71	21.7	90	SW	7	3.1		2c	0	W		0	0	Fair	
Yuma, Arizona			29.84	757.9	81	27.2		N				2c8	0	W		0	0	Fair	
Sub Series.																			
Kingston, Jamaica, W. I.			30.14	765.5	78	25.6	78	Calm	0	0		8c	2s		NE	0.19	4.8		James Gall.
St. Georges, Bermudas			30.06	763.5	79.5	26.4	67	NNE	10	4.5		0	8k			0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Paramaribo, D. Guiana S.A.			30.02	762.5	81	27.2	78	E			2	5k	5k	E		0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.10	764.5			85.1	29.5		NE								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.19	639.8			62.5	16.9	76	Calm	0	0		8c	0			0	0	Cloudy	Thomas Herran
York Factory, B. A.			29.70	754.4	58.5	14.7	82	S	15	6.7		4cX	0	S		0.10	2.5		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.05	763.3	76	24.4		NE			5					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Addie Fuller* At Brunswick, Ga.			30.09	764.3	81	27.2		E			2	10k	0	E				Overcast	Capt. James Jorgensen.
Steamer Leipzig. N. 43° 10′, W. 60° 28′.	S63 W		29.84	757.9	62.4	16.9		NW			4		..k			Smooth		Squally	Capt. R. Hoffmann.

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.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,912 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, 4,362.2 ft., or 1,329.6 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. * Rain-fall in 24 hours 0.10 in., or 2.5 mm.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

Furnished by coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request, and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto-pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg'd.) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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			30.01	762.3	79.5	26.4	69	NNE			2		1			0	0	Clear	Charnot.
Algiers			30.01	762.3	79.5	26.4	75	NE			3		3			0	0	Fair	Peter.
La Calle			29.99	761.8	78.4	25.8	76	NE			3		8			0	0	Cloudy	Kunts.
Tunis			30.03	762.8	87.4	30.8	50	E			3		0			0	0	Clear	Jacques.
Sfax			30.10	764.5	86.5	30.3	58	S			4		1			0	0	Clear	Chauvey.
Saida			30.01	762.2	83.5	28.6	16	NW			2		2			0	0	Clear	Millot.
Tebessa			30.04	762.9	84.2	29.0		W			2		3			0	0	Fair	Colin.
Geriville			30.05	763.2	83.7	28.7	25	NNW			3		2			0	0	Clear	Lemaillot.
Laghouat			30.05	763.3	95.0	35.0		S			4		2			0	0	Clear	Guyot.
Biskra			30.03	762.8	90.5	32.5	33	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.	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	Millimeters.	Weather.	Observer.
Agram			29.88	759.0	74.1	23.4	54	SW			2		8			0.004	0.1		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.86	758.5	67.6	19.8	80	W			3		10			0.079	2.0		Dr. Wierzbiski.
Eperies			29.86	758.5	68.7	20.4	80	S			1		10ns			0	0		Julius Mikolik.
Gratz	28.64	727.2	29.79	756.6	72.1	22.3	62	NW			2		6			0.181	4.6		Andreas Rospini.
Hermannstadt	28.58	725.9	29.95	760.7	69.6	20.9	38	WNW			3		1			0	0		Prof. Reissenberger.
Kremsmünster	28.62	726.9	29.94	760.5	59.0	15.0	89	WNW			2		10			0.291	7.4		Prof. C. Wagner.
Lemberg			29.80	756.9	70.0	21.1	78	SW			3		4			0	0		Dr. T. Stanecki.
Nylregyhaza																			Habzsuda Daniel.
Pola			29.97	761.2	72.7	22.6	68	SSW			1		2ks			0	0		I.R.Hydrographic Office.
Szegedin																			Karl Stancel.
Trieste			29.96	760.9	74.1	23.4	61	NW			1		4			2.173	55.2		Prof. V. Farolfi.
Vienna			29.87	758.7	70.3	21.3	62	W			2		10			0.157	4.0	Raining	I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.6 m., or 1.258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Stations.	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	Millimeters.	Weather.	Observer.
Brussels			29.76	755.9	64.0	17.8	66	SSW			6		9k		SW	0.075	1.90		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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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 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.
Aberdeen			29.32	744.7	56.6	13.7		SSE	12	5.4			6			0.030	0.76	*D. clouds	William Boswell.
Ardrossan			29.39	746.5	58	14.4		SW			3		6					*D. clouds	William McNeil.
Armagh, Observatory			29.32	744.7	55.4	13.0		SSE	16	7.2			10					Squally	S. Cail, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.34	745.2	61.7	16.5		WSW			3–4		9					Squally	J. Dreyer.
Bradford			29.54	750.3	56.9	13.8		SW			1		10			0.02	0.5	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	85.2	29.6		NE			3		8					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			29.65	753.1	65.0	18.3		SW			2		7			Blank	Blank	*D. clouds	H. Todd.
Cardington			29.61	752.1	66.0	18.9		W			2		8					Overcast	John McLaren.
Carlisle																			T. Bel, for J. Carmell.
Chatham, School M. E			29.69	754.1	63.5	17.5		SW			2		8					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.23	717.0	29.71	754.6	55.0	12.8		SW			5		10					Raining	R. E. Power.
Donaghadee			29.45	748.0	59	15.0		SSW			3		10					Overcast	J. Mac Gowan.
Dover			29.70	754.4	63	17.2		SW			4		7					¾ cloudy	J. Costello.
Eccles (near Manchester.)			29.52	749.8	59.6	15.3		S	5.0	2.2			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			29.65	753.1	62.0	16.7		WSW			5		9					Showery	The Staff.
Fort Napier, (Natal)	27.73	704.3	29.96	761.0	53.9	12.2		SE			2		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	79	26.1		W			5		8					Overcast	
Galway, Queen's College			29.83	757.7	64	17.8		W			3		5					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean).			30.04	763.0	81.0	27.2		E			3		5					*D. clouds	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.38	746.2	56.7	13.7		S			1		10					Overcast	Lewis Stuart.
Great Yarmouth			29.65	753.1	64	17.8		WSW			4		4					*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y			29.67	753.6	65.5	18.6		SSW			3		9					*D. clouds	The Staff, for G. B. Airy
Guernsey																			Dr. S. E. Hoskins.
Helston			29.74	755.4	63	17.2		SW			2		10n			0.12	3.0	Raining	M. P. Moyle.
Holyhead			29.33	745.0	57	13.9		SSE			3		10					Raining	John Tilston.
Kew, Observatory			29.67	753.6	65.6	18.7		SSW	18	8.0			9					Threatening	The Staff.
Kingstown			29.38	746.2	59	15.0		SSE			4		9			Blank	Blank	Overcast	George Mitchell.
Leicester Museum			29.60	751.8	61.9	16.6		W			1		9					Threatening	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			30.04	762.7	79.0	26.1		NE			1		8k					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			29.36	745.7	58	14.4		Calm			0		10					Overcast	W. D. Penny.
Nassau, (Bahamas			30.04	763.0	79.6	26.4		NE			4		10					Overcast	Surg. Maj. Henry.
Nottingham, Observatory			29.57	751.1	63.2	17.3		SW			3		8k		W	0.163	4.14	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.57	751.1	60.5	15.8		SW			4		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.61	752.1	64	17.8		SW			2		10					Overcast	J. Lucas.
Plymouth			29.66	753.4	59	15.0		S			2		10					Raining	John Merrifield.
Roche's Point			29.46	748.3	60	15.6		NNW			6		10					Rain-squalls	W. Kennedy.
Saint Ann's Head			29.50	749.3	59	15.0		SSW			6		10					*Raining	John C. Walker.
Saint Helier, Jersey			29.79	756.7	60.6	15.9		SW			6		10					Raining	A. P. Amy.
Sandwick Manse (Orkneys)			29.40	746.7	54.5	12.5		W	7	3.1			4					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery (Turkey)			30.03	762.7	81.0	27.2		NE			2		2					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.55	750.6	63.0	17.2		SW			3		8			0.010	0.25	Overcast	W. F. Cooper.
Silloth Rectory			29.44	747.8	61.6	16.4	69	W			1		4			0.880	22.35	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.49	749.0	57.8	14.3		SW			1		10			Blank	Blank	Threatening	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.)			29.33	745.0	58	14.4		SE			3		5					*D. clouds	John Smith.
Strathfield Turgiss			29.68	753.9	65.0	18.3		SW			4		4					Squally	Rev. Charles H. Griffith.
Thurso			29.38	746.2	56	13.3		NNE			1		6					*D. clouds	John Trotter.
Truro, Royal Institution			29.64	752.8	64	17.8		SW			7		10					Raining	W. Newcombe.
Valencia, Observatory			29.52	749.8	58.9	14.9		WNW	17	7.6			8					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, Isle of Man					56	13.3		S			4		10			0	0		Thomas Dawson.
Cape Good Hope, Obs'y			30.47	773.9	57.8	14.3	65	SE	9	4.0		1	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania			29.74	755.4	62.0	16.7	76	N			3		10kn			0.06	1.5	Covered	Francis Abbott, F.R.A.S.
Leith, Restaurig Park			29.36	745.7	58.9	14.9		SW			2		8k			0.14	3.6	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.23	767.8				E	24.3	10.9						0.02	0.5		C. Meldrum
Melbourne, Observatory			30.25	768.3	53.9	11.7	68	W	5	2.2			10			0	0	Dull	R. L. J. Ellery.
Monach Lighthouse, Hebrides			29.58	746.2	66	15.3		SE			4		10			0	0		J. Youngclause.
North Unst, Shetland Is.			29.25	742.9	52	11.1		NW			7		10			Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time; Mauritius, unknown. 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			29.61	752.0	64.6	18.1	52	SW			2		6						
Faroe			29.60	751.8	60.1	15.6	78	SW			4		9						
Godthaab, Greenland			30.23	767.8	46.2	7.9	67	WSW			4		5						
Stykkisholm, Iceland			29.90	759.4	47.3	8.5	94	NE			9		5						
Thorshavn, (Faröe)			29.40	746.8	51.4	10.8	84	NNE			2		10					Raining	
Vestervig			29.47	748.5	58.3	14.6	70	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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	65.3	18.5	59	W			2		10k			0.110	2.8	Covered	Normal School.
Amiens																			Normal School.
Avignon			30.00	762.1	78.6	25.9	49	S			1		2		NW	0	0	Partly cloudy	Normal School.
Bar-sur-Seine			29.94	760.4	62.2	16.8	67	SW			2		10		W	0.602	15.3	Raining	C. Saillard.
Beaumette, (near Angers)			29.88	758.9	67.3	19.6	64	SW	8.5	3.8					SW	0.063	1.6		Beaumette Observatory.
Beauvais			29.85	758.1	64.4	18.0	64	SW			2		8		WSW	0.295	7.50	Very cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			29.97	761.3	68.0	20	65	N			2		n		N	0.31	8.		Normal School.
Bourges			30.03	762.7	60.1	15.6	73	SW			3		10		SW	0.228	5.8	Covered	Normal School.
Brest			29.76	756.0	63.1	17.3	90	WSW			4		10		WSW	0.069	1.75	Raining	Naval Observatory.
Carcassonne			30.05	763.3	68.0	20	60	W			1		5		E	0	0	Cloudy	Normal School
Caen																			Normal School.
Chartres			30.07	763.7	62.2	16.8	83	NW			2		8		W	0	0		Normal School.
Châlons-sur-Marne			29.93	760.1	59.4	15.2	76	W			6		10n		E	0.039	1.0	Covered	Normal School.
Clermont			29.95	760.7	67.3	19.6	61	SW			4		10		W	0.071	1.8	Covered	Puy de Dome Obs'y.
Commercy			29.95	760.7	59.9	15.5	72	SW			4		2kn		SW	0.532	13.5	Slightly cl'dy	Normal School.
Commune de Greasque*			30.07	763.6	78.4	25.8	35	NW			2		5		NW	0	0		M. Kina.
Grenoble			29.98	761.6	61.0	16.1	70	WNW			2		5		SW	0.089	2.25	Cloudy	Normal School.
La Roche-sur-Yon					65.3	18.5	78	WSW			2		5		ENE	0.051	1.3	Cloudy	Normal School.
Le Mans			29.57	751.0	63.1	17.3	59	N			8		5		NW	0.59	15.	Cloudy	Normal School.
Lons-Le-Saulnier			30.05	762.8	65.5	18.6	72	SW			2		5			0.909	23.1	Partly cloudy	Normal School.
Mâcon			30.15	765.9	65.5	18.6	86	Calm			0		5		NW	0.20	5.	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			29.92	760.0	61.7	16.5	72	WSW			4		8		WSW	0.335	8.5	Very cloudy	Normal School.
Nismes			30.02	762.4	81.5	27.5	87	W			2		2		N	0	0	Slightly cl'dy	Normal School.
Orleans																			Normal School.
Paris, Observatory			29.86	758.5	66.0	18.9	56	W			3		8k		SW	0.217	5.51	Very cloudy	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			29.98	761.4	69.8	21.0	69	SW			2		10		NE	0.239	6.0	Covered	Naval Observatory.
Rouen			29.88	758.9	63.3	17.4	57	SSW			2		10		W	0.157	4.0	Covered	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School
Villefranche																			Normal School.
Sub-Series.																			
Fort de France, Martinique			29.88	758.9	80.6	27													L'Abbé Marchési.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.24	768.0	65.8	18.8	70	SSW	22.4	10.00			5		SW	0	0		—, Falguère.
Montsouris, Paris			29.86	758.4	67.6	19.8	60	SW			4		9k,kn			0.193	4.9		Montsouris Observatory.
Perpignan			30.04	763.1	83.8	28.8	36	N	1.9	0.83			8		W	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.42	544.0			43.3	6.3		WSW			2		8					Cloudy	M. Baylac.
Pic du Midi, (Plantade) H.P.	22.66	575.4			49.1	9.5		WSW			3		6			0.094	2.4	Cloudy	General de Nansouty.
Saint Maur, (near Paris)			29.87	758.6	64.2	17.9	63	SW			3		9			Blank	Blank	Covered	E. Renou.
Toulouse			30.11	764.9	71.6	22.0	69	WSW			1		7			Blank	Blank		Toulouse Observatory
Tours			29.91	759.8	68.0	20.0	69	SW			1		8		WSW	0.350	8.9		C. Marquet.
Versailles, (near Paris)			29.86	758.5	65.5	18.6	59	W			2		8			0.115	2.91	Very cloudy	Dr. A. Bérigny
Zi-Ka-Wei, (near Shanghai)			29.78	756.5	73.9	23.3	89	SE	2.2	1.0			0			0	0	Clear	Marc Dechevrens, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	62.2	16.8	63	SW			6		9	SW		0.157	4.0		Prof. T. Hoh.
Berlin			29.79	756.7	65.5	18.6	55	SW			2		6			0.295	7.5		Prof. Arndt.
Breslau			29.89	759.2	67.3	19.6	44	NW			5		10			0	0		Dr. P. Neugebauer.
Carlsruhe			29.89	759.3	62.2	16.8	82	SW			2		9			0.345	8.5		A. Senz.
Cassel			29.84	757.8	63.7	17.6	60	SW			5		7	S		0.445	11.3		Dr. H. Möhl.
Emden			29.68	753.8	62.2	16.8	68	SSW			5		8			0.008	0.2		Prof. Prestel.
Frankfort on the Main			29.80	757.0	65.3	18.5	55	SW			2		8			0.287	7.3		Physical Society
Friedrichshafen			29.98	761.6	62.2	16.8	77	WSW			4		5			0.547	13.9	Rainy	M. Wilhelm.
Hamburg			29.72	755.0	63.7	17.6	66	SW			4		7kn	WSW		0.055	1.4	Thunder-storm	Captain F. Hegemann.
Kiel			29.66	753.3	63.5	17.5	63	SW			3		6			0.165	4.2		Prof. G. Karston.
Königsberg, (Prussia.)			29.67	753.7	65.7	18.7	65	SW			5		2			0.157	4.0		Prof. E. Luther
Köslin			29.74	755.5	63.3	17.4		SW			6		4			0.339	8.6		H. Müller.
Leipsic			29.84	757.9	66.2	19.0	54	WSW			4		7	W		0.161	4.1		Prof. Bruhns.
Memel			29.67	753.5	64.6	18.1	75	W			4		k	W		0.020	0.5		Reinbrecht & Skalweit
Münster			29.72	755.0	65.1	18.4	75	SW			2		4			0.169	4.3		Prof. E. Heis.
Neufahrwasser			29.71	754.5	66.2	19.0	60	WNW			3		10			0.150	3.8		A. Lothes.
Posen			29.81	757.2	69.4	20.8	44	W			5		8			0.008	0.2		Dr. Magener.
Strassburg, (in Alsace)			29.94	760.4	61.9	16.6	77	SW			2		10	SW		0.520	13.2		Dr. Schur.
Stuttgart			29.91	759.6	62.1	16.7	68	W			2		10			0.362	9.2	Rainy	Prof. Schoder.
Thorn			29.76	755.9	69.4	20.8	47	W			6		7			0.111	2.9		Dr. Hasenbalg.
Treves, (Trier)			29.84	757.8	61.3	16.3	68	S			7		10			0.575	14.6		Prof. Flesch.
Wustrow, Naval School			29.77	756.1	60.6	15.9	77	WNW			4		4			0.201	5.1		E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	761.2	82.4	28 0		NE					..k						

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	70.3	21.3	29	Calm	0	0			9			0	0		
Padua			29.91	759.6	73.8	23.2	60	ESE	2.5	1.1			9	W		0	0		
Vicenza			29.90	759.5	75.9	24.4	52	S	1.8	0.8			3	W		0	0		
Verona			29.90	759.4	80.1	26.7	51	E			2		10			0	0		
Bergamo																			
Domodossola	28.91	734.4	29.91	759.8	66.2	19.0	72	Calm			0		9			0	0		
Milan			29.93	760.1	74.8	23.8	65	E			2		10			0	0		
Pavia			29.89	759.3	77.2	25.1	48	W			4		6	SW		0	0		
Moncalieri			29.90	759.4	74.1	23.4	60	SE	1.8	0.8			9	NW		0	0		
Mondovi	28.04	712.2	29.89	759.2	70.3	21.3	59	N			2		2			0	0		
Porto Maurizio			29.97	761.3	74.3	23.5	61	SW			6		2			0	0		
Genoa			30.97	761.1	73.9	23.3	59	SE	11.2	5.0			4	S		0	0		
Piacenza			29.89	759.2	75.2	24.0	53	W			2		5	E		0	0		
Parma			29.90	759.4	76.5	24.7	39	SW			8		2			0	0		
Bologna			29.98	761.6	77.9	25.5	33	SW			6		2	S		0	0		
Florence			30.00	761.9	79.7	26.5	44	SW			6		7	SW		0	0		
Leghorn			30.00	762.0	75.6	24.2	45	SSW	9.4	4.2			3			0	0		
Siena	28.81	731.8	29.98	761.5	75.6	24.2	45	SSW	2.5	1.1			3	W		0	0		
Urbino	28.89	733.9	30.01	762.3	72.1	22.3	44	SW			2		0			0	0		
Ancona			29.94	760.4	80.2	26.8	37	SE			4		1			0	0		
Grosseto			30.06	763.4	77.7	25.4	52	S			2		3	SW		0	0		
Rome			30.04	762.9	78.8	26.0	48	SW	4.3	1.9			1			0	0		
Naples, O. U.			30.04	763.1	80.8	27.1	56	SW			2		1	SW		0	0		
Lecce			30.03	762.8	82.4	28.0	37	ENE	7.4	3.3			1			0	0		
Cosenza			30.06	763.4	85.3	29.6	67	NW	5.6	2.5			5			0	0		
Riposto, (Sicily)			30.02	762.5	80.6	27.0	56	NW			2		3	SE		0	0		
Palermo			30.02	762.4	77.2	25.1	59	NE	3.8	1.7			3			0	0		
Caltanissetta	28.11	713.9	29.97	761.2	78.1	25.6	49	SW			4		7	SE		0	0		
Sub-Series.																			
Naples, S. R			30.06	763.5	77.5	25.3	52	SW	3.1	1.4			2	SW		0	0		Prof. F. Brioschi.
Pesaro			30.02	762.5	77.2	25.1	48	SSW	9.8	4.36			1k	SW		0	0		L. Guidi.

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			29.76	756.0	63.7	17.6		WSW			4								
Groningen			29.63	752.7	62.2	16.8		SW			4								
Helder			29.67	753.7	62.6	17.0		SW			4								
Utrecht			29.70	754.3	62.1	16.7	74	SSW			2		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter and omit the rain-fall; for Utrecht, they give the the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.29	744.0	56.3	13.5	89	SSE	9.6	4.3			10			0.197	5.0	Raining	
Brono			29.55	750.5	66.2	19.0	74	E	9	4			4			0	0		
Christiania			29.33	744.9	59.0	15.0	77	SSE	3.1	1.4			10			0.173	4.4		
Tromsö			29.72	754.8	52.2	11.2		NW	13	6			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	771.2	75.4	24.1	85	WSW	4.9	2.19			4			0.039	1.0		Dr. J. A. N. Sampaio.
Campo Major			29.96	760.9	91.9	33.3	19	SW	5.6	2.5			7	WNW		0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)			30.16	766.0	75.6	24.2	67	SW	6.3	2.8			9			0	0		Capt. D. A. da Cunha.
Lisbon			30.05	763.2	82.8	28.2	25	N	28.6	12.8			3	N		0	0	Squally	The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level, excepting Lisbon. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia at St. Petersburg.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	756.4	62.4	16.9	89	W	11	5			10					Light rain	Astronomical Obs.
Wilna			29.71	754.6	62.4	16.9	83	SW	4	2			10						Astronomical Obs.
Dorpat			29.61	752.1	65.5	18.6	66	ESE	2	1			4						Physical Cabinet.
St. Petersburg			29.57	751.0	58.5	14.7	89	NE	7	3			10						Central Physical Obs.
Kuopio			29.70	754.4	60.1	15.6	79	E	13	6			10					Raining	Ch. Forsten.
Kieff			29.79	756.7	66.4	19.1	58	WNW	13	6			5						Physical Cabinet.
Nikolaiev			29.97	761.3	75.9	24.4	46	NW	18	8			5						Kurdakof.
Kertch			30.02	762.5	75.7	24.3	60	WNW	16	7			0						Lagorio.
Moscow			29.66	753.3	69.4	20.8	67	S	7	3			10						Meteorological Obs.
Lugan			29.71	754.6	79.5	26.4	34	SW	34	15			4						Meteorological Obs.
Archangel			29.87	758.6	55.2	12.9	89	E	13	6			10						Ogorodnikof.
Tiflis	28.50	724.0	29.84	757.8	85.3	29.6	35	SE	4	2			0						Physical Observatory.
Astrakhan			30.00	761.9	80.2	26.8	36	SE	11	5			0						Sebastianof.
Kasan			30.02	762.4	77.7	25.4	38	SSE	16	7			6						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	29.23	742.4	30.14	765.5	74.1	23.4	45	W	2	1			3						Meteorological Obs.
Nukuss			29.91	759.6	76.8	24.9	49	W?	9	4			0						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul			30.09	764.2	61.0	16.1	76	NW	0	0			10						Meteorological Obs.
Yeniseisk			29.83	757.6	49.1	9.5	79	W	9	4			5			Blank	Blank		Marks.
Irkutsk																			Usolsef.
Oorga																			Mossin.
Peking, (China)			29.72	754.9	78.8	26.0	87	Calm	0	0			5					Foggy	Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.69	754.1	70.7	21.5	79	Calm	0	0			0						
Nikolaievsk, on the Amoor																			

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk 592.0? m., or 1,942.2? ft.; 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.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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			29.92	759.9	87.4	30.8	30	NE	4.5	2.00		2	0	NW		0	0	Light clouds	Royal Observatory.
San Fernando			29.87	758.8	83.5	28.6	59	WSW	9.2	4.1		0	1		W				The Naval Observatory.

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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			29.78	756.5	61.9	16.6	62	SE			2		0			0	0		
Umea			29.67	753.7	63.7	17.6	51	SE			2		1			0.071	1.8		
Hernosand			29.61	752.0	62.6	17.0	60	ESE			4		1			0	0		
Stockholm			29.48	748.7	56.1	13.4	98	SSE			6		10			0.220	5.6	Raining	
Wisby			29.52	749.9	60.4	15.8	87	SW			6		3			0.350	8.9		
Sub-Series.																			
Upsala			29.48	748.9	59.4	15.2	68	SSW	11.0	4.9			10		SE	0.435	11.04	Raining	Dr. Hildebrandsson.

Note.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.62	727.0	30.02	762.4	66.7	19.3	57	SW			5		10			0.280	7.1	Covered	The Observatory.
Zurich	28.37	720.7	29.98	761.5	62.1	16.7	81	NE			1		7			0.579	14.7	Raining	The Observatory.

NOTE—For Geneva the corresponding departures from the normal values are: Barometer, —0.5 mm; Thermometer, —1.1 cent.; Relative Humidity, —1 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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			30.01	762.2	75.6	24.2	50	N	12	5.5			0			0	0		
Fao, (Persian Gulf)			29.76	756.0	90.7	32.6		NW			4		10						
Salonica			30.01	763.1	91.6	33.1		NW			6		0						
Valona			30.07	763.7	74.8	23.8		NW			2		0						
Varna			29.88	759.0	78.8	26.0		S			2		0						
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y			29.79	756.6	91.8	33.2	51	SW			2		0					Clear	Prof. C. V. A. Van Dyck.

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	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.			29.78	756.4	55.1	12.8	85	N	3	1.3		0	5			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.06	763.5	64	17.8		Calm	0	0		0	Haze			0	0	Clear	W. R. Bigg.
*Chatham, N. B.			29.81	757.2	53	11.7	94	SW	6	2.7		5k	2ks	W	W	0.26	6.6	Fair	G. A. Blair.
Charlottetown, P. E. Island.			29.84	757.9	54	12.2	68	W	3	1.3		5k	0			Inap.	Inap.	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			30.01	762.2	58.5	14.7	82	E			1		Fog			0	0	Fair	James Smith, M. A.
Dalhousie, N. B.			29.82	757.4	52.9	11.6	93	W			1					0	0	Cloudy	H. A. Johnson.
Esquimault, B. C.			30.09	764.3	50.3	10.2	93	SE	1	0.4		1ck	0			0	0	Clear	W. H. Bevis.
Fredericton, N. B.			29.88	758.9	54.4	12.4	85	NW	3	1.3			10s			Inap.	Inap.	Showery	Prof. Harrison.
*Fort Garry, Manitoba			29.75	755.6	55	12.8	100	W	6	2.7		0	Haze		W	1.800	45.72	Clear	James Stewart.
Goderich, Ontario			29.94	760.5	71.7	22.1	65	Calm			0	3c	3s	W		0.013	0.33	Fine	H. J. Strang, M. A.
Granton, Ontario	28.90	734.0	29.97	761.2	64	17.8		SW			1		10n			Inap.	Inap.	Cloudy	James Grant.
*Halifax, N. S.			29.85	758.2	55	12.8	86	NW	6	2.7			8n			Inap.	Inap.	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.03	762.7	65	18.3	89	Calm	0	0		2c	Sm'e			0	0	Fair	S. Woods, M. A.
Little Glace Bay, N. S.			29.70	754.4	57.5	14.2	79	NW	8	3.6		5k	0	NW		0	0	Fair	C. H. Rigby.
*Montreal, Quebec			30.00	762.0	65	18.3	69	W	2	0.9		0	0			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.03	762.7	58	14.4	75	N	5	2.2		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			29.99	761.7	60	15.6	94	N	4	1.8		0	0			0	0	Clear	Rev. R. Mosley.
Port Dover, Ontario			30.00	762.0	65	18.3	94	Calm	0	0		10k	0	S		0	0	Fair	H. Morgan.
Port Hastings, N. S.			29.78	756.4	55.3	12.9		NW	18	8.0						0	0	Fine	Peter Grant.
Port Stanley, Ontario			30.01	762.2	65	18.3	94	NE	1	0.4			10ks		W	0	0	Cloudy	M. Payne.
*Quebec, Quebec			29.94	760.5	59	15.0	88	SW	4	1.8		0	0			0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.			29.91	759.7	55	12.8	87	SW	2	0.9		10k	0			0	0	Cloudy	G. Murdoch, C. E.
*Saugeen, Ontario			29.93	760.2	61	16.1	77	Calm	0	0			10ks			0	0	Cloudy	K. Stewart.
Stayner, Ontario			29.96	761.0	63	17.2	83	Calm	0	0		8k	0	NW		0	0	Cloudy	R. J. Cole.
Stratford, Ontario	24.71	729.2	29.95	760.7	65.9	18.8	83	Calm	0	0		2cs	3s	NW		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.77	756.1	55	12.8	74	W	13	5.8		2ck	5ks		NW	0.01	0.5	Fair	T. C. Hill.
*Toronto, Ontario			29.98	761.5	68	20.0	72	NW	1	0.4		5k	2s	W	W	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			29.98	761.5	65.8	18.8	89	E	1	0.4			10ks			0	0	Fine	J. Montgomery.
SUB-SERIES.																			
St. Johns, Newfoundland.			29.61	752.1	55	12.8	81	N					10n			3.82	97.0	Cloudy	John Delaney.

NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.			30.00	762.0	62	16.7	71	Calm	0	0		Haze	Haze			0	0	Hazy	
Alpena, Mich.			29.86	758.4	66	18.9	90	SE	5	2.2		5ck	Haze	W		0	0	Fair	
Atlantic City, N. J.			30.02	762.5	74	23.3	81	SW	8	3.6		5cs	2s	NW	SW	0	0	Cloudy	
Augusta, Ga.			30.13	765.3	73	22.8	82	Calm	0	0		0	0			0	0	Clear	
Baltimore, Md.			30.02	762.5	71	21.7	71	S	4	1.8		5k	Haze	W		0	0	Fair	
Barnegat, N. J.			30.00	762.0	72	22.2	85	SW	9	4.0			10s		W	Inap.	Inap.	Cloudy	
Bismarck, Dakota	28.11	714.0	29.71	754.6	55	12.8	93	Calm	0	0		0	Fog			0	0	Foggy	
Boston, Mass.			30.01	762.2	64	17.8	58	W	5	2.2		Haze	Haze			0	0	Hazy	
Breckenridge, Minn.			29.74	755.4	68	20.0	93	SW	4	1.8			Fog			0	0	Foggy	
Buffalo, N. Y.			29.96	761.0	68.5	20.3	62	SW	4	1.8		5ck	2ks	SW	SW	0	0	Cloudy	
Burlington, Vt.			30.02	762.5	59	15.0	70	S	1	0.4		2c	0			0	0	Fair	
Cairo, Ill.			30.04	763.0	74	23.3	85	S	4	1.8		5ck	0	SW		0	0	Fair	
Cape Hatteras, N. C.			30.06	763.5	76	24.4	69	SW	4	1.8		2c	2ks			0	0	Fair	
Cape Henry, Va.			30.06	763.5	72	22.2	80	SW	13	5.8		5c,k	0	W		0	0	Fair	
Cape Lookout, N. C.			30.14	765.5	75	23.9	72	N	6	2.7		1k	Haze			0	0	Fair	
Cape May, N. J.			30.03	762.7	75	23.9	76	SW	16	7.2		8cs	0	NW		0	0	Fair	
Charleston, S. C.			30.14	765.5	77	25.0	77	NE	3	1.3		0	0			0	0	Clear	
Cheyenne, Wyoming	24.12	612.6	30.06	763.5	53	11.7	48	NW	12	5.4		0	0			Inap.	Inap.	Clear	
Chicago, Ill.			29.87	758.7	70	21.1	90	S	5	2.2		0	5s		S	0.82	20.8	Fair	
Cincinnati, Ohio			29.96	761.0	67	19.4	79	SE	5	2.2		8c	0			0	0	Fair	
Cleveland, Ohio			29.97	761.2	65.3	18.5	74	SE	6	2.7			10ks		W	0	0	Cloudy	
Corsicana, Tex.			30.04	763.0	75	23.9	90	Calm	0	0		0	0			0	0	Clear	
Davenport, Iowa			29.92	760.0	72	22.2	75	W	1	0.4		5k	7s	W		0	0	Cloudy	
Denison, Tex.			30.02	762.5	80	26.7	78	S	5	2.2		0	0			0	0	Clear	
Denver, Col.	24.89	632.2	30.11	764.8	56	13.3	68	S	4	1.8		0	0			0	0	Clear	
Detroit, Mich.			29.92	760.0	67	19.4	84	SE	4	1.8			10s		S	0.48	12.2	Cloudy	
Dodge City, Kan.	27.34	694.4	29.51	749.5	72	22.2	80	S	11	4.9		0	0			0	0	Clear	
Dubuque, Iowa			29.83	757.7	70	21.1	84	SW	8	3.6			10s			2.90	73.7	Cloudy	
Duluth, Minn.			29.77	756.1	60	15.6	94	Calm	0	0			Fog			0.07	1.8	Foggy	
Eastport, Me.			29.89	759.2	61	16.1	76	W	4	1.8		5ck	0	NW		Inap.	Inap.	Fair	
Erie, Pa.			29.95	760.7	70	21.1	61	S	2	0.9		8ck	Fog	W		0	0	Cloudy	
Escanaba, Mich.			29.82	757.4	65	18.3	89	S	4	1.8			10s			0	0	Cloudy	
Fort Gibson, Indian Ter.			29.95	760.7	78	25.6	77	SE	4	1.8		5ck	5ks			0	0	Cloudy	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.81	731.8	29.87	758.7	73	22.8	81	S	4	1.8		2ck	0	S		0.03	0.8	Clear	
Fort Sully, Dakota	28.16	715.3	29.75	755.6	64	17.8	94	NW	6	2.7		0	0			0	0	Clear	
Florence, Arizona	28.45	722.6	29.91	759.7	72	22.2		E				0	0			0	0	Clear	
Galveston, Tex.			30.07	763.8	81	27.2	82	NW	6	2.7		0	0			0	0	Clear	
Grand Haven, Mich.			29.86	758.4	70	21.1	90	SW	3	1.3		4c	2s	W	SW	0.20	5.1	Fair	
Indianapolis, Ind.			29.95	760.7	70	21.1	79	S	7	3.1		8cs,ck	0	W		0	0	Fair	
Indianola, Tex.			30.06	763.5	81	27.2	87	Calm	0	0		1k	0			0	0	Clear	
Jacksonville, Fla.			30.10	764.5	81	27.2	78	NE	4	1.8		5k	0	NW		0.78	19.8	Fair	
Keokuk, Iowa			29.83	758.2	82	27.8	74	S	6	2.7		0	0			0	0	Clear	
Key West, Fla.			30.05	763.3	85	29.4	72	E	5	2.2		2cs	0			0	0	Clear	
Kittyhawk, N. C.			30.14	765.5	75	23.9	76	SW	12	5.4		5c	0	NW		0	0	Fair	
Knoxville, Tenn.			30.08	764.0	71	21.7	95	Calm	0	0			Fog			Inap.	Inap.	Dense fog	
La Crosse, Wis.			29.78	756.4	69	20.6	90	S	8	3.6			10s			0.06	1.5	Cloudy	
Leavenworth, Kan.			29.86	758.4	75	23.9	85	S	1	0.4		0	0			0	0	Clear	
Louisville, Ky.			30.01	762.2	72	22.2	71	S	2	0.9		2c	Haze			0	0	Fair	
Lynchburg, Va.			30.02	762.5	74	23.3	74	S	1	0.4		8c,cs	0	W		0	0	Fair	
Malone, N. Y.			29.98	761.5	55	12.8	73	S	6	2.7		0	Haze		S	0	0	Hazy	
Marquette, Mich.			29.82	757.4	64	17.8	78	S	4	1.8			10s			0	0	Threatening	
Memphis, Tenn.			30.08	764.0	78	25.6	78	S	4	1.8		0	Sm'e		S	0	0	Smoky	
Milwaukee, Wis.			29.86	758.4	69	20.6	90	SW	9	4.0			8s		SW	3.65	92.7	Cloudy	
Mobile, Ala.			30.10	764.5	76	24.4	90	NE	5	2.2		0	0			0.14	3.6	Clear	
Montgomery, Ala.			30.12	765.0	79.5	26.4	80	SE	4	1.8		0	Haze			0	0	Clear	
Morgantown, W. Va.	29.00	736.6	30.04	763.0	61	16.1	88	Calm	0	0		2c	Fog	NW		0	0	Fair	
Mt. Washington, N. H.	23.80	604.5	30.16	766.1	38	3.3	100	NW	48	21.5			Fog			0	0	Foggy	
Nashville, Tenn.			30.06	763.5	71	21.7	85	Calm	0	0		10k	0	W		0	0	Cloudy	
New Haven, Conn.			30.02	762.5	66.0	18.9	64	SW	4	1.8		Haze	5s,fog			0	0	Fair	
New London, Conn.			30.02	762.5	65	18.3	63	N	2	0.9		2k	Haze	W		0	0	Fair	
New Orleans, La.			30.07	763.8	82.5	28.1	78	Calm	0	0		1cs	Sm'e			0	0	Clear	
Newport, R. I.			30.01	762.2	65	18.3	64	N	4	1.8		0	Haze			0	0	Hazy	
New York, N. Y.			30.02	762.5	70	21.1	57	NW	2	0.9			10ks,f'g			0	0	Cloudy	
Norfolk, Va.			30.09	764.3	72	22.2	80	S	10	4.5		8c	0	N		0	0	Fair	
North Platte, Neb.	27.02	686.3	29.48	748.8	64	17.8	83	Calm	0	0		0	5ks			Inap.	Inap.	Fair	
Omaha, Neb.	28.77	730.7	29.78	756.4	75	23.9	85	S	6	2.7		2c	8s		SW	0	0	Cloudy	
Oswego, N. Y.			30.00	762.0	64.5	18.1	67	SE	4	1.8		2k	8s	W	W	0	0	Smoky	
Pembina, Dakota			29.72	754.9	55	12.8	93	Calm	0	0		5c	0			0.53	13.5	Fair	
Philadelphia, Penn.			30.00	762.0	70	21.1	84	W	7	3.1		5ck	5s		W	0	0	Cloudy	
Pike's Peak, Colorado	18.03	458.0	30.24	768.1	34	1.1	79	SW	12	5.4		2c	0	W		0.09	2.3	Fair	
Pittsburgh, Penn.			30.01	762.2	63	17.2	88	NW	2	0.9		5k	Fog	NW		0	0	Foggy	
Port Huron, Mich.			29.92	760.0	67	19.4	79	S	7	3.1			10n		SW	0.01	0.3	Light rain	
Portland, Me.			29.99	761.7	61	16.1	66	W	4	1.8		5k	0	NW		0	0	Fair	
Portland, Oregon			30.05	763.3	53	11.7	93	Calm	0	0		0	0			0	0	Clear	
Punta Rassa, Fla.			30.08	764.0	80.5	26.9	80	E	8	3.6		Haze	0			0.01	0.3	Clear	
Rochester, N. Y.			29.97	761.2	66	18.9	63	SW	3	1.3		10k	Sm'e	W		0	0	Cloudy	
Salt Lake City, Utah	25.67	652.0	30.00	762.0	60	15.6	48	S	4	1.8		0	0			0	0	Clear	
Sandy Hook, N. J.			30.00	762.0	70	21.1	75	W	2	0.9		10ck	Haze	W		0	0	Cloudy	
San Diego, Cal.			29.98	761.5	62	16.7	78	NW	4	1.8		0	5s		NW	0	0	Fair	
San Francisco, Cal.			29.88	758.9	57	13.9	82	S	4	1.8		0	0			0	0	Clear	
Santa Fé, N. M.	23.36	593.3	29.90	759.4	54	12.2	79	NE	1	0.4		5k	0	NW		0	0	Fair	
Savannah, Ga.			30.12	765.0	80	26.7	74	Calm	0	0		2cs	0	NE		0	0	Clear	
Shreveport, La.			30.10	764.5	79	26.1	86	Calm	0	0		0	0			0	0	Clear	
Smithville, N. C.			30.14	765.5	76	24.4	66	Calm	0	0		0	0			0	0	Clear	
Springfield, Mass.			30.01	762.2	62	16.7	66	N	4	1.8		0	Fog			0	0	Fair	
St. Louis, Mo.			29.98	761.5	77	25.0	81	SW	8	3.6		0	0			0	0	Clear	
St. Marks, Fla.			30.09	764.3	75	23.9	85	N	5	2.2		2c	2ks	E		0.27	6.9	Fair	
St. Paul, Minn.			29.73	755.1	68	20.0	100	Calm	0	0			Fog			0	0	Foggy	
St. Paul's Island, Alaska			29.94	760.5	42	5.6	100	N	12	5.4			10n			0.10	2.5	Light rain	
Thatcher's Island, Mass.			29.99	761.7	63	17.2	67	Calm	0	0		0	0			0	0	Clear	
Toledo, Ohio			29.89	759.2	66	18.9	94	SW	16	7.2			10s		SW	0.43	10.9	Cloudy	
Tucson, Arizona	27.58	700.5	30.18	766.6	65	18.3		SW				0	0			0.19	4.8	Clear	
Tybee Island, Ga.			30.12	765.0	82	27.8	67	SE	4	1.8		2ck	0	SE		0	0	Fair	
Vicksburg, Miss.			30.10	764.5	78	25.6	80	SE	4	1.8		2c	0			0	0	Clear	
Virginia City, M. T.	24.34	618.2	29.82	757.1	45	7.2	60	Calm	0	0		0	0			0	0	Clear	
Washington, D. C.			30.02	762.5	71.5	21.9	73	SW	6	2.7		5c	1ks		W	0	0	Fair	
Wilmington, N. C.			30.14	765.5	76	24.4	76	Calm	0	0		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.
Wood's Holl, Mass			30.03	762.7	69	20.6	65	N	4	1.8		0	0			0	0	Clear	
Yankton, Dakota	28.56	725.4	29.77	756.1	73	22.8	63	NW	6	2.7		0	5s		NW	0	0	Fair	
Yuma, Arizona			29.92	760.0	78	25.6		NE				0	0			0	0	Clear	
Sub Series.																			
Kingston, Jamaica, W. I.			30.16	766.1	79	26.1	74	Calm	0	0		2c	0			0	0		James Gall.
St. Georges, Bermudas			30.17	766.3	80.0	26.7	66	NE	6	2.7		0	2k			0.25	6.3	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Paramaribo, D. Guiana S.A			30.01	762.2	81	27.2	87	E			3	7ks?	6ks	E		0.260	6.60	½ Cloudy	C. J. Hering.
Batavia, Dutch Guiana S.A.	30.07	763.6			87.8	31.0		E								0.098	2.50		Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1			64.0	17.8	78	S	2	0.9		7ck	3s			0	0	Cloudy	Thomas Herran
York Factory, B. A			29.51	749.5	51	10.6	100	S	3	1.3			Fog			0.90	22.9		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.05	763.3	76	24.4		NE			3					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Adelie Fuller, At Brunswick, Ga.			30.10	764.5	81	27.2		Calm			0	2c	5k					Cloudy	Capt. James Jorgensen.
Steamer Leipzig. N. 41° 21′, W. 65° 25′.	S 65 W		29.99	761.7	66.9	19.4		W			3		c			Smooth		Blue sky	Capt. R. Hoffmann.

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.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,912 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, 4,362.2 ft., or 1,329.6 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

Furnished by coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request, and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^d.), Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON AUGUST 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.
1:18 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			29.95	760.6	78.8	26.0	78	Calm			0		0			0	0	Clear	Charnot.
Algiers			29.95	760.6	86.4	30.2	46	NNW			2		2			0	0	Clear	Peter.
La Calle			29.93	760.3	77.2	25.1	80	NE			3		1			0	0	Clear	Kunts.
Tunis			29.96	760.9	86.0	30.0	59	E			3		0			0	0	Clear	Jacques.
Sfax			30.01	762.2	86.7	30.4	63	SE			3		1			0	0	Clear	Chauvey.
Saida			29.95	760.7	91.4	33.0		E			2		0			0	0	Clear	Millot.
Tebessa			29.98	761.6	86.0	30.0		NW			2		4			0	0	Fair	Colin.
Geriville			30.00	762.0	84.6	29.2	24	W			2		1			Inap.	Inap.	Clear	Lemaillot.
Laghouat			29.99	761.7	91.4	33.0	25	E			4		0			0	0	Clear	Guyot.
Biskra			29.96	760.9	95.4	35.2		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			29.66	753.4	74.1	23.4	51	SW			5		2			0.949	24.1		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.62	752.4	72.7	22.6	59	W			1		3			0.161	4.1		Dr. Wierzbiski.
Eperies			29.67	753.5	72.3	22.4	65	S			3		2c		N	0.667	1.70		Julius Mikolik.
Gratz	28.43	722.0	29.58	751.4	68.7	20.4	69	WSW			2		9			0.244	6.2		Andreas Rospini.
Hermannstadt	28.39	721.1	29.74	755.3	75.6	24.2	43	SE			3		0			0	0		Prof. Reissenberger.
Kremsmünster	28.20	716.2	29.48	748.7	67.6	19.8	65	NW			3		6			0.354	9.0		Prof. C. Wagner.
Lemberg			29.67	753.5	72.3	22.4	77	S			3		4			Blank	Blank		Dr. T. Staneckl.
Nylregyhaza																			Habsuda Daniel.
Pola			29.75	755.6	75.7	24.3	70	S			4		9cs			0	0		I.R.Hydrographic Office.
Szegedin																			Karl Stancel.
Trieste			29.71	754.7	76.5	24.7	68	SSW			1		9			0	0	Covered	Prof. V. Farolfi.
Vienna			29.52	749.7	73.9	23.3	54	SSE			4		10			0.098	2.5		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, 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			29.23	742.4	52.3	11.3	90	SW			6		10		WSW	0.520	13.20	Covered	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, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, 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.
Aberdeen	.....	.....	29.16	740.7	55.2	12.9	.....	NNE	32	14.3	.....	.....	9	.....	.....	0.180	4.57	Squally	William Boswell.
Ardrossan	.....	.....	29.27	743.4	58	14.4	.....	N	.....	.....	4	.....	8	.....	.....	2.09	53.1	Overcast	William McNeil.
Armagh, Observatory	.....	.....	29.39	741.0	58.6	14.8	.....	NW	14	6.3	.....	.....	8	.....	.....	.....	.....	Showery	S. Cail, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	29.51	749.5	58.5	14.7	.....	NW	.....	.....	3-4	.....	9	.....	.....	.....	.....	Showery	J. Dreyer.
Bradford	.....	.....	29.03	737.3	55.3	12.9	.....	W	.....	.....	6	.....	10	.....	.....	0.54	13.7	Raining	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	29.99	761.7	84.5	29.2	.....	E	.....	.....	1	.....	9	.....	.....	.....	.....	Overcast	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory	.....	.....	29.09	738.9	54.5	12.5	.....	SSW	.....	.....	2	.....	10	.....	.....	Blank	Blank	Overcast	H. Todd.
Cardington	.....	.....	29.11	739.4	68.0	20.0	.....	W	.....	.....	3	.....	7	.....	.....	.....	.....	*D. clouds	John McLaren.
Carlisle	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T. Bell, for J. Carmichael.
Chatham, School M. E	.....	.....	29.16	740.7	54.5	12.5	.....	SW	.....	.....	3	.....	10	.....	.....	Blank	Blank	Gloomy	Capt. J. Fellowes, R.E.
Dartmoor	28.03	711.9	29.51	749.5	51.5	10.8	.....	NW	.....	.....	8	.....	9	.....	.....	.....	.....	Showery	R. L. Power.
Donaghadee	.....	.....	29.25	742.9	57	13.9	.....	N	.....	.....	6	.....	8	.....	.....	.....	.....	*D. clouds	J. Mac Gowan.
Dover	.....	.....	29.15	740.4	58	14.4	.....	WSW	.....	.....	3	.....	7	.....	.....	.....	.....	Showery	J. Costello.
Eccles (near Manchester	.....	.....	28.99	736.3	54.8	12.7	.....	N	8.4	3.8	.....	.....	10	.....	.....	.....	.....	Raining	Thomas Mackereth.
Falmouth, Observatory	.....	.....	29.54	750.3	60.0	15.6	.....	WNW	.....	.....	7	.....	5	.....	.....	.....	.....	Squally	The Staff.
Fort Napier, (Natal)	28.12	714.2	30.36	771.1	60.9	16.1	.....	NE	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone	.....	.....	29.95	760.7	79	26.1	.....	W	.....	.....	3	.....	7	.....	.....	.....	.....	*D. clouds	
Galway, Queen's College	.....	.....	29.77	756.1	66	18.9	.....	NW	.....	.....	2	.....	3	.....	.....	.....	.....	*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	29.89	759.2	82.5	28.1	.....	E	.....	.....	2	.....	0	.....	.....	.....	.....	Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	29.25	742.9	54.2	12.3	.....	NNW	.....	.....	1	.....	10	.....	.....	.....	.....	Raining	Lewis Stuart.
Great Yarmouth	.....	.....	29.10	739.1	58	14.4	.....	W	.....	.....	3	.....	4	.....	.....	.....	.....	*D. clouds	G. T. Watson.
Greenwich, Royal Ob'y	.....	.....	29.14	740.1	54.8	12.7	.....	WSW	.....	.....	1	.....	10	.....	.....	.....	.....	Drizzling	The Staff, for G. B. Airy
Guernsey	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. S. E. Hoskins.
Helston	.....	.....	29.64	752.8	62	16.7	.....	NW	.....	.....	3	.....	6k	.....	.....	0.53	13.5	Showery	M. P. Moyle.
Holyhead	.....	.....	29.29	744.0	57	13.9	.....	NW	.....	.....	7	.....	10	.....	.....	.....	.....	Misty	John Tilston.
Kew, Observatory	.....	.....	29.14	740.1	52.0	11.1	.....	SW	12	5.4	.....	.....	10	.....	.....	.....	.....	Raining	The Staff.
Kingstown	.....	.....	29.37	746.0	59	15.0	.....	NW	.....	.....	6	.....	8	.....	.....	.....	.....	Overcast	George Mitchell.
Leicester Museum	.....	.....	29.09	738.9	54.8	12.7	.....	W	.....	.....	3	.....	10	.....	.....	†2.11	†53.6	Threatening	Wm. J. Harrison, F.G.S.
Malta, Mediterranean	.....	.....	29.95	760.7	84.8	29.3	.....	SW	.....	.....	1	.....	4k	.....	.....	.....	.....	*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn	.....	.....	29.34	745.2	56	13.3	.....	ENE	.....	.....	4	.....	5	.....	.....	.....	.....	½ clouded	W. D. Penny.
Nassau, (Bahamas	.....	.....	30.11	764.8	84.5	29.2	.....	NE	.....	.....	4	.....	6	.....	.....	.....	.....	*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	29.8	738.6	57.1	13.9	.....	SW	.....	.....	3	.....	3k,ks	.....	WSW	0.240	6.10	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	29.07	738.4	52.5	11.4	.....	W	.....	.....	3	.....	10	.....	.....	.....	.....	Raining	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	29.09	738.9	53	11.7	.....	W	.....	.....	3	.....	10	.....	.....	.....	.....	Overcast	J. Lucas.
Plymouth	.....	.....	29.45	748.0	60	15.6	.....	NW	.....	.....	6	.....	10	.....	.....	.....	.....	Overcast	John Merrifield.
Roche's Point	.....	.....	29.57	751.1	57	13.9	.....	NNW	.....	.....	7	.....	5	.....	.....	.....	.....	Gale	W. Kennedy.
Saint Ann's Head	.....	.....	29.39	746.5	58	14.4	.....	NW	.....	.....	6	.....	4	.....	.....	.....	.....	Squally	John C. Walker.
Saint Helier, Jersey	.....	.....	29.47	748.5	61.6	16.4	.....	W	.....	.....	7	.....	5	.....	.....	.....	.....	½ clouded	A. P. Amy.
Sandwick Manse, Orkneys	.....	.....	29.40	746.7	57	13.9	.....	NE	14	6.3	.....	.....	1	.....	.....	.....	.....	*D. clouds	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. Shaw.
Scutari Cemetery, Turkey	.....	.....	29.76	755.9	80.0	26.7	.....	NE	.....	.....	2	.....	2	.....	.....	.....	.....	*D. clouds	Sergt. W. H. Lyne.
Sheffield	.....	.....	29.03	737.3	57.0	13.9	.....	WSW	.....	.....	3	.....	4	.....	.....	0.182	4.62	Blue sky	W. F. Cooper.
Silloth Rectory	.....	.....	29.12	739.6	53.0	11.7	87	N	.....	.....	6	.....	8	.....	.....	0.16	4.06	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	29.02	737.1	52.0	11.1	.....	W	.....	.....	3	.....	10	.....	.....	.....	.....	Raining	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.	.....	.....	29.41	747.0	58	14.4	.....	NNE	.....	.....	2	.....	2	.....	.....	.....	.....	Blue sky	John Smith.
Stratfield Turgiss	.....	.....	29.14	740.1	51.8	11.0	.....	W	.....	.....	3	.....	10	.....	.....	.....	.....	Squally	Rev. Charles H. Griffith.
Thurso	.....	.....	29.36	745.7	59	15.0	.....	NF	.....	.....	3	.....	5	.....	.....	.....	.....	*D. clouds	John Trotter.
Truro, Royal Institution	.....	.....	29.59	751.6	63	17.2	.....	NW	.....	.....	8	.....	5	.....	.....	Blank	Blank	*D. clouds	W. Newcombe.
Valencia, Observatory	.....	.....	29.70	754.4	58.5	14.7	.....	W	24	10.7	.....	.....	5	.....	.....	.....	.....	*D. clouds	The Staff.
SUB-SERIES																			
Calf of Man, Isle of Man	.....	.....	.....	.....	53	11.7	.....	NE	.....	.....	8	.....	10	.....	.....	0.10	2.5	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.22	767.6	64.1	17.8	47	SSE	12	5.4	.....	0	0	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	29.91	759.7	64.5	18.1	77	NE	.....	.....	6	.....	10n	.....	.....	0.01	0.3	Raining	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	.....	.....	53.2	11.8	.....	NE	.....	.....	8	.....	10n	.....	.....	1.52	38.6	Raining	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.22	767.6	.....	.....	.....	E	17.4	7.8	.....	.....	.....	.....	.....	0	0	.....	C. Meldrum
Melbourne, Observatory	.....	.....	29.82	757.4	56.2	13.4	59	N	30	13.4	.....	.....	0	.....	.....	0	0	Fine	R. L. J. Ellery.
Monach Lighthouse, Hebrides	.....	.....	29.43	747.5	57	13.9	.....	NE	.....	.....	4	5	3	N	.....	0	0	.....	J. Youngclause
North Unst, Shetland Isls.	.....	.....	29.45	748.0	52	11.1	.....	NE	.....	.....	4	2	3	NE	.....	.....	.....	.....	Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, distinction between upper and lower clouds and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Hobart Town, 7.30 a. m.; Nottingham, 6 p. m., local time: Mauritius, unknown. 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 during month of August.

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen	.....	.....	29.30	744.2	60.1	15.6	79	SE	.....	.....	2	.....	10	.....	.....	.....	.....	Raining	
Faroe	.....	.....	29.18	741.1	55.0	12.8	95	S	.....	.....	2	.....	10	.....	.....	.....	.....	.....	
Godthaab, Greenland	.....	.....	30.19	766.7	43.7	6.5	84	Calm	.....	.....	0	.....	2	.....	.....	.....	.....	.....	
Stykkisholm, Iceland	.....	.....	30.09	764.2	49.5	9.7	82	Calm	.....	.....	0	.....	0	.....	.....	.....	.....	.....	
Thorshavn, Faröe	.....	.....	29.55	750.5	50.7	10.4	89	NE	.....	.....	4	.....	10	.....	.....	.....	.....	Raining	
Vestervig	.....	.....	29.19	741.3	55.0	12.8	96	SE	.....	.....	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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	751.4	59.0	15	84	W			4		8k		W	0.268	6.8	Very cloudy	Normal School.
Amiens																			Normal School.
Avignon			29.81	757.1	77.7	25.4	50	S			3		2		W	0	0	Partly cloudy	Normal School.
Bar-sur-Seine			29.56	750.7	63.7	17.6	51	Var.			6		5		W	0.614	15.6	Squally	C. Saillard.
Beaumette, (near Angers)			29.63	752.6	64.9	18.3	57	W	64.6	28.9			10		WSW	0.469	11.9	Raining	Beaumette Observatory.
Beauvais			29.38	746.2	60.1	15.6	63	WSW			6		10		WSW	0.561	14.25	Covered	Normal School.
Besançon																			Normal School.
Bourg en Bresse			29.77	756.2	60.8	16	71	E			4		10p		E	0.55	14.	Raining	Normal School.
Bourges			29.69	754.2	62.2	16.8	75	WSW			4		8		WSW	0.453	11.5	Very cloudy	Normal School.
Brest			29.63	752.7	65.7	18.7	67	WNW			6		3		WNW	0.315	8.00	Stormy	Naval Observatory.
Carcassonne			30.02	762.4	59.2	15.1	74	W			1		5		E	0	0	Cloudy	Normal School
Caen																			Normal School.
Chartres			29.70	754.3	58.3	14.6	82	NW			4		10		NW	0	0	Covered	Normal School.
Châlons-sur-Marne			29.45	747.9	63.7	17.6	50	SW			8		5k		NE	0.709	18.0	Cloudy	Normal School.
Clermont			29.71	754.7	63.7	17.6	57	SW			6		5		SW	0.220	5.6	Cloudy	Puy de Dome Obs'y
Commercy			29.54	750.3	60.1	15.6	64	W			6		2ck, n		W	0.55	14.	Slightly cl'dy	Normal School
Commune de Greasque*			29.91	759.8	79.9	26.6	37	W			2		2		SW	0	0		M. Kina.
Grenoble			29.70	754.4	66.2	19.0	75	SW			6		10		SW	0.098	2.50	Covered	Normal School.
La Roche-sur-Yon					63.7	17.6	65	W			10		10		N	0.322	8.2	Rainy	Normal School.
Le Mans			29.54	750.3	63.7	17.6	53	W			8		5		W	0.35	9.	Cloudy	Normal School.
Lons-Le-Saulnier			29.76	755.8	60.6	15.9	71	SW			4		5		SW	1.528	38.8	Partly cloudy	Normal School.
Mâcon			29.88	758.9	66.2	19	73	SW			6		5		NW	0.35	9.	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			29.56	750.8	61.5	16.4	49	SW			4		5		SW	0.402	10.2	Cloudy	Normal School.
Nismes			29.83	757.6	73.4	23	74	SW			2		2		SE	0	0	Slightly cl'dy	Normal School.
Orleans																			Normal School.
Paris, Observatory			29.45	748.1	57.7	14.3	76	WSW			6		8kn		W	0.227	5.77	Very cloudy	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			29.84	757.8	69.1	20.6	58	W			6		8		E	0.039	1.0	Covered	Naval Observatory.
Rouen			29.36	745.7	59.7	15.4	73	S			6		8		SW	0.169	4.3	Very cloudy	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School.
Villefranche																			Normal School.
Sub-Series.																			
Fort de France, Martinique			29.87	758.7	82.4	28													L'Abbé Marchôsi.
Marseilles																			Marseilles Observatory.
Mont-Louis			30.00	764.2	67.1	19.5	61	SSW	26.1	11.67			2		SW	0	0		—. Faïgnière.
Montsouris, Paris			29.45	747.9	56.5	13.6	74	W			6		9k kn		W	0.201	5.1	Squally	Montsouris Observatory.
Perpignan			29.91	759.6	77.5	25.3	73	S	7.4	3.33			7		W	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.	21.32	541.4			43.2	6.2		W			4		3					Fair	M. Baylac.
Pic du Midi, (Plantade) H.P.	22.56	572.9			49.3	9.6		W			3		10			0	0	Fair	General de Nansouty.
Saint Maur, (near Paris)			29.47	748.6	56.1	13.4	86	WSW			4		10			0.236	6.0	Raining	E. Fenou.
Toulouse			29.95	760.6	62.1	16.7	99	WNW			4		10			0.142	3.6		Toulouse Observatory
Tours			29.63	752.7	65.1	18.4	51	WNW			5		7		WNW	0.480	12.2		C. Marquet.
Versailles, (near Paris)			29.46	748.3	57.2	14.0	80	W			8		10			0.332	8.42	Raining	Dr. A. Bérigny
Zi-Ka-Wei, (near Shanghai)			29.82	757.4	73.9	23.3	89	ESE	5.4	2.4			0			0	0	Clear	Marc Dechevrens, S. J.

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day; the weather in general terms as published. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; 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. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. * 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	64.0	17.8	65	W			4		7	WSW		0	0		Prof. T. Hob.
Berlin			29.36	745.7	62.2	16.8	83	S			2		10			0.075	1.9		Prof. Arndt.
Breslau			29.61	752.1	69.1	20.6	57	S			4		10			0.874	22.2	Raining	Dr. P. Neugebauer.
Carlsruhe			29.47	748.6	61.2	16.2	73	SW			10		1			0.650	16.5	Raining	A. Senz.
Cassel			29.37	746.0	66.2	19.0	44	SSW			7		3	SSW		0.079	2.0		Dr. H. Möhl.
Emden			29.21	742.0	61.2	16.2	62	SW			6		1			0.579	14.7		Prof. Prestel.
Frankfort on the Main			29.41	747.1	66.2	19.0	42	SW			4		6			0.409	10.4		Physical Society.
Friedrichshafen			29.67	753.6	54.7	12.6	86	W			10		10			0.118	3.0	Rainy	M. Wilhelm.
Hamburg			29.27	743.4	61.2	16.2	68	SW			4		9k	SW		0.449	11.4	Showery	Captain F. Hegemann.
Kiel			29.22	742.3	61.3	16.3	73	S			3		7			0.283	7.2		Prof. G. Karston.
Königsberg, (Prussia.)			29.59	751.6	67.8	19.9	61	E			2		5			0.004	0.1		Prof. E. Luther.
Köslin			29.45	748.1	67.6	19.8		S			6		3			0.197	5.0		H. Müller.
Leipsic			29.41	747.1	61.3	16.3	89	SW			4		9	WSW		0	0	Stormy	Prof. Bruhns.
Memel			29.65	753.1	65.5	18.6	69	SSW			2		ck			0.150	3.8		Reinbrecht & Skalweit.
Münster			29.21	741.8	64.4	18.0	58	SW			2		3			0.398	10.1		Prof. E. Heis.
Neufahrwasser			29.56	750.8	68.7	20.4	54	S			5		5	SW				Rainy	A. Lothes.
Posen			29.51	749.5	67.8	19.9	51	SSE			2		10			0.197	5.0		Dr. Magener.
Strassburg, (in Alsace)			29.54	750.3	59.9	15.5	81	SW			2		7	SW		0.508	12.9		Dr. Schur.
Stuttgart			29.91	759.6	57.9	14.4	81	W			1		8			0.213	5.4		Prof. Schoder.
Thorn			29.55	750.5	69.8	21.0	50	E			4		5			0.693	17.6		Dr. Hasenbalg.
Treves, (Trier)			29.37	746.1	65.1	18.4	49	W			8		7			0.339	8.6		Prof. Flesch.
Wustrow, Naval School			29.34	745.3	57.9	14.4	96	SSE			6		10					Raining	E. F. Schütz.

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	84.9	29.4		S										Very cloudy	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.68	753.8	66.7	19.3	89	SW	3.8	1.7			10			0.539	13.7		
Padua			29.65	753.1	72.0	22.2	72	N	4.9	2.2			8	SW		0	0		
Vicenza			29.66	753.3	70.5	21.4	73	NE	1.3	0.6			6	W		0	0		
Verona			29.63	752.5	73.4	23.0	48	E			1		6			0.047	1.2		
Bergamo																			
Domodossola	28.60	726.5	29.60	751.9	65.3	18.5	84	S			2		10			0	0		
Milan			29.61	752.2	80.2	26.8	48	ENE			4		10			0.614	15.6	Showery	
Pavia			29.61	752.0	75.9	24.4	58	NE			4		7	SW		0	0		
Moncalieri			29.61	752.1	73.0	22.8	64	SE	4.9	2.2			5	NW		0	0		
Mondovi	27.75	704.8	29.60	751.9	73.9	23.3	60	NW			4		4	W		0	0		
Porto Maurizio			29.74	755.4	75.6	24.2	54	SW			8		5	E		0	0		
Genoa			29.71	754.6	76.6	24.8	55	SE	13.7	6.1			4	SW		0	0		
Piacenza			29.60	751.8	72.5	22.5	46	SW			6		8	SW		0	0		
Parma			29.58	751.4	77.0	25.0	40	SW			8		2			0	0		
Bologna			29.74	755.4	79.0	26.1	37	SW			8		3	NE		0	0		
Florence			29.82	757.3	78.8	26.0	59	SW			4		9	SW		0.008	0.2		
Leghorn			29.83	757.6	75.6	24.2	62	WNW	17.4	7.8			4			0	0		
Siena	28.63	727.3	29.80	757.0	77.2	25.1	50	SSW	4.3	1.9			9	W		0	0		
Urbino	28.28	718.4	29.80	756.8	72.7	22.6	57	SW			4		4			0	0		
Ancona			29.72	754.9	82.0	27.8	43	SW			4		3			0	0		
Grosseto			29.89	759.3	77.0	25.0	58	NW			4		2	SW		0	0		
Rome			29.91	759.8	79.2	26.2	58	WSW	10.5	4.7			7	SW		0	0		
Naples, O. U.			29.96	760.9	79.9	26.6	62	SW			4		8	NW		0	0		
Lecce			29.92	760.0	78.8	26.0	53	ESE	7.4	3.3			5			0	0		
Cosenza			29.94	760.5	84.2	29.0	71	SW	11.9	5.3			1			0	0		
Riposto, (Sicily)			29.89	759.3	82.0	27.8	59	ENE			2		1			0	0		
Palermo			29.91	759.6	79.0	26.1	61	NE	4.9	2.2			4			0	0		
Caltanissetta	28.02	711.6	29.88	758.9	79.5	26.4	45	SW			2		3	E		0	0		
Sub-Series.																			
Naples, S. R.			29.99	761.7	75.6	24.2	59	NE	3.1	1.4			3	WSW		0	0		Prof. F. Brioschi.
Pesaro			29.79	756.7	80.1	26.7	54	SW	19.5	8.72			8k	SW		0	0		L. Guidi.

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			29.18	741.1	56.3	13.5		SW			5								
Groningen			29.12	739.6	57.9	14.4		S			5								
Helder			29.15	740.4	58.8	14.9		SW			4								
Utrecht			29.16	740.7	53.4	11.9	87	SSW			4		10					Overcast	

Note.—The originals give the wind-pressure in kilograms per square meter and omit the rain-fall; for Utrecht, they give the the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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			29.32	744.8	60.1	15.6	62	Calm	0	0			0			0	0		
Brono			29.52	749.7	64.4	18.0	62	NE	9	4			3			0	0		
Christiania			29.43	747.6	60.4	15.8	57	E	5.1	2.3			6			0.209	5.3		
Tromsö			29.63	752.6	48.9	9.4		NE	18	8			8			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	77.5	25.3	82	W	4.9	2.19			6			0.197	5.0		Dr. J. A. N. Sampaio.
Campo Major			29.91	759.6	89.2	31.8	23	NNW	4.3	1.9			2			0	0		Dr. A. M. R. dos Santos
Funchal, (Madeira,)																			Capt. D. A. da Cunha.
Lisbon			30.02	762.4	75.9	24.4	53	NNW	23.7	10.6			2	ESE		0	0	Squally	The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level, excepting Lisbon. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia at St. Petersburg.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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			29.61	752.0	67.6	19.8	66	S	9	4			8						Astronomical Obs.
Wilna			29.71	754.5	64.6	18.1	69	S	2	1			10						Astronomical Obs.
Dorpat			29.67	753.7	66.7	19.3	59	SSW	9	4			2						Physical Cabinet.
St. Petersburg			29.65	753.0	64.4	18.0	59	WSW	11	5			3						Central Physical Obs.
Kuopio			29.51	749.5	56.8	13.8	82	S	7	3			10						Ch. Forsten.
Kieff			29.82	757.4	74.7	23.7	48	S	11	5			5						Physical Cabinet.
Nikolaiev			29.95	760.8	83.1	28.4	34	S	4	2			7						Kurdakof.
Kertch			30.00	762.0	74.5	23.6	66	NW	9	4			0						Lagorio.
Moscow			29.82	757.5	69.1	20.6	63	SE	9	4			4						Meteorological Obs.
Lugan			29.89	759.2	78.8	26.0	31	E	13	6			0						Meteorological Obs.
Archangel			29.53	750.1	62.1	16.7	90	SE	9	4			10					Raining	Ogorodnikof.
Tiflis	28.60	726.3	29.96	760.9	75.2	24.0	67	SE	9	4			5						Physical Observatory.
Astrakhan			29.96	760.9	82.6	28.1	35	ESE	9	4			5						Sebastianof.
Kasan			29.85	758.2	77.4	25.2	35	S	11	5			8						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	29.20	741.6	30.10	764.5	77.9	25.5	44	SW	9	4			1						Meteorological Obs.
Nukuss			29.85	758.3	73.0	22.8	61	W?	4	2			10						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul			30.08	764.1	60.8	15.7	41	NNE	0	0			1						Meteorological Obs.
Yeniseisk			30.01	762.3	45.7	7.6	70	NW	2	1			1						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.73	755.1	76.1	24.5	91	Calm	0	0			10						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock			29.74	755.4	71.2	21.8	95	SE	11	5			3						
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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	87.8	31.0	21	NW	9.7	4.34		4	0	NW		0	0	Light clouds	Royal Observatory.
San Fernando			29.98	761.4	76.1	24.5	64	W	10.3	4.6		0	0						The Naval Observatory.

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind: Direction. From—	Wind: Velocity. Miles per hour.	Wind: Velocity. Meters per second.	Wind: Force. 0—10.	Clouds: Amount. Up'er 0—10.	Clouds: Amount. Low'r 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	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			29.54	750.4	55.4	13.0	59	N			4		10			0.20	5.		
Umea			29.52	749.9	59.0	15.0	68	NNE			2		10			0.146	3.7		
Hernosand			29.55	750.6	60.6	15.9	62	E			2		7			0.016	0.4		
Stockholm			29.51	749.5	65.3	18.5	56	S			2		5			0.004	0.1		
Wisby			29.64	752.9	64.0	17.8	78	SW			2		3			0.150	3.8		
Sub-Series.																			
Upsala			29.52	749.9	61.9	16.6	70		3.4	1.5			7		SW	0.035	0.90		Dr. Hildebrandsson.

NOTE.—The originals give the wind force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rainfall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower From —	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Geneva	28.39	721.1	29.83	757.6	52.7	11.5	72	SE			6		10			0.185	4.7	Raining	The Observatory.
Zurich	28.09	713.5	29.74	755.3	51.6	10.9	92	W			4		10		W	1.161	29.5	Raining.	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, —3.4 mm; Thermometer, —8.8 cent.; Relative Humidity, +13 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower From —	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			29.82	757.3	75.9	24.4	66	NE	19	8.5			2		NE	0	0		
Fao, (Persian Gulf)			29.80	757.0	95.0	35.0		S			3		5						
Salonica			29.87	758.8	83.5	28.6		S			2		0						
Valona			29.95	760.7	76.6	24.8		NW			2		0						
Varna			29.84	758.0	78.8	26.0		S			2		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.75	755.6	88.0	31.1	56	W			2		10s		E				Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower From —	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	61.9	16.6	66	Calm	0	0		0	0			0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			29.96	761.0	64	17.8		SW	3	1.3			10s		SW	0	0	Smoky	W. R. Bigg.
*Chatham, N. B.			29.74	755.4	57	13.9	64	W	2	0.9		5c	0	W		0	0	Fair	G. A. Blair.
Charlottetown P. E. Island			29.70	754.4	59	15.0	63	N	7	3.1		0	0			0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			29.87	758.7	72.2	22.3	57	SE			1	10k	0	W		0	0	Fair.	James Smith, M. A.
Dalhousie, N. B.			29.77	756.1	58.2	14.6	69	W			1					0	0	Clear	H. A. Johnson.
Esquimault, B. C.			30.04	763.0	52.3	11.3	93	NE	1	0.4		0	0			0	0	Clear	W. H. Bevis.
Fredericton, N. B.			29.83	757.7	55.0	12.8	63	NW	11	4.9		0	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.90	759.4	49	9.4	96	W	14	6.3		2k	2s	W	W	0.170	4.32	Fair	James Stewart.
Goderich, Ontario			29.89	759.2	72.3	22.4	89	Calm			0	9k	0	W		Inap.	Inap.	Dull	H. J. Strang, M. A.
Granton, Ontario	28.86	733.0	29.91	759.7	66	18.9		C lm			0	1cs	0			0	0	Clear	James Grant.
*Halifax, N. S.			29.72	754.9	59	15.0	62	W	9	4.0		2cs	0			Inap.	Inap.	Fair	F. Allison, M. A.
*Kingston, Ontario			29.95	760.7	68	20.0	91	Calm	0	0		Haze	Sm'e			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			29.54	750.3	56.0	13.3	81	NW	7	3.1		8k	0	NW		0	0	Cloudy	C. H. Rigby.
*Montreal, Quebec			29.90	759.4	62	16.7	73	S	4	1.8			Sm'e			0	0	Smoky	C. H. McLeod, C. E.
*Ottawa, Ontario			29.90	759.4	59	15.0	73	NE	2	0.9			Sm'e		NE	0	0	Threatening	J. B. Haney.
*Parry Sound, Ontario			29.88	758.9	67	19.4	92	S	7	3.1		2ck	2ks	NW	NW	0	0	Fair	Rev. R. Mosley.
Port Dover, Ontario			29.93	760.2	68	20.0	95	Calm	0	0		Haze	Haze			0	0	Hazy	H. Morgan.
Port Hastings N. S.			29.68	753.9	59.0	15.0		NW	20	8.9						0	0	Fine	Peter Grant.
Port Stanley, Ontario			29.93	760.2	71	21.7	95	S	1	0.4		8k	0	W		0	0	Fair	M. Payne.
*Quebec, Quebec			29.88	758.9	60	15.6	8	Calm	0	0		0	0			0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.			29.83	757.7	56	13.3	57	NW	9	4.0		0	0			0	0	Fine	G. Murdoch, C. E.
*Sandgeen, Ontario			29.86	758.4	61	16.1	83	Calm	0	0		0	0			0.02	0.5	Clear	K. Stewart.
Stayner, Ontario			29.85	758.2	74	23.3	81	SE	1	0.4		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario	28.66	728.0	29.89	759.2	66.8	19.3	97	S	2	0.9		1c	Fog	SW		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.58	751.3	57	13.9	76	W	11	4.9			10s		NW	Inap.	Inap.	Cloudy	T. C. Hon.
*Toronto, Ontario			29.92	760.0	70	21.1	78	SW	3	1.3		0	5ks		W	0	0	Fair	Magnetic Observatory.
Woodstock, Ontario			29.92	760.0	67.8	19.9	95	SE	2	0.9		0	0			0	0	Fine	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			29.60	751.8	55	12.8	81	S					10n			0	0	Cloudy	John Delaney.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The 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.			29.92	760.0	64	17.8	78	Calm	0	0		8k	Haze	W		0	0	Cloudy	
Alpena, Mich.			29.80	756.9	67	19.4	94	S	4	1.8			10ks		S	0	0	Cloudy	
Atlantic City, N. J.			29.92	760.0	73	22.8	71	NW	4	1.8		10ck	Haze	W		0	0	Cloudy	
Augusta, Ga.			30.05	763.3	78	25.6	82	Calm	0	0		0	0			0	0	Clear	
Baltimore, Md.			29.97	761.2	74	23.3	59	NW	4	1.8		5c	Sm'e	W	NW	0	0	Smoky	
Barnegat, N. J.			29.92	760.0	70	21.1	75	NW	7	3.1		8c	Haze	NW		Inap.	Inap.	Fair	
Bismarck, Dakota	28.35	720.1	29.97	761.2	53	11.7	72	NW	15	6.7		0	8s		NW	0	0	Fair	
Boston, Mass.			29.92	760.0	67	19.4	59	NW	2	0.9		2cs	Fog	W		0	0	Foggy	
Breckenridge, Minn.			29.96	761.0	55	12.8	73	W	16	7.2		5cs	0	W		0	0	Fair	
Buffalo, N. Y.			29.89	759.2	70	21.1	70	SW	6	2.7		1ck	Sm'e	W		0	0	Clear	
Burlington, Vt.			29.92	760.0	62	16.7	66	S	3	1.3			Sm'e			0	0	Smoky	
Cairo, Ill.			29.96	761.0	73	22.8	95	SW	8	3.6			10n			0.18	4.6	Light rain	
Cape Hatteras, N. C.			29.96	761.0	78	25.6	77	W	12	5.4		5c	Haze			0	0	Fair	
Cape Henry, Va.			29.96	761.0	73	22.8	90	W	6	2.7			10s		W	0.32	8.1	Cloudy	
Cape Lookout, N. C.			30.04	763.0	79	26.1	82	W	14	6.3		0	5ks		W	0	0	Fair	
Cape May, N. J.			29.93	760.2	75	23.9	72	NW	12	5.4		5cs	0	NW		0.08	2.0	Fair	
Charleston, S. C.			30.08	764.0	80	26.7	82	W	6	2.7		5ck	2k		W	0	0	Fair	
Cheyenne, Wyoming	24.20	614.7	30.14	765.5	52	11.1	48	N	20	8.9		2ck	1s	W		0	0	Fair	
Chicago, Ill.			29.84	757.9	72	22.2	80	Calm	0	0		0	Fog			0	0	Clear	
Cincinnati, Ohio			29.88	758.9	74	23.3	85	SE	4	1.8			10ks		W	0.14	3.6	Cloudy	
Cleveland, Ohio			29.91	759.7	69.9	21.1	86	SE	4	1.8		5k	Sm'e	W	SE	0	0	Fair	
Corsicana, Tex.			30.01	762.2	76	24.4	86	S	3	1.3		2cs	Haze	SE		0	0	Clear	
Davenport, Iowa			29.88	758.9	71	21.7	85	SW	5	2.2		1ck	0	SW		0.43	10.9	Clear	
Denison, Tex.			30.00	762.0	78	25.6	77	S	5	2.2		0	0			0	0	Clear	
Denver, Col.	24.91	632.7	30.13	765.3	59	15.0	59	S	5	2.2		0	2s			0.02	0.5	Clear	
Detroit, Mich.			29.86	758.4	71	21.7	95	S	2	0.9			Fog			0	0	Foggy	
Dodge City, Kan.	27.33	694.2	29.51	749.5	70	21.1	79	SW	8	3.6		2c	0	S		0	0	Fair	
Dubuque, Iowa			29.84	757.9	69	20.6	84	S	4	1.8		2cs	Haze	S		0	0	Fair	
Duluth, Minn.			29.68	753.9	71	21.7	75	W	8	3.6		5c	0	W		0	0	Fair	
Eastport, Me.			29.83	757.7	61	16.1	56	NW	8	3.6		5c	0	E		0.06	1.5	Fair	
Erie, Pa.			29.89	759.2	70	21.1	75	S	4	1.8		8ck	Haze			0	0	Fair	
Escanaba, Mich.			29.75	755.6	68	20.0	94	SW	10	4.5						0	0	Foggy	
Fort Gibson, Indian Ter.			29.92	760.0	80	26.7	70	SE	4	1.8		0	0			0	0	Clear	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T.	28.76	730.5	29.82	757.4	74	23.3	76	S	4	1.8		0	0			0	0	Clear	
Fort Sully, Dakota	28.46	722.9	30.10	764.5	59	15.0	54	N	8	3.6		10k	0			0	0	Cloudy	
Florence, Arizona	28.45	722.6	29.93	760.2	68	20.0		W				0	0			0	0	Clear	
Galveston, Tex.			30.03	762.7	83	28.3	79	SE	2	0.9		2k	0	E		0	0	Fair	
Grand Haven, Mich.			29.84	757.9	71	21.7	90	S	3	1.3		0	1s		SW	0	0	Clear	
Indianapolis, Ind.			29.87	758.7	73	22.8	85	SW	3	1.3			10s			1.30	33.0	Cloudy	
Indianola, Tex.			30.02	762.5	81	27.2	78	E	4	1.8		0	2ks		S	0	0	Fair	
Jacksonville, Fla.			30.08	764.0	82	27.8	83	Calm	0	0		0	0			0	0	Clear	
Keokuk, Iowa			29.84	757.9	73	22.8	85	S	5	2.2		2k	0	S		0.10	2.5	Clear	
Key West, Fla.			30.08	764.0	83	28.3	74	SE	8	3.6		2ck	0			0	0	Clear	
Kittyhawk, N. C.			30.00	762.0	76	24.4	76	W	16	7.2		2c	2s	N		0	0	Fair	
Knoxville, Tenn.			30.01	762.2	73	22.8	81	S	2	0.9		1c	0	NE		0	0	Clear	
La Crosse, Wis.			29.80	756.9	68	20.0	90	S	6	2.7		2k	2s	S	S	0	0	Fair	
Leavenworth, Kan.			29.81	757.2	75	23.9	85	S	10	4.5		0	0			0.15	3.8	Clear	
Louisville, Ky.			29.93	760.2	73	22.8	90	SE	8	3.6			10ks		SE	0.54	13.7	Threatening	
Lynchburg, Va.			29.97	761.2	76	24.4	69	W	1	0.4		8c,cs	0	W		0	0	Fair	
Malone, N. Y.			29.85	758.2	62	16.7	65	S	8	3.6		0	Haze		S	0	0	Hazy	
Marquette, Mich.			29.68	753.9	72	22.2	81	SW	16	7.2		0	0			0	0	Clear	
Memphis, Tenn.			30.02	762.5	78	25.6	82	Calm	0	0		10cs	Sm'e	SW		0	0	Cloudy	
Milwaukee, Wis.			29.87	758.7	67	19.4	94	W	7	3.1			Fog			0	0	Foggy	
Mobile, Ala.			30.08	764.0	81	27.2	87	S	4	1.8		0	0			0	0	Clear	
Montgomery, Ala.			30.10	764.5	79.5	26.4	80	S	2	0.9		0	Haze			0	0	Clear	
Morgantown, W. Va.	28.93	734.8	29.94	760.5	70	21.1	84	E	1	0.4		10c	0	W		Inap.	Inap	Cloudy	
Mt. Washington, N. H.	23.80	604.5	30.16	766.1	42	5.6	83	NW	48	21.5		2cs	Haze	NW		0	0	Fair	
Nashville, Tenn.			29.97	761.2	79	26.1	78	Calm	0	0		5k	0	SW		0	0	Fair	
New Haven, Conn.			29.93	760.2	66.0	18.9	73	N	4	1.8		5c	Fog	W		0	0	Fair	
New London, Conn.			29.94	760.5	66	18.9	73	N	4	1.8		8c	Haze	W		0	0	Fair	
New Orleans, La.			30.05	763.3	83.5	28.6	74	E	4	1.8		2k	0	E		0	0	Fair	
Newport, R. I.			29.93	760.2	67	19.4	93	N	4	1.8		10cs	0	NW		0	0	Cloudy	
New York, N. Y.			29.94	760.5	71	21.7	75	NE	8	3.6			10s,fog			0	0	Cloudy	
Norfolk, Va.			29.99	761.7	75	23.9	81	SW	3	1.3		2cs	8ks			0	0	Cloudy	
North Platte, Neb.	27.05	687.1	29.50	749.3	67	19.4	54	N	16	7.2		2cs	8ks	W	W	0	0	Cloudy	
Omaha, Neb.	28.74	730.0	29.76	755.9	72	22.2	90	Calm	0	0		5ck	0	SW		0	0	Fair	
Oswego, N. Y.			29.93	760.2	68.5	20.3	74	S	3	1.3		5k	Haze	NW		0	0	Cloudy	
Pembina, Dakota			29.87	758.7	49	9.4	92	W	8	3.6		0	0			0	0	Clear	
Philadelphia, Penn.			29.93	760.2	73	22.8	63	N	5	2.2		5ck	Fog			0	0	Foggy	
Pike's Peak, Colorado	18.06	458.7	30.27	768.8	33	0.6	79	W	6	2.7		8c	1k			0.05	1.3	Fair	
Pittsburgh, Penn.			29.92	760.0	65	18.3	80	SE	1	0.4			Fog			0.02	0.5	Foggy	
Port Huron, Mich.			29.86	758.4	69	20.6	95	SW	6	2.7			Fog		S	0.18	4.6	Foggy	
Portland, Me.			29.90	759.4	64	17.8	61	NW	4	1.8		0	0			0	0	Clear	
Portland, Oregon			30.05	763.3	57	13.9	93	Calm	0	0		0	0			0	0	Clear	
Punta Rassa, Fla.			30.09	764.3	78.5	25.8	86	NE	5	2.2		5c	0	NE		0.05	1.3	Fair	
Rochester, N. Y.			29.89	759.2	71	21.7	66	SW	4	1.8		0	Haze			0	0	Hazy	
Salt Lake City, Utah	25.74	653.8	30.07	763.8	58	14.4	57	SE	1	0.4		0	0			0	0	Clear	
Sandy Hook, N. J.			29.92	760.0	68	20.0	100	Calm	0	0			Fog			Inap.	Inap.	Foggy	
San Diego, Cal.			30.04	762.7	64	17.8	83	N	4	1.8		0	5s		N	0	0	Fair	
San Francisco, Cal.			30.02	762.5	58	14.4	81	Calm	0	0		0	0			0	0	Clear	
Santa Fé, N. M.	23.40	594.4	29.94	760.5	54	12.2	55	NE	1	0.4		5c	0			0	0	Fair	
Savannah, Ga.			30.09	764.3	83	28.3	79	SW	4	1.8		Haze	0			0	0	Clear	
Shreveport, La.			30.08	764.0	80	26.7	78	Calm	0	0		Haze	0			0	0	Clear	
Smithville, N. C.			30.06	763.5	78	25.6	77	W	4	1.8		1k	0	W		0	0	Clear	
Springfield, Mass.			29.94	760.5	66	18.9	73	E	4	1.8		5c	Fog			0.01	0.3	Fair	
St. Louis, Mo.			29.93	760.2	72	22.2	90	NW	4	1.8			10s			1.01	25.7	Cloudy	
St. Marks, Fla.			30.10	764.5	78	25.6	86	Calm	0	0		2k	0	SE		0	0	Fair	
St. Paul, Minn.			29.74	755.4	70	21.1	95	SE	2	0.9		8c	Fog	SW		0.04	1.0	Fair	
St. Paul's Island, Alaska			30.07	763.8	42	5.6	91	W	4	1.8			10s		W	0.04	1.0	Cloudy	
Thatcher's Island, Mass.			29.93	760.2	67	19.4	64	Calm	0	0		0	0			0	0	Hazy	
Toledo, Ohio			29.85	758.2	74	23.3	90	SW	3	1.3		2c	Haze	SW		0	0	Hazy	
Tucson, Arizona	27.58	700.5	30.10	766.8	71	21.7		SE				2c	2s	SE	S	0	0	Fair	
Tybee Island, Ga.			30.07	763.8	79	26.1	95	S	4	1.8		1k	0	SW		0	0	Clear	
Vicksburg, Miss.			30.09	764.3	77	25.0	86	Calm	0	0		2c	0			0	0	Clear	
Virginia City, M. T.	24.44	620.8	29.92	760.0	43	6.1	75	SE	8	3.6		1c	Fog	SE	SE	0	0	Clear	
Washington, D. C.			29.97	761.2	74.5	23.6	69	W	1	0.4		5cs	2s			Inap.	Inap.	Fair	
Wilmington, N. C.			30.06	763.5	78	25.6	82	W	6	2.7		1cs	1ks	NW		0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

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Wood's Holl, Mass.			29.95	760.7	69	20.6	70	N	3	1.3		5c	0	W		0	0	Fair.	
Yankton, Dakota	28.64	727.4	29.86	758.4	68	20.0	84	N	20	8.9		2c	0	NW		0	0	Fair.	
Yuma, Arizona			29.96	761.0	73	22.8		SW				0	0			0	0	Clear.	
Sub Series.																			
Kingston, Jamaica, W. I.			30.17	766.3	79	26.1	78	Calm	0	0		5c	2s			0	0		James Gall.
St. Georges, Bermudas			30.16	766.1	79.0	26.1	70	NE	4	1.8		0	8k			0	0	Cloudy.	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa W. I.																			
Paramaribo, D. Guiana S.A.			30.00	762.0	81	27.2	87	E			2	5k	5k	E		1.080	27.43		C. J. Hering.
Batavia, Dutch Guiana. S.A.	30.07	763.7			85.6	29.8		E								0.591	15.00		Dr. H. Groot.
Medellin, Colombia, S. A.																0.13	3.3		Thomas Herran.
York Factory, B. A.			29.49	749.0	52.5	11.4	96	N	6	2.7		4k	7s	N		0.20	5.1		J. Fortescue, W. Wood
Honolulu, Oahu, H. I.			30.03	762.7	76	24.4		NE			2					0	0		Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.
Marine Series	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Schooner Adelie Fuller, At Brunswick, Ga.			30.09	764.3	81	27.2		SW			1	0	0					Clear.	Capt. James Jorgensen.
Steamer Hibernian, N. 37° 15′, W. 74° 00′.	N 67 E	10	29.99	761.7	75	23.9		WSW			2					Smooth		Clear.	Lieut. F. Archer, R. N. R.
Steamer Leipzig, N. 39° 18′, W. 70° 39′.	S 60 W		29.93	760.2	74.8	23.8		SW			2		c			Smooth		*D. clouds.	Capt. R. Hoffmann.

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.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,912 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, 4,362.2 ft., or 1,329.6 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 added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fè, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. and 0.01 in. for reduction to sea-level. *Detached clouds.

UNITED STATES (NAVAL) SERIES.

By authority of the SECRETARY OF THE NAVY.

Furnished by coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

NOTE.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1876.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request, and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^d.,) Chief Signal Officer, U. S. A.