2562

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 1, 1876.

QC
982
.B85
1876
(May-June)

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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National Oceanic & Atmospheric Administration
U.S. Dept. of Commerce
MAR 16 1951

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	68.9	20.5	57	NNW			1		2			0	0	Clear	Charnot.
Algiers			30.08	764.0	68.9	20.0	55	NNW			1		3			0	0	Fair	Peter.
La Calle																			Kunts.
Tunis			30.04	762.8	76.6	24.8	34	NW			3		7			0	0	Cloudy	Jacques.
Sfax			30.08	764.0	74.8	23.8	69	S			2		1			0	0	Clear	Chauvey.
Saida			30.11	764.7	65.3	18.5	29	NNE			2		1			0		Clear	Millot.
Tebessa			30.07	763.6	76.6	24.8		W			3		10			0	0	Hidden	Colin.
Gerlville			30.13	765.2	63.1	17.3	54	N			2		2			0	0	Clear	Buard.
Laghouat			30.08	764.0	69.8	21.0	49	N			3		3			0.039	1.0	Fair	Guyot.
Biskra			30.01	762.3	80.6	27.0	31	NW			5		8			0	0	Cloudy	Laromer.

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

AUSTRIAN SERIES.

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

Agram			29.84	757.9	67.6	19.8	45	SW			4		4			0.213	5.4		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.79	756.7	66.6	19.2	58	W			2		3			0.310	8.1		I. R. Observatory.
Eperies			29.82	757.4	63.9	17.7	81	S			3		9		N	0.304	7.72		Julius Mikolik.
Gratz	28.63	727.1	29.70	756.6	67.3	19.6	42	S			5		4			0	0		Andreas Rospini.
Hermannstadt	28.55	723.8	29.86	758.4	73.0	22.8	34	NW			2		2			0	0		Prof. Reissenberger.
Kremsmünster	28.48	723.3	29.80	756.8	58.3	14.6	54	WNW			2		7			0.087	2.2		Prof. C. Wagner.
Lemberg			29.83	757.7	62.2	16.8	63	S			2		4			0.240	6.1		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			29.90	759.5	63.3	17.4	82	SSE			6		6K8			0	0		I. R. Hydrographic Office
Szegedin			29.87	758.8	74.1	23.4	46	W			1		4			0	0		Karl Stancel.
Trieste			29.90	759.1	69.1	20.6	58	WSW			1		4			0.708	17.9		Prof. V. Farolfi.
Vienna			29.76	755.9	66.2	19.0	44	W			2		2			0.035	0.9		I. R. Central Institute.

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

BELGIAN SERIES.

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

Brussels			29.85	758.1	47.7	8.7	70	N			3		10			0.291	7.40		Royal Observatory.

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L58s

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Millimeters.	Barometer. Reduced to sea-level. Inches.	Millimeters.	Temperature of the Air. Fahrenheit.	Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er. 0–10.	Low'r. 0–10.	Clouds. Direction. Upper. From—	Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Millimeters.	Weather.	Observer.
Aberdeen			30.12	765.0	41.5	5.3		NE	24	10.7			5			0.050	1.27	Squally	William Boswell.
Ardrossan			30.13	765.3	48	8.9		WNW			2		5					*D. clouds	William McNeil.
Armagh Observatory			30.17	766.3	48.8	9.1		NE	13	5.8									S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			30.08	764.0	42.4	5.8		NNE	18	8.0			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			30.16	766.1	46.8	8.2		NNW			1		8					*D. clouds	J. Dreyer.
Bradford			30.04	763.0	43.0	6.1		NE			4		8			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.00	762.0	82	27.8		SE			4		10					Overcast	Sergt. J. F. Halanen, A. H. C.
Cambridge Observatory			30.00	762.0	52.0	11.1		N			3		7					Showery	H. Todd.
Cardington [illegible]			30.02	762.5	49.0	9.4		NE			2		8					Overcast	John McLaren.
Carlisle			30.08	764.0	45	7.2		N			5		8			0	0	*D. clouds	T. Bell, for J. Carmell.
Chatham, School M. E.			30.00	762.0	47.7	8.7		NE			2		10					Overcast	Major C. N. Martin, R.E.
Dartmoor	28.60	726.[illegible]	30.13	765.3	44.0	6.7		N			4		7					*D. clouds	R. F. Power.
Donaghadee			30.13	765.3	49	9.4		NNE			3		3					*D. clouds	J. Mac Gowan.
Dover			29.92	760.0	49	9.4		ENE			4		5					½ clouded	J. Costello.
Eccles, (near Manchester)			30.05	763.3	42.7	5.9		N	2.2	1.0			10					Showery	Thomas Mackereth.
Falmouth Observatory			30.08	764.0	50.4	10.2		N	21	9.4			2					*D. clouds	The Staff.
Fort Napier, (Natal)	27.50	698.5	29.73	755.1	84.4	29.1		N			3		1					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	84	28.9		N			1		9					Overcast	
Galway, Queen's College			30.18	766.6	55	12.8		N			1		2					*D. clouds	B. G. Cl[illegible]re, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.10	764.5	69.8	21.0		SW			6		0					Blue sky	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			30.11	764.8	45.4	7.5		NE			1		7					Fine	Lewis Stuart.
Great Yarmouth			29.96	761.0	47	8.3		N			5		5					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			29.98	761.5	48.9	9.4		ENE			1		7			Blank	Blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.02	762.5	48	8.9		WNW			8		5					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			30.10	764.5	41.0	5.0		NNE			2		10					Drizzling	L. J. Crossley.
Helston			30.01	763.0	55	12.8		N			3		10			0	0	Fine	M. P. Moyle.
Holyhead			30.11	764.8	47	8.3		NNE			3		4					*D. clouds	John Tilston.
Kew Observatory			29.99	761.7	47.2	8.4		N	11	6.3			9					Threatening	The Staff.
Kingstown			30.13	765.3	46	7.8		NE			3		9					Overcast	George Mitchell.
Leicester Museum			30.06	763.5	45.0	7.2		NE			2		8					Showery	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.00	762.0	69.8	21.0		SE			2		0					Fine	Sergt. F. Travis, A. H. C.
Nairn			30.16	766.1	46	7.8		NE			2		2					¼ clouded	W. D. Penny.
Nassau, (Bahamas)			30.08	764.0	80.1	26.7		NE			4		6					*D. clouds	Surg. Maj. Henry.
Nottingham			30.05	763.3	44.7	7.1		N			4		8k, ks, d		NNE	0.008	0.2	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.03	762.7	45.4	7.4		NNE			2		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			30.00	762.0	46	7.8		N			2		10			Blank	Blank	Overcast	J. Lucas.
Plymouth			30.04	763.0	51.4	10.8		N			3		7					*D. clouds	John Merrifield.
Roche's Point			30.13	765.3	52	11.1		NNW			2		5					Fine	W. Kennedy.
Saint Ann's Head			30.09	764.3	49	9.4		NNW			2		6					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.98	761.5	50.0	10.0		NE			5		10					Overcast	A. P. Amy.
Sandwick Manse (Orkneys)			30.16	766.1	42.7	5.9		N	20	8.9			1					Blue sky	Rev. C. Clouston, LL. D.
Scarborough			30.01	763.0	43.1	6.2		N			5		3					Blue sky	F. Shaw.
Scutari Cemetery, Turkey			29.98	761.5	70.6	21.4		SW			1		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			30.05	763.3	44.2	6.8		NE			1		10			Inap.	Inap.	Gloomy	W. F. Cooper.
Silloth Rectory			30.10	764.5	49.3	9.6	52	E			1		4			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			30.05	763.3	45.5	7.5		E			1		6			Blank	Blank		Rev. S. J. Perry.
Stornoway, Lews C. Hebr.			30.20	767.1	45	7.2		NE			3		10					Hailing	John Smith
Stratfield Turgiss			29.98	761.5	52.0	11.1		NE			1		5					Showery	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Th[illegible]			30.15	765.8	46	7.8		NNE			3		6					*D. clouds	John Trotter.
Truro, Royal Institution			30.08	764.0	53	11.7		N			6		5					*D. clouds	W. Newcombe.
Valencia Observatory			30.16	766.1	51.9	11.1		NNE	17	7.6			4					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					48	8.9		NE			3		0			0	0		
Cape Good Hope Obs.			30.14	765.5	58.2	14.6	88	ESE	5	2.2			10						The Staff, for E. J. Stone.
Leith, Restalrig Park			30.15	765.8	42.5	5.8		NE			2		7k			0.02	0.5	Cloudy	Andrew Gibb.
Mauritius			30.04	763.0				E	20.1	9.0						0.3[illegible]	7.6		C. Meldrum.
Melbourne			30.19	766.8	53.3	11.8	71	WNW	6	2.7			10			0	0	Dull	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.19	766.8	46	7.8		NE			4	0	0			0	0		J. Youngclause.
North Unst, (Shetland Is.)			30.07	763.8	46	7.8		N			4	5	3	N					

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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 Inches	Millimeters	Reduced Inches	Millimeters	Fahrenheit	Centigrade	Per cent	Wind From—	Miles per hour	Meters per second	Force	Clouds Up'er	Low'r	Upper From—	Lower From—	Rain Inches	Millimeters	Weather
Copenhagen			29.73	755.2	53.1	11.7	78	S			2		10					
Fanöe			29.71	754.7	45.0	7.2	77	NNW			4		10					
Godthaab, (Greenland)																		
Stykkisholm, (Iceland)			29.99	761.7	28.6	−1.9	94	E			6		8					
Thorshavn, (Faröe)			30.22	767.6	42.1	5.6	52	WSW			2		4					
Vestervig			29.76	755.8	38.1	3.4	92	NNE			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.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Temperature of the Air. Fahrenheit.	Centigrade.	Relative Humidity. Per cent.	Winds. 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.
A[illegible]			29.91	759.6	51.8	11	89	NE			4		10			0	0	Covered	
Amiens			29.84	757.9	47.1	8.4	89	S			3		10			0.504	12.8	Covered	Normal School.
Avignon			29.87	758.6	62.6	17	88	Calm			0		8			0.71	18.	Very cloudy	Normal School.
Bar-sur-Seine			29.78	756.5	58.3	14.6	57	SW			2		8		W	0.173	4.4	Very cloudy	Normal School.
Beaumette, near Angers			29.89	759.3	49.5	9.7	81	N	11.6	5.2			10		N	0.205	5.2	Covered	C. Saillard.
Beauvais			29.89	759.3	46.2	7.9	68	NE			4		10			0.008	0.20	Covered	Beaumette Observatory.
Besançon			29.83	757.6	60.1	15.6	51	WSW			2		2		SW	0.146	3.7	Slightly cl'dy	Normal School.
Bourg en Bresse			29.91	759.7	56.7	13.7	66	S			2		..n			0	0	Raining	Normal School.
Bourges			29.[illegible]	758.4	55.8	13.2	86	SW			2		10		W	0.134	3.4	Covered	Normal School.
Brest			29.98	761.6	48.4	9.1	55	NNE			4		5n		N	0.039	1.00		Normal School.
Caen			30.71?	780.1?	50.9	10.5	83	N			6		5		S	0.425	10.8	Partly cloudy	Naval Observatory.
Carcassonne			29.94	760.4	59.5	15.3	67	W			1		10		E	0.16	4.	Covered	Normal School.
Chartres			29.83	757.6	46.0	7.8		WSW			2		9			0	0	Cloudy	Normal School.
Chaumont																			Normal School.
Clermont			29.82	757.4	55.4	13.0	50	S			2		4			0.075	1.9		Puy de Dome Obs.
Commercy			29.70	756.6	54.1	12.3	67	NW			2		5k.		SW	0.697	17.7	Gen'ally cl'dy	Normal School.
Commune de Gréasque*			29.87	758.6	55.6	13.1	70	NW			2		2		SW	0	0		M. Kina.
Grenoble			29.88	758.9	49.6	9.8	85	ENE			1		10		SW	0.138	3.50	Raining	Normal School.
Le Mans			29.89	759.3	49.1	9.5	73	NE			4		8		NE	0.094	2.4	Very cloudy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			29.86	758.5	58.8	14.9	50	W			2		10		W	0	0	Covered	Normal School.
Mâcon			29.94	760.4	56.8	13.8	82	Calm			0		5		E	0.205	5.2	Cloudy	Normal School.
Mirecourt			29.78	756.3	52.7	11.5	63	SW			4		5		NE	0	0	Cloudy	Normal School.
Metz																			M. Schuster.
Nismes			29.86	758.4	56.5	13.6	67	NW			4		5		N	0.610	15.5	Cloudy	Normal School.
Orleans			29.80	756.8	52.2	11.2	86	NNW			3		8		NNW	0.24	6.	Very cloudy	Normal School.
Paris Observatory			29.85	758.2	44.2	6.8	85	NE			3		10n			0.190	4.83	Raining	National Observatory
Parthenay			29.81	757.2	52.9	11.6	93	W			2		5		W	0.063	1.6		Normal School.
Privas			29.89	759.3	51.1	10.6		E			2		10			0.480	12.2	Covered	Normal School.
La Roche-sur-Yon			29.64?	752.8?	50.9	10.5	84	WNW			4		2		SE	0.094	2.4	Slightly cl'dy	Normal School.
Rochefort, Observatory			29.93	760.3	58.1	14.5	75	WNW			4		8			0.118	3.0	¾ covered	Naval Observatory.
Rouen			29.91	759.6	47.3	8.5	78	NNW			3		8			0.638	16.2	Very cloudy	Normal School.
Saint Lo			29.70	754.3	44.6	7	80	NE			1		9		NE	0.47	12.		Normal School.
Tarbes	28.92	731.5	29.98	761.5	62.6	17		W			2		8			0	0	Very cloudy	Normal School.
Toulouse																			Normal School.
Villefranche			29.87	758.0	56.8	13.8	59	SE			1		10			0.165	4.20	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.6	77.5	25.3													L'Abbé Marchési.
Gorée																			
Marseilles			29.84	757.9	57.6	14.2	76	W			2		5			0	0	Cloudy	Marseilles Observatory.
Mont-Louis	24.71	627.3	30.01	762.3	42.8	6.0	58	WSW	7.4	3.33			8		W	0.094	2.4		—. Falguère.
Montsouris, Paris																			Montsouris Observ'tory.
Perpignan			29.91	759.7	61.3	16.3	56	N	24.3	10.83			6		W	0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			29.84	757.9	46.2	7.9	80	N			2		10			0.327	8.3	Covered	E. Renou.
Toulouse			29.96	760.9	52.2	11.2	81	WSW			3		9			0.504	12.8		Toulouse Observatory.
Tours			29.86	758.4	53.1	11.7	75	NNW			2		10		N	0.063	1.6		C. Marquet.
Versailles, (near Paris)			29.86	758.4	46.0	7.8	89	N			3		10			0.183	4.66	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.06	763.4	58.5	14.7	93	ESE	6.5	2.9			0			0 / 0	0 / 0		H. Le Lec, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Grèasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 ft.; Clermont 388 m., or 1,272.9 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft.; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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.	Corr. Inches	Corr. mm	Red. Inches	Red. mm	Fahr.	Cent.	Per cent.	Dir. From—	Miles per hour	Meters per second	Force	Up'er	Low'r	Upper From—	Lower From—	Rain Inches	Rain mm	Weather	Observer
Bamberg			29.71	754.7	58.6	14.8	57	SW			5		4	SW		0.098	2.5		Prof. T. Hoh.
Berlin			29.71	754.5	61.7	16.5	56	S			2		8			0	0		Prof. Arndt.
Breslau			29.84	757.7	55.8	13.2	68	S			7		10			0.161	4.1	Thunder-storm	Dr. P. Neugebauer
Carlsruhe			29.78	756.3	60.3	15.7	45	SW			5		9	NE		0	0		A. Senz.
Cassel			29.34	745.3	50.5	10.3	76	SSW			4		9	S		0	0		Dr. H. Mohl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main			29.84	757.9	52.7	11.5	66	WNW			1		0			0.150	3.8		Physical Society.
Friedrichshafen	28.41	721.7	29.83	757.7	57.9	14.4	48	W			2					1.087	27.6		M. Wilhelm.
Hamburg			29.72	755.0	46.4	8.0	86	NNE			3		10			0.020	0.5	Rainy	Captain F. Hegemann.
Kiel			29.74	755.4	45.1	7.3	78	NNE			2		10			0.224	5.7		Prof. G. Karsten.
Königsberg			29.85	758.3	59.5	15.3	60	SE			2		2			0	0		Prof. E. Luther.
Köslin			29.73	755.2	61.7	16.5		S			1		5			0	0		H. Müller.
Leipsic			29.57	751.1	61.3	16.3	59	S			3		9	SSW		0.161	4.1	Light rain	Prof. Bruhns.
Memel			29.90	759.4	54.3	12.4	61	S			4		2			0.004	0.1		Reinbrecht & Skalweit.
Münster			29.78	756.4	44.2	6.8	91	NE			3		10			0.173	4.4		Prof. E. Heis.
Neufahrwasser			29.74	755.5	63.5	17.5	59	SSW			4		10			0.311	7.9		A. Lothes.
Posen			29.80	756.8	68.2	20.1	44	SW			1		10			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.79	756.7	63.3	17.4	41	WSW			3		4	WSW		0.008	0.2		Dr. Schur.
Stuttgart			29.76	755.9	62.1	16.7	34	W			3		2			0	0		Prof. Schoder.
Thorn			29.79	756.7	65.8	18.8	52	S			4		4			0.024	0.6		Dr. Hasenbalg.
Treves, (Trier)			29.77	756.2	53.8	12.1	65	WNW			3		10			0.134	3.4		Prof. Flesch.
Wustrow, Naval School			29.63	752.5	47.1	8.4	90	N			1		10			0.520	13.2		E. F. Schütt.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Stations.																			
Udine			29.87	758.7	63.0	17.2	65	S	4.2	1.9			10			0.213	5.4	Showery	
Padua			29.84	757.8	62.6	17.0	61	SE	8.7	3.9			10	SE		0.012	0.3		
Vicenza			29.84	758.0	63.5	17.5	66	S	4.9	2.2			9	S		0.059	1.5	Showery	
Verona			29.86	758.4	63.5	17.5	70	E			2		10			0.559	14.2	Showery	
Bergamo	28.48	723.3	29.80	756.8	56.8	13.8	59	NNW			4		9			0.496	12.6		
Domodossola	28.84	732.5	29.78	756.5	54.5	12.5	88	E			1		10			0.094	2.4		
Milan			29.63	752.7	63.1	17.3	72	ESE			1		9	SSW		0.622	15.8		
Pavia			29.83	757.6	60.8	16.0	72	NE			4		8	W		0.630	16.0	Showers, hail	
Moncalieri			29.82	757.5	60.3	15.7	60	SE	5.6	2.5			8	W		0.024	0.6		
Mondovi	27.91	709.0	29.83	757.7	57.0	13.9	54	NW			4		7	SW		0.370	9.4	Hail-showers	
Porto Maurizio			29.89	759.3	62.4	16.9	75	SW			2		2	E		0	0		
Genoa			29.88	759.0	61.3	16.3	75	SE	8.1	3.6			10	S		0	0		
Piacenza			29.81	757.2	64.8	18.2	62	ENE			4		9			0	0		
Parma			29.85	758.1	64.6	18.1	61	SW			6		9			0	0		
Bologna			29.89	759.3	70.9	21.6	41	S			6		5	N		0	0		
Florence			29.92	759.9	68.5	20.3	40	SW			4		8	SW		0.059	1.5		
Leghorn			29.89	759.2	65.1	18.4	65	SSW	16.8	7.5			4			0	0		
Siena	28.69	728.8	29.89	759.2	67.3	19.6	51	SSW	1.8	0.8			9	SW		0.024	0.6		
Urbino	28.38	720.8	29.93	760.3	62.6	17.0	57	SW			2		10			0	0		
Pesaro																			
Ancona			29.93	760.2	64.0	17.8	75	SE			4		5			0	0		
Grosseto			29.93	760.1	67.6	19.8	65	SSE			4		9	S		0	0		
Rome			29.99	761.7	66.2	19.0	65	S	15.4	6.9			10	SW		0	0		
Naples, O. U			30.07	763.7	76.5	24.9	38	SW			2		10	SW		0	0		
Lecce			30.07	763.7	70.9	21.6	60	SSW	12.5	5.6			1			0	0		
Cosenza			30.01	762.3	77.9	25.5	72	NE	1.3	0.6			2			0	0		
Riposto, (Sicily)			30.07	763.7	64.2	17.9	83	E			2		5			0	0		
Palermo			29.90	759.5	77.1	25.1	39	NNE	1.8	0.8			5			0	0		
Caltanissetta	28.08	713.3	29.99	761.8	66.2	19.0	95	S			1		1	N		0	0		
Sub-Series.																			
Naples, S. R			30.01	762.3	74.8	23.8	37	SW	1.8	0.8						0	0	Foggy	Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters., or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Stations.																			
Tokio																			

NETHERLANDS' SERIES.

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

Stations.																			
Flushing			29.92	759.9	48.9	9.4		NE			4								
Groningen			29.76	756.0	45.7	7.6		NNW			4								
Helder			29.87	758.7	45.3	7.4		NNW			4								
Utrecht			29.82	757.5	45.5	7.5	83	N			4		10					Dull	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

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

Stations.																			
Bergen			29.84	757.9	43.9	6.6	68	W	8.9	4.0			10			0	0		
Brönö			29.91	759.8	39.6	4.2	65	W	18	8			7			0	0		
Christiania			29.86	758.5	49.6	9.8	18	NE	7.2	3.2			7			0	0		
Tromsö			29.78	756.4	37.8	3.2	63	S	2	1			10			0	0		

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

PORTUGUESE SERIES.

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

Stations.	Barometer corrected for instrumental errors.		Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Winds. Direction.	Winds. Velocity.		Winds. Force.	Clouds. Amount.		Clouds. Direction.		Rain-fall or melted snow in the past 24 hours.		Weather.	Observer.
	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.		
Angra, (Azores,)	.....	.....	30.16	766.0	62.8	17.1	90	W	9.4	4.20	.....	.....	9	.....	.....	0.283	7.2	Raining.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.13	765.3	66.6	19.2	86	NW	5.8	2.58	.....	.....	4	NW	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)	.....	.....	30.24	768.1	66.0	18.9	55	SSE	2.2	0.97	.....	.....	8	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.21	767.4	61.9	16.6	48	NW	9.8	4.4	.....	.....	5	NW	.....	0	0	.....	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

RUSSIAN SERIES.

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

Warsaw	.....	.....	29.84	757.8	61.7	16.5	52	SE	9	4	.....	.....	3	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.92	760.0	52.7	11.5	54	NNW	4	2	.....	.....	2	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.91	759.8	45.1	7.3	49	NW	7	3	.....	.....	0	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.85	758.1	36.9	2.7	81	NW	20	9	.....	.....	9	.....	.....	.....	.....	.....	Central Physical Obs
Kuopio	.....	.....	29.69	754.0	37.9	3.3	92	W	18	6	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.88	759.0	61.5	16.4	45	NW	11	5	.....	.....	5	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.99	761.8	76.3	24.6	47	SSW	18	8	.....	.....	3	.....	.....	.....	.....	.....	Kurdukof.
Kertch	.....	.....	30.04	763 0	68.5	20.3	71	S	9	4	.....	.....	1	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.62	752.4	54.0	12.2	93	SSE	4	2	.....	.....	8	.....	.....	.....	.....	Raining.....	Meteorological Obs.
Lugan	.....	.....	29.82	757.3	81.5	27.5	26	WSW	40	18	.....	.....	4	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.78	756.4	44.8	4.9	64	ESE	22	10	.....	.....	9	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.55	725.1	29.87	758.8	82.4	28.0	21	S	9	4	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.03	762.8	78.4	25.8	32	SSE	7	3	.....	.....	0	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.87	758.7	61.2	16.2	56	W	4	2	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.10	739.0	30.14	765.5	31.6	— 0.8	96	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.00	762.1	80.2	26.8	13	NE	13	6	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.41	721.7	30.07	763.6	71.6	22.0	50	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.55	775.9	23.9	— 4.5	47	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	30.16	766.0	24.3	— 4.3	46	NW	9	4	.....	.....	2	.....	.....	.....	.....	.....	Marks.
Irkutsk	28.49	723.6	29.91	759.8	31.5	— 0.3	70	NW	11	5	.....	.....	10	.....	.....	.....	.....	.....	Usolzef.
Orga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.83	757.6	74.5	23.6	39	SSW	11	5	.....	.....	1	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	35.4	1.9	91	N	4	2	.....	.....	5	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 404 meters, or 1,311.8 feet; Ekaterinburg, 261.2 m., or 1,905.2 ft.; Tashkend, in 454.2 ft., or 1,621.3 ? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0 ? m., or 1,942.2 ? ft.; Orga, 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	.....	.....	30.07	763.8	67.5	19.7	37	NW	8.2	3.67	.....	0	5	.....	.....	0.067	1.7	Cloudy.....	Royal Observatory.
San Fernando	.....	.....	30.17	766.2	62.4	16.9	56	WNW	11.2	5.0	.....	1	2	E	N	0	0	.....	The Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight; 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	.....	.....	29.77	756.2	40.3	4.6	65	N	.....	.....	2	.....	7	.....	.....	0	0	.....	
Umea	.....	.....	29.76	756.0	43.2	6.2	53	N	.....	.....	2	.....	8	.....	.....	0	0	.....	
Hernosand	.....	.....	29.85	758.3	40.5	4.7	49	SSW	.....	.....	4	.....	7	.....	.....	0.016	0.4	Snowy.....	
Stockholm	.....	.....	29.85	758.3	44.1	6.7	56	SSE	.....	.....	2	.....	8	.....	.....	0.012	0.3	.....	
Wisby	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.370	9.4	.....	
Sub-Series.																			
Upsala	.....	.....	29.89	759.1	45.0	7.2	47	NE	5.8	2.6	.....	.....	10	.....	.....	0	0	.....	Dr. Hildebrandsson.

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

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er. 0–10.	Clouds. Amount. Low'r. 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28.41	721.5	29.83	757.7	55.6	13.1	54	WSW	....	....	4	....	10	....	....	0.440	11.4	Covered	The Observatory.
Zurich	28.19	716.0	29.81	757.1	59.7	15.4	60	SE	....	....	1	....	3	....	....	0	0	Clear	The Observatory.

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer. —2.9 mm.; Thermometer, —1.3 cent.; Relative Humidity, —4 per cent.

NOTE.—The originals give the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Bar. corr. Inches.	Bar. corr. Millimeters.	Bar. sea-level Inches.	Bar. sea-level Millimeters.	Fahrenheit.	Centigrade.	Rel. Hum. Per cent.	Wind From—	Miles per hour.	Meters per second.	Force.	Clouds Up'er.	Clouds Low'r.	Clouds Upper From—	Clouds Lower From—	Rain Inches.	Rain Mill meters.	Weather.	Observer.
Constantinople	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	
Fao, (Persian Gulf)	....	....	29.93	760.3	81.7	27.6	....	SE	....	....	3	....	10	....	....	....	....	....	
Salonica	....	....	30.05	763.2	76.6	24.8	....	SE	....	....	1	....	0	....	....	....	....	....	
Valona	....	....	30.01	762.2	75.6	24.2	....	SW	....	....	2	....	0	....	....	....	....	....	
Varna	....	....	29.96	760.9	68.0	20.0	....	NE	....	....	3	....	5	....	....	....	....	....	
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y.	....	....	29.93	760.2	72.0	22.2	68	NW	....	....	2	....	3c,k	....	N	0	0	Fair	Prof. C.V. A. Van Dyck.

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Bar. corr. Inches.	Bar. corr. Millimeters.	Bar. sea-level Inches.	Bar. sea-level Millimeters.	Fahrenheit.	Centigrade.	Rel. Hum. Per cent.	Wind From—	Miles per hour.	Meters per second.	Force.	Clouds Up'er.	Clouds Low'r.	Clouds Upper From—	Clouds Lower From—	Rain Inches.	Rain Mill meters.	Weather.	Observer.
Bathurst, N. B.	....	....	29.50	749.3	33.3	0.7	98	NE	20	8.9	....	....	....	....	....	....	....	....	Hon. J. Ferguson.
Brockville, Ontario	....	....	29.96	761.0	34	1.1	....	NW	13	5.8	....	0	5s	....	NW	0	0	Fair	W. R. Bigg.
*Chatham, N. B.	....	....	29.46	748.3	34	1.1	96	NE	8	3.6	....	....	10s	....	NE	1.07	27.2	Heavy snow	G. A. Blair.
Charlottetown, P. E. Island.	....	....	29.50	749.3	34	1.1	98	SE	26	11.6	....	....	10n	....	....	0.45	11.4	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	....	....	29.76	755.9	32.8	0.4	72	NW	....	....	5	....	10s	....	....	0.026	0.66	Stormy	James Smith, M. A.
Dalhousie, N. B.	....	....	29.52	749.8	32.7	0.4	100	E	....	....	3	....	10	....	....	0.40	10.2	....	J. A. Johnson.
Esquimault, B. C.	....	....	30.18	766.6	47.3	8.5	100	Calm	0	0	....	4cs	....	....	....	0	0	Cloudy	W. H. Bevis.
Fredericton, N. B.	....	....	29.34	745.2	39.4	4.1	88	SE	9	4.0	....	....	10n	....	....	0.560	14.22	Raining	Prof. Harrison.
*Fort Garry, Manitoba	....	....	30.29	769.4	32	0.0	97	E	2	0.9	....	5k	5n	E	....	0.12	3.0	Cloudy	James Stewart.
Goderich, Ontario	....	....	30.14	765.5	34.0	1.1	82	N	....	....	2	1k	....	W	....	0	0	Fair	[illegible] J. Strang, M. A.
Granton, Ontario	....	....	30.14	765.5	34.0	1.1	....	NW	....	....	2	....	....	....	....	0	0	Clear	James Grant.
*Halifax, N. S.	....	....	29.32	744.7	37	2.8	100	SE	29	13.0	....	....	10n	....	....	1.87	47.5	Heavy rain	F. Allison, M. A.
*Kingston, Ontario	....	....	29.96	761.0	33	0.6	79	NW	20	8.9	....	5k	0	SW	....	0.25	6.3	Fair	S. Woods, M. A.
Little Current, Ontario	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	G. B. Abrey, C. E.
*Montreal, Quebec	....	....	29.63	752.6	32	0.0	90	W	24	10.7	....	....	10n	....	....	0.01	0.3	Light snow	C. H. McLeod, C. E.
*Ottawa, Ontario	....	....	29.88	758.9	33	0.6	75	NW	20	8.9	....	5ck	2s	NW	NW	Inap.	Inap.	Fair	J. B. Laney.
*Parry Sound, Ontario	....	....	30.11	764.8	32	0.0	59	NW	9	4.0	....	2cs	0	NW	....	0	0	Fair	Rev. R. Mooley.
*Port Dover, Ontario	....	....	30.14	765.5	33	0.6	70	NW	12	5.4	....	0	0	....	....	0	0	Clear	H. Morgan.
Port Hastings, N. S.	....	....	29.63	752.6	34.0	1.1	....	SE	18	8.0	....	....	....	....	....	0.80	20.3	Rainy	Peter Grant.
*Port Stanley, Ontario	....	....	30.16	766.1	35	1.7	75	NW	15	6.7	....	0	0	....	....	Inap.	Inap.	Clear	M. Payne.
*Quebec, Quebec	....	....	29.44	747.8	33	0.6	100	Calm	0	0	....	....	10n	....	....	0.40	[illegible]	Cloudy	Capt. Ash, R. N.
St. John, N. B.	....	....	29.34	745.2	38	3.3	90	E	8	3.6	....	....	[illegible]n	....	....	0.420	[illegible]	Showery	G. Murdoch, C. E.
*Saugeen, Ontario	....	....	30.12	765.0	33	0.6	70	N	5	2.2	....	0	0	....	....	0	0	Clear	K. Stewart.
Stayner, Ontario	....	....	30.11	764.8	32	0.0	75	N	13	5.8	....	0	0	....	....	Inap.	Inap.	Clear	R. J. Cole.
Stratford, Ontario	....	....	30.15	765.8	31.9	—0.1	76	NW	13	5.8	....	....	....	....	....	0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.	....	....	29.77	756.1	32	0.0	93	E	10	4.5	....	....	1[illegible]	....	....	0	0	Threatening	T. C. Hill.
*Toronto, Ontario	....	....	30.10	764.5	34	1.1	75	NW	18	8.0	....	0	0	....	....	Inap.	Inap.	Clear	Magnetic Observatory.
Woodstock, Ontario	....	....	30.17	766.3	35.3	1.8	93	NW	....	....	2	0	0	....	....	0	0	Fine	J. Montgomery.

NOTE.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 m.

UNITED STATES SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Force. 0—10	Clouds. Amount. Up'er. 0—10	Clouds. Amount. Low'r. 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	759.9	36	2.2	70	W	25	11.2	.....	2k	0	W	.....	0	0	Fair.....	.....
Alpena, Mich.	.....	.....	30.18	766.6	36	2.2	70	N	11	4.9	.....	0	0	.....	.....	0	0	Clear.....	.....
Atlantic City, N. J.	.....	.....	29.95	760.7	40	4.4	47	NW	20	8.9	.....	0	0	.....	.....	0	0	Clear.....	.....
Augusta, Ga.	.....	.....	29.96	761.0	70	21.1	66	E	8	3.6	.....	.....	10s	.....	SW	0	0	Cloudy.....	.....
Baltimore, Md.	.....	.....	30.07	763.8	40	4.4	40	NW	13	5.8	.....	0	0	.....	.....	0	0	Clear.....	.....
Barnegat, N. J.	.....	.....	29.92	760.0	42	5.6	42	NW	30	13.4	.....	0	0	.....	.....	0	0	Clear.....	.....
Benton, Montana	27.60	701.0	30.40	772.1	40	4.4	66	NW	2	0.9	.....	2c	0	.....	.....	0	0	Fair.....	.....
Bismarck, Dakota	28.44	722.4	30.18	766.6	28.5	— 1.9	53	NE	10	4.5	.....	0	10ks	.....	NE	0	0	Cloudy.....	.....
Boston, Mass.	.....	.....	29.57	751.1	41	5.0	41	W	27	12.1	.....	2cs	2s	NW	NW	0.06	1.5	Fair.....	.....
Breckenridge, Minn.	.....	.....	30.20	767.1	36	2.2	90	NE	9	4.0	.....	.....	10n	.....	.....	0.03	0.8	Light rain...	.....
Buffalo, N. Y.	.....	.....	30.03	763.5	34	1.1	61	NW	12	5.4	.....	5k	0	NW	.....	0	0	Fair.....	.....
Burlington, Vt.	.....	.....	29.96	753.4	33	0.6	60	NW	10	4.5	.....	.....	10s	.....	W	0.04	1.0	Cloudy.....	.....
Cairo, Ill.	.....	.....	29.83	760.2	49	9.4	57	E	16	7.2	.....	.....	10s	.....	.....	0.34	8.6	Cloudy.....	.....
Cape Hatteras, N. C.	.....	.....	30.04	763.0	46	7.8	61	NE	20	8.9	.....	.....	10s	.....	NE	Inap.	Inap.	Cloudy.....	.....
Cape Henry, Va.	.....	.....	30.11	764.8	44	6.7	68	NW	17	7.6	.....	8c	0	W	.....	0	0	Fair.....	.....
Cape Lookout, N. C.	.....	.....	30.10	764.5	44	6.7	83	N	24	10.7	.....	.....	10n	.....	N	0.06	1.5	Light rain...	.....
Cape May, N. J.	.....	.....	30.00	762.0	40	4.4	56	NW	24	10.7	.....	0	0	.....	.....	0	0	Clear.....	.....
Charleston, S. C.	.....	.....	30.00	762.0	64	17.8	78	E	20	8.9	.....	0	8s	.....	E	0	0	Fair.....	.....
Cheyenne, Wyoming	24.14	613.1	30.08	764.0	37	2.8	90	E	20	8.9	.....	5ck	2s	N	N	0.06	1.5	Fair.....	.....
Chicago, Ill.	.....	.....	30.23	767.1	42	5.6	65	E	6	2.7	.....	0	0	.....	.....	0	0	Clear.....	.....
Cincinnati, Ohio	.....	.....	30.14	765.5	39	3.9	47	SE	8	3.6	.....	Haze	0	W	.....	0	0	Clear.....	.....
Cleveland, Ohio	.....	.....	30.19	766.8	37.8	3.2	56	N	12	5.4	.....	0	0	.....	.....	0	0	Clear.....	.....
Colorado Springs, Col.	24.17	613.9	30.04	763.0	42	5.6	49	NW	7	3.1	.....	2k	0	SW	.....	0	0	Fair.....	.....
Corsicana, Tex.	.....	.....	29.86	758.4	70	21.1	89	S	12	5.4	.....	8ck	0	W	.....	0	0	Cloudy.....	.....
Davenport, Iowa	.....	.....	30.18	766.6	37	2.8	62	E	12	5.4	.....	5ck	0	N	.....	0	0	Cloudy, frost	.....
Denison, Tex.	.....	.....	29.96	760.4	74	23.3	81	S	8	3.6	.....	.....	10s	.....	S	0	0	Cloudy.....	.....
Denver, Col.	24.02	610.0	30.14	765.5	44	6.7	59	NE	1	0.4	.....	2k	0	W	.....	Inap.	Inap.	Clear.....	.....
Detroit, Mich.	.....	.....	30.18	766.6	35	1.7	61	N	5	2.2	.....	0	0	.....	.....	0	0	Clear.....	.....
Dodge City, Kan.	27.35	694.7	29.91	752.1	51	10.6	93	N	23	10.3	.....	.....	10s	.....	.....	0.30	7.6	Cloudy.....	.....
Dubuque, Iowa	.....	.....	30.22	767.6	38	3.3	55	E	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy.....	.....
Duluth, Minn.	.....	.....	30.30	769.6	30	— 1.1	59	NE	4	1.8	.....	2ck	5s	W	W	0	0	Fair.....	.....
Eastport, Me.	.....	.....	29.30	744.2	38	3.3	90	NW	8	3.6	.....	.....	Fog	.....	.....	0.86	21.8	Foggy.....	.....
Erie, Pa.	.....	.....	30.12	765.0	36	2.2	70	NW	14	6.3	.....	2k	0	.....	.....	Inap.	Inap.	Clear.....	.....
Escanaba, Mich.	.....	.....	30.28	769.	29	— 1.7	67	N	6	2.7	.....	2c	0	N	.....	0	0	Clear.....	.....
Fort Gibson, Indian Terr.	.....	.....	29.76	755.9	62	16.7	86	N	15	6.7	.....	.....	10n	.....	NE	0.03	0.8	Light rain...	.....
Ft. St. Michael, Alaska	.....	.....	29.62	752.3	19	— 7.2	.....	N	10	4.5	.....	.....	5s	.....	.....	.....	.....	Cloudy.....	.....
Fort Sill, Indian T.	28.10	723.6	29.56	751.8	60	15.6	81	NW	.....	.....	2	.....	10s	.....	.....	0	0	Cloudy.....	.....
Fort Sully, Dakota	28.46	722.9	30.19	766.8	34	1.1	89	Calm	0	0	.....	2c	0	.....	.....	0	0	Fair.....	.....
Galveston, Tex.	.....	.....	29.84	757.9	76	24.4	81	SW	9	4.0	.....	0	5s	.....	SW	0	0	Fair.....	.....
Grand Haven, Mich.	.....	.....	30.21	767.3	38	3.3	54	E	7	3.1	.....	2c	0	NW	.....	0	0	Clear.....	.....
Indianapolis, Ind.	.....	.....	30.18	766.6	40	4.4	48	E	10	4.5	.....	5c	0	SW	.....	0	0	Fair.....	.....
Indianola, Tex.	.....	.....	29.82	757.4	74	23.3	90	S	32	14.3	.....	0	8ks	.....	S	0	0	Cloudy.....	.....
Jacksonville, Fla.	.....	.....	30.00	762.	74	23.3	67	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear.....	.....
Keokuk, Iowa	.....	.....	30.09	764.5	37	2.8	54	E	15	6.7	.....	8k	0	E	.....	0	0	Fair.....	.....
Key West, Fla.	.....	.....	30.01	763.0	78.1	25.6	73	E	5	2.2	.....	0	2s	.....	.....	0	0	Clear.....	.....
Kittyhawk, N. C.	.....	.....	30.13	765.3	43	6.1	60	NE	21	10.7	.....	2k	5s	NW	NW	0.03	0.8	Fair.....	.....
Knoxville, Tenn.	.....	.....	29.96	761.0	60	9.4	59	NE	16	7.2	.....	.....	10ks	.....	NE	0.32	8.1	Cloudy.....	.....
La Crosse, Wis.	.....	.....	30.24	767.8	30	3.9	47	SE	5	2.2	.....	10cs	0	.....	.....	0	0	Cloudy.....	.....
Leavenworth, Kan.	.....	.....	29.98	761.5	39	3.9	91	E	14	6.3	.....	.....	10n	.....	.....	0.40	10.2	Light rain...	.....
Lexington, Ky.	28.99	736.3	30.14	765.5	34	1.1	51	NE	16	7.2	.....	.....	10s	.....	.....	0	0	Cloudy.....	.....
Long Branch, N. J.	.....	.....	29.89	759.2	42	5.6	58	NW	32	14.3	.....	0	0	.....	.....	0.03	0.8	Clear.....	.....
Louisville, Ky.	.....	.....	30.11	764.8	38	3.3	45	NE	18	8.0	.....	5c	0	.....	.....	0	0	Fair.....	.....
Lynchburg, Va.	.....	.....	30.15	765.8	46	7.8	23	NW	2	0.9	.....	10c	0	W	.....	0	0	Cloudy.....	.....
Malone, N. Y.	.....	.....	29.74	755.4	28	— 2.2	85	W	14	6.3	.....	.....	10n	.....	NW	0.30	7.6	Heavy snow.	.....
Manhattan, Kan.	28.82	732.0	29.99	761.7	40	4.4	100	NW	20	8.9	.....	.....	10n	.....	.....	1.00	25.4	Light rain...	.....
Marquette, Mich.	.....	.....	29.91	759.6	32	0.0	69	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear.....	.....
Memphis, Tenn.	.....	.....	29.77	756.1	60	15.6	94	NE	11	4.9	.....	.....	10s	.....	NE	1.63	41.4	Threatening	.....
Milwaukee, Wis.	.....	.....	30.23	768.1	36	2.2	53	E	10	4.5	.....	2c	0	N	.....	0	0	Clear.....	.....
Mobile, Ala.	.....	.....	29.93	760.2	70	21.1	90	SW	6	2.7	.....	5c	5s	W	SW	0	0	Cloudy.....	.....
Montgomery, Ala.	.....	.....	29.93	760.2	71.7	21.9	80	SW	4	1.8	.....	.....	10s	.....	SW	0	0	Cloudy.....	.....
Morgantown, W. Va.	.....	.....	30.18	766.6	41	5.0	32	.....	0	0	.....	.....	0	.....	.....	0	0	Clear.....	.....
Mt. Washington, N. H.	23.03	585.0	29.19	746.5	9	—12.8	100	NW	72	32.2	.....	0	Fog	.....	.....	0.45	11.4	Foggy.....	.....
Nashville, Tenn.	.....	.....	29.72	760.0	50	10.	58	NE	6	2.7	.....	.....	10s	.....	E	0.47	11.9	Cloudy.....	.....
New Haven, Conn.	.....	.....	29.79	756.7	44	6.1	42	NW	12	5.4	.....	.....	0	.....	.....	0.04	1.0	Clear.....	.....
New London, Conn.	.....	.....	29.74	755.4	49	4.4	48	W	16	7.2	.....	0	0	.....	.....	0.07	1.8	Clear.....	.....
New Orleans, La.	.....	.....	29.88	758.9	72	22.2	80	S	6	2.7	.....	0	0	SW	.....	0	0	Fair.....	.....
Newport, R. I.	.....	.....	29.89	759.1	38	3.3	71	W	20	8.9	.....	5k	0	.....	.....	0.28	7.1	Clear.....	.....
New York, N. Y.	.....	.....	29.88	758.9	39	3.9	40	NW	24	10.7	.....	0	0	.....	.....	0.08	2.0	Clear.....	.....
Norfolk, Va.	.....	.....	30.14	765.5	41	5.0	41	N	12	5.4	.....	0	0	N	.....	0	0	Fair.....	.....
North Platte, Neb.	.....	.....	29.73	755.1	45	7.2	76	N	6	2.7	.....	8c	10s	.....	N	0.05	1.3	Cloudy.....	.....
Omaha, Neb.	27.14	689.3	30.0.	764.0	30	3.9	81	NE	11	4.9	.....	.....	10s	.....	E	0.16	4.1	Cloudy.....	.....
Oswego, N. Y.	28.94	736.1	29.97	761.2	31.5	0.7	65	NW	16	7.2	.....	.....	10ks	.....	NW	0.01	0.3	Cloudy.....	.....
Pembina, Dakota	.....	.....	30.26	768.6	32	0.	89	Calm	0	0	.....	.....	10s	.....	.....	0.02	0.5	Cloudy.....	.....
Philadelphia, Penn.	.....	.....	29.99	761.7	30	3.9	47	NW	24	10.7	.....	0	0	.....	.....	.....	.....	Clear.....	.....
Pike's Peak, Colorado	17.77	451.4	29.94	760.5	12	—11.1	100	W	12	5.4	.....	2s	2ks	.....	.....	0.01	0.3	Fair.....	.....
Pittsburgh, Penn.	.....	.....	30.17	766.3	36	2.2	80	N	12	5.4	.....	0	0	.....	.....	0	0	Clear.....	.....
Port Huron, Mich.	.....	.....	30.19	766.8	34	1.1	69	N	8	3.6	.....	0	0	.....	.....	Inap.	Inap.	Clear.....	.....
Portland, Me.	.....	.....	29.16	748.3	41	5.0	57	NW	16	7.2	.....	8k	0	NW	.....	0.15	3.8	Cloudy.....	.....
Portland, Oregon	.....	.....	30.21	767.3	48	8.9	92	NW	3	1.3	.....	10cs	0	.....	.....	0.03	0.8	Cloudy.....	.....
Punta Rassa, Fla.	.....	.....	30.04	763.0	77.8	25.4	72	NW	4	1.8	.....	Haze	5ks	.....	SW	0	0	Fair.....	.....
Rochester, N. Y.	.....	.....	30.01	762.2	32	0.0	79	NW	15	6.7	.....	0	5ks	.....	NW	0.07	1.8	Fair.....	.....
Salt Lake City, Utah	.....	.....	30.18	766.6	45	7.2	53	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	.....
Sandy Hook, N. J.	25.85	656.6	29.85	758.2	40	4.4	56	NW	44	19.7	.....	0	1ks	.....	NW	0.01	0.3	Clear.....	.....
San Diego, Cal.	.....	.....	30.05	763.1	55	12.8	93	S	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy.....	.....
San Francisco, Cal.	.....	.....	30.12	765.1	53	11.7	79	SW	6	2.7	.....	0	0	.....	.....	0	0	Clear.....	.....
Santa Fe, N. M.	.....	.....	29.81	757.2	43	6.1	66	NE	4	1.8	.....	0	1k	.....	NE	0	0	Clear.....	.....
Savannah, Ga.	23.27	591.0	29.93	760.7	74	23.3	56	W	6	2.7	.....	2cs	Haze	N	.....	0	0	Hazy.....	.....
Shreveport, La.	.....	.....	29.81	757.2	71	21.7	85	E	5	2.2	.....	10ck	2ks	NW	S	0	0	Cloudy.....	.....
Smithville, N. C.	.....	.....	30.07	763.8	47	8.3	54	NE	10	8.9	.....	.....	10ks	.....	W	0	0	Cloudy.....	.....
Springfield, Mass.	.....	.....	29.74	755.4	40	4.4	73	W	8	3.6	.....	2k	0	.....	.....	0.07	1.8	Clear.....	.....
St. Louis, Mo.	.....	.....	30.01	762.2	43	6.1	58	E	5	2.2	.....	0	5s	N	.....	0	0	Fair.....	.....
St. Marks, Fla.	.....	.....	29.98	761.5	68	20.0	84	S	4	1.8	.....	5c	0	W	.....	0	0	Fair.....	.....
St. Paul, Minn.	.....	.....	30.2.	767.1	41	5.0	57	SE	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy.....	.....
St. Paul's Island, Alaska	.....	.....	29.38	746.2	28	— 2.	88	E	27	12.1	.....	.....	10s	.....	.....	0.04	1.0	.....	.....
Thatcher's Island, Mass.	.....	.....	29.72	719.8	41	5.	48	NW	35	15.6	.....	2k	0	NW	.....	0.07	1.8	Fair.....	.....
Toledo, Ohio	.....	.....	30.17	766.3	38	3.3	81	W	6	2.7	.....	0	Sm'e	.....	W	0	0	Clear.....	.....
Tucson, Arizona	27.55	699.8	30.14	765.5	58	14.4	.....	S	.....	.....	.....	0	0	.....	.....	0	0	Clear.....	.....
Tybee Island, Ga.	.....	.....	29.93	760.2	69	20.6	84	W	4	1.8	.....	5c	0	.....	.....	0	0	Fair.....	.....
Vicksburg, Miss.	.....	.....	29.89	759.2	72	22.	80	SW	2	0.9	.....	2ck	5k	W	SW	0	0	Fair.....	.....

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Virginia City, M. T.	24.54	623.3	30.02	762.5	30	— 1.1	68	Calm	0	0	.....	0	0	.....	.....	Inap.	Inap.	Clear.	
Washington, D. C.	.....	.....	30.11	764.8	39.5	4.2	48	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear.	
Wilmington, N. C	.....	.....	30.09	764.3	39	3.9	71	NE	14	6.3	.....	.....	10n	.....	W	Inap	Inap.	Light rain.	
Wood's Holl, Mass.	.....	.....	29.64	752.8	45	7.2	53	NW	25	11.2	.....	0	0	.....	.....	0.61	15.5	Clear.	
Wytheville, Va.	27.71	703.8	29.92	760.0	38	3.3	45	E	3	1.3	.....	Haze	0	.....	.....	0.01	0.3	Hazy.	
Yankton, Dakota	28.86	733.0	30.18	766.6	39	3.9	86	E	12	5.4	.....	.....	10n	.....	.....	0.09	2.3	Light rain.	
Yuma, Arizona	.....	.....	29.95	760.7	66	18.9	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear.	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.04	763.0	81	27.2	74	E	4	1.8	.....	10k	10ks	W	.....	0	0	Cloudy..	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.99	761.7	79	26.1	86	E	.....	.....	.....	.....	10ks	.....	.....	0.05	1.3	Fair.	L. V. Bigard.
St. Thomas, S. T., W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. S. Cameron.
Kingston, Jamaica, W. I.	.....	.....	30.16	766.1	78	25.6	78	Calm	0	0	.....	8c	2s	SE	.....	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.76	755.9	79	26.1	74	N	2.4	1.1	.....	8ck	0	N	.....	0.28	7.1	Fair.	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.03	762.7	78	25.6	82	NE	1.2	0.5	.....	8c	0	W	.....	0	0	Fair.	Charles Hasselbrink
St. Georges, Bermudas	.....	.....	30.02	762.5	71.0	21.7	87	SW	10.0	4.5	.....	8k	8k	SW	.....	0	0	Fair.	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica W. I.	27.19	690.6	29.86	75 .4	68	20.0	84	N	2.0	0.9	.....	2c	5k	N	.....	0	0	Fine.	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.02	762.5	77	25.0	91	E	.....	.....	2	.....	10n	.....	E	0.972	24.69	Rainy.	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.08	763.9	.....	.....	80.6	27	.....	NE	.....	.....	.....	.....	.....	.....	.....	0.226	5.75	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.17	639.3	.....	.....	68.0	20.0	71	SW	2	0.9	.....	5k	0	.....	.....	0.01	0.3	Fair.	Thomas Herran.
St. John's, Newfoundland	.....	.....	30.16	766.1	33.0	0.6	89	E	.....	.....	.....	.....	10n	.....	.....	0	0	Foggy	John Delaney.
York Factory, B. A.	.....	.....	30.39	771.9	28.5	— 1.9	94	W	1	0.4	.....	.....	9s	.....	.....	0	0	.....	J. Fortescue.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Makawao, Maui, H. I.	27.82	706.6	29.99	761.7	59	15.0	88	NE	2.4	1.1	.....	2cs	0	.....	.....	0	0	Threatening	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.
Steamer Hibernian, N. 44° 39′, W. 63° 34′.	.....	.....	At Halifax.	29.36	745.7	38	3.3	.....	SE	.....	.....	8	.....	.....	.....	.....	Rough	.....	Raining.	Lieut F. Archer, R.N.R.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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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, 6,032.1 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,802.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; 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.

Collated at the Office of the Chief Signal Officer of the Army, Washington, D. C.

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 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.	Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	66.0	18.9	56	NNW	.....	.....	1	.....	3	.....	.....	0	0	Fair.....	Charnot.
Algiers	.....	.....	30.04	763.0	66.2	19.0	81	NNE	.....	.....	1	.....	4	.....	.....	0	0	Fair.....	Peter.
La Calle	.....	.....	.....	.....	64.9	17.3	.....	NNE	.....	.....	2	.....	1	.....	.....	0	0	Clear.....	Kuntz.
Tunis	.....	.....	30.09	764.2	72.1	22.3	43	NE	.....	.....	3	.....	2	.....	.....	0	0	Clear.....	Jacques.
Sfax	.....	.....	30.11	764.9	71.6	22.0	58	NE	.....	.....	5	.....	2	.....	.....	0	0	Clear.....	Chauvey.
Salda	.....	.....	30.05	763.3	71.6	22.0	48	N	.....	.....	2	.....	3	.....	.....	0.154	3.9	Fair.....	Millot.
Tebessa	.....	.....	30.06	763.5	72.3	22.4	.....	S	.....	.....	2	.....	6	.....	.....	0	0	Fair.....	Colin.
Geriville	.....	.....	30.07	763.6	70.5	21.4	51	SE	.....	.....	3	.....	2	.....	.....	0.016	0.4	Clear.....	Buard.
Laghouat	.....	.....	30.08	763.9	71.6	22.0	20	W	.....	.....	2	.....	5	.....	.....	0.354	9.0	Fair.....	Guyot.
Biskra	.....	.....	30.08	763.9	78.8	25.8	33	NW	.....	.....	1	.....	10	.....	.....	0	0	Hidden.....	Laromer.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

AUSTRIAN SERIES.

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

Agram	.....	.....	29.84	757.8	65.5	18.6	46	SW	.....	.....	5	.....	3	.....	.....	0	0	.....	Prof. Ivan Stozir.
Buda-Pesth	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	I. R. Cen. M. I., Hungary
Cracow	.....	.....	29.68	753.8	62.2	16.8	77	W	.....	.....	2	.....	7	.....	.....	0.169	4.3	.....	I. R. Observatory.
Eperies	.....	.....	29.77	756.1	56.1	13.4	87	SE	.....	.....	2	.....	10	.....	.....	0.305	7.74	.....	Julius Mikolik.
Gratz	.....	.....	29.72	755.0	63.5	17.5	46	SW	.....	.....	5	.....	7	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	28.56	725.4	29.80	756.9	64.4	18.0	76	SW	.....	.....	3	.....	4	.....	.....	0	0	.....	Prof. Reissenberger.
Kremsmünster	28.42	721.9	29.92	759.9	47.1	8.4	78	W	.....	.....	5	.....	10	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	28.56	725.5	29.64	752.8	71.1	21.7	55	SE	.....	.....	2	.....	8	.....	.....	0.020	0.5	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Pola	.....	.....	29.93	760.2	69.9	16.6	75	SSW	.....	.....	2	.....	2ks	.....	.....	0.310	8.10	.....	I. R. Hydrographic Office
Szegedin	.....	.....	29.84	758.0	68.5	20.3	42	W	.....	.....	3	.....	6	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	29.92	759.9	63.7	17.6	76	.....	.....	.....	1	.....	6	.....	.....	0	0	.....	Prof. V. Farolfi.
Vienna	.....	.....	29.71	755.3	54.9	12.7	68	WNW	.....	.....	5	.....	10	.....	.....	0	0	.....	I. R. Central Institute.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Brussels	.....	.....	30.03	762.8	48.7	9.3	57	NNW	.....	.....	0	.....	9	.....	.....	0	0	.....	Royal Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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	44.7	7.1		NW	10	4.5			3			0.010	0.25	Blue sky	William Boswell.
Ardrossan			30.26	768.8	49	9.4		S			3		2					Blue sky	William McNeil.
Armagh Observatory			30.28	769.1	49.2	9.6		NNE	72	0.9			0					Blue sky	S. Call. for Dr. Robinson.
Bidston, Liverpool Obs			30.24	768.1	46.2	7.9		NW	15	6.7			7					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			30.24	768.1	52.2	11.2		SSE			1		4					*D. clouds	J. Dreyer.
Bradford			30.19	766.8	45.1	7.3		NE			2		5			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.00	762.0	83.5	28.6		NE			3		7					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge Observatory			30.16	766.1	47.2	8.4		NNE			3		10					Overcast	H. Todd. [H. C.
Cardington			30.17	766.3	47.0	8.3		NE			2		7			Blank	Blank	Overcast	John McLaren.
Carlisle			30.22	767.6	50	10.0		N			0		7			0	0	*D. clouds	T. Bel . for J. Car mell.
Chatham, School M. E			30.14	765.5	43.2	6.2		NE			1		6			Blank	Blank	*D. clouds	Major C. N. Martin, R.E.
Dartmoor	28.74	730.0	30.27	768.8	47.0	8.3		NE			5		6					*D. clouds	R. E. Power.
Donaghadee			30.27	768.8	50	10.0		SE			2		3					*D. clouds	. Mac Gowan.
Dover			30.10	764.5	45	7.2		NNE			4		5					Squally	J. Costello.
Eccles, (near Manchester)			30.22	767.6	48.1	8.9		N	3.0	1.3			8					Gloomy	Thomas Mackereth.
Falmouth Observatory			30.22	767.6	49.2	9.6		SE	13	5.8			3					*D. cl uds	The Staff.
Fort Napier, (Natal)	27.77	705.4	30.01	762.2	60.5	15.8		S			2		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.93	760.2	90	32.2		N			1		7					*D. clouds	tis.
Galway, Queen's College			29.28	769.1	57	13.9		SSW			1		0					Bl e sky	B. G. Cl re, for Prof. Cur-
Gibraltar, (Mediterranean)			30.00	762.0	68.0	20.0		E			1		0					Blue sky	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			30.22	767.6	49.6	9.8		WNW			1		2					Fine	Lewis Stuart.
Great Yarmouth			30.11	765.5	46	7.8		NNE			4		4			Blank	Blank	*D. clouds	G. T. Watson.
Greenwich Royal Obs			30.15	765.8	50.5	10.3		N			4		6			Blank	Blank	*D. clouds	The Staff. for G. B. Airy.
Guernsey			30.02	762.5	48	8.9		WNW			3		5					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs			30.25	768.3	43.6	6.4		NE			1		10					*D. clouds	L. J. Crossley.
Helston			30.17	766.3	57	13.9		NE			4		3c			0	0	Fine	M. P. Moyle.
Holyhead			30.27	768.8	47	8.3		NNE			4		2					Blue sky	John Tilston.
Kew Observatory			30.16	766.1	46.5	8.1		NE	18	8.0			6					Threatening	The Staff.
Kingstown			30.29	769.4	47	8.3		E			3		1					Blue sky	George Mitchell.
Leicester Museum			30.23	767.8	43.9	6.6		NE			1		10					Raining	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)			29.99	761.7	72.2	22.3		SE			1		2k						Sergt. F. Travis, A. H. C.
Nairn			30.20	767.1	51	10.6		NE			1		0					Clear	W. D. Penny.
Nassau, (Bahamas)			30.07	763.8	80.4	26.9		SE			5		6					*D. clouds	Surg. Maj. Henry.
Nottingham			30.22	767.6	39.7	4.3		NNW			4		10n		NNW	0.02c	0.51	Raining	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.21	767.2	45.1	7.3		NNE			3		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.17	766.3	45	7.2		N			5		10					Raining	J. Lucas.
Plymouth			30.19	766.8	51	10.6		NNE			1		4					*D. clouds	John Merrifield.
Roche's Point			30.23	767.8	51	10.6		SE			4		5					Fine	W. Kennedy.
Saint Ann's Head			30.23	767.8	50	10.0		SW			1		2						John C. Walker.
Saint Helier, Jersey)			30.15	765.8	52.0	11.1		NE			5		2					¼ cl ar	A. P. Amy.
Sandwick Manse(Orkneys)			30.22	767.6	43.7	6.5		W	20	8.9			2					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough			30.21	767.3	44.3	6.8		N			4		10					Overcast	F. Shaw.
Scutari Cemetery Turkey			29.89	759.2	81.0	27.2		SW			1		0					Blue sky	Sergt. W. H. Lyne.
Sheffield			30.20	767.1	46.9	8.3		NNE			2		9			0	0	Misty	W. F. Cooper.
Silloth Rectory			30.24	768.1	56.3	13.5	51	E			1		1			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			30.23	767.8	46.4	8.0		N			1		5						Rev. S. J. Perry.
Stornoway, Lews C. Hebr.			30.21	767.3	48	8.9		SW			1		8					*D. clouds	John Smith.
Stratfield Turgiss			30.18	766.6	49.0	9.4		NE			1		6					*D. clouds	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			30.20	767.1	50	10.0		N			1		6					Hazy	John Trotter.
Truro, Royal Institution			30.20	767.1	49	9.4		SW			4		10					Gloomy	W. Newcombe.
Valencia Observatory			30.21	767.8	51.4	10.8		SE	22	9.8			8					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man				768.9	48	8.9		N			3		0			0	0		The Staff. for E. J. Stone.
Cape Good Hope Obs			30.14	766.3	65.1	18.4	51	SSE	15	6.7			1						Andrew Gibb.
Leith, Restalrig Park			30.26	768.6	47.0	8.3		NE			2					0.11	2.8	Fine	C. Meldrum.
Mauritius, Observatory			30.05	763.3				E	20.1	9.0						0.01	0.3		R. L. J. Ellery.
Melbourne, Observatory			30.31	769.9	55.2	12.9	80	WSW	10	4.5			10			0.01	0.3	Dull, fine	J. Youngclause.
Monach Lt-house, Hebrides			30.23	767.8	49	9.4		S			3	0	0			0	0	Sola halo	
North Unst, (Shetland Is.)			30.10	764.5	44	6.7		W			4		10						

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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			29.76	755.9	44.6	7.0	77	WNW			2		10						
Fanöe			29.81	759.7	43.7	6.5	72	N			6		9						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			30.06	763.4	25.3	— 3.7	93	E			7		5					Raining	
Thorshavn, (Faröe)			30.04	763.1	45.5	7.5	83	W			6		10						
Vestervig			29.89	759.3	39.6	4.2	90	NNE			6		10						

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

FRENCH SERIES.

Furnished by the 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.
Amiens			30.06	763.4	52.5	11.4	72	S			3		8		W	0.087	2.2	Very cloudy	Normal School.
Avignon			30.02	762.4	57.7	14.3	72	E			1		8						Normal School.
Bar-sur-Seine			30.07	763.8	46.2	7.9	74	NE			2		10		NNE	0.309	7.7	Covered	Normal School.
Beaumette, (near Angers)			30.09	764.2	44.1	6.7	88	N	4.0	1.8			10		N	0.228	5.8	Covered	C. Saillard.
Beauvais			30.11	764.8	47.1	8.4	54	N			3		8		N	0.002	0.05	Very cloudy	Beaumette Observatory.
Besançon			30.07	763.8	40.2	7.8	85	S			2		8		SW	0.102	2.6	Very cloudy	Normal School.
Bourg en Bresse			30.09	764.3	50.0	10	74	W			2		..ck		NE	0	0		Normal School.
Brest			30.10	764.4	49.5	9.7	54	N			4		5		NW	0.217	5.5	Cloudy	Normal School.
Caen			30.077	770.02	51.6	10.9	73	NNW			3		6n		NE	0.010	0.25		Normal School.
Carcassonne			30.10	764.6	57.2	14	53	W			2		1			0.256	6.5	Quite clear	Naval Observatory.
Chartres			30.24	768.1	40.1	4.5		N			2		5		E	0.20	5.	Cloudy	Normal School.
Clermont			30.02	762.6	43.7	6.5	85	W			6		10			0.571	14.5	Covered	Normal School.
Commercy			30.08	763.9	44.6	7	67	N			1		10		W	0	0		Normal School.
Commune de Gréasque*			30.05	763.3	59.9	15.5	53	NW			2		10k,n		N	0.701	17.8	Covered	Puy de Dome Obs.
Grenoble			29.94	760.4	54.7	12.6	67	NNW			2		5			0.689	17.5		Normal School.
Le Mans			30.11	764.7	49.5	9.7	64	W			8		2ck		NE	0.886	22.50	Slightly cl'dy	M. Kina.
Loches											3		2		N	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier			30.03	762.8	48.4	9.1	81	S			2		5		NW	0.126	3.2		Normal School.
Mâcon			30.13	765.2	49.1	9.5	83	N			2		5		E	0.110	2.8	Cloudy	Normal School.
Mirecourt			30.03	762 7	50.5	10.3	63	N			4		10		S	0.04	1.	Covered	Normal School.
Metz																			M. Schuster.
Nismes			29.98	761.5	62.2	16.8	43	W			2		2		W	0	0	Slightly cl'dy	Normal School.
Orleans			30.05	763.2	47.1	8.4	46	NE			4		8		NE	0.047	1.2	Very cloudy	Normal School.
Paris Observatory			30.10	764.4	46.2	7.9	50	NE			4		8	S	N	0.059	2.53	Very cloudy	National Observatory
Parthenay			30.01	759.8	54.0	12.2	86	NW			2		10		NE	0.165	4.2		Normal School.
Privas			29.99	761.7	56.1	13.4		W			2		10		W	0.08	2.	Covered	Normal School.
La Roche-sur-Yon			29.88	758.9	54.5	12.4	61	N			4		2		S	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.11	764.9	52.2	11.2	61	NE			3		8		SW	0	0	¾ Covered	Naval Observatory.
Rouen			30.11	764.8	49.6	9.8	40	NNE			3		8		NW	0.067	1.7	Very cloudy	Normal School.
Saint Lo			29.87	758.7	49.5	9.7	54	E			1		3		NE	0.055	1.4		Normal School.
Tarbes	28.95	735.4	30.04	762.8	57.5	14		W			2		5		E	0	0	Cloudy	Normal School.
Toulouse																			Normal School.
Villefranche			30.07	763.6	54.0	12.2	77	NW			3		10		NW	0.04	1.	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.91	759.8	77.5	25.3													L'Abbé Marchési.
Gorée																			
Marseilles			30.02	762.5	58.1	14.5	53	WSW			3		3			0.094	2.40		Marseilles Observatory.
Mont-Louis	24.78	629.5	30.10	764.5	42.1	5.6	75	ESE	18.0	8.33			8		SW	0.003	0.1		—. Falguère.
Montsouris, Paris																			Montsouris Observ'tory.
Perpignan			30.05	763.5	58.8	14.9	48	SW	5.0	2.5			9		W	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	48.0	8.9	60	N			1		9			0.193	4.9	Cloudy	E. Renou.
Toulouse			30.11	764.8	54.5	12.5	58	W			1		9			0.028	0.7		Toulouse Observatory.
Tours			30.10	764.1	51.4	10.8	46	NNE			2		8		NNE	0.010	0.4		C. Marquet.
Versailles, (near Paris)			30.09	764.3	42.1	5.6	73	E			2		10			0.195	4.95	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.12	765.1	60.8	16.0	98	ESE	4.7	2.1		6n	0			{ 0 / 0 }	{ 0 / 0 }		H. Le Leo, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 342 m., or 1,089.9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Turbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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.

Bamberg			29.86	758.4	40.6	9.2	72	WSW			4		10	NW		0	0		Prof. T. Hoh.
Berlin			29.87	758.8	50.9	10.5	66	N			2		8			0.071	1.8		Prof. Arndt.
Breslau			29.84	757.8	43.7	6.6	100	W			6		10			0.901	24.4	Raining	Dr. P. Neugebauer
Carlsruhe			30.0	762.1	49.3	9.6	60	N			1		10			0	0		A. Senz.
Cassel			30.00	761.9	51.8	11.0	68	NW			5		8	WNW		0	0		Dr. H. Möhl.
Cologne																			Dr. Gartlaub.
Emden																			Prof. Prestel.
Frankfort on the Main			30.07	763.6	50.4	10.2	45	N			1		8			0	0		Physical Society.
Friedrichshafen	28.52	724.4	29.07	761.1	50.4	10.2	82	SW			1					0.713	18.1	Raining	M. Wilhelm.
Hamburg			29.92	759.9	45.7	7.6	68	NW			2		9kn			0.012	0.3	Cloudy	Captain F. Hegemann.
Kiel			29.85	758.2	48.0	8.9	60	NE			4		7			0.035	0.9		Prof. G. Karsten.
Königsberg			29.74	755.4	59.2	15.1	53	SW			2		6			0	0		Prof. E. Luther.
Köslin			29.94	760.4	47.8	8.8		SSW			2		3			0.610	15.5		H. Müller.
Leipsic			30.00	761.9	46.8	8.2	60	NW			3		9	NW		0.004	0.1		Prof. Bruhns.
Memel			29.78	756.5	50.0	10.0	82	NW			4		2			0.031	0.8		Reinbrecht & Skalweit.
Münster			30.00	762.0	49.3	9.6	68	NW			3		3			0.001	0.1		Prof. E. Heis.
Neufahrwasser			29.98	753.8	61.2	16.2	71	W			4		6			0.038	1.4		A. Lothes.
Posen			29.85	758.2	51.1	10.6	76	NW			6		10			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.04	763.0	47.3	8.5	70	NE			1		10	NE		0.114	2.9		Dr. Schur.
Stuttgart			30.00	761.9	46.8	8.2	57	N			1		10			0.157	4.0		Prof. Schoder.
Thorn			29.75	755.6	59.7	15.1	59	NE			3		9			0	0		Dr. Hasenbalg.
Treves, (Trier)			29 98	761.6	47.8	8.8	58	NE			3		10			0.028	0.7		Prof. Flesch.
Wustrow, Naval School			29.76	755.9	45.3	7.4	82	WNW			3		8			0.270	7.0		E. F. Schütz.

Note.—In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation. The elevation of Friedrichshafen is 414.4 meters, or 1,359.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			29.87	758.8	58.8	14.9	72	SW	3.8	1.7			10			0.484	12.3	Showery	
Padua			29.87	758.6	62.1	16.7	57	NW	15.4	6.9			5	W		0.197	5.0		
Vicenza			29.87	758.6	62.1	16.7	58	SW	7.4	3.3			9	W		0	0		
Verona			29.99	761.8	64.8	18.2	82	E			2		10			0.098	2.5		
Bergamo	28.52	724.5	29.84	758.0	59.0	15.0	60	SW			2		5			0.567	14.4	Showers, hail	
Domodossola	28.82	731.9	29.84	757.9	61.9	16.6	61	SSW			4		9			0	0		
Milan			29.89	759.3	60.1	15.6	72	WSW			1		8	NW		0	0		
Pavia			29.89	759.1	59.9	15.5	60	N			2		4	SW		0.055	1.4	Showery	
Moncalieri			29.88	759.0	59.9	15.5	61	SSE	3.1	1.4			3	W		0.220	5.6	Showery	
Mondovi	27.96	710.1	29.88	758.9	57.0	13.9	66	WNW			4		6	NE		0	0		
Porto Maurizio			29.91	760.5	61.5	16.4	61	WSW			6		1	ENE		0	0		
Genoa			29.93	760.2	63.5	17.5	55	SE	9.8	4.4			2	SE		0	0		
Piacenza			29.89	759.1	59.9	15.5	62	N			4		6			0	0		
Parma			29.89	759.1	64.9	18.3	43	SSW			6		2			0	0		
Bologna			29.91	759.8	67.8	19.9	38	WSW			8		4	E		0	0		
Florence			30.02	762.6	65.3	18.5	36	NW			6		3	NW		0.012	0.3		
Leghorn			30.01	762.2	61.9	16.6	56	WSW	34.2	15.3			1			0	0		
Siena	28.78	731.0	29.98	761.4	62.5	17.1	33	SW	5.6	2.5			5	SW		0	0		
Urbino	28.40	721.4	29.96	760.9	62.4	16.9	52	SW			2		4			0.276	7.0		
Pesaro																			
Ancona			29.97	761.1	68.0	20.0	54	SE			4		4			0	0		
Grosseto			29.99	761.7	68.4	20.2	46	SSW			4		3	S		0.008	0.2		
Rome			30.07	763.7	64.9	18.3	58	SSW	4.9	2.2			4	W		0	0		
Naples, O. U.			30.08	764.1	68.9	20.5	50	WSW			4		2	WNW		0	0		
Lecce			30.04	763.0	69.9	21.0	46	ENE	11.2	5.0			5			0	0		
Cosenza			30.01	762.2	78.6	25.9	75	N	3.8	1.7			4			0	0		
Riposto, (Sicily)			30.07	763.7	69.4	20.8	66	E			2		3	W		0	0		
Palermo			30.02	762.5	64.9	18.3	73	NE	7.4	3.3			9			0	0		
Caltanissetta	28.07	712.9	29.98	761.4	68.2	20.1	47	WSW			1		4	E		0	0		
Sub-Series.																			
Naples, S. R.			30.09	764.2	66.6	19.2	52	WSW	0	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.

Tokio																			

NETHERLANDS' SERIES.

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

Flushing			30.09	764.3	50.0	10.0		NE			3								
Groningen			29.95	760.8	47.8	8.8		NW			4								
Helder			30.05	763.3	45.9	7.7		NW			4								
Utrecht			30.02	762.5	49.5	9.7	66	WNW			3		10					Dull	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

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

Bergen			30.02	762.6	45.3	7.4	50	NNW	13.4	6.0			0			0.256	6.5		
Bröno			29.95	760.6	41.6	5.0	69	WSW	20	9			8			0	0		
Christiania			29.92	759.9	45.9	7.7	36	NNE	7.6	3.4			10			0	0		
Tromsö			29.87	758.7	38.1	3.4	54	SW	2	1			10			0	0		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	64.8	18.2	84	W	15.5	6.94	.....	.....	6	.....	.....	0.331	8.4	Raining.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.03	762.7	68.4	20.2	20	SW	5.6	2.50	.....	.....	8	SW	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.07	763.7	59.7	15.4	52	SSW	18.6	8.3	.....	.....	1	.....	.....	0	0	.....	The Observatory.

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

RUSSIAN SERIES.

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

Warsaw	.....	.....	29.72	754.8	54.1	12.3	86	Calm	0	0	.....	.....	10	.....	.....	.....	.....	Raining.....	Astronomical Obs.
Wilna	.....	.....	29.82	757.3	58.5	14.7	69	SE	11	5	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.95	760.7	51.1	10.6	54	ESE	16	7	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.01	762.3	45.5	7.5	63	W	4	2	.....	.....	8	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.97	761.2	43.3	6.3	76	N	7	3	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kief	.....	.....	29.89	759.2	66.9	19.4	49	SE	11	5	.....	.....	8	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.05	763.3	78.4	25.8	36	SW	18	8	.....	.....	0	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.05	763.3	76.5	24.7	58	SSE	2	1	.....	.....	0	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.04	762.9	49.3	9.6	53	N	4	2	.....	.....	1	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.97	761.1	77.0	25.0	21	NNW	9	4	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.85	758.2	38.3	3.5	75	NNW	13	6	.....	.....	10	.....	.....	.....	.....	.....	Ogorounikof.
Tiflis	28.57	725.7	29.91	759.8	77.0	25.0	31	S	9	4	.....	.....	7	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.01	762.0	84.7	29.3	16	S W	9	4	.....	.....	0	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.69	761.7	55.2	12.9	64	N	4	2	.....	.....	10	.....	.....	.....	.....	Raining.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.80	731.4	29.82	757.5	36.5	2.5	96	NE	4	2	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.97	761.3	82.9	28.3	14	NE	7	3	.....	.....	0	.....	.....	.....	.....	.....	.....
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bolsof.
Tashkend	28.45	722.6	30.10	764.5	72.0	22.2	46	ENE	20	9	.....	.....	10	.....	.....	.....	.....	Light rain...	Michelson.
Barnaul	.....	.....	30.12	765.1	37.9	3.3	38	NE	13	6	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	30.14	765.5	25.0	— 3.9	49	ESE	2	1	.....	.....	1	.....	.....	.....	.....	.....	Marks.
Irkutsk	28.61	726.7	30.07	763.8	22.1	— 5.5	56	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Usolzof.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	30.02	762.6	71.8	22.1	43	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nikolaievsk, on the Amoor	.....	.....	.....	.....	33.6	0.9	94	ESE	16	7	.....	.....	10	.....	.....	.....	.....	Light rain...	.....

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 400 meters, or 1,311.8 feet; Catorin barg, 914.12 m., or 1,495.22 ft.; Tasnkend, in 494.22, or 1,621.31 ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.07 m., or 1,942.27 ft.; Oorga, 1,281.06 m., or 4,202.67 ft.

SPANISH SERIES.

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

Madrid	.....	.....	29.96	761.0	67.6	19.8	37	SW	8.2	3.67	.....	2	0	SW	.....	0	0	.....	Royal Observatory.
San Fernando	.....	.....	30.03	762.7	65.7	18.7	58	NW	7.6	3.4	.....	0	1	.....	SW	0	0	.....	The Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight; 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	.....	.....	30.02	762.5	37.0	2.8	60	SW	.....	.....	2	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	30.02	762.4	45.5	7.5	42	SW	.....	.....	2	.....	5	.....	.....	0	0	.....	
Hernosand	.....	.....	30.00	762.0	46.8	8.2	44	ESE	.....	.....	2	.....	8	.....	.....	0	0	.....	
Stockholm	.....	.....	29.74	755.4	35.2	1.8	82	NE	.....	.....	6	.....	10	.....	.....	0.047	1.2	.....	
Wisby	.....	.....	29.77	756.2	52.2	11.2	90	S	.....	.....	4	.....	7	.....	.....	0.079	2.0	.....	
Sub-Series.																			
Upsala	.....	.....	29.85	758.2	32.4	0.2	95	NNE	12.8	5.7	.....	.....	10	.....	.....	0.677	17.21	Snowing.....	Dr. Hildebrandsson.

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

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28.57	725.6	30.00	762.0	52.2	11.2	56	WSW	.....	.....	3	.....	7	.....	.....	0.122	3.1	Cloudy	The Observatory.
Zurich	28.35	720.1	30.10	764.5	44.4	6.9	95	W	.....	.....	1	.....	10	.....	.....	1.595	40.5	Raining	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, —1.1 mm.; Thermometer, —3.3 cent.; Relative Humidity, —2 per cent.

NOTE.—The originals give the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fao, (Persian Gulf)	.....	.....	29.94	760.4	86.0	30.0	.....	NW	.....	.....	1	.....	0	.....	.....	.....	.....	.....	.....
Salonica	.....	.....	30.04	763.1	79.2	26.2	.....	SE	.....	.....	1	.....	0	.....	.....	.....	.....	.....	.....
Valona	.....	.....	29.97	761.2	72.9	22.7	.....	W	.....	.....	1	.....	5	.....	.....	.....	.....	.....	.....
Varna	.....	.....	30.12	765.0	62.6	17.0	.....	SE	.....	.....	2	.....	0	.....	.....	.....	.....	.....	.....
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.89	759.3	77.0	25.0	69	W	.....	.....	2	.....	5k	.....	E	0	0	Fair	Prof. C. V. A. Van Dyck

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B.	.....	.....	29.59	751.6	34.7	1.5	97	NE	10	4.5	.....	.....	.....	.....	.....	0	0	Clear	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.02	762.5	45	7.2	.....	NW	4	1.8	.....	0	0	.....	.....	.....	.....	Clear	W. R. Bigg.
*Chatham, N. B.	.....	.....	29.51	749.5	35	1.7	94	N	13	5.8	.....	.....	10ks	.....	N	0.84	21.3	Cloudy	G. A. Blair.
Charlottetown, P. E. Island.	.....	.....	29.41	747.0	40	4.4	77	S	5	2.2	.....	5k	0	.....	.....	0.15	3.8	Fair	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.88	758.9	46.5	8.1	58	E	.....	.....	1	2ck	.....	.....	.....	0	0	Clearing	James Smith, M. A.
Dalhousie, N. B.	.....	.....	29.68	753.9	38.0	3.3	70	NE	.....	.....	5	.....	9s	.....	.....	0.23	5.8	.....	H. A. Johnson.
Esquimault, B. C.	.....	.....	30.09	764.3	50.3	10.2	79	W	1	0.4	.....	1cs	.....	.....	.....	0	0	Clear	W. H. Bevis.
Fredericton, N. B.	.....	.....	29.53	750.0	37.0	2.8	83	N	12	5.4	.....	.....	10n	.....	.....	0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.20	767.1	30	— 1.1	97	SW	1	0.4	.....	2k	2ks	S	S	0	0	Fair	James Stewart.
Goderich, Ontario	.....	.....	30.11	764.8	34.8	2.7	81	Calm	.....	.....	0	8ck	.....	W	.....	0	0	Cloudy	J. Strang, M. A.
Granton, Ontario	.....	.....	30.06	763.5	35.0	1.7	.....	Calm	.....	.....	0	1cs	.....	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S.	.....	.....	29.31	744.5	36	2.2	95	SW	4	1.8	.....	.....	10n	.....	.....	0.34	8.6	Sleeting	F. Allison, M. A.
*Kingston, Ontario	.....	.....	30.00	762.0	44	6.7	59	N	6	2.7	.....	2c	0	.....	.....	0	0	Clear	S. Woods, M. A.
Little Current, Ontario	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. B. Abrey, C. E.
*Montreal, Quebec	.....	.....	29.86	758.4	46	7.8	63	NW	10	4.5	.....	0	2ks	.....	.....	0.04	1.0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.91	759.7	44	6.7	69	NW	12	5.4	.....	2ck	0	NW	.....	0	0	Clear	J. B. Hamby.
*Parry Sound, Ontario	.....	.....	30.07	763.8	38	3.3	72	N	12	5.4	.....	0	0	.....	.....	0	0	Clear	Rev. R. Mooley.
*Port Dover, Ontario	.....	.....	30.06	763.5	38	3.3	63	N	11	4.9	.....	10cs	0	N	.....	0	0	Fair	H. Morgan.
Port Hastings, N. S.	.....	.....	29.42	747.3	35.7	2.1	.....	SE	14	6.3	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
*Port Stanley, Ontario	.....	.....	30.06	763.5	37	2.8	75	N	10	4.5	.....	.....	10n	.....	N	0	0	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	29.83	757.7	40	4.4	73	NE	7	3.1	.....	.....	10n	.....	NE	0.50	12.7	Cloudy	Capt. Ash, R. N.
St. John, N. B.	.....	.....	29.44	747.8	36	2.2	90	N	8	3.6	.....	k	.....	.....	.....	0.010	0.25	Cloudy, sleet	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.06	763.5	40	4.4	64	Calm	0	0	.....	10ks	0	.....	.....	0	0	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	30.06	763.5	36	2.2	71	NW	5	2.2	.....	2c	0	NW	.....	0	0	Fair	R. J. Cole.
Stratford, Ontario	.....	.....	30.06	763.5	36.2	2.3	73	N	4	1.8	.....	3cs	4s	.....	.....	0	0	Fair	C. J. MacGregor, M. A.
*Sydney, C. B.	.....	.....	29.52	749.8	38	3.3	89	SE	8	3.6	.....	.....	1 n	.....	S	0.61	15.5	Hailing	T. C. Hill.
*Toronto, Ontario	.....	.....	30.01	763.0	41	5.0	57	N	13	5.8	.....	5cs	0	NW	.....	0	0	Fair	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.07	763.8	39.6	4.2	72	N	.....	.....	1	10cs	0	.....	.....	0	0	Fine	J. Montgomery.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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NOTE.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. pper. From	Clouds. Direction. Lower. From —	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	29.85	758.2	48	8.9	62	NW	18	8.0	.....	1k	0	W	.....	0	0	Clear	
Alpena, Mich.	.....	.....	30.08	764.0	39	3.9	63	NE	4	1.8	.....	8ck	0	W	.....	0	0	Fair	
Atlantic City, N. J.	.....	.....	30.00	762.0	46	7.8	47	NW	8	3.6	.....	0	Haze	.....	.....	0	0	Clear	
Augusta, Ga.	.....	.....	29.91	759.7	45	7.2	92	SE	5	2.2	.....	.....	10n	.....	SE	0.41	10.4	Light rain	
Baltimore, Md.	.....	.....	30.03	762.7	48	8.9	42	N	4	1.8	.....	8ck	2s	W	.....	0	0	Cloudy	
Barnegat, N. J.	.....	.....	29.97	761.2	48	8.9	49	N	14	6.3	.....	2c	0	NW	.....	0	0	Clear	
Benton, Montana	27.31	693.7	30.14	765.5	36	2.2	70	SW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.39	721.1	30.10	764.5	35	1.7	52	S	5	2.2	.....	10k	0	S	.....	0	0	Cloudy	
Boston, Mass.	.....	.....	29.76	755.9	48	8.9	49	NW	24	10.7	.....	1k	Haze	NW	.....	0	0	Clear	
Breckenridge, Minn.	.....	.....	30.28	769.1	31	— 0.6	89	W	4	1.8	.....	0	0	.....	.....	0.04	1.0	Clear	
Buffalo, N. Y.	.....	.....	30.02	762.5	35	1.7	70	SW	2	0.9	.....	2cs	0	.....	.....	0	0	Fair	
Burlington, Vt.	.....	.....	29.84	757.9	43	6.1	75	NW	12	5.4	.....	.....	10s	.....	W	0.01	0.3	Cloudy	
Cairo, Ill.	.....	.....	30.13	762.7	46	7.8	69	W	20	8.9	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Cape Hatteras, N. C.	.....	.....	29.85	758.2	56	13.3	87	E	25	11.2	.....	.....	10n	.....	E	Inap.	Inap.	Light mist	
Cape Henry, Va.	.....	.....	29.99	761.7	49	9.4	71	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Cape Lookout, N. C.	.....	.....	29.79	756.7	55	12.8	100	NE	28	12.5	.....	.....	10n	.....	NE	2.32	58.9	Light rain	
Cape May, N. J.	.....	.....	30.00	762.0	48	8.9	49	NW	8	3.6	.....	5ck	0	W	.....	0	0	Fair	
Charleston, S. C.	.....	.....	29.88	758.9	51	10.6	86	NE	2	0.9	.....	.....	10n	.....	.....	Inap.	Inap.	Light rain	
Cheyenne, Wyoming	24.21	614.9	30.15	765.8	33	0.6	79	S'W	4	1.8	.....	2c	0	NW	.....	0.07	1.8	Fair	
Chicago, Ill.	.....	.....	30.10	764.5	40	4.4	56	N	10	4.5	.....	.....	10s	.....	.....	0	0	Cloudy	
Cincinnati, Ohio.	.....	.....	29.93	760.2	44	6.7	44	NE	11	4.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Cleveland, Ohio.	.....	.....	30.08	764.0	38.3	3.5	76	NE	2	0.9	.....	.....	10ks	.....	NE	0	0	Cloudy	
Colorado Springs, Col.	24.34	618.2	30.20	767.1	30	— 1.1	84	Calm	0	0	.....	5ck	2s	.....	.....	Inap.	Inap.	Cloudy	
Corsicana, Tex.	.....	.....	30.22	767.6	59	10.0	64	N	16	7.2	.....	10k	0	N	.....	0	0	Cloudy	
Davenport, Iowa.	.....	.....	30.09	766.8	40	4.4	56	NW	8	3.6	.....	5cs	0	.....	.....	Inap.	Inap.	Fair	
Denison, Tex.	.....	.....	30.34	770.1	48	8.9	62	NW	16	7.2	.....	.....	10s	.....	NW	Inap.	Inap.	Cloudy	
Denver, Col.	25.63	37.8	30.25	768.3	35	1.7	70	S	4	1.8	.....	0	0	.....	.....	0.03	0.8	Fair	
Detroit, Mich.	.....	.....	30.7	763.8	38	3.3	63	N	3	1.3	.....	.....	10s	.....	NW	0	0	Cloudy	
Dodge City, Kan.	27.75	704.8	30.10	764.5	39	3.9	81	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa.	.....	.....	30.18	766.6	40	4.4	64	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Duluth, Minn.	.....	.....	30.17	766.3	39	3.9	72	SW	10	4.5	.....	.....	10s	.....	.....	0	0	Cloudy	
Eastport, Me.	.....	.....	29.44	747.5	38	3.3	89	NW	24	10.7	.....	.....	10s	.....	N	0.45	11.4	Cloudy	
Erie, Pa.	.....	.....	30.03	762.7	41	5.0	76	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Escanaba, Mich.	.....	.....	30.15	765.8	33	0.6	79	N	8	3.6	.....	.....	10s	.....	N	0	0	Cloudy	
Fort Gibson, Indian Terr.	.....	.....	30.25	768.3	41	6.7	75	N	14	6.3	.....	.....	10s	.....	N	0.04	1.0	Cloudy	
Ft. St. Michael, Alaska.	.....	.....	29.50	749.3	9	—12.8	.....	N	28	12.5	.....	.....	10s	.....	.....	.....	.....	Cloudy	
Fort Sill, Indian T.	.....	.....	.....	.....	.....	.....	.....	N	.....	.....	4	.....	10s	.....	N	0	0	Cloudy	
Fort Sully, Dakota.	29.10	739.1	30.25	768.3	45	7.2	85	N	8	3.6	.....	5ck	0	.....	.....	0	0	Fair	
Galveston, Tex.	28.55	725.2	30.29	769.4	34	1.1	79	SE	33	14.8	.....	5k	0	N	.....	0	0	Fair	
Grand Haven, Mich.	.....	.....	30.03	762.7	68	20.0	79	N	8	3.6	.....	.....	10s	.....	NW	0	0	Cloudy	
Indianapolis, Ind.	.....	.....	30.01	762.7	46	7.8	54	N	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Indianola, Tex.	.....	.....	30.10	764.5	64	17.8	73	N	38	17.0	.....	2ck	0	W	.....	0	0	Fair	
Jacksonville, Fla.	.....	.....	29.94	759.7	73	22.8	81	SW	8	3.6	.....	8k	0	SW	.....	0	0	Fair	
Keokuk, Iowa.	.....	.....	30.18	766.6	40	4.4	82	NW	7	3.1	.....	8k	0	NW	.....	0.12	3.0	Fair	
Key West, Fla.	.....	.....	30.01	762.2	78.5	25.8	73	S	5	2.2	.....	2k	0	SE	.....	0	0	Clear	
Kittyhawk, N. C.	.....	.....	29.97	761.2	51	10.6	64	E	8	3.6	.....	.....	10n	.....	E	Inap.	Inap.	Light rain	
Knoxville, Tenn.	.....	.....	29.83	757.7	43	7.8	92	Calm	0	0	.....	.....	10n	.....	NE	0.73	18.5	Light rain	
La Crosse, Wis.	.....	.....	30.17	766.3	43	6.1	51	N	6	2.7	.....	.....	10s	.....	N	0	0	Cloudy	
Leavenworth, Kan.	.....	.....	30.19	766.9	39	3.9	72	N	8	3.6	.....	0	0	.....	.....	0.57	14.5	Clear	
Lexington, Ky.	.....	.....	29.92	760.0	42	5.6	58	N	24	10.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Long Branch, N. J.	28.80	731.5	29.94	761.0	50	10.0	51	NW	12	5.4	.....	5c	0	W	.....	0	0	Fair	
Louisville, Ky.	.....	.....	29.94	761.0	50	10.0	51	N	16	7.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Lynchburg, Va.	.....	.....	29.94	760.5	47	8.3	48	N	16	7.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Malone, N. Y.	.....	.....	29.96	761.0	48	8.9	45	NE	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Manhattan, Kan.	.....	.....	29.88	758.9	39	3.9	81	NW	7	3.1	.....	10k	0	N	.....	0.70	17.8	Cloudy	
Marquette, Mich.	.....	.....	30.32	770.1	35	1.7	90	NW	12	5.4	.....	.....	10ks	.....	.....	0.20	5.1	Cloudy	
Memphis, Tenn.	29.12	739.6	30.17	766.3	38	3.3	54	NW	8	3.6	.....	8ck	0	W	.....	0	0	Cloudy	
Milwaukee, Wis.	.....	.....	30.03	762.7	48	8.9	85	N	11	4.9	.....	10s	5ks	N	N	0.88	22.4	Threatening	
Mobile, Ala.	.....	.....	30.28	769.1	36	2.2	53	E	10	4.5	.....	2c	0	N	.....	0	0	Clear	
Montgomery, Ala.	.....	.....	29.88	758.9	76	24.4	72	SW	8	3.6	.....	5k	5s	NW	W	0	0	Cloudy	
Morgantown, W. Va.	.....	.....	29.8	757.2	65.5	18.6	90	S	10	4.5	.....	10cs	Haze	W	.....	0.47	11.9	Cloudy	
Mt. Washington, N. H.	.....	.....	29.95	760.7	45	7.2	59	N	2	0.9	.....	10c	0	W	.....	0	0	Cloudy	
Nashville, Tenn.	23.20	589.3	29.76	756.8	18	— 7.8	100	NW	48	21.5	.....	.....	Fog	.....	.....	0	0	Foggy	
New Haven, Conn.	.....	.....	29.88	758.9	47	8.3	85	NW	7	3.1	.....	.....	10n	.....	N	0.33	8.4	Light rain	
New London, Conn.	.....	.....	29.89	759.2	50	10.0	44	NW	16	7.2	.....	0	0	.....	.....	Inap.	Inap.	Clear	
New Orleans, La.	.....	.....	29.87	758.7	51	10.6	39	NW	14	6.3	.....	2c	0	W	.....	0	0	Clear	
Newport, R. I.	.....	.....	29.88	758.9	75	23.9	81	SW	12	5.4	.....	8k	0	W	.....	0	0	Fair	
New York, N. Y.	.....	.....	29.82	757.4	48	8.9	49	W	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Norfolk, Va.	.....	.....	29.94	760.5	45	7.2	46	NW	9	4.0	.....	2c	0	.....	.....	0	0	Clear	
North Platte, Neb.	.....	.....	30.10	765.0	49	9.4	64	SE	2	0.9	.....	.....	10s	.....	.....	Inap.	Inap.	Threatening	
Omaha, Neb.	.....	.....	29.98	761.5	41	5.0	73	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	27.31	694.4	30.39	769.6	40	4.4	91	NW	7	3.1	.....	.....	10s	.....	NW	0.15	3.8	Cloudy	
Pembina, Dakota.	29.19	741.4	29.98	761.5	40	4.5	73	NW	6	2.7	.....	2cs	0	.....	.....	0	0	Fair	
Philadelphia, Penn.	.....	.....	30.17	766.3	29	— 1.7	88	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Pike's Peak, Colorado.	.....	.....	30.11	765.2	46	7.8	40	N	16	7.2	.....	5ck	0	W	.....	0	0	Fair	
Pittsburgh, Penn.	.....	.....	30.03	764.0	11	—11.7	61	NW	14	6.3	.....	2c	0	NW	.....	0.10	2.5	Fair	
Port Huron, Mich.	27.87	453.9	30.02	762.5	40	4.4	64	NE	6	2.7	.....	.....	10s	.....	NE	0	0	Cloudy	
Portland, Me.	.....	.....	30.06	763.5	37	2.8	80	NE	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Portland, Oregon.	.....	.....	29.71	754.6	46	7.8	40	NW	24	10.7	.....	5k	0	NW	.....	0	0	Fair	
Punta Rassa, Fla.	.....	.....	30.23	767.8	52	11.1	79	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Rochester, N. Y.	.....	.....	30.02	762.5	79.9	26.6	72	SW	12	5.4	.....	.....	8ks	.....	SW	0	0	Cloudy	
Salt Lake City, Utah	25.75	654.0	30.08	764.0	46	7.8	54	W	1	0.4	.....	0	Haze	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	29.97	761.2	42	5.6	58	NW	5	2.2	.....	2cs	0	.....	.....	0	0	Clear	
San Diego, Cal.	.....	.....	29.93	760.2	45	7.2	60	NW	16	7.2	.....	5c	0	NW	.....	0	0	Fair	
San Francisco, Cal.	.....	.....	30.00	762.0	53	11.7	100	Calm	0	0	.....	0	Fog	.....	.....	0	0	Foggy	
Santa Fe, N. M.	.....	.....	30.13	765.3	53	11.7	79	W	8	3.6	.....	Haze	2s	.....	.....	0	0	Hazy	
Savannah, Ga.	23.47	596.1	30.01	762.2	35	1.7	70	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Shreveport, La.	.....	.....	29.86	758.4	61	16.1	83	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Smithville, N. C.	.....	.....	30.11	765.5	53	11.7	80	.....	14	6.3	.....	.....	10s	.....	SW	0	0	Cloudy	
Springfield, Mass.	.....	.....	29.85	758.2	49	9.4	93	NE	10	4.5	.....	.....	10s	.....	N	0.03	0.8	Cloudy	
St. Louis, Mo.	.....	.....	29.85	758.2	59	10.0	58	NW	16	7.2	.....	2k	0	.....	.....	1.62	25.9	Cloudy	
St. Marks, Fla.	.....	.....	30.16	766.1	41	5.0	73	N	12	5.4	.....	.....	10s	.....	.....	0	0	Clear	
St. Paul, Minn.	.....	.....	29.96	761.0	73	22.8	85	W	12	5.4	.....	.....	10s	.....	.....	0.11	2.8	Cloudy	
St. Paul's Island, Alaska.	.....	.....	30.18	766.6	40	4.4	64	NW	6	2.7	.....	.....	10s	.....	W	0	0	Cloudy	
Thatcher's Island, Mass.	.....	.....	29.22	742.2	27	— 2.8	76	N	33	14.8	.....	1c	5k	.....	NW	0	0	Cloudy	
Toledo, Ohio.	.....	.....	29.72	754.9	46	7.8	60	NW	27	12.1	.....	0	0	.....	.....	0.52	13.2	.....	
Tucson, Arizona.	.....	.....	30.04	763.0	42	5.6	66	N	4	1.8	.....	.....	10ks	.....	.....	0	0	Clear	
Tybee Island, Ga.	27.58	700.5	30.17	766.3	59	15.0	.....	S	.....	.....	.....	0	0	.....	NW	0	0	Cloudy	
Vicksburg, Miss.	.....	.....	29.84	757.9	59	15.0	94	E	4	1.8	.....	.....	10s	.....	.....	0	0	Clear	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.02	0.5	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
Virginia City, M. T.	24.37	619.0	29.85	758.2	37	2.8	54	SE	4	1.8		8c	0	W		0	0	Cloudy.	
Washington, D. C.			30.03	762.7	48	8.9	45	N	8	3.6		6ck,c	1s	W	W	0	0	Fair.	
Wilmington, N. C			29.85	758.2	48	8.9	92	NE	9	4.0			10s		NE	0.47	11.9	Cloudy.	
Wood's Holl, Mass.			29.81	756.9	53	11.7	48	NW	20	8.9		1c	0	SW		0	0	Clear.	
Wytheville, Va.	27.52	699.0	29.68	753.9	43	6.1	75	SE	4	1.8			10n			Inap.	Inap.	Light rain.	
Yankton, Dakota	29.01	736.8	30.36	771.1	38	3.3	86	NW	8	3.6		0	0			0.05	1.3	Clear.	
Yuma, Arizona			29.88	758.9	74	23.3		E				0	0			0	0	Clear.	
SUB-SERIES.																			
Bridgetown, B'b'dos, W. I.			30.04	763.0	81	27.2	74	E	8	3.6		5k	5ks	E		0	0	Fair.	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.98	761.5	80	26.7	78	E				0	5k			0.60	15.2	Fair.	L. V. Bigard.
St. Thomas, S. T., W. I																			W. S. Cameron.
Kingston, Jamaica, W. I.			30.16	766.1	79	26.1	78	Calm	0	0		5ck	2s	SE		0	0		James Gall.
Santiago de Cuba, W. I.			29.76	755.9	79	26.1	78	NW	1.2	0.5		8c	0	NW		0.12	3.0	Fair.	Robert Mason.
Havana, Cuba, W. I.			29.99	761.7	80	26.7	74	Calm	0	0		0	0			0	0	Clear.	Charles Hasselbrink
St. Georges, Bermudas			30.08	764.0	69.5	20.8	82	SW	15.0	6.7		5ck	2k	SW		0	0	Fair.	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.18	690.4	29.96	761.0	70	21.1	84	NW	1.0	0.4		5c	0	NW		0	0	Fine.	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.03	762.7	78	25.6	91	E			3		7ks			0.400	10.16	Rainy.	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.04	763.0			77.9	25.5		NE								0.906	23.00		Dr. H. Groot.
Medellin, Colombia, S. A.	25.19	639.8			66.5	19.2	80	SW	5	2.2		6k	4s			0.01	0.3	Cloudy.	Thomas Herran.
St. John's, Newfoundland.			29.74	755.4	40.0	4.4	100	W				5k	5s			0	0	Fair.	John Delaney.
York Factory, B. A.			30.36	771.1	31	— 0.6	95	E	8	3.6		7k	0	E		0	0		J. Fortescue.
Honolulu, Oahu, H. I.																			Daniel Smith.
Makawao, Maui, H. I.	27.83	706.9	30.00	762.0	58	14.4	82	NE	2.4	1.1		2cs	0	NE		0	0	Threatening	F. L. Clarke.

MARINE SERIES.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	WEATHER.	OBSERVER
Steamer Hibernian, N. 44° 39′, W. 63° 34′.	At Halifax.		Rough		Showery	Lieut F. Archer, R.N.R.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City 4,268.8 ft., or 1,301.1 m.; Santa 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.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 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.
0:58 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.98	761.5	66.0	18.9	69	NNW			1		1			0	0	Clear	Charnot.
Algiers			29.99	761.7	71.2	21.8	67	N			1		2			Inap	Inap.	Clear	Peter.
La Calle					62.6	17.0		WNW			2		6			0.866	22.0	Fair	Kuntz.
Tunis			30.07	764.7	66.7	19.3	72	N			2		10			0.051	1.3	Hidden	Jacques.
Sfax			30.12	765.1	73.4	23.0	44	NE			4		2			0	0	Clear	Chauvey.
Saida			30.03	762.7	71.6	22.0	47	ESE			3		2			0.189	4.8	Clear	Millot.
Tebessa			30.05	763.3	58.6	14.8		SW			1		9			0.079	2.0	Hidden	Colin.
Gerfville			30.04	763.1	72.0	22.2	45	S			2		2			0.504	12.8	Clear	Buard.
Laghouat			30.06	763.4	62.6	17.0	61	NW			2		6			0	0	Fair	Guyot.
Biskra			30.14	765.5	75.4	24.1	51	NE			1		10			0.028	0.7	Hidden	Laromer.

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

AUSTRIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram			29.99	761.7	68.5	20.3	49	SW			2		4			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow					55.0	12.8	64	NE			1		9			0.008	0.2		I. R. Observatory.
Eperies			30.11	764.7	64.1	15.6	67	Calm			0		6		N	0	0		Julius Mikolik.
Gratz			30.02	762.4	64.1	15.6	67	SW			3		5			0	0		Andreas Rospini.
Hermannstadt	28.84	732.6	30.04	762.9	57.0	13.9	80	SW			4		6			0	0		Prof. Reissenberger.
Kremsmünster	28.52	724.2	29.93	760.3	66.2	19.0	56	WNW			1		10			0.138	3.5		Prof. C. Wagner.
Lemberg	28.71	729.3	30.07	763.8	48.9	9.4	74	NE			1		4			0	0		Dr. T. Stanecki.
Nyiregyhaza			30.02	762.4	55.4	13.0	65	NE			1		4						Habzsuda Daniel.
Pola													2Rs			0	0		I. R. Hydrographic Office
Szegedin			30.07	763.6	61.5	16.4	68	SW			1		0			0	0		Karl Stancel.
Trieste			30.01	762.3	68.5	20.2	75	E			1		2			0	0		Prof. V. Farolfi.
Vienna			30.06	763.1	62.4	16.9	60	Calm			0		2			0	0		I. R. Central Institute.
			30.01	762.2	57.1	14.1	69	SE			2		5			0	0		

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

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.23	767.9	48.4	9.1	68	N			1		10			0.006	0.15	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			30.30	769.6	49.9	9.9		NW	10	4.5			2			0	0	Blue sky	William Boswell.
Ardrossan			30.34	770.6	52	11.1		S			3		1					Blue sky	William McNeil.
Armagh Observatory			30.36	771.1	55.0	12.8		SW	7	3.1			0					Blue sky	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			30.34	770.6	49.2	9.6		WNW	13	5.8			1					Blue sky	John Hartnup.
Birr Castle, (Parsonstown)			30.35	770.9	56.5	13.6		SE			1		6					*D. clouds	J. Dreyer.
Bradford			30.28	769.1	54.1	12.3		NW			1		6			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.00	762.0	84.0	28.9		NE			3		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge Observatory			30.33	770.4	54.0	12.2		NNE			1		10					Overcast	H. Todd. [H. C.
Cardington			30.34	770.6	52.0	11.1		NE			1		4					*D. clouds	John McLaren.
Carlisle			30.30	769.6	56.9	13.8		NW			2		1			0	0	Blue sky	T. Bel . for J. Car mell.
Chatham, School M. E			30.36	771.6	52.0	11.1		NE			1		4					*D. clouds	Major C. N. Martin, R.E.
Dartmoor	24.85	732.8	30.34	771.6	48.6	9.2		E			4		3					*D. clouds	R. F. Power.
Donaghadee			30.33	770.4	58	14.4		SSW			2		2					*D. clou s	J. Mac Gowan.
Dover			30.31	769.6	48	8.9		ENE			4		5					½ c o ded	J. Costello.
Eccles, (near Manchester.)			30.31	769.9	55.5	13.1		SW	6.2	2.8								Hazy	Thomas Mackereth.
Falmouth Observatory			30.3	771.1	48.3	9.1		ESE	17	7.6			1					*D. clouds	Th Staff.
Fort Napier, (Natal)	27.84	707.1	30.07	763.8	68.0	20.0		NE			3		3					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.93	760.2	88	31.1		NE			1		6					*D. clouds	[tis.
Galway, Queen's College			30.34	770.4	58	14.4		WSW			1		0					Blu sky	B. G. Cl re, for Prof. Cur-
Gibraltar, (Mediterranean)			29.97	761.2	69.5	20.8		E			1		7					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			30.30	769.6	52.0	11.1		W			1		7					Fine	Lewis Stuart.
Great Yarmouth			30.44	770.6	49	9.4		NNE			3		4					*D. clouds	G. T. Watson.
Greenwich Royal Obs			30.32	770.1	53.3	11.8		NNE			1		8					*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.30	769.6	49	9.4		NE			3		3			Blank	Blank	*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			30.31	769.9	55.2	12.9		NW			1		5					*D. cl uds	L. J. Crosley.
Helston			30.30	769.6	55	12.8		E			6		0			0	0	Blue sky	M. P. Moyle.
Holyhead			30.37	771.4	49	9.4		NW			2		0					B ue sky	John Tilston.
Kew Observatory			30.33	770.4	50.2	10.1		NE	13	5.8			8					Hazy	The Staff.
Kingstown			30.36	771.6	49	9.4		ESE			2		2					Blue sky	George Mitchell.
Leicester Museum			30.30	771.1	52.0	11.1		Calm			0		1					Hazy	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.05	763.3	68.2	20.1		NE			1		6k						Sergt. F. Travis, A. H. C.
Nairn			30.25	768.3	57	13.9		Calm			0		0					Clear	W. D. Penny.
Nassau, (Bahamas)			30.03	762.7	80.4	26.9		SE			4		7					*D. clouds	Surg. Maj. Henry.
Nottingham			30.33	770.4	56.7	13.7		S			1		1ck		E	0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.33	770.4	53.8	12.1		NE			2		3					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.32	770.1	52	11.1		Calm			0		3					Blue sky	J. Lucas.
Plymouth			30.32	770.1	51.6	10.9		ENE			2		1					Blue sky	John Merrifield.
Roche's Point			30.35	770.9	53	11.7		SSE			4		2					Fine	W. Kennedy.
Saint Ann's Head			30.35	770.9	50	10.0		WSW			1		3					Blue sky	John C. Walker.
Saint Helier, Jersey			30.27	768.8	53	11.7		E			4		5					½ clouded	A. P. Amy.
Sandwick Manse (Orkneys)			30.27	768.8	46.4	8.0		W	20	8.9			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough			30.32	770.1	46.6	8.1		NNE			1		1					Blue sky	F. Shaw.
Scutari Cemetery, Turkey			29.94	760.5	73.6	23.1		NE			1		0					Blue sky	Sergt. W. H. Lyne.
Sheffield			30.29	769.4	53.7	12.1		NNE			1		5			0.007	0.18	Hazy	W. F. Cooper.
Silloth Rectory			30.33	770.4	55.9	13.3	56	W			6		2			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			30.31	769.9	53.3	11.8		W			2							Blue sky	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.			30.25	768.3	55	12.8		WSW			1		5					*D. clouds	John Smith.
Stratfield Turgiss			30.30	769.0	53.2	11.8		N			1		0					Blue sky	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			30.26	768.6	50	10.0		NW			2		6					*D. clou s	John Trotter.
Truro, Royal Institution			30.34	770.6	57	13.9		SE			6		4					*D. clouds	W. Newcombe.
Valencia Observatory			30.33	770.4	54.3	12.4		SSE	25	11.2			5					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man					52	11.1		W			2		0			0	0		
Cape Good Hope Obs			30.03	762.7	70.5	21.4	54	SE	12	5.4			7						The Staff, for E. J. Stone.
Leith, Restalrig Park			30.39	771.9	56.7	13.7		W			2	3ck				0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.08	764.0				ESE	15.1	6.8						0.02	0.5		C. Meldrum.
Melbourne, Observatory			30.47	773.9	50.3	10.2	78	ESE	9	4.0			7			0.01	0.3	Fine	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.26	768.6	50	10.0		S			3	5	0	SW		0	0		J. Youngclause.
North Unst, (Shetland Is.)			30.17	766.3	45	7.2		N			4	4	2	N					

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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			30.05	763.2	49.3	9.6	44	NW			2		1						
Fanöe			30.15	765.7	48.9	9.4	74	N			6		5						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.85	758.2	27.0	— 2.8	98	E			8		10						
Thorshavn, (Faröe)			29.98	761.6	43.0	6.1	90	Calm			0		10					Raining	
Vestervig			30.07	763.7	47.1	8.4	89	NW			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.
Agen	.....	.....	30.13	765.4	51.8	11	56	NE	.....	.....	3	.....	δnk	.....	NE	0	0	Cloudy.....	Normal School.
Amiens	.....	.....	30.21	767.3	51.1	10.6	71	E	.....	.....	6	.....	10	.....	.....	0.406	10.3	Covered	Normal School.
Avignon	.....	.....	30.10	764.6	56.1	13.4	60	NW	.....	.....	1	.....	8	.....	SW	0	0	Very cloudy	Normal School.
Bar-sur-Seine	.....	.....	30.15	765.8	45.9	7.7	79	ENE	.....	.....	2	.....	8	.....	.....	0.425	10.8	Light rain ...	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.19	766.8	49.1	9.5	61	NE	11.2	5.0	.....	.....	10	.....	NE	0.102	2.6	Covered.....	Beaumette Observatory
Beauvais	.....	.....	30.26	768.6	48.7	9.3	54	NE	.....	.....	3	.....	10	.....	NNE	0	0	Covered.....	Normal School.
Besançon	.....	.....	30.16	766.0	48.9	9.4	69	NE	.....	.....	2	.....	8	.....	SW	0.138	3.5	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	30.18	766.6	51.8	11	61	W	.....	.....	2	.....	..k	.....	NE	0	0	.....	Normal School.
Bourges	.....	.....	30.15	765.7	49.6	9.8	82	SW	.....	.....	2	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	30.20	767.1	49.8	9.9	54	ENE	.....	.....	3	.....	6k	.....	ENE	0.039	1.00	.....	Naval Observatory.
Caen	.....	.....	30.09?	779.4?	51.8	11	89	NW	.....	.....	6	.....	2	.....	S	0.12	3.	Slightly cl'dy	Normal School.
Carcassonne	.....	.....	30.11	764.8	55.8	13.2	67	NW	.....	.....	2	.....	5	.....	SE	0	0	Cloudy.....	Normal School.
Chartres	.....	.....	30.22	767.6	41.7	5.4	.....	ENE	.....	.....	2	.....	10	.....	.....	0.08	2.	Covered	Normal School.
Chaumont	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Clermont	.....	.....	30.15	765.7	47.1	8.4	64	N	.....	.....	1	.....	10	.....	.....	0.130	3.3	Covered	Puy de Dome Obs.
Commercy	.....	.....	30.16	766.0	47.3	8.5	64	.....	.....	.....	4	.....	10kn	.....	E	0.031	0.8	Covered	Normal School.
Commune de Gréasque*	.....	.....	29.93	760.2	57.2	14.0	57	NW	.....	.....	2	.....	10	.....	.....	0	0	Covered	M. Kina.
Grenoble	.....	.....	30.07	763.6	51.4	10.8	64	N W	.....	.....	6	.....	..k	.....	NE	0.106	2.70	.....	Normal School.
Le Mans	.....	.....	30.23	767.8	47.8	8.8	86	ESE	.....	.....	2	.....	2	.....	NE	0.010	0.4	Slightly cl'dy	Normal School.
Loches	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Lons-Le-Saulnier	.....	.....	30.16	766.1	52.7	11.5	59	S	.....	.....	2	.....	5	.....	S	0	0	.....	Normal School.
Mâcon	.....	.....	30.24	768.2	45.5	7.5	89	NW	.....	.....	3	.....	5	.....	W	0.185	4.7	Cloudy.....	Normal School.
Mirecourt	.....	.....	30.11	764.8	47.1	8.4	74	NE	.....	.....	2	.....	2	.....	SW	0	0	Slightly cl'dy	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	30.08	764.1	56.1	13.4	82	W	.....	.....	1	.....	5	.....	W	0.138	3.5	Cloudy.....	Normal School.
Orleans	.....	.....	30.15	765.7	47.5	8.6	63	NE	.....	.....	3	.....	8	.....	NE	0	0	Very cloudy	Normal School.
Paris Observatory	.....	.....	30.22	767.6	46.4	8.0	64	NE	.....	.....	4	.....	9	NE	ENE	0.065	1.65	Almost cov'd	National Observatory
Parthenay	.....	.....	30.11	764.9	50.3	13.5	77	NE	.....	.....	2	.....	10	.....	NE	0.08	2.	Cloudy.....	Normal School.
Privas	.....	.....	30.10	764.6	53.6	12	.....	S	.....	.....	2	.....	5	.....	S	0	0	Cloudy.....	Normal School.
La Roche-sur-Yon	.....	.....	29.95	760.8	58.2	11.8	63	NE	.....	.....	2	.....	2	.....	SW	0.134	3.4	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.17	766.4	58.8	14.9	46	E	.....	.....	3	.....	8	.....	W	0	0	½ Covered...	Naval Observatory.
Rouen	.....	.....	30.25	768.4	51.4	10.8	61	NNE	.....	.....	3	.....	5	.....	NE	0	0	Cloudy.....	Normal School.
Saint Lo	.....	.....	29.99	761.7	48.2	9	73	E	.....	.....	1	.....	9	.....	E	0.08	2.	.....	Normal School.
Tarbes	28.92	734.6	30.01	762.3	54.5	12.5	.....	W	.....	.....	2	.....	10	.....	.....	0	0	Raining.....	Normal School.
Toulouse	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Villefranche	.....	.....	30.25	768.3	55.6	13.1	68	SW	.....	.....	3	.....	5	.....	N	0.362	9.20	Cloudy.....	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.88	759.0	79.2	26.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Gorée	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marseilles	.....	.....	30.11	764.7	57.7	14.3	68	W	.....	.....	1	.....	10	.....	.....	0	0	Covered	Marseilles Observatory.
Mont-Louis	24.78	629.5	30.10	764.5	34.7	1.5	100	SE	5.6	2.50	.....	.....	10	.....	.....	0.055	1.4	.....	—. Falguère.
Montsouris, Paris	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montsouris Observ'tory.
Perpignan	.....	.....	30.10	764.4	53.4	11.9	67	SE	5.6	2.50	.....	.....	10	.....	.....	0	0	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.21	767.2	50.9	10.5	65	NE	.....	.....	2	.....	7	.....	.....	0.091	2.3	Cloudy.....	E. Renou.
Toulouse	.....	.....	30.14	765.5	49.6	9.8	70	NW	.....	.....	1	.....	9	.....	.....	0.016	0.4	.....	Toulouse Observatory.
Tours	.....	.....	30.18	766.6	53.6	12.0	54	NNE	.....	.....	3	.....	8	.....	N	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.22	767.5	45.0	7.2	81	E	.....	.....	2	.....	10	.....	.....	0.081	2.04	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.11	764.9	61.0	16.1	96	E	5.2	2.3	.....	.....	10k	.....	.....	{ 0 / 0	{ 0 / 0	.....	H. Le Lec, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,089.9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,430.1 feet; Pic du Midi, (Plantade,) 2,368 m., or 7,767.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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.

Bamberg	.....	.....	30.04	763.0	48.7	9.3	68	NW	.....	.....	4	.....	10	.....	.....	0.04	1.	.....	Prof. T. Hoh.
Berlin	.....	.....	30.16	766.1	50.5	10.3	54	S	.....	.....	1	.....	8	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.18	766.5	51.1	10.4	46	NW	.....	.....	5	.....	10	.....	.....	0	0	.....	Dr. P. Sonntagbauer
Carlsruhe	.....	.....	30.15	765.8	46.0	7.8	83	E	.....	.....	1	.....	10	NE	.....	0.043	1.1	Raining.....	A. Senz.
Cassel	.....	.....	30.24	768.2	51.5	12.5	49	NNW	.....	.....	5	.....	9	NW	.....	0	0	Sprinkling..	Dr. H. Möll.
Cologne	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Garthe.
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.24	768.1	54.5	12.5	32	NE	.....	.....	2	.....	5	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	28.73	729.8	30.21	767.2	45.0	7.2	82	NE	.....	.....	2	.....	.....	.....	.....	0.614	15.6	.....	M. Wilhelm.
Hamburg	.....	.....	30.19	766.7	48.1	7.8	76	NW	.....	.....	2	.....	10	.....	.....	0.106	2.7	Rain and hail	Captain F. Hegemann.
Kiel	.....	.....	30.12	765.0	51.4	10.8	80	WSW	.....	.....	2	.....	8	.....	.....	0.031	0.8	.....	Prof. G. Karsten.
Königsberg	.....	.....	30.04	763.0	46.2	7.9	88	W	.....	.....	5	.....	9	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	30.04	764.1	45.1	7.3	.....	W	.....	.....	3	.....	2	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.20	767.1	46.6	8.1	86	NNW	.....	.....	2	.....	8	NW	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	30.02	762.6	44.8	7.1	80	W	.....	.....	5	.....	10	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.25	768.3	48.7	9.3	64	NW	.....	.....	2	.....	10	.....	.....	0.047	1.2	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.00	762.0	51.1	10.6	69	W	.....	.....	4	.....	9	.....	.....	0	0	.....	A. Lothes.
Posen	.....	.....	30.18	766.5	52.7	11.5	48	NW	.....	.....	7	.....	10	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.16	766.1	50.7	10.3	72	NE	.....	.....	2	.....	10	NE	.....	0.055	1.4	.....	Dr. Schur.
Stuttgart	.....	.....	30.13	765.3	48.7	9.3	57	E	.....	.....	1	.....	9	.....	.....	0.008	0.2	Light rain....	Prof. Schoder.
Thorn	.....	.....	30.10	764.4	52.7	11.5	56	W	.....	.....	4	.....	9	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.13	765.4	5[illegible]	10.0	51	E	.....	.....	2	.....	10	.....	.....	0.035	0.9	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	30.07	763.7	46.2	7.9	73	NW	.....	.....	2	.....	10	.....	.....	0.004	0.1	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Upper. 0–10.	Clouds. Amount. Lower. 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Udine			30.02	762.5	63.0	17.2	48	SW	3.8	1.7			3			0	0		
Padua			30.02	762.4	63.0	17.2	43	SSW	4.9	2.2			8			0	0		
Vicenza			30.01	762.2	63.1	17.3	46	S	1.8	0.8			3	E		0	0		
Verona			29.99	761.8	62.9	17.7	59	E			1		10			0	0		
Bergamo	28.64	727.4	29.96	760.9	58.1	14.5	46	NE			6		5			0.150	3.8		
Domodossola	28.99	736.4	30.02	762.4	54.5	12.5	73	E			1		5			0.146	3.7		
Milan			29.99	761.7	63.0	17.2	56	SSW			1		10	SSW		0	0		
Pavia			29.97	761.3	62.8	17.1	44	NE			4		5	SW		0.094	2.4		
Moncalieri			29.98	761.6	61.2	16.2	44	E	4.9	2.2			8	SE		0	0		
Mondovi	28.05	712.4	29.97	761.1	59.0	15.0	61	ESE			5		7	SW		0.016	0.4		
Porto Maurizio			30.09	764.3	61.0	16.1	64	SW			6		3	ENE		0	0		
Genoa			30.06	763.5	61.7	16.5	57	SW	6.3	2.8			4	SW		0	0		
Piacenza			29.98	761.6	64.6	18.1	34	E			4		6			0	0		
Parma			30.00	762.0	66.4	19.1	43	SW			6		5			0	0		
Bologna			30.05	763.3	66.6	19.2	42	SSW			8		4	NW		0	0		
Florence			30.09	764.2	66.2	19.0	38	NW			4		3	W		0	0		
Leghorn			30.08	764.1	64.4	18.0	43	SW	11.2	5.0			1			0	0		
Siena	28.85	732.8	30.05	763.2	64.8	18.2	38	SSE	0.7	0.3			8	W		0	0		
Urbino	28.52	724.4	30.08	763.9	61.9	16.6	39	SW			4		6			0	0		
Pesaro																			
Ancona			30.07	763.8	64.4	18.0	55	E			4		2			0	0		
Grosseto			30.09	764.3	68.0	20.0	54	ENE			4		6	S		0	0		
Rome			30.11	764.7	67.3	19.6	46	SSW	3.8	1.7			3			0	0		
Naples, O. U.			30.14	765.6	67.3	19.6	39	NW			2		2	W		0	0		
Lecce			30.07	763.7	67.1	19.5	25	NE	6.3	2.8			4			0	0		
Cosenza			30.03	762.7	75.9	24.4	77	ESE	0	0			3			0	0		
Riposto (Sicily)			29.95	760.7	67.5	19.7	79	SE			2		1			0	0		
Palermo			30.02	762.6	64.8	18.2	60	NE	7.4	3.3			6			0	0		
Caltanissetta	28.10	713.7	30.01	762.2	66.4	19.1	38	SSE			4		2	N		0	0		
Sub-Series.																			
Naples, S. R.			30.12	765.1	68.9	19.4	46	SW	4.9	2.2			8	SW		0	0	Foggy	Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.6 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

NETHERLANDS' SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Upper. 0–10.	Clouds. Amount. Lower. 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.31	769.9	50.7	10.4		NE			4								
Groningen			30.18	766.6	47.1	8.4		N			4								
Helder			30.27	768.8	45.7	7.6		NNW			4								
Utrecht			30.23	767.8	50.5	10.3	50	NNE			3		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Upper. 0–10.	Clouds. Amount. Lower. 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Bergen			30.08	763.9	44.2	6.8	66	NNW	14.1	6.3			8			0	0		
Bröno			29.89	759.2	42.8	6.0	56	W	20	9			6			0.024	0.6		
Christiania			29.93	760.3	53.6	12.0	22	WNW	9.8	4.4			6			0	0		
Tromsö			29.76	756.0	41.9	5.5	50	E	0	0			9			0	0		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.24	768.1	63.3	17.4	88	WSW	3.2	1.45	.....	.....	5	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.96	761.0	65.5	18.6	50	SW	9.1	4.08	.....	.....	8	SW	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.12	765.0	66.4	19.1	40	SW	5.6	2.60	.....	.....	8	.....	.....	0	0	.....	Capt D. A. da Cunha.
Lisbon	.....	.....	30.03	762.7	60.8	16.0	57	NW	13.6	6.1	.....	.....	8	SW	.....	0	0	.....	The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h. 6 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	.....	.....	30.09	764.3	52.0	11.1	64	W	7	3	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.01	762.2	47.8	8.8	74	W	13	6	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.78	756.3	53.1	11.7	69	NNW	11	5	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.75	755.6	46.9	8.3	74	E	13	6	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.80	757.0	42.9	6.0	84	ESE	7	3	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.97	761.3	69.8	21.0	40	WNW	9	4	.....	.....	2	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.10	764.5	83.1	28.4	31	W	11	5	.....	.....	2	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.01	762.3	77.0	25.0	53	NE	9	4	.....	.....	0	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.82	757.3	65.3	18.5	58	SSW	9	4	.....	.....	2	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.00	762.0	78.8	26.0	24	SW	9	4	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.99	761.7	43.0	6.1	56	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.70	729.1	30.06	763.4	75.9	24.4	29	SE	9	4	.....	.....	8	.....	.....	.....	.....	.....	Physical Observatory.
Astrachan	.....	.....	30.20	767.1	76.8	24.9	24	ENE	13	6	.....	.....	0	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.08	764.0	48.4	9.1	66	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tchernischef.
Ekaterinburg	28.95	735.3	29.98	761.6	33.3	0.7	92	NW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.97	761.1	84.2	29.0	13	E	9	4	.....	.....	8	.....	.....	.....	.....	.....	
Kasalv	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bolrof.
Tashkend	28.48	723.4	30.13	765.3	72.0	22.2	55	NW	9	4	.....	.....	7	.....	.....	.....	.....	Thunder-storm	Michelson.
Barnaul	.....	.....	29.81	757.0	42.9	5.9	82	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.81	757.1	31.6	— 0.2	46	E	4	2	.....	.....	10	.....	.....	.....	.....	.....	Marks.
Irkutsk	28.52	724.3	29.95	760.7	27.7	— 2.4	42	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Pekling, (China)	.....	.....	30.15	765.7	68.0	20.0	42	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	36.7	2.6	91	E	4	2	.....	.....	10	.....	.....	.....	.....	Raining	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 401 meters, or 1,315.8 feet; Ekaterinburg, 275.12 m., or 1,005.22 ft.; Tashkend, m. 434.22, or 1,621.32 ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.02 m., or 1,942.22 ft.; Oorga, 1,281.06 m., or 4,202.62 ft.

SPANISH SERIES.

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

Madrid	.....	.....	29.87	758.6	68.0	20.0	39	SW	20.0	9.00	.....	0	6	.....	.....	0	0	Cloudy	Royal Observatory.
San Fernando	.....	.....	30.01	762.3	64.0	17.8	62	W	6.5	2.9	.....	3	7	W	W	0	0	.....	The Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight; 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	.....	.....	29.90	759.5	41.0	7.0	89	E	.....	.....	2	.....	10	.....	.....	0	0	.....	
Umea	.....	.....	29.82	757.3	34.9	1.6	96	NNE	.....	.....	2	.....	10	.....	.....	0	0	Snowing	
Hernosand	.....	.....	29.81	757.2	43.9	6.6	61	ENE	.....	.....	2	.....	8	.....	.....	0.020	0.5	.....	
Stockholm	.....	.....	29.84	757.8	39.0	4.2	71	N	.....	.....	4	.....	9	.....	.....	0.28	7.1	.....	
Wisby	.....	.....	29.97	761.1	36.7	2.6	100	NW	.....	.....	6	.....	10	.....	.....	0.024	0.6	Raining	
Sub-Series.																			
Upsala	.....	.....	29 86	758.4	39.7	4.3	76	NNW	10.7	4 8	.....	.....	1	.....	NW	0.011	0.28	.....	Dr. Hildebrandsson.

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

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28.67	728.2	30.10	764.6	52.5	11.4	51	WSW	.....	.....	2	.....	7	.....	.....	0.016	0.4	Cloudy.....	The Observatory.
Zurich	28.47	723.0	30.21	767.4	44.4	6.9	80	NW	.....	.....	1	.....	9	.....	.....	0.709	18.0	Cloudy.....	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +3.7 mm.; Thermometer, —3.3 cent.; Relative Humidity, —7 per cent.

NOTE.—The originals give the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople	.....	.....	30.04	763.0	84.2	29.0	.....	SE	.....	.....	1	.....	10	.....	.....	Blank	Blank	.....	
Fao, (Persian Gulf)	.....	.....	29.99	761.8	77.7	25.4	.....	S	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.00	762.0	72.1	22.3	.....	W	.....	.....	1	.....	2	.....	.....	.....	.....	.....	
Valona	.....	.....	30.04	763.0	69.8	21.0	.....	N	.....	.....	3	.....	0	.....	.....	.....	.....	Foggy.....	
Varna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.93	760.1	73.8	23.2	76	N	.....	.....	2	.....	2k	.....	N	0	0	Fair.....	Prof. C. V. A. Van Dyck.

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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 the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	30.13	765.3	36.8	2.7	88	Calm	0	0	.....	.....	.....	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.04	763.0	43	6.1	.....	N	1	0.4	.....	.....	10s	.....	.....	0.10	2.5	Light rain...	W. R. Bigg.
*Chatham, N. B	.....	.....	30.14	765.5	40	4.4	64	N	1	0.4	.....	2k	8ks	N	N	0	0	Cloudy.....	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.08	764.0	36	2.2	80	N	11	4.9	.....	8cs	0	.....	.....	0	0	Cloudy.....	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.98	761.5	40.0	4.4	95	E	.....	.....	1	.....	10n	.....	.....	Inap.	Inap.	Rainy.....	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.17	766.3	43.5	6.4	43	Calm	.....	.....	0	9cs	...	.....	.....	0	0	.....	H. A. Johnson.
Esquimault, B. C	.....	.....	30.17	766.3	41.6	5.3	92	NE	1	0.4	.....	1cs	.....	.....	.....	0	0	Clear.....	W. H. Bevis.
Fredericton, N. B	.....	.....	30.13	765.3	38.1	3.4	71	N	3	1.3	.....	.....	10s	.....	.....	Inap.	Inap.	Fair.....	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.07	763.8	34	1.1	89	NE	12	5.4	.....	.....	10ks	.....	N	0.34	8.6	Cloudy.....	James Stewart.
Goderich, Ontario	.....	.....	30.01	762.2	38.5	3.6	79	Calm	.....	.....	0	.....	.....	.....	.....	0	0	Clear.....	H. J. Strang, M. A.
Granton, Ontario	.....	.....	29.96	761.0	40.0	4.4	.....	Calm	.....	.....	0	.....	.....	.....	.....	0	0	Clear.....	James Grant.
*Halifax, N. S	.....	.....	30.03	762.7	41	5.0	69	NE	10	4.5	.....	2cs	2ks	.....	N	0.03	0.4	Fair.....	F. Allison, M. A.
*Kingston, Ontario	.....	.....	30.00	762.0	44	6.7	80	Calm	0	0	.....	8cs	0	.....	.....	0	0	Cloudy.....	S. Woods, M. A.
Little Current, Ontario	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. B. Abrey, C. E.
*Montreal, Quebec	.....	.....	30.01	762.2	41	5.0	72	NE	4	1.8	.....	Haze	8ks	.....	.....	0	0	Cloudy.....	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.00	762.0	40	4.4	82	E	10	4.5	.....	.....	10n	.....	E	0.05	1.3	Light rain ...	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.97	761.2	38	3.3	81	E	2	0.9	.....	2ck	5s	W	W	0	0	Fair.....	Rev. R. Mooley.
*Port Dover, Ontario	.....	.....	29.98	761.5	40	4.4	73	N	3	1.3	.....	0	0	.....	.....	0	0	Clear.....	H. Morgan.
Port Hastings, N. S	.....	.....	30.01	762.2	34.4	1.3	.....	NW	16	7.2	.....	.....	.....	.....	.....	0	0	Fine.....	Peter Grant.
*Port Stanley, Ontario	.....	.....	29.99	761.7	39	3.9	73	N	7	3.1	.....	0	0	.....	.....	0	0	Clear.....	M. Payne.
*Quebec, Quebec	.....	.....	30.09	764.3	39	3.9	64	NE	1	0.4	.....	.....	10n	.....	NE	0	0	Cloudy.....	Capt. Ash, R. N.
St. John, N. B	.....	.....	30.15	765.8	34	1.1	89	N	1	0.4	.....	.....	10ks	.....	.....	0	0	Cloudy... ...	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.95	760.7	41	5.0	74	Calm	0	0	.....	5ks	0	.....	.....	0	0	Fair.....	K. Stewart.
Stayner, Ontario	.....	.....	29.94	760.5	43	6.1	57	Calm	0	0	.....	5ck	0	.....	.....	0	0	Fair.....	R. J. Cole.
Stratford, Ontario	.....	.....	29.96	761.0	37.1	2.8	77	N	3	1.3	.....	.....	.....	.....	.....	0	0	Fine.....	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.01	762.2	35	1.7	80	N	12	5.4	.....	4k	5ks	N	N	0.12	3.0	Fair.....	T. C. Hill.
*Toronto, Ontario	.....	.....	29.97	761.2	43	6.1	59	NW	13	5.8	.....	5ck	0	W	.....	0	0	Fair.....	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.96	761.0	40.1	4.5	74	Calm	.....	.....	0	0	0	.....	.....	0	0	Fine.....	J. Montgomery
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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NOTE.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 m.

UNITED STATES SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	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 the past 24 hours. Inches	Millimeters.	Weather.
Albany, N. Y.			29.94	760.5	48	8.9	77	NE	2	0.9			10n			0.02	0.5	Light rain
Alpena, Mich.			29.92	76?.0	41	5.0	57	NW	3	1.3		5ck	0	NW		0	0	Fair
Atlantic City, N. J.			29.90	759.4	46	7.8	85	NE	18	8.0			10n		E	0	0	Light rain
Augusta, Ga.			29.98	761.0	51	10.6	79	N	8	3.6			10ks		N	0.42	10.7	Cloudy
Baltimore, Md.			29.93	760.2	50	10.0	64	NE	1	0.4			10s			Inap.	Inap.	Cloudy
Barnegat, N. J.			29.91	759.7	46	7.8	76	E	14	6.3			10n		E	Inap.	Inap.	Light rain
Benton, Montana	27.07	687.6	29.87	758.7	41	5.0	73	SE	9	4.0			10n		SE	0.47	11.9	Light rain
Bismarck, Dakota	28.25	717.5	29.96	761.0	30	−1.1	48	N	4	1.8		Haze	Haze			0	0	Hazy
Boston, Mass.			30.01	762.2	45	7.2	76	NE	7	3.1		10ck	Haze	NE		0	0	Cloudy
Breckenridge, Minn			29.88	758.9	31	−0.6	90	N	20	8.0			10s		N	0.17	4.3	Cloudy
Buffalo, N. Y.			29.94	760.5	38	3.3	81	SW	3	1.3		2c	0	NW		0	0	Fair
Burlington, Vt.			29.94	760.5	46	7.8	69	SE	4	1.8			10s			0	0	Cloudy
Cairo, Ill.			30.??	764.3	50	10.0	64	Calm	0	0		0	0			0	0	Clear
Cape Hatteras, N. C.			29.75	755.6	49	9.4	93	NE	13	5.8			10n		NE	0.97	24.6	Light mist
Cape Henry, Va.			29.90	759.4	46	7.8	88	N	14	6.3			10n		N	1.00	25.4	Light rain
Cape Lookout, N. C.			29.78	756.4	49	9.4	100	N	24	10.7			10n		N	0.80	20.3	Light rain
Cape May, N. J.			29.89	759.2	47	8.3	69	NE	10	4.5			10s			0	0	Threatening
Charleston, S. C.			29.87	758.7	50	10.0	86	N	11	4.9			10s		N	0.73	18.5	Cloudy
Cheyenne, Wyoming	23.80	604.5	29.74	755.4	43	6.1	48	N	4	1.8			10s		W	0	0	Cloudy
Chicago, Ill.			29.93	760.2	42	5.6	74	S	3	1.3		0	0			0	0	Clear
Cincinnati, Ohio			29.97	761.2	44	6.7	75	Calm	0	0		0	Fog			0	0	Clear
Cleveland, Ohio			29.99	761.7	40.3	4.?	71	W	4	1.8		0	Sm'e		W	0	0	Smoky
Colorado Springs, Col.	23.90	607.0	29.78	756.4	41	5.0	33	NW	2	0.9		1c	8s			0	0	Cloudy
Corsicana, Tex.			30.17	766.3	45.6	7.6	85	SE	1	0.4		0	0			0	0	Clear
Davenport, Iowa			29.94	760.5	43	6.1	75	SW	4	1.8		5ck	0	NW		0	0	Fair
Denison, Tex.			30.11	764.8	56	13.3	62	S	12	5.4		0	0			0	0	Clear
Denver, Col.	24.55	623.6	29.77	756.1	45	7.2	24	S	6	2.7		8cs	0	W		0	0	Cloudy
Detroit, Mich			29.98	761.0	46	7.8	54	E	4	1.8		0	0			0	0	Clear
Dodge City, Kan.	27.24	691.9	29.50	749.3	47	8.3	69	SE	16	7.2		8c	0			0	0	Fair
Dubuque, Iowa			29.90	759.4	42	5.6	74	S	8	3.6			10s			0	0	Cloudy
Duluth, Minn.			29.77	756.9	34	1.1	90	NE	24	10.7			10n			0.58	14.7	Heavy snow.
Eastport, Me.			30.08	764.0	28	−2.2	71	N	4	1.8			10s			0.01	0.3	Cloudy
Erie, Pa.			29.95	760.7	41	5.0	83	SW	4	1.8		2c	0			0	0	Clear
Escanaba, Mich			29.94	760.5	36	2.2	70	N	1	0.4		8cs	0	N		0	0	Fair
Fort Gibson, Indian Terr.			30.16	765.5	48	8.9	85	SE	4	1.8		0	0			0	0	Clear
Ft. St. Michael, Alaska			29.20	741.?	28	−3.3		N	10	8.5			10s			Blank	Blank	Cloudy
Fort Sill, Indian T.	28.21	716.?	29.94	76?.5	43	6.1	75	S			4	0	0			0	0	Clear
Fort Sully, Dakota	28.31	719.1	30.01	763.?	28	−2.2	77	NW	6	2.7		0	0			0	0	Clear
Galveston, Tex.			30.17	766.3	55	12.8	68	NE	8	3.6		0	0			0	0	Clear
Grand Haven, Mich.			29.91	76?.5	43	6.1	70	Calm	0	0		0	10s		W	0	0	Cloudy
Indianapolis, Ind.			30.00	762.0	43	6.1	75	Calm	0	0		0	0			0	0	Clear
Indianola, Tex.			30.18	766.6	60	15.?	68	E	18	8.0		1c	0			0	0	Clear
Jacksonville, Fla.			29.91	759.7	63	17.2	78	W	5	2.2		5k	5s	W	W	0.37	9.4	Fair
Keokuk, Iowa			29.94	760.0	50	10.0	68	SW	8	3.6		0	0			0	0	Clear
Key West, Fla.			29.98	761.5	79	26.2	69	NW	4	1.8		1cs	0			0	0	Clear
Kittyhawk, N. C.			29.8?	758.4	46	7.8	92	NE	20	8.9			10n		NE	1.05	26.7	Light rain
Knoxville, Tenn			30.01	762.2	45	7.	70	NE	8	3.6		0	Haze			0.21	5.3	Fair
La Crosse, Wis.			29.79	756.7	41	5.	73	S	16	7.2			10s		S	0.38	9.7	Cloudy
Leavenworth, Kan			29.9?	759.4	47	8.3	60	SW	15	6.7		0	0			0	0	Clear
Lexington, Ky.	28.92	734.6	30.04	763.0	44	6.7	67	N	4	1.8		0	0			0	0	Clear
Long Branch, N. J.			29.94	760.5	46	7.8	89	NE	14	6.3			10s			0	0	Cloudy
Louisville, Ky.			30.01	762.2	49	9.4	57	NW	1	0.4		0	0			0	0	Clear
Lynchburg, Va.			29.91	759.?	48	8.9	7?	N?	4	1.8		5k	5s	W	NW	0.15	3.8	Cloudy
Malone, N. Y.			29.91	76?.5	45	7.2	9?	Calm	0	0			10ks			0.10	2.5	Cloudy
Manhattan, Kan.	28.75	73?.2	29.89	759.2	48	8.9	85	SW	20	8.9		0	0			0	0	Clear
Marquette, Mich			29.95	760.7	35	1.7	80	Calm	0	0		8cs	0			0	0	Fair
Memphis, Tenn.			30.13	765.3	51	10.6	75	NW	2	0.9		0	0			0	0	Clear
Milwaukee, Wis.			29.97	761.2	40	4.4	49	S	3	1.3		10s	Fog	SW		0	0	Cloudy
Mobile, Ala.			30.11	764.8	51	10.?	75	N	8	3.6		0	0			0.35	8.9	Clear
Montgomery, Ala.			30.07	763.8	51.5	10.8	65	N	11	4.9		0	Haze		N	0.06	1.5	Clear
Morgantown, W. Va.			29.94	760.5	47	8.3	64	N	2	0.9		0	0			0	0	Clear
Mt. Washington, N. H.	23.6?	6?1.0	30.02	762.5	26	−3.3	100	NE	5	2.2			Fog			0	0	Foggy
Nashville, Tenn.			30.05	763.3	50	10.0	64	NW	4	1.8		0	Haze			0.02	0.5	Clear
New Haven, Conn.			29.98	761.5	51	10.?	50	NE	8	3.6		Haze	10s			0	0	Cloudy
New London, Conn.			29.98	761.5	48	8.9	60	E	10	4.5			10s		SW	0	0	Cloudy
New Orleans, La.			30.14	765.5	57	13.9	57	NE	12	5.4		2k	0	NE		0.15	3.8	Clear
Newport, R. I.			29.98	761.5	48	8.9	55	E	8	3.6			10ks		SW	0	0	Cloudy
New York, N. Y.			29.94	760.5	48	8.9	64	NE	11	4.9			10s			0	0	Cloudy
Norfolk, Va.			29.91	759.7	43.5	6.4	87	N	6	2.7			10n			0.72	18.3	Heavy rain
North Platte, Neb.	26.88	682.7	29.45	748.0	38	3.3	80	N	19	8.5			10s		N	0	0	Cloudy
Omaha, Neb.	28.75	730.2	29.81	757.2	47	8.3	77	W	5	2.2		2ck	0			0	0	Clear
Oswego, N. Y.			29.96	76?.0	44	6.7	67	W	1	0.4			10s		SE	0	0	Cloudy
Pembina, Dakota			29.97	761.2	34	1.1	89	NW	12	5.4			10s		NW	0	0	Cloudy
Philadelphia, Penn			29.94	760.5	47	8.3	55	E	12	5.4		10cs	0			0	0	Cloudy
Pike's Peak, Colorado	17.65	448.3	29.86	758.4	19	−7.2	54	SW	38	17.0		2c	2s	W		0	0	Fair
Pittsburgh, Penn.			29.98	761.0	42	5.6	65	NW	6	2.7		0	0			0	0	Clear
Port Huron, Mich.			29.97	761.2	39	3.9	81	Calm	0	0		8ck	2s	W		0	0	Cloudy
Portland, Me.			30.11	764.8	41	5.0	74	E	12	5.4			10s			0	0	Cloudy
Portland, Oregon			30.20	769.4	49	9.4	85	S	3	1.3			10s			0.03	0.8	Cloudy
Punta Rassa, Fla.			29.95	760.7	79.6	26.4	74	SW	20	8.9			8ks		SW	0	0	Cloudy
Rochester, N. Y.			29.94	760.4	46	7.8	61	W	3	1.3			10s		W	0	0	Cloudy
Salt Lake City, Utah	25.51	647.9	29.85	758.2	51	10.6	59	NW	16	7.2			10s		SW	0.04	0.5	Cloudy
Sandy Hook, N. J.			29.93	760.2	48	8.9	71	NE	12	5.4			10s			0	0	Cloudy
San Diego, Cal.			29.9?	759.4	57	13.9	100	Calm	0	0			Fog			0	0	Foggy
San Francisco, Cal.			30.06	763.5	52	11.1	75	SW	4	1.8		Haze	Haze			0	0	Hazy
Santa Fe, N. M.	23.20	589.3	29.71	755.4	42	5.6	65	SE	5	2.2		1ck	2cs	SW		0	0	Fair
Savannah, Ga.			29.92	760.0	51	10.6	86	N	16	7.2			10ks		NW	1.02	25.9	Cloudy
Shreveport, La.			30.2?	767.1	50	10.	86	Calm	0	0		0	0			0	0	Clear
Smithville, N. C.			29.81	757.2	47	8.?	92	N	12	5.4			10n			1.09	27.7	Light rain
Springfield, Mass.			29.97	761.2	50	10.0	64	E	4	1.8			10s			0	0	Cloudy
St. Louis, Mo.			30.05	763.3	48	8.9	70	W	4	1.8		0	0			Inap.	Inap.	Clear
St. Marks, Fla			29.90	761.7	54	12.	67	N	15	6.7		8k	0	N		0.25	6.3	Fair
St. Paul, Minn.			29.71	754.6	35	1.7	85	NW	14	6.3			10n		NW	0.21	5.3	Light rain
St. Paul's Island, Alaska			29.77	756.1	23	−5.	73	NW	10	4.5			10k			Inap.	Inap.	
Thatcher's Island, Mass.			30.03	762.7	45	7.2	76	E	7	3.1			10s		NW	0	0	Cloudy
Toledo, Ohio			29.94	76?.2	48	8.9	63	S	2	0.9		0	Haze			0	0	Clear
Tucson, Arizona	27.37	693.7	29.98	761.0	60	15.6		S				2c	0	W		0	0	Fair
Tybee Island, Ga.			29.84	758.9	51	10.6	86	NW	16	7.2			10ks		NW	2.14	54.4	Cloudy
Vicksburg, Miss.			30.18	766.?	54	12.?	70	N	4	1.8		2k	0	N		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.	24.10	612.1	29.58	751.3	33	0.6	89	W	8	3.6	.....	.....	10n	.....	W	0.30	7.6	Light snow.	
Washington, D. C.	.....	.....	29.90	759.4	50.5	10.3	64	N	8	3.6	.....	.....	10s	.....	N	0	0	Cloudy	
Wilmington, N. C	.....	.....	29.82	757.4	45	7.2	100	N	12	5.4	.....	.....	10n	.....	.....	0.54	13.7	Light rain	
Wood's Holl, Mass.	.....	.....	29.98	761.5	47	8.3	61	E	12	5.4	.....	2k	8s	W	E	0	0	Cloudy	
Wytheville, Va.	27.55	699.8	29.71	754.6	44	6.7	75	Calm	0	0	.....	.....	10ks	.....	NW	0.18	4.6	Cloudy	
Yankton, Dakota	28.62	726.9	29.93	760.2	36	2.2	61	N	11	4.9	.....	2c	0	W	.....	0	0	Fair	
Yuma, Arizona	.....	.....	29.72	754.9	80	26.7	.....	SW	.....	.....	.....	0	0	.....	.....	0	0	Clear	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.04	763.0	81	27.2	78	NE	7	3.1	.....	2k	5ks	E	.....	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.98	761.5	79	26.1	78	E	.....	.....	.....	10k	0	.....	.....	0.13	3.3	Fair	L. V. Bigard.
St. Thomas, St. T., W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. S. Cameron.
Kingston, Jamaica, W. I.	.....	.....	30.12	765.0	80	26.7	74	Calm	0	0	.....	8c	5n	SE	.....	0	0	.....	James Hall.
Santiago de Cuba, W. I.	.....	.....	29.75	755.6	80	26.7	78	Calm	0	0	.....	4c	2s	NW	.....	0	0	Fair	Robert Mason.
Havana, Cuba, W. I.	.....	.....	29.97	761.2	80	26.7	78	Calm	0	0	.....	10c	0	.....	.....	0.09	2.3	Fair	Charles Hasselbrink
St. Georges, Bermudas	.....	.....	30.03	762.7	69.5	20.8	80	SW	11.0	4.9	.....	8ch	5k	SW	.....	0	0	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica W. I.	27.16	689.8	29.94	760.5	67	19.4	90	SE	1.0	0.4	.....	2c	5k	SE	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	29.98	761.5	78	25.6	91	E	.....	.....	2	.....	10n	.....	E	0.870	22.10	Rainy	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.04	762.9	.....	.....	82.0	27.8	.....	NE	.....	.....	.....	.....	.....	.....	.....	0.295	7.50	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.15	638.8	.....	.....	66.0	18.9	87	Calm	0	0	.....	3c	3s	.....	.....	0.12	3.0	Fair	Thomas Herran.
St. John's, Newfoundland	.....	.....	29.70	754.4	37.5	3.1	90	NE	.....	.....	.....	.....	10n	.....	.....	0.65	16.5	Cloudy	John Delaney.
York Factory, B. A.	.....	.....	30.31	769.9	24.5	— 4.2	94	NE	6	2.7	.....	.....	10s	.....	.....	0	0	.....	J. Fortescue.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Makawao, Maui, H. I.	27.87	707.9	30.03	762.7	59	15.0	82	NE	2.4	1.1	.....	10	2ks	W	.....	0	0	Misty	F. L. Clarke.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Hibernian, N. 45° 24', W. 58° 38'.	E	11½	29.93	760.2	34	1.1	.....	NNW	.....	.....	5	.....	8k	.....	.....	Rough	.....	Nearly overcast	Lieut. F. Archer, R.N.R.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. *The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day.* The altitude of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057 3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; *Dodge City, 2,478.8 ft., or 755.5 m.;* Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City 4,268.8 ft., or 1,301.1 m.; Santa 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.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 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.	Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	760.1	67.1	19.5	63	Calm	.....	.....	0	.....	8	.....	.....	0	0	Cloudy	Charnot.
Algiers	.....	.....	29.99	759.1	67.3	19.6	81	NNW	.....	.....	2	.....	6	.....	.....	0.094	2.4	Fair	Peter.
La Calle	.....	.....	.....	.....	68.7	20.4	.....	E	.....	.....	1	.....	4	.....	.....	0	0	Fair	Kunts.
Tunis	.....	.....	30.02	762.5	79.5	26.4	35	E	.....	.....	4	.....	3	.....	.....	0	0	Fair	Jacques.
Sfax	.....	.....	30.08	764.0	74.5	23.6	58	E	.....	.....	4	.....	1	.....	.....	0	0	Clear	Chauvey.
Saïda	.....	.....	29.96	760.9	70.1	21.5	39	ENE	.....	.....	2	.....	3	.....	.....	0.350	8.9	Fair	Millot.
Tebessa	.....	.....	30.02	762.5	81.0	27.2	.....	S	.....	.....	2	.....	0	.....	.....	0	0	Clear	Colin.
Geriville	.....	.....	29.87	761.2	74.8	23.8	42	SE	.....	.....	2	.....	1	.....	.....	0.409	10.4	Clear	Buard.
Laghouat	.....	.....	29.96	760.9	71.6	22.0	47	NW	.....	.....	2	.....	3	.....	.....	0	0	Fair	Guyot.
Biskra	.....	.....	30.05	763.2	87.8	31.0	20	NE	.....	.....	3	.....	2	.....	.....	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.	Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	.....	.....	30.16	766.0	65.5	18.6	52	SW	.....	.....	2	.....	6	.....	.....	0	0	.....	Prof. Ivan Stozir.
Buda-Pesth	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	I. R. Cen. M. I., Hungary
Cracow	.....	.....	30.32	770.2	50.2	10.1	76	W	.....	.....	1	.....	10	.....	.....	0.094	2.4	.....	I. R. Observatory.
Eperies	.....	.....	30.20	767.1	58.3	14.6	69	N	.....	.....	3	.....	10	.....	.....	0	0	.....	Julius Mikolik.
Gratz	.....	.....	30.23	767.8	57.2	14.0	62	WNW	.....	.....	1	.....	10	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	29.03	737.3	30.23	767.8	57.2	14.0	62	NNE	.....	.....	3	.....	5	.....	.....	0	0	.....	Prof. Reissenberger.
Kremsmünster	28.67	728.1	30.04	763.0	72.0	22.2	37	E	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	28.93	734.9	30.31	769.8	47.3	8.5	79	E	.....	.....	2	.....	7	.....	.....	0.035	0.9	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	30.17	766.4	57.0	14.2	58	NE	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	Habsauda Daniel.
Pola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	I. R. Hydrographic Office
Segedin	.....	.....	30.17	766.4	66.7	19.3	53	S	.....	.....	1	.....	1ks	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	30.10	764.6	75.0	23.9	37	S	.....	.....	1	.....	6	.....	.....	0	0	.....	Prof. V. Farolfi.
Vienna	.....	.....	30.19	766.8	65.8	18.8	47	WNW	.....	.....	1	.....	1	.....	.....	0	0	Partly cov'd.	I. R. Central Institute.
.....	.....	.....	30.28	769.1	57.4	10.8	65	N	.....	.....	1	.....	10	.....	.....	0.760	19.3	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	773.3	51.4	10.8	67	E	.....	.....	1	.....	9	.....	.....	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			30.30	769.6	57.1	13.9		SSW	11	4.9			5			0	0	Blue sky	William Boswell.
Ardrossan			30.39	771.9	52	11.1		S			3		6					*D. clouds	William McNeil.
Armagh Observatory			30.43	772.9	55.9	13.3		SW	15	6.7			8					*D. clouds	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			30.44	773.2	58.9	14.9		WNW	5	2.2			5					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			30.41	772.4	59.6	15.3		SSW			1		2					Blue sky	J. Dreyer.
Bradford			30.40	772.1	57.8	14.3		W			0		0			0	0	Blue sky	J. Mel.andsborough.
Bridgetown, (Barbados)			29.96	761.0	83.5	28.6		NE			2		7					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge Observatory			30.47	773.9	59.0	15.0		E			1		1					*D. clouds	H. Todd. [H. C.
Cardington			30.48	774.2	59.0	15.0		SE			1		1					Blue sky	John McLaren.
Carlisle			30.41	772.4	57.1	13.9		W			3		9			0	0	Gloomy	T. Bel . for J. Carmell.
Chatham, School M. E			30.47	773.9	51.2	10.7		NE			1		1					*D. clouds	Major C. N. Martin, R.E.
Dartmoor	28.99	736.3	30.51	774.9	52.6	11.4		E			1		3					*D. clouds	R. E. Power.
Donaghadee			30.40	772.1	58	14.4		SW			3		3					*D. clouds	J. Mac Gowan.
Dover			30.48	774.2	50	10.0		ENE			3		3					¼ clouded	J. Costello.
Eccles, (near Manchester.)			30.42	772.7	60.9	16.1		W	3.4	1.5			8					Hazy	Thomas Mackereth.
Falmouth Observatory			30.47	773.9	53.6	12.0		SE	7	3.1			1					*D. clouds	The Staff.
Fort Napier, (Natal)	27.78	705.6	30.02	762.5	68.3	20.2		NE			1		1					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.95	760.7	90	32.2		N			1		6					*D. clouds	[tis.
Galway, Queen's College			30.12	765.0	59	15.0		WSW			3		1					Blue sky	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			29.96	761.0	63.0	17.2		E			2		9					Gloomy	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			30.36	771.1	54.8	12.7		WSW			3		8					Fine	Lewis Stuart.
Great Yarmouth			30.50	774.7	49	9.4		SSE			2		3					Blue sky	G. T. Watson.
Greenwich Royal Obs			30.49	774.4	56.5	13.6		E			1		1					Blue sky	The Staff, for G. B. Airy.
Guernsey			30.46	773.4	53	11.7		NE			3		0					Blue sky	Dr. S. L. Hoskins.
Halifax, Moorside Obs			30.43	772.9	59.2	15.1		NW			1		4					*D. clouds	L. J. Crossley.
Helston			30.42	772.7	59	15.0		SE			4		0			0	0	Blue sky	M. P. Moyle.
Holyhead			30.45	773.4	56	13.3		WSW			2		1					Blue sky	John Tilston.
Kew Observatory			30.45	774.2	53.7	12.1		E	12	5.4								Hazy	The Staff.
Kingstown			30.46	773.4	53	11.7		SSE			4		1					Blue sky	George Mitchell.
Leicester Museum			30.48	773.7	58.2	14.6		Calm			0		5					Hazy	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.15	765.3	69.4	20.8		NE			1		0						Sergt. F. Travis, A. H. C.
Nairn			30.29	769.4	56	13.3		SW			1		5					½ clouded	W. D. Penny.
Nassau, (Bahamas)			30.04	763.0	83.4	28.6		NE			3		6					*D. clouds	Surg. Maj. Henry.
Nottingham			30.45	773.4	63.7	17.6		S			1		3k		NNE	0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.43	772.9	60.7	15.9		SE			2		6					Hazy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.43	772.9	57	13.9		E			1		6					*D. clouds	J. Lucas.
Plymouth			30.4	773.4	56.5	13.6		S			2		1					Blue sky	John Merrifield.
Roche's Point			30.45	773.4	55	12.8		SSE			3		2					Fine	W. Kennedy.
Saint Ann's Head			30.5	773.7	55	12.8		S			1		3					Hazy	John C. Walker.
Saint Helier, Jersey			30.43	772.9	55.8	13.2		E			5		0					Clear	A. P. Amy.
Sandwick Manse, Orkneys			30.26	768.6	50.5	10.3		SW	14	6.3			10					Overcast	Rev. C. Clouston, LL. D.
Scarborough			30.43	772.9	50.5	10.3		SE			1		2					Blue sky	F. Shaw.
Scutari Cemetery Turkey			30.05	762.7	70.4	21.3		N			1		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			30.42	772.7	58.7	14.8		WNW			1		4			0.01	0.25	Blue sky	W. F. Cooper.
Silloth Rectory			30.41	772.4	58.4	14.7	52	SW			1		2			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			30.43	772.9	57.4	14.1		W			2							Blue sky	Rev. S. J. Perry.
Stornoway, Lewis C., Hebr.			30.23	767.8	50	10.0		SW			6		10					Overcast	John Smith.
Stratfield Turgiss			30.36	773.7	55.7	13.2		SE			1		0					Blue sky, fog	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			30.24	768.1	53	11.7		Calm			0		9					Gloomy	John Trotter.
Truro, Royal Institution			30.15	773.4	62	16.7		SE			4		8					*D. clouds	W. Newcombe.
Valencia Observatory			30.41	772.4	58.7	12.1		SSE	31	13.9			7					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					54	12.2		W			2		0			0	0		Thomas Dawson.
Cape Good Hope Obs			29.98	761.5	64.3	17.9	79	WNW	12	5.4			2						The Staff for E. J. Stone.
Leith, Restalrig Park			30.37	771.4	58.2	14.6		W			4					0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.08	764.0				ESE	10.2	4.6						0.01	1.0		C. Meldrum.
Melbourne, Observatory			30.33	770.4	47.1	8.4	85	SE	3	1.3			0			0	0	Fine hy dew	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.21	767.3	48	8.9		SSW			6		10			0	0		J. Youngclause.
North Unst, (Shetland Is.)			30.19	766.8	44	6.7		SW			6		10			Blank	Blank		Robert Burnet.

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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			30.28	769.1	49.3	9.6	44	NNW			4		0						
Fanöe			30.40	772.1	47.5	8.8	71	NW			6		5						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.67	753.5	32.9	0.5	96	E			6		5						
Thorshavn, (Faröe)			29.98	761.5	50.0	10.0	87	SW			3		10						
Vestervig			30.30	769.5	47.8	8.8	84	NW			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.
Amiens			30.10	764.4	53.0	12	46	NE			2		8nl.		NE	0	0	Very cloudy	Normal School.
Avignon			30.39	772.0	54.3	12.4	54	E			1		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.23	767.7	56.3	13.5	66	N			2		8		SW	0.161	4.1	Very cloudy	Normal School.
Beaumette, (near Angers)			30.33	770.4	54.5	12.5	43	E	8.1	3.6	6		8			0.402	10.2	Very cloudy	C. Saillard.
Beauvais			30.43	773.0	53.4	11.9	86	ENE			3		8		NE	0	0	Cloudy	Beaumette Observatory
Besançon			30.29	769.4	55.4	13	59	E			3		8		ENE	0.018	0.45	Very cloudy	Normal School.
Bourg en Brosse			30.08	764.1	53.2	11.8	75	NE			6		2		NE	0.016	0.4	Very cloudy	Normal School.
Bourges			30.32	770.2	58.6	14.8	48	W			2		..k		SE	0	0		Normal School.
Brest			30.34	770.5	55.6	13.1	80	NE			3		2k		NE	0	0	Slightly cl'dy	Normal School.
Caen			30.692	779.67	52.7	11.5	85	NE			1		2		E	0	0		Naval Observatory.
Carcassonne			30.25	768.4	54.3	12.4	80	NW			3		10		SE	0.374	9.5	Slightly cl'dy	Normal School
Chartres			30.22	767.6	51.1	10.6		ENE			2		0			0	0	Covered	Normal School.
Chaumont																		Clear	Normal School.
Clermont			30.26	768.7	52.2	11.2	65	N			1		8		N	0	0		Normal School.
Commercy			30.39	772.0	50.0	10	47	NE			2		5kl.			0.177	4.5	Very cloudy	Puy de Dome Obs.
Commune de Gréasque*			30.23	767.9	57.0	13.9	59	NE			2		10			0.059	1.5	Cloudy	Normal School.
Grenoble			30.24	768.1	48.0	8.9	70	NW			2		..kn		NW	0.030	0.75	Covered	M. Kina.
Le Mans			30.39	771.8	54.1	12.3	41	E			3		6		E	0.055	1.4	Raining	Normal School.
Loches																		Cloudy	Normal School.
Lons-Le-Saulnier			30.34	769.6	47.3	8.5	85	NE			2		10			0.217	5.5	Raining	Normal School.
Mâcon			30.42	772.6	53.2	11.8	65	NW			2		0			0.008	0.2	Clear	Normal School.
Mirecourt			30.33	770.4	51.6	10.9	74	NNE			6		8		SW	0	0	Very cloudy	Normal School.
Metz																			M. Schuster.
Nismes			30.21	767.4	55.8	13.2	50	NE			4		0			0	0	Clear	Normal School.
Orleans			30.34	770.5	55.0	12.8	47	NE			3		5		NE	0	0	Cloudy	Normal School.
Paris Observatory			30.10	772.1	53.6	12.0	47	NNE			3		8			0.008	0.19	Very cloudy	National Observatory
Parthenay			30.17	766.4	58.1	14.5	93	NE			2		5		NE	0	0	Cloudy	Normal School.
Privas			30.28	769.0	53.6	12		NNE			4		5		NNE	0	0	Cloudy	Normal School.
La Roche-sur-Yon			30.10	764.4	57.9	14.4	55	ENE			4		5		SW	0	0	Gen'ally cl'dy	Normal School.
Rochefort, Observatory			30.30	769.7	56.7	13.7	53	ENE			4		2		SSW	0	0	¼ covered	Naval Observatory.
Rouen			30.44	773.1	57.6	13.9	87	N			2		2		E	0	0	Slightly cl'dy	Normal School.
Saint Lo			30.14	765.6	52.2	11.2	75	NE			2		2		E	0.047	1.2		Normal School.
Tarbes	29.11	739.5	30.00	762.1	55.4	13		W			2		2		E	0.28	7.	Slightly cl'dy	Normal School.
Toulouse																			Normal School
Villefranche			30.33	770.4	59.0	15	55	NNW			6		5		N	0.008	0.20	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.90	759.5	81.3	27.4													L'Abbé Marchési.
Gorée																			
Marseilles			30.17	766.3	61.9	16.1	57	ENE			1		10			0	0	Covered	Marseilles Observatory.
Mont-Louis	24.91	632.7	30.23	767.7	34.2	1.2	100	SE	7.4	3.33			10			0.394	10.0		—. Falguère.
Montsouris, Paris																			Montsouris Observ'tory.
Perpignan			30.23	767.8	54.0	12.2	65	E	5.6	2.50			10			0.240	6.1		Dr. Pines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.39	771.9	55.4	13.0	38	NE			2		7			0.008	0.2		E. Renou.
Toulouse			30.28	769.0	52.2	11.2	86	S			1		10			0.028	0.7		Toulouse Observatory.
Tours			30.34	770.6	55.8	13.2	45	ENE			4		7		E	0	0		C. Marquet.
Versailles, (near Paris)			30.39	771.8	55.4	13.0	38	E			4		8			0.013	0.32	Very cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.06	763.4	62.1	16.7	83	E	2.7	1.2		10ok	0	W		0.020 0.524	0.5 0.6		H. Le Leu, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 ft.; Clermont, 388 m., or 1,272.0 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; *Pic du Midi*, (Plantade,) 2,366 *m.*, or 7,762.6 feet: Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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			30.25	768.3	51.8	11.0	75	NW			3		10	N		0	0		Prof. T. Hoh.
Berlin			30.41	772.3	51.8	10.7	60	N			1		8			0	0		Prof. Arndt.
Breslau			30.41	772.3	51.1	10.6	49	W			2		8			0	0		Dr. P. Neugebauer
Carlsruhe			30.34	770.6	54.3	12.4	44	E			2		10			0.134	3.4		A. Sena.
Cassel			30.44	773.1	55.0	13.3	54	N			2		8	NW		0	0		Dr. H. Möhl.
Cologne																			Dr. Gartler.
Emden																			Prof. Prestel.
Frankfort on the Main			30.45	773.5	54.5	12.5	48	N			3		4			0	0		Physical Society.
Friedrichshafen	28.85	732.9	30.33	770.4	44.6	7.0	64	NE			4					0.378	9.6	Light rain	M. Wilhelm.
Hamburg			30.41	772.4	51.1	10.6	60	WNW			4		6k			0.039	1.0	Good	Captain F. Hegemann.
Kiel			30.37	771.3	52.0	11.1	51	NW			3		5			0	0		Prof. G. Karsten.
Königsberg			30.24	768.1	51.8	11.0	51	W			5		2			0	0		Prof. E. Luther.
Koslin			30.32	770.2	44.8	7.1		W			4		3			0	0		H. Müller.
Leipsic			30.04	763.0	47.1	8.4	71	NNW			2		10	N		0	0		Prof. Bruhns.
Memel			30.24	768.1	45.0	7.2	77	NW			4		8			0	0		Reinbrecht & Skalweit.
Münster			30.54	775.6	53.4	11.9	67	NW			2		0			0	0		Prof. E. Heis.
Neufahrwasser			30.27	768.9	50.0	10.0	73	WNW			4		10			0	0		A. Lothes.
Posen			30.36	771.2	55.0	13.1	84	NW			5		6			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.35	771.0	53.1	11.7	42	ENE			3		10	NE		0.374	9.5		Dr. Schur.
Stuttgart			30.34	770.5	50.5	10.3	47	E			1		8			0	0		Prof. Schoder.
Thorn			30.30	769.6	48.3	14.6	54	W			4		6			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.34	770.6	52.0	11.6	52	NW			4		6			0.008	0.2		Prof. Flesch.
Wustrow, Naval School			30.28	769.1	46.4	8.0	77	W			2		4			0	0		E. F. Schütz.

Note.—In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			30.17	766.2	64.9	17.7	48	Calm	0	0			3			0	0		
Padua			30.15	765.9	64.8	18.2	46	NE	6.3	2.8			3	SSW		0	0		
Vicenza			30.16	766.1	63.7	17.6	51	NE	2.5	1.1			3	SW		0	0		
Verona			30.17	766.2	70.7	21.5	76	SE			2		0			0	0		
Bergamo	28.80	731.5	30.12	765.1	55.4	13.0	61	NW			2		10			0.181	4.6		
Domodossola	29.20	741.6	30.22	767.6	52.7	11.5	77	Calm			0		10			0.390	9.9		
Milan			30.17	766.2	59.5	15.3	70	NE			1		10	NE		0.091	2.3		
Pavia			30.17	766.3	58.1	14.5	74	NE			1		9	SW		0.028	0.7		
Moncalieri			30.17	766.3	55.9	13.3	74	NW	3.8	1.7			9	W		0.161	4.1		
Mondovi	28.23	717.0	30.15	765.7	56.5	13.6	77	NW			2		8			0	0		
Porto Maurizio			30.21	767.3	64.4	18.0	72	ESE			2		4	NE		0	0		
Genoa			30.17	766.3	63.0	17.2	50	SW	1.8	0.8			4	SW		0	0		
Piacenza			30.15	765.9	64.9	18.3	45	NE			4		1			0	0		
Parma			30.14	765.6	68.4	20.2	62	SE			4		10			0	0		
Bologna			30.18	766.5	68.4	20.2	37	SW			6		3	NE		0	0		
Florence			30.17	766.4	69.8	21.0	26	W			2		0			0	0		
Leghorn			30.16	766.1	65.8	18.8	43	SW	4.9	2.2			1			0	0		
Siena	28.97	735.8	30.17	766.2	67.6	19.8	27	S	0	0			3	SW		0	0		
Urbino	28.63	727.3	30.19	766.8	64.4	18.0	39	SE			2		1			0	0		
Pesaro																			
Ancona			30.18	766.5	63.7	17.6	65	SE			4		1			0	0		
Grosseto			30.17	766.4	67.3	19.6	57	NE			4		5	S		0	0		
Rome			30.17	766.4	69.4	20.8	43	SSW	5.6	2.5			3			0	0		
Naples, O. U.			30.18	766.6	73.4	23.0	44	SW			2		4	S		0	0		
Lecce			30.18	766.6	66.6	19.2	24	N	6.3	2.8			1			0	0		
Cosenza			30.15	765.8	77.9	25.5	74	WNW	1.3	0.6			1			0	0		
Riposto, (Sicily)			30.22	767.6	69.4	20.8	83	E			2		0			0	0		
Palermo			30.0	764.6	67.1	19.5	63	NE	5.6	2.5			1			0	0		
Caltanissetta	28.18	715.8	30.09	764.3	68.4	20.2	45	SSE			4		1	N		0	0		
Sub-Series.																			
Naples, S. R.			30.18	766.5	73.0	22.8	35	W	0.7	0.3				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, 300 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.

Flushing			30.51	774.9	52.9	11.6		NE			2								
Groningen			30.41	772.4				NW			3								
Helder			30.47	773.9	46.8	8.2		NW			2								
Utrecht			30.44	773.1	52.7	11.5	51	NNE			1		8						Very cloudy

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

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

Bergen			30.27	768.9	40.3	4.6	84	SSW	11.0	4.9			10			0.102	2.6	Raining	
Bröno			30.09	764.3	39.9	4.4	74	W	2.9	13			10			0.220	5.6		
Christiania			30.22	767.6	50.2	10.1	24	SW	2.5	1.1			10			0	0		
Tromsö			29.82	757.3	42.1	5.6	51	SW	0	0			2			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 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.		Barometer: Reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind: Direction.	Wind: Velocity.		Wind: Force.	Clouds: Amount. Up'er	Clouds: Amount. Low'r	Clouds: Direction. Upper.	Clouds: Direction. Lower.	Rain-fall or melted snow in the past 24 hours.		Weather.	Observer.
	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.		
Angra, (Azores,)	....	....	30.31	769.9	65.7	18.7	84	W	11.4	5.11	....	....	6	....	....	0	0	....	Dr. J. A. N. Sampaio.
Campo Major	....	....	29.90	759.4	72.5	22.5	39	E	5.4	2.41	....	....	9	SSW	....	0	0	....	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)	....	....	30.17	766.4	66.2	19.0	55	SW	4.2	1.89	....	....	9	....	....	0	0	....	Capt D. A. da Cunha.
Lisbon	....	....	29.98	761.4	63.0	17.2	48	NNE	9.8	4.4	....	....	6	SE	....	0	0	....	The Observatory.

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

RUSSIAN SERIES.

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

Warsaw	....	....	30.29	769.4	52.7	11.5	50	WNW	13	6	....	....	6	....	....	....	....	....	Astronomical Obs.
Wilna	....	....	30.20	767.0	48.7	9.3	57	W	9	4	....	....	10	....	....	....	....	....	Astronomical Obs.
Dorpat	....	....	30.02	762.5	42.4	5.8	54	NNW	9	4	....	....	10	....	....	....	....	....	Physical Cabinet.
St. Petersburg	....	....	29.94	760.5	38.1	3.4	80	WNW	18	8	....	....	9	....	....	....	....	Light rain...	Central Physical Obs.
Kuopio	....	....	29.71	754.7	37.8	3.2	87	W	18	8	....	....	10	....	....	....	....	....	Ch. Forsten.
Kieff	....	....	30.12	765.0	60.3	15.7	64	N	4	2	....	....	10	....	....	....	....	....	Physical Cabinet.
Nikolaiev	....	....	30.04	762.9	85.3	29.6	31	NNW	11	5	....	....	6	....	....	....	....	....	Kurdukof.
Kertch	....	....	29.98	761.1	76.6	24.8	61	SE	4	2	....	....	0	....	....	....	....	....	Lagorio.
Moscow	....	....	30.08	764.1	52.9	11.6	61	S	9	4	....	....	8	....	....	....	....	....	Meteorological Obs.
Lugan	....	....	29.95	760.6	84.7	29.3	20	SE	22	10	....	....	4	....	....	....	....	....	Meteorological Obs.
Archangel	....	....	29.87	758.7	44.4	6.9	66	Calm	0	0	....	....	10	....	....	....	....	....	Ogorodnikof.
Tiflis	28.73	729.8	30.08	764.2	74.8	23.8	31	E	13	6	....	....	8	....	....	....	....	....	Physical Observatory.
Astrakhan	....	....	30.18	766.5	72.5	22.5	41	SE	18	8	....	....	4	....	....	....	....	....	Sebastianof.
Kasan	....	....	29.98	761.1	53.4	11.9	71	W	2	1	....	....	8	....	....	....	....	....	Physical Cabinet.
Orenburg	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Tschernischef.
Ekaterinburg	29.04	737.5	30.07	763.8	34.0	1.1	92	SE	4	2	....	....	10	....	....	....	....	....	Meteorological Obs.
Nukuss	....	....	30.17	766.2	70.7	21.5	32	NE	16	7	....	....	9	....	....	....	....	....	
Kasaly	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Bobrof.
Tashkend	28.50	723.9	30.13	765.3	77.7	25.4	94	NNW	7	3	....	....	0	....	....	....	....	....	Michelson.
Barnaul	....	....	29.67	753.7	36.1	2.3	82	N	13	6	....	....	10	....	....	....	....	Raining......	Meteorological Obs.
Yeniseisk	....	....	29.76	755.8	35.2	1.8	60	N	2	1	....	....	4	....	....	....	....	....	Marks.
Irkutsk	28.24	717.2	29.61	752.2	41.2	5.1	60	Calm	0	0	....	....	10	....	....	....	....	....	Usolzef.
Oorga	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Mossin.
Peking, (China)	....	....	30.09	764.2	63.3	17.4	44	SSE	9	4	....	....	7	....	....	....	....	....	Physical Observatory.
Nertchinsk	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Meteorological Obs.
Vladivostock	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	
Nikolaievsk, on the Amoor	....	....	....	....	30.4	-0.9	90	E	7	3	....	....	8	....	....	....	....	Light rain...	

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 40[illegible] meters, or 1,311.8 feet; Ekaterinburg, [illegible] m., or 1,915.2? ft.; Tashkend, [illegible] 494.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	....	....	29.94	760.4	68.2	20.1	44	E	3.7	1.67	....	0	7	....	....	0	0	Cloudy......	Royal Observatory.
San Fernando	....	....	29.95	760.6	69.6	20.9	47	SSE	35.3	15.8	....	0	6	....	SE	0.004	0.1	....	The Naval Observatory.

NOTE.—The originals give the weather in general terms; 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	....	....	29.73	755.1	30.7	2.6	90	NE	....	....	2	....	10	....	....	0	0	Raining......	
Umea	....	....	29.82	757.5	45.7	7.6	38	N	....	....	7	....	7	....	....	0.362	9.2	....	
Hernosand	....	....	29.96	760.9	46.2	7.9	34	WNW	....	....	6	....	8	....	....	0	0	....	
Stockholm	....	....	30.06	763.5	50.0	10.0	38	WNW	....	....	4	....	5	....	....	0	0	....	
Wisby	....	....	30.24	768.1	43.2	6.2	48	N	....	....	4	....	0	....	....	0	0	....	
SUB-SERIES.																			
Upsala	....	....	30.09	764.2	50.4	10.2	35	WNW	13.0	5.8	....	....	5	....	....	0	0	....	Dr. Hildebrandsson.

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

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	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.
Geneva	28.84	732.6	30.29	769.4	46.8	8.2	73	NE			4		9			0	0	Covered	The Observatory.
Zurich	28.65	727.7	30.32	770.2	42.3	5.7	89	E			1		10			0.217	5.5	Raining	The Observatory.

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +8.0 mm.; Thermometer, —6.6 cent.; Relative Humidity, +15 per cent.

NOTE.—The originals give the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Corr. Inches	Corr. mm	Red. Inches	Red. mm	Fahr.	Cent.	Rel. Hum.	Wind from	Miles/hour	Meters/second	Force	Clouds Up'er	Low'r	Upper from	Lower from	Rain Inches	Rain mm	Weather	Observer
Constantinople																			
Fao, (Persian Gulf)			30.04	763.0	87.8	31.0		NW			3		2						
Salonica			30.09	764.2	77.0	25.0		S			1		0						
Valona			30.10	764.5	72.0	22.2		W			2		0						
Varna			30.01	763.0	78.8	26.0		SW			2		0						
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y			29.92	760.0	75.0	23.9	76	N			2	[illegible]	6k	S	N	0	0	Fair	Prof. C. V. A. Van Dyck

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Corr. Inches	Corr. mm	Red. Inches	Red. mm	Fahr.	Cent.	Rel. Hum.	Wind from	Miles/hour	Meters/second	Force	Clouds Up'er	Low'r	Upper from	Lower from	Rain Inches	Rain mm	Weather	Observer
Bathurst, N. B.			30.17	766.3	33.7	0.9	81	SE	2	0.9									Hon. J. Ferguson.
Brockville, Ontario			30.06	763.5	47	8.3		N	1	0.4		0	5s		W	0.05	1.3	Fair	W. R. Bigg.
*Chatham, N. B.			30.18	766.6	34	1.1	71	NE	3	1.3		2k	8ks	NE	NE	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			30.07	763.8	37	2.8	76	N	9	4.0			10s			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.02	762.5	42.8	6.0	78	E			1		10s			0.305	7.75	Unsettled	James Smith, M. A.
Dalhousie, N. B.			30.13	765.3	33.5	0.8	75	SE			1	10cs				0	0		H. A. Johnson.
Esquimault, B. C.			29.86	758.4	44.3	6.8	100	E	2	0.9			10			Inap.	Inap.	Rainy	W. H. Bevis.
Fredericton, N. B.			30.15	765.8	35.0	1.7	64	E	9	4.0			10s			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			30.10	764.5	35	1.7	90	N	3	1.3		7k	5ks	N	N	0	0	Cloudy	James Stewart.
Goderich, Ontario			29.80	756.9	39.5	4.2	85	NW			1		8n			0.127	3.23	Clearing	H. J. Strang, M. A.
Granton, Ontario			29.76	755.9	49.0	9.4		S			1	1cs		NE		0	0	Clear	James Grant.
*Halifax, N. S.			29.94	760.5	36	2.2	78	NE	9	4.0			10n			Inap.	Inap.	Light snow	F. Allison, M. A.
*Kingston, Ontario			30.01	762.2	41	5.0	92	NE	2	0.9		10cs	0			0	0	Cloudy	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			30.02	762.5	40	4.4	96	SE	11	4.9			10ks			0.20	5.1	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.02	762.5	42	5.6	67	E	4	1.8		10k	0	E		0.07	1.8	Cloudy	J. B. Haney.
*Parry Sound, Ontario			29.84	757.9	37	2.8	90	E	13	5.8			10n		E	0.24	6.1	Light rain	Rev. R. Mooley.
*Port Dover, Ontario			29.84	757.9	45	7.2	78	S	16	7.2			10n		SW	0.02	0.5	Light rain	H. Morgan.
Port Hastings, N. S.			30.02	762.5	37.2	2.9		S	6	2.7						0.20	5.1	Fine	Peter Grant.
*Port Stanley, Ontario			29.82	757.4	46	7.8	80	SW	20	8.9			10ks		SW	0.04	1.0	Cloudy	M. Payne.
*Quebec, Quebec			30.12	765.0	34	1.1	79	NE	16	7.2			10n		NE	0	0	Cloudy	Capt. Ash, R. N.
St. John, N. B.			30.11	764.8	34	1.1	79	N	4	1.8			10ks			0	0	Cloudy	G. Murdoch, C. E.
*Saugeen, Ontario			29.80	756.9	37	2.8	81	SW	15	6.7		2k	8n		W	0.23	5.8	Cloudy	K. Stewart.
Stayner, Ontario			29.78	756.4	41	5.0	91	SE	3	1.3			8n		S	0.19	4.8	Clearing	R. J. Cole.
Stratford, Ontario			29.74	755.4	47.2	8.4	76	SW	15	6.7		9k		W		0.127	3.23	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			30.08	764.0	39	3.9	75	E	14	6.3		8ck	2s	W	E	0	0	Fair	T. C. Hill.
*Toronto, Ontario			29.89	759.2	40	4.4	88	E	7	3.1			1 n		SW	0.11	2.8	Light rain	Magnetic Observatory.
Woodstock, Ontario			29.83	757.7	49.2	9.6	67	SW			3		9ks			0.08	2.0	Fine	J. Montgomery.

NOTE.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. pper. From —	Clouds. Direction. Lower. From —	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alpena, Mich	.....	.....	30.07	763.8	45	7.2	67	S	10	4.5	.....	.....	10s	.....	SW	1.10	27.9	Cloudy	
Atlantic City, N. J.	.....	.....	29.70	754.4	36	2.2	90	NW	16	7.2	.....	.....	10s	.....	NW	0.27	6.9	Cloudy	
Augusta, Ga.	.....	.....	30.18	766.6	46	7.8	76	Calm	0	0	.....	2k	2s	SW	.....	0.01	0.3	Fair	
Baltimore, Md	.....	.....	30.17	766.3	52	11.1	86	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	
Barnegat, N. J	.....	.....	30.17	766.3	47	8.3	77	SW	10	4.5	.....	2cs	2ks	SW	SW	0	0	Fair	
Benton, Montana	.....	.....	30.17	766.3	46	7.8	76	Calm	0	0	.....	.....	10s	.....	NW	Inap.	Inap.	Cloudy	
Bismarck, Dakota	27.90	688.4	29.89	759.2	36	2.2	62	Calm	0	0	.....	0	0	.....	.....	0.03	0.8	Clear	
Boston, Mass	28.24	717.3	29.94	760.5	31	— 0.6	57	NE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Breckenridge, Minn	.....	.....	30.12	765.0	45	7.2	53	N	3	1.3	.....	Haze	5ck	.....	NW	0	0	Fair	
Buffalo, N. Y	.....	.....	30.02	762.5	38	3.3	54	NE	12	5.4	.....	0	8ks	.....	.....	0	0	Cloudy	
Burlington, Vt	.....	.....	29.86	758.4	46	7.8	69	S	11	4.9	.....	.....	10n	.....	SW	0.01	0.3	Light rain	
Cairo, Ill	.....	.....	29.93	761.5	47	8.3	70	S	16	7.2	.....	0	5ks	.....	SE	0.05	1.3	Fair	
Cape Hatteras, N. C	.....	.....	29.93	760.2	56	13.3	62	S	8	3.6	.....	5c	Haze	.....	.....	0	0	Fair	
Cape Henry, Va	.....	.....	30.13	765.3	49	9.4	77	NE	16	7.2	.....	0	0	.....	.....	0.04	1.0	Clear	
Cape Lookout, N. C	.....	.....	30.21	767.3	46	7.8	77	E	6	2.7	.....	.....	10s	.....	E	0.13	3.3	Cloudy	
Cape May, N. J	.....	.....	30.20	767.	49	9.4	77	N	12	5.4	.....	8k	0	NE	.....	0.20	5.1	Cloudy	
Charleston, S. C	.....	.....	30.19	766.8	46	7.8	76	N	4	1.8	.....	.....	10ks	.....	SW	0.13	3.3	Cloudy	
Cheyenne, Wyoming	23.83	605.3	30.18	766.6	58	14.4	69	NE	6	2.7	.....	1c	Sm'e	.....	.....	0	0	Clear	
Chicago, Ill	.....	.....	29.77	756.1	30	— 1.1	89	SE	2	0.9	.....	0	1s	.....	.....	0.02	0.5	Clear	
Cincinnati, Ohio	.....	.....	29.91	759.7	41	4.4	63	N	12	5.4	.....	1c	0	.....	.....	0.04	1.0	Clear	
Cleveland, Ohio	.....	.....	29.90	759.4	55	12.8	50	Calm	0	0	.....	2c	0	.....	.....	0	0	Clear	
Colorado Springs, Col	23.89	606.8	29.76	755.9	41	5.0	87	Calm	0	0	.....	.....	1k	8s	.....	0.05	1.3	Cloudy	
Corsicana, Tex	.....	.....	29.72	754.9	63	17.2	83	SE	12	5.4	.....	10k	0	SE	.....	0	0	Cloudy	
Davenport, Iowa	.....	.....	29.91	759.7	43	6.1	58	E	8	3.6	.....	2ck	8s	.....	.....	0	0	Cloudy	
Denison, Tex	.....	.....	29.70	754.4	61	16.1	82	SE	16	7.2	.....	.....	10s	.....	S	0	0	Cloudy	
Denver, Col	24.64	625.6	29.45	748.2	40	4.4	64	N	4	1.8	.....	.....	10s	.....	SW	Inap.	Inap.	Cloudy	
Detroit, Mich	.....	.....	29.91	759.2	40	4.4	64	N	4	1.8	.....	0	2s	.....	W	0.02	0.5	Clear	
Dodge City, Kan	27.01	686.8	29.77	744.4	46	7.8	76	NW	20	8.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Dubuque, Iowa	.....	.....	29.94	760.5	39	3.9	63	NE	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Duluth, Minn	.....	.....	30.02	762.5	40	4.4	56	NW	12	5.4	.....	2ck	Haze	.....	.....	0.15	3.8	Fair	
Eastport, Me	.....	.....	30.05	763.3	33	2.2	79	N	14	6.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Erie, Pa	.....	.....	29.84	757.9	50	10.0	71	SW	18	8.0	.....	.....	10n	.....	.....	Inap.	Inap.	Light rain	
Escanaba, Mich	.....	.....	29.89	759.2	37	2.	80	NW	8	3.6	.....	0	0	.....	.....	1.29	32.8	Clear	
Fort Buford, Indian Terr	.....	.....	29.39	746.1	58	14.4	69	SE	13	5.8	.....	10ck	0	SE	.....	0	0	Cloudy	
Ft. St. Michael, Alaska	.....	.....	29.70	754.4	23	— 6.7	.....	S	16	7.2	.....	.....	10s	.....	.....	.....	.....	Cloudy	
Fort Stanton, Indian T	24.35	720.1	29.42	747.3	57	13.9	84	S	16	7.2	.....	.....	10s	.....	S	0	0	Cloudy	
Fort Sully, Dakota	24.27	718.1	29.93	761.0	39	3.9	82	E	12	5.4	.....	.....	10n	.....	.....	0.03	0.8	Light rain	
Galveston, Tex	.....	.....	29.87	758.7	70	21.1	75	S	12	5.4	.....	5c	0	NW	.....	0	0	Fair	
Grand Haven, Mich	.....	.....	29.88	758.9	39	3.9	72	NW	15	6.7	.....	.....	10s	.....	NW	0.28	7.1	Cloudy	
Indianapolis, Ind	.....	.....	29.88	758.9	55	12.8	62	S	3	1.3	.....	0	8ks	.....	W	0	0	Threatening	
Indianola, Tex	.....	.....	29.81	757.2	71	21.7	80	SE	16	7.2	.....	8cs	1ks	SW	.....	0	0	Cloudy	
Jacksonville, Fla	.....	.....	30.09	764.5	63	17.2	73	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Keokuk, Iowa	.....	.....	29.82	757.4	46	7.8	61	NE	11	4.9	.....	.....	10s	.....	NE	0.06	1.5	Cloudy	
Key West, Fla	.....	.....	30.02	762.5	74.1	22.8	67	N	4	1.8	.....	2k	Haze	N	N	0	0	Fair	
Kittyhawk, N. C	.....	.....	30.23	767.8	47	8.3	77	E	10	4.5	.....	10k	0	NE	.....	0.09	2.3	Cloudy	
Knoxville, Penn	.....	.....	30.02	762.5	44	6.7	92	Calm	0	0	.....	1c	Fog	SW	.....	0	0	Foggy	
La Crosse, Wis	.....	.....	30.10	764.5	44	6.7	92	N	8	3.6	.....	8ck	0	.....	.....	0	0	Fair	
Leavenworth, Kan	.....	.....	29.97	761.2	37	2.8	62	N	8	3.6	.....	.....	10n	.....	.....	0.18	4.6	Light rain	
Lexington, Ky	.....	.....	29.72	754.9	50	10.0	93	E	8	3.6	.....	.....	.....	.....	.....	0	0	Fair	
Long Branch, N. J	28.9	734.0	30.11	764.9	53	11.7	61	S	16	7.2	.....	5c	0	S	.....	0	0	Fair	
Louisville, Ky	.....	.....	30.16	766.1	46	7.8	76	SE	7	3.1	.....	5c	2ks	W	.....	Inap.	Inap.	Fair	
Lynchburg, Va	.....	.....	29.94	760.5	53	13.3	57	S	5	2.2	.....	2c	Sm'e	SW	.....	0	0	Clear	
Malone, N. Y	.....	.....	30.14	765.5	52	11.1	65	S	1	0.4	.....	2c	0	E	.....	0	0	Clear	
Manhattan, Kan	.....	.....	29.97	761.2	47	8.3	76	SW	4	1.8	.....	2ck	5ks	W	SW	0.14	3.6	Cloudy	
Marquette, Mich	28.57	725.7	29.72	754.9	37	2.8	100	N	4	1.8	.....	.....	10s	.....	.....	0.30	7.6	Cloudy	
Memphis, Tenn	.....	.....	29.91	759.7	38	3.3	81	NW	12	5.4	.....	0	0	.....	.....	0.05	1.3	Clear	
Milwaukee, Wis	.....	.....	29.93	760.2	57	13.9	69	SE	6	2.7	.....	0	Haze	.....	.....	0	0	Clear	
Mobile, Ala	.....	.....	29.91	760.5	38	3.3	71	N	4	1.8	.....	.....	10s	.....	.....	0.15	3.8	Cloudy	
Montgomery, Ala	.....	.....	29.97	761.8	55	12.8	93	NE	3	1.3	.....	5ck	Haze	S	.....	0	0	Fair	
Morgantown, W. Va	.....	.....	30.12	765.0	57.5	14.2	75	Sc	5	2.2	.....	0	Haze	.....	.....	0	0	Clear	
Mt. Washington, N. H	23.68	601.5	30.11	764.7	24	— 4.4	100	Calm	0	0	.....	10c	0	W	.....	0	0	Cloudy	
Nashville, Tenn	.....	.....	29.91	759.7	24	— 4.4	100	NW	18	8.0	.....	.....	Fog	.....	.....	0	0	Foggy	
New Haven, Conn	.....	.....	29.91	759.7	56	13.3	62	SE	2	0.9	.....	2cs	0	.....	.....	0	0	Clear	
New London, Conn	.....	.....	30.15	765.8	53	11.7	53	S	6	2.7	.....	0	0	.....	.....	Inap.	Inap.	Clear	
New Orleans, La	.....	.....	30.16	766.1	47	8.3	54	NW	2	0.9	.....	2c	0	.....	.....	Inap.	Inap.	Clear	
Newport, R. I	.....	.....	30.02	762.5	63	17.2	67	SE	7	3.1	.....	8c	0	W	.....	0	0	Fair	
New York, N. Y	.....	.....	30.13	765.3	42	5.6	74	N	6	2.7	.....	2c	0	NE	.....	0.01	0.3	Fair	
Norfolk, Va	.....	.....	30.17	766.3	44	6.7	67	SW	8	3.6	.....	2ck	0	W	.....	0	0	Clear	
North Platte, Neb	.....	.....	30.23	767.8	48	8.9	70	S	5	2.2	.....	.....	10s	.....	S	0.05	1.3	Cloudy	
Omaha, Neb	26.91	683.8	29.53	750.0	38	3.3	71	NE	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Oswego, N. Y	28.77	730.7	29.85	758.2	38	3.3	95	NE	15	6.7	.....	.....	10n	.....	NE	0.41	10.4	Light rain	
Pembina, Dakota	.....	.....	29.93	760.2	44.8	7.1	80	SE	8	3.6	.....	.....	10s	.....	NW	0	0	Threatening	
Philadelphia, Penn	.....	.....	30.05	763.3	35	1.7	84	Calm	0	0	.....	10k	0	NW	.....	0	0	Cloudy	
Pike's Peak, Colorado	.....	.....	30.18	766.6	45	7.2	76	SW	13	5.8	.....	5k	0	SW	.....	0	0	Fair	
Pittsburgh, Penn	17.42	442.5	29.44	747.8	15	— 9.4	100	W	12	5.4	.....	.....	10n	.....	.....	0.05	1.3	Light snow	
Port Huron, Mich	.....	.....	29.75	755.9	43	6.1	58	S	8	3.6	.....	5cs	Haze	.....	.....	0	0	Fair	
Portland, Me	.....	.....	29.95	760.7	59	15.0	58	W	23	10.3	.....	0	1s	.....	.....	0.05	1.3	Clear	
Portland, Oregon	.....	.....	30.12	765.0	43	6.1	70	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Punta Rassa, Fla	.....	.....	30.14	765.5	47	8.3	85	SW	11	4.5	.....	.....	10n	.....	S	0.43	10.9	Light rain	
Rochester, N. Y	.....	.....	30.03	762.7	66.8	18.9	78	NE	10	4.5	.....	Haze	2ks	NE	NE	0	0	Hazy	
Salt Lake City, Utah	.....	.....	29.91	760.5	41	6.7	75	SW	2	3.6	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Sandy Hook, N. J	25.52	648.2	29.85	758.2	44	6.7	44	NW	6	2.7	.....	5k	0	NW	.....	0	0	Fair	
San Diego, Cal	.....	.....	30.15	765.8	59	15.0	64	S	8	3.6	.....	5cs	0	SW	.....	Inap.	Inap.	Fair	
San Francisco, Cal	.....	.....	29.99	759.4	58	14.4	76	SE	8	3.6	.....	.....	10s	.....	SE	0	0	Cloudy	
Santa Fe, N. M	.....	.....	29.37	746.2	52	11.1	79	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	23.09	584.2	29.84	757.9	51	10.6	52	NE	11	4.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Shreveport, La	.....	.....	30.15	765.8	64	17.8	61	NE	4	1.8	.....	Haze	0	.....	.....	0	0	Clear	
Smithville, N. C	.....	.....	29.91	759.7	67	13.9	87	SE	5	2.2	.....	.....	10ks	.....	.....	0	0	Threatening	
Springfield, Mass	.....	.....	30.19	766.8	54	11.7	86	.....	6	2.7	.....	8k	0	.....	.....	0.11	2.8	Cloudy	
St. Louis, Mo	.....	.....	30.12	765.0	49	9.	65	S	4	1.8	.....	5cs	Sm'e	.....	.....	Inap.	Inap.	Fair	
St. Marks, Fla	.....	.....	29.86	758.4	51	12.2	67	S	8	3.6	.....	0	5s	.....	.....	0	0	Fair	
St. Paul, Minn	.....	.....	30.12	765.0	56	13.3	80	NE	4	1.8	.....	8k	0	SE	.....	0	0	Fair	
St. Paul's Island, Alaska	.....	.....	29.93	760.0	33	2.	79	N	10	4.5	.....	8c c	0	NW	.....	Inap.	Inap.	Fair	
Thatcher's Island, Mass	.....	.....	30.07	763.8	24	— 4.4	73	NW	8	3.6	.....	0	8k	.....	.....	Inap.	Inap.	.....	
Toledo, Ohio	.....	.....	30.13	765.3	42	5.6	74	N	7	3.1	.....	8ck	0	N	.....	0	0	Clearing	
Tucson, Arizona	.....	.....	29.82	757.4	51	10.6	65	W	9	4.0	.....	.....	10ks	.....	SW	Inap.	Inap.	Cloudy	
Tybee Island, Ga	27.24	691.9	29.84	757.7	61	16.1	.....	.....	.....	.....	.....	0	Haze	.....	.....	0	0	Clear	
Vicksburg, Miss	.....	.....	30.12	765.0	63	17.2	57	N	12	5.4	.....	0	0	.....	.....	0	0	Clear	
	.....	.....	30.01	762.2	55	12.8	80	S	10	4.5	.....	5c	2ck	W	W	0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Virginia City, M. T.	24.11	612.4	29.59	751.6	26	— 3.3	67	N	1	0.4	.....	2c	0	SW	.....	0.06	1.5	Fair	
Washington, D. C.	.....	.....	30.17	766.3	47.5	8.6	81	S	12	5.4	.....	8k	0	S	.....	0	0	Fair	
Wilmington, N. C	.....	.....	30.20	767.1	52	11.1	72	E	6	2.7	.....	0	1ks	.....	NE	0.06	1.5	Clear	
Wood's Holl, Mass.	.....	.....	30.13	765.3	42	5.6	74	N	4	1.8	.....	.....	10s	.....	N	0	0	Cloudy	
Wytheville, Va.	27.71	703.8	29.91	759.4	42	5.6	75	Calm	0	0	.....	5cs	Haze	.....	.....	0	0	Fair, frost	
Yankton, Dakota	28.66	728.0	29.97	761.2	36	2.2	75	E	13	5.8	.....	8cs	5s	W	E	0	0	Cloudy	
Yuma, Arizona	.....	.....	29.72	754.9	70	21.1	.....	E	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.02	762.5	82	27.8	70	E	10	4.5	.....	5ck	5s	E	.....	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.99	761.7	76	24.4	90	E	.....	.....	.....	10c	0	.....	.....	0.25	6.3	Hazy	L. V. Bigard.
St. Thomas, S. T., W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. S. Cameron.
Kingston, Jamaica, W. I.	.....	.....	30.12	765.0	81	27.2	74	Calm	0	0	.....	5c	2ks	SE	.....	0	0	.....	James Hall.
Santiago de Cuba, W. I.	.....	.....	29.77	756.1	82	27.8	74	NNE	6.0	2.7	.....	8cs	0	.....	.....	0	0	Fair	Robert Mason.
Havana, Cuba, W. I.	.....	.....	29.99	761.7	79	26.1	74	NE	2.4	1.1	.....	5k	0	NE	.....	0	0	Fair	Charles Hasselbrink
St. Georges, Bermudas	.....	.....	30.00	762.0	72.5	22.5	86	SW	8.0	3.6	.....	8c	5k	SW	.....	0.26	6.6	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica W. I.	27.16	689.8	29.93	760.2	69	20.6	90	SE	3.0	1.3	.....	2c	0	SE	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	29.99	761.7	79	26.1	82	E	.....	.....	3	0	7ks	.....	.....	0	0	Dry	C. J. Hering.
Batavia, Dutch Guiana, S.A.	29.98	761.6	.....	.....	85.1	29.5	.....	NE	.....	.....	.....	.....	.....	.....	.....	0	0	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.17	639.3	.....	.....	65.5	18.6	78	NW	7	3.1	.....	8k	2s	.....	.....	0	0	Cloudy	Thomas Herran.
St. John's, Newfoundland	.....	.....	30.28	769.1	36.0	2.2	61	NE	.....	.....	.....	10k	10s	.....	.....	0	0	Cloudy	John Delaney.
York Factory, B. A.	.....	.....	30.23	767.8	26.5	— 3.1	94	NE	1	0.4	.....	.....	8s	.....	.....	0	0	.....	J. Fortescue.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Makawao, Maui, H. I.	27.87	707.9	30.04	763.0	59	15.0	82	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	F. L. Clarke.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Marine Series.	True course towards.	Hourly rate in knots.													State of ocean.	Direction of swell from—		
Steamer Hibernian, N. 46° 41′, W. 52° 51′.	ENE	9½	30.22	767.6	33	0.6	.....	NE	.....	.....	5	.....	Haze	.....	.....	Long swells	.....	Mist & sleet	Lieut. F. Archer, R.N.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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, 2,078.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft , or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City 4,268.8 ft., or 1,301.1 m.; Santa Fè, 6,862.2 (? ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,291 8 ft., or 699.4 m ; Yankton, 1,278 ft., or 389.5 m. The following constants are 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.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 5, 1876.

7:35 A. M. WASHINGTON mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:48 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours	.....	.....	29.87	758.6	59.1	15.1	70	WNW	.....	.....	2	.....	10	.....	.....	0.335	8.5	Hidden	Charnot.
Algiers	.....	.....	29.76	755.9	64.4	18.0	90	N	.....	.....	1	.....	10	.....	.....	0.039	1.0	Hidden	Peter.
La Calle	.....	.....	.....	.....	57.8	30.8	.....	SE	.....	.....	3	.....	5	.....	.....	0	0	Fair	Kunts.
Tunis	.....	.....	.....	.....	82.9	28.3	27	SE	.....	.....	4	.....	4	.....	.....	0	0	Fair	Jacques.
Sfax	.....	.....	29.82	757.3	74.1	23.4	59	SE	.....	.....	3	.....	1	.....	.....	0	0	Clear	Chauvey.
Saida	.....	.....	29.80	756.4	51.8	11.0	86	NNW	.....	.....	2	.....	4	.....	.....	0	0	Fair	Millot.
Tebessa	.....	.....	29.84	758.0	82.2	27.9	.....	SSE	.....	.....	5	.....	0	.....	.....	0	0	Clear	Colin.
Gerlville	.....	.....	29.80	757.0	64.9	18.3	65	N	.....	.....	2	.....	2	.....	.....	0	0	Clear	Buard.
Laghouat	.....	.....	29.85	758.2	75.2	24.0	46	NW	.....	.....	2	.....	6	.....	.....	0	0	Fair	Guyot.
Biskra	.....	.....	29.74	755.3	89.6	32.0	.....	NE	.....	.....	5	.....	10	.....	.....	0	0	Hidden	Laromer.
.....	.....	.....	29.80	756.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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	.....	.....	30.09	764.3	61.8	18.2	57	SW	.....	.....	1	.....	10	.....	.....	0.102	2.6	Raining	Prof. Ivan Stosir.
Buda-Pesth	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	I. R. Cen. M. I., Hungary
Cracow	.....	.....	30.24	768.0	54.7	12.6	68	W	.....	.....	2	.....	10	.....	.....	0.189	4.8	.....	I. R. Observatory.
Eperies	.....	.....	30.16	766.0	54.7	12.6	67	N	.....	.....	3	.....	10	.....	.....	0	0	.....	Julius Mikolik.
Gratz	.....	.....	30.00	762.0	64.0	17.8	45	S	.....	.....	4	.....	8	.....	.....	0.028	0.7	.....	Andreas Rospini.
Hermannstadt	28.88	734.0	30.00	762.5	64.0	17.8	45	S	.....	.....	4	.....	8	.....	.....	0	0	.....	Prof. Reissenberger.
Kremsmünster	28.62	727.0	29.99	761.8	60.1	15.6	49	SSE	.....	.....	3	.....	8	.....	.....	0.102	2.6	.....	Prof. C. Wagner.
Lemberg	28.77	730.8	30.12	765.	52.8	11.4	69	ENE	.....	.....	3	.....	8	.....	.....	0.004	0.1	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	30.14	765.6	43.7	6.5	87	NE	.....	.....	2	.....	10	.....	.....	.....	.....	.....	Habasuda Daniel.
Pola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	.....	I. R. Hydrographic Office
Szegedin	.....	.....	30.08	764.0	64.4	18.0	63	ESE	.....	.....	0-1	.....	108	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	30.03	762.7	73.4	22.3	47	W	.....	.....	2	.....	7	.....	.....	0.390	9.9	Threatening	Prof. V. Faroli.
Vienna	.....	.....	30.11	764.8	62.6	17.0	65	NW	.....	.....	1	.....	10	.....	.....	0	0	.....	I. R. Central Institute.
.....	.....	.....	30.11	764.8	55.4	13.0	63	NE	.....	.....	2	.....	7	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

BELGIAN SERIES.

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

Brussels	.....	.....	30.30	769.7	55.4	13.0	49	ENE	.....	.....	2	.....	7	.....	.....	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. Millimètres.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimètres.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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. Millimètres.	Weather.	Observer.
Aberdeen	.....	.....	30.20	768.6	54.6	12.6	.....	SE	11	4.9	.....	.....	4	.....	.....	0	0	Blue sky.....	William Boswell.
Ardrossan	.....	.....	30.31	769.9	53	11.7	.....	SSW	.....	.....	2	.....	7c	.....	.....	.....	.....	*D. clouds....	William McNeil.
Armagh Observatory	.....	.....	30.30	769.6	59.1	15.1	.....	SSE	13	5.8	.....	.....	3	.....	.....	.....	.....	*D. clouds....	S. Call, for Dr. Robinson
Bidston, Liverpool Obs	.....	.....	30.31	769.9	60.0	15.6	.....	ESE	5	2.2	.....	.....	0	.....	.....	.....	.....	Blue sky.....	John Hartnup.
Birr Castle, (Parsonstown)	.....	.....	30.25	768.3	60.3	15.7	.....	SSE	.....	.....	1	.....	3	.....	.....	.....	.....	*D. clouds....	J. Dreyer.
Bradford	.....	.....	30.31	769.9	59.4	15.2	.....	S	.....	.....	0	.....	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.
Cambridge Observatory	.....	.....	30.34	770.6	62.2	16.8	.....	SSE	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	H. Todd.
Cardington	.....	.....	30.37	771.4	62.4	16.9	.....	SE	.....	.....	1	.....	6	.....	.....	.....	.....	*D. clouds....	John McLaren.
Carlisle	.....	.....	30.3	769.6	60.1	15.6	.....	NW	.....	.....	1	.....	4	.....	.....	0	0	*D. clouds....	T. Bel. for J. Car mell
Chatham, School M. E	.....	.....	30.35	771.1	54.2	12.3	.....	ENE	.....	.....	2	.....	3	.....	.....	.....	.....	*D. clouds....	Major C. N. Martin, R.E.
Dartmoor	29.89	733.8	30.41	772.4	51.0	10.6	.....	E	.....	.....	4	.....	4	.....	.....	.....	.....	*D. clouds....	R. F. Power.
Donaghadee	.....	.....	30.29	769.4	55	12.8	.....	S	.....	.....	3	.....	0	.....	.....	.....	.....	Blue sky.....	J. MacGowan.
Dover	.....	.....	30.36	771.1	51	10.6	.....	ESE	.....	.....	2	.....	2	.....	.....	.....	.....	¼ clouded...	J. Costello.
Eccles (near Manchester.)	.....	.....	30.30	769.6	63.1	17.3	.....	SSW	3.8	1.7	.....	.....	.....	.....	.....	.....	.....	Hazy.....	Thomas Mackereth.
Falmouth Observatory	.....	.....	30.33	770.4	52.2	11.2	.....	ESE	13	5.8	.....	.....	4	.....	.....	.....	.....	*D. clouds....	Th Staff.
Fort Napier, (Natal)	27.02	701.5	29.86	758.4	85.4	29.7	.....	NW	.....	.....	3	.....	4	.....	.....	.....	.....	*D. clouds....	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.94	760.5	87	30.6	.....	N	.....	.....	2	.....	6	.....	.....	.....	.....	*D. clouds....	(the
Galway, Queen's College	.....	.....	30.19	766.8	63	17.2	.....	S	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	B. G. C re, for Prof. Cu
Gibraltar, (Mediterranean)	.....	.....	29.88	758.9	70.7	21.5	.....	W	.....	.....	2	.....	4	.....	.....	.....	.....	*D. clouds....	Pvt. C. Aitk n, A. H. C.
Glasgow Observatory	.....	.....	30.28	769.1	58.6	14.8	.....	SW	.....	.....	1	.....	3	.....	.....	.....	.....	Fine.....	Lewis Stuart.
Great Yarmouth	.....	.....	30.37	771.4	50	10.0	.....	SSE	.....	.....	2	.....	2	.....	.....	.....	.....	Blue sky.....	G. T. Watson.
Greenwich Royal Obs	.....	.....	30.35	770.9	59.7	15.4	.....	ESE	.....	.....	1	.....	4	.....	.....	.....	.....	*D. clouds....	The Staff, for G. B. Airy
Guernsey	.....	.....	30.3	769.8	54	12.2	.....	ENE	.....	.....	3	.....	0	.....	.....	.....	.....	Blue sky.....	Dr. E. Hoskins.
Halifax, Moorside Obs.	.....	.....	30.41	769.9	62.5	16.9	.....	NW to E	.....	.....	1	.....	5	.....	.....	.....	.....	*D. clouds....	L. J. Crossley.
Helston	.....	.....	30.28	769.1	60	15.6	.....	E	.....	.....	6	.....	0	.....	.....	0	0	Blue sky.....	M. P. Moyle.
Holyhead	.....	.....	30.31	769.9	55	13.3	.....	WSW	.....	.....	2	.....	0	.....	.....	.....	.....	Blue sky.....	John Tilston.
Kew Observatory	.....	.....	30.35	770.9	58.1	14.5	.....	E	7	3.1	.....	.....	2	.....	.....	.....	.....	Hazy.....	The Staff.
Kingstown	.....	.....	30.42	770.1	53	11.7	.....	SSE	.....	.....	4	.....	1	.....	.....	.....	.....	Blue sky.....	George Mitchell.
Leicester Museum	.....	.....	30.35	770.9	59.2	15.1	.....	Calm	.....	.....	0	.....	5	.....	.....	.....	.....	*D. clouds....	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)	.....	.....	30.04	763.0	68.8	20.4	.....	SE	.....	.....	2	.....	8k	.....	.....	.....	.....	.....	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	30.22	767.6	61	16.1	.....	Calm	.....	.....	0	.....	0	.....	.....	.....	.....	Clear.....	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.18	766.6	83.6	28.7	.....	NE	.....	.....	5	.....	7	.....	.....	.....	.....	*D. clouds....	Surg. Maj. Henry.
Nottingham	.....	.....	30.35	770.9	63.6	17.6	.....	SSW	.....	.....	1	.....	8ck, k	.....	{ NNE SSW }	0	0	*D. clouds....	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.42	770.1	61.1	16.2	.....	S	.....	.....	2-3	.....	9	.....	.....	.....	.....	*D. clouds....	Rev. Stephen Whitty.
Oxford, Radcliffe Obs	.....	.....	30.32	770.1	58	14.4	.....	SE	.....	.....	1	.....	0	.....	.....	.....	.....	Hazy.....	J. Lucas.
Plymouth	.....	.....	30.33	770.4	56.5	13.6	.....	SE	.....	.....	3	.....	2	.....	.....	.....	.....	*D. clouds....	John Merrifield.
Roche's Point	.....	.....	30.28	769.1	56	13.3	.....	SSE	.....	.....	5	.....	5	.....	.....	.....	.....	Fine.....	W. Kennedy.
Saint Ann's Head	.....	.....	30.32	770.1	52	11.1	.....	SSE	.....	.....	3	.....	5	.....	.....	.....	.....	Hazy.....	John C. Walker.
Saint Helier, Jersey	.....	.....	30.29	769.4	58.8	14.9	.....	E	.....	.....	5	.....	0	.....	.....	.....	.....	Clear.....	A. P. Amy.
Sandwick Manse, Orkneys	.....	.....	30.24	768.1	50	10.0	.....	WSW	19	8.5	.....	.....	6	.....	.....	.....	.....	*D. clouds....	Rev. C. Clouston, LL.D.
Scarborough	.....	.....	30.32	770.1	70.2	11.7	.....	SSE	.....	.....	1	.....	5	.....	.....	.....	.....	*D. clouds....	F. Shaw
Scutari Cemetery Turkey	.....	.....	30.02	762.5	83.1	24.6	.....	NE	.....	.....	2	.....	1	.....	.....	.....	.....	Blue sky.....	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.40	769.6	61.7	15.9	.....	SSW	.....	.....	1	.....	4	.....	.....	.....	.....	Blue sky.....	W. P. Cooper.
Silloth Rectory	.....	.....	30.32	770.1	61.6	16.4	46	SW	.....	.....	2	.....	2	.....	.....	0	0	*D. clouds....	Rev. Francis Redford
Stonyhurst Observatory	.....	.....	30.29	769.4	60.0	15.6	.....	W	.....	.....	0	.....	8	.....	.....	0	0	azy.....	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.	.....	.....	30.19	766.8	54	12.2	.....	SSW	.....	.....	5	.....	5	.....	.....	.....	.....	*D. clouds....	John Smith.
Strathfield Turgiss	.....	.....	30.35	770.9	59.4	15.2	.....	N	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	Rev. Charles H. Griffith
Streatley Vicarage	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Rev. John Slatter.
Thurso	.....	.....	30.22	767.6	56	13.3	.....	WSW	.....	.....	2	.....	6	.....	.....	.....	.....	*D. clouds....	John Trotter.
Truro, Royal Institution	.....	.....	30.31	769.9	60	15.6	.....	SE	.....	.....	5	.....	4	.....	.....	.....	.....	*D. clouds....	W. Newcombe.
Valencia Observatory	.....	.....	30.19	766.8	54.9	12.7	.....	SSE	25	15.6	.....	.....	5	.....	.....	.....	.....	*D. clouds....	The Staff.
Sub-Stations.																			
Calf of Man, (Isle of Man	.....	.....	.....	.....	55	12.8	.....	SW	.....	.....	2	.....	0	.....	.....	0	0	.....	Thomas Dawson.
Cape Good Hope Obs	.....	.....	30.03	762.7	60.6	15.9	81	WNW	13	5.8	.....	.....	10	.....	.....	.....	.....	.....	The Staff for E. J. Stone.
Leith, Restalrig Park	.....	.....	30.29	769.4	61.5	16.4	.....	W	.....	.....	4	.....	.....	.....	.....	0	0	Fine.....	Andrew Gibb.
Mauritius, Observatory	.....	.....	29.99	761.7	.....	.....	.....	E	10.2	4.6	.....	.....	.....	.....	.....	0	0	.....	C. Meldrum.
Melbourne, Observatory	.....	.....	30.10	764.5	60.0	15.6	77	NNE	5	2.2	.....	.....	8	.....	.....	0.02	0.5	Fine, sulry.	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	30.18	766.6	49	9.4	.....	SSW	.....	.....	4	3	0	S	.....	0	0	.....	J. Youngclarke.
North Unst, (Shetland Is.)	.....	.....	30.09	764.3	45.5	7.5	.....	W	.....	.....	6	.....	10	.....	.....	Blank	Blank	.....	Robert Burnet.

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-stations, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 9 p. m. local time; at 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	.....	.....	30.24	768.2	49.6	9.8	62	N	.....	.....	2	.....	1	.....	.....	.....	.....	.....	.....
Faroe	.....	.....	30.30	769.0	49.6	9.8	82	WSW	.....	.....	4	.....	3	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stykkisholm, Iceland	.....	.....	29.54	756.3	47.7	8.7	87	SE	.....	.....	4	.....	10	.....	.....	.....	.....	Foggy.....	
Thorshavn, (Faroe)	.....	.....	30.06	763.4	50.7	10.4	89	W	.....	.....	4	.....	5	.....	.....	.....	.....	.....	.....
Vestervig	.....	.....	30.23	767.9	48.2	9.0	88	WNW	.....	.....	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.
Amiens	.....	.....	30.09	764.2	53.6	12	55	NE	.....	.....	3	.....	5bk	.....	NE	0	0	Cloudy.....	Normal School.
Avignon	.....	.....	30.28	769.2	56.8	13.8	71	E	.....	.....	3	.....	0	.....	.....	0	0	Clear.....	Normal School.
Bar-sur-Seine	.....	.....	30.06	763.4	63.3	17.4	50	N	.....	.....	3	.....	5	.....	SW	0	0	Cloudy	Normal School.
Beaumette, near Angers	.....	.....	30.25	768.4	51.4	10.8	52	E	.....	.....	3	.....	8	.....	.....	Inap.	Inap.	Very cloudy	C. Saillard.
Beauvais	.....	.....	30.17	766.4	55.2	12.9	42	E	13.9	6.2	.....	.....	8	.....	E	0	0	Cloudy.....	Beaumette Observatory
Besançon	.....	.....	30.30	769.5	57.0	13.9	35	E	.....	.....	3	.....	2	.....	ENE	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	30.21	767.3	51.1	10.6	68	NE	.....	.....	3	.....	8	.....	NE	0.008	0.2	.....	Normal School.
Bourges	.....	.....	30.2-	768.3	54.5	12.5	65	W	.....	.....	2	.....	.k	.....	SSE	0	0	.....	Normal School.
Brest	.....	.....	30. 1	767.3	55.0	12.8	67	NE	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Caen	.....	.....	30.17	766.4	54.5	17.5	46	S	.....	.....	1	.....	1k	.....	.....	0	0	.....	Naval Observatory.
Carcassonne	.....	.....	30.09?	779.42	53.6	12	87	NE	.....	.....	6	.....	0	.....	.....	0	0	Clear.....	Normal School
Cherbourg	.....	.....	30.07	763.7	56.7	13.7	56	SW	.....	.....	1	.....	10	.....	NE	0.299	7.6	Covered	Normal School.
Chaumont	.....	.....	30.12	765.0	57.6	14.2	.....	ENE	.....	.....	2	.....	5	.....	.....	0	0	Cloudy.....	Normal School.
Clermont	.....	.....	30.17	766.4	52.0	11.1	48	N	.....	.....	1	.....	5	.....	N	0	0	Cloudy..	Puy de Dome Obs.
Commercy	.....	.....	30.27	768.9	51.1	10.6	48	NE	.....	.....	2	.....	5n	.....	.....	0	0	Cloudy.....	Normal School.
Commune de Gréasque*	.....	.....	30.06	763.5	65.3	18.5	54	W	.....	.....	2	.....	8	.....	SE	0	0	.....	M. Kina.
Grenoble	.....	.....	29.80	759.2	58.1	14.5	54	NNW	.....	.....	2	.....	5ck	.....	SE	0.205	5.20	Cloudy.....	Normal School.
Le Mans	.....	.....	30.26	768.7	55.6	13.1	43	ESE	.....	.....	4	.....	5	.....	ESE	0	0	Cloudy.....	Normal School.
Loches	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Lons-Le-Saulnier	.....	.....	30.15	765.7	52.5	11.3	61	NE	.....	.....	2	.....	5	.....	NW	0	0	.....	Normal School.
Mâcon	.....	.....	30.35	770.8	54.1	12.3	65	N	.....	.....	6	.....	5	.....	N	0	0	Cloudy.....	Normal School.
Mirecourt	.....	.....	30.25	768 4	48.0	8.9	75	NE	.....	.....	4	.....	10	.....	WSW	0.063	1.6	Covered	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Orleans	.....	.....	30.05	763.3	60.4	15.8	56	NE	.....	.....	6	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Paris Observatory	.....	.....	30.20	767.0	58.3	14.6	33	ENE	.....	.....	3	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Parthenay	.....	.....	30.26	768.7	56.7	13.7	29	NE	.....	.....	3	.....	4	.....	ENE	0	0	Cloudy.....	National Observatory
Privas	.....	.....	30.16	766.-	65.3	18.5	70	NE	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
La Rochelle-sur-Yon	.....	.....	30.12	765.0	56.3	13.5	.....	NNE	.....	.....	4	.....	2	.....	NNE	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	29.97	761.1	61.5	16.4	47	E	.....	.....	4	.....	0	.....	.....	0	0	Clear.....	Normal School.
Rouen	.....	.....	30.18	766.6	61.7	16.5	38	ESE	.....	.....	4	.....	0	.....	.....	0	0	Blue sky.....	Naval Observatory.
Saint Lo	.....	.....	30.29	769.3	62.4	16.9	34	SE	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Tarbes	.....	.....	30. 2	767.1	58.6	14.8	50	E	.....	.....	1	.....	3	.....	E	0	0	.....	Normal School.
Toulouse	28.96	735.5	30.04	763.0	55.4	13	.....	E	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Villefranche	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
	.....	.....	30.32	770 0	59.4	15.2	68	N	.....	.....	6	.....	5	.....	N	0	0	Cloudy.....	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.99	761.8	81.3	27.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Gorée	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	Cloudy..	Marseilles Observatory.
Marseilles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	—. Falguère.
Mont-Louis	.....	.....	30.02	762.5	64.8	18.2	51	WSW	.....	.....	2	.....	5	.....	SW	0.028	0.7	.....	Montsouris Observ'tory.
Montsouris, Paris	24.85	631.1	30.16	766.1	45.0	7.2	69	ENE	14.9	6.66	.....	.....	8	.....	.....	.....	.....	.....	Dr. Lines.
Perpignan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Summit) H.P.	.....	.....	30.06	763.4	59.5	15.3	45	SE	7.4	3.3	.....	.....	5	.....	WSW	0	0	.....	General de Nansouty.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. Renou.
Saint Maur, (near Paris)	.....	.....	30.26	768.6	58.8	14.9	32	NE	.....	.....	2	.....	4	.....	.....	0	0	.....	Toulouse Observatory.
Toulouse	.....	.....	30.10	764.6	59.9	15.5	48	ESE	.....	.....	1	.....	6	.....	.....	0	0	.....	C. Marquet.
Tours	.....	.....	30.23	767.9	59.7	15.4	38	E	.....	.....	2	.....	7	.....	ENE	0	0	.....	Dr. A. Bérigny.
Versailles, (near Paris)	.....	.....	30.26	768.6	56.8	13.8	57	ENE	.....	.....	2	.....	4	.....	.....	.....	.....	.....	.....
Zi-Ka-Wei, (near Shanghai)	.....	.....	29.98	761.6	69.8	16.6	90	ENE	1.6	0.7	.....	.....	10ks	.....	.....	{0.094 / 0.098}	{2.4 / 2.5}	.....	H. Le Leu, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,580.40 meters, or 5,204.8 feet; Chaumont, 342 m., or 1,060.9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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.

Bamberg	.....	.....	30.2	767.1	52.3	11.3	61	NE	.....	.....	4	.....	10	NE	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.26	768.6	54.0	12.8	47	S	.....	.....	1	.....	8	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.28	769.2	55.4	13.0	42	NNE	.....	.....	3	.....	9	.....	.....	0	0	.....	Dr. P. Neugebauer
Carlsruh	.....	.....	30.22	767.6	52.0	11.6	57	NE	.....	.....	3	.....	10	.....	.....	0	0	.....	A. Sena.
Cassel	.....	.....	30.26	768.6	58.6	14.8	48	NNE	.....	.....	3	.....	4	NE	.....	0	0	.....	Dr. H. Möhl.
Cologne	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Gartlie.
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Physical Society.
Friedrichshafen	.....	.....	30.30	769.7	58.6	14.8	83	NE	.....	.....	4	.....	4	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	28.74	729.9	30.21	767 2	45.3	7.4	77	N	.....	.....	1	.....	.....	.....	.....	0.089	24.6	Raining.....	M. Wilhelm.
Kiel	.....	.....	30.33	770.3	52.9	11.6	51	NW	.....	.....	3	.....	7k	.....	.....	0	0	Fair.....	Captain F. Hegemann.
Königsberg	.....	.....	30.31	769.8	52.3	11.3	52	NNE	.....	.....	3	.....	2	.....	.....	0	0	.....	Prof. G. Karsten.
Köslin	.....	.....	30.20	767 0	53.6	12.0	41	SW	.....	.....	2	.....	6	.....	.....	0	0	.....	Prof. E. Luther.
Leipsic	.....	.....	30.26	768.6	47.8	8.8	.....	NW	.....	.....	2	.....	1	.....	.....	0.024	0.6	.....	H. Müller.
Memel	.....	.....	29.91	759.7	52.3	11.3	51	N	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. Bruhns.
Munster	.....	.....	30.24	768.2	46.8	8.2	79	WSW	.....	.....	3	.....	4	W	.....	0	0	.....	Reinbrecht & Skalweit.
Neufahrwasser	.....	.....	30.13	772.8	54.4	12.5	65	NW	.....	.....	2	.....	3	.....	.....	0	0	.....	Prof. E. Heis.
Posen	.....	.....	30.15	765.8	51.8	11.0	53	N	.....	.....	2	.....	6	.....	.....	0	0	.....	A. Lothes.
Strassburg, (in Alsace)	.....	.....	30.27	768.9	57.2	14.0	48	NW	.....	.....	2	.....	9	.....	.....	0	0	.....	Dr. Magener.
Stuttgart	.....	.....	30.20	767.8	47.5	8.6	67	NE	.....	.....	2	.....	10	NE	.....	0.110	2.8	.....	Dr. Schur.
Thorn	.....	.....	30.29	767.7	48.6	9.2	68	E	.....	.....	2	.....	8	.....	.....	0.067	1.7	Light rain....	Prof. Schoder.
Treves, (Trier)	.....	.....	30.22	767.9	50.5	10.3	49	NW	.....	.....	4	.....	3	.....	.....	0	0	.....	Dr. Hasenbalg.
Wustrow, Naval School	.....	.....	30.21	767.3	57.6	13.9	46	NE	.....	.....	5	.....	6	.....	.....	0	0	.....	Prof. Flesch.
	.....	.....	30.23	767.9	47.1	8.4	81	WNW	.....	.....	2	.....	3	.....	.....	0	0	.....	E. F. Schütz.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation. The elevation of Friedrichshafen is 413.1 meters, or 1,355.3 feet. The rain-fall is measured at Neufahrwasser at 2 p. m., local time.

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			30.07	763.6	66.0	18.9	49	SE	1.3	0.6			9			0	0		
Padua			30.05	763.2	65.8	18.8	49	E	11.2	5.0			10	N		0	0		
Vicenza			30.04	763.1	66.7	19.3	46	E	3.8	1.7			5	W		0	0		
Verona			30.04	763.0	68.2	20.1	65	E			4		6			0	0		
Bergamo	28.67	728.3	29.99	761.8	59.7	15.4	57	SE			2		9			0.276	7.0	Showery	
Domodossola	29.08	738.6	30.10	764.6	50.0	10.0	87	Calm			0		10			0.378	9.6		
Milan			30.03	762.8	65.8	18.8	74	NE			1		10	NE		0.354	9.0		
Pavia			30.06	763.5	63.9	17.7	59	NE			1		9	E		0	0		
Moncalieri			30.03	762.8	59.9	15.5	68	E	3.8	1.7			9	N		0	0		
Mondovi	28.12	714.2	30.04	762.9	59.0	15.0	65	NNW			4		8	W		0	0		
Porto Maurizio			30.05	763.3	64.0	17.8	71	E			4		5	NE		0	0		
Genoa			30.01	763.0	64.0	17.8	54	SW	1.8	0.8			4	SW		0	0		
Piacenza			30.02	762.4	65.7	18.7	56	SE			6		10			0	0		
Parma			30.04	762.9	67.3	19.6	62	SE			4		10			0	0		
Bologna			30.11	764.7	63.	17.5	58	W			1		5	E		0	0		
Florence			30.08	763.9	70.3	21.3	49	WSW			4		10	SW		0.110	2.8		
Leghorn			30.07	763.6	64.9	18.3	64	S	6.9	3.1			10			0.185	4.7		
Siena	28.84	732.6	30.04	763.0	57.7	14.3	72	SSW	0	0			10	SW		0.016	0.4		
Urbino	28.54	725.0	30.10	764.5	62.4	16.9	58	WSW			2		10			0	0		
Pesaro																			
Ancona			30.10	764.4	64.8	18.2	53	SE			4		10			0	0		
Grosseto			30.07	764.6	61.9	16.6	77	NNW			4		10	SE		0.039	1.0		
Rome			30.07	763.8	73.8	23.2	48	S	0.7	0.3			7			0	0		
Naples, O. U.			30.09	764.2	78.4	25.8	32	WSW			2		3	S		0	0		
Lecce			30.12	765.0	69.8	21.0	38	NNE	6.3	2.8			0			0	0		
Cosenza			30.05	763.3	78.8	26.0	75	WNW	0.7	0.3			1			0	0		
Riposto, (Sicily)			30.15	765.7	69.4	20.8	80	E			2		1			0	0		
Palermo			29.98	761.4	70.2	21.2	66	ENE	2.5	1.1			0			0	0		
Caltanissetta	28.12	714.3	30.03	762.8	70.0	21.1	40	SSE			4		1	NW		0	0		
Sub-Series.																			
Naples, S. R.			30.09	764.2	78.4	25.8	37	SW						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, 305 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.

Flushing			30.37	771.5	56.1	13.4		NE			3								
Groningen			30.30	769.5	54.9	11.7		NW			1								
Helder			30.36	771.2	50.2	10.1		WSW			1								
Utrecht			30.32	770.1	54.1	12.3	44	NNE			2		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

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

Bergen			30.21	767.2	47.5	8.6	78	S	16.1	7.2			10			0.047	1.2		
Brönö			30.19	766.8	42.8	6.0	50	NNE	7	3			5			0	0		
Christiania			29.17	766.3	53.2	11.8	44	SE	5.4	2.4			4			0	0		
Tromsö			30.13	765.4	40.6	4.8	57	NE	2	1			5			0	0		

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

PORTUGUESE SERIES.

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

Stations	Barometer corrected for instrumental errors.		Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Winds			Clouds				Rain-fall or melted snow in the past 24 hours.		Weather.	Observer.
								Direction.	Velocity.		Amount.		Direction.					
	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	Force. 0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.		
Angra, (Azores,)	.....	.....	30.30	769.5	64.4	18.0	77	W	13.9	6.22	.....	.....	5	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.89	759.2	66.7	19.3	53	NE	7.0	2.67	.....	.....	9	NE	.....	0.087	2.2	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)	.....	.....	30.22	767.5	65.7	18.2	54	E	2.4	1.08	.....	.....	1	.....	.....	0	0	.....	Capt D. A. da Cunha.
Lisbon	.....	.....	29.91	760.4	67.3	19.6	49	N	9.4	4.2	.....	.....	6	N	.....	0.055	1.4	.....	The Observatory.
.....	.....	.....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h. 6 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	.....	.....	30.20	767.0	55.2	12.9	57	W	4	2	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.17	766.4	52.5	11.4	46	W	9	4	.....	.....	7	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.06	763.4	45.5	7.5	46	NNW	11	5	.....	.....	6	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.91	759.8	38.3	3.5	43	WNW	27	12	.....	.....	10	.....	.....	.....	.....	Rain & snow	Central Physical Obs
Kuopio	.....	.....	29.80	757.0	42.1	5.6	62	NNW	7	3	.....	.....	5	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.13	765.3	56.5	13.6	47	NNE	7	3	.....	.....	9	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaev	.....	.....	30.12	765.1	65.5	18.6	58	NE	11	5	.....	.....	8	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.99	761.7	68.9	20.5	68	S	13	6	.....	.....	7	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.10	764.5	47.5	8.6	43	NNW	18	8	.....	.....	7	.....	.....	.....	.....	.....	Meteorological Obs.
Luga	.....	.....	29.92	760.0	61.3	16.3	68	NE	34	15	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.82	757.5	39.0	3.9	62	NE	18	8	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.53	724.6	29.85	758.3	81.5	27.5	28	E	9	4	.....	.....	4	.....	.....	.....	.....	.....	Physical Observatory.
Astrachan	.....	.....	29.95	760.7	76.1	24.5	40	SSE	13	6	.....	.....	6	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.85	758.2	55.0	12.8	45	W	31	14	.....	.....	4	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.95	735.2	29.96	760.9	44.2	6.8	85	Calm	0	0	.....	.....	10	.....	.....	.....	.....	Light rain...	Meteorological Obs.
Nukuss	.....	.....	30.07	763.7	78.3	25.7	13	ENE	9	4	.....	.....	9	.....	.....	.....	.....	.....	.....
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.49	724.6	30.13	765.4	73.9	23.3	43	NNW	18	8	.....	.....	0	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.08	764.1	41.0	5.0	43	N	4	2	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.94	759.7	32.9	0.5	73	N	2	1	.....	.....	2	.....	.....	.....	.....	.....	Marks.
Irkutsk	28.35	720.2	29.74	755.3	32.9	0.5	84	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.89	759.2	72.7	22.6	42	SW	9	4	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nikolaievsk, on the Amoo	.....	.....	.....	.....	29.1	-1.6	94	E	4	2	.....	.....	2	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 401 meters, or 1,311.8 feet; Ekaterinburg, 195.1? m., or 1,005.2? ft.; Tashkend, m. 494.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0 m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	29.88	758.9	63.1	17.3	55	N	7.0	2.67	.....	0	8	.....	.....	0.020	0.5	Cloudy.....	Royal Observatory.
San Fernando	.....	.....	29.95	760.6	64.2	17.9	58	W	2.0	0.9	.....	0	4	.....	W	0	0	.....	The Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight; 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	.....	.....	30.03	762.7	38.8	3.8	67	NE	..	.....	4	.....	10	.....	.....	0.71	18.	.....	
Umea	.....	.....	30.07	763.8	42.3	5.7	70	NE	..	.....	6	.....	10	.....	.....	0	0	.....	
Hernosand	.....	.....	30.09	764.2	48.4	9.1	28	NW	.....	.....	4	.....	8	.....	.....	0	0	.....	
Stockholm	.....	.....	30.09	764.3	51.1	10.6	38	NW	.....	.....	3	.....	5	.....	.....	0	0	.....	
Wisby	.....	.....	30.25	768.6	42.4	5.8	67	N	.....	.....	2	.....	0	.....	.....	0.051	1.3	.....	
SUB-SERIES.																			
Upsala	.....	.....	30.11	764.9	52.0	11.1	36	NW	10.1	4.5	.....	.....	2	.....	NW	0.046	1.16	.....	Dr. Hildebrandsson.

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

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Millimeters.	Barometer. Reduced to sea-level. Inches.	Millimeters.	Temperature of the Air. Fahrenheit.	Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Velocity. Miles per hour.	Meters per second.	Force. 0—10.	Clouds. Amount. Up'er 0—10.	Low'r 0—10.	Direction. Upper. From—	Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Mill meters.	Weather.	Observer.
Geneva	28.74	730.0	30.19	766.7	47.8	8.8	69	N			2		2			0.138	3.5	Clear	The Observatory.
Zurich	28.56	725.3	30.24	768.0	41.9	5.5	96	NW			1		10			1.096	27.8	Raining	The Observatory.

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +5.4 mm.; Thermometer, —6.1 cent.; Relative Humidity, +11 per cent.

NOTE.—The originals give the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva 1,408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Corr. Inches	Corr. mm	Red. Inches	Red. mm	Fahr.	Cent.	Per cent	Wind From	Miles per hour	Meters per second	Force	Clouds Up'er	Low'r	Upper From	Lower From	Rain Inches	Mill meters	Weather	Observer
Constantinople																			
Fao, (Persian Gulf)			30.04	763.0	88.3	31.3		NW			1		0						
Salonica			30.09	764.2	79.2	26.2		S			2		2						
Valona			29.94	760.5	73.0	22.8		W			2		0						
Varna			30.04	763.0	71.6	22.0		SE			3		5						
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y			29.86	758.5	76.8	24.9	75	Calm			0		9c			0	0	Muggy	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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Corr. Inches	Corr. mm	Red. Inches	Red. mm	Fahr.	Cent.	Per cent	Wind From	Miles per hour	Meters per second	Force	Clouds Up'er	Low'r	Upper From	Lower From	Rain Inches	Mill meters	Weather	Observer
Bathurst, N. B.			30.27	768.8	40.3	4.6	85	Calm	0	0									Hon. J. Ferguson.
Brockville, Ontario			30.22	767.6	49	9.4		W	2	0.9		5c	2s		W	0.16	4.1	Fair	W. R. Bigg.
*Chatham, N. B.			30.31	769.9	39	3.9	78	SW	6	2.7		2ck	0	SW		0	0	Fair	G. A. Blair.
Charlottetown P. E. Island.			30.35	770.9	38	3.3	85	W	5	2.2			8s			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.18	766.6	46.5	7.5	75	E			1	10ks				0.334	8.48	Clearing	James Smith, M. A.
Dalhousie, N. B.			30.17	766.3	37.8	3.2	71	W			1					0	0		H. A. Johnson.
Esquimault, B. C.			30.06	763.5	45.3	7.4	92	SW	4	1.8			10			0.35	8.9	Rainy	W. H. Bevis.
Fredericton, N. B.			30.47	771.4	39.1	3.9	73	E	2	0.9		1k				0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			30.06	763.5	36	2.2	80	E	3	1.3		5k	5ks	SE	SE	0	0	Cloudy	James Stewart.
Goderich, Ontario			30.00	762.0	42.8	6.0	93	Calm			0		10n			Inap.	Inap.	Lig. Clou..	H. J. Strang, M. A.
Granton, Ontario			30.04	763.0	42.0	5.6		E			1		1 n			0	0	Cloudy	James Grant.
*Halifax, N. S.			30.33	770.4	40	4.4	77	N	2	0.9		0	5ks		N	0.25	6.3	Fair	F. Allison, M. A.
*Kingston, Ontario			30.19	766.8	45	7.2	81	NE	2	0.9		10c	0	SW		0.03	0.8	[illegible]	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			30.20	767.[illegible]	41	5.0	93	N	2	0.9		Haze	8ks			0.39	9.9	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.19	766.8	42	5.6	71	NE	6	2.7			10n		E	0.20	5.1	Threatening	J. B. Haney.
*Parry Sound, Ontario			30.15	765.8	40	4.4	82	E	10	4.5		5k	5ks	SE	SE	0.24	6.1	Cloudy	Rev. R. Mooley.
*Port Dover, Ontario			30.05	763.3	45	7.2	76	NE	7	3.1		10k	0	W		0	0	Cloudy	H. Morgan.
~~Port Hastings, N. S.~~			29.27	743.4	34.2	1.2		NW	12	5.4						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.02	762.5	47	8.3	73	NE	10	4.5			10n		SW	0	0	Cloudy	M. Payne.
*Quebec, Quebec			30.26	768.6	36	2.2	80	NE	21	9.4			10n		NE	0	0	Cloudy	Capt. Ash, R. N.
St. John, N. B.			30.39	771.9	42	5.6	74	S	5	2.2						0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario			30.05	763.3	39	3.9	82	SE	4	1.8			10s			0.01	0.3	Light rain	K. Stewart.
Stayner, Ontario			30.12	765.0	37	2.8	91	Calm	0	0			10n			Inap.	Inap.	Light rain	R. J. Cole.
Stratford, Ontario			30.05	763.3	41.6	5.3	83	E	4	1.8			10s			0	0	Threatening	C. J. MacGregor, M. A.
*Sydney, C. B.			30.27	768.8	36	2.2	90	NW	5	2.2			10n			0.16	4.1	Clearing	T. C. Hill.
*Toronto, Ontario			30.11	764.8	42	5.6	90	E	12	5.4		5k	1	W	E	Inap.	Inap.	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.04	763.0	48.0	6.1	80	E			2		1s			0.[illegible]6	6.6	[illegible]	J. Montgomery

NOTE.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Upper. 0—10	Clouds. Amount. Lower. 0—10	Clouds. Direction. Upper. From	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.18	766.6	46	7.8	85	S	9	4.0	.....	.....	10ks	.....	S	0	0	Cloudy.....	
Alpena, Mich.	.....	.....	30.02	762.5	36	2.2	90	SE	10	4.5	.....	.....	10s	.....	SE	0	0	Cloudy.....	
Atlantic City, N. J.	.....	.....	30.24	768.1	50	10.0	93	S	12	5.4	.....	2k	Haze	S	.....	0	0	Fair.....	
Augusta, Ga.	.....	.....	30.17	766.3	60	15.6	85	SE	2	0.9	.....	2cs	0	W	.....	0	0	Clear.....	
Baltimore, Md.	.....	.....	30.19	766.8	55	12.8	74	SE	4	1.8	.....	5cs	Sm'e	.....	.....	0	0	Fair.....	
Barnegat, N. J.	.....	.....	30.23	767.8	55	12.8	73	S	15	6.7	.....	2ck	Haze	W	.....	0	0	Fair.....	
Benton, Montana	26.95	684.5	29.75	755.6	45	7.2	67	Calm	0	0	.....	.....	10n	.....	.....	0.18	4.6	Light rain...	
Bismarck, Dakota	28.20	717.8	29.96	761.0	33	0.6	50	E	6	2.7	.....	.....	1oks	.....	E	0	0	Cloudy..	
Boston, Mass.	.....	.....	30.28	769.1	47	8.3	77	SW	4	1.8	.....	10s	Fog	SW	.....	0.01	0.3	Cloudy.....	
Breckenridge, Minn	.....	.....	29.93	760.2	35	1.7	80	NE	14	6.3	.....	8k	0	.....	.....	0	0	Cloudy.	
Buffalo, N. Y.	.....	.....	30.03	762.7	48	8.9	70	E	6	2.7	.....	.....	10s	.....	E	0.01	0.3	Cloudy..	
Burlington, Vt.	.....	.....	30.18	766.6	44	6.7	92	S	2	0.9	.....	.....	10s	.....	.....	0.14	3.6	Cloudy.....	
Cairo, Ill.	.....	.....	29.82	757.4	60	15.6	100	S	30	13.4	.....	.....	10n	.....	S	0.82	20.8	Heavy rain..	
Cape Hatteras, N. C.	.....	.....	30.20	767.1	62	16.7	77	SE	6	2.7	.....	5ck	1s	W	.....	0	0	Fair.....	
Cape Henry Va.	.....	.....	30.24	768.1	61	16.1	71	SE	11	4.9	.....	2k	Haze	NE	.....	0	0	Fair.....	
Cape Lookout, N. C.	.....	.....	30.24	768.1	64	17.8	78	E	19	4.5	.....	2k	0	S	.....	0	0	Fair.....	
Cape May, N. J.	.....	.....	30.24	768.1	52	11.1	86	S	16	7.2	.....	2ck	0	S	.....	0	0	Fair.....	
Charleston, S. C.	.....	.....	30.18	766.6	66	18.9	90	E	3	1.3	.....	0	4ks	.....	SW	0	0	Fair.....	
Cheyenne, Wyoming	23.72	602.5	29.66	753.4	32	0.0	100	SE	16	7.2	.....	.....	10n	.....	.....	0.17	4.3	Light snow..	
Chicago, Ill.	.....	.....	29.71	754.6	47	8.3	85	E	9	4.0	.....	.....	Fog	.....	.....	0.19	4.8	Light rain ..	
Cincinnati, Ohio	.....	.....	29.83	757.7	62	16.7	56	S	9	4.0	.....	.....	10s	.....	S	0.04	1.0	Cloudy.....	
Cleveland, Ohio	.....	.....	29.95	760.7	53	11.9	71	SE	13	5.8	.....	.....	10ks	.....	SW	0.04	1.0	Cloudy, sm'e	
Colorado Springs, Col.	23.79	04.3	29.56	753.4	32	0.0	100	SE	13	5.8	.....	.....	10n	.....	.....	0.06	1.5	Light snow..	
Corsicana, Texa	.....	.....	29.74	755.4	71	21.7	90	S	11	4.9	.....	5k	0	S	.....	0	0	Fair.....	
Davenport, Iowa	.....	.....	29.70	754.4	43	6.1	91	N	14	6.3	.....	.....	10s	.....	S	1.14	29.0	Threatening	
Denison, Texas	.....	.....	29.80	756.9	59	15.0	94	N	4	1.8	.....	.....	10s	.....	S	Ina.	Ina.	Cloudy.....	
Denver, Col.	24.49	22.0	29.71	754.6	37	2.8	90	N	9	4.0	.....	.....	10n	.....	.....	0.16	4.1	Light rain....	
Detroit, Mich.	.....	.....	29.92	760.0	45	7.2	84	E	9	4.0	.....	.....	10s	.....	SW	0.02	0.5	Cloudy.....	
Dodge City, Kan.	27.24	691.9	29.54	750.3	37	2.8	90	N	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Dubuque, Iowa	.....	.....	29.77	756.1	42	5.6	91	N	8	3.6	.....	8k	0	E	.....	0.54	13.7	Cloudy.....	
Duluth, Minn	.....	.....	30.00	762.	39	3.9	71	Calm	0	0	.....	.....	10s	.....	W	0	0	Fair.....	
Eastport, Me.	.....	.....	30.32	770.1	41	5.0	64	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Erie, Pa.	.....	.....	29.96	761.0	54	12.2	68	SE	16	7.2	.....	10cs	Haze	.....	.....	Inap.	Inap.	Cloudy.....	
Escanaba, Mich.	.....	.....	29.98	761.5	38	3.3	80	NE	8	3.6	.....	.....	10s	.....	NE	0	0	Cloudy.....	
Fort Custer, Indian Terr.	.....	.....	29.82	757.4	53	11.7	95	NW	8	3.6	.....	.....	10n	.....	W	0.08	2.0	Light rain...	
Fort St. Michael, Alaska	.....	.....	29.33	757.7	21	— 6.1	.....	NE	7	3.1	.....	.....	10s	.....	.....	.....	.....	Cloudy.....	
Fort Sill, Indian T.	.....	.....	29.83	757.7	50	10.0	86	N	16	7.2	.....	.....	10s	.....	N	0	0	Cloudy.....	
Fort Sully, Dakota	28.57	725.7	29.67	753.6	38.5	3.6	77	SE	6	2.7	.....	5k	2s	.....	SE	Inap.	Inap.	Cloudy.....	
Galveston, Texas	28.22	716.3	29.88	758.9	73	22.8	90	SE	6	2.7	.....	0	2s	.....	.....	0.03	0.8	Fair.....	
Grand Haven, Mich.	.....	.....	29.87	758.7	44	6.7	96	E	18	8.0	.....	.....	10n	.....	E	0.24	6.1	Light rain...	
Indianapolis, Ind.	.....	.....	29.82	757.4	56	13.3	87	SE	14	6.3	.....	.....	10n	.....	.....	0.42	10.7	Light rain...	
Indianola, Texas	.....	.....	29.78	756.4	74	23.3	95	SE	12	5.4	.....	.....	10s	.....	S	0	0	Cloudy.....	
Jacksonville, Fla.	.....	.....	29.83	757.7	71	21.7	75	NE	4	1.8	.....	8k	0	S	.....	0	0	Fair.....	
Keokuk, Iowa	.....	.....	30.14	765.3	71	21.7	75	NE	4	1.8	.....	.....	10s	.....	NW	0.93	23.6	Threatening	
Key West, Fla.	.....	.....	29.98	753.9	47	8.3	85	NW	10	4.5	.....	8k	Haze	SE	SE	0	0	Cloudy.....	
Kittyhawk, N. C.	.....	.....	30.07	763.8	80	26.8	82	SE	10	4.5	.....	8k	Haze	.....	.....	0	0	Fair.....	
Knoxville, Tenn.	.....	.....	30.26	768.6	57	13.9	84	S	12	5.4	.....	5cs	0	.....	.....	0	0	Cloudy.....	
La Crosse, Wis.	.....	.....	30.07	763.8	52	11.1	86	E	4	1.8	.....	10cs	Haze	SE	.....	0	0	Cloudy.....	
Leavenworth, Kan.	.....	.....	29.86	758.4	41	4.4	100	N	12	5.4	.....	.....	10n	.....	N	0.25	6.3	Heavy rain	
Lexington, Ky.	.....	.....	29.90	759.4	45	7.2	85	N	12	5.4	.....	.....	10s	.....	N	1.55	39.4	Cloudy.....	
Long Branch, N. J.	28.84	732.5	29.92	760.0	60	15.6	59	S	20	8.9	.....	.....	1os	.....	.....	0	0	Cloudy.....	
Louisville, Ky.	.....	.....	29.94	760.4	48	8.9	77	S	3	1.3	.....	0	0	.....	.....	0	0	Clear.....	
Lynchburg, Va.	.....	.....	29.85	758.2	61	16.1	71	S	8	3.6	.....	.....	10ks	.....	S	0.03	0.8	Threatening	
Malone, N. Y.	.....	.....	30.17	766.3	59	15.0	53	S	3	1.3	.....	5c	0	SW	.....	0	0	Fair.....	
Manhattan, Kan.	.....	.....	30.06	766.1	44	6.7	87	Calm	0	0	.....	2c	0	NW	.....	0.20	5.1	Cloudy.....	
Marquette, Mich.	28.75	729.7	29.48	758.9	40	4.4	100	N	10	4.5	.....	.....	10s	.....	.....	0.21	5.3	Cloudy.....	
Memphis, Tenn.	.....	.....	30.02	762.5	49	9.4	82	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Milwaukee, Wis.	.....	.....	29.84	757.9	62	16.7	88	SE	11	4.9	.....	.....	10ks	.....	S	0.74	18.8	Threatening	
Mobile, Ala.	.....	.....	30.06	763.5	69	20.6	90	S	6	2.7	.....	1cm	Fog	.....	.....	0.62	15.7	Light rain....	
Montgomery, Ala.	.....	.....	30.07	763.8	61.5	16.4	74	SE	7	3.1	.....	10cs	0	.....	.....	0	0	Cloudy.....	
Morgantown, W. Va.	.....	.....	30.0	763.5	64	17.8	72	SW	6	2.7	.....	.....	10s	.....	SW	0.07	1.8	Cloudy.....	
Mt. Washington, N. H.	24.3	617.5	30.24	768.1	24	— 4.4	62	NW	24	10.7	.....	5cs	8s	NW	NW	0.41	10.4	Fair.....	
Nashville, Tenn.	.....	.....	29.91	759.7	61	16.1	79	S	16	7.2	.....	5k	5s	SW	.....	0.08	2.0	Cloudy.....	
New Haven, Conn.	.....	.....	30.26	768.6	57	11.1	73	S	10	4.5	.....	.....	10s	.....	.....	0.02	0.5	Cloudy.....	
New Orleans, La.	.....	.....	30.10	769.3	47	8.3	85	S	8	3.6	.....	.....	10s	.....	SW	0.03	0.8	Cloudy.....	
Newport, R. I.	.....	.....	30.22	767.5	68	20.0	79	SE	4	1.8	.....	.....	10s	.....	SW	0	0	Cloudy.....	
New York, N. Y.	.....	.....	30.1	769.6	45	7.2	92	S	8	3.6	.....	.....	10ks	.....	W	0.04	1.0	Cloudy.....	
Norfolk, Va.	.....	.....	30.15	768.3	49	9.4	78	S	4	1.8	.....	2c	Sm'e	.....	.....	0	0	Clear.....	
North Platte, Neb.	.....	.....	30.25	768.9	63	17.2	67	S	9	4.0	.....	0	0	.....	.....	0	0	Clear..	
Omaha, Neb.	26.89	683.0	29.47	748.5	38	3.3	80	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Oswego, N. Y.	28.74	730.0	29.81	757.2	42	5.6	91	N	8	3.6	.....	.....	10s	.....	N	0.28	7.1	Cloudy.....	
Pembina, Dakota	.....	.....	30.13	765.3	47.5	8.6	67	SE	4	1.8	.....	.....	10s	.....	NW	0.03	0.8	Cloudy.....	
Philadelphia, Penn.	.....	.....	30.06	763.0	38	3.3	81	Calm	0	0	.....	10k	0	.....	.....	0	0	Cloudy.....	
Pike's Peak, Colorado	.....	.....	30.23	767.8	50	10.0	78	S	3	1.3	.....	8ck	Sm'e	W	.....	0	0	Fair.....	
Pittsburgh, Penn.	.....	.....	29.54	752.3	11	—10.0	44	W	20	8.9	.....	5cs	5s	W	.....	0.04	1.0	Cloudy.....	
Port Huron, Mich.	17.43	442.8	29.93	760.0	51	12.2	67	E	4	1.8	.....	0	10s	.....	.....	0	0	Cloudy.....	
Portland, Me.	.....	.....	29.89	759.1	41	4.4	91	NE	7	3.1	.....	.....	10s	.....	.....	0.02	0.5	Cloudy.....	
Portland, Oregon	.....	.....	30.00	762.0	45	7.2	84	SE	5	2.2	.....	.....	10s	.....	.....	0.01	0.3	Cloudy.....	
Punta Rassa, Fla.	.....	.....	30.03	762.8	46	7.8	76	Calm	0	0	.....	.....	10s	.....	.....	0.09	2.3	Cloudy.....	
Rochester, N. Y.	.....	.....	30.10	764.5	74.0	23.3	85	E	8	3.6	.....	10cs	Sm'e	SW	E	0	0	Cloudy.....	
Salt Lake City, Utah	.....	.....	30.04	764.3	45	7.2	76	NE	2	0.9	.....	.....	10s	.....	SW	0.05	1.3	Cloudy.....	
Sandy Hook, N. J.	25.37	644.4	29.70	754.4	40	4.4	82	Calm	0	0	.....	.....	10s	.....	NW	0.27	6.9	Cloudy.....	
San Diego, Cal.	.....	.....	30.22	767....	55	12.8	79	S	6	2.7	.....	2c	Haze	SW	.....	0	0	Fair.....	
San Francisco, Cal.	.....	.....	29.84	757.9	58	14.4	81	S	12	5.4	.....	.....	10s	.....	S	0	0	Cloudy.....	
Santa Fe, N. M.	.....	.....	29.67	753.9	51	10.6	78	W	4	1.8	.....	Haze	0	.....	.....	0	0	Hazy.....	
Savannah, Ga.	22.99	583.9	29.53	750.1	50	10.0	51	SW	8	3.6	.....	0	0	.....	.....	0	0	Cloudy.....	
Shreveport, La.	.....	.....	30.16	766.1	72	22.2	75	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Clear.....	
Smithville, N. C.	.....	.....	29.97	761.2	69	20.6	95	SW	6	2.2	.....	0	10ks	.....	SW	0.19	4.8	Threatening	
Springfield, Mass.	.....	.....	30.22	767.5	64	17.8	88	N	4	1.8	.....	0	1ks	.....	.....	0	0	Clear.....	
St. Louis, Mo.	.....	.....	30.25	768.3	48	8.9	85	S	6	3.6	.....	.....	10n	.....	.....	0.06	1.5	Light rain...	
St. Marks, Fla.	.....	.....	29.74	755.4	60	15.6	100	SW	8	3.6	.....	.....	1on	.....	.....	0.48	12.2	Light rain...	
St. Paul, Minn.	.....	.....	30.09	764.3	60	20.6	79	SE	12	5.4	.....	5k	0	SE	.....	0	0	Fair.	
St. Paul's Island, Alaska	.....	.....	29.85	758.2	45	7.2	60	NE	2	0.9	.....	.....	10s	.....	E	0	0	Cloudy.....	
Thatcher's Island, Mass.	.....	.....	30.14	765.5	30	— 1.1	78	W	14	6.3	.....	7k	10f	WNW	.....	Inap.	Inap.	.....	
Toledo, Ohio	.....	.....	30.04	763.0	47	8.3	85	S	9	4.0	.....	.....	10s	.....	NW	0	0	Cloudy.....	
Tucson, Arizona	.....	.....	29.44	747.9	49	9.4	93	E	4	1.8	.....	.....	10n	.....	SE	0.06	1.5	Light rain....	
Tybee Island, Ga.	.....	.....	29.89	759.2	60	15.6	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear.....	
Vicksburg, Miss.	27.30	693.4	30.14	765.5	70	21.1	75	S	4	1.8	.....	0	0	.....	.....	0	0	Clear.....	
	.....	.....	29.94	760.5	65	18.3	89	S	10	4.5	.....	2c	5s	S	SW	0.38	9.7	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.	24.00	609.6	29.48	748.8	30	— 1.1	89	Calm	0	0			10n			0.11	2.8	Light sn'w..	
Washington, D. C.			30.18	766.6	57.5	14.2	65	S	12	5.4		5ck.c	Haze	W		0	0	Hazy	
Wilmington, N. C			30.21	768.1	66	18.9	84	E	4	1.8		2ck	0	S		0	0	Fair	
Wood's Holl, Mass			30.32	770.1	47	8.3	92	S	15	6.7			10n			0.07	1.8	Light rain	
Wytheville, Va	27.75	704.8	29.91	759.4	53	11.7	73	Calm	0	0		5c	0	S		0	0	Fair	
Yankton, Dakota	28.54	724.9	29.84	757.9	40	4.4	86	Calm	0	0			10s		NE	0.03	0.8	Cloudy..	
Yuma, Arizona			29.66	753.4	76	24.4		S				2c		SW		0	0	Fair..	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.09	764.3	81	27.2	74	E	10	4.5		5ck	0	E		0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.95	760.7	81	27.2	78	E				0	8ks			0.43	10.9	Fair	L. V. Bigard.
St. Thomas, S. T., W. I.																			W. S. Cameron.
Kingston, Jamaica, W. I.			30.18	766.6	81	27.2	78	Calm	0	0		2c	2s	SE		0	0		James Hall.
Santiago de Cuba, W. I.			29.80	756.9	82	27.8	70	NE	4.8	2.1		0	2s		NE	0	0	Fair	Robert Mason.
Havana, Cuba, W. I.			30.04	763.0	78	25.6	86	NE	2.4	1.1		10c	0	SW		0	0	Cloudy	Charles Hasselbrink.
St. Georges, Bermudas			30.28	769.1	70.5	21.4	80	NE	22.0	9.8		2fk	0	SW		0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I	27.19	690.6	29.98	761.5	69	20.6	84	SE	4.0	1.8		5c	5k	SE		0	0	Dull	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.03	762.7	80	26.7	78	E			2	0	5k		E	0	0	Dry	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.11	764.7			86.0	30		ESE								0.03	0.75		Dr. H. Groot.
Medellin, Colombia, S. A.	25.19	639.8			69.0	20.6	74	Calm	0	0		7cs	0			0.01	0.3	Fair	Thomas Herran.
St. John's, Newfoundland			30.08	764.0	31.0	— 0.6	80	NE				10c	10s			0	0	Cloudy	John Delaney.
York Factory, B. A			30.16	766.1	33	0.6	94	S	2	0.9		10ks	0	S		0	0		J. Fortescue.
Honolulu, Oahu, H. I.																			Daniel Smith.
Makawao, Maui, H. I.	27.88	708.1	30.05	763.3	60	15.6	70	Calm	0	0		2cs	3ks	S		0	0	Fair	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.
Steamer Hibernian, N. 48° 11', W. 49° 18'.	E½S	9½	29.93	760.2	35	1.7		NE			5		8s				NE	Nearly overcast	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° Fahrenheit, are read from a spirit thermometer. The rain-fal at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude of he barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenn , 6,057 3 ft., or 1,846.2 m.; Clifton about 2,80? ft., or 881.5 m.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin 4,012 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 4,208.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (? ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,291.8 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 m.; 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.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 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	.....	.....	29.84	757.8	58.8	14.9	86	Calm	.....	.....	0	.....	10	.....	.....	1.260	32.0	Hidden	Charnot.
Algiers	.....	.....	29.72	754.8	61.2	16.2	91	N	.....	.....	2	.....	10	.....	.....	0.094	2.4	Hidden	Peter.
La Calle	.....	.....	.....	.....	61.2	17.9	.....	NW	.....	.....	1	.....	3	.....	.....	0	0	Fair	Kuntz.
Tunis	.....	.....	29.61	752.2	82.6	28.1	44	ESE	.....	.....	4	.....	2	.....	.....	0	0	Clear	Jacques.
Sfax	.....	.....	29.58	751.2	75.2	24.0	60	ESE	.....	.....	3	.....	6	.....	.....	0	0	Fair	Chauvey.
Saida	.....	.....	29.82	757.4	47.3	8.5	1 0	NW	.....	.....	5	.....	7	.....	.....	0.465	11.8	Cloudy	Millot.
Tebessa	.....	.....	29.7	754.5	82.8	28.2	...	S	.....	.....	5	.....	0	.....	.....	0	0	Clear	Colin.
Geriville	.....	.....	29.78	756.3	44.4	6.9	100	N	.....	.....	3	.....	7	.....	.....	0.094	2.4	Cloudy	Buard.
Laghouat	.....	.....	29.6	753.4	69.8	21.0	27	NW	.....	.....	3	.....	6	.....	.....	0.472	12.0	Fair	Guyot.
Biskra	.....	.....	29.62	752.4	89.2	31.8	.....	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	.....	.....	29.90	759.5	52.3	11.3	90	SE	.....	.....	1	.....	10	.....	.....	1.516	38.5	Raining	Prof. Ivan Stozir.
Buda-Pesth	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	I. R. Cen. M. I., Hungary
Cracow	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.039	1.0	.....	I. R. Observatory.
Eperies	.....	.....	30.03	762.8	55.8	13.2	53	NE	.....	.....	1	.....	10	.....	.....	.....	.....	.....	.....
Gratz	.....	.....	29.95	760.6	56.8	13.8	54	N	.....	.....	3	.....	10	.....	SW	0.065	1.66	.....	Julius Mikolik.
Hermannstadt	28.74	730.0	29.95	760.7	54.9	12.5	80	S	.....	.....	3	.....	10	.....	.....	0.039	1.0	.....	Andreas Rospini.
Kremsmunster	28.45	722.7	29.81	757.8	65.5	18.6	68	WNW	.....	.....	2	.....	6	.....	.....	0.102	2.60	.....	Prof. Reissenberger.
Lemberg	28.68	728.4	30.04	763.1	41.2	6.8	91	Calm	.....	.....	0	.....	10	.....	.....	0.079	2.0	.....	Prof. C. Wagner.
Nyiregyhaza	.....	.....	29.94	760.4	51.4	10.8	68	N	.....	.....	1	.....	7	.....	.....	0.083	2.1	.....	Dr. T. Stanecki.
Pola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Szegedin	.....	.....	29.85	758.2	57.7	14.3	94	ESE	.....	.....	2	.....	10s	.....	.....	0.089	2.24	.....	I. R. Hydrographic Office
Trieste	.....	.....	29.8	759.0	59.9	15.5	83	N	.....	.....	1	.....	10	.....	.....	0.264	6.70	.....	Karl Stancel.
Vienna	.....	.....	29.87	758.6	59.7	15.4	84	Calm	.....	.....	0	.....	10	.....	.....	1.134	28.8	Raining	Prof. V. Farolfi.
.....	.....	.....	29.97	761.1	50.5	10.3	82	N	.....	.....	2	.....	10	.....	.....	0.083	2.1	.....	I. R. Central Institute.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels	.....	.....	30.14	765.6	57.2	14.0	51	NNE	.....	.....	1	.....	7	.....	.....	0	0	.....	Royal Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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	53.4	11.9		SE	13	5.8			1			0	0	Blue sky	William Roswell.
Ardrossan			30.28	769.1	58	14.4		NW			1		4					Foggy	William McNeil.
Armagh Observatory			30.31	769.9	60.9	16.1		SSW	4	1.8			0					Blue sky	S. Call. for Dr. Robinson.
Bidston, Liverpool Obs			30.26	768.6	55.1	12.8		W	10	4.5			1					Blue sky	John Hartnup.
Birr Castle, (Parsonstown)			30.28	769.1	62.6	17.0		Calm			0		1					Blue sky	J. Dreyer.
Bradford			30.24	768.1	63.4	17.4		NW			4		0			0	0	Blue sky	J. Mellandsborough.
Bri getown, (Barbadoes)			30.00	762.0	81.2	27.3		NE			4		4					*D. clouds	Sergt. J. F. Halanen. A.
Cambridge Observatory			30.20	767.1	68.0	20.0		NE			1		10					Overcast	H. Todd. [H. C.
Cardington			30.22	767.6	65.0	18.3		N			1		7					*D clouds	John McLaren.
Carlisle			30.24	768.1	65	18.3		E			1		0			0	0	Blue sky	T. Bel , for J. Carmell.
Chatham, School M. E			30.20	767.0	58.0	14.4		NE			1							Gloomy	Major C. N. Martin, R.E.
Dartmoor	28.81	731.8	30.31	769.9	57.0	13.9		E			5		0					Blue sky	R. E. Power.
Donaghadee			30.29	769.4	54	12.2		SSE			1		0					Blue sky	a. Mac Gowan.
Dover			30.24	767.1	54	12.2		NNE			3		3					¼ clo ded	J. Costello.
Eccles (near Manchester)			30.23	767.8	63.8	17.7		WNW	2.4	1.1			8					Hazy	Thomas Mackereth.
Falmouth Observatory			30.25	768.5	54.6	12.6		ESE	13	5.8			2					Cl ei nus	The Staff.
Fort Napier, (Natal)	27.45	697.2	29.68	753.9	82.6	28.1		NW			4		6					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.92	760.0	89	31.7		NE			1		6					* clouds	[tte.
Galway, Queen's College			30.20	767.1	62	16.7		SE			2		0					Blu sky	B. G. C re, for Prof. Cur-
Gibral ar, (Mediterranean)			29.85	758.2	64.0	17.8		W			4		8					Gloomy	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			30.27	768 8	61.6	16.4		ENE			1		7					Fine	Lewis Stuart.
Great Yarmouth			30.24	768.1	56	13.3		NNE			2		3					Hazy	G. T. Watson.
Greenwich Royal Obs			30.21	767.3	65.5	18.6		N			1		0					Blue sky	The Staff, for G. B. Airy.
Guernsey			30.19	766.8	55.5	13.1		NE			4		0					Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			30.25	768.3	64.6	18.1		NE			1		3					*D. clouds	L. J. Crossley.
Helston			30.21	767.1	61	16.1		NE			6		0			0	0	Blue sky	M. P. Moyle.
Holyhead			30.28	769.1	54	12.6		NNW			2		0					Blue sky	John Tilston.
Kew Observatory			30.22	767.6	61.2	16.2		NNW	9	4.0			0					Blue sky	The Staff.
Kingstown			30.34	770.4	51	10.6		ESE			2		1					Blue sky	George Mitchell.
Leice ter Museum			30.24	768.1	64.0	17.8		N			1		5					Hazy	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)			29.78	756.4	69.8	21.0		SE			3		8kn					Overcast	Sergt. F. Travis, A. H. C.
Nairn			30.28	769.1	64	17.8		E			1		0					Clear	W. D. Lenny.
Nassau, (Bahamas)			30.19	766.8	81.4	27.4		NE			6		8					*D. clouds	Surg. Maj. Henry.
Nottingham			30.24	768.1	65.8	18.8		S			1		4ck		NE	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.22	767.6	63.9	17.7		NNE			3		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.18	766.6	61	16.1		Calm			0		1					Blue sky	J. Lucas.
Plymouth			30.22	767.6	59.8	15.4		E			4		0					Blue sky	John Merrifield.
Roche's Point			30.27	768.8	56	13.3		SE			4		5					Fine	W. Kennedy.
Saint Ann's Head			30.25	768.5	54	12.2		W			1		2					Hazy	John C. Walker.
Saint Helier, Jersey			30.15	765.8	60.6	15.9		E			6		0					Clear	A. P. Amy.
Sandwick Manse, Orkneys)			30.32	770.1	57	13.9		S	10	4.5			3					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough			30.29	769.4	51.8	11.0		NNE			2		6					*D. clouds	F. Shaw
Scutari Cemetery Turkey			29.89	759.2	64.8	18.2		SSW			1		2					Hazy	Sergt. W. H. Lyne.
Sheffield			30.25	768.3	61.0	17.8		NE			3		4			0	0	Hazy	W. F. Cooper.
Silloth Rectory			30.25	768.9	67.1	19.5	42	E			2		0			0	0	Blue sky	Rev. Francis Redford.
Stonyhurst Observatory			30.22	767.6	64.5	18.1		NE			1		3					Hazy	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.			30.27	768.8	58	14.4		SSW			1		2					Blue sky	John Smith.
Stratfield Turgiss			30.23	767.8	62.5	16.9		N			1		0					Blue sky	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			30.27	768.8	60	15.6		SE			2		1					Hazy	John Trotter.
Truro, Royal Institution			30.24	768.1	63	17.2		E			4		3					*D. clouds	W. Newcombe.
Valencia Observatory			30.25	768.3	59.3	15.2		SSE	11	4.9			2					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					55	12.8		NE			2		0			0	0		Thomas Dawson.
Cape Good Hope Obs			30.01	762.0	69.8	15.4	72	SSE	21	9.4			10						The Staff for E. J. Stone.
Leith, Restalrig Park			30.32	770.1	51.8	11.0		E			2					0	0	Fine	Andrew Gibb.
Mauritius, Observatory			29.97	761.2				ESE	6.3	2.8						0	0		C. Meldrum.
Melbourne, Observatory			30.80	782.0	60.0	15.6	90	NNE	5	2.2			9			0	0	Threatening	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.29	769.4	50	10.0		S			3	3	0	S		0	0		J. Youngclause.
North Unst, (Shetland Is.)			30.39	771.9	48	8.9		NW			4	2	3	W		0	0		Robert Burnet.

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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			30.11	764.9	50.2	10.1	65	ENE			6		10						
Fanöe			30.20	767.0	52.3	11.3	70	NW			4		1						
Godthaab, Greenland																			
Stykkisholm, Iceland			29.69	754.5	46.9	8.3	94	S			6		10					Raining	
Thorshavn, (Faröe)			30.25	768.3	52.3	11.3	74	S			2		3						
Vestervig			30.15	765.9	54.3	12.4	61	NE			2		6						

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

FRENCH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alengon	.....	.....	30.08	764,0	55.4	13	41	NE	.....	.....	1	.....	5ck	.....	NE	0	0	Cloudy	Normal School.
Amiens	.....	.....	30.15	765.7	63.3	17.4	53	E	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	29.76	756.0	65.3	18.5	47	NNW	.....	.....	3	.....	8	.....	.....	0	0	Very cloudy	Normal School.
Bar-sur-Seine	.....	.....	30.04	763.1	58.3	14.6	33	E	.....	.....	6	.....	8	.....	E	0	0	Very cloudy	C. Saillard.
Beaumette, near Angers	.....	.....	30.02	762.4	59.2	15.1	41	E	28.0	12.6	.....	.....	5	.....	E	0	0	Cloudy	Beaumette Observatory
Beauvais	.....	.....	30.15	765.8	59.4	15.2	37	NE	.....	.....	6	.....	5	.....	ENE	0	0	Cloudy	Normal School.
Besançon	.....	.....	30.01	762.2	56.8	13.8	58	NE	.....	.....	6	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	29.95	760.8	62.6	17	52	N	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Bourges	.....	.....	30.03	765.4	59.0	15	98	NE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Brest	.....	.....	30.05	763.3	58.5	14.7	53	NNE	.....	.....	4	0c	.....	NE	.....	0	0	.....	Naval Observatory.
Caen	.....	.....	30.042	778.2	56.5	13.6	76	NE	.....	.....	6	.....	1	.....	S	0	0	Quite clear	Normal School
Carcassonne	.....	.....	29.81	757.2	59.5	15.3	30	W	.....	.....	2	.....	5	.....	E	0	0	Cloudy	Normal School.
Cherbourg	.....	.....	30.03	762.8	59.5	15.3	.....	NE	.....	.....	4	.....	2	.....	.....	0	0	.....	Normal School.
Chartmont	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Clermont	.....	.....	29.93	760.1	55.0	12.8	50	N	.....	.....	4	.....	8	.....	N	0	0	Very cloudy	Puy de Dome Obs.
Commercy	.....	.....	30.10	764.6	53.8	12.1	39	E	.....	.....	6	.....	5k1	.....	E	0	0	Cloudy	Normal School.
Commune de Gréasque*	.....	.....	29.78	756.3	70.7	21.5	41	NW	.....	.....	2	.....	2	.....	NE	0	0	.....	M. Kina.
Grenoble	.....	.....	30.28	769.2	56.3	13.5	60	ENE	.....	.....	2	.....	5n	.....	SE	0	0	.....	Normal School.
Le Mans	.....	.....	30.06	763.5	60.3	15.7	35	E	.....	.....	4	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Loches	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Lons-Le-Saulnier	.....	.....	29.96	761.0	56.3	13.5	55	NE	.....	.....	6	.....	0	.....	.....	0	0	Clear	Normal School.
Mâcon	.....	.....	30.03	762.8	57.6	14.2	57	N	.....	.....	8	.....	5	.....	N	0	0	Cloudy	Normal School.
Mirecourt	.....	.....	30.06	763.4	51.3	10.7	43	NNE	.....	.....	4	.....	5	.....	SW	0	0	Cloudy	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	29.80	756.8	64.8	18.2	34	N	.....	.....	6	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	30.02	762.6	60.1	15.6	26	NE	.....	.....	3	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Paris Observatory	.....	.....	30.10	764.6	59.7	15.4	34	ENE	.....	.....	4	.....	5	.....	E	0	0	Cloudy	National Observatory
Parthenay	.....	.....	29.89	759.2	68.0	20	81	NE	.....	.....	2	.....	5	.....	N	0	0	Cloudy	Normal School.
Privas	.....	.....	29.87	758.6	59.7	15.4	.....	NNE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
La Rochelle-sur-Yon	.....	.....	29.80	756.8	63.3	17.4	46	NE	.....	.....	6	.....	0	.....	.....	0	0	Clear	Normal School.
Rochefort, Observatory	.....	.....	29.95	760.8	59.5	15.3	53	ENE	.....	.....	6	.....	8	.....	SSW	0	0	¾ Covered	Naval Observatory.
Rouen	.....	.....	30.14	765.5	65.7	18.7	43	E	.....	.....	3	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Saint Lo	.....	.....	29.86	758.4	58.5	14.7	63	E	.....	.....	3	.....	1	.....	E	0	0	.....	Normal School.
Tarbes	28.75	730.3	29.83	757.6	58.1	14.5	.....	W	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Toulouse	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Villefranche	.....	.....	29.97	761.3	61.2	16.2	75	N	.....	.....	6	.....	2	.....	N	0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.97	761.1	77.0	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Gorée	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Marseilles	.....	.....	29.73	755.2	68.7	20.4	44	W	.....	.....	2	.....	0	.....	.....	0	0	Clear	Marseilles Observatory.
Mont-Louis	24.65	626.2	29.97	761.2	48.0	8.9	80	SE	16.8	7.50	.....	.....	8	.....	NNW	0.224	5.7	.....	—. Faiguère.
Montsouris, Paris	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montsouris Observ'tory.
Perpignan	.....	.....	29.76	756.0	67.3	19.6	33	NE	9.3	4.17	.....	.....	2	.....	SE	0	0	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.10	764.5	61.0	16.1	30	NE	.....	.....	4	.....	7	.....	.....	0	0	.....	E. Renou.
Toulouse	.....	.....	29.88	759.0	60.4	15.8	42	NW	.....	.....	2	.....	3	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.02	762.4	62.2	16.8	31	ENE	.....	.....	6	.....	1	.....	ENE	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.03	764.2	61.2	16.2	47	ENE	.....	.....	4	.....	3	.....	.....	0	0	.....	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai	.....	.....	30.02	762.5	62.6	17.0	90	E	3.8	1.7	.....	.....	10k	.....	SE	0 0	0 0	.....	H. Le Lec, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 342 m., or 1,050.9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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.

Bamberg	.....	.....	30.04	763.0	54.5	12.5	50	NE	.....	.....	4	.....	10	E	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.11	764.7	57.2	14.0	30	N	.....	.....	1	.....	8	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.13	765.2	53.6	12.0	42	NW	.....	.....	2	.....	8	.....	.....	0	0	.....	Dr. P. Neugebauer
Carlsruhe	.....	.....	30.07	763.7	57.9	14.4	40	NE	.....	.....	3	.....	7	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.16	766.4	59.7	15.4	31	E	.....	.....	7	.....	2	ENE	.....	0	0	.....	Dr. H. Möhl.
Cologne	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Garthe.
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.25	768.4	59.	15.0	30	ENE	.....	.....	2	.....	8	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	28.61	726.7	30.08	763.9	46.4	8.0	63	NE	.....	.....	4	.....	.....	.....	.....	0	0	Raining	M. Wilhelm.
Hamburg	.....	.....	30.19	766.7	56.1	13.4	54	WNW	.....	.....	2	.....	8ck, k	.....	.....	0	0	Very cloudy	Captain F. Hegemann.
Kiel	.....	.....	30.17	766.2	53.4	11.9	55	N	.....	.....	2	.....	2	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg	.....	.....	30.10	764.4	53.1	11.7	38	N	.....	.....	2	.....	2	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	30.12	765.0	52.7	11.5	.....	NW	.....	.....	2	.....	1	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.15	765.7	55.8	13.2	39	NNE	.....	.....	2	.....	8	.....	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	30.15	765.9	45.3	7.4	64	NW	.....	.....	4	.....	5	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Munster	.....	.....	30.19	766.9	52.9	11.6	72	NW	.....	.....	2	.....	6	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.07	763.7	50.0	10.0	35	N	.....	.....	2	.....	4	.....	.....	0	0	.....	A. Lothes.
Posen	.....	.....	30.13	765.3	53.6	12.0	32	NW	.....	.....	2	.....	1	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.08	764.0	55.4	13.0	45	NE	.....	.....	1	.....	8	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	30.08	764.1	50.9	10.5	59	N	.....	.....	2	.....	10	.....	.....	0	0	Light rain	Prof. Schoder.
Thorn	.....	.....	30.08	764.1	51.3	12.4	40	NE	.....	.....	4	.....	1	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.07	763.6	57.2	14.0	38	NE	.....	.....	5	.....	8	.....	.....	0	0	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	30.09	764.1	51.6	10.9	81	WNW	.....	.....	2	.....	10	.....	.....	0	0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation. The elevation of Friedrichshafen is 1134 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			29.86	758.5	54.7	12.6	90	N	0.7	0.3			10			0.189	4.8		
Padua			29.85	758.1	54.7	12.6	88	N	9.8	4.4			10	NE		0.244	6.2	Storm	
Vicenza			29.87	758.6	52.9	11.6	88	N	2.5	1.1			10	E		0.051	1.3		
Verona			29.86	758.4	60.1	15.6	71	E			2		10			0.47	12.0		
Bergamo	28.50	724.0	29.82	757.5	53.2	11.8	83	SSE			1		10			0.0	.6		
Domodossola	28.76	730.4	29.78	756.4	66.2	19.0	38	SSW			2		1			0	0		
Milan			29.85	758.3	56.3	13.5	88	E			1		10	NE		0.075	1.4		
Pavia			29.88	758.9	53.4	11.9	90	NE			1		10			0.26	6.8		
Moncalieri			29.87	758.6	59.5	15.3	69	SE	3.8	1.7			9	NE		0	0		
Mondovi	27.96	710.1	29.87	758.8	54.5	12.5	74	WNW			2		10			0	0		
Porto Maurizio			29.79	755 6	71.2	21.8	42	E			4		10			0	0		
Genoa			29.78	756.3	64.4	18.0	58	N	3.8	1.7			6	S		0	0		
Piacenza			29.87	758.7	50 0	10.0	95	NE			4		10			0.05	1.4		
Parma			29.86	758.4	55.2	12.9	95	NNE			4		1			0.039	1.0		
Bologna			29.86	758.4	60.4	15.8	50	E			6		10			0.15	4.1		
Florence			29.79	756.6	71.6	22.0	57	Calm			0		10			0.008	0.2		
Leghorn																0.039	1.0		
Siena	28.57	725.6	29.76	756.0	68.0	20.0	63	SE	2.5	1.1			10	SW		0	0		
Urbino	28.31	719.0	29.86	758 5	59.4	15.2	76	WNW			2		10			0.07	1.2		
Pesaro																			
Ancona			29.8	757 9	63.7	17.6	67	SE			4		10			0.07	1.8		
Grosseto			29.76	755.8	70.5	21.4	56	SSE			2		9	S		0.01	0.3		
Rome			29.77	756 1	76.3	24.6	45	S	9.8	4.4			9			0	0		
Naples, O. U			29.82	757.4	77.5	25.3	39	SSW					8			0	0		
Lecce			29.89	759.3	72.4	23.0	32	W	11.2	5.0			8			0	0		
Cosenza			29.85	758.2	80.6	27.0	72	SE	3.1	1.4			9			0	0		
Riposto, (Sicily)			29.95	760.6	69.1	20.6	76	SSE			2		4	W		0	0		
Palermo			29.62	752.3	83.7	28.7	24	SSE	31.1	13 9			10			0	0		
Caltanissetta	27.88	708.2	29.79	756.7	72.0	22.2	32	ENE			6		10			0	0		
Sub-Series.																			
Naples, S. R			29.81	757.2	77.4	25.2	36	SW	3.8	1.7			Calm	S		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.

Flushing			30.21	767.4	55.6	13 1		N			2								
Groningen			30.15	765 7	52.9	11.1		N			2								
Helder			30.21	767.4	50.7	10.4		NE			2								
Utrecht			30.15	765.9	57.4	14.1	53	NNE			2		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

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

Bergen			30.21	767.3	55.0	12.8	53	NW	6.3	2.8			10			0	0		
Bróno			30.38	771.7	47.8	8.8	50	NNE	11	5			1			0	0		
Christiania			30.28	769.0	51.8	11.0	39	E	4.7	2.1			6			0	0		
Tromsö			30.49	774.5	34.2	1.2	72	NE	2	1			10			0.024	0.6		

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

PORTUGUESE SERIES.

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

Stations.	Barometer, corrected for instrumental errors: Inches.	Millimeters.	Barometer, reduced to sea-level: Inches.	Millimeters.	Temperature of the air: Fahrenheit.	Centigrade.	Relative humidity: Per cent.	Winds, direction: From—	Velocity: Miles per hour.	Meters per second.	Force: 0—10.	Clouds, amount, Up'er: 0—10.	Low'r: 0—10.	Direction, Upper: From—	Lower: From—	Rain-fall or melted snow in the past 24 hours: Inches.	Millimeters.	Weather.	Observer.
Angra, (Azores)			30.23	767.9	68.5	20.3	75	W	8.2	3.67			4			0	0		Dr. J. A. N. Sampaio.
Campo Major			29.87	758.6	66.9	19.4	48	SW	10.7	4.78			8	WNW		0.022	0.5[illegible]		Dr. A. M. R. dos Santos.
Funchal, (Madeira)			30.16	766.0	66.4	19.1	67	SW	7.0	3.14			5			0	0		Capt. D. A. da Cunha.
Lisbon			29.96	761.0	59.7	15.4	59	WNW	16.1	7.2			10	WNW		0	0		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h. 6 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.	Bar. corr. Inches.	Millimeters.	Bar. sea-level 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.
Varsaw			30.01	762.2	51.3	12.4	48	WNW	9	4			4						Astronomical Obs.
Wilna			30.06	76[illegible]	50.4	10.2	39	N	9	4			8						Astronomical Obs.
Dorpat			30.06	[illegible]3.4	40.3	4.6	76	NNW	11	5			9						Physical Cabinet.
St. Petersburg			30.00	762.0	37.9	3.3	86	NNE	11	5			10					Raining.	Central Physical Obs.
Kuopio			30.17	766.[illegible]	35.2	1.8	67	NE	18	8			5						Ch. Forsten.
Kieff			29.93	760.1	48.6	9.2	91	ENE	4	2			10					Light rain.	Physical Cabinet.
Nikolaieff			29.93	760.3	73.[illegible]	23.8	48	SW	9	4			5						Kurdakof.
Kertch			29.95	760.8	70.0	21.1	65	S	13	6			7						Lagorio.
Moscow			30.01	762.2	47.8	8.8	68	S	13	6			8						Meteorological Obs.
Lugan			29.82	757.3	66.6	19.2	37	NE	13	6			6						Meteorological Obs.
Arch			30.15	765.7	36.5	2.5	72	E	29	13			2						Ogorodnikof.
Tiflis	28.44	722.5	29.77	756.2	81.5	27.5	28	NNW	11	5			3						Physical Observatory.
Astrakhan			29.81	757.2	74.3	23.[illegible]	56	NNW	2	1			8					Raining.	Sebastianof.
Kasan			29.94	760.5	54.0	12.2	38	NW	20	9			4						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.81	732.6	29.84	758.[illegible]	48.[illegible]	9.2	43	N	43	19			5						Meteorological Obs.
Nukuss			29.84	757.8	83.1	28.4	19	E	4	2			1						
Kas[illegible]																			Bobrof.
Tashkend	28.34	719.7	29.95	760.6	79.7	26.5	36	Calm	0	0			1						Michelson.
Barnaul			30.[illegible]	763.3	50.5	10.3	34	S	13	6			9						Meteorological Obs.
Yeniseisk			29.95	760.7	39.2	4.0	47	Calm	0	0			0						Marks.
Irkutsk	28.63	727.2	30.02	762.6	43.[illegible]	6.1	54	Calm	0	0									Usolzef.
Jor[illegible]																			Mossin.
Peking, (China)			29.91	759.7	74.3	23.5	42	SSW	9	4			3						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor					33.1	0.6	90	NW	4	2			10					Snow & rain	

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 4[illegible] meters, or 1,311.8 feet; Ekaterinburg, [illegible] m., or 1,[illegible]5.2? 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.	Bar. corr. Inches.	Millimeters.	Bar. sea-level 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.
Madrid			29.76	755.8	70.0	21.1	52	NW	3.7	1.67		0	6			0.114	2.9	Cloudy	Royal Observatory.
San Fernando			29.91	760.4	61.4	18.0	70	W	10.3	4.6		4	4	W	W	0	0		The Naval Observatory.

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight; 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.	Bar. corr. Inches.	Millimeters.	Bar. sea-level 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.
Haparanda			30.14	773.2	32.4	0.2	78	N			4		7			0	0		
Umea			30.40	772.2	39.0	3.9	65	NE			6		9			0	0		
Hernosand			30.39	771.8	39.2	4.0	67	E			4		2			0	0		
Stockholm			30.20	767.1	42.1	5.6	45	N			6		7			0.031	0.8		
Wisby			30.23	767.8	40.0	4.8	81	ENE			4		3			0.01	0.3		
SUB-SERIES.																			
Upsala.			30.28	769.0	41.7	5.5	49	NNE	21.5	9 6			6	NNW	NNW	0	0		Dr. Hildebrandsson.

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

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0-10.	Clouds. Amount. Low'r 0-10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28.51	724.1	29.95	760.6	50.7	10.4	63	N			8		3			0	0		The Observatory.
Zurich	28.42	721.8	30. 8	761.0	46.2	7.9	80	NE			1		9			1.067	27.1	Cloudy.	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —0.5 mm.; Thermometer, —4.7 cent.; Relative Humidity, +5 per cent.

Note.—The originals give the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople																			
Fao, (Persian Gulf)			29.88	759.0	87.8	31.0		SW			1		10						
Salonica			29.97	761.2	79.5	26.4		S			1		2						
Valona			29.78	756.3	77.9	25.5		S			2		2						
Varna			29.93	760.1	73.4	23.0		SW			3		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			29.82	757.4	73.9	23.4	73	W			2		9n		E	0	0	Threatening	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B.			30.29	769.4	41.8	5.4	90	Calm	0	0									Hon. J. Ferguson.
Brockville, Ontario			30. 0	762.0	54	12.2		E	8	3.6			10s		E	0.12	3.0	Cloudy	W. R. Bigg.
*Chatham, N. B.			30.33	770.4	43	6.1	75	W	1	0.4		8ck	0	SW		0	0	Fair	G. A. Blair.
Charlottetown P. E. Island.			30.39	771.9	40	4.4	84	S	4	1.8			8ks			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.97	761.2	50.3	10.2	95	E			1		10s			0.169	4.29	Unsettled	James Smith, M. A.
Dalhousie, N. B.			30.34	770.6	39.6	3.9	77	W			1					0	0		H. A. Johnson.
Esquimault, B. C.			30.25	768.3	41.1	5.1	92	S	1	0.4		2cs				0.09	2.3	Clear	W. H. Bevis.
Fredericton, N. B.			30.33	770.4	39.1	3.9	91	SE	4	1.8			10n			Inap.	Inap.	Raining	Prof. Harrison.
*Fort Garry, Manitoba			30.09	764.3	39	3.9	84	NE	4	1.8		2ck	2ks	E	E	0	0	Fair	James Stewart.
Goderich, Ontario			30.06	763.5	40.9	4.9	87	Calm			0		10n			0.204	5.18	Unsettled	H. J. Strang, M. A.
Granton, Ontario			30.02	762.5	44.0	6.7		NW			1		10n			0.68	17.3	Raining	James Grant.
*Halifax, N. S.			30.38	771.6	37	2.8	100	S	9	4.0			10n			0.09	2.3	Lo[illegible]n	F. Allison, M. A.
*Kingston, Ontario			30.00	762.0	49	9.4	96	S	10	4.5			10ks			0.14	3.6	Cloudy	S. Woods, M. A.
Little Current, Ontario																			G. B. Abrey, C. E.
*Montreal, Quebec			30.00	762.0	47	8.3	97	SE	10	4.5			10n		SW	0.22	5.6	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.93	760.2	50	10.0	82	E	3	1.3			10n		S	0.17	4.3	Light rain	J. B. Hamey.
*Parry Sound, Ontario			29.97	761.2	38	3.3	95	S W	14	6.3			Fog		SW	0.51	13.0	Foggy	Rev. R. Mooley.
*Port Dover, Ontario			30.04	763.0	48	8.9	94	SW	6	2.7		8ck	0	SW		0.32	8.1	Fair	H. Morgan.
Port Hastings, N. S.			29.42	747.3	43.1	6.2		Calm	0	0						0	0	Fine	P. ter Grant.
*Port Stanley Ontario			30.03	762.7	51	10.6	87	W	12	5.4			10n		W	0.59	15.0	Cloudy	M. Payne.
*Quebec, Quebec			30.17	766.3	39	3.9	82	NE	24	10.7			10n		NE	0.01	0.3	Light rain	Capt. Ash, R. N.
St. John, N. B.			30.35	771.1	39	3.9	91	Calm	0	0			10n			0.270	6.86	Raining	G. Murdoch, C. E.
*Saugeen, Ontario			30.00	762.0	37	2.8	95	SW	11	4.9			10s			0.49	12.4	Cloudy	K. Stewart.
Stayner, Ontario			29.99	761.7	43	6.1	83	NW	8	3.6			10n		W	0.46	11.7	Cloudy	R. J. Cole.
Stratford, Ontario			30.03	762.7	44.8	7.1	91	NW					10s			0.496	12.60	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			30.41	772.4	51	10.6	58	W	4	1.8		0	0			0	0	Clear	T. C. Hill.
*Toronto, Ontario			30.00	762.0	53	6.1	81	W	14	6.3		2cs	5ks	SW	SW	0.24	6.1	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.01	762.2	48.7	9.3	93	W			1		10s			0.22	5.6	Gloomy	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 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. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From–	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10	Clouds. Amount. Up'er 0–10	Clouds. Amount. Low'r 0–10	Clouds. Direction. Upper. From–	Clouds. Direction. Lower. From–	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.05	763.3	54	12.2	86	S	5	2.2			10s		S	0.29	7.4	Threatening	
Alpena, Mich			29.98	761.5	39	3.9	91	NW	8	3.6			10s		NW	0.95	24.1	Cloudy	
Atlantic City, N. J			30.11	764.8	53	11.7	93	S	14	6.3		5cs	2s	SW	S	0.07	1.8	Cloudy	
Augusta, Ga.			30.18	766.6	68	20.0	95	SE	5	2.2			10s			0	0	Cloudy	
Baltimore, Md			30.12	765.0	63	17.2	83	S	1	0.4		5k	Sm'e	W		0.02	0.5	Smoky	
Barnegat, N. J			30.10	764.5	54	12.2	93	SW	13	5.8		5ck	2s	W	SW	0.22	5.6	Cloudy	
Benton, Montana	27.20	690.9	30.00	762.0	41	5.0	73	NW	12	5.4			10n		[illegible]	0.50	12.7	Light rain	
Bismarck, Dakota	28.23	717.0	29.92	760.0	36	2.2	53	E	4	1.8		8ck	0	SE		0	0	Fair	
Boston, Mass			30.20	767.1	45	7.2	100	E	5	2.2		10n	Fog			0.01	0.3	Light rain	
Breckenridge, Minn			30.02	762.5	42	5.6	83	E	12	5.4		10cs	0	S		0	0	Cloudy	
Buffalo, N. Y			29.99	761.7	42	5.6	100	SW	8	3.6			Fog		SW	0.21	5.3	Foggy	
Burlington, Vt			30.03	762.7	53	11.7	93	S	8	3.6			10s		SW	0.12	3.0	Cloudy	
Cairo, Ill			29.90	759.4	69	20.6	84	S	15	6.7			10s		S	0.50	12.7	Cloudy	
Cape Hatteras, N. C			30.17	766.3	68	20.0	84	S	9	4.0		2ck	1k	W		0	0	Fair	
Cape Henry, Va			30.16	766.1	69	20.6	80	SW	14	6.3		5k	Haze	W		0	0	Fair	
Cape Lookout, N. C			30.24	768.1	68	20.0	90	S	8	3.6		0	0			0	0	Clear	
Cape May, N. J			30.11	764.8	54	12.2	93	S	5	2.2		2ck	Haze	W		0.02	0.5	Fair	
Charleston, S. C			30.21	767.3	70	21.1	90	SE	5	2.2		0	0			0	0	Clear	
Cheyenne, Wyoming	23.80	604.5	29.74	755.4	32	0.0	95	N	8	3.6			10n			0.05	1.3	Light snow	
Chicago, Ill			30.00	762.0	40	4.4	82	NE	14	6.3			10s			0.03	0.8	Cloudy	
Cincinnati, Ohio			29.98	761.5	59	15.0	94	SE	1	0.4			Fog			0.06	1.5	Foggy	
Cleveland, Ohio			30.06	763.5	50.8	10.4	84	W	5	2.2			10s		W	0.15	3.8	Cloudy	
Colorado Springs, Col	23.81	604.8	29.68	753.9	32	0.0	100	N	16	7.2			10n			0.60	15.2	Light snow	
Corsicana, Tex			29.70	751.4	75	23.9	76	S	20	8.9		10k	0	S		0	0	Cloudy	
Davenport, Iowa			29.90	759.4	44	6.7	84	NE	16	7.2			10n			0.12	3.0	Light rain	
Denison, Tex			29.64	752.8	74	23.3	81	SE	20	8.9			10s		S	Inap.	Inap.	Cloudy	
Denver, Col.	24.58	624.3	29.80	756.9	34	1.1	90	N	4	1.8			10n			0.82	20.8	Light snow	
Detroit, Mich			30.01	762.2	44	6.7	84	W	5	2.2			10s		W	0.47	11.9	Cloudy	
Dodge City, Kan	27.02	686.3	29.26	743.2	44	6.7	100	NE	12	5.4			10n			0.02	0.5	Light rain	
Dubuque, Iowa			30.08	764.0	42	5.6	83	E	12	5.4			10s			0.02	0.5	Cloudy	
Duluth, Minn			30.13	765.3	36	2.2	80	Calm	0	0		2cs	5ks	SW	SW	0	0	Fair	
Eastport, Me			30.27	768.8	41	5.0	91	S	4	1.8			10s			0.22	5.6	Cloudy	
Erie, Pa			30.03	762.7	51	10.6	93	W	16	7.2			10s			0.21	5.3	Cloudy	
Escanaba, Mich			30.03	762.7	42	5.6	75	N	5	2.2		0	0			0.56	14.2	Clear	
Fort Gibson, Indian Terr.			29.53	750.0	75	23.9	72	SE	26	11.6		1k	8ks	S		Inap.	Inap.	Fair	
Ft. St. Michael, Alaska			29.92	760.0	19	−7.2	....	SW	23	10.3			10s			....	....	Cloudy	
Fort Sill, Indian T.	28.33	719.6	29.37	746.0	71	21.7	90	S	28	12.5			10s		S	0	0	Cloudy	
Fort Sully, Dakota	28.24	717.3	99.91	759.7	44	6.7	76	Calm	0	0			10s			0	0	Cloudy	
Galveston, Tex			29.88	758.9	74	23.3	90	SE	12	5.4		2c	2s		SE	0.08	2.0	Fair	
Grand Haven, Mich			30.02	762.5	41	5.0	87	E	3	1.3			10s		E	0.56	14.2	Cloudy	
Indianapolis, Ind			29.98	761.5	54	12.2	100	NW	5	2.2			10n		S	1.49	37.8	Light rain	
Indianola, Tex			29.82	757.4	75	23.9	90	SE	16	7.2			10s		S	0	0	Cloudy	
Jacksonville, Fla			30.20	767.1	74	23.3	81	Calm	0	0		10k	0	E		0.03	0.8	Cloudy	
Keokuk, Iowa			29.76	755.9	47	8.3	100	W	15	6.7			10n		W	0.98	24.9	Light rain	
Key West, Fla			30.12	765.0	82.0	27.8	78	SE	15	6.7		2ck	1ks	NW	SE	0	0	Fair	
Kittyhawk, N. C			30.21	767.3	68	20.0	84	SW	8	3.6		0	Haze			0	0	Clear	
Knoxville, Tenn			30.11	764.8	57	13.9	93	NE	4	1.8		10cs	Haze	SW		Inap.	Inap.	Fair	
La Crosse, Wis			29.98	761.5	42	5.6	74	NE	6	2.7			10s		NE	Inap.	Inap.	Cloudy	
Leavenworth, Kan			29.67	753.6	51	10.6	93	NE	6	2.7			10n			1.00	25.4	Heavy rain	
Lexington, Ky	28.96	735.6	30.01	763.0	61	16.1	88	SE	8	3.6			10s			0.03	0.8	Cloudy	
Long Branch, N. J			30.11	764.8	50	10.0	86	S	10	4.5		2c	2ks	SW	S	0.45	11.4	Fair	
Louisville, Ky			29.98	761.5	62	16.7	83	SE	4	1.8			10ks		SW	0.02	0.5	Cloudy	
Lynchburg, Va			30.13	765.3	69	20.6	64	SW	5	2.2		0	0			Inap.	Inap.	Clear	
Malone, N. Y.			29.92	760.0	55	12.8	80	S	13	5.8			10s		SW	0.10	2.5	Cloudy	
Manhattan, Kan.	28.42	721.9	29.54	750.3	45	7.2	100	NE	16	7.2			10n			2.30	58.4	Light rain	
Marquette, Mich			30.08	764.0	43	6.1	75	NW	10	4.5		0	0			0.20	5.1	Clear	
Memphis, Tenn			29.90	759.4	70	21.1	90	S	12	5.4			10ks		S	0	0	Cloudy	
Milwaukee, Wis			30.04	764.0	38	3.3	80	E	8	3.6			10s		E	0.25	6.3	Cloudy	
Mobile, Ala			30.10	764.5	71	21.7	85	SE	6	2.7		5c	0	SW		0	0	Fair	
Montgomery, Ala			30.13	765.3	67	19.4	79	SE	5	2.2		5c	Haze			0	0	Fair	
Morgantown, W. Va			30.06	763.5	61	17.8	72	SW	6	2.7			10s		SW	0.07	1.8	Cloudy	
Mt. Washington, N. H	23.84	605.5	30.20	767.1	34	1.1	100	SW	24	10.7			10n		SW	0.45	11.4	Light rain	
Nashville, Tenn			29.99	761.7	68	20.0	68	SE	4	1.8		5ck	0	W		0.01	0.3	Fair	
New Haven, Conn			30.14	765.5	51	12.2	86	SE	4	1.8			10n			0.40	10.2	Heavy rain	
New London, Conn			30.18	766.6	49	9.4	98	SE	9	4.0			10n			0.23	5.8	Light rain	
New Orleans, La			30.02	762.5	72	22.2	90	SE	12	5.4			10ks			0.03	0.8	Cloudy	
Newport, R. I			30.19	766.8	50	10.0	100	SE	10	4.5		10n	Fog	SE		0.13	3.3	Light rain	
New York, N. Y			30.11	764.8	53	11.7	93	SE	3	1.3			Fog			0.11	2.8	Foggy	
Norfolk, Va			30.17	766.3	69	20.6	75	SW	10	4.5		5k	0			0	0	Fair	
North Platte, Neb	26.86	682.2	29.42	747.3	39	3.9	91	NE	14	6.3			10n			0.21	5.3	Light rain	
Omaha, Neb	28.70	729.0	29.75	755.9	45	7.2	92	NE	12	5.4			10n			0.38	9.7	Heavy rain	
Oswego, N. Y			29.99	761.7	59	15.0	79	S	8	3.6			10n		SW	0.01	0.3	Light rain	
Pembina, Dakota			30.03	762.7	41	5.0	73	N	1	0.4		5k	0			0	0	Fair	
Philadelphia, Penn			30.12	765.0	62	16.7	83	SW	11	4.9		8k	0	SW		0.14	3.6	Fair	
Pike's Peak, Colorado	17.37	441.2	29.58	751.3	6	−14.4	100	NE	20	8.9			10n			0.29	7.4	Light snow	
Pittsburgh, Penn			30.05	763.3	61	16.1	82	W	10	4.5		0	10s		W	0	0	Cloudy	
Port Huron, Mich			30.02	762.5	47	8.3	92	NW	5	2.2			10n		NW	0.31	7.9	Light rain	
Portland, Me			30.25	768.3	44	6.7	92	NE	6	2.7			Fog			0.24	6.1	Foggy	
Portland, Oregon			30.15	770.9	43	6.1	83	Calm	0	0			10s			0	0	Cloudy	
Punta Rassa, Fla			30.11	765.5	79.5	26.4	86	E	14	6.3		8cs	Sm'e	NE	E	0	0	Cloudy	
Rochester, N. Y			29.96	761.0	59	15.0	81	W	12	5.4		1k	2s	W	W	0.10	2.5	Fair	
Salt Lake City, Utah	25.53	648.4	29.86	758.4	40	4.4	73	S	4	1.8			10s			0.22	5.6	Cloudy	
Sandy Hook, N. J			30.09	764.3	54	12.2	93	Calm	0	0			10s		SW	0.33	8.4	Cloudy	
San Diego, Cal.			29.93	760.2	54	12.2	93	Calm	0	0		0	0			0	0	Clear	
San Francisco, Cal			29.99	761.7	53	11.7	79	SW	2	0.9		0	0			0	0	Clear	
Santa Fe, N. M	23.05	585.5	29.59	751.6	31	−0.6	79	SW	4	1.8		2k	0	NW		Inap.	Inap.	Fair	
Savannah, Ga.			30.09	764.8	80	26.7	74	S	6	2.7		2k	Sm'e	SE		0	0	Smoky	
Shreveport, La			29.87	758.7	75	23.9	86	S	8	3.6		10k	0	S		0	0	Cloudy	
Smithville, N. C			30.23	767.8	69	20.6	90	S	6	2.7		0	0			0	0	Clear	
Springfield, Mass			30.00	762.0	55	12.8	93	Calm	0	0			10n			0.10	2.5	Light rain	
St. Louis, Mo			29.81	757.2	59	15.0	87	E	4	1.8			10s		S	0.03	0.8	Cloudy	
St. Marks, Fla			30.15	765.8	68	20.0	90	SE	5	2.2		2c	0			0	0	Fair	
St. Paul, Minn			29.97	761.2	43	6.1	71	NE	8	3.6			10s		NE	0	0	Cloudy	
St. Paul's Island, Alaska			30.02	762.5	33	0.6	89	S	4	1.8			Fog			0.05	1.3	....	
Thatcher's Island, Mass			30.20	767.1	47	8.3	92	NE	1	0.4			10n		SW	0.09	2.3	Light rain	
Toledo, Ohio			30.01	762.2	51	10.6	86	SW	3	1.3			10ks		SW	0.11	2.8	Cloudy	
Tucson, Arizona	27.45	697.2	30.01	763.0	59	15.0	....	W	....	....		0	0			0	0	Clear	
Tybee Island, Ga			30.18	766.6	73	22.8	85	S	4	1.8		0	Fog			0	0	Clear	
Vicksburg, Miss			30.00	762.0	72	22.2	85	S	11	4.9		10k	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.	24.29	614.7	29.68	753.9	29	— 1.7	78	Calm	0	0	.....	.....	10n	.....	SE	0.09	2.3	Light rain...	
Washington, D. C.	.....	.....	30.12	765.0	68	20.0	72	W	4	1.8	.....	Haze	0	.....	.....	0.02	0.5	Clear.....	
Wilmington, N. C	.....	.....	30.22	767.6	70	21.1	90	S	4	1.8	.....	0	0	.....	.....	0	0	Clear.....	
Wood's Holl, Mass	.....	.....	30.23	767.8	53	11.7	86	S	12	5.4	.....	.....	10c	.....	SW	0.04	1.0	Cloudy.....	
Wytheville, Va	27.82	706.6	29.97	761.2	55	12.8	90	Calm	0	0	.....	2cs	1ks	W	W	Inap	Inap.	Fair.....	
Yankton, Dakota	28.61	726.7	29.91	759.7	42	5.6	91	NE	10	4.5	.....	.....	10n	.....	.....	0.25	6.3	Light rain...	
Yuma, Arizona	.....	.....	29.89	759.2	66	18.9	.....	NW	.....	.....	.....	0	0	.....	.....	0	0	Clear.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.07	763.8	81	27.2	74	NE	7	3.1	.....	5k	10ks	NE	.....	0	0	Cloudy.....	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	30.02	762.5	82	27.8	70	E	.....	.....	.....	2k	2k	.....	.....	0	0	Fair.....	L. V. Bigard.
St. Thomas, S. T., W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. S. Cameron.
Kingston, Jamaica, W. I.	.....	.....	30.13	765.3	82	27.8	78	Calm	0	0	.....	5c	2s	SE	.....	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.86	758.4	80	26.7	74	NE	6.0	2.7	.....	4c	0	.....	.....	0.23	5.8	Fair.....	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.08	764.0	79	26.1	82	NE	4.8	2.1	.....	8c	0	.....	.....	0.09	2.3	Fair.....	Charles Hasselbrink.
St. Georges, Bermudas	...	.....	30.33	770.4	69.5	20.8	85	E	15.0	6.7	.....	.....	10n	.....	.....	0	0	Sprinkling..	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica, W. I.	27.24	691.9	30.02	762.5	67	19.4	84	NNE	1.0	0.4	.....	5c	0	NE	.....	0.08	2.0	Dull	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	...	30.02	762.5	80	26.7	74	NE	.....	.....	3	.....	5k	.....	NE	0	0	Dry.....	C. J. Hering.
Batavia Dutch Guiana, S. A.	30.7	763.8	.....	.....	85.6	29.8	.....	SE	.....	.....	.....	.....	.....	.....	.....	0	0	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.2	640.8	.....	.....	67.0	19.4	76	Calm	0	0	.....	7k	3s	.....	.....	0.13	3.3	Clear.....	Thomas Herran.
St. John's, Newfoundland	.....	.....	30.36	771.1	40.0	4.4	58	NE	.....	.....	.....	0	8s	.....	.....	0	0	Fair.....	John Delaney.
York Factory, B. A.	.....	.....	30.16	766.1	38	3.3	77	S	2	0.9	.....	4k	0	SW	.....	0	0	.....	J. Fortescue.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Makawao, Maui, H. I.	27.85	707.4	30.02	762.5	57	13.9	81	Calm	0	0	.....	0	1k	.....	.....	0	0	Clear.....	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.
Steamer Hibernian, N. 49° 28', W. 43° 21'.	E½S	10½	29.85	758.2	44	6.7	.....	N	.....	.....	5	.....	7k	.....	.....	Long swells	.....	Blue sky.....	Lieut. F. Archer, R.N.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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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° Fahrenheit, are read from a spirit thermometer. The rain-fal at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude of he barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenn , 6,057 3 ft., or 1,846.2 m.; Clifton about 2.892 ft., or 881.5 m.; Colorado Springs, 6 032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2 478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft , or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,916.6 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 4,268.8 ft., or 1,301.1 m.; Santa Fè, 6,892.2 (? 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.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 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	.....	.....	29.85	758.1	66.0	18.9	67	NNW	.....	.....	2	.....	6	.....	.....	0.886	22.5	Fair	Charnot.
Algiers	.....	.....	29.76	755.9	60.8	16.0	98	NW	.....	.....	2	.....	10	.....	.....	0.217	5.5	Hidden	Peter.
La Calle	.....	.....	.....	.....	69.6	15.9	.....	NW	.....	.....	2	.....	8	.....	.....	2.283	58.0	Cloudy	Kuntz.
Tunis	.....	.....	29.58	751.3	74.8	23.8	61	E	.....	.....	4	.....	9	.....	.....	0.189	4.8	Hidden	Jacques.
Sfax	.....	.....	29.71	755.1	71.5	21.6	55	SE	.....	.....	2	.....	5	.....	.....	0	0	Fair	Chauvey.
Saïda	.....	.....	29.87	758.6	51.8	11.0	97	NW	.....	.....	3	.....	6	.....	.....	0.055	1.4	Fair	Millot.
Tebessa	.....	.....	29.71	754.5	53.8	12.1	.....	NW	.....	.....	4	.....	10	.....	.....	0.236	6.0	Hidden	Colin.
Gerlville	.....	.....	29.84	758.6	47.7	8.7	86	NNW	.....	.....	2	.....	6	.....	.....	0.484	12.3	Fair	Buard.
Laghouat	.....	.....	29.78	756.4	80.6	27.0	15	W	.....	.....	3	.....	2	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	29.71	754.5	72.0	22.2	48	NW	.....	.....	3	.....	10	.....	.....	0	0	Hidden	Laromer.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

AUSTRIAN SERIES.

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

Agram	.....	.....	29.98	761.5	47.7	8.7	78	SW	.....	.....	3	.....	10	.....	.....	1.130	28.7	Raining	Prof. Ivan Stozir.
Buda-Pesth	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	I. R. Cen. M. I., Hungary
Cracow	.....	.....	30.08	764.1	47.8	8.8	81	NE	.....	.....	3	.....	10	.....	.....	0.197	5.0	.....	I. R. Observatory.
Eperies	.....	.....	29.95	760.8	51.2	10.1	78	N	.....	.....	3	.....	10	.....	S	0.039	1.00	.....	Julius Mikolik.
Gratz	.....	.....	29.95	760.8	51.2	10.1	78	N	.....	.....	4	.....	10	.....	.....	0.870	22.1	.....	Andreas Rospini.
Hermannstadt	28.77	730.7	29.98	761.5	48.9	9.4	88	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kremsmünster	28.39	721.1	29.76	756.0	65.5	18.6	71	WNW	.....	.....	1	.....	10	.....	.....	0.161	4.10	.....	Prof. Reissenberger.
Lemberg	28.68	728.5	30.03	762.8	50.7	10.4	52	ENE	.....	.....	2	.....	7	.....	.....	0.49	12.5	.....	Prof. C. Wagner.
Nyiregyhaza	.....	.....	29.95	760.6	46.9	8.3	86	NE	.....	.....	3	.....	10	.....	.....	0.472	12.0	.....	Dr. T. Stanecki.
Pola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Szegedin	.....	.....	29.77	756.1	50.7	10.4	74	ENE	.....	.....	4	.....	108	.....	.....	0.097	2.46	.....	I. R. Hydrographic Office
Trieste	.....	.....	29.86	758.5	54.1	11.7	99	N	.....	.....	1	.....	10	.....	.....	0.562	14.30	.....	Karl Stancel.
Vienna	.....	.....	29.88	758.9	45.5	7.5	74	ENE	.....	.....	5	.....	10	.....	.....	0.809	20.4	Stormy.	Prof. V. Farolfi.
.....	.....	.....	29.98	761.5	54.0	12.2	50	N	.....	.....	3	.....	9	.....	.....	0.157	4.0	.....	I. R. Central Institute.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Brussels	.....	.....	30.24	768.1	53.2	11.8	57	NE	.....	.....	4	.....	7	.....	.....	0	0	.....	Royal Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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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	.....	.....	30.48	774.2	50.0	10.0	.....	S	18	8.0	.....	.....	5	.....	.....	0	0	Blue sky.....	William Boswell.
Ardrossan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	William McNeil.
Armagh Observatory	.....	.....	30.41	772.4	58.4	14.7	.....	SE	10	4.5	.....	.....	0	.....	.....	.....	.....	Blue sky.....	S Call for Dr. Robinson.
Bidston, Liverpool Obs.	.....	.....	30.19	771.9	53.3	11.8	.....	E	15	6.7	.....	.....	7	.....	.....	.....	.....	*Detached clouds...	John Hartnup.
Birr Castle, (Parsonstown)	.....	.....	30.33	770.4	60.8	16.0	.....	SE	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	J. Dreyer.
Bradford	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. McLandsborough.
Bridgetown, (Barbadoes)	.....	.....	29.98	761.5	82.5	28.1	.....	SE	.....	.....	3	.....	7	.....	.....	.....	.....	*Detached clouds...	Sergt. J. F. Balanen. A.
Cambridge Observatory	.....	.....	30.36	771.1	58.0	14.4	.....	NE	.....	.....	1	.....	1	.....	.....	.....	.....	Blue sky.....	H. Todd. [H. C.
Cardington	.....	.....	30.37	771.4	56.0	13.3	.....	E	.....	.....	1	.....	9	.....	.....	.....	.....	Overcast.....	John McLaren.
Carlisle	.....	.....	30.43	772.9	60.9	16.1	.....	SE	.....	.....	2	.....	6	.....	.....	0	0	Fine.....	T. Pelham for J. Carmell.
Chatham, School M. E	.....	.....	30.34	770.6	49.5	9.7	.....	NE	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast.....	Major C. N. Martin, R.E.
Dartmoor	28.84	732.5	30.37	771.4	50.6	10.3	.....	E	.....	.....	6	.....	10	.....	.....	.....	.....	Gloomy.....	R. I. Power.
Donaghadee	.....	.....	30.42	772.7	56	13.3	.....	SSE	.....	.....	2	.....	0	.....	.....	.....	.....	Blue sky.....	J. MacGowan.
Dover	.....	.....	30.20	767.1	51	10.6	.....	NE	.....	.....	5	.....	4	.....	.....	.....	...	½ clouded..	J. Costello.
Eccles (near Manchester)	.....	.....	30.40	772.1	53.2	11.8	.....	NE	7.2	3.2	.....	.....	7	.....	.....	.....	.....	*Detached clouds...	Thomas Mackereth.
Falmouth Observatory	.....	.....	30.30	769.6	52.1	11.2	.....	E	22	9.8	.....	.....	2	.....	.....	.....	.....	*Detached clouds...	The Staff.
Fort Napier, (Natal)	27.45	697.2	29.69	754.1	71.2	21.8	.....	SE	.....	.....	3	.....	7	.....	.....	.....	.....	Detached clouds...	Lieut. Grain on. A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.86	758.4	83	28.3	.....	W	.....	.....	2	.....	9	.....	.....	.....	.....	Overcast.....	[tis.
Galway, Queen's College	.....	.....	30.29	769.4	62	16.7	.....	SE	.....	.....	2	.....	0	.....	.....	.....	.....	Blue sky.....	P. G. Carre, for Prof. Cur
Gibraltar, (Mediterranean)	.....	.....	29.81	757.2	65.0	18.3	.....	W	.....	.....	5	.....	9	.....	.....	Blue	Blank	*Detached clouds...	Lieut. C. Aitken, A. H. C.
Glasgow Observatory	.....	.....	30.42	772.7	59.0	15.0	.....	NE	.....	.....	2	.....	2	.....	.....	.....	.....	Fine.....	Lewis Stuart.
Great Yarmouth	.....	.....	30.41	772.4	50	10.0	.....	E	.....	.....	5	.....	2	.....	.....	.....	.....	Blue sky.....	G. T. Watson.
Greenwich Royal Obs	.....	.....	30.34	770.6	56.5	13.6	.....	ENE	.....	.....	1	.....	6	.....	.....	Blank	Blank	*Detached clouds...	The Staff, for G. B. Airy
Guernsey	.....	.....	30.24	768.1	52	11.1	.....	NE	.....	.....	5	.....	8	.....	.....	.....	.....	*Detached clouds...	Dr. J. Hoskins.
Halifax, Moorside Obs.	.....	.....	30.43	772.9	48.6	9.2	.....	NE	.....	.....	2	.....	10	.....	.....	.....	.....	Overcast.....	J. S. Crossley.
Helston	.....	.....	30.24	768.1	59	15.0	.....	E	.....	.....	6	.....	10	.....	.....	0	0	Fine.....	M. J. Moyle.
Holyhead	.....	.....	30.37	771.4	58	14.4	.....	ENE	.....	.....	4	.....	0	.....	.....	.....	.....	Blue sky.....	John Tilston.
Kew Observatory	.....	.....	30.43	770.4	54.3	12.4	.....	ENE	22	9.8	.....	.....	9	.....	.....	.....	.....	Threatening	The Staff.
Kingstown	.....	.....	30.40	772.1	52	11.1	.....	E	.....	.....	3	.....	1	.....	.....	.....	.....	Blue sky.....	George Mitchell.
Leicester Museum	.....	.....	30.41	772.1	54.0	12.2	.....	E	.....	.....	1	.....	8	.....	.....	.....	.....	*Detached clouds...	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)	.....	.....	29.62	752.3	72.4	22.4	.....	SE	.....	.....	2	.....	6k	.....	.....	.....	.....	.....	Sergt. I. Travis, A. H. C.
Nairn	.....	.....	30.38	771.6	55	12.8	.....	F	.....	.....	1	.....	0	.....	.....	.....	.....	Clear.....	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.06	763.5	81.6	27.6	.....	NE	.....	.....	6	.....	7	.....	.....	.....	.....	Detached clouds...	Surg. Maj. Henry.
Nottingham	.....	.....	30.41	772.4	55.4	13.0	.....	NNE	.....	.....	4	.....	7k	.....	NE	0	0	*D. clouds.....	J. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.3	771.4	49.4	9.7	.....	ENE	.....	.....	4	.....	8	.....	.....	.....	.....	*Detached clouds...	Rev. Stephen Whitty.
Oxford, Radcliffe Obs	.....	.....	30.31	769.9	55	12.8	.....	NE	.....	.....	1	.....	9	.....	.....	.....	.....	Hazy.....	J. Lucas.
Plymouth	.....	.....	30.38	769.1	57	13.9	.....	E	.....	.....	5	.....	2	.....	.....	.....	.....	*Detached clouds...	John Merrifield.
Roche's Point	.....	.....	30.32	770.1	56	13.3	.....	ESE	.....	.....	3	.....	2	.....	.....	.....	.....	Fine.....	W. Kennedy.
Saint Ann's Head	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John C. Walker.
Saint Helier, Jersey	.....	.....	30.29	767.1	57.0	13.9	.....	E	.....	.....	6	.....	5	.....	.....	.....	.....	½ clouded..	A. P. Amy.
Sandwick Manse, Orkneys	.....	.....	30.13	765.9	52.1	11.1	.....	SSE	21	9.4	.....	.....	5	.....	.....	.....	.....	*Detached clouds...	Rev. C. Clouston, LL.D.
Scarborough	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. Shaw
Scutari Cemetery Turkey	.....	.....	29.78	756.4	80.8	27.1	.....	NE	.....	.....	2	.....	4	.....	.....	.....	.....	*Detached clouds...	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.41	772.4	56.0	13.3	.....	ESE	.....	.....	2	.....	8	.....	.....	Inap	Inap.	Overcast.....	W. F. Cooper.
Silloth Rectory	.....	.....	30.43	772.9	55.8	13.2	66	SE	.....	.....	3	.....	4	.....	.....	0	0	*D. clouds.....	Rev. Francis Redford
Stonyhurst Observatory	.....	.....	30.41	772.4	53.4	11.9	.....	E	.....	.....	3	.....	5	.....	.....	.....	.....	Hazy.....	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.	.....	.....	30.35	770.9	53	11.7	.....	Calm	.....	.....	0	.....	5	.....	.....	.....	.....	*Detached clouds...	John Smith.
Stratfield Turgiss	.....	.....	30.32	770.1	54.8	12.7	.....	NE	.....	.....	1	.....	9	.....	.....	.....	.....	*Detached clouds...	Rev. Charles H. Griffith
Streatley Vicarage	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Rev. John Slatter.
Thurso	.....	.....	30.39	771.9	58	14.4	.....	SSE	.....	.....	3	.....	8	.....	.....	.....	.....	Hazy.....	John Trotter.
Truro, Royal Institution	.....	.....	30.29	769.4	63	17.2	.....	E	.....	.....	6	.....	7	.....	.....	.....	.....	*Detached clouds...	W. Newcombe.
Valencia Observatory	.....	.....	30.29	769.4	61.9	16.6	.....	SW	11	4.9	.....	.....	0	.....	.....	.....	.....	Hazy.....	The Staff.
Sub-Stations.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	53	11.7	.....	E	.....	.....	2	.....	0	.....	.....	0	0	.....	Thomas Dawson.
Cape Good Hope Obs	.....	.....	30.11	764.8	62.8	17.1	73	SSE	10	4.5	.....	.....	9	.....	.....	.....	.....	.....	The Staff for E. J. Stone.
Leith, Restalrig Park	.....	.....	30.47	773.9	56.7	13.7	.....	E	.....	.....	2	10ck	.....	.....	.....	0	0	Fine.....	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.03	762.7	.....	.....	.....	W	4.4	2.0	.....	.....	.....	.....	.....	0	0	.....	C. Meldrum.
Melbourne, Observatory	.....	.....	30.12	765.0	53.8	12.1	92	SSE	7	3.1	.....	.....	4	.....	.....	0	0	Heavy dew..	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	30.36	771.1	54	12.2	.....	S	.....	.....	3	0	0	.....	.....	0	0	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	30.46	773.7	49	9.4	.....	SE	.....	.....	3	3	4	N	.....	.....	.....	.....	Robert Burnet.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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	.....	.....	30.41	772.4	45.9	7.7	47	S	.....	.....	2	.....	0	.....	.....	.....	.....	.....	.....
Fanöe	.....	.....	30.46	773.7	52.3	11.3	47	ENE	.....	.....	4	.....	3	.....	.....	.....	.....	.....	.....
Godthaab, Greenland	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stykkisholm, Iceland	.....	.....	29.87	758.7	45.1	7.3	96	SE	.....	.....	4	.....	10	.....	.....	.....	.....	Raining.....	
Thorshavn, Faröe	.....	.....	30.37	771.3	50.9	10.5	80	S	.....	.....	2	.....	1	.....	.....	.....	.....	.....	.....
Vestervig	.....	.....	30.47	773.8	51.8	11.0	45	NE	.....	.....	4	.....	0	.....	.....	.....	.....	.....	.....
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Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the 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			30.11	764.9	55.4	13	44	NE			4		5ck		NE	0	0	Cloudy	Normal School.
Amiens			30.19	766.7	53.2	11.8	71	E			3		0			0	0	Clear	Normal School.
Avignon			29.74	755.4	64.6	18.1	47	N			6		8			0	0	Cloudy	Normal School.
Bar-sur-Seine			30.06	763.4	58.8	14.9	26	E			10		5		E	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)			30.01	762.2	61.2	16.2	36	E	47.0	21.0			5		E	0	0	Cloudy	Beaumette Observatory.
Beauvais			30.19	766.8	59.5	15.3	29	E			4		5		ENE	0	0	Cloudy	Normal School.
Besançon			29.98	761.6	58.1	14.5	49	E			6		2		NE	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse			29.90	759.4	63.[illegible]	17.3	44	NE			2		0			0	0	Clear	Normal School.
Bourges			29.93	760.1	59.4	15.2	55	NE			8		0			0	0	Clear	Normal School.
Brest			30.[illegible]	764.6	54.5	12.5	67	NE			4		7k		NE	0	0		Naval Observatory.
Caen			30.69?	779.4?	55.4	13	84	NE			6		5		SW	0	0	Cloudy	Normal School
Carcassonne			29.74	755.3	62.6	17	50	NW			3		5		SE	0	0	Cloudy	Normal School.
Chartres			30.08	764.1	61.0	16.1		NE			4		6			0	0	Cloudy	Normal School.
Chaumont																			Normal School.
Clermont			29.91	759.7	49.6	9.8	64	N			4		8		N	0	0	Very cloudy	Puy de Dome Obs.
Commercy			30.13	765.2	56.5	13.6	40	E			6		5k[illegible]		E	0	0	Cloudy	Normal School.
Commune de Gréasque*			29.72	754.8	67.5	19.7	47	NW			4		2		NW	0	0		M. Kina.
Grenoble			30.25	768.3	54.1	12.3	61	ENE			2		..ks		N	0	0		Normal School.
Le Mans			30.11	764.8	59.9	15.5	38	E			4		2		E	0	0	Slightly cl'dy	Normal School.
Loches																			Normal School.
Lons-Le-Saulnier			29.92	759.9	58.1	14.5	41	NE			6		5		NE	0	0	Cloudy	Normal School.
Mâcon			29.95	760.8	57.7	14.3	52	N			8		5		N	0	0	Cloudy	Normal School.
Mirecourt			29.27	743.5	54.9	12.7	33	NNE			6		2		SW	0	0	Slightly cl'dy	Normal School.
Metz																			M. Schuster.
Nismes			29.71	754.5	65.1	18.4	36	N			4		0			0	0	Clear	Normal School.
Orleans			30.03	752.7	60.4	15.8	25	NE			4		2		E	0	0	Slightly cl'dy	Normal School.
Paris Observatory			30.13	765.4	59.4	15.2	27	NE			4		8		E	0	0	Very cloudy	National Observatory.
Parthenay			29.97	761.2	68.[illegible]	20	64	NE			8		2		N	0	0	Slightly cl'dy	Normal School.
Privas			29.84	757.8	58.[illegible]	14.8		N			4		2		NNE	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			29.78	756.4	63.3	17.4	46	N			8		0			0	0	Clear	Normal School.
Rochefort, Observatory			29.95	760.8	61.9	18.3	32	ENE			6		0			0	0	Blue sky	Naval Observatory.
Rouen			30.19	766.7	61.0	16.1	69	NNE			3		2		E	0	0	Slightly cl'dy	Normal School.
Saint Lo			29.90	759.4	55.2	12.9	73	E			4		9		E	0	0		Normal School.
Tarbes	28.78	730.8	29.84	757.9	59.0	15		S			2		2		E	0	0	Slightly cl'dy	Normal School.
Toulouse																			Normal School.
Villefranche			29.96	760.9	61.9	16.6	72	NW			6		2		N	0	0	Slightly cl'dy	Normal School.
SUB-SERIES.																			
Fort de France, Martinique			29.88	758.9	79.5	26.4													L'Abbé Marchési.
Gorée																			
Marseilles			29.65	753.1	71.4	21.9	43	W			2		0			0	0	Clear	Marseilles Observatory.
Mont-Louis	24.61	625.2	29.93	760.2	50.5	10.3	67	NW	18.6	8.33			2		NNW	0	0		—. Faiguère.
Montsouris, Paris																			Montsouris Observ'tory.
Perpignan			29.71	754.5	69.1	20.6	55	NE	18.6	8.33			0			0	0		Dr. Fines.
Pic du Midi, (Summit) H.P.																			M. Baylac.
Pic du Midi, (Plantade)																			General de Nansouty.
Saint Maur, (near Paris)			30.12	765.1	59.9	15.5	27	NE			3		5			0	0		E. Renou.
Toulouse			29.87	758.6	62.1	16.7	53	NW			4		0			0	0		Toulouse Observatory.
Tours			30.04	762.9	62.4	16.9	32	ESE			6		0			0	0	Clear	C. Marquet.
Versailles, (near Paris)			30.13	765.3	61.2	16.2	41	E			4		6			0	0		Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.04	763.0	62.6	17.0	91	ESE	9.6	4.3			10k			0.008 / 0.012	0.2 / 0.3	Misty	H. Le Lec, S. J.

NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Grèasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,089.9 ft.; Clermont 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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. Inches.	Barometer: Corrected. Millimeters.	Barometer: Reduced. Inches.	Barometer: Reduced. Millimeters.	Fahrenheit.	Centigrade.	Per cent.	Wind From—	Miles per hour.	Meters per second.	Force 0—10.	Clouds Up'er 0—10.	Clouds Low'r 0—10.	Upper From—	Lower From—	Rain Inches.	Rain Millimeters.	Weather.	Observer.
Bamberg			30.08	764.0	49.1	9.5	65	NE			7		9	N		0	0		Prof. T. Hoh.
Berlin			30.30	769.7	48.4	9.[illegible]	53	N			4		10			0.02[illegible]	0.6		Prof. Arndt.
Breslau			30.18	766.6	51.8	11.0	46	NE			7		10			0	0		Dr. P. Neugebauer.
Carlsruh			30.09	764.2	[illegible]6.3	13.5	43	NE			10		10			0	0		A. Senz.
Cassel			30.27	768.8	51.1	10.6	43	NE			6		5	NE		0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main			30.26	768.7	50.4	10.2	60	NE			6		5			0.012	0.3		Physical Society.
Friedrichshafen	28.59	726.2	30.04	762.9	50.5	10.3	40	NE			6		0			0	0		M. Wilhelm.
Hamburg			30.43	772.8	45.9	7.7	53	NE			4		4k			0	0	Fair	Captain F. Hegemann.
Kiel			30.43	772.9	46.9	8.3	54	NE			5		3			0.091	2.3		Prof. G. Karsten.
Königsberg			30.29	769.3	43.[illegible]	6.1	54	NE			2		5			0	0		Prof. F. Luther.
Köslin			30.33	770.4	45.7	7.6		N[illegible]			3		4			0	0		H. Müller.
Leipsic			30.28	769.1	45.7	7.6	65	NE			4		9	NE		0	0		Prof. Bruhns.
Memel			30.31	769.9	42.3	5.7	55	NNE			4		9	NE		0	0		Reinbrecht & Skalweit.
Münster			30.41	772.4	52.7	11.5	53	NE			5		3			0	0		Prof. E. Heis.
Neufahrwasser			30.27	768.9	43.2	6.2	72	NNE			4		6			0	0		A. Lothes.
Posen			30.26	768.6	49.5	9.7	50	SE			8		10			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.07	763.8	[illegible]7.9	14.4	33	NE			2		10	NE		0	0		Dr. Schur.
Stuttgart			30.07	763.8	55.4	13.[illegible]	40	NE			6		8			0	0	Light rain	Prof. Schoder.
Thorn			30.23	767.7	51.8	11.[illegible]	47	NE			5		6			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.83	757.6	57.4	11.1	46	E			8		4			0	0		Prof. Flesch.
Wustrow, Naval School			30.35	771.6	41.4	6.9	51	N[illegible]			4		3			0	0		E. F. Schütz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of obs[illegible] elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			29.93	760.2	48.9	9.4	70	E	5.6	2.5			10			0.142	3.6		
Padua			29.86	758.5	48.9	9.4	88	NE	13.0	5.8			10			0.272	6.9		
Vicenza			29.89	759.2	48.2	9.0	96	NE	3.8	1.7			10	E		0.433	11.0		
Verona			29.84	757.9	54.0	12.2	69	E			2		10			0.039	1.0		
Bergamo	28.48	723.4	29.80	756.9	50.0	10.0	87	SE			4		10			0.224	5.7		
Domodossola	28.72	729.5	29.74	755.5	63.5	17.5	60	SW			8		3			0.19	4.9		
Milan			29.85	758.1	55.2	12.9	85	E			4		10	E		0.270	7.0		
Pavia			29.83	757.6	51.8	11.0	91	E			6		10	E		0.165	4.2		
Moncalieri			29.82	757.5	54.7	12.6	89	ENE	9.4	4.2			10	E		0.169	4.3		
Mondovi	27.90	708.6	29.82	757.3	51.8	11.0	91	Calm?			2?		10			0	0		
Porto Maurizio			29.68	753.8	74.1	23.4	32	NNE			4		5	S		0	0		
Genoa			29.69	754.0	61.5	16.4	57	N	3.8	1.7			10	S		0	0		
Piacenza			29.85	758.3	49.5	9.8	92	SE			4		10			0.138	3.5		
Parma			29.87	758.6	51.3	10.7	96	SE			4		10			0.028	0.7		
Bologna			29.88	759.0	53.1	11.7	59	ENE			1		10			0.551	14.0		
Florence			29.72	754.9	62.6	17.0	56	NE			8		10	S		0	0		
Leghorn			29.63	752.6	68.0	20.0	40	E	16.1	7.2			10			0	0		
Siena	28.54	725.0	29.74	755.4	66.7	19.3	60	NE	8.1	3.6			10	SW		0	0		
Urbino	28.25	717.6	29.80	756.9	53.4	11.9	79	NNE			4		10			0.05	1.3		
Pesaro																			
Ancona			29.76	755.8	63.7	17.6	68	NW			4		8			0	0		
Grosseto			29.62	752.3	76.3	24.6	55	SSW			2		8	S		0	0		
Rome			29.62	752.3	77.4	25.2	47	SSE	11.9	5.3			10			0	0		
Naples, O. U.			29.76	755.9	77.0	25.0	35	SW			4		10	SW		0	0		
Lecce			29.79	756.6	75.0	23.9	34	SSW	17.4	7.8			9			0	0		
Cosenza			29.74	755.5	76.3	24.6	79	SE	4.9	2.2			10			0	0		
Riposto, (Sicily)			29.86	758.5	68.4	20.2	79	ESE			2		8	NW		0	0		
Palermo			29.56	750.9	70.3	21.3	57	ENE	6.3	2.8			8			0	0		
Caltanissetta	27.65	702.4	29.56	750.9	64.6	18.1	53	E			6		10	W		0	0		
Sub-Series.																			
Naples, S. R.			29.72	754.9	73.4	23.0	40	ESE	2.5	1.1			Calm	SE		0	0	Foggy	Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Tokio																			

NETHERLANDS' SERIES.

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

Flushing			30.33	770.3	55.8	13.2		NE			5								
Groningen			30.32	770.0	50.4	10.2		NE			5								
Helder			30.38	771.7	49.3	9.6		NE			4								
Utrecht			30.30	769.5	55.0	12.8	41	ENE			5		2					Light cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

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

Bergen			30.47	773.8	52.5	11.4	52	SW	6.3	2.8			2			0	0		
Brönö			30.47	773.9	48.2	9.0	51	NNE	2	1			0			0	0		
Christiania			30.36	771.2	56.8	13.8	33	S	6.3	2.8			4			0	0		
Tromsö			30.48	774.1	37.0	2.8	52	SW	9	4			1			0	0		

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

PORTUGUESE SERIES.

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

Stations	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the air. Fahrenheit.	Temperature of the air. Centigrade.	Relative humidity. Per cent.	Winds: Direction. From—	Winds: Velocity. Miles per hour.	Winds: Velocity. Meters per second.	Winds: Force. 0—10.	Clouds: Amount. Up'er. 0—10.	Clouds: Amount. Low'r. 0—10.	Clouds: Direction. Upper. From—	Clouds: Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores.)			29.98	761.5	64.8	18.2	90	W	3.12	1.45			9			0.236	6.0	Raining	Dr. J. A. N. Sampaio.
Campo Major			29.78	756.5	54.5	12.5	76	E	13.2	5.91			8	E		0.354	9.00		Dr. A. M. R. dos Santos.
Funchal, (Madeira,)			30.10	764.5	66.4	19.1	67	Calm	0	0			1			0	0		Capt. D. A. da Cunha.
Lisbon			29.80	757.?	62.2	16.8	58	NW	23.7	10.6			2			0	0		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h. 6 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	Corr. Inches	Corr. Millimeters	Red. Inches	Red. Millimeters	Fahrenheit	Centigrade	Per cent	Wind from—	Miles per hour	Meters per second	Force	Clouds Up'er	Clouds Low'r	Upper from—	Lower from—	Rain Inches	Rain Millimeters	Weather	Observer
Warsaw			30.12	765.1	51.3	10.7	53	NNE	27	12			7						Astronomical Obs.
Wilna			30.18	766.6	43.3	6.3	48	NW	13	6			10						Astronomical Obs.
Dorpat			30.26	768.6	37.6	3.1	69	NNE	7	3			10						Physical Cabinet.
St. Petersburg			30.23	767.7	36.9	2.7	61	NE	11	5			9						Central Physical Obs.
Kuopio			30.35	770.8	35.8	2.1	96	NE	7	3			0						Ch. Forsten.
Kieff			29.96	760.9	48.2	9.0	96	NE	7	3			10					Raining	Physical Cabinet.
Nikolaiev			29.93	760.1	73.0	22.8	65	S	20	9			6						Kurdakof.
Kertch			29.?6	761.0	65.8	18.8	72	SSW	9	4			10						Lagorio.
Moscow			29.98	761.6	44.8	7.1	65	NNW	9	4			5						Meteorological Obs.
Lugan			29.78	756.4	69.6	20.9	52	NW	18	8			6						Meteorological Obs.
Archangel			30.37	771.3	24.1	-4.4	45	NE	18	8			6						Ogorodnikof.
Tiflis	28.56	725.5	29.89	759.2	84.6	29.2	31	S	9	4			4						Physical Observatory.
Astrakhan			29.98	761.4	76.1	24.5	45	SSE	4	2			4						Sebastianof.
Kasan			29.90	759.5	53.8	12.1	39	SS	4	2			10						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.93	736.0	29.93	761.6	46.2	7.9	49	W	4	2			10						Meteorological Obs.
Nukuss			29.81	757.2	87.8	31.0	2.	W	9	4			0						
Kasaly																			Bobrof.
Tashkend	28.37	720.7	30.0?	762.1	77.0	25.0	49	Calm	0	0			10						Michelson.
Barnaul			29.87	758.8	61.4	18.0	54	Calm	0	0			9						Meteorological Obs.
Yeniseisk			29.86	758.5	45.5	7.5	70	S	4	2			10					Raining	Marks.
Irkutsk	28.57	725.6	29.9?	761.1	40.5	4.7	45	Calm	0	0			0						Usolzef.
Ourga																			Mossin.
Peking, (China)			30.01	762.2	75.4	21.1	51	Calm	0	0			6						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor					33.1	0.6	90	Calm	0	0			8						

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 40[illegible] meters or 1,311.8 feet; Ekaterinburg, [illegible] 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.; Ourga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

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

Stations	Corr. Inches	Corr. Millimeters	Red. Inches	Red. Millimeters	Fahrenheit	Centigrade	Per cent	Wind from—	Miles per hour	Meters per second	Force	Clouds Up'er	Clouds Low'r	Upper from—	Lower from—	Rain Inches	Rain Millimeters	Weather	Observer
Madrid			29.71	754.7	64.4	18.0	55	W	7.4	3.33		0	8			0	0	Cloudy	Royal Observatory.
San Fernando			29.81	758.?	63.7	17.6	57	WSW	15.9	7.1		0	8		W	0	0		The Naval Observatory.

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

SWEDISH SERIES.

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

Stations	Corr. Inches	Corr. Millimeters	Red. Inches	Red. Millimeters	Fahrenheit	Centigrade	Per cent	Wind from—	Miles per hour	Meters per second	Force	Clouds Up'er	Clouds Low'r	Upper from—	Lower from—	Rain Inches	Rain Millimeters	Weather	Observer
Haparanda			30.58	776.8	32.7	0.4	81	N			4		5			0	0		
Umea			30.49	774.4	36.0	2.2	65	NE			6		10			0	0		
Hernosand			30.52	775.3	37.0	2.8	62	ENE			4		10			0	0		
Stockholm			30.36	771.1	42.6	5.9	40	NNE			4		7			0	0		
Wisby			30.43	772.9	39.2	4.0	77	NNW			6		5			0	0		
SUB-SERIES.																			
Upsala			30.43	772.8	41.4	5.2	44	N	15.2	6.8			6	NNW	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; the weather by Vienna symbols, or, occasionally, in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather	Observer.
Geneva	28.47	723 1	29.90	759.5	51.6	10.9	49	NE	.....	.....	8	.....	9	.....	.....	0	0	Covered	The Observatory.
Zurich	28.38	720.8	30. 02	762.6	51.4	10.8	55	E	.....	.....	2	.....	5	.....	NE	0	0	Cloudy.....	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —1.6 mm.; Thermometer, —4.3 cent.; Relative Humidity —9 per cent.

Note.—The originals give the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva 1,408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather	Observer.
Constantinople	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fao, (Persian Gulf)	.....	.....	29.91	759.6	92.7	33.7	.....	NW	.....	.....	4	.....	5	.....	.....	.....	.....	.....	.....
Salonica	.....	.....	29.81	757.2	79.3	26.3	.....	SE	.....	.....	1	.....	0	.....	.....	.....	.....	.....	.....
Valona	.....	.....	29.75	755.6	73.8	23.2	.....	S	.....	.....	2	.....	10	.....	.....	.....	.....	.....	.....
Varna	.....	.....	29.88	759.0	63.5	17.5	.....	SE	.....	.....	4	.....	10	.....	.....	.....	.....	.....	.....
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.82	757.5	77.0	25.0	74	NW	.....	.....	1	.....	6en	.....	S	0	0	Fai	Prof. C.V. A.Van Dyck

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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 the Meteorological Office of the Dominion of Canada. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather	Observer.
Bathurst, N. B.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.97	761.2	46	7.8	.....	S	5	2.2	.....	.....	10s	.....	S	0.14	1.0	Light rain ...	W. R. Bigg.
*Chatham, N. B.	.....	.....	30.09	762.0	42	5.6	95	W	7	3.1	.....	.....	10s	.....	W	0.76	19.3	Cloudy.....	G. A. Blair.
Charlottetown P. E. Island.	.....	.....	29 98	761.5	47	8.3	96	S	6	2.7	.....	.....	10n	.....	.....	0.41	10.4	Light rain..	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.94	760.5	47.2	8.4	87	NE	.....	.....	2	.....	10n	.....	.....	Inap.	Inap.	Rainy.....	James Smith, M. A.
Dalhousie, N. B.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.39	9.9	.....	H. A. Johnson.
Esquimault, B. C.	.....	.....	30.29	769.4	47.3	8.5	85	N	1	0.4	.....	10cs	.....	.....	.....	0	0	Cloudy.....	W. H. Bevis.
Fredericton, N. B.	.....	.....	30.01	762.2	48.3	9.1	84	Calm	0	0	.....	.....	10s	.....	.....	0.606	15.24	Cloudy.....	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.07	763.8	36	2.2	75	NE	7	3.1	.....	0	0	.....	.....	0	0 ..	Clear.....	James Stewart.
Goderich, Ontario	.....	.....	29.75	75 .6	55.4	13.0	93	Calm	.....	.....	0	.....	10n	.....	.....	Inap.	Inap.	Light rain..	H. J. Strang, M. A.
Granton, Ontario	.....	.....	29.74	755.4	51	10.6	.....	SE	.....	.....	1	.....	10n	.....	.....	0.50	12.7	Cloudy..	James Grant.
*Halifax, N. S.	.....	.....	29.97	761.2	43	6.1	97	SE	3	1.3	.....	.....	Fog	.....	.....	0.44	11.2	Foggy	F. Allison, M. A.
*Kingston, Ontario	.....	.....	29.90	759.4	48	8.9	89	NE	12	5.4	.....	.....	10s	.....	.....	0.02	0.5	Cl udy.....	S. Woods, M. A.
Little Current, Ontario	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. B. Abbey, C. E.
*Montreal, Quebec	.....	.....	29.98	761.5	42	5.6	97	E	9	4.0	.....	.....	Fog	.....	.....	0.09	2.3	Foggy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.96	761.0	45	7.2	80	NE	12	5.4	.....	.....	10n	.....	E	0.10	2.5	H avy rain..	J. B. Laney.
*Parry Sound, Ontario	.....	.....	29.89	756.9	43	6 1	92	E	13	5.8	.....	5k	5ks	E	E	0 30	7.6	Cloudy.....	Rev. R. Mooley.
*Port Dover, Ontario	.....	.....	29.77	756.1	51	10.6	86	Calm	0	0	.....	.....	10k	.....	SW	0	0	Cloudy.....	H. Morgan.
Port Hastings, N. S.	.....	.....	30.02	762.5	43.5	6.4	.....	SE	16	7.2	.....	.....	.....	.....	.....	0.60	15 2	Rainy.....	Peter Grant.
*Port Stanley Ontario	.....	.....	29.77	756.1	52	11.1	89	E	16	7.2	.....	.....	10n	.....	SW	0.24	6.1	Cloudy.....	M. Payne.
*Quebec, Quebec	.....	.....	30.06	763.5	37	2.8	100	NE	4	1.8	.....	.....	Fog	.....	.....	0.18	4.6	Foggy	Capt. Ash, R. N.
St. John, N. B.	.....	.....	30.03	762.7	45	7.2	100	Calm	0	0	.....	.....	Fog	.....	.....	0.280	7.11	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.70	754.4	49	9.4	93	Calm	0	0	.....	.....	10n	.....	.....	0.26	6.6	.....	K. Stewart.
Stayner, Ontario	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. J. Cole.
Stratford, Ontario	.....	.....	29.76	755.9	50.0	10.0	95	Calm	0	0	.....	.....	10	.....	.....	0.250	7.00	Cl udy... .	C. J. MacGregor, M. A.
*Sydney, C. B.	.....	.....	30.14	765.5	41	5.0	96	S	8	3.6	.....	.....	10n	.....	.....	0 29	7.4	Light rain ...	T. C. Hill.
*Toronto, Ontario	.....	.....	29.82	757.4	46	7.8	90	E	11	4.9	.....	.....	10n	.....	W	0.20	5.1	Cloudy.....	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.75	755.6	49.2	9.6	89	E	.....	.....	1	.....	10	.....	.....	0.26	6.6	Glo ny.....	J. Montgomery.
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Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 m.

UNITED STATES SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches	Millimeters.	Temperature of the air. Fahrenheit.	Centigrade.	Relative humidity. Per cent.	Wind. Direction. From	Velocity. Miles per hour.	Meters per second.	Force. 0—10.	Clouds. Amount. Up'er 0—10	Low'r 0—10	Direction. Upper. From	Lower. From	Rain-fall or melted snow in the past 24 hours. Inches	Millimeters.	Weather.	Observer.
Albany, N. Y.			29.95	760.7	66	18.9	68	S	1	0.4		2ck	1k	W	W	0	0	Fair	
Alpena, Mich			29.75	755.6	38	3.3	100	NE	9	4.0			10n			0.69	17.5	Light rain	
Atlantic City, N. J.			30.03	762.7	56	13.3	87	S	8	3.6		5cs	Haze	SW		0	0	Fair	
Augusta, Ga.			30.14	765.5	73	22.8	85	SE	6	2.7		0	5s		SE	0	0	Fair	
Baltimore, Md			30.02	762.5	66	18.9	84	S	2	0.9		2c	2s			0	0	Fair	
Barnegat, N. J.			30.04	763.0	60	15.6	82	SW	10	4.5		5c	Haze	W		0	0	Fair	
Benton, Montana	27.30	693.4	30.10	764.5	54	12.2	48	SW	5	2.2		0	0			0.04	1.0	Clear	
Bismarck, Dakota	28.25	717.5	29.92	760.0	40	4.4	40	NW	4	1.8		2k	Haze	NW		0	0	Fair	
Boston, Mass			30.04	763.0	52	11.1	92	Calm	0	0		10s	Fog	SW		0.07	1.8	Foggy	
Breckenridge, Minn			29.85	758.2	41	5.0	74	N	12	5.4			10s		N	0	0	Cloudy	
Buffalo, N. Y.			29.74	755.4	59	15.0	70	NE	4	1.8		5ck	2s	W		0	0	Fair	
Burlington, Vt			29.95	760.7	55	12.8	24	S	2	0.9		5k	5s			0	0	Cloudy	
Cairo, Ill			29.86	758.4	63	17.2	94	SE	8	3.6			10s		S	1.16	29.5	Cloudy	
Cape Hatteras, N. C.			30.11	764.8	71	21.7	85	SW	11	4.9		2c	Haze			0	0	Fair	
Cape Henry, Va			30.10	764.5	72	22.2	80	SW	16	7.2		0	0			0	0	Clear	
Cape Lookout, N. C.			30.19	766.8	71	21.7	85	S	6	2.7		0	2s			0	0	Fair	
Cape May, N. J.			30.05	763.3	57	13.9	87	S	8	3.6		2c	Haze	W		0	0	Fair	
Charleston, S. C.			30.15	765.8	76	24.4	76	SW	8	3.6		0	8ks		S	0	0	Fair	
Cheyenne, Wyoming	24.06	611.1	30.00	762.0	32	0.0	89	NW	8	3.6		0	1s			0.02	0.5	Clear	
Chicago, Ill			29.65	753.	50	10.0	75	SE	1	0.4			10s			0.79	20.1	Cloudy	
Cincinnati, Ohio			29.76	755.9	68	20.0	69	S	9	4.0		8ck	2ks	W	S	0	0	Cloudy	
Cleveland, Ohio			29.68	753.9	70.8	21.6	49	S	18	8.0			10ks		SW	0.01	0.3	Cloudy	
Colorado Springs, Col.	24.14	613.1	30.01	762.2	34	1.1	79	N	6	2.7		2k	4ks	NW	NW	0.02	0.5	Cloudy	
Corsicana, Tex			29.72	755.4	58.4	14.7	81	N	22	9.8			10s			0.41	10.4	Cloudy	
Davenport, Iowa			29.61	752.1	53	11.7	86	SW	12	5.4		5k	5ks		SW	2.08	52.8	Fair	
Denison, Tex			29.90	751.7	54	12.2	55	NE	16	7.2			10s			0.41	10.4	Cloudy	
Denver, Col.	24.88	631.9	30.10	764.5	39	3.9	72	Calm	0	0			10s		N	0.42	10.7	Cloudy	
Detroit, Mich			29.69	754.1	57	13.9	93	SW	7	3.1			10s		W	0.67	17.0	Cloudy	
Dodge City, Kan	27.43	696.7	29.73	755.1	46	7.8	76	W	16	7.2		0	0			0.03	0.8	Clear	
Dubuque, Iowa			29.58	751.3	49	9.4	85	SE	4	1.8			10s			0.60	15.2	Cloudy	
Duluth, Minn			29.79	756.7	45	7.2	67	NE	14	6.3			10n			0.06	1.5	Light rain	
Eastport, Me			29.98	761.4	46	7.8	100	NW	3	1.3			Fog			0.19	4.8	Foggy	
Erie, Pa			29.69	754.1	72	22.2	54	S	20	8.9		8ck	8ks	W	SW	0	0	Fair	
Escanaba, Mich			29.78	756.4	42	5.6	91	NE	12	5.4			10n			0.07	1.8	Light rain	
Fort Gibson, Indian Ter			29.97	761.2	48	8.9	77	W	5	2.2		10ck	0	SW		0.35	8.9	Fair	
Ft. St. Michael, Alaska			29.90	759.4	23	-5.0		S	3	1.3			10s					Cloudy	
Fort Sill, Indian T	28.80	731.5	29.93	760.2	46	7.8	60	N	8	3.6			10s			0	0	Cloudy	
Fort Sully, Dakota	28.29	718.6	29.95	760.7	43	6.1	59	NW	18	8.0		10cs	0			0	0	Cloudy	
Galveston, Tex			29.82	757.4	76	24.4	90	SE	6	2.7			10s		SE	0	0	Cloudy	
Grand Haven, Mich			29.68	753.9	51	10.6	97	SE	4	1.8			Fog			0.68	17.3	Foggy	
Indianapolis, Ind			29.75	755.6	63	17.2	88	S	6	2.7			10s			2.02	51.3	Threatening	
Indianola, Tex			29.78	756.4	76	24.4	90	S	8	3.6		0	8ks		S	0	0	Cloudy	
Jacksonville, Fla			30.16	766.1	79	26.1	69	SE	4	1.8		5k	0	SE		0	0	Fair	
Keokuk, Iowa			29.62	752.3	51	10.6	72	NW	19	8.5		8k	0	NW		1.43	36.3	Clearing	
Key West, Fla			30.08	764.0	81.2	27.3	74	E	15	6.7		2k	Haze	E	E	0	0	Hazy	
Kittyhawk, N. C.			30.16	766.1	69	20.6	90	SW	14	6.3		8k	Haze	W		0	0	Fair	
Knoxville, Tenn			29.95	760.7	65	18.	78	S	2	0.9			10ks		S	0	0	Cloudy	
La Crosse, Wis			29.55	750.6	46	7.8	92	SE	12	5.4			10n		SE	0.30	7.6	Light rain	
Leavenworth, Kan			29.74	755.4	44	6.7	75	W	20	8.9			10s		W	1.51	38.4	Cloudy	
Lexington, Ky	28.87	733.3	29.91	760.5	63	17.2	91	S	12	5.4			10n			0.01	0.3	Light rain	
Long Branch, N. J.			30.02	762.5	51	12.2	83	S	2	0.9		2c	Haze	SW		0	0	Clear	
Louisville, Ky			29.86	758.4	63	17.	89	S	8	3.6			10n			0.03	0.8	Light rain	
Lynchburg, Va			30.04	763.0	73	22.8	71	SW	5	2.2		5k	0	SW		0	0	Fair	
Malone, N. Y.			29.89	759.2	53	11.7	79	NE	4	1.8			10s		SW	0	0	Cloudy	
Manhattan, Kan.	28.70	729.9	29.86	758.4	40	4.4	91	NW	32	14.3			10s			0.25	6.3	Cloudy	
Marquette, Mich			29.86	758.4	42	5.6	74	NE	4	1.8			10ks		E	0	0	Cloudy	
Memphis, Tenn			29.87	758.7	63	17.2	94	N	2	0.9			10s			2.10	53.3	Cloudy	
Milwaukee, Wis			29.69	754.1	39	3.9	100	NE	7	3.1			Fog			1.67	42.4	Light rain	
Mobile, Ala			30.06	763.5	76	24.	90	S	5	2.2			10s		SW	Inap.	Inap.	Cloudy	
Montgomery, Ala			30.06	763.5	74	23.3	85	S	6	2.7			10ks		S	0	0	Threatening	
Morgantown, W. Va			29.84	757.9	78	25.6	41	S	6	2.7		8c	0	SW		0	0	Fair	
Mt. Washington, N. H	23.79	604.3	30.15	765.8	39	3.9	91	NW	54	21.1		5s	2s	NW		0.04	1.0	Fair	
Nashville, Tenn			29.93	761.1	64	17.8	89	SE	4	1.8			10n		SE	1.03	26.2	Heavy rain	
New Haven, Conn			30.01	762.2	67	19.4	68	S	2	0.9		Haz	Fog			0.01	0.3	Fair	
New London, Conn			30.05	763.3	60	15.6	76	Calm	0	0		2c	Haze	W		0.39	9.9	Clear	
New Orleans, La			29.99	761.7	75	23.9	85	S	3	1.3			10ks		S	Inap.	Inap.	Cloudy	
Newport, R. I.			30.11	764.0	53	11.7	83	S	1	0.4		0	0			0.37	9.4	Clear	
New York, N. Y.			30.01	762.2	62	16.7	77	S	4	1.8		0	Sm'e			0	0	Clear	
Norfolk, Va			30.12	765.0	73	22.8	76	SW	12	5.4		5k	0	SW		0	0	Fair	
North Platte, Neb	27.03	686.6	29.62	752.3	42	5.	71	NW	12	5.4			10s		NW	1.14	29.0	Cloudy	
Omaha, Neb.	28.42	721.9	29.47	748.5	41	5.	95	NW	20	8.9			10n		NW	0.39	9.9	Light rain	
Oswego, N. Y.			29.70	754.1	61	16.1	68	S	8	3.6		2cs	8s		W	Inap.	Inap.	Threatening	
Pembina, Dakota			30.01	762.2	36	2.2	70	Calm	0	0		0	0			0	0	Clear	
Philadelphia, Penn			30.12	762.5	65	18.3	83	S	8	3.6		8ck	Sm'e	W		0	0	Smoky	
Pike's Peak, Colorado	17.60	447.9	29.81	757.2	3	-16.	100	NE	5	2.2			10n		W	0.19	4.8	Heavy snow	
Pittsburgh, Penn			29.82	757.4	71	21.7	54	S	11	4.9		2cs	0	W		0	0	Clear	
Port Huron, Mich			29.68	753.9	57	13.9	93	S	6	2.7			10s			0.43	10.9	Cloudy	
Portland, Me			30.04	763.0	48	8.9	93	NE	4	1.8			Fog			0.04	1.0	Foggy	
Portland, Oregon			30.33	770.4	53	11.7	86	N	3	1.3			10s			0	0	Cloudy	
Punta Rassa, Fla			30.11	764.8	75.9	24.4	81	E	12	5.4		Haze	Sm'e			0	0	Hazy	
Rochester, N. Y.			29.77	756.1	57	13.9	75	Calm	0	0		5ck	Haze	NW		0	0	Fair	
Salt Lake City, Utah	25.79	655.0	30.12	765.0	39	3.9	56	E	1	0.4		0	0			0	0	Clear	
Sandy Hook, N. J.			30.01	762.2	68	20.	79	S	8	3.6		5c	Haze	SW		0	0	Fair	
San Diego, Cal.			29.99	761.7	57	13.9	93	N	4	1.8			10s			0	0	Cloudy	
San Francisco, Cal			29.97	761.2	57	13.9	81		4	1.8		0	0			0	0	Clear	
Santa Fe, N. M	23.21	589.5	29.75	755.6	32	0.0	80	N	18	8.0			10n			Inap.	Inap.	Light snow	
Savannah, Ga.			30.18	766.6	80	26.7	73	S	7	3.1		2cs	5ks		S	0	0	Fair	
Shreveport, La			29.85	758.2	65	18.3	94	N	4	1.8			10n		NE	3.55	90.2	Light rain	
Smithville, N. C.			30.19	766.8	71	21.7	83	S	6	2.7		1ck	0	SW		0	0	Clear	
Springfield, Mass			30.01	762.2	57	13.9	90	Calm	0	0			Fog			0.06	1.5	Foggy	
St. Louis, Mo			29.77	756.1	62	16.7	88	SW	4	1.8			10s			1.52	38.6	Cloudy	
St. Marks, Fla			30.11	764.8	75	24.1	84	SE	13	5.8		5k	0	SE		0	0	Fair	
St. Paul, Minn			29.57	751.1	42	5.6	90	N	14	6.3			10n			0.23	5.8	Light rain	
St. Paul's Island, Alaska			29.88	758.9	34	1.1	89	SSE	14	6.3			Fog			0.01	0.3		
Thatcher's Island, Mass			30.02	762.5	48	8.9	92	S	7	3.1						0.08	2.0	Dense fog	
Toledo, Ohio			29.67	753.6	63	17.2	83	SW	9	4.0		2ck	2ks	SW	SW	0.22	5.6	Clearing	
Tucson, Arizona	27.51	699.5	30.13	765.3	53	11.7		N				0	0			0	0	Clear	
Tybee Island, Ga			30.16	766.1	74	23.3	90	S	4	1.8		5ck	0	SW		0	0	Fair	
Vicksburg, Miss			30.07	763.8	64	17.8	97	NE	6	2.7			10n			1.70	43.2	Light rain	

UNITED STATES SERIES. CONTINUED.

STATIONS.	BAROMETER. Corrected for instrumental errors. Inches.	BAROMETER. Corrected for instrumental errors. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per Cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10	CLOUDS. Amount. Up'er 0—10	CLOUDS. Amount. Low'r 0—10	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER
Virginia City, M. T.	24.40	619.8	29.88	758.9	27	— 2.8	55	Calm	0	0	.....	1c	0	W	.....	0.02	0.5	Clear	
Washington, D. C.	.....	.....	30.01	762.2	72	22.2	75	S	19	8.5	.....	8c	Haze	W	.....	0	0	Smoky	
Wilmington, N. C	.....	.....	30.18	766.6	73	22.8	85	SW	10	4.5	.....	0	8ks	.....	S W	0	0	Cloudy	
Wood's Holl, Mass.	.....	.....	30.06	763.5	52	11.1	86	SW	4	1.8	.....	.....	10s	.....	SW	0.22	5.6	Cloudy	
Wytheville, Va	27.72	704.1	29.79	756.7	70	21.1	71	SW	12	5.4	.....	8ck,cs	2k8	.....	W	0	0	Cloudy	
Yankton, Dakota	28.42	721.9	29.72	754.9	36	2.2	90	N	36	16.1	.....	.....	10n	.....	.....	0.55	14.0	Light rain	
Yuma, Arizona	.....	.....	29.96	761.0	73	22.8	.....	NW	.....	.....	.....	0	0	.....	.....	1.30	33.0	Clear	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
SUB-SERIES.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.08	764.0	81	27.2	74	NE	7	3.1	.....	5ck	10s	NE	.....	0	0	Cl udy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.98	761.5	81	27.2	73	E	.....	.....	.....	2k	5k8	.....	.....	0	0	Fair	L. V. Bigard.
St. Thomas, S. T., W. I	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. S. Cameron.
Kingston, Jamaica, W. I.	.....	.....	30.18	766.6	79	26.1	74	Calm	0	0	.....	8c	2s	.....	.....	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.81	757.2	81	27.2	74	N	4.8	2.1	.....	0	2k	.....	E	0	0	Fair	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.05	763.3	83	28.3	67	E	6.0	2.7	.....	0	0	.....	.....	0	0	Cl ar	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.24	768.1	72.0	22.2	71	N	6.0	2.7	.....	.....	.....	.....	.....	0.15	3.8	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica W. I	27.20	690.9	29.98	761.5	66	18.9	90	Calm	0	0	.....	8c	0	.....	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	29.98	761.5	82	27.8	71	E	.....	.....	2	.....	4k	.....	.....	0	0	Dry	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.04	762.9	.....	.....	82.9	28.3	.....	SE	.....	.....	.....	.....	.....	.....	.....	0	0	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1	.....	.....	69.0	20.6	76	SW	4	1.8	.....	7c	3ks	.....	.....	0.63	16.0	Cloudy	Thomas Herran.
St. John's, Newfoundland	.....	.....	30.34	770.6	45.0	7.2	61	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear	John Delaney.
York Factory, B. A	.....	.....	30.11	764.8	36	2.2	66	SW	2	0.9	.....	5c	0	SW	.....	0	0	.....	J. Fortescue.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Makawao, Maui, H. I.	27.83	706.9	30.00	762.0	58	14.4	76	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	F. L. Clarke.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

MARINE SERIES.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—		
Steamer Hibernian, N. 50° 15', W. 36° 23'.	ESE	11	29.84	757.9	46	7.8	.....	NNW	.....	.....	1	.....	4n	.....	.....	Rough	.....	Squal'y	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-fal 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; Cheyenn , 6,057 3 ft., or 1,846.2 m.; Clifton about 2 89 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 755.6 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City 4,268.8 ft., or 1,301.1 m.; Santa Fe, 6,862.2 (? ft., or 2,091.6 (?) m.; Tucson, 2,513 (? ft., or 772.1 (? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,291 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 m.; 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.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 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	.....	.....	29.89	759.3	66.0	19.2	54	Calm	.....	.....	0	.....	5	.....	.....	0	0	Fair	Charnot.
Algiers	.....	.....	29.86	758.5	65.1	18.4	72	NW	.....	.....	2	.....	9	.....	.....	Inap.	Inap.	Hidden	Peter.
La Calle	.....	.....	.....	.....	62.6	17.0	.....	NW	.....	.....	4	.....	8	.....	.....	2.204	56.0	Cloudy	Kuntz.
Tunis	.....	.....	29.78	756.4	73.6	23.1	54	W	.....	.....	4	.....	8	.....	.....	0.268	6.8	Cloudy	Jacques.
Sfax	.....	.....	29.84	757.8	78.1	25.6	31	S	.....	.....	5	.....	2	.....	.....	0	0	Clear	Chauvey.
Saida	.....	.....	29.93	760.2	51.5	12.5	65	WSW	.....	.....	1	.....	4	.....	.....	0.102	2.6	Fair	Millot.
Tebessa	.....	.....	29.61	752.1	65.9	19.4	.....	SO	.....	.....	3	.....	5	.....	.....	0	0	Fair	Colin.
Geriville	.....	.....	29.84	758.0	41.4	6.9	94	WNW	.....	.....	2	.....	7	.....	.....	0.488	12.4	Cloudy	Buard.
Laghouat	.....	.....	29.78	756.4	68.0	20.0	25	SW	.....	.....	3	.....	6	.....	.....	0.276	7.0	Fair	Guyot.
Biskra	.....	.....	29.71	754.5	65.3	18.5	77	WNW	.....	.....	4	.....	0	.....	.....	0.067	1.7	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	764.1	59.7	10.4	69	NE	.....	.....	3	.....	10	.....	.....	0.803	20.4	Raining	Prof. Ivan Stozir.
Buda-Pesth	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	I. R. Cen. M. I., Hungary
Cracow	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.013	0.3	.....	I. R. Observatory.
Eperies	.....	.....	30.27	768.9	49.6	9.8	69	ENE	.....	.....	3	.....	9	.....	.....	0.013	0.3	.....	Julius Mikolik.
Gratz	.....	.....	30.14	765.6	50.9	10.5	62	N	.....	.....	5	.....	10	.....	S	0	0	.....	Andreas Rospini.
Hermannstadt	28.90	734.0	30.11	764.8	52.5	11.4	61	NW	.....	.....	2	.....	10	.....	.....	0.406	10.3	.....	Prof. Reissenberger.
Kremsmünster	28.52	724.3	29.99	759.5	61.8	18.2	74	ESE	.....	.....	1	.....	6	.....	.....	0.244	6.20	Rainy	Prof. C. Wagner.
Lemberg	28.78	731.1	30.15	765.8	47.1	8.4	65	E	.....	.....	5	.....	10	.....	.....	0.024	0.6	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	30.21	767.4	44.8	7.1	70	NE	.....	.....	3	.....	10	.....	.....	0.118	3.0	.....	Habasuda Daniel.
Pola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	I. R. Hydrographic Office
Szegedin	.....	.....	29.82	757.3	56.1	13.4	63	ENE	.....	.....	7	.....	10ks	.....	.....	0.198	5.03	.....	Karl Stancel.
Trieste	.....	.....	30.03	762.8	56.1	13.4	69	NE	.....	.....	2	.....	8	.....	.....	0.022	0.55	.....	Prof. V. Farolfi.
Vienna	.....	.....	29.92	760.0	50.7	10.4	68	ENE	.....	.....	4	.....	10	.....	.....	0.776	19.7	Stormy	I. R. Central Institute.
.....	.....	.....	30.18	765.3	52.3	11.3	69	NE	.....	.....	3	.....	10	.....	.....	0	0	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels	.....	.....	30.26	768.5	51.1	10.6	42	ENE	.....	.....	5	.....	0	.....	.....	0	0	.....	Royal Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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			30.54	775.7	51.1	10.6		SSE	20	8.9			0			0	0	Blue sky	William Boswell.
Ardrossan			30.46	773.7									0					Hazy	William McNeil.
Armagh Observatory			30.46	773.7	54.9	12.7		ESE	11	4.9			2					*D. clouds	S. Call. for Dr. Robinson.
Bidston, Liverpool Obs			30.44	773.2	55.4	13.0		SE	16	7.2			3					Blue sky	John Hartnup.
Birr Castle, (Parsonstown)			30.38	771.6	60.0	15.6		SE			1		1					Blue sky	J. Dreyer.
Bradford			30.47	774.9	54.1	12.3		NE			2		0			0	0	Blue sky	J. McFarlandsborough.
Bridgetown, (Barbados)			29.99	761.7	81.5	27.5		SE			1		9					*D. clouds	Sergt. J. F. Halanen, R.A.
Cambridge Observatory			30.44	773.2	55.2	12.9		ENE			2		7					*D. clouds	H. Todd. [H. C.
Cardington			30.43	772.9	56.6	13.7		E			2		2					Blue sky	John McLaren.
Carlisle			30.45	773.4	61.5	16.4		SE			2		0			0	0	Blue sky	T. Bel , for J. Car mell.
Chatham, School M. E			30.42	772.7	47.7	8.7		NE			3		6					*D. clouds	Major C. N. Martin, R.E.
Dartmoor	28.85	732.8	30.37	771.4	53.0	11.7		E			7		0					Blue sky	R. E. Power.
Donaghadee			30.48	774.2	54	12.2		SE			2		0					Blue sky	., Mac Gowan.
Dover			30.36	771.1	51	10.0		ENE			5		1					⅓ clouded	J. Costello.
Eccles (near Manchester)			30.45	773.4	57.7	14.3		ESE	3.4	1.5			2					Hazy	Thomas Mackereth.
Falmouth Observatory			30.45	770.9	51.9	11.1		ESE	22	9.8			1					*D. clouds	The Staff.
Fort Napier, (Natal)	27.70	703.6	29.93	760.2	53.7	12.1		S			2		10					Drizzling	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.93	760.2	88	31.1		NE			1		7					*D. clouds	[the
Galway, Queen's College			30.29	769.4	64	17.8		SE			1		0					Blue sky	B. G. Clare, for Prof. Carr
Gibraltar, (Mediterranean)			29.90	759.4	71.0	21.7		W			3		6					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			30.43	772.9	59.0	15.0		NE			1		2					Fine	Lewis Stuart.
Great Yarmouth			30.47	773.9	50	10.0		ENE			4		3					Blue sky	G. T. Watson.
Greenwich Royal Obs			30.40	772.1	57.5	14.2		ENE			5		4					*D. clouds	The Staff. for G. B. Airy
Guernsey			30.27	768.8	52.5	11.4		NE			6		0					Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs			30.50	774.7	54.6	12.6		E			2		2					*D. clouds	L. J. Crossley.
Helston			30.29	769.4	55	12.8		E			7		0			0	0	Blue sky	M. P. Moyle.
Holyhead			30.41	772.4	55	12.8		ENE			6		1					Blue sky	John Tilston.
Kew Observatory			30.40	772.1	53.6	12.0		ENE	29	13.0			5					D. clouds	The Staff.
Kingstown			30.46	773.7	52	11.1		ESE			4		1					Blue sky	George Mitchell.
Leicester Museum			30.47	774.0	54.6	12.6		E			2		4					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)			29.42	754.0	74.8	23.8		SW			1		0						Sergt. F. Travis, A. H. C.
Nairn			30.45	772.9	55	12.8		E			1		0					Clear	W. D. Penny.
Nassau, (Bahamas)			30.13	765.3	81.0	27.2		NE			4		7					*D. clouds	Surg. Maj. Henry.
Nottingham			30.49	774.4	56.4	13.6		ENE			3		3k		ENE	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.44	773.2	55.5	13.1		ENE			4		4					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.39	771.9	56	13.3		ENE			2		3					Blue sky	J. Lucas.
Plymouth			30.33	770.4	56.6	13.7		ESE			4		0					Blue sky	John Merrifield.
Roche's Point			30.36	771.1	56	13.3		SE			2		5					Fine	W. Kennedy.
Saint Ann's Head			30.38	771.6	53	11.7		SE			3		3						John C. Walker.
Saint Helier, Jersey)			30.24	768.1	56.0	13.3		E			6		2					¼ clouded	A. P. Amy.
Sandwick Manse, Orkneys)			30.49	774.4	52.5	11.4		WNW	8	3.6			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough			30.31	770.7	46.7	8.2		E			2		1					Blue sky	F. Shaw
Scutari Cemetery Turkey			29.87	758.7	72.8	22.7		SW			1		6					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.48	774.2	55.3	12.9		E			3		4			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			30.56	776.2	61.7	16.5	45	SE			3		0			0	0	Blue sky	Rev. Francis Redford.
Stonyhurst Observatory			30.46	773.7	54.6	12.6		E			2		1					*D. clouds	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			30.42	772.7	57	13.9		SE			1		0					Blue sky	John Smith
Strathfield Turgiss			30.39	771.9	56.2	13.4		NE			1		3					Blue sky	Rev. Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Thurso			30.45	773.4	54	12.2		NNE			1		3					Hazy	John Trotter.
Truro, Royal Institution			30.41	773.2	60	15.6		E			4		4					*D. clouds	W. Newcombe.
Valencia Observatory			30.29	769.4	59.2	15.1		ESE	30	13.4			4					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					53	11.7		E			3		0			0	0		Thomas Dawson.
Cape Good Hope Obs			30.25	768.3	65.5	15.6	55	SE	3	1.3			5						The Staff. for E. J. Stone.
Leith, Restalrig Park			30.51	774.9	54.9	12.7		NE			2					0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.10	764.5				ESE	15.6	7.0						0.05	1.3		C. Meldrum.
Melbourne, Observatory			30.04	763.0	51.0	10.6	93	ENE	1	0.4		0	0			0	0	Fine, h'y dew	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.40	772.1	55	12.8		SSE			3	3	0	S		0	0		J. Youngclause.
North Unst, (Shetland Is.)			30.48	774.2	49	9.4		E			2	0	0						Robert Burnet.

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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			30.56	776.2	45.1	7.3	66	S			2		9						
Fanöe			30.51	775.8	53.2	11.8	56	E			4		5						
Godthaab, Greenland																			
Stykkisholm, (Iceland)			29.99	754.2	51.6	10.9	97	SE			8		10						
Thorshavn, (Faröe)			30.43	773.0	48.4	9.1	92	Calm			0		2						
Vestervig			30.51	775.0	54.7	12.6	66	Calm			0		2						

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

FRENCH SERIES.

Furnished by the 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.
Angon			30.17	766.3	53.6	12	33	NE			2	2c		NE		0	0	Slightly cl'dy	Normal School.
Amiens			30.17	766.3	57.2	14.0	40	E			8		0			0	0	Clear	Normal School.
Avignon			29.83	757.6	51.1	10.6	84	N			2		10		S	0.165	4.2	Raining	Normal School.
Bar-sur-Seine			30.03	762.8	58.1	14.5		NE			8		5k		ENE	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)			30.01	762.3	58.3	14.6	39	NE	56.4	25.2			1		E	0	0	Clear	Beaumette Observatory.
Beauvais			30.19	766.9	54.9	12.7	26	NE			6		0			0	0	Clear	Normal School.
Besançon			29.91	759.6	55.4	13	55	E			6		2		E	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse			29.90	759.5	60.6	15.9	49	N			2	3c		E		0	0		Normal School.
Bourges			29.90	759.5	58.6	14.8	76	N			8		2		NE	0	0	Slightly cl'dy	Normal School.
Brest			30.15	765.9	56.3	13.5	57	NE			5		0			0	0		Naval Observatory.
Caen			30.34?	770.5?	54.1	12.3	86	N			10		2		S	0	0	Slightly cl'dy	Normal School
Carcassonne			29.86	758.4	57.6	14.2	57	W			4		5		E	0	0	Cloudy	Normal School.
Chartres			30.06	763.5	59.0	15		NE			6		0			0	0	Clear	Normal School.
Clermont			29.89	759.2	48.4	9.1	61	N			4		10		N	0	0	Covered	Puy de Dome Obs.
Commercy			30.07	763.8	54.1	12.3	36	NE			6	2c		NE		0	0	Slightly cl'dy	Normal School.
Commune de Grèasque*			29.82	757.3	47.8	8.8	95	NW			2		10		NW	0.354	9.0	Light rain	M. Kina.
Grenoble			29.79	756.6	51.6	10.9	77	NW			4		5kn		SE	0.28	7.	Cloudy	Normal School.
Le Mans			30.10	764.6	57.4	14.1	30	E			6		0			0	0	Clear	Normal School.
Lons-Le-Saulnier			29.81	757.8	58.8	14.9	41	NE			2		5		NE	0	0		Normal School.
Macon			29.95	760.7	55.2	12.9	39	N			8		5		N	0	0	Cloudy	Normal School.
Mirecourt			29.22	742.1	53.1	11.7	43	NNE			6		5		SW	0	0	Cloudy	Normal School.
Metz																			M. Schuster.
Nismes			29.81	757.1	51.1	10.6	77	N			2		5		N	0	0	Cloudy	Normal School.
Orleans			30.02	762.6	59.7	15.4	29	NE			4		2		E	0	0	Slightly cl'dy	Normal School.
Paris Observatory			30.12	765.1	57.0	13.9	28	NE			6		0			0	0	Very clear	National Observatory.
Parthenay			29.97	761.2	63.9	17.7	58	NE			2		5		NE	0	0	Cloudy	Normal School.
Privas			29.91	759.7	60.7	10.4		NW			6		10		NW	0.20	5.	Covered	Normal School.
La Roche-sur-Yon			29.86	758.4	60.4	15.8	42	NE			8		5		SSW	0	0	Cloudy	Normal School.
Rochefort, Observatory			30.00	762.1	63.1	17.3	41	NE			4		2		SW	0	0	¼ covered	Naval Observatory.
Rouen			30.23	767.8	60.3	15.7	33	N			6		1		E	0	0	Clear	Normal School.
Saint Lo			29.99	761.7	52.2	11.2	61	E			4		2		E	0	0		Normal School.
Tarbes	28.80	731.5	29.87	758.7	55.4	13		W			4		5		E	0	0	Cloudy	Normal School.
Villefranche			29.87	758.8	59.3	15.3	57	NE			4		2		N	0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.86	758.5	81.0	27.2													L'Abbé Marchési.
Marseilles			29.76	755.8	53.2	11.8	76	N			1		10			0.322	8.20	Rainy	Marseilles Observatory
Mont-Louis	24.59	624.5	29.90	759.5	44.6	7.0	41	WNW	14.9	6.66			4		SW	0	0		—. Faiguère.
Montsouris, Paris																			Montsouris Observ'tory.
Perpignan			29.79	756.7	59.0	15.0	41	N	22.4	10.00			3		W	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	764.6	59.5	15.3	31	NNE			4		0			0	0	Clear	E. Renou.
Toulouse			29.92	759.9	50.2	10.1	61	NW			3		10			0	0		Toulouse Observatory.
Tours			30.03	762.8	60.1	15.6	33	NE			7		1		E	0	0		C. Marquet.
Versailles, (near Paris)			30.11	764.8	58.0	14.8	50	E			4		0			0	0	Clear	Dr. A. Bérigny.
Zi Ka Wei, (near Shanghai)			30.02	762.6	62.6	17.0	100	ESE	6.5	2.9			10n			{0.130 0.240	{3.3 6.1	Light rain	H. Le Lec, S. J.

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Grèasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Clermont, 388 m., or 1,272.9 ft; Commune de Grèasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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																			Prof. T. Hoh.
Berlin			30.13	765.2	50.9	10.5	46	NE			6		7	NE		0	0		Prof. T. Hoh.
Breslau			30.15	773.3	45.9	7.7	39	NE			4		3			0	0		Prof. Arndt.
Carlsruhe			30.41	772.4	47.5	8.6	42	ENE			3		10			0	0		Dr. P. Neugebau r.
Cassel			30.38	764.1	56.1	13.4	37	NE			5		10			0	0		A. Senz.
Emden			30.33	770.4	54.1	12.3	30	ENE			7		1	NE		0	0		Dr. H. Möhl.
Frankfort on the Main																			Prof. Prestel.
Friedrichshafen			30.27	768.8	54.1	12.3	40	NE			5		2			0	0		Physical Society.
Hamburg	28.53	724.7	30.08	764.1	48.7	9.3	57	NE			6					0	0		M. Wilhelm.
Kiel			30.50	774.6	47.7	8.7	51	NE			4		8k			0	0	Gloomy	Captain F. Hegemann.
Königsberg			30.54	775.8	46.4	8.0	49	NE			3		3			0	0		Prof. G. Karsten
Köslin			30.48	774.3	42.4	5.8	50	NE			2		5			0.004	0.1		Prof. E. Luther
Leipsic			30.51	774.9	43.9	6.6		NE			4		3			0	0		H. Müller.
Memel			30.38	771.7	47.3	8.5	36	NE			5		3	ENE		0	0		Prof. Brühns.
Münster			30.50	774.7	40.8	4.9	65	NNW			5		9	NE		0	0		Reinbrecht & Skalweit.
Neufahrwasser			30.39	772.0	54.1	12.3	63	NE			5		0			0	0		Prof. E. Heis.
Posen			30.46	773.7	42.6	5.9	69	NE			3		7			0	0		A. Lothes.
Strassburg, (in Alsace)			30.46	773.7	46.9	8.3	50	NE			5		9			0	0		Dr. Mageter.
Stuttgart			30.05	763.2	56.3	13.5	44	NE			5		10	NE		0.028	0.7		Dr. Schur.
Thorn			30.08	764.0	55.0	12.8	38	NE			4		8			0	0		Prof. Schoder.
Treves, (Trier)			30.44	773.1	46.2	7.9	48	NE			5		8			0	0		Dr. Rasenbalg
Wustrow, Naval School			30.46	764.5	56.3	13.5	33	E			6		1			0	0		Prof. Fresen.
			30.47	773.9	44.8	7.1	50	ENE			4		3			0	0		E. F. Schütz

Note.—In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			29.97	761.1	51.4	10.8	69	E	6.9	3.1			10			0.067	1.7		
Padua			29.92	759.9	50.7	10.4	78	NE	21.7	9.7			10			0.272	6.9	Stormy	
Vicenza			29.89	759.3	50.2	10.1	75	NE	4.9	2.2			10	E		0.110	2.8	Stormy	
Verona			29.88	759.0	55.2	12.9	69	E			2		10			0.217	5.5		
Bergamo	28.54	724.8	29.85	758.3	50.4	10.2	84	SW			1		10			0.197	5.0		
Domodossola	28.87	733.3	29.89	759.2	53.6	12.0	73	Calm			0		10			0.087	2.2		
Milan			29.91	759.8	51.8	11.0	92	N			1		10	E		0.559	14.2		
Pavia			29.91	759.8	49.1	9.5	89	NE			6		10	E		0.728	18.5		
Moncalieri			29.94	760.5	46.9	8.3	87	WNW	4.3	1.9			10	W		1.240	31.5		
Mondovi	28.02	711.7	29.94	760.4	39.7	4.3	93	WNW			4		10			0.315	8.0		
Porto Maurizio			29.73	755.2	58.1	14.5	52	N			6		9	W		0.118	3.0		
Genoa			29.75	755.7	58.6	14.8	52	NW	8.7	3.9			10	S		0.035	0.9		
Piacenza			29.90	759.5	48.7	9.3	88	ESE			8		10			0.157	4.0		
Parma			29.87	758.7	48.9	9.4	95	NE			4		10			0.106	2.7		
Bologna			29.95	760.7	49.1	9.5	63	NE			1		10			1.772	45.0		
Florence			29.74	755.3	59.0	15.0	56	NE			8		10	SE		0.146	3.7		
Leghorn			29.66	753.4	63.0	17.2	54	ENE	26.2	11.7			10			0.067	1.7		
Siena	28.49	723.6	29.69	754.0	59.7	15.4	54	ENE	7.4	3.3			10	SE		0.441	11.2		
Urbino	28.28	718.3	29.84	757.8	50.2	10.1	97	ENE			4		10			0.488	12.4		
Pesaro																			
Ancona			29.63	752.7	60.8	16.0	79	N			4		10			0.063	1.6		
Grosseto			29.62	752.4	61.9	16.6	90	NNE			6		10	SE		0.591	15.0		
Rome			29.58	751.2	78.1	25.6	38	S	50.3	22.5			3	SE		0	0		
Naples, O. U.			29.64	752.8	77.7	25.4	50	SSE			4		10	S		0.012	0.3		
Lecce			29.80	757.0	69.4	20.8	52	WSW	11.2	5.0			10			0	0		
Cosenza			29.72	754.8	67.1	19.5	77	NW	1.8	0.8			10			0.050	1.5		
Riposto, (Sicily)			29.75	755.6	67.5	19.7	81	NE			2		3			0.039	1.0		
Palermo			29.59	751.6	66.9	19.4	78	ENE	8.1	3.6			10			0	0		
Caltanissetta	27.69	703.4	29.60	751.9	64.9	18.3	52	S			4		4	N		0	0		
Sub-Series. Naples, S. R.			29.67	753.5	72.9	22.7	57	ESE	1.8	0.8			..k,c	E		0	0		Prof. F. Briosci.

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.

Flushing			30.36	771.2	53.2	11.8		ENE			5								
Groningen			30.41	772.3	51.8	11.0		NE			5								
Helder			30.43	773.0	50.2	10.1		NE			4							Cloudy	
Utrecht			30.35	770.8	53.1	11.7	34	ENE			6		5						

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

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

Bergen			30.50	774.6	50.7	10.4	70	W	8.1	3.6			2			0	0		
Bröno			30.52	775.1	46.4	8.0	72	WSW	11	5			2			0	0		
Christiania			30.51	775.0	52.9	11.6	43	SSW	4.7	2.1			3			0	0		
Tromsö			30.43	773.0	43.5	6.4	55	S.v	11	5			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 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,)	.....	.....	30.12	765.1	61.9	16.6	43	NE	14.7	6.58	.....	.....	4	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.82	757.5	55.0	12.8	25	NW	7.4	3.33	.....	.....	2	NW	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)	.....	.....	30.10	764.5	67.3	19.6	67	SW	1.0	0.45	.....	.....	10	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	29.91	759.6	68.4	20.2	54	NW	12.5	5.6	.....	.....	1	.....	.....	0	0	.....	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h. 6 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	.....	.....	30.37	771.5	46.2	7.9	42	NE	13	6	.....	.....	8	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.41	772.5	43.2	6.2	49	N	11	5	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.47	773.8	40.1	4.5	45	NNE	11	5	.....	.....	7	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.46	773.6	28.2	— 2.1	60	N	11	5	.....	.....	8	.....	.....	.....	.....	.....	Central Physical Obs
Kuopio	.....	.....	30.53	775.4	30.4	— 0.8	98	NE	7	3	.....	.....	0	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.21	767.2	49.5	9.7	48	NNE	7	3	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.10	764.5	54.7	12.6	88	ENE	31	14	.....	.....	9	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.97	761.1	80.8	27.1	40	NE	4	2	.....	.....	3	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.21	767.3	39.9	4.4	43	NNW	18	8	.....	.....	6	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.97	761.2	55.4	13.0	68	N	22	10	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.35	771.0	23.7	— 4.6	58	NNE	18	8	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.52	724.5	29.85	758.3	82.0	27.8	32	SW	18	8	.....	.....	7	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.98	761.5	80.8	27.1	29	SSW	13	6	.....	.....	1	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.87	758.7	37.4	3.0	71	N	13	6	.....	.....	9	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.96	735.5	29.97	761.2	44.6	7.0	49	SE	25	11	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.97	761.1	87.3	30.9	23	N	4	2	.....	.....	8	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.57	725.6	30.19	766.8	70.7	26.5	24	NNW	13	6	.....	.....	0	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.43	747.4	68.9	20.5	40	S	13	6	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.62	752.4	40.5	5.3	72	NW	2	1	.....	.....	7	.....	.....	.....	.....	.....	Marks.
Irkutsk	28.32	719.3	29.97	753.7	51.3	10.7	50	NW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	30.20	768.7	61.2	16.2	66	NNE	9	4	.....	.....	10	.....	.....	.....	.....	Raining	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	31.8	— .1	94	SE	9	4	.....	.....	10	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 401 meters or 1,314.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, m. 404.2?, or 1,321.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0 m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	29.78	756.3	69.1	20.6	45	SW	5.2	2.33	.....	0	1	.....	.....	0	0	Somew't c'dy	Royal Observatory.
San Fernando	.....	.....	29.95	760.6	64.9	18.3	56	WSW	4.0	1.8	.....	2	6	SW	SW	0	0	.....	The Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight; 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	.....	.....	30.55	775.9	30.9	— 0.6	73	S	.....	.....	2	.....	2	.....	.....	0	0	.....	
Umea	.....	.....	30.58	776.7	35.1	1.7	68	SSW	.....	.....	4	.....	9	.....	.....	0	0	.....	
Hernosand	.....	.....	30.58	776.6	40.1	4.5	53	SE	.....	.....	2	.....	7	.....	.....	0	0	.....	
Stockholm	.....	.....	30.50	774.8	41.7	5.4	52	NNW	.....	.....	2	.....	2	.....	.....	0	0	.....	
Wisby	.....	.....	30.59	777.0	37.0	2.8	72	NNE	.....	.....	6	.....	3	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.56	776.2	41.4	5.2	43	N	10.3	4.6	.....	.....	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; the weather by Vienna symbols, or, occasionally, in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28.43	722.0	29.87	758.7	48.0	8.9	68	N			9		10			0.004	0.1	Covered	The Observatory.
Zurich	28.32	719.3	29.97	761.3	49.1	9.5	67	E			2		8		NE	0	0	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —2.6 mm.; Thermometer, —6.5 cent.; Relative Humidity, +10 per cent.

Note.—The originals give the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Constantinople																			
Fao, (Persian Gulf)			29.88	759.0	89.6	32.0		SW			1		10						
Salonica			29.97	761.2	79.5	26.4		S			1		5						
Valona			29.70	754.3	79.2	26.2		SE			6		10						
Varna			29.98	761.5	68.0	20.0		SW			3		2						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.92	759.9	75 9	24.4	76	N			1		1k		N	0	0	Fair	Prof. C.V. A.Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. 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.			29.88	758.9	40.1	4.5	92	Calm	0	0									Hon. J. Ferguson.
Brockville, Ontario			29.83	757.7	57	13.9		NE	1	0.4			8s		W	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B.			29.89	759.2	39	3.9	95	N	3	1.3			10ks		N	0.01	0.3	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			29.85	758.2	40	4.4	93	Calm	0	0			10s			0.09	2.3	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.78	756.4	51.0	10.6	89	E			1		9k			0.175	4.45	Clearing	James Smith, M. A.
Dalhousie, N. B.			29.89	759.2	40.5	4.7	73	NW			1		10			0	0		H. A. Johnson.
Esquimault, B. C.			30.14	765.5	46.3	7.9	100	N	1	0.4		1cs				0	0	Clear	W. H. Revis.
Fredericton, N. B.			29.89	759.2	41.6	5.3	80	NE	2	0.9			10s			0.265	6.73	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			29.90	759.4	42	5.6	71	S W	2	0.9		5k	5ks	NW	NW	0	0	Cloudy	James Stewart.
Goderich, Ontario			29.73	755.1	48.9	9.4	95	Calm			0		10n					Light rain	H. J. Strang, M. A.
Granton, Ontario			29.72	754.9	53	11.7		SW			1		10n			0.25	6.3	Cloudy	James Grant.
*Halifax, N. S.			29.78	756.4	47	8.3	95	SE	6	2.7			8n			0.61	15.5	Cloudy	F. Allison, M. A.
*Kingston, Ontario			29.80	756.9	53	11.7	96	Calm	0	0		10c	Sm'e			0	0	Fair	S. Woods, M. A.
*Montreal, Quebec			29.83	757.7	46	7.8	98	SE	6	2.7			Fog			0.43	10.9	Foggy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.79	756.7	49	9.4	65	N	8	3.6			Fog		N	0.40	10.2	Foggy	J. B. Haney.
*Parry Sound, Ontario			29.79	756.7	51	10.6	100	S	8	3.6		2ck	8n	SE	SE	0.71	18.0	Light rain	Rev. R. Mooley.
*Port Dover, Ontario			29.72	754.9	58	14.4	82	W	6	2.7			10n		SW	0.02	0.5	Light rain	H. Morgan.
Port Hastings, N. S.			29.84	757 9	38.9	3.8		SE	6	2.7						0	0	Fine	P ter Grant.
*Port Stanley Ontario			29.77	756.1	54	12.2	87	SW	1	0.4			10n			0.83	21.1	Light rain	M. Payne.
*Quebec, Quebec			29.88	758.9	36	2.2	95	NE	22	9.8			10n		NE	0.27	6.9	Cloudy	Capt. Ash, R. N.
St. John, N. B.			29.87	758.7	43	6.1	91	N	2	0.9			9ks			0.070	1.78	Cloudy	G. Murdoch, C. E.
*Saugeen, Ontario			29.67	753.6	48	8.9	88	SW	5	2.2			10n			0.69	17.5	Light rain	K. Stewart.
Stayner, Ontario			29.68	753.9	52	11.1	95	C l n	0	0			10n		SE	0.53	13.5	[illegible]	R. J. Cole.
Stratford, Ontario			29.74	755.4	52 5	11.4	91	SW					10n			0.643	16.34	Rainy	C. J. MacGregor, M. A.
*Sydney, C. B.			29.90	759.4	37	2.8	98	NE	7	3.1			Fog			0.07	1.8	Cloudy	T. C. Hill.
*Toronto, Ontario			29.74	755.4	52	11.1	96	W	6	2.7		8k	Fog	8		0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			29.68	753.9	54 7	12.6	91	W			2	10cs	0			0.05	1.3	Gloomy	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 m.

UNITED STATES SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	29.80	756.9	72	22.2	80	Calm	0	0	.....	2k	Haze	S	.....	0.08	2.0	Fair	
Alpena, Mich.	.....	.....	29.61	752.1	46	7.8	92	SW	6	2.7	.....	.....	10s	.....	SW	0.02	0.5	Cloudy	
Atlantic City, N. J.	.....	.....	29.87	758.7	58	14.4	87	S	8	3.6	.....	1cs	Haze	S	.....	0	0	Clear	
Augusta, Ga.	.....	.....	29.95	760.7	72	22.2	85	SE	9	4.0	.....	.....	10s	.....	SE	0	0	Cloudy	
Baltimore, Md	.....	.....	29.87	758.7	73	22.8	67	S'W	7	3.1	.....	5ck	5ks	SW	W	Inap.	Inap.	Cloudy	
Barnegat, N. J.	.....	.....	29.84	757.9	58	14.4	81	SW	14	6.3	.....	2ck	2k	SW	SW	0	0	Fair	
Benton, Montana	27.33	694.2	30.13	765.3	40	4.4	67	SW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.22	716.8	29.89	759.2	39	3.9	91	NW	6	2.7	.....	2c	Haze	NW	NW	0	0	Fair	
Boston, Mass.	.....	.....	29.81	757.0	49	0.4	93	E	7	3.1	.....	.....	Fog	.....	.....	0.07	1.8	Foggy	
Breckenridge, Minn	.....	.....	29.98	761.5	34	1.1	79	W	8	3.6	.....	0	2s	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	29.97	753.6	63	17.2	78	SW	11	4.9	.....	.....	10ks	.....	SW	0	0	Cloudy	
Burlington, Vt.	.....	.....	29.78	756.4	48	8.9	78	NW	4	1.8	.....	0	0	.....	.....	0.05	1.3	Clear	
Cairo, Ill.	.....	.....	30.10	762.0	52	11.1	66	W	14	6.3	.....	5c	0	.....	.....	0.04	1.0	Fair	
Cape Hatteras, N. C.	.....	.....	30.01	762.2	71	21.7	80	S	18	8.0	.....	2c	2k	.....	.....	0	0	Fair	
Cape Henry, Va.	.....	.....	29.98	761.5	72	22.2	76	SW	22	9.8	.....	5c	Haze	NW	.....	0	0	Fair	
Cape Lookout, N. C.	.....	.....	30.08	764.0	71	21.7	80	SW	15	6.7	.....	0	5ks	.....	SW	0	0	Fair	
Cape May, N. J.	.....	.....	29.87	758.7	60	15.6	88	S	8	3.6	.....	2ck	0	W	.....	0	0	Fair	
Charleston, S. C.	.....	.....	30.05	763.3	75	23.9	76	SW	12	5.4	.....	5c	2ks	.....	SW	0	0	Fair	
Cheyenne, Wyoming	24.15	613.4	30.09	764.3	35	1.7	69	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	29.75	755.6	49	9.4	71	SW	10	4.5	.....	.....	10s	.....	W	Inap.	Inap.	Threatening	
Cincinnati, Ohio	.....	.....	29.80	756.9	59	15.0	70	W	7	3.1	.....	.....	10s	.....	.....	0.02	0.5	Threatening	
Cleveland, Ohio	.....	.....	29.78	756.4	52.1	11.2	80	W	1	0.4	.....	.....	10n	.....	NW	0.02	0.5	Light rain	
Colorado Springs, Col.	24.21	615.7	30.11	764.8	42	5.6	35	N	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Corsicana, Tex	.....	.....	30.13	765.3	50	10.0	78	N	8	3.6	.....	10cs	0	W	.....	0.64	16.3	Cloudy	
Davenport, Iowa	.....	.....	29.93	757.7	44	6.7	84	NW	16	7.2	.....	0	8s	.....	NW	0	0	Fair	
Denison, Tex.	.....	.....	30.19	766.8	52	11.1	72	NE	4	1.8	.....	8c	2s	N	.....	0	0	Cloudy	
Denver, Col.	24.95	33.7	30.17	766.3	43	6.1	50	W	2	0.9	.....	0	0	.....	.....	0.01	0.3	Clear	
Detroit, Mich	.....	.....	29.72	754.9	52	11.1	86	SW	10	4.5	.....	.....	10n	.....	SW	0.05	1.3	Light rain	
Dodge City, Kan.	27.49	698.2	29.78	756.4	49	9.4	71	N	4	1.8	.....	2k	0	N	.....	Inap.	Inap.	Fair	
Dubuque, Iowa	.....	.....	29.83	757.7	44	6.7	75	NW	10	4.5	.....	.....	10s	.....	.....	0	0	Cloudy	
Duluth, Minn	.....	.....	29.86	758.4	44	6.7	67	NW	16	7.2	.....	0	0	.....	.....	0.23	5.8	Clear	
Eastport, Me	.....	.....	29.83	757.7	45	7.2	92	N	6	2.7	.....	.....	10s	.....	.....	0.50	12.7	Cloudy	
Erie, Pa	.....	.....	29.72	754.9	58	14.4	81	W	12	5.4	.....	.....	10ks	.....	.....	0.05	1.3	Cloudy	
Escanaba, Mich	.....	.....	29.92	752.3	39	3.9	91	W	12	5.4	.....	.....	10n	.....	.....	0.16	4.1	Light rain	
Fort Gibson, Indian Terr.	.....	.....	30.11	764.8	45	7.2	84	Calm	0	0	.....	2c	0	W	.....	0	0	Fair	
Ft. St. Michael, Alaska	.....	.....	29.75	755.6	32	0.0	.....	S	13	5.8	.....	.....	10s	.....	.....	.....	.....	Cloudy	
Fort Sill, Indian T.	28.92	734.6	30.06	763.5	43	6.1	75	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.31	719.1	29.99	761.7	42	5.6	79	NW	1	0.4	.....	10k	0	NW	.....	0	0	Cloudy	
Galveston, Tex.	.....	.....	30.01	763.0	62	16.7	91	N	32	14.3	.....	.....	10s	.....	N	0.64	16.3	Cloudy	
Grand Haven, Mich.	.....	.....	29.71	754.4	44	6.7	92	SW	14	6.3	.....	.....	10n	.....	SW	0.01	0.3	Light rain	
Indianapolis, Ind.	.....	.....	29.83	757.7	54	12.2	68	W	3	1.3	.....	8cs,k	0	W	.....	0.01	0.3	Fair	
Indianola, Tex.	.....	.....	30.07	763.8	61	16.1	66	N	38	17.0	.....	.....	10s	.....	N	0	0	Cloudy	
Jacksonville, Fla.	.....	.....	30.05	763.3	75	23.9	81	SE	4	1.8	.....	5k	0	SE	.....	0	0	Fair	
Keokuk, Iowa	.....	.....	29.91	759.4	44	6.7	59	NW	14	6.3	.....	10k	0	NW	.....	0	0	Cloudy	
Key West, Fla.	.....	.....	30.03	762.7	79.3	26.3	78	SE	10	4.5	.....	1ck	Haze	N	SE	0	0	Fair	
Kittyhawk, N. C.	.....	.....	30.01	763.0	70	21.1	79	W	20	8.9	.....	2k	Haze	W	.....	0	0	Fair	
Knoxville, Penn.	.....	.....	29.92	760.0	62	16.7	94	SW	6	2.7	.....	.....	10n	.....	.....	1.13	28.7	Misty	
La Crosse, Wis.	.....	.....	29.83	757.7	44	6.7	75	N	12	5.4	.....	10k	0	N	.....	Inap.	Inap.	Cloudy	
Leavenworth, Kan.	.....	.....	30.04	763.0	45	7.2	71	NW	6	2.7	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Lexington, Ky.	28.80	731.5	29.88	758.9	55	12.8	93	W	8	3.6	.....	.....	10n	.....	.....	0.01	0.3	Light rain	
Long Branch, N. J.	.....	.....	29.82	757.1	55	12.8	87	SE	3	1.3	.....	5c	0	SW	.....	0	0	Fair	
Louisville, Ky.	.....	.....	29.99	761.7	59	15.0	59	W	8	3.6	.....	.....	10s	.....	W	0.02	0.5	Cloudy	
Lynchburg, Va.	.....	.....	29.91	759.7	69	20.6	84	S	6	2.7	.....	.....	10n	.....	S	0.01	0.3	Light rain	
Malone, N. Y.	.....	.....	29.74	755.1	60	15.6	82	Calm	0	0	.....	5k	2s	W	SW	0.25	6.3	Cloudy	
Manhattan, Kan.	28.92	734.6	30.10	764.5	40	4.4	91	S	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Marquette, Mich.	.....	.....	29.66	753.4	37	2.8	90	NW	16	7.2	.....	.....	10n	.....	N	0.16	4.1	Light rain	
Memphis, Tenn.	.....	.....	30.05	763.3	54	12.2	67	NW	10	4.5	.....	.....	10s	.....	.....	0.02	0.5	Cloudy	
Milwaukee, Wis.	.....	.....	29.72	754.9	47	8.3	77	NW	16	7.2	.....	.....	10ks	.....	.....	0.03	0.8	Cloudy	
Mobile, Ala.	.....	.....	29.96	761.0	69	20.6	95	SE	6	2.7	.....	.....	10n	.....	SE	1.84	46.7	Heavy rain	
Montgomery, Ala.	.....	.....	30.00	762.0	67.5	19.7	90	S	7	3.1	.....	.....	10s	.....	SW	1.10	27.9	Cloudy	
Morgantown, W. Va.	.....	.....	29.81	759.7	65	18.3	80	S	9	4.0	.....	.....	10n	.....	S	Inap.	Inap.	Light rain	
Mt. Washington, N. H.	23.70	602.0	30.06	763.5	41	5.0	91	NW	36	16.1	.....	0	8s	.....	NW	0	0	Fair	
Nashville, Tenn.	.....	.....	29.93	760.2	61	16.1	82	W	4	1.8	.....	5k	5s	W	.....	0.10	4.1	Cloudy	
New Haven, Conn.	.....	.....	29.81	757.2	69	20.6	71	SE	2	0.9	.....	Haze	Fog	.....	.....	0.10	2.5	Fair	
New London, Conn.	.....	.....	29.84	757.9	56	13.3	87	S	5	2.2	.....	2ck	8s	SW	SW	0	0	Fair	
New Orleans, La.	.....	.....	29.96	761.0	67	19.4	91	N	12	5.4	.....	.....	10n	.....	N	3.95	100.3	Heavy rain	
Newport, R. I.	.....	.....	29.81	757.0	54	12.2	86	S	5	2.2	.....	.....	10ks	.....	SW	0	0	Cloudy	
New York, N. Y.	.....	.....	29.82	757.4	68	20.0	60	S	1	0.4	.....	0	Fog	.....	.....	0	0	Clear	
Norfolk, Va.	.....	.....	30.00	762.0	73	22.8	71	SW	18	8.0	.....	5k	0	SW	.....	0	0	Fair	
North Platte, Neb.	.....	.....	29.74	755.4	44	6.7	84	Calm	0	0	.....	2ck	5s	W	W	0	0	Fair	
Omaha, Neb.	27.14	689.3	30.01	762.0	41	5.0	82	NW	5	2.2	.....	2ck	0	NW	.....	0.01	0.3	Clear	
Oswego, N. Y.	28.95	735.3	29.76	755.9	65	18.3	76	SE	6	2.7	.....	.....	10s	.....	.....	0.09	2.3	Cloudy	
Pembina, Dakota	.....	.....	29.90	759.4	4[illegible]	4.4	64	Calm	0	0	.....	5k	0	NW	.....	0	0	Fair	
Philadelphia, Penn.	.....	.....	29.84	757.9	72	22.2	71	SW	17	7.6	.....	5ck	0	SW	.....	0	0	Fair	
Pike's Peak, Colorado	.....	.....	28.17	761.2	7	—13.9	54	N	40	17.9	.....	0	2s	.....	W	0.10	2.5	Fair	
Pittsburgh, Penn.	17.76	451.1	29.77	756.1	66	18.9	83	S	10	4.5	.....	.....	10n	.....	.....	0.01	0.3	Light rain	
Port Huron, Mich.	.....	.....	29.69	754.1	52	11.1	86	SW	10	4.5	.....	.....	10n	.....	.....	0.28	7.1	Light rain	
Portland, Me.	.....	.....	29.87	758.7	52	11.1	86	SE	5	2.2	.....	.....	Fog	.....	SE	0.13	3.3	Foggy	
Portland, Oregon	.....	.....	30.10	764.5	54	12.2	86	N	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Punta Rassa, Fla.	.....	.....	30.04	763.0	78.0	25.6	82	E	14	6.3	.....	.....	8ks	.....	SE	0	0	Cloudy	
Rochester, N. Y.	.....	.....	29.70	754.4	64	17.8	83	SW	4	1.8	.....	2c	5s	SW	SW	Inap.	Inap.	Fair	
Salt Lake City, Utah	.....	.....	30.20	767.1	43	6.1	51	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	25.87	657.1	29.80	756.9	68	20.0	75	SW	6	2.7	.....	5cs	Haze	SW	.....	0	0	Fair	
San Diego, Cal.	.....	.....	30.05	763.3	56	13.3	100	NE	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
San Francisco, Cal.	.....	.....	30.01	762.2	61	16.1	66	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Santa Fe, N. M.	23.40	594.4	29.94	760.5	30	—1.1	89	N	10	4.5	.....	.....	Fog	.....	.....	0.36	9.1	Foggy	
Savannah, Ga.	.....	.....	30.03	762.7	77	25.0	76	SW	8	3.6	.....	.....	10s	.....	S	0	0	Cloudy	
Shreveport, La.	.....	.....	30.12	765.0	56	13.3	75	N	10	4.5	.....	10cs,hs	0	.....	.....	2.92	74.2	Cloudy	
Smithville, N. C.	.....	.....	30.07	763.8	71	21.7	79	S	11	4.9	.....	2c	0	SW	.....	0	0	Fair	
Springfield, Mass.	.....	.....	29.81	757.2	71	21.7	80	S	4	1.8	.....	5ck	0	S	.....	0.10	2.5	Fair	
St. Louis, Mo.	.....	.....	29.97	761.2	49	9.4	57	NW	12	5.4	.....	.....	10s	.....	NW	0	0	Cloudy	
St. Marks, Fla.	.....	.....	30.04	762.2	71	21.7	85	E	3	1.3	.....	5ck	5s	SW	S	0.04	1.0	Cloudy	
St. Paul, Minn.	.....	.....	29.89	759.2	40.5	4.7	78	NW	5	2.2	.....	5k	0	.....	.....	0.21	5.3	Fair	
St. Paul's Island, Alaska	.....	.....	29.39	746.5	32	0.0	80	ENE	23	10.3	.....	.....	10s	.....	.....	0	0	.....	
Thatcher's Island, Mass.	.....	.....	29.86	758.4	49	9.4	91	SE	3	1.3	.....	.....	10s	.....	S	0.05	1.3	Cloudy	
Toledo, Ohio	.....	.....	29.72	754.9	55	12.8	93	SW	12	5.4	.....	.....	10s	.....	SW	0.01	0.3	Threatening	
Tucson, Arizona	27.07	702.8	30.26	768.8	57	13.9	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30.03	762.7	73	22.8	85	S	6	2.7	.....	2c	2ks	.....	SW	0	0	Fair	
Vicksburg, Miss.	.....	.....	30.01	762.2	58	14.4	93	NE	12	5.4	.....	.....	10s	.....	N	1.95	49.5	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	36	2.2	66	Calm	0	0	0	0	0			0	0	Clear	
Washington, D. C.			29.87	758.7	73	22.8	74	S	12	5.4		2ck	8s	SW	SW	0	0	Cloudy	
Wilmington, N. C			30.05	763.3	73	22.8	71	SW	13	5.8		2c	2ks	W	SW	0	0	Fair	
Wood's Holl, Mass.			29.86	758.4	53	11.7	86	SW	8	3.6			10s		SW	0	0	Cloudy	
Wytheville, Va	27.60	701.3	29.68	753.9	62	16.7	94	Calm	0	0			10ks		SW	1.00	25.4	Threatening	
Yankton, Dakota	28.75	730.2	30.06	763.5	42	5.6	74	SW	4	1.8		5cs	0	NW		0.02	0.5	Fair	
Yuma, Arizona			30.04	763.0	67	19.4		NW				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown B'b'dos, W. I.			30.09	764.3	81	27.2	87	NE	5	2.2		5k	2ks	E		0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.95	760.7	80	26.7	78					5c	5k			0.11	2.8	Fair	L. V. Bigard.
St. Thomas, S. T., W. I																			W. S. Cameron.
Kingston, Jamaica, W. I.			30.14	765.5	79	26.1	82	Calm	0	0		2ck	2s			0.56	14.2		James Gall.
Santiago de Cuba, W. I.			29.76	755.9	79	26.1	74	N	1.2	0.5		4k	0	N		1.02	25.9	Fair	Robert Mason.
Havana, Cuba, W. I			30.00	762.0	82	27.8	70	NE	7.2	3.2		0	0			0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas			30.21	767.3	71.5	21.9	75	NNW	5.0	2.2		0	1k			0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa W. I.																			
Clifton, Jamaica W. I	27.19	690.6	29.97	761.2	70	21.1	90	SE	1.0	0.4		2c	0	SE		0.04	1.0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.			29.97	761.2	81	27.2	78	E			3		6ks			0.106	2.6	Dry & cloudy	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.02	762.4			86.0	30		W								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.18	633.6			66.0	18.9	85	SE	1	0.4		6ck	3s			0.04	1.0	Cloudy	Thomas Herran.
St. John's, Newfoundland			30.15	765.8	38.5	3.6	81	E				10k	10s			0	0	Cloudy	John Delaney.
York Factory, B. A.			29.78	756.4	36.5	2.5	81	S	2	0.9		10cs	0	W		0	0		J. Fortescue.
Honolulu, Oahu, H. I.																			Daniel Smith.
Makawao, Maui, H. I.	27.82	706.6	29.98	761.5	58	14.4	76	Calm	0	0		2cs	2k	SW		0	0	Cloudy	F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Wind. Direction. From—	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. 0—10	Clouds. Direction. Upper. From—	State of ocean.	Direction of swell from—	Weather.	Observer.
Steamer Hibernian, N. 51° 07', W. 29° 09'.	ESE	10	29.96	761.0	55	12.8	W		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.; Colorado Springs, 6 032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (? ft., or 2,091.6 (?) m.; Tucson, 2,513 (? ft., or 772.1 (? m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,291 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.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 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	761.5	70.7	21.5	54	Calm	.....	.....	0	.....	1	.....	.....	0	0	Clear	Charnot.
Algiers	.....	.....	29.95	760.8	69.8	21.0	82	NW	.....	.....	2	.....	4	.....	.....	0	0	Fair	Peter.
La Calle	.....	.....	.....	.....	64.4	18.0	.....	NW	.....	.....	2	.....	5	.....	.....	0.906	23.0	Fair	Kuntz.
Tunis	.....	.....	29.95	760.6	63.7	17.6	73	W	.....	.....	4	.....	10	.....	.....	0.012	0.3	Hidden	Jacques.
Sfax	.....	.....	29.96	760.9	72.3	22.4	68	NE	.....	.....	4	.....	4	.....	.....	0	0	Fair	Chauvey.
Saida	.....	.....	30.03	762.6	65.3	18.5	69	N	.....	.....	1	.....	3	.....	.....	0.028	0.7	Fair	Millot.
Tebessa	.....	.....	29.73	755.2	62.8	17.1	.....	NW	.....	.....	2	.....	7	.....	.....	0.394	10.0	Fair	Colin.
Gerlville	.....	.....	29.89	759.1	60.8	16.0	48	NNW	.....	.....	1	.....	2	.....	.....	0.850	21.6	Clear	Buard.
Laghonat	.....	.....	29.84	757.9	68.0	20.0	40	N	.....	.....	1	.....	0	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	29.76	755.9	83.3	28.5	40	NNW	.....	.....	1	.....	0	.....	.....	0.106	2.7	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	.....	.....	29.99	761.8	54.0	10.0	76	NE	.....	.....	4	.....	10	.....	.....	0.224	5.7	.....	Prof. Ivan Stozir.
Buda-Pesth	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	I. R. Cen. M. I., Hungary
Cracow	.....	.....	30.21	767.3	47.8	8.8	63	NNE	.....	.....	4	.....	10	.....	.....	0.122	3.1	.....	I. R. Observatory.
Eperies	.....	.....	30.18	766.9	45.3	7.4	86	N	.....	.....	2	.....	10	.....	S	0.167	4.25	.....	Julius Mikolik.
Gratz	.....	.....	30.03	762.8	54.0	10.5	69	SW	.....	.....	2	.....	10	.....	.....	0.354	9.0	.....	Andreas Rospini.
Hermannstadt	28.82	732.0	30.03	762.8	54.0	10.5	69	SW	.....	.....	2	.....	10	.....	.....	0.354	9.0	.....	Andreas Rospini.
Kremsmünster	28.48	723.3	29.87	758.7	62.4	16.9	60	SE	.....	.....	4	.....	5	.....	.....	0.154	3.90	.....	Prof. Reissenberger.
Lemberg	28.71	729.2	30.08	764.0	45.3	7.4	62	E	.....	.....	3	.....	10	.....	.....	0	0	.....	Prof. C. Wagner.
Nyiregyhaza	.....	.....	30.18	766.6	40.6	4.8	90	NE	.....	.....	3	.....	10	.....	.....	1.047	26.6	.....	Dr. T. Stanecki.
Pola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habesuda Daniel.
Szegedin	.....	.....	29.87	758.7	57.9	14.4	61	E	.....	.....	4	.....	1 rks	.....	.....	0.020	0.50	.....	I. R. Hydrographic Office
Trieste	.....	.....	29.92	759.9	49.8	9.9	98	NE	.....	.....	2	.....	10	.....	.....	0.579	14.70	.....	Karl Stancel.
Vienna	.....	.....	29.92	759.9	54.1	12.3	67	ENE	.....	.....	3	.....	5	.....	.....	0.028	0.7	Threatening	Prof. V. Farolfi.
.....	.....	.....	30.05	763.3	50.0	10.0	53	N	.....	.....	2	.....	10	.....	.....	0	0	.....	I. R. Central Institute.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

BELGIAN SERIES.

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

Brussels	.....	.....	30.18	766.6	52.3	11.3	43	NE	.....	.....	7	.....	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. Upper. 0 10.	Clouds. Amount. Lower. 0 10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.48	774.2	48.0	8.9		SSE	18	8.0			1			0	0	Blue sky	William Boswell.
Ardrossan			30.50	774.7	56	13.3		NW			3		1					Blue sky	William McNeil.
Armagh Observatory			30.51	774.9	54.8	12.7		ESE	13	5.8			2					*D. clouds	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			30.42	772.7	52.9	11.6		ENE	30	13.4			3					Blue sky	John Hartnup.
Birr Castle, (Parsonstown)			30.41	772.4	57.5	14.2		SE			1		8					*D. clouds	J. Dreyer.
Bradford			30.44	773.2	49.5	9.7		E			3		8			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	82.0	27.8		NE			4		7					Overcast	Sergt. J. F. Halanen, A. H. C.
Cambridge Observatory			30.37	771.4	56.0	13.3		N			4		1					*D. clouds	H. Todd.
Cardington			30.38	771.6	55.0	12.8		E			4		2					Blue sky	John McLaren.
Carlisle			30.49	774.4	57.5	14.2		S			3		1			0	0	*[illegible] clouds	T. Bel[illegible], for J. Carmell.
Chatham, School M. E			30.34	770.6	46.2	7.9		NE			4		6					*D. clouds	Major C. N. Martin, R.E.
Dartmoor	28.80	731.5	30.32	770.1	52.4	11.3		E			7		5					*D. clouds	R. E. Power.
Donaghadee			30.50	774.7	56	13.3		SE			2		2					*D. clouds	J. Mac Gowan.
Dover			30.26	768.6	49	9.4		NNE			6		1					¼ c o ded.	J. Costello.
Eccles (near Manchester)			30.44	773.2	52.8	11.6		ENE	7.2	3.2			7					*D. clouds	Thomas Mackereth.
Falmouth Observatory			30.28	769.1	50.8	10.4		E	19	8.5			1					*D. clouds	The Staff.
Fort Napier, (Natal)	27.82	706.6	30.30	763.5	67.3	19.6		S			2		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.80	260.7	87	30.6		N			2		9					Overcast	[illegible]
Galway, Queen's College			30.34	770.6	66	18.9		E			1		0					Blue sky	B. G. Clare, for Prof. Currey.
Gibraltar, (Mediterranean)			30.02	762.5	72 0	22.2		W			4		1k					[illegible]	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			30.48	774.2	56.9	13.8		SE			1		1					Fine	Lewis Stuart.
Great Yarmouth			30.41	772.4	48	8.9		ENE			6		8					Blue sky	G. T. Watson.
Greenwich Royal Obs			30.31	769.9	57.0	13.9		ENE			4		0					Blue sky	The Staff, for G. B. Airy
Guernsey			30.48	766.6	50.5	10.3		NE			6		0					Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			30.49	774.4	49.6	9.8		E			4		9					*D. clouds	L. J. Crossley.
Helston			30.24	768.1	56	13.3		E			7		0			0	0	Blue sky	M. P. Moyle.
Holyhead			30.41	772.4	51	12.8		ENE			6		1					Blue sky	John Tilston.
Kew Observatory			30.30	769.6	53.0	11.7		NE	29	13.0			1					Hazy	The Staff.
Kingstown			30.49	774.1	50	10.0		E			5		5					*D. clouds	George Mitchell.
Leicester Museum			30.45	772.9	51.8	11.0		E			1		1					D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			30.01	762.7	67.4	19.7		NE			1		2k					[illegible]	Sergt. F. Travis, A. H. C.
Nairn			30.44	773.2	59	15.0		Calm			0		0					Clear	W. D. Penny.
Nassau, (Bahamas)			30.10	764.5	82.0	28.1		SE			6		5					*D. clouds	Surg. Maj. Henry.
Nottingham			30.41	773.2	53.7	12.1		ENE			6		1c, k		SE, E	0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.39	771.9	54.0	12.2		NE			5–		6					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.31	769.9	55	12.8		NE			4		4					*D. clouds	J. Lucas.
Plymouth			30.26	768.4	56.5	13.6		ENE			4		0					Blue sky	John Merrifield.
Roche's Point			30.38	771.6	52	11.1		ESE			5		2					Fine	W. Kennedy.
Saint Ann's Head			30.44	770.6	54	12.2		E			4		6					*D. colluds	John C. Walker.
Saint Helier, Jersey			30.44	765.5	55.0	12.8		ENE			6		6					Clear	A. P. Amy.
Sandwick Manse, Orkneys			30.31	770.1	52.5	11.4		S	21	9.4			0					Blue sky	Rev. C. Clouston, LL.D.
Scarborough			30.34	775.7	47.0	8.3		ENE			3		1					Blue sky	F. Shaw.
Scutari Cemetery Turkey																			Sergt. W. H. Lyne.
Sheffield			30.46	773.7	54 0	12.2		E			4		8			0	0	Overcast	W. F. Cooper.
Silloth Rectory			30.49	774.4	60.6	24.9	26	SE			3		2			0	0	*D. clouds	Rev. Francis Redford
Stonyhurst Observatory			30.40	773.7	52.5	11.4		E			3		3					*D clouds	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.			30.47	773 9	51	11 7		Calm			0		0					Blue sky	John Smith.
Stratfield Turgiss			30.30	769.6	56.2	13.4		E			2–3		0					Blue sky	Rev. Charles H. Griffith
Streatley Vicarage																		Blue sky	Rev. John Slatter.
Thurso			30.49	774,4	55	18.3		S			2		0					*D. clouds	John Trotter.
Truro, Royal Institution			30.26	768.6	54	17.8		E			6		3					*D. clouds	W. Newcombe.
Valencia Observatory			30.36	771.1	59.3	15.2		SSE	13	5.8			5					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					53	11.7		E			3		0			0	0		Thomas Dawson.
Cape Good Hope Obs			30.23	767.8	71.8	22.1	51	SE	8	3.6			5						The Staff, for E. J. Stone.
Leith, Restalrig Park			30.55	776.1	49.0	9.4		E			4					0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.08	764.0				SE	20.1	9.0						0	0		C. Meldrum.
Melbourne, Observatory			29.83	757.7	61.8	16.6	50	NNE	25	11.2			5			0.02	0.5	Boisterous	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.16	773.7	55	12.8		S			3	0	0			0	0		J. Youngclause.
North Unst, (Shetland Is.)			30.59	777.0	50	10.0		E			2	0	0						Robert Burnet.

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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			30.51	774.9	47.1	8.4	62	SSW			2		0						
Fanöe			30.48	774.2	51.5	12.5	67	WSW			2		1						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29 94	760 5	45.9	7.7	98	SE			4		8					Foggy	
Thorshavn, (Faröe)			30.50	774.8	48.2	9.0	84	Calm			0		10						
Vestervig			30.47	773.8	54.7	12.6	68	NW			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. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	30.04	763.1	53.6	12	56	NE	.....	.....	2	.....	8nk	.....	NE	0	0	Very cloudy	Normal School.
Amiens	.....	.....	30.04	763.1	57.6	14.2	37	E	.....	.....	8	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	29.91	759.7	60.8	16	61	E	.....	.....	1	.....	..nk	.....	S	0	0	.....	Normal School.
Bar-sur-Seine	.....	.....	30.05	763 2	45.5	7.5	73	SE	.....	.....	2	.....	10	.....	.....	Inap.	Inap.	Covered	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.09	762.1	50.5	10.3	62	NE	40.3	18.0	.....	.....	10	.....	E	0.008	0.2	Raining	Beaumette Observatory.
Beauvais	.....	.....	30.11	764.9	54.9	12.7	85	E	.....	.....	6	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Besançon	.....	.....	29.97	761.3	52.9	11.6	61	NE	.....	.....	6	.....	8	.....	NE	0	0	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	30.02	762.6	50.5	15.3	66	E	.....	.....	1	.....	..en	.....	NW	0	0	.....	Normal School.
Bourges	.....	.....	30.00	761.9	51.1	10.6	83	NE	.....	.....	6	.....	10	.....	NE	0	0	Covered	Normal School.
Brest	.....	.....	30.09	764.2	52.3	11.3	63	NE	.....	.....	5	.....	4k	.....	NE	0	0	.....	Naval Observatory.
Caen	.....	.....	30.07?	779.0?	53.6	12	75	N	.....	.....	10	.....	5	.....	S	0	0	Cloudy	Normal School.
Carcassonne	.....	.....	29.98	761.6	58.8	14.9	68	W	.....	.....	5	.....	10	.....	E	0	0	Covered	Normal School.
Chartres	.....	.....	30.01	762.2	52.3	11.3	.....	ENE	.....	.....	4	.....	10	.....	.....	0	0	Covered	Normal School.
Clermont	.....	.....	30.28	769.0	54.9	12.7	72	N	.....	.....	1	.....	10	.....	N	0.110	2.8	Covered	Puy de Dome Obs.
Commercy	.....	.....	30.08	763.9	40.3	9.6	54	NE	.....	.....	6	.....	5kn	.....	NE	0	0	Cloudy	Normal School.
Commune de Gréasque*	.....	.....	29.93	760.2	59.0	15.0	58	SW	.....	.....	4	.....	5	.....	SW	0.236	6.0	.....	M. Rina.
Grenoble	.....	.....	29.88	758.9	58.3	14.6	74	NNE	.....	.....	2	.....	5kn	.....	NW	0.030	0.75	Cloudy	Normal School.
Le Mans	.....	.....	29.98	763.9	51.8	11	50	E	.....	.....	6	.....	8	.....	E	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	29.92	760.0	56.1	13.4	62	NE	.....	.....	1	.....	10	.....	.....	0	0	.....	Normal School.
Mâcon	.....	.....	29.99	761.8	58.3	14.6	84	N	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Mirecourt	.....	.....	30.03	762.8	51.3	10.7	84	NE	.....	.....	1	.....	10	.....	SW	0	0	Covered	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Niames	.....	.....	29.88	759.0	64.8	18.2	57	SW	.....	.....	2	.....	8	.....	SW	0	0	Very cloudy	Normal School.
Orleans	.....	.....	30.02	762.5	51.4	10.8	50	E	.....	.....	6	.....	10	.....	E	0	0	Covered	Normal School.
Paris Observatory	.....	.....	30.06	763.4	55.0	12.8	34	NE	.....	.....	4	.....	8	.....	ENE	0	0	Very cloudy	National Observatory.
Parthenay	.....	.....	29.79	756.7	56.3	13.5	77	NE	.....	.....	6	.....	5	.....	NE	0	0	Cloudy	Normal School.
Privas	.....	.....	29.87	758.8	60.8	16	.....	S	.....	.....	2	.....	10	.....	S	0.126	3.2	Covered	Normal School.
La Roche-sur-Yon	.....	.....	29.84	757.8	57.0	14.2	55	NE	.....	.....	6	.....	5	.....	SW	0	0	Cloudy	Normal School.
Rochefort, Observatory	.....	.....	30.00	762.0	61.0	16.1	44	NE	.....	.....	4	.....	5	.....	SW	0	0	Covered	Naval Observatory.
Rouen	.....	.....	30.12	765.0	60.4	15.8	32	NE	.....	.....	3	.....	1	.....	E	0	0	Clear	Normal School.
Saint Lo	.....	.....	29.88	758 9	52.0	11.1	63	E	.....	.....	4	.....	9	.....	E	0	0	.....	Normal School.
Tarbes	28.82	732.0	29.90	759.4	55.4	13	.....	NW	.....	.....	4	.....	8	.....	E	0	0	Very cloudy	Normal School.
Villefranche	.....	.....	29.92	759.9	54.9	12.7	84	NE	.....	.....	3	.....	10	.....	.....	0.024	0.60	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.91	759.7	79.3	26.3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.89	759.3	58.5	14.7	59	WSW	.....	.....	2	.....	1	.....	.....	0.154	3.90	Clear	Marseilles Observatory
Mont-Louis	24.67	626.6	29.98	761.6	38.1	3.4	96	ENE	5.6	2.50	.....	.....	10	.....	NNW	0.091	2.3	.....	J. Falguère.
Montsouris, Paris	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montsouris Observ'tory.
Perpignan	.....	.....	29.91	759.6	57.9	14.4	60	NE	20.5	9.17	.....	.....	7	.....	W	0.043	1.1	.....	Dr. Pinas.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.05	763.2	55.8	13.2	39	ENE	.....	.....	3	.....	10	.....	.....	0	0	Very cloudy	E. Renou.
Toulouse	.....	.....	29.98	761.6	47.5	8.6	94	W	.....	.....	2	.....	10	.....	.....	0.248	6.3	.....	Toulouse Observatory.
Tours	.....	.....	30.02	762.4	53.1	11.7	48	N	.....	.....	5	.....	10	.....	ENE	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.05	763.3	54.0	12.2	52	ENE	.....	.....	4	.....	10	.....	.....	0	0	Very cloudy	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai)	.....	.....	30.04	762.9	59.7	15.4	85	NNE	1.1	0 5	.....	10ck	0	.....	.....	0.213 0.248	5.4 6.3	.....	H. Le Lec, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and now are frequently omitted. 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. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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.

Bamberg	.....	.....	30.13	765.2	53.1	11.7	42	E	.....	.....	6	.....	6	E	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.20	769.4	5 .9	10.5	31	SE	.....	.....	2	.....	6	.....	.....	0	0	.....	Prof. Arndt
Breslau	.....	.....	30.31	769.9	49.8	9.9	50	ENE	.....	.....	8	.....	10	.....	.....	0	0	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	30.04	763.0	55.2	12.9	41	E	.....	.....	8	.....	5	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.28	769 1	53.6	12.0	33	NE	.....	.....	8	.....	1	NE	.....	0	0	.....	Dr. H. Möll.
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.19	766,8	57.2	14.0	35	E	.....	.....	5	.....	2	.....	.....	0	0	.....	Physical Society
Friedrichshafen	28.52	724.8	29.97	761.3	46.2	7.9	68	NE	.....	.....	6	.....	.....	.....	.....	Inap.?	Inap.?	Light rain	M. Wilhelm.
Hamburg	.....	.....	30.44	773.2	51.6	10.9	41	ENE	.....	.....	4	.....	2k	ENE	.....	0	0	Good	Captain F. Hegemann.
Kiel	.....	.....	30.48	774.3	46.6	8.1	49	NE	.....	.....	5	.....	0	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg	.....	.....	30.46	773.6	47.1	8.4	33	N	.....	.....	2	.....	2	.....	.....	Inap.	Inap.	.....	Prof. E. Luther.
Köslin	.....	.....	30.45	773.5	47.3	8.5	.....	NNE	.....	.....	2	.....	2	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.30	769.7	49.3	9.6	39	E	.....	.....	6	.....	7	E	.....	0	0	Stormy	Prof. Brunns.
Memel	.....	.....	30.52	775.1	40.1	4.5	71	NW	.....	.....	5	.....	0	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.37	771.5	54.5	12.5	46	NE	.....	.....	3	.....	0	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.43	773.0	43.7	6.5	71	NE	.....	.....	4	.....	1	.....	.....	0	0	.....	A. Lothes.
Posen	.....	.....	30.40	772.2	50.2	10.1	39	NE	.....	.....	6	.....	9	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.08	764.0	46.8	8.2	83	NE	.....	.....	2	.....	10	NE	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	30.04	762.9	53.2	11.8	48	NE	.....	.....	4	.....	8	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	30.39	771.9	51.4	10.8	38	NE	.....	.....	5	.....	6	.....	.....	0	0	.....	Dr Hasselbarg
Treves, (Trier)	.....	.....	30.04	763.0	57.9	14.4	35	.....	.....	.....	9	.....	3	.....	.....	0	0	.....	Prof. Fuesen.
Wustrow, Naval School	.....	.....	30.43	773.0	44.4	6.9	64	ENE	.....	.....	4	.....	4	.....	.....	0	0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Udine			29.90	759.5	59.5	15.3	49	SE	11.2	5.0			6			0.150	3.8		
Padua			29.90	759.4	58.3	14.6	59	SSE	13.7	6.1			10			0.413	10.5		
Vicenza			29.91	759.8	59.2	15.1	58	NE	5.6	2.5			8	E		0.283	7.2		
Verona			29.88	759.0	59.9	15.5	52	E			2		10			0.063	1.6		
Bergamo	28.56	725.4	29.88	758.9	53.6	12.0	81	SW			1		10			0.055	1.4		
Domodossola	28.87	733.2	29.89	759.2	57.2	14.0	80	SSW			4		10			0.118	3.0		
Milan			29.93	760.2	50.4	10.2	92	NNE			2		10	NNE		0.177	4.5		
Pavia			29.94	760.4	54.5	12.5	77	E			4		10	E		0.189	4.8		
Moncalieri			29.95	760.6	51.6	10.9	87	NW	0.7	0.3			10	W		0.547	13.9		
Mondovi	28.02	711.8	29.94	760.5	47.2	8.5	90	NW			2		10			0.047	1.2		
Porto Maurizio			29.93	760.2	63.0	17.2	73	WSW			2		9			0.394	10.0		
Genoa			29.88	758.9	58.5	14.7	78	Calm	0	0			10	SE		0.035	0.9		
Piacenza			29.93	760.1	53.1	11.7	79	E			4		10			0.039	1.0		
Parma			29.93	760.2	55.6	13.1	86	SE			4		10			0	0		
Bologna			29.94	760.5	52.2	11.2	55	NE			1		10			0.866	22.0		
Florence			29.89	759.1	61.7	16.5	61	NE			6		10			0.079	2.0		
Leghorn			29.87	758.6	58.3	14.6	71	NW	4.3	1.9			10			0.035	0.9		
Siena	28.65	727.7	29.85	758.1	53.1	11.7	78	NNW	1.8	0.8			10	NE		0.039	1.0		
Urbino	28.35	720.1	29.91	759.6	50.7	10.4	94	NNE			4		10			0.391	10.0		
Pesaro																			
Ancona			29.89	759.1	61.5	16.4	79	N			4		10			0.061	1.3		
Grosseto			29.86	758.5	65.5	18.6	75	WNW			2		9	SE		0.154	3.9		
Rome			29.88	759.0	68.2	20.1	68	SSW	10.5	4.7			9			0	0		
Naples, O. U.			29.93	760.2	74.1	23.4	58	SW			2		7	S		0.020	0.5		
Lecce			29.88	759.0	72.5	22.5	46	NNW	6.3	2.8			1			0	0		
Cosenza			29.94	760.4	72.5	22.5	78	NW	3.1	1.4			5			0	0		
Riposto, (Sicily)			29.98	761.6	68.2	20.1	79	E			2		1	E		0	0		
Palermo			29.86	758.4	68.7	20.4	58	NE	3.1	1.4			2			0	0		
Caltanissetta	27.96	710.3	29.87	758.8	68.9	20.5	39	SW			2		0			0	0		
Sub-Series.																			
Naples, S. R.			29.94	760.4	69.1	20.6	66	SW	3.1	1.4			..6	S		0.024	0.6		Prof. F. Briosci.

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, 806 m., or 1,003.0 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,478.7 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			30.29	769.3	53.1	11.7		ENE			5								
Groningen			30.35	771.0	50.9	10.5		NE			6								
Helder			30.38	771.7	48.4	9.1		NE			5							Clear	
Utrecht			30.28	769.0	52.9	11.6	35	ENE			6			0					

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Bergen			30.53	775.4	48.7	9.3	76	W	7.4	3.3			6			0	0		
Brönö			30.49	774.5	42.8	6.0	85	SW	11	5			10			0.008	0.2	Light rain	
Christiania			30.47	774.0	61.9	16.6	22	NE	8.9	4.0			3			0	0		
Tromsö			30.33	770.3	39.2	4.0	80	SW	13	6			10			0.102	2.6		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores,)	.....	.....	30.24	768.0	59.7	15.4	78	ENE	2.4	1.08	.....	.....	6	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.86	758.5	74.3	23.5	24	NW	6.5	2.92	.....	.....	0	.....	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)	.....	.....	30.23	767.9	66.2	19.0	73	SW	5.8	2.58	.....	.....	10	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.04	763.0	63.9	17.7	54	SW	19.9	8.9	.....	.....	2	.....	.....	0	0	.....	The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 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	.....	.....	30.32	770.1	49 8	9.9	43	NE	18	8	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.39	772.0	46.9	8.3	88	N	11	5	.....	.....	6	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.47	773.9	40.6	4.8	36	N	2	1	.....	.....	5	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.42	772.6	35.8	2.1	57	W	13	6	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	30.41	772.5	38.7	3.7	77	E	7	3	.....	.....	0	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.24	768.2	50.7	10.4	38	N	16	7	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.15	765.9	56.1	13.4	70	ENE	18	8	.....	.....	10	.....	.....	.....	.....	Raining.	Kurdakof.
Kertch	.....	.....	29.99	761.7	65.1	18.4	68	NE	18	8	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.40	772.1	29.5	— 1.4	62	NW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.09	764.2	56.1	13.4	30	NE	34	15	.....	.....	6	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.35	771.0	30.9	— 0.6	51	N	20	13	.....	.....	2	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.51	724.2	29.85	758.1	78.8	26.0	42	S	11	5	.....	.....	7	.....	.....	.....	.....	.....	Physical Observatory
Astrakhan	.....	.....	29.97	761.2	74.5	23.6	42	NNE	27	12	.....	.....	0	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.08	763.9	28.2	— 2.1	43	WNW	7	3	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.90	734.0	29.95	760.6	27 7	— 2.4	89	W	16	7	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.80	757.0	92.3	33.5	19	E	4	2	.....	.....	9	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.39	721.0	30.01	762.2	79.7	26.5	35	NW	13	6	.....	.....	8	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.93	760.3	44.2	6.8	61	SW	4	2	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.66	753.4	30.7	2.6	58	NNW	7	3	.....	.....	7	.....	.....	.....	.....	.....	Marks.
Irkutsk	28.00	711.3	29.34	745.3	51.3	10.7	68	NW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Usoltzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Pekin, (China)	.....	.....	29.98	761.6	69.8	21.0	35	SSW	11	5	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	29.1	— 1.6	94	NE	4	2	.....	.....	3	.....	.....	.....	.....	.....	

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 403. m eters, or 1,311.8 feet; Ekaterinburg, 311.4? m., or 1,005.2? ft.; Tashkend, m. 404.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	29.94	760.4	64.9	18.3	36	SW	6.0	2.67	.....	0	0	.....	.....	0	0	Clear	Royal Observatory.
San Fernando	.....	.....	30.08	764.0	65.1	18.4	66	WSW	14.1	6.3	.....	0	8	.....	WSW	0	0	.....	The Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight; 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	.....	.....	30.50	774.6	35.2	1.8	75	S	.....	.....	2	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	30.49	774.4	47.3	8.5	47	SW	.....	.....	2	.....	8	.....	.....	0	0	.....	
Hernosand	.....	.....	30.48	774.1	50.4	10.2	84	E	.....	.....	4	.....	5	.....	.....	0	0	.....	
Stockholm	.....	.....	30.41	772.4	49.3	9.6	60	SSW	.....	.....	2	.....	5	.....	.....	0	0	.....	
Wisby	.....	.....	30.52	775.3	36.3	2.4	79	N	.....	.....	2	.....	0	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.42	772.6	56.1	13.4	32	WNW	5.1	2.3	.....	.....	2	NNW	WNW	0	0	.....	Dr. Hildebrandsson.

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

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28.50	724.0	29.95	760.6	49.6	9.8	72	N	.....	.....	3	.....	10	.....	.....	0.012	0.3	Covered	The Observatory.
Zurich	28.35	720.2	30.03	762.7	43.9	6.6	83	NE	.....	.....	.....	.....	10	.....	NE	0.008	0.2	Foggy	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —0.7 mm.; Thermometer, —5.7 cent.; Relative Humidity, +14 per cent.

Note.—The originals give the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople	.....	.....	29.92	760.0	91.4	33.0	.....	SE	.....	.....	1	.....	10	.....	.....	.....	.....	.....	.....
Fao, (Persian Gulf)	.....	.....	29.91	759.6	73.8	23.2	.....	N	.....	.....	2	.....	0	.....	.....	.....	.....	.....	.....
Salonica	.....	.....	29.85	758.3	73.0	22.8	.....	S	.....	.....	2	.....	2	.....	.....	.....	.....	.....	.....
Valona	.....	.....	29.96	761.0	60.8	16.0	.....	SE	.....	.....	6	.....	10	.....	.....	.....	.....	.....	.....
Varna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.	.....	.....	29.91	759.8	77.7	25.4	76	NW	.....	.....	1	.....	0	.....	.....	0	0	Fair.....	Prof. C.V. A.Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B.	.....	.....	29.62	752.3	39.0	3.9	100	NE	1	0.4	.....	.....	.....	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.84	757.9	46	7.8	.....	Calm	0	0	.....	.....	10s	.....	SW	0.13	3.3	Cloudy.....	W. R. Bigg.
*Chatham, N. B.	.....	.....	29.72	754.9	42	5.6	95	SW	3	1.3	.....	.....	10s	.....	.....	0.10	2.5	Cloudy.....	G. A. Blair.
Charlottetown, P. E. Island.	.....	.....	29.81	757.2	40	4.4	97	S	6	2.7	.....	.....	10n	.....	.....	0.05	1.3	Light rain....	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.75	755.6	51.5	10.8	83	W	.....	.....	1	.....	10s	.....	.....	0.182	4.88	Unsettled....	James Smith, M. A.
Dalhousie, N. B.	.....	.....	29.76	755.9	35.3	1.8	96	E	.....	.....	1	.....	10	.....	.....	0.21	5.3	Foggy.....	H. A. Johnson.
Esquimault, B. C.	.....	.....	30.03	762.7	48.3	9.1	93	N	1	0.4	.....	3cs	.....	.....	.....	0	0	Clear.....	W. H. Bevis.
Fredericton, N. B.	.....	.....	29.76	755.9	49.8	9.9	81	SW	4	1.8	.....	.....	10s	.....	.....	0.210	5.33	Rainy.....	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.85	758.2	36	2.2	80	NW	9	4.0	.....	0	2ks	.....	NW	0	0	Fair.....	James Stewart.
Goderich, Ontario	.....	.....	29.86	758.4	41.2	5.1	96	Calm	.....	.....	0	.....	10n	.....	.....	†1.018	†25.85	Light rain...	H. J. Strang, M. A.
Granton, Ontario	.....	.....	29.81	757.2	42	5.6	.....	Calm	.....	.....	0	.....	10n	.....	.....	0	0	Cloud.....	James Grant.
*Halifax, N. S.	.....	.....	29.79	756.7	38	3.3	100	S	12	5.4	.....	.....	Fog	.....	.....	0.04	1.0	Foggy	F. Allison, M. A.
*Kingston, Ontario	.....	.....	29.82	757.4	47	8.3	92	Calm	0	0	.....	.....	10s	.....	.....	0.13	3.3	Cloudy.....	S. Woods, M. A.
*Montreal, Quebec	.....	.....	29.77	756.1	48	8.9	84	Sw	8	3.6	.....	5k	5ks	W	W	0.22	5.6	Cloudy.....	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.74	755.4	47	8.3	69	S	6	2.7	.....	5k	5s	S	S	0.20	5.1	Cloudy.....	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.81	757.2	40	4.4	100	SW	2	0.9	.....	.....	Fog	.....	SW	0.18	4.6	Foggy	Rev. R. Mooley.
*Port Dover, Ontario	.....	.....	29.82	757.4	48	8.9	78	NW	6	2.7	.....	10k	0	W	.....	0.10	2.5	Fair.....	H. Morgan.
Port Hastings, N. S.	.....	.....	29.83	757.7	35.5	1.9	.....	SE	20	8.9	.....	.....	.....	.....	.....	0	0	Fine.....	Peter Grant.
*Port Stanley, Ontario	.....	.....	29.83	757.7	48	8.9	78	NW	10	4.5	.....	.....	10ks	.....	W	0.11	2.8	Cloudy.....	M. Payne.
*Quebec, Quebec	.....	.....	29.73	755.1	46	7.8	85	NE	9	4.0	.....	.....	10n	.....	NE	0.10	2.5	Cloudy.....	Capt. Ash, R. N.
St. John, N. B.	.....	.....	29.81	757.2	40	4.4	92	SE	1	0.4	.....	.....	Fog	.....	.....	0.140	3.56	Raining.....	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.79	756.7	39	3.9	91	SW	6	2.7	.....	.....	Fog	.....	.....	0.01	0.3	Light rain....	K. Stewart.
Stayner, Ontario	.....	.....	29.77	756.1	44	6.7	85	Calm	0	0	.....	8ck	2n	W	S	0.04	1.0	Cloudy.....	R. J. Cole.
Stratford, Ontario	.....	.....	29.82	757.4	43.2	6.2	87	SW	.....	.....	.....	.....	10s	.....	.....	0	0	Cloudy.....	C. J. MacGregor, M. A.
*Sydney, C. B.	.....	.....	29.87	758.7	39	3.9	93	S	4	1.8	.....	.....	10n	.....	.....	0	0	Cloudy.....	T. C. Hill.
*Toronto, Ontario	.....	.....	29.82	757.4	44	8.9	77	W	4	1.8	.....	.....	7ks	.....	W	0.10	2.5	Cloudy.....	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.80	756.9	54.7	12.6	84	W	.....	.....	1	.....	10s	.....	.....	0.10	2.5	Fine.....	J. Montgomery.
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Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 m. † Rain-fall in past 48 hours.

UNITED STATES SERIES.

Furnished by the cooperation 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	55	12.8	93	N'e	5	2.2	.....	.....	10n	.....	.....	0.02	0.5	Light rain...	
Alpena, Mich	.....	.....	29.78	756.4	43	6.1	75	NW	5	2.2	.....	8ck	0	NW	.....	0	0	Fair	
Atlantic City, N. J.	.....	.....	29.78	755.1	55	12.8	100	S	12	5.4	.....	.....	Fog	.....	.....	0.30	7.6	Foggy	
Augusta, Ga.	.....	.....	29.85	758.2	68	20.0	79	W	8	3.6	.....	2k	5s	SW	SW	0.17	4.3	Cloudy	
Baltimore, Md.	.....	.....	29.78	756.4	64	17.8	78	NE	6	2.7	.....	.....	10n	.....	E	0.49	12.4	Light rain...	
Barnegat, N. J.	.....	.....	29.84	757.9	58	14.4	81	SW	14	6.3	.....	2ck	2k	SW	SW	0	0	Fair	
Benton, Montana	27.19	690.6	29.99	761.7	60	15.6	34	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.20	716.3	29.85	758.2	48	6.1	37	NW	7	3.1	.....	Haze	Haze	NW	NW	0	0	Hazy	
Boston, Mass	.....	.....	29.78	756.4	52	11.1	100	SW	1	0.4	.....	10n	Fog	SW	.....	0.25	6.3	Light rain...	
Breckenridge, Minn	.....	.....	29.87	758.7	37	2.8	90	NW	6	2.6	.....	0	Fog	.....	.....	0	0	Fair	
Buffalo, N. Y.	.....	.....	29.78	756.4	42	5.6	83	W	3	1.3	.....	.....	10s	.....	W	0.05	1.3	Cloudy	
Burlington, Vt.	.....	.....	29.76	755.9	54	12.2	74	SW	8	1.8	.....	.....	10ks	.....	.....	0.03	0.8	Cloudy	
Cairo, Ill.	.....	.....	30.04	762.2	58	11.7	66	W	4	1.8	.....	10ck	0	W	.....	0	0	Cloudy..	
Cape Hatteras, N. C.	.....	.....	29.83	757.7	74	23.3	81	S	26	11.6	.....	2k	5s	SW	SW	0	0	Cloudy	
Cape Henry, Va	.....	.....	29.76	755.9	73	22.8	76	S	18	8.0	.....	2k	8ks	SW	SW	6	0	Cloudy	
Cape Lookout, N. C.	.....	.....	29.87	758.7	72	22.2	80	S	24	10.7	.....	0	5ks	.....	S	0	0	Threatening	
Cape May, N. J.	.....	.....	29.72	754.9	56	13.3	100	S	20	8.9	.....	.....	10s	.....	SW	0.15	3.8	Cloudy, fog..	
Charleston, S. C.	.....	.....	29.86	758.4	72	22.2	95	SW	8	3.6	.....	.....	10n	.....	SW	0.30	7.6	Light rain...	
Cheyenne, Wyoming	24.14	613.1	30.08	764.0	47	8.3	35	NW	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	29.85	758.2	49	9.4	71	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	29.95	758.2	52	11.1	72	W	7	3.1	.....	.....	10s	.....	W	0	0	Cloudy	
Cleveland, Ohio	.....	.....	29.83	757.7	47.2	8.4	77	W	6	2.7	.....	.....	10ks	.....	SW	0.10	2.6	Cloudy.	
Colorado Springs, Col.	24.25	615.9	30.12	765.0	43	6.1	58	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Corsicana, Tex	.....	.....	30.14	765.5	51	10.6	93	SW	8	1.3	.....	0	0	.....	.....	0	0	Clear	
Davenport, Iowa	.....	.....	29.87	758.7	50	10.0	71	S	4	1.8	.....	2ck	0	.....	.....	0	0	Clear	
Denison, Tex	.....	.....	30.16	766.1	62	16.7	71	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Denver, Col.	24.94	633.5	30.46	766.1	45	7.2	47	S	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich	.....	.....	29.81	757.2	46	7.8	61	NW	4	1.8	.....	.....	10s	.....	NW	0	0	Cloudy	
Dodge City, Kan	27.51	698.7	29.83	757.7	45	7.2	76	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	29.82	757.4	48	8.9	70	Calm	0	0	.....	5k	0	W	.....	0	0	Fair	
Duluth, Minn	.....	.....	29.71	754.6	47	8.3	61	W	12	5.4	.....	0	0	.....	.....	0.03	0.8	Clear	
Eastport, Me	.....	.....	29.73	755.1	43	6.1	91	S	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy..	
Erie, Pa.	.....	.....	29.78	756.4	50	10.0	78	SW	8	3.6	.....	.....	10ks	.....	SW	0.11	2.8	Cloudy	
Escanaba, Mich	.....	.....	29.70	754.4	44	6.7	75	W	13	5.8	.....	8c	0	S	.....	0.01	0.3	Fair	
Fort Gibson, Indian Terr.	.....	.....	30.10	764.5	51	10.6	78	E	1	0.4	.....	1c	0	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	29.70	754.4	25	— 3.9	.....	NE	17	7.6	.....	0	Haze	.....	.....	.....	.....	Fair	
Fort Sill, Indian T.	28.93	734.8	30.07	763.8	43	6.1	48	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.26	717.8	29.91	759.7	51	10.6	52	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex	.....	.....	30.16	766.1	63	17.2	77	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Grand Haven, Mich	.....	.....	29.82	757.4	50	10.0	71	W	6	2.7	.....	1c	0	.....	.....	0.01	0.3	Clear	
Indianapolis, Ind.	.....	.....	29.89	759.2	49	9.4	85	W	4	1.8	.....	.....	1 s	.....	W	Ina.	Inap.	Threatening	
Indianola, Tex	.....	.....	30.18	766.6	69	20.6	48	E	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Jacksonville, Fla.	.....	.....	29.91	759.7	77	25.0	69	SW	4	1.8	.....	8k	0	SW	.....	0	0	Fair	
Keokuk, Iowa	.....	.....	29.89	759.2	53	11.7	90	W	5	2.2	.....	8c	0	W	.....	0.01	0.3	Fair	
Key West, Fla.	.....	.....	29.98	761.5	80.9	27.2	74	SE	17	7.6	.....	2cs	Haze	W	SE	0	0	Hazy	
Kittyhawk, N. C.	.....	.....	29.83	757.7	74	23.3	81	SW	28	12.5	.....	2ck	2ks	SW	S W	0	0	Fair	
Knoxville, Tenn	.....	.....	29.92	760.0	51	10.6	86	SW	4	1.8	.....	.....	10s	.....	SW	0.87	22.1	Cloudy	
La Crosse, Wis.	.....	.....	29.73	755.1	52	11.1	69	W	15	6.7	.....	5k	0	W	.....	0	0	Fair	
Leavenworth, Kan	.....	.....	29.96	761 0	50	10.0	77	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Lexington, Ky.	28.82	732.0	29.91	759 7	49	9.4	78	W	8	3.6	.....	.....	10n	.....	.....	0.02	0.5	Light rain...	
Long Branch, N. J.	.....	.....	29.78	756.4	56	13.3	100	NE	14	6.3	.....	.....	10n	.....	N	0.82	20.8	Light rain...	
Louisville, Ky.	.....	.....	29.91	759.7	51	10.6	72	W	8	3.6	.....	.....	10s	.....	W	Inap.	Ina.	Threatening	
Lynchburg, Va.	.....	.....	29.73	755.1	62	16.7	83	NW	2	0.9	.....	.....	10n	.....	W	1.23	31.2	Light rain...	
Malone, N. Y.	.....	.....	29.74	755.4	50	10.0	78	NW	5	2.2	.....	.....	10s	.....	.....	0.23	5.8	Cloudy	
Manhattan, Kan.	28.87	733 3	30.03	762.7	43	6.1	83	SW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Marquette, Mich	.....	.....	29.84	752.8	45	7.2	60	S	20	8.9	.....	.....	10s	.....	SW	0.02	0.5	Cloudy	
Memphis, Tenn	.....	.....	30.05	763.3	57	13.9	70	W	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Milwaukee, Wis.	.....	.....	29.81	757.2	47	8.3	72	W	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Mobile, Ala.	.....	.....	30.08	763.5	56	14.3	80	N	8	3.6	.....	0	0	.....	.....	1.85	47.0	Clear	
Montgomery, Ala.	.....	.....	30.05	763.3	55	12.8	90	NW	6	2.7	.....	0	8ks	.....	N W	1.17	29.7	Fair	
Morgantown, W. Va.	.....	.....	29.77	7 6.1	55	12.8	68	NE	2	0.9	.....	.....	10s	.....	NW	0.12	3.0	Cloudy	
Mt. Washington, N. H.	23.54	597.9	29.90	759.4	34	1.1	90	NW	48	21.5	.....	10s	8s	NW	NW	0.45	11.4	Cloudy	
Nashville, Tenn	.....	.....	29.98	761.5	51	10.6	72	W	5	2.2	.....	10k	0	W	.....	0	0	Cloudy	
New Haven, Conn	.....	.....	29.80	756.9	56	13.3	81	N	4	1.8	.....	.....	1 s	.....	NE	0.30	7.6	Threatening	
New London, Conn	.....	.....	29.81	757.2	57	13.9	87	NW	2	0.9	.....	.....	10n	.....	.....	0.54	13.7	Light rain...	
New Orleans, La	.....	.....	30.08	764.0	64	17.8	57	N	8	3.6	.....	0	0	.....	.....	0.14	3.6	Clear	
Newport, R. I.	.....	.....	29.80	756.9	54	12.2	93	Calm	0	0	.....	.....	10n	.....	W	0.57	14.5	Heavy rain..	
New York, N. Y.	.....	.....	29.78	756.4	57	13.9	87	SE	11	4.9	.....	.....	10n	.....	.....	0.84	21.3	Light rain...	
Norfolk, Va.	.....	.....	29.77	756.1	74	23.3	76	S	18	8.0	.....	.....	10s	.....	S	Inap.	Inap.	Threatening	
North Platte, Neb.	27.11	688.6	30.07	763.6	49	9.4	77	SW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb.	28.82	732.0	29.88	758.9	51	10.6	69	SW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	29.87	758.9	47	8.3	88	W	8	3.6	.....	.....	10ks	.....	W	0.22	5.6	Cloudy	
Pembina, Dakota	.....	.....	29.84	757.9	36	2.2	70	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Penn	.....	.....	29.75	755.6	55	12.8	97	NE	14	6.3	.....	.....	10n	.....	.....	0.88	22.4	Light rain...	
Pike's Peak, Colorado	17.92	455.2	30.13	765.3	17	— 8.3	67	NE	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Pittsburgh, Penn	.....	.....	29.78	756.4	53	11.7	60	N	3	1.3	.....	.....	10s	.....	.....	0.03	0.8	Cloudy	
Port Huron, Mich	.....	.....	29.84	757.2	43	6.1	83	NE	2	0.9	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Portland, Me.	.....	.....	29.80	756.9	51	10.6	79	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Portland, Oregon	.....	.....	30.10	764.5	56	13.3	80	Calm	0	0	.....	5cs	0	.....	.....	0	0	Fair	
Punta Rassa, Fla.	.....	.....	29.99	761.7	78.5	25.8	86	SE	10	4.5	.....	2c	8ks	SW	SE	0.24	6.1	Cloudy	
Rochester, N. Y.	.....	.....	29.76	755.9	51	10.6	72	W	5	2.2	.....	.....	10s	.....	W	Inap.	Inap.	Cloudy	
Salt Lake City, Utah	25.76	654.3	30.09	764.3	52	11.1	53	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	29.77	756.1	55	12.8	100	NE	8	3.6	.....	.....	10n	.....	.....	1.02	25.9	Light rain...	
San Diego, Cal.	.....	.....	30.04	763.0	57	13.9	93	N	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
San Francisco, Cal.	.....	.....	30.00	762.0	53	11.7	86	SW	18	8.0	.....	.....	10s	.....	SW	0	0	Cloudy	
Santa Fe, N. M.	23.44	595.4	29.98	761.5	40	4.4	56	E	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	29.88	758.9	66	2454	72	W	8	3.6	.....	8ks	2ks	.....	.....	0.01	0.3	Cloudy	
Shreveport, La.	.....	.....	30. 7	7602	57	1399	87	W	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Smithville, N. C.	.....	.....	29.84	757.9	70	21.1	90	SW	30	16.1	.....	.....	10n	.....	S	0.19	4.8	Light rain...	
Springfield, Mass.	.....	.....	29.79	756.7	59	15.0	75	N	4	1.8	.....	.....	10n	.....	.....	0.13	3.3	Light rain...	
St. Louis, Mo.	.....	.....	29.96	761.0	53	11.7	54	W	8	3.6	.....	5k	0	.....	.....	0	0	Fair	
St. Marks, Fla	.....	.....	29.94	760.5	66	18.9	90	N	7	3.1	.....	.....	10s	.....	N	0.26	6.6	Cloudy	
St. Paul, Minn.	.....	.....	29.73	755.1	32	11.1	41	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	29.34	745.2	31	— 0.6	80	ENE	9	4 0	.....	.....	Fog	.....	.....	0.03	0.8	.....	
Thatcher's Island, Mass.	.....	.....	29.79	756.7	47	8.3	100	SW	7	3.1	.....	.....	10n	.....	SW	0.18	4.6	Light rain...	
Toledo, Ohio	.....	.....	29.82	757.4	51	10.6	86	W	7	3.1	.....	10k	0	SW	.....	Inap.	Inap.	Cloudy	
Tucson, Arizona	27.57	700.3	30.16	766.1	60	15.6	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	29.86	758.4	71	21.7	95	W	2	0.9	.....	0	8ks	.....	SW	0.46	11.7	Cloudy	
Vicksburg, Miss.	.....	.....	30.11	764.8	60	15.6	79	Calm	0	0	.....	0	0	.....	.....	0.01	0.3	Clear	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	BAROMETER. Corrected for instrumental errors. Inches.	Corrected for instrumental errors. Millimeters.	Reduced to sea-level. Inches.	Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per Cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10	CLOUDS. Amount. Up'er 0—10	CLOUDS. Amount. Low'r 0—10	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Virginia City, M. T.	24.36	618.7	29.84	757.9	44	6.7	59	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Washington, D. C.	.....	.....	29.76	755.9	60	15.6	94	N	8	3.6	.....	.....	10n	.....	.....	0.73	18.5	Light rain.	
Wilmington, N. C	.....	.....	29.83	757.7	70	21.1	100	S	24	10.7	.....	.....	10n	.....	SW	1.05	26.7	Heavy rain.	
Wood's Holl, Mass.	.....	.....	29.83	757.7	54	12.2	86	SW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy.	
Wytheville, Va.	27.27	692.6	29.58	751.3	52	11.1	93	Calm	0	0	.....	.....	10n	.....	.....	0.99	25.1	Light rain.	
Yankton, Dakota	28.63	727.2	29.89	759.2	54	12.2	61	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear.	
Yuma, Arizona	.....	.....	29.90	759.4	70	21.1	.....	NE	.....	.....	.....	0	0	.....	.....	0	0	Clear.	
SUB-SERIES.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.07	763.8	82	27.8	87	NE	4	1.8	.....	5k	10ks	.....	.....	0	0	Cloudy.	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.96	761.7	75	23.9	90	E	.....	.....	.....	10k	0	.....	.....	0.98	24.9	Rainy.	L. V. Bigard.
St. Thomas, St. T., W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. S. Cameron.
Kingston, Jamaica, W. I.	.....	.....	30.17	766.3	79	26.1	78	Calm	0	0	.....	2k	2s	SE	.....	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.80	756.9	80	26.7	70	NW	1.2	0.5	.....	0	2k	.....	.....	0	0	Fair.	Robert Mason.
Havana, Cuba, W. I.	.....	.....	29.97	761.2	83	28.3	79	NE	2.4	1.1	.....	5c	0	W	.....	0.09	2.3	Fair.	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.22	767.6	75.0	23.9	70	SSW	8.0	3.6	.....	0	5k	.....	.....	0	0	Fair.	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica W. I.	27.19	690.6	29.97	761.2	70	21.1	90	S	2.0	0.9	.....	2c	0	S	.....	0.03	0.8	Fine.	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.02	762.5	81	27.2	83	E	.....	.....	3	.....	5ks	.....	.....	0.050	1.27	Dry.	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.02	762.4	.....	.....	86.0	30	.....	WSW	.....	.....	.....	.....	.....	.....	.....	0	0	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.19	639.8	.....	.....	69.0	20.6	75	NE	2	0.9	.....	8c	2s	.....	.....	0	0	Cloudy.	Thomas Herran.
St. John's, Newfoundland.	.....	.....	30.10	764.5	38.0	3.3	90	E	.....	.....	.....	.....	10n	.....	.....	0.01	0.3	Hazy.	John Delaney.
York Factory, B. A.	.....	.....	29.91	759.7	33	0.6	94	N	10	4.5	.....	3k	0	SE	.....	0	0	.....	J. Fortescue.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Makawao, Maul, H. I.	27.82	706.6	29.98	761.5	57	13.9	81	Calm	0	0	.....	2cs	0	.....	.....	0	0	Clear.	F. L. Clarke.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

MARINE SERIES.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—			
Steamer Hibernian, N. 51° 30′, W. 22° 15′.	ESE	10	30.36	771.1	56	13.3	.....	E	.....	.....	1–2	.....	3k	.....	.....	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-fal' at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057 3 ft., or 1,846.2 m.; Clifton about 2.892 ft., or 881.5 m.; Colorado Springs, 6 032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City 4,268.8 ft., or 1,301.1 m.; Santa Fè, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m; Yankton, 1,278 ft., or 389.5 m. The following constants are 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.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 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	.....	.....	29.96	761.0	69.6	20.9	62	NNW	.....	.....	1	.....	1	.....	.....	0	0	Clear	Charnot.
Algiers	.....	.....	29.97	761.2	67.3	19.6	76	N	.....	.....	3	.....	1	.....	.....	0	0	Clear	Peter.
La Calle	.....	.....	.....	.....	64.2	17.9	.....	NW	.....	.....	3	.....	2	.....	.....	0	0	Clear	Kuntz.
Tunis	.....	.....	29.97	761.2	70.2	21.2	75	W	.....	.....	5	.....	3	.....	.....	0	0	Fair	Jacques
Sfax	.....	.....	29.98	761.1	72.3	22.4	56	NE	.....	.....	5	.....	2	.....	.....	0	0	Clear	Chauvey.
Saida	.....	.....	30.01	762.3	70.7	21.5	35	WSW	.....	.....	1	.....	1	.....	.....	0	0	Clear	Millot.
Tebessa	.....	.....	29.96	760.9	60.8	16.0	.....	N	.....	.....	2	.....	4	.....	.....	0.315	8.0	Fair	Colin.
Geriville	.....	.....	30.02	762.5	64.5	17.5	43	WNW	.....	.....	1	.....	1	.....	.....	0	0	Clear	Buard.
Laghouat	.....	.....	30.01	762.3	71.6	22.0	36	W	.....	.....	2	.....	1	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	30.03	762.7	76.5	24.7	33	NW	.....	.....	3	.....	0	.....	.....	0	0	Clear	Laromer.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

AUSTRIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From -	Clouds. Direction. Lower. From -	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram	.....	.....	29.95	760.8	54.4	10.2	70	NE	.....	.....	2	.....	10	.....	.....	0.039	1.0	Raining	Prof. Ivan Stozir.
Buda-Pesth	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	I. R. Cen. M. I., Hungary
Cracow	.....	.....	30.10	764.6	44.6	7.0	77	NNE	.....	.....	4	.....	10	.....	.....	0.319	8.1	.....	I. R. Observatory.
Eperies	.....	.....	29.98	761.6	45.0	7.2	77	N	.....	.....	3	.....	10	.....	8	0	0	.....	Julius Mikolik.
Gratz	.....	.....	29.98	761.0	50.0	10.0	64	WSW	.....	.....	4	.....	10	.....	.....	0.016	0.4	.....	Andreas Rospini.
Hermannstadt	28.75	730.3	29.98	761.0	50.0	10.0	64	WSW	.....	.....	4	.....	10	.....	.....	0.016	0.4	.....	Prof. Reissenberger.
Kremsmünster	28.43	722.0	29.82	757.4	59.	15.0	77	SSE	.....	.....	1	.....	10	.....	.....	0.051	1.30	.....	Prof. C. Wagner.
Lemberg	28.71	729.2	30.08	764.1	43.5	6.4	68	ENE	.....	.....	2	.....	10	.....	.....	0.177	4.5	.....	Dr. T. Stanecki.
Nylregyhaza	.....	.....	29.98	761.0	39.7	4.3	92	NE	.....	.....	3	.....	10	.....	.....	0.843	21.4	.....	Habsuda Daniel.
Pola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	I. R. Hydrographic Office
Szegedin	.....	.....	29.80	756.8	56.1	13.4	62	E	.....	.....	3	.....	108	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	29.91	759.7	56.1	13.4	64	Calm	.....	.....	0	.....	10	.....	.....	0.063	1.60	.....	Prof. V. Farolfi.
Vienna	.....	.....	29.83	757.7	54.1	12.3	58	ENE	.....	.....	4	.....	10	.....	.....	0	0	Stormy	I. R. Central Institute.
.....	.....	.....	30.01	762.3	46.8	8.2	60	N	.....	.....	3	.....	10	.....	.....	0	0	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From -	Clouds. Direction. Lower. From -	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels	.....	.....	30.14	765.5	55.0	12.8	40	E	.....	.....	4	.....	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	.....	.....	30.48	774.2	43.1	6.2	.....	ESE	10	4.5	.....	.....	7	.....	.....	0	0	*D. clouds	William Boswell.
Ardrossan	.....	.....	30.39	771.9	58	14.4	.....	NW	.....	.....	3	.....	0	.....	.....	.....	.....	Blue sky	William McNeil.
Armagh Observatory	.....	.....	30.40	772.1	54.3	12.4	.....	ESE	11	4.9	.....	.....	0	.....	.....	.....	.....	Blue sky	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.	.....	.....	30.32	770.1	53.6	12.0	.....	ENE	23	10.3	.....	.....	3	.....	.....	.....	.....	Blue sky	John Hartnup.
Birr Castle, (Parsonstown)	.....	.....	30.30	769.6	53.8	12.1	.....	ENE	.....	.....	1	.....	6	.....	.....	.....	.....	*D. clouds	J. Dreyer.
Bradford	.....	.....	30.35	770.9	50.3	10.2	.....	NE	.....	.....	4	.....	6	.....	.....	0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	29.95	761.0	83.0	28.3	.....	E	.....	.....	5	.....	9	.....	.....	.....	.....	*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge Observatory	.....	.....	30.26	768.6	57.0	13.9	.....	E	.....	.....	3	.....	1	.....	.....	.....	.....	*D. clouds	H. Todd.
Cardington	.....	.....	30.27	768.8	58.0	14.4	.....	E	.....	.....	3	.....	1	.....	.....	.....	.....	Blue sky	John McLaren.
Carlisle	.....	.....	30.38	771.6	56.6	13.7	.....	NE	.....	.....	4	.....	1	.....	.....	0	0	Blue sky	T. Bell, for J. Carmell.
Chatham, School M. E	.....	.....	30.25	768.3	49.2	9.6	.....	NE	.....	.....	4	.....	5	.....	.....	.....	.....	*D. clouds	Major C. N. Martin, R.E.
Dartmoor	28.79	729.0	30.22	767.6	51.0	10.6	.....	E	.....	.....	7	.....	6	.....	.....	.....	.....	*D. clouds	R. E. Power.
Donaghadee	.....	.....	30.39	771.9	57	13.9	.....	ESE	.....	.....	2	.....	0	.....	.....	.....	.....	Blue sky	J. Mac Gowan.
Dover	.....	.....	30.21	767.1	54	10.6	.....	NE	.....	.....	4	.....	1	.....	.....	.....	.....	¼ cloud d	J. Costello.
Eccles (near Manchester)	.....	.....	30.32	770.1	56.5	13.6	.....	NE	10.2	4.6	.....	.....	3	.....	.....	.....	.....	*D. clouds	Thomas Mackereth.
Falmouth Observatory	.....	.....	30.18	766.6	60.9	10.5	.....	E	26	11.6	.....	.....	2	.....	.....	.....	.....	*D. clouds	The Staff.
Fort Napier, (Natal)	27.86	707.6	30.10	764.5	69.4	20.8	.....	E	.....	.....	2	.....	0	.....	.....	.....	.....	Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.93	760.2	87	30.6	.....	W	.....	.....	4	.....	8	.....	.....	.....	.....	*D. clouds	[ills.
Galway, Queen's College	.....	.....	30.24	768.1	62	16.7	.....	SE	.....	.....	2	.....	6	.....	.....	.....	.....	*D. clouds	B. G. Clare, for Prof. Carr
Gibraltar, (Mediterranean)	.....	.....	29.99	761.7	69.5	20.8	.....	W	.....	.....	3	.....	5	.....	.....	.....	.....	*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow Observatory	.....	.....	30.38	771.6	54.0	12.2	.....	NE	.....	.....	1	.....	.....	.....	.....	.....	.....	Fine	Lewis Stuart.
Great Yarmouth	.....	.....	30.32	770.1	49	9.4	.....	ENE	.....	.....	5	.....	2	.....	.....	.....	.....	Blue sky	G. T. Watson.
Greenwich Royal Obs	.....	.....	30.24	768.1	57.0	13.9	.....	ENE	.....	.....	4	.....	2	.....	.....	.....	.....	Blue sky	*The Staff, for G. B. Airy*
Guernsey	.....	.....	30.12	765.0	52	11.1	.....	NE	.....	.....	5	.....	0	.....	.....	.....	.....	Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs.	.....	.....	30.39	771.9	51.4	10.8	.....	E	.....	.....	3	.....	8	.....	.....	.....	.....	*D. clouds	L. J. Crossley.
Helston	.....	.....	30.17	766.3	57	13.9	.....	NE	.....	.....	7	.....	10	.....	.....	0	0	Fine	M. P. Moyle.
Holyhead	.....	.....	30.30	769.6	55	12.8	.....	ENE	.....	.....	5	.....	0	.....	.....	.....	.....	Blue sky	John Tilston.
Kew Observatory	.....	.....	30.24	768.1	52.0	11.1	.....	ENE	27	12.1	.....	.....	3	.....	.....	.....	.....	Hazy	The Staff.
Kingstown	.....	.....	30.38	771.6	49	9.4	.....	ENE	.....	.....	5	.....	5	.....	.....	.....	.....	D. clouds	George Mitchell.
Leicester Museum	.....	.....	30.32	770.1	52.6	11.6	.....	E	.....	.....	4	.....	6	.....	.....	.....	.....	Blue sky	Wm. J. Harrison, F.G.S.
Malta, Mediterranean	.....	.....	29.85	758.2	68.0	20.0	.....	NW	.....	.....	2	.....	4k	.....	.....	.....	.....	.....	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	30.41	772.4	53	11.7	.....	E	.....	.....	2	.....	0	.....	.....	.....	.....	Clear	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.08	764.0	78.7	25.9	.....	SE	.....	.....	5	.....	10	.....	.....	.....	.....	Overcast	Surg. Maj. Henry.
Nottingham	.....	.....	30.34	770.6	54.5	12.5	.....	NE	.....	.....	5	.....	9o	.....	ENE	0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.28	769.1	54.1	12.3	.....	ENE	.....	.....	5	.....	2	.....	.....	.....	.....	*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs	.....	.....	30.22	767.6	56	13.3	.....	ENE	.....	.....	3	.....	4	.....	.....	.....	.....	*D. clouds	J. Lucas.
Plymouth	.....	.....	30.18	766.6	55.8	13.2	.....	E	.....	.....	5	.....	0	.....	.....	.....	.....	Blue sky	John Merrifield.
Roche's Point	.....	.....	30.29	769.4	51	10.6	.....	ESE	.....	.....	5	.....	5	.....	.....	.....	.....	Fine	W. Kennedy.
Saint Ann's Head	.....	.....	30.24	768.1	51	10.6	.....	E	.....	.....	4	.....	5	.....	.....	.....	.....	*D. clouds	John C. Walker.
Saint Helier, Jersey	.....	.....	30.08	764.0	56.6	13.7	.....	NE	.....	.....	6	.....	5	.....	.....	.....	.....	½ clouded	A. P. Amy.
Sandwick Manse, Orkneys	.....	.....	30.48	774.2	48.2	9.0	.....	SE	16	7.2	.....	.....	0	.....	.....	.....	.....	Blue sky	Rev. C. Clouston, LL.D.
Scarborough	.....	.....	30.41	772.4	44.9	7.2	.....	ENE	.....	.....	2	.....	10	.....	.....	.....	.....	Overcast	F. Shaw.
Scutari Cemetery, Turkey	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Blank	Blank	.....	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.30	770.9	54.0	12.2	.....	ENE	.....	.....	4	.....	7	.....	.....	0	0	Overcast	W. F. Cooper.
Silloth Rectory	.....	.....	30.37	771.4	56.9	13.8	53	SE	.....	.....	4	.....	1	.....	.....	0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory	.....	.....	30.35	770.9	53.4	11.9	.....	E	.....	.....	3	.....	2	.....	.....	.....	.....	*D. clouds	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.	.....	.....	30.46	772.1	51	13.9	.....	SE	.....	.....	2	.....	0	.....	.....	.....	.....	Blue sky	John Smith.
Stratfield Turgiss	.....	.....	30.23	767.8	56.0	13.3	.....	E	.....	.....	2-3	.....	0	.....	.....	.....	.....	Blue sky	Rev. Charles H. Griffith.
Streatley Vicarage	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Rev. John Slatter.
Thurso	.....	.....	30.16	773.4	52	11.1	.....	SSE	.....	.....	2	.....	4	.....	.....	.....	.....	*D. clouds	John Trotter.
Truro, Royal Institution	.....	.....	30.20	767.1	60	15.6	.....	E	.....	.....	7	.....	3	.....	.....	.....	.....	*D. clouds	W. Newcombe.
Valencia Observatory	.....	.....	30.25	768.3	56.3	13.5	.....	ESE	16	7.2	.....	.....	4	.....	.....	.....	.....	*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man	.....	.....	.....	.....	53	11.7	.....	E	.....	.....	3	.....	0	.....	.....	0	0	.....	Thomas Dawson.
Cape Good Hope Obs	.....	.....	30.14	765.5	70.0	21.1	65	SE	10	4.5	.....	.....	1	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Leith, Restalrig Park	.....	.....	30.45	773.4	48.0	8.9	.....	NE	.....	.....	4	.....	.....	.....	.....	0	0	Fine	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.04	763.0	.....	.....	.....	SE	12.6	5.6	.....	.....	.....	.....	.....	0	0	.....	C. Meldrum.
Melbourne, Observatory	.....	.....	30.07	763.8	50.1	10.1	90	ENE	2	0.9	.....	.....	8	.....	.....	0.40	10.2	Misty, rain	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	30.41	772.4	55	12.8	.....	Calm	.....	.....	0	0	0	.....	.....	0	0	Solar halo	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	30.51	774.9	50	10.0	.....	NE	.....	.....	2	0	0	.....	.....	.....	.....	.....	Robert Burnet.

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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	.....	.....	30.32	770.1	46.6	8.1	72	S	.....	.....	2	.....	10	.....	.....	.....	.....	.....	.....
Fanöe	.....	.....	30.33	770.4	53.1	11.7	52	NW	.....	.....	4	.....	8	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stykkisholm, (Iceland)	.....	.....	30.24	768.2	47.7	8.7	95	S	.....	.....	6	.....	8	.....	.....	.....	.....	Raining	.....
Thorshavn, (Faröe)	.....	.....	30.49	774.5	47.7	8.7	84	Calm	.....	.....	0	.....	10	.....	.....	.....	.....	Foggy	.....
Vestervig	.....	.....	30.30	769.7	56.1	13.4	56	NE	.....	.....	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.
Aiencon	.....	.....	30.03	762.7	55.4	13	55	NE	.....	.....	2	.....	5ck	.....	NE	0	0	Cloudy	Normal School.
Amiens	.....	.....	30.11	764.9	60.4	15.8	42	ENE	.....	.....	8	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	29.85	758.2	63.9	17.7	55	N	.....	.....	4	.....	0	.....	.....	0	0	Very clear	Normal School.
Bar-sur-Seine	.....	.....	29.89	759.3	52.0	11.1	54	E	.....	.....	3	.....	10	.....	.....	0.287	7.3	Raining	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.98	761.6	58.8	14.9	37	NE	11.2	5.0	.....	.....	10	.....	E	0	0	Covered	Beaumette Observatory.
Beauvais	.....	.....	30.08	764.1	59.0	15.0	29	E	.....	.....	3	...	8	.....	E	0	0	Very cloudy	Normal School.
Besançon	.....	.....	29.97	761.1	54.7	12.6	59	ENE	.....	.....	6	.....	8	.....	NE	0	0	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	30.04	762.8	57.0	13.9	69	N	.....	.....	1	.....	..n	.....	SE	0	0	.....	Normal School.
Bourges	.....	.....	29.97	761.1	54.0	12.2	72	NNE	.....	.....	2	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	29.99	761.8	56.7	13.7	47	NE	.....	.....	5	.....	1k	.....	NE	0	0	.....	Naval Observatory.
Caen	.....	.....	30.06?	778.8?	54.7	12.6	64	N	.....	.....	6	.....	10	.....	S	0	0	Covered	Normal School
Carcassonne	.....	.....	29.89	759.2	59.5	15.3	55	W	.....	.....	3	.....	10	.....	E	0.20	5.	Covered	Normal School.
Chartres	.....	.....	29.97	761.2	55.6	13.1	.....	N NE	.....	.....	4	.....	10	.....	.....	0.08	2.	Covered	Normal School.
Clermont	.....	.....	29.94	760.5	50.0	10.0	73	NNE	.....	.....	1	.....	10	.....	N	0	0	Covered	Puy de Dome Obs.
Commercy	.....	.....	30.06	763.4	51.8	11	52	E	.....	.....	1	.....	5kr	.....	E	0.016	0.4	Cloudy	Normal School.
Commune de Gréasque*	.....	.....	29.85	758.1	62.8	17.1	52	NW	.....	.....	2	.....	5	.....	.....	0	0	.....	M. Kina.
Grenoble	.....	.....	29.92	759.9	50.9	10.5	90	NW	.....	.....	8	.....	10	.....	SE	0	0	Covered	Normal School.
Le Mans	.....	.....	30.02	762.5	57.4	14.1	38	ESE	.....	.....	4	.....	2	.....	ESE	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier	.....	.....	29.95	760.7	53.4	11.9	76	NW	.....	.....	1	.....	10	.....	.....	0	0	.....	Normal School.
Mâcon	.....	.....	30.01	762.1	50.4	10.2	90	N	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Mirecourt	.....	.....	30.02	762.6	51.8	11	62	NE	.....	.....	4	.....	10	.....	SW	0	0	Covered	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	29.84	757.9	67.3	19.6	45	NW	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	29.99	761.8	55.8	13.2	43	E	.....	.....	4	.....	8	.....	E	0	0	Ve y cloudy	Normal School.
Paris Observatory	.....	.....	30.05	763.3	50.7	13.7	32	ENE	.....	.....	3	.....	8	.....	ENE	0	0	Very cloudy	National Observa ory.
Parthenay	.....	.....	29.96	760.9	58.1	14.5	88	NE	.....	.....	2	.....	5	.....	NE	0	0	Cloudy	Normal School.
Privas	.....	.....	29.87	758.8	57.9	14.4	.....	N	.....	.....	4	.....	5	.....	N	0	0	Cloudy	Normal School.
La Roche-sur-Yon	.....	.....	29.76	756.0	58.3	14.6	61	NE	.....	.....	6	.....	10	.....	SW	0	0	Covered	Normal School.
Rochefort, Observatory	.....	.....	29.97	761.3	64.4	18.0	48	ENE	.....	.....	3	.....	5	.....	SW	0	0	Cloudy	Naval Observatory.
Rouen	.....	.....	30.08	764.1	61.2	16.2	31	NE	.....	.....	2	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Saint Lo	.....	.....	29.83	757.7	52.9	11.6	68	E	.....	.....	2	.....	9	.....	E	0	0	.....	Normal School.
Tarbes	28.82	731.9	29.89	759.1	57.2	14	.....	E	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Villefranche	.....	.....	30.04	762.9	55.6	13.1	77	N	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.99	761.8	80.6	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchésl.
Marseilles	.....	.....	29.80	756.9	64.9	18.3	54	WSW	.....	.....	2	.....	1	.....	.....	0	0	Clear	Marseilles Observatory —. Faiguère.
Mont-Louis	24.71	627.6	30.02	762.6	50.0	10.0	55	SE	9.3	4.17	.....	.....	4	.....	SW	0	0	.....	.....
Montsouris, Paris	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montsouris Observ'tory.
Perpignan	.....	.....	29.87	758.6	65.5	18.6	31	N	7.4	3.33	.....	.....	0	.....	.....	0	0	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.04	763.1	57.0	13.9	35	E	.....	.....	3	.....	10	.....	.....	0	0	Cloudy	E. Renou.
Toulouse	.....	.....	29.98	761.5	60.3	15.7	56	NW	.....	.....	1	.....	5	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	29.98	761.6	55.5	13.3	42	NE	.....	.....	3	.....	6	.....	N E	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.04	763.1	56.1	13.4	55	E	.....	.....	3	.....	10	.....	.....	0	0	Almost cov'd	Dr. A. Berigny.
Zi Ka-Wei, (near Shanghai)	.....	.....	29.97	761.3	55.9	13.3	89	E	4.5	2.0	.....	1c	0	.....	.....	{ 0	{ 0	.....	H. Le Lec, S. J.
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NOTE.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,580.40 meters, or 5,204.8 feet; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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.

Bamberg	.....	.....	30.09	764.2	54.3	12.4	37	E	.....	.....	7	.....	6	E	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.23	767.7	53.4	11.9	38	E	.....	.....	2	.....	2	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.21	767.4	51.6	10.8	31	NE	.....	.....	6	.....	7	.....	.....	0	0	.....	Dr. P. Neugebau r.
Carlsruhe	.....	.....	30.05	763.3	55.9	12.8	30	NE	.....	.....	3	.....	10	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.16	766.1	58.1	14.5	25	E	.....	.....	7	.....	1	ENE	.....	0	0	.....	Dr. H. Möll.
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.15	765.9	56.3	13.5	30	NE	.....	.....	5	...	1	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	28.56	725.4	30.02	762.4	47.1	8.4	52	NE	.....	.....	6	.....	.....	.....	.....	Inap?	Inap.?	Lerbt r in...	M. Wilhelm.
Hamburg	.....	.....	30.30	769.5	53.4	11.9	46	NE	.....	.....	5	.....	5c	.....	.....	0	0	Fair	Captain F. Hegemann.
Kiel	.....	.....	30.31	769.8	52.7	11.5	48	N	.....	.....	3	.....	10	.....	.....	0	0	.....	Prof. G. Karsten
Königsberg	.....	.....	30.27	768.9	48.2	9.0	38	N	.....	.....	5	.....	2	.....	.....	0	0	.....	Prof. E. Luther
Köslin	.....	.....	29. 8	769.0	47.5	8.6	....	N	.....	.....	2	.....	0	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.21	767.3	52.7	11.6	77	ENE	.....	.....	3	.....	4	ENE	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	30.30	769.5	50.4	10.2	37	NE	.....	.....	4	.....	4	ENE	.....	0	0	.....	Reinbrecht & Skalweit.
Mühlhausen	.....	.....	30.23	767.8	57.0	13.9	49	NE	.....	.....	4	.....	6	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.25	768.4	45.1	7.3	66	NNE	.....	.....	3	.....	6	.....	.....	0	0	.....	A. Lothes.
Posen	.....	.....	30.25	768.4	51.1	10.6	30	N	.....	.....	7	.....	9	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.06	763.4	51.8	11.0	51	NE	.....	.....	2	.....	10	NE	.....	0.063	1.6	.....	Dr. Schur.
Stuttgart	.....	.....	30.07	763.6	52.2	11.2	37	E	.....	.....	3	.....	5	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	30.21	767.4	51.8	11.0	36	NE	.....	.....	4	.....	8	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.03	762.7	58.6	14.8	31	NE	.....	.....	8	.....	1	.....	.....	0	0	.....	Prof. F esch.
Wustrow, Naval School	.....	.....	30.26	768.5	52.5	11.4	46	ENE	.....	.....	3	.....	7	.....	.....	0	0	.....	E. F Schütz.
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NOTE.—In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			29.85	758.1	54.1	12.3	66	SE	8.7	3.9			10			0.004	0.1		
Padua			29.84	757.8	54.1	12.3	73	E	14.3	6.4			10			0.028	0.7		
Vicenza			29.83	757.7	57.4	14.1	68	SE	4.9	2.2			10	E		0.047	1.2		
Verona			29.82	757.5	57.6	14.2	87	E			2		10			0	0		
Bergamo	28.47	723.1	29.79	756.6	55.4	13.0	75	S			2		9			0	0		
Domodossola	28.77	730.8	29.80	756.8	62.6	17.0	67	SW			4		7			0.030	0.8		
Milan			29.85	758.2	63.7	17.6	59	SE			2		9	SE		0	0		
Pavia			29.84	757.9	58.1	14.5	65	E			4		9	E		0	0		
Moncalieri			29.84	757.8	57.7	14.3	75	S	6.3	2.8			9	NE		0.201	5.1		
Mondovi	27.94	709.8	29.86	758.5	51.4	10.8	90	NW			2		10			0.94	2.4		
Porto Maurizio			29.83	757.7	64.2	17.9	67	SW			2		8	S.W		0	0		
Genoa			29.78	756.5	60.6	15.9	68	N	4.9	2.2			10	SE		0	0		
Piacenza			29.84	758.0	54.9	12.7	72	ESE			4		10			0.012	0.3		
Parma			29.85	758.2	54.7	12.6	93	SE			4		10			0.591	15.0		
Bologna			29.88	758.9	57.7	14.3	48	NE			1		10			0.661	16.8		
Florence			29.79	756.7	61.3	16.3	69	N			2		10			0.161	4.1		
Leghorn			29.78	756.3	57.0	13.9	85	NNW	4.9	2.2			10	E		0.441	11.2		
Siena	28.55	725.2	29.75	755.6	54.1	12.3	91	ENE	1.3	0.6			10			0.630	16.0		
Urbino	28.28	718.4	29.84	757.9	49.5	9.7	96	NNE			2		10						
Pesaro																			
Ancona			29.82	757.4	59.7	15.4	85	NNW			4		10			0.539	13.7		
Grosseto			29.76	756.0	58.3	14.6	91	NNE			2		9	S		0.166	4.2		
Rome			29.78	756.3	66.2	19.0	66	SW	4.9	2.2			6	SW		0.051	1.3		
Naples, O. U			29.87	758.7	70.2	21.2	51	SW			2		8	S		0	0		
Lecce			29.84	757.8	70.2	21.2	57	WNW	15.0	6.7			10			0	0		
Cosenza			29.82	757.4	75.2	24.0	75	SW	1.8	0.8			10			0	0		
Riposto, (Sicily)			29.91	759.7	64.8	18.2	88	Calm			0		10	NW		0	0		
Palermo			29.79	756.7	65.8	18.8	61	NE	4.3	1.9			10	NE		0	0		
Caltanissetta	27.91	708.8	29.82	757.3	58.3	14.6	70	W			4		10	E		0.394	10.0		
Sub-Series.																			
Naples, S. R			29.84	757.8	67.3	19.6	59	SW	1.8	0.8			c	SW		0.067	1.7		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour: generally, no distinction between upper and lower clouds; occasionally the weather 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.

Flushing			30.23	767.7	55.8	13.2		NE			4								
Groningen			30.26	768.7	53.6	12.0		NNE			4								
Helder			30.31	769.8	48.9	9.4		NE			4								
Utrecht			30.20	767.0	56.3	13.5	31	ENE			5		2						Light cloudy

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

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

Bergen			30.38	771.6	53.6	12.0	76	WNW	8.3	3.7			0			0	0		
Brönö			30.46	773.7	44.6	7.0	88	WSW	7	3			10			0	0		Light mist...
Christiania			30.40	772.1	50.5	13.6	46	E	10.7	4.8			10			0	0		
Tromsö			30.30	769.5	42.4	5.8	87	SW	2	1			10			0.008	0.2		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 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,)	.....	.....	30.15	765.8	59.9	15.5	76	E	13.9	6.22	.....	.....	7	.....	.....	0.055	1.4	Raining.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.95	760.6	63.3	17.4	49	SW	8.4	3.75	.....	.....	8	W	.....	0	0	Solar halo....	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)	.....	.....	30.09	764.2	67.3	19.6	73	SW	5.0	2.25	.....	.....	6	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.01	762.2	56.5	13.6	71	SW	8.7	3.9	.....	.....	10	SW	.....	0	0	.....	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h. 6 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	.....	.....	30.15	765.7	50.4	10.2	86	NE	13	6	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.24	768.0	47.5	8.6	89	N	4	2	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.43	773.0	36.1	2.3	82	E	11	5	.....	.....	1	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.46	773.7	35.8	2.1	80	ENE	4	2	.....	.....	0	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	30.45	773.3	42.1	5.6	62	E	7	3	.....	.....	7	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.08	764.0	42.8	6.0	91	E	11	5	.....	.....	10	.....	.....	.....	.....	Raining.....	Physical Cabinet.
Nikolaiev	.....	.....	30.02	762.6	49.6	9.8	86	NE	11	5	.....	.....	10	.....	.....	.....	.....	Raining.....	Kurdakof.
Kertch	.....	.....	29.95	760.7	57.0	13.9	75	E	18	8	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.98	761.4	39.0	3.9	88	WNW	13	6	.....	.....	4	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.11	764.8	48.2	9.0	58	E	34	15	.....	.....	5	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.41	772.5	29.8	— 1.2	73	NW	29	13	.....	.....	0	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.46	723.0	29.80	756.9	78.1	25.6	44	NW	4	2	.....	.....	7	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.16	766.0	47.7	8.7	41	NE	22	10	.....	.....	10	.....	.....	.....	.....	Raining.....	Sebastianof.
Kasan	.....	.....	30.18	766.6	38.8	3.8	57	N	2	1	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.98	736.0	30.01	762.3	31.8	— 0.1	94	WNW	4	2	.....	.....	10	.....	.....	.....	.....	Snowing.....	Meteorological Obs.
Nukuse	.....	.....	29.68	753.8	81.1	27.3	33	NE	9	4	.....	.....	9	.....	.....	.....	.....	.....	.....
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.25	717.6	29.86	758.4	78.4	25.8	54	Calm	0	0	.....	.....	9	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.69	754.0	43.3	6.3	66	W	29	13	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	25.49	749.1	30.9	4.4	57	NNW	7	3	.....	.....	3	.....	.....	.....	.....	.....	Marks.
Irkutsk	28.13	714.5	29.49	749.1	44.1	6.7	46	NW	11	5	.....	.....	10	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.62	752.4	84.9	29.4	15	SSW	13	6	.....	.....	5	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nikolaievsk, on the Amoor	.....	.....	.....	.....	30.0	— 1.1	94	SW	18	8	.....	.....	10	.....	.....	.....	.....	Snowing.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 401 meters, or 1,411.8 feet; Ekaterinburg, 295.17 m., or 1,005.27 ft.; Tashkend, 494.27, or 1,621.37 ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.07 m., or 1,942.27 ft.; Oorga, 1,281.66 m., or 4,202.67 ft.

SPANISH SERIES.

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

Madrid	.....	.....	29.80	757.0	72.5	22.5	35	SW	12.7	5.67	.....	1	0	SW	.....	0	0	.....	Royal Observatory.
San Fernando	.....	.....	30.04	763.0	63.0	17.2	59	WSW	7.2	3.2	.....	0	10	.....	W	0	0	.....	The Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight; 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	.....	.....	30.46	773.7	38.5	3.6	77	S	.....	.....	2	.....	10	.....	.....	0	0	.....	
Umea	.....	.....	30.46	773.7	42.6	5.9	68	S	.....	.....	2	.....	10	.....	.....	0	0	.....	
Hernosand	.....	.....	30.45	773.5	43.9	6.6	51	SW	.....	.....	2	.....	10	.....	.....	0	0	.....	
Stockholm	.....	.....	30.38	771.7	44.1	6.9	51	NE	.....	.....	6	.....	5	.....	.....	0	0	.....	
Wisby	.....	.....	30.43	772.9	40.6	4.8	65	ENE	.....	.....	6	.....	8	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.41	772.3	51.4	10.8	33	NE	7.6	3.4	.....	.....	1	.....	NNE	0	0	.....	Dr. Hildebrandsson.

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

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Upper 0–10.	Clouds. Amount. Lower 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.51	724.2	29.95	760.8	49.1	9.5	73	N	.....	.....	3	.....	10	.....	.....	0	0	Covered	The Observatory.
Zurich	28.36	720.3	30.03	762.7	45.3	7.4	70	E	.....	.....	.....	.....	10	.....	.....	0.008	0.2	Covered	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, —0.6 mm.; Thermometer, —0.1 cent.; Relative Humidity, +15 per cent

NOTE.—The originals give the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.82	757.3	77.7	25.4	.....	S	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	29.78	756.4	71.6	22.0	.....	SW	.....	.....	1	.....	10	.....	.....	.....	.....	.....	
Varna	.....	.....	29.96	761.0	64.4	18.0	.....	E	.....	.....	2	.....	10	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.81	757.1	75.9	24.4	78	N	.....	.....	1	.....	1k	.....	N	0	0	Fair	Prof. C. V. A. Van Dyck.

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	29.74	755.4	36.9	2.7	99	Calm	0	0	.....	.....	.....	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.80	756.9	51	10.6	.....	SW	8	3.6	.....	0	5s	.....	SW	0.08	1.5	Fair	W. R. Bigg.
*Chatham, N. B	.....	.....	29.75	755.6	43	6.1	91	N	4	1.8	.....	.....	10s	.....	N	0.05	1.3	Light rain...	G. A. Blair.
Charlottetown P. E. Island	.....	.....	29.77	756.1	48	8.9	94	SE	5	2.2	.....	.....	10n	.....	.....	0.23	5.8	Light rain	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.73	755.1	50.0	10.0	93	SE	.....	.....	1	.....	10s	.....	.....	0	0	Unsettled....	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.78	756.4	39.1	3.9	91	NW	.....	.....	1	.....	10	.....	.....	0.15	3.8	Raining.....	H. A. Johnson.
Esquimault, B. C	.....	.....	30.15	765.8	48.3	9.0	93	W	1	0.4	.....	4ck	.....	.....	.....	0	0	Cloudy.....	W. H. Hevis.
Fredericton, N. B	.....	.....	29.77	756.1	48.4	9.1	98	Calm	0	0	.....	.....	1cn	.....	.....	0.390	9.91	Rainy.....	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.07	763.8	37	2.8	90	SE	2	0.9	.....	Haze	2s	S	S	0	0	Fair.....	James Stewart.
Goderich, Ontario	.....	.....	29.72	754.9	43.1	6.2	91	N	.....	.....	2	.....	10n	.....	.....	0.306	7.77	Threatening	H. J. Strang, M. A.
Granton, Ontario	.....	.....	29 68	753.9	43	6.1	.....	NW	.....	.....	1	.....	10n	.....	.....	0.47	11.9	Cloudy.....	James Grant.
*Halifax, N. S.	.....	.....	29.79	756.7	44	6.7	100	SE	1	0.4	.....	.....	Fog	.....	.....	0.15	3.8	Foggy	F. Allison, M. A.
*Kingston, Ontario	.....	.....	29.78	756.4	44	6.7	93	SW	3	1.3	.....	5ck	0	W	.....	0.08	2 0	Fair.....	S. Woods, M. A.
*Montreal, Quebec	.....	.....	29.75	755.6	49	9.4	86	W	8	3.6	.....	Haze	8ks	.....	W	0.04	1.0	Cloudy.....	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.74	755.4	47	8.3	71	S	3	1.3	.....	.....	10n	.....	S	0	0	Threatening	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.76	755.9	42	5.6	95	W	2	0.9	.....	.....	1cn	.....	W	0.01	0.3	Light rain..	Rev. R. Mooley.
*Port Dover, Ontario	.....	.....	29.68	753.9	47	8.3	85	W	8	3 6	.....	10k	0	SW	.....	0.06	1.5	Fair.....	H. Morgan.
Port Hastings, N. S	.....	.....	29.83	757.7	41.6	5.3	.....	SE	1	0.4	.....	.....	.....	.....	.....	0	0	Dull.....	Peter Grant.
*Port Stanley Ontario	.....	.....	29.69	754.1	47	8.3	86	W	12	5.4	.....	5ck	0	NW	.....	0.12	3.0	Fair.....	M. Payne.
*Quebec, Quebec	.....	.....	29.78	756.4	44	6.7	92	NE	5	2.2	.....	.....	10n	.....	NE	0.15	3.8	Cloudy.....	Capt. Ash, R. N.
St. John, N. B.	.....	.....	29.76	755.9	46	7.8	96	Calm	0	0	.....	.....	Fog	.....	.....	0.47	11.94	Raining....	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.73	755.1	39	3.9	93	NE	2	0.9	.....	.....	10ks	.....	E	0	0	Light rain..	K. Stewart.
Stayner, Ontario	.....	.....	29.73	755.1	45	7.2	88	Calm	0	0	.....	.....	1cn	.....	SE	0.11	2.8	Light rain..	R. J. Cole.
Stratford, Ontario	.....	.....	29.69	754.1	44.6	7.0	83	E	4	1.8	.....	.....	10s	.....	.....	0.547	13 90	Cloudy...	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.86	758.4	47	8.3	92	S	3	1.3	.....	...	10n	.....	.....	0.08	2.0	Light rain....	T. C. Hill.
*Toronto, Ontario	.....	.....	29.74	755.4	42	5.6	94	NE	5	2.2	.....	.....	10n	.....	.....	0.21	5.3	Light rain....	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.67	753.6	44.3	6.8	91	N	.....	.....	1	.....	0ks	.....	.....	0.11	2.8	Cloudy.....	J. Montgomery.
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NOTE.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 m.

UNITED STATES SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper.	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	29.74	755.4	54	11.7	93	Calm	0	0	.....	.....	10s	.....	S	0.36	9.1	Cloudy	
Alpena, Mich.	.....	.....	29.78	756.4	41	5.0	100	S	8	3.6	.....	.....	10n	.....	S	0.04	1.0	Light rain	
Atlantic City, N. J.	.....	.....	29.82	757.4	55	12.8	100	Calm	0	0	.....	.....	10s	.....	W	0.92	23.4	Cloudy	
Augusta, Ga.	.....	.....	30.07	763.8	53	11.7	63	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Baltimore, Md	.....	.....	29.87	758.2	59	13.9	64	NW	4	1.8	.....	2cs	Sm'e	.....	NW	0.21	5.3	Fair	
Barnegat, N. J.	.....	.....	29.80	756.9	55	12.8	100	W	1	0.4	.....	.....	10n	.....	.....	1.36	34.5	Light rain	
Benton, Montana	27.16	689.8	29.96	761.0	55	12.8	68	NW	6	2.7	.....	.....	10n	.....	NW	0.28	7.1	Light rain	
Bismarck, Dakota	28.14	714.7	29.78	756.4	45	7.2	53	SE	9	4.0	.....	5k	0	SE	.....	0	0	Fair	
Boston, Mass	.....	.....	29.77	756.1	53	11.7	93	SW	3	1.3	.....	.....	Fog	.....	.....	0.77	19.6	Foggy	
Breckenridge, Minn	.....	.....	30.06	763.5	37	2.8	71	E	8	3.6	.....	2c	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	29.67	753.6	45	7.2	84	S	1	0.4	.....	.....	10s	.....	SW	0.04	1.0	Cloudy	
Burlington, Vt.	.....	.....	29.72	754.9	50	10.0	93	N	1	0.4	.....	.....	10s	.....	.....	0.14	3.6	Cloudy	
Cairo, Ill.	.....	.....	29.98	761.5	62	16.7	56	W	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Cape Hatteras, N. C.	.....	.....	29.83	757.7	64	17.8	78	W	12	5.4	.....	.....	10s	.....	W	1.50	38.1	Cloudy	
Cape Henry, Va.	.....	.....	29.84	757.9	60	15.6	88	N	10	4.5	.....	8k	0	NW	.....	2.64	67.1	Fair	
Cape Lookout, N. C.	.....	.....	29.92	760.0	61	16.1	82	W	20	8.9	.....	.....	10ks	.....	W	1.77	45.0	Cloudy	
Cape May, N. J.	.....	.....	29.83	757.7	56	13.3	93	NW	2	0.9	.....	10k	5ks	W	NW	1.07	27.2	Cloudy	
Charleston, S. C.	.....	.....	30.07	763.8	57	13.9	60	NW	9	4.0	.....	0	0	.....	.....	0.22	5.6	Clear	
Cheyenne, Wyoming	24.04	610.6	29.98	761.5	44	6.7	54	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	29.93	760.2	46	7.8	76	N	12	5.4	.....	5k	0	N	.....	0.04	1.0	Fair	
Cincinnati, Ohio	.....	.....	29.73	755.1	56	13.3	68	NW	11	4.9	.....	5k	0	N	.....	0.03	0.8	Fair	
Cleveland, Ohio	.....	.....	29.71	754.6	47.1	8.4	88	W	11	4.9	.....	1c	5ks	W	.....	0.05	1.3	Fair	
Colorado Springs, Col.	24.14	613.1	30.01	762.2	40	7.8	47	NW	11	4.9	.....	0	0	.....	.....	0	0	Clear	
Corsicana, Tex	.....	.....	30.12	765.0	57	13.9	75	S	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Davenport, Iowa	.....	.....	30.01	762.2	46	7.8	76	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Denison, Tex.	.....	.....	30.10	764.5	67	19.4	59	SE	15	6.7	.....	0	0	.....	.....	0	0	Clear	
Denver, Col.	24.82	630.4	30.34	763.0	52	11.1	40	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	29.71	754.6	46	7.8	76	W	9	4.0	.....	8k	0	NW	.....	0.31	7.9	Fair	
Dodge City, Kan.	27.36	694.9	29.90	751.8	57	13.9	46	E	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	30.01	762.2	47	8.3	92	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Duluth, Minn.	.....	.....	30.07	763.8	42	5.6	75	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	29.99	754.1	42	5.6	91	NE	2	0.9	.....	.....	10n	.....	.....	0.57	14.5	Light rain	
Erie, Pa.	.....	.....	29.66	753.4	51	10.6	78	SW	12	5.4	.....	.....	10ks	.....	W	0	0	Cloudy	
Escanaba, Mich	.....	.....	29.93	760.2	42	5.6	75	N	12	5.4	.....	5k	0	N	.....	0.33	8.4	Fair	
Fort Gibson, Indian Terr.	.....	.....	30.02	762.5	63	17.2	62	SE	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	29.71	754.6	29	— 1.7	.....	NE	14	6.3	.....	.....	10s	.....	.....	.....	.....	Cloudy	
Fort Sill, Indian T.	28.82	732.0	29.93	760.2	54	12.2	43	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.23	717.0	29.87	758.7	49	9.4	44	SE	18	8.0	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.18	766.6	66	18.9	83	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Grand Haven, Mich.	.....	.....	29.87	758.7	45	7.2	76	NW	14	6.3	.....	5ck	2s	N	N	0.01	0.3	Fair	
Indianapolis, Ind.	.....	.....	29.86	758.4	51	10.6	65	N	12	5.4	.....	0	0	.....	.....	0.12	3.0	Clear	
Indianola, Tex.	.....	.....	30.18	766.6	70	21.1	70	S	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Jacksonville, Fla.	.....	.....	30.14	765.3	64	17.8	68	NW	4	1.8	.....	0	0	.....	.....	0.95	24.1	Clear	
Keokuk, Iowa	.....	.....	29.99	761.7	52	11.1	60	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla.	.....	.....	29.95	760.3	72.8	22.7	85	NE	22	9.8	.....	10k	0	N	.....	0.23	5.8	Cloudy	
Kittyhawk, N. C.	.....	.....	29.88	758.9	62	16.7	83	W	16	7.2	.....	5k	5ks	W	W	1.65	41.9	Clearing	
Knoxville, Tenn.	.....	.....	29.98	761.5	51	10.6	72	SW	8	3.6	.....	2ck	0	W	.....	0	0	Fair	
La Grosse, Wis.	.....	.....	30.05	763.3	44	6.7	67	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan.	.....	.....	29.99	761.7	56	14.4	58	NE	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Lexington, Ky.	28.7	729.7	29.81	757.2	57	13.9	63	W	20	8.9	.....	0	0	.....	.....	0	0	Clear	
Long Branch, N. J.	.....	.....	29.81	757.2	50	13.3	93	S	2	0.9	.....	.....	10n	.....	.....	1.50	38.1	Light rain	
Louisville, Ky.	.....	.....	29.82	757.4	63	17.2	47	W	11	4.9	.....	0	0	.....	.....	0.01	0.3	Clear	
Lynchburg, Va.	.....	.....	29.88	758.9	56	13.3	62	W	3	1.3	.....	0	0	.....	.....	0.10	2.5	Clear	
Malone, N. Y.	.....	.....	29.70	754.4	49	9.4	93	SW	2	0.9	.....	.....	10s	.....	SW	0.03	0.8	Cloudy	
Manhattan, Kan.	28.84	732.5	29.96	761.0	58	14.4	75	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Marquette, Mich	.....	.....	29.99	761.1	44	6.7	75	NW	12	5.4	.....	5ck	0	NW	.....	0.25	6.3	Fair	
Memphis, Tenn	.....	.....	30.05	763.1	65	18.3	63	SW	6	2.2	.....	2ck	0	NW	.....	0	0	Clear	
Milwaukee, Wis.	.....	.....	29.98	761.5	43	4.3	76	NW	12	5.4	.....	0	0	.....	.....	0.04	1.0	Clear	
Mobile, Ala.	.....	.....	30.18	766.6	60	15.6	70	N	2	0.9	.....	0	Sm'e	.....	.....	0	0	Clear	
Montgomery, Ala.	.....	.....	30.17	766.3	58	14.4	72	W	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Morgantown, W. Va.	.....	.....	29.72	754.9	53	11.7	73	SW	6	2.7	.....	.....	10s	.....	SW	0.07	1.8	Threatening	
Mt. Washington, N. H.	23.56	598.4	29.02	760.0	30	2.2	100	Calm	0	0	.....	.....	Fog	.....	.....	1.05	26.7	Foggy	
Nashville, Tenn.	.....	.....	29.94	760.5	62	16.7	56	SW	6	2.7	.....	10k	c	W	.....	0	0	Cloudy	
New Haven, Conn	.....	.....	29.77	756.1	58	14.4	87	SW	4	1.8	.....	.....	10n	.....	.....	0.67	17.0	Light rain	
New London, Conn	.....	.....	29.80	756.9	56	13.3	93	Calm	0	0	.....	.....	10n	.....	SW	0.91	23.1	Light rain	
New Orleans, La	.....	.....	30.18	766.6	67	19.4	59	NE	3	1.3	.....	0	Sm'e	.....	.....	0	0	Clear	
Newport, R. I.	.....	.....	29.77	756.1	53	11.7	93	Calm	0	0	.....	.....	10n	.....	SW	0.96	24.4	Light rain	
New York, N. Y.	.....	.....	29.80	756.9	54	12.2	93	SW	4	1.8	.....	.....	10n	.....	.....	1.15	29.2	Light rain	
Norfolk, Va.	.....	.....	29.86	758.4	59	15.0	81	N	8	3.6	.....	5k	2s	N	.....	2.17	55.1	Fair	
North Platte, Neb.	27.03	686.6	29.54	750.3	56	13.	68	SE	14	6.3	.....	2ck	0	W	.....	0	0	Clear	
Omaha, Neb.	28.96	735.6	30.02	762.5	54	11.7	60	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	29.76	756.0	51.5	10.	64	SW	2	0.9	.....	5ck	2s	W	.....	0.04	1.0	Fair	
Pembina, Dakota	.....	.....	30.02	762.5	39	3.9	81	Calm	0	0	.....	8c	0	.....	.....	0	0	Cloudy	
Philadelphia, Penn	.....	.....	29.80	756.9	56	13.3	87	SW	6	2.7	.....	8k	2s	SW	SW	0.72	18.3	Cloudy	
Pike's Peak, Colorado	17.90	454.6	30.11	764.8	23	5.0	60	NW	24	10.7	.....	0	0	.....	.....	0	0	Clear	
Pittsburgh, Penn	.....	.....	29.71	754.6	48	8.9	92	S	4	1.8	.....	.....	10n	.....	.....	0.19	4.8	Light rain	
Port Huron, Mich	.....	.....	29.71	754.6	41	5.0	91	NW	11	4.9	.....	.....	10n	.....	NW	0.25	6.3	Light rain	
Portland, Me.	.....	.....	29.72	754.9	53	11.7	86	Calm	0	0	.....	8k	Fog	N	.....	0.61	15.5	Clearing	
Portland, Oregon	.....	.....	30.23	767.8	49	9.4	71	Calm	0	0	.....	.....	10s	.....	NW	0	0	Cloudy	
Punta Rassa, Fla.	.....	.....	30.12	765.0	66.2	19.0	73	N	12	5.4	.....	Haz.	1ks	SW	N	1.42	36.1	Hazy	
Rochester, N. Y.	.....	.....	29.70	754.4	48	8.9	77	SE	2	0.9	.....	.....	10s	.....	SW	0.02	0.5	Cloudy	
Salt Lake City, Utah	25.57	649.5	29.9	759.4	61	15.6	19	E	4	1.8	.....	5k	0	SW	.....	0	0	Fair	
Sandy Hook, N. J.	.....	.....	29.79	756.7	56	13.3	100	SW	6	2.7	.....	.....	10n	.....	SW	1.30	33.0	Light rain	
San Diego, Cal.	.....	.....	30.00	762.0	58	14.4	87	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
San Francisco, Cal.	.....	.....	30.01	762.2	52	11.1	86	W	10	4.5	.....	.....	10s	.....	.....	0	0	Cloudy	
Santa Fe, N. M.	23.34	592.8	29.88	758.9	49	9.4	30	NE	13	5.8	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.10	764.5	59	15.0	66	NW	5	2.2	.....	Haze	0	.....	.....	0.01	0.3	Clear	
Shreveport, La.	.....	.....	30.18	766.6	64	15.6	77	S	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Smithville, N. C.	.....	.....	29.98	761.5	57	13.9	76	NW	5	2.2	.....	5cs	0	SW	.....	0.28	7.1	Fair	
Springfield, Mass.	.....	.....	29.76	755.9	50	13.3	80	NW	4	1.8	.....	.....	10ks	.....	W	0.72	18.3	Cloudy	
St. Louis, Mo.	.....	.....	30.01	762.0	57	13.9	40	N	12	5.4	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla	.....	.....	30.15	765.8	57	13.9	87	Calm	0	0	.....	0	0	.....	.....	0.67	17.0	Clear	
St. Paul, Minn.	.....	.....	30.03	762.7	46	7.8	65	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	29.72	754.9	32	0.0	89	NNE	8	3.6	.....	.....	Fog	.....	.....	0.01	0.3	.....	
Thatcher's Island, Mass.	.....	.....	29.75	755.6	50	10.0	93	SW	7	3.1	.....	...	10s	.....	NW	0.87	22.1	Cloudy	
Toledo, Ohio	.....	.....	29.73	755.1	47	8.3	85	NW	20	8.9	.....	8c	0	NW	.....	0.08	2.0	Fair	
Tucson, Arizona	27.49	698.2	30.08	764.0	61	16.1	.....	S	.....	.....	.....	2	0	w	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30. 7	763.8	57	13.9	68	NW	12	5.4	.....	0	0	.....	.....	0.17	4.3	Clear	
Vicksburg, Miss.	.....	.....	30.10	766.8	58	14.4	78	S	1	0.4	.....	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
Virginia City, M. T.	24.19	614.4	29.67	753.6	47	8.3	62	NW	6	2.7	.....	8c	0	W	....	0	0	Cloudy.....	
Washington, D. C.	.....	.....	29.84	757.9	61	16.1	61	W	4	1.8	.....	Haze	sm e	.....	.....	0.18	4.6	Clear.....	
Wilmington, N. C	.....	.....	29.97	761.2	58	14.4	81	NW	7	3.1	.....	5cs	0	SW	.....	0.24	6.1	Fair.....	
Wood's Holl, Mass	.....	.....	29.77	756.1	59	10.0	100	S	6	2.7	.....	.....	10n	.....	.....	0.45	11.4	Ligh. rain...	
Wytheville, Va	27.55	699.8	29.69	754.1	48	8.9	77	W	.....	.....	.....	0	8ks	....	W	0.02	0.5	Cloudy.....	
Yankton, Dakota	28.76	730.5	30.04	763.0	51	10.6	65	E	1	0.4	.....	0	0	.....	.....	0	0	Clear.....	
Yuma, Arizona	.....	.....	29.84	757.7	77	25.0	.....	E	.....	.....	.....	0	0	.....	.....	0	0	Clear.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.08	764.0	80	26.7	78	NE	6	2.7	.....	5k	10ks	NE	.....	0	0	Cloudy.....	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.95	760.7	81	27.2	74	NE	.....	.....	.....	2c	5k	.....	.....	0	0	Fair.....	L. V. Bigard.
St. Thomas, S. T., W. I	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. S. Cameron.
Kingston, Jamaica, W. I.	.....	.....	30.19	766.8	79	26.1	74	Calm	0	0	.....	2k	2s	SE	.....	0	0	.....	James Gall.
Santiago de Cuba, W. I	.....	.....	29.83	757.7	80	26.7	78	Calm	0	0	.....	0	2k	.....	.....	0	0	Fair.....	Robert Mason.
Havana, Cuba, W. I	.....	.....	30.02	762.5	79	26.1	82	Calm	0	0	.....	8c,k	5ks,n	S	NE	0.32	8.1	Cloudy.....	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.27	768.8	76.0	24.4	68	SSW	9.0	4.0	.....	0	1k	.....	.....	0	0	Fair.....	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica W. I	27.18	690.4	29.96	761.0	70	21.1	90	S	2.0	0.9	.....	5c	0	S	.....	0.26	6.6	Fine.....	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.03	762.7	83	28.3	75	E	.....	.....	3	.....	5ks	....	.....	1.24	31.50	Dry.....	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.93	762.7	.....	.....	86.0	30	.....	E	.....	.....	.....	.....	.....	.....	.....	0.207	5.25	.....	Dr. H. Groot.
Medellin, Colombia, S. A	25.21	64 3	.....	.....	67.0	19.4	78	Calm	0	0	.....	7ck	3s	.....	.....	0 36	9.1	Cloudy.....	Thomas Herran.
St. John's, Newfoundland	.....	.....	30.01	762.2	42.0	5.6	91	S	.....	.....	.....	.....	10n	.....	.....	0.13	3.3	Cloudy.....	John Delaney.
York Factory, B. A	.....	.....	30.25	768.3	29	— 1.7	94	E	2	0.9	.....	.....	9s	....	.....	Inap.	Inap	....	J. Fortescue.
Honolulu, Oahu, H. I	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	Daniel Smith.
Makawao, Maui, H. I.	27.82	706.6	29.99	761.7	57	13.9	81	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	F. L. Clarke.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	
....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Hibernian, N. 51° 35′, W. 14° 55′.	ESE	10	30.26	768.6	60	15.6	.....	ESE	.....	.....	3	.....	..8	.....	.....	Smooth	.....	*D. clouds. ...	Lieut F. Archer, R.N.R.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fal 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; Cheyenn , 6,057 3 ft., or 1,846.2 m.; Clifton about 2.89 : ft., or 881.5 m.; Colorado Springs, 6,632.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.1 (?) 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.; Medillin 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City 4,208.8 ft., or 1,301.1 m.; Santa 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.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 11, 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.
1:18 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			29.86	758.5	66.6	19.2	64	N			1		10			0	0	Hidden	Charnot.
Algiers			29.91	759.8	71.6	22.0	58	N			1		4			0	0	Fair	Peter.
La Calle					61.9	16.6		ESE			2		1			0	0	Clear	Kunts.
Tunis			29.90	761.7	69.8	21.0	55	E			3		0			0	0	Clear	Jacques
Sfax			30.04	762.9	73.4	23.0	52	S			4		1			0	0	Clear	Chauvey.
Saida			29.97	761.1	77.9	25.5	31	WSW			2		2			0.012	0.3	Clear	Millot.
Tebessa			29.98	761.5	70.0	21.1		NW			3		3			0	0	Fair	Colin.
Gerfville			30.00	762.1	71 8	22 1	26	SW			2		4			0	0	Clear	Buard.
Laghouat			30.03	762.8	77.0	25.0	28	W			3		3			0	0	Fair	Guyot.
Biskra			30.03	762.8	78.1	25.6	98	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			29.91	759.8	48.3	9.4	70	NE			3		10			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.03	762.7	50.4	10.2	50	NE			3		9			0	0		I. R. Observatory.
Eperies			29.90	760.9	47.1	8.4	67	W			3		10		S	0	0		Julius Mikolik.
Gratz	28.73	720.8	29.93	760.7	47.8	8.8	69	SW			4		10			0.024	0.6		Andreas Rospini.
Hermannstadt	28.30	718.9	29.70	754.4	57.0	13.9	88	WNW			2		10			0.248	6.30	Raining	Prof. Reissenberger.
Kremsmünster	28.62	726.9	29.98	761.5	45.7	7.6	52	E			3		10			0.039	1.0		Prof. C. Wagner.
Lemberg			29.92	759.9	44.2	6.8	77	NE			2		10			0.177	4.5		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.93	757.6	58.1	14.5	71	WNW			2		9ks			0	0		I. R. Hydrographic Office
Szegedin			29.81	757.1	53.6	12.0	75	N			4		10			0.006	0.15		Karl Stancel.
Trieste			29.85	758.3	57.9	14.4	49	ENE			3		2			0	0	Partly clear.	Prof. V. Farolfi.
Vienna			29.94	760.4	51.8	11.0	48	N			2		8			0	0		I. R. Central Institute.

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

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.02	762.5	59.7	15.3	84	E			2		8			0	0		Royal Observatory.

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

BRITISH SERIES.

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, 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	.....	.....	30.35	770.9	43.7	6.5	.....	ENE	8	3.6	.....	.....	2	.....	.....	0	0	Blue sky.....	William Boswell.
Ardrossan	.....	.....	30.30	769.6	59	15.0	.....	ENE	.....	.....	2	.....	6	.....	.....	.....	.....	*D. clouds.....	William McNeil.
Armagh Observatory	.....	.....	30.30	769.6	55.5	13.1	.....	ENE	8	3.6	.....	.....	3	.....	.....	.....	.....	*D. clouds.....	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs	.....	.....	30.20	767.1	54.8	12.7	.....	NE	12	5.4	.....	.....	4	.....	.....	.....	.....	*D. clouds.....	John Hartnup.
Birr Castle, (Parsonstown)	.....	.....	30.20	767.1	60.2	15.7	.....	SE	.....	.....	1	.....	1	.....	.....	.....	.....	Blue sky.....	J. Dreyer.
Bradford	.....	.....	30.23	767.8	52.1	11.2	.....	NE	.....	.....	2	.....	10	.....	.....	0	0	Overcast.....	J. McLandsborough.
Bridgetown, (Barbadoes)	.....	.....	30.00	762.0	78.5	25.8	.....	E	.....	.....	3	.....	10	.....	.....	.....	.....	Overcast.....	Sergt. J. F. Halanen, A. H. C.
Cambridge Observatory	.....	.....	30.16	766.1	59.1	15.1	.....	E	.....	.....	3	.....	7	.....	.....	.....	.....	*D. clouds.....	H. Todd.
Cardington	.....	.....	30.17	766.3	57.0	13.9	.....	E	.....	.....	3	.....	8	.....	.....	.....	.....	Overcast.....	John McLaren.
Carlisle	.....	.....	30.24	768.1	59.9	15.5	.....	E	.....	.....	5	.....	3	.....	.....	0	0	*D. clouds.....	T. Bell, for J. Carmell.
Chatham, School M. E	.....	.....	30.13	765.3	55.0	12.8	.....	NE	.....	.....	3	.....	1	.....	.....	.....	.....	Blue sky.....	Major C. N. Martin, R.E.
Dartmoor	28.72	726.9	30.12	765.0	51.6	10.9	.....	E	.....	.....	6	.....	5	.....	.....	.....	.....	*D. clouds.....	R. E. Power.
Donaghadee	.....	.....	30.28	769.1	57	13.9	.....	E	.....	.....	2	.....	2	.....	.....	.....	.....	Blue sky.....	... Mac Gowan.
Dover	.....	.....	30.10	764.5	54	12.2	.....	NE	.....	.....	4	.....	3	.....	.....	.....	.....	¼ c o ded..	J. Costello.
Eccles (near Manchester)	.....	.....	30.21	767.3	58.7	14.8	.....	NE	5.8	2.6	.....	.....	5	.....	.....	.....	.....	*D. clouds.....	Thomas Mackereth.
Falmouth Observatory	.....	.....	30.08	764.0	53.0	11.7	.....	E	24	10.7	.....	.....	1	.....	.....	.....	.....	Hazy.....	The Staff.
Fort Napier, (Natal)	27.86	707.6	30.1	764.5	72.4	22.4	.....	NE	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky	Pvt. G. Salmon, A. H. C. (ret.
Free Town, (Sierra Leone)	.....	.....	29.96	761.0	85	29.4	.....	N	.....	.....	2	.....	7	.....	.....	.....	.....	*... clouds...	
Galway, Queen's College	.....	.....	30.14	765.5	60	15.6	.....	E	.....	.....	1	.....	4	.....	.....	.....	.....	*D. clouds.....	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)	.....	.....	29.86	758.4	70.0	21.1	.....	WNW	.....	.....	2	.....	2	.....	.....	.....	.....	*D. clouds.....	Pvt. C. Aitken, A. H. C.
Glasgow Observatory	.....	.....	30.28	769.1	54.9	12.7	.....	ENE	.....	.....	2	.....	1	.....	.....	.....	.....	Fine.....	Lewis Stuart.
Great Yarmouth	.....	.....	30.19	766.8	52	11.1	.....	NE	.....	.....	4	.....	2	.....	.....	.....	.....	Blue sky.....	G. T. Watson.
Greenwich Royal Obs	.....	.....	30.14	765.5	58.7	14.8	.....	ENE	.....	.....	4	.....	2	.....	.....	.....	.....	Blue sky.....	The Staff, for G. B. Airy
Guernsey	.....	.....	30.01	762.2	54.5	12.5	.....	NE	.....	.....	4	.....	0	.....	.....	.....	.....	Blue sky.....	Dr. S. E. Hoskins.
Halifax, Moorside Obs	.....	.....	30.26	768.6	53.0	11.7	.....	E	.....	.....	2	.....	9	.....	.....	.....	.....	Fine.....	L. J. Crossley.
Helston	.....	.....	30.04	763.0	59	15.0	.....	E	.....	.....	6	.....	10	.....	.....	0	0	Fine.....	M. P. Moyle.
Holyhead	.....	.....	30.22	767.6	53	11.7	.....	NE	.....	.....	4	.....	0	.....	.....	.....	.....	Blue sky.....	John Tilston.
Kew Observatory	.....	.....	30.12	765.0	58.2	14.6	.....	ENE	28	12.5	.....	.....	5	.....	.....	.....	.....	Hazy.....	The Staff.
Kingstown	.....	.....	30.28	769.1	49	9.4	.....	E	.....	.....	4	.....	3	.....	.....	.....	.....	Blue sky.....	George Mitchell.
Leicester Museum	.....	.....	30.21	767.3	56.0	13.3	.....	NE	.....	.....	2	.....	6	.....	.....	.....	.....	*D. clouds.....	Wm. J. Harrison, F.G.S.
Malta, Mediterranean	.....	.....	29.87	758.7	68.0	20.0	.....	NW	.....	.....	1	.....	4k	.....	.....	.....	.....	.....	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	.....	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.13	765.3	76.4	24.7	.....	N	.....	.....	7	.....	7k	.....	NNE	0	0	Overcast.....	Surg. Maj. Henry.
Nottingham	.....	.....	30.24	768.1	55.2	12.9	.....	NNE	.....	.....	4	.....	2	.....	.....	.....	.....	*D. clouds.....	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.18	766.6	57.0	13.9	.....	ENE	.....	.....	4	.....	10	.....	.....	.....	.....	*D. clouds.....	Rev. Stephen Whitty.
Oxford, Radcliffe Obs	.....	.....	30.13	765.3	55	12.8	.....	NE	.....	.....	2	.....	0	.....	.....	.....	.....	Gloomy.....	J. Lucas.
Plymouth	.....	.....	30.08	764.0	58.4	14.7	.....	E	.....	.....	5	.....	5	.....	.....	.....	.....	Blue sky.....	John Merrifield.
Roche's Point	.....	.....	30.17	766.3	54	12.2	.....	ESE	.....	.....	5	.....	4	.....	.....	.....	.....	Fine.....	W. Kennedy.
Saint Ann's Head	.....	.....	30.14	765.5	57	13.9	.....	E	.....	.....	2	.....	0	.....	.....	.....	.....	*D. colnds.....	John C. Walker.
Saint Helier, Jersey	.....	.....	30.99	761.7	60.0	15.6	.....	E	.....	.....	6	.....	10	.....	.....	.....	.....	Clear.....	A. P. Amy.
Sandwick Manse, Orkneys)	.....	.....	30.36	771.1	49.5	9.7	.....	SW	8	3.6	.....	.....	10	.....	.....	.....	.....	Misty.....	Rev. C. Clouston, LL.D.
Scarborough	.....	.....	30.26	768.6	47.5	8.6	.....	NNE	.....	.....	2	.....	4	.....	.....	.....	.....	Overcast.....	F. Shaw
Scutari Cemetery Turkey	.....	.....	30.68	753.9	76.4	24.7	.....	NE	.....	.....	2	.....	8	.....	.....	0	0	D. clouds.....	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.23	767.8	52.0	11.1	.....	NNE	.....	.....	2	.....	4	.....	.....	0	0	Overcast.....	W. F. Cooper.
Silloth Rectory	.....	.....	30.25	768.3	61.0	16.1	54	E	.....	.....	4	.....	6	.....	.....	.....	.....	*D. clouds.....	Rev. Francis Redford.
Stonyhurst Observatory	.....	.....	30.22	767.6	53.7	12.1	.....	E	.....	.....	2	.....	0	.....	.....	.....	.....	*D. clouds.....	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.	.....	.....	30.31	770.6	53	11.7	.....	Calm	.....	.....	0	.....	5	.....	.....	.....	.....	Blue sky.....	John Smith.
Stratfield Turgiss	.....	.....	30.12	765.0	59.8	15.4	.....	E	.....	.....	2	.....	.....	.....	.....	.....	.....	*D. clouds.....	Rev. Charles H. Griffith.
Streatley Vicarage	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	Rev. John Slatter.
Thurso	.....	.....	30.33	770.4	54	12.2	.....	NNE	.....	.....	2	.....	4	.....	.....	.....	.....	Blue ky.....	John Trotter.
Truro, Royal Institution	.....	.....	30.10	764.5	63	17.2	.....	E	.....	.....	6	.....	4	.....	.....	.....	.....	*D. clouds.....	W. Newcombe.
Valencia Observatory	.....	.....	30.20	767.1	59.0	15.0	.....	ESE	20	8.9	.....	.....	4	.....	.....	.....	.....	*D. clouds.....	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	53	11.7	.....	E	.....	.....	2	.....	0	.....	.....	0	0	.....	Thomas Dawson.
Cape Good Hope Obs	.....	.....	30.06	763.6	74.2	23.4	52	SE	11	4.9	.....	.....	2	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Leith, Restalrig Park	.....	.....	30.35	770.9	47.0	8.3	.....	NE	.....	.....	3	.....	.....	.....	.....	0	0	Fine.....	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.08	764.0	.....	.....	.....	E	17.6	7.9	.....	.....	.....	.....	.....	0	0	.....	C. Meldrum.
Melbourne, Observatory	.....	.....	30.76	755.9	53.1	11.7	98	W	4	1.8	.....	.....	10	.....	.....	0.79	20.1	Fog and rain	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	30.32	770.1	55	12.8	.....	NE	.....	.....	3	0	0	.....	.....	0	0	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	30.37	771.4	46	7.8	.....	NE	.....	.....	4	.....	10	.....	.....	.....	.....	.....	Robert Burnet.

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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	.....	.....	30.32	770.1	45.1	7.3	55	SE	.....	.....	4	.....	1	.....	.....	.....	.....	.....	.....
Fanöe	.....	.....	30.29	769.3	51.6	10.9	51	SE	.....	.....	4	.....	5	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stykkisholm, (Iceland)	.....	.....	30.37	771.3	45.9	7.7	94	S	.....	.....	2	.....	6	.....	.....	.....	.....	.....	.....
Thorshavn, (Faröe)	.....	.....	30.45	773.4	44.6	7.0	79	NE	.....	.....	2	.....	8	.....	.....	.....	.....	.....	.....
Vestervig	.....	.....	30.31	769.9	48.2	9.0	61	ENE	.....	.....	2	.....	10	.....	.....	.....	.....	.....	.....

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

FRENCH SERIES.

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

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alengon	.....	.....	29.94	760.5	55.4	13	39	NE	.....	.....	1	2c	.....	NE	.....	0	0	Slightly cl'dy	Normal School.
Amiens	.....	.....	30.00	762.0	64.4	18.0	56	ENE	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	29.86	758.4	66.9	19.4	55	N	.....	.....	2	.....	5	.....	SW	0	0	Cloudy	Normal School.
Bar-sur-Seine	.....	.....	29.90	759.5	59.9	15.5	36	E	.....	.....	2	.....	8	.....	E	0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.87	758.7	61.5	16.4	36	E	17.0	7.6	.....	.....	8	.....	E	0	0	Very cloudy	Beaumette Observatory
Beauvais	.....	.....	30.00	761.9	57.9	14.4	26	ENE	.....	.....	3	.....	2	.....	ENE	0	0	Slightly cl'dy	Normal School.
Besançon	.....	.....	29.92	760.0	55.4	13	61	NE	.....	.....	4	.....	8	.....	NE	0	0	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	30.00	761.9	58.5	14.7	55	W	.....	.....	1	.....	..kn	.....	NW	0	0	.....	Normal School.
Bourges	.....	.....	29.92	759.9	58.6	14.8	69	NNE	.....	.....	1	.....	8	.....	NE	0	0	Very cloudy	Normal School.
Brest	.....	.....	29.90	759.4	57.4	14.1	53	NE	.....	.....	4	.....	8	.....	NE	0	0	Stormy	Naval Observatory.
Caen	.....	.....	30.05?	778.0?	56.3	13.5	76	ENE	.....	.....	2	.....	1	.....	SW	0	0	Quite clear	Normal School
Carcassonne	.....	.....	29.87	758.7	54.7	12.6	40	E	.....	.....	2	.....	10	.....	W	0	0	Covered	Normal School.
Chartres	.....	.....	29.91	759.8	61.0	16.1	.....	NE	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Clermont	.....	.....	29.86	758.5	53.4	11.9	53	N	.....	.....	2	.....	10	.....	.....	0	0	Covered	Puy de Dome Obs.
Commercy	.....	.....	29.96	761.0	54.5	12.5	41	NE	.....	.....	2	.....	2k	.....	NE	0	0	Slightly cl'dy	Normal School.
Commune de Grèasque*	.....	.....	29.91	759.8	64.6	18.1	50	NW	.....	.....	2	.....	8	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	29.85	758.3	59.9	15.5	67	N W	.....	.....	8	.....	2ks	.....	SE	0	0	Slightly cl'dy	Normal School.
Le Mans	.....	.....	29.93	760.2	59.7	15.4	34	E	.....	.....	4	.....	2	.....	E	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	29.94	759.5	53.1	11.7	83	S	.....	.....	1	.....	10	.....	.....	0	0	.....	Normal School.
Macon	.....	.....	29.98	761.5	55.8	13.2	84	Calm	.....	.....	0	.....	10	.....	.....	0	0	Covered	Normal School.
Mirecourt	.....	.....	29.92	760.0	54.1	12.3	41	N	.....	.....	4	.....	2	.....	SW	0	0	Slightly cl'dy	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	29.83	757.6	69.4	20.8	51	NW	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	29.89	759.3	58.6	14.8	30	NE	.....	.....	4	.....	2	.....	ENE	0	0	Slightly cl'dy	Normal School.
Paris Observatory	.....	.....	29.96	760.9	59.0	15.0	25	NE	.....	.....	3	.....	1	.....	.....	0	0	Almost clear	National Observatory.
Parthenay	.....	.....	29.82	757.5	54.0	12.2	83	NE	.....	.....	2	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Privas	.....	.....	29.83	757.7	63.	17.2	.....	E	.....	.....	2	.....	5	.....	NNE	0	0	Cloudy	Normal School.
La Roche-sur-Yon	.....	.....	29.66	753.3	63.7	17.6	44	NE	.....	.....	6	.....	5	.....	SW	0	0	Cloudy	Normal School.
Rochefort, Observatory	.....	.....	29.88	759.0	62.8	17.1	55	C lm	.....	.....	0	.....	10	.....	NE	0	0	Covered	Naval Observatory.
Rouen	.....	.....	29.98	761.4	64.0	17.8	27	NNE	.....	.....	2	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Saint Lo	.....	.....	30.10	764.5	57.2	14	55	E	.....	.....	2	.....	2	.....	E	0	0	.....	Normal School.
Tarbes	28.75	730.3	29.82	757.3	59.0	15	.....	NW	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School
Villefranche	.....	.....	29.98	761.4	56.3	13.5	72	N	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.97	761.1	77.0	25	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.86	758.5	67.1	19.5	46	WSW	.....	.....	2	.....	5	.....	.....	0	0	Partly cl'dy.	Marseilles Observatory
Mont-Louis	24.71	627.7	30.01	762.3	52.9	11.6	69	ESE	11.2	5.00	.....	.....	8	.....	WSW	0	0	.....	—. Faiguère.
Montsouris, Paris	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montsouris Observ'tory.
Perpignan	.....	.....	29.86	758.4	65.3	18.5	59	SE	9.3	4.17	.....	.....	3	.....	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	761.0	61.5	16.4	27	ENE	.....	.....	3	.....	0	.....	.....	0	0	.....	E. Renou.
Toulouse	.....	.....	29.78	758.9	67.6	19.8	49	SE	.....	.....	1	.....	2	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	29.91	759.6	59.7	15.4	36	NE	.....	.....	4	.....	5	.....	N	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.96	761.0	59.7	15.4	26	ENE	.....	.....	3	.....	0	.....	.....	0	0	Clear	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	29.93	760.3	57.2	14.0	89	SSE	4.0	1.8	.....	0	0	.....	.....	0 0	0 0	.....	H. Le Lec, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

Bamberg	.....	.....	29.98	761.6	53.6	12.0	39	E	.....	.....	5	.....	9	ESE	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.14	765.6	51.6	10.9	35	N	.....	.....	2	.....	6	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.12	765.0	50.2	10.1	38	NE	.....	.....	3	.....	10	.....	.....	0	0	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	29.97	761.2	55.0	12.8	34	NE	.....	.....	1	.....	9	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30. 8	764.1	56.3	13.5	28	E	.....	.....	6	.....	6	ENE	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.07	763.7	58.1	14.5	29	E	.....	.....	4	.....	5	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	28.52	724.3	29.97	761.2	47.8	8.8	56	SE	.....	.....	1	.....	.....	.....	.....	0.035	0.9	Light rain	M. Wilhelm.
Hamburg	.....	.....	30.19	766.8	48.6	9.2	55	NE	.....	.....	4	.....	0k,c8	NE	.....	0	0	Vapory	Captain F. Hegemann.
Kiel	.....	.....	30.27	768.8	46.0	7.8	56	ENE	.....	.....	5	.....	5	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg	.....	.....	30.19	766.9	42.8	6.0	67	NE	.....	.....	5	.....	5	.....	.....	0.012	0.3	.....	Prof. E. Luther
Koslin	.....	.....	30.20	767.0	45.5	7.5	.....	NE	.....	.....	1	.....	3	.....	.....	.....	0	.....	H. Müller.
Leipsic	.....	.....	30.11	764.7	53.2	11.8	36	N	.....	.....	3	.....	8	E	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	30.28	769.2	44.	6.9	52	ESE	.....	.....	6	.....	10	.....	.....	0.008	0.2	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.14	765.6	57.9	14.4	48	NE	.....	.....	2	.....	0	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.16	766.0	42.6	5.9	72	NE	.....	.....	4	.....	7	.....	.....	0.012	0.3	.....	A. Lothes.
Posen	.....	.....	30.17	766.2	48.6	9.2	49	N	.....	.....	6	.....	9	.....	.....	0	.....	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.97	761.2	54.5	12.5	37	NE	.....	.....	2	.....	10	NE	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.97	761.2	52.7	11.5	36	E	.....	.....	2	.....	8	.....	.....	0	0	.....	Prof. Schöder.
Thorn	.....	.....	30.13	765.2	48.9	9.4	49	NE	.....	.....	5	.....	8	.....	.....	0	0	.....	Dr. Hasenbalg
Treves, (Trier)	.....	.....	29.95	760.6	58.6	14.8	31	NE	.....	.....	6	.....	1	.....	.....	0	0	.....	Prof. Fiesch.
Wustrow, Naval School	.....	.....	30.21	767.4	43.9	6.6	48	NE	.....	.....	5	.....	3	.....	.....	0	0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation. The elevation of Friedrichshafen is 433.4 meters, or 1,356.3 feet. The rain-fall is observed at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			29.83	757.6	59.5	15.3	46	SE	2.5	1.1			8			0	0		
Padua			29.84	757.9	59.4	15.2	91	NE	3.1	1.1			5	W		0	0		
Vicenza			29.84	758.0	59.7	15.4	48	N	3.1	1.4			5	S		0	0		
Verona			29.82	757.4	56.8	13.8	66	E			1		5			0	0		
Bergamo	28.50	723.9	29.77	756.2	55.4	13.0	60	SE			1		9			0	0		
Domodossola																			
Milan			29.86	758.5	61.5	16.4	69	E			2		10	W		0	0		
Pavia			29.85	758.3	59.4	15.2	62	NNE			2		9	SW		0	0		
Moncalieri			29.87	758.7	54.7	12.6	81	E	0.7	0.3			9	NE		0	0		
Mondovi	27.95	709.9	29.85	758.3	51.3	10.7	80	NW			2		10			0	0		
Porto Maurizio			29.83	757.6	65.5	18.6	71	S			2		5	NE		0	0		
Genoa			29.85	758.1	62.4	16.9	61	SW	2.9	1.3			8	SW		0	0		
Piacenza			29.85	758.1	58.3	14.6	68	SE	5.6	2.5			10			0	0		
Parma			29.85	758.1	61.0	16 1	59	SE			4		3			0	0		
Bologna			29.91	759.7	60.4	15.8	37	NW			1		4	E		0.079	2.0		
Florence			29.85	758.2	65.3	18.5	48	SW			2		6	W		0	0		
Leghorn			29.85	758.2	63.0	17.2	66	WSW	4.9	2.2			4			0	0		
Siena	28.68	727.1	29.82	757.5	60.6	15.9	59	NNW	3.8	1.7			4	W		0.601	0.1		
Urbino																			
Pesaro																			
Ancona			29.86	758.4	58.6	14.8	76	NNW			4		7			0	0		
Grosseto			29.85	758.2	64.8	18.2	57	NNW			4		6	N		0	0		
Rome			29.82	757.5	68.0	20.0	60	W	11.2	5.0			3	WNW		0	0		
Naples, O. U			29.85	758.3	67.6	19.8	52	W			1		5	S		0.079	2.0		
Lecce			29.79	756.6	63.3	17.4	72	NNW	4.9	2.2			9			0.071	1.8		
Cosenza			29.89	759.3	66.9	19.4	79	NW	1.3	0.6			6			0.748	19.0		
Riposto, (Sicily)			29.95	760.6	68.4	20.2	61	SE			2		4	E		0.213	5.4		
Palermo			29.85	758.2	64.9	18.3	55	WNW	9.4	4.2			5			0	0		
Caltanissetta	27.95	709.3	29.82	757.5	60.3	15.7	59	WNW			4		10	ESE		0	0		
Sub-Series.																			
Naples, S. R			29.84	757.9	66.2	19.0	58	WSW	7.4	3.3			10	SW		0.071	1.8		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Tokio																			

NETHERLANDS' SERIES.

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

Flushing			30.11	764 8	57.2	14.0		NE			4								
Groningen			30.12	765.0	53.8	12.1		NE			4								
Helder			30.15	765.9	48.9	9.4		NE			4								
Utrecht			30.07	763.6	56.8	13.8	33	ENE			4		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

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

Bergen			30.31	769.8	51.8	11.0	77	WNW	6.7	3.0			0			0	0		
Brönö			30.40	772.2	44.2	6.8	74	N	7	3			9			0	0	Light Mist.	
Christiania			30.40	772.1	51.4	10.8	53	SE	1.6	0.7			10			0	0		
Tromsö			30.32	770.2	44.1	6.7	76	SW	2	1			10			0	0		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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,)	.....	.....	30.02	762.4	59.5	15.3	66	N	12.7	5.67	.....	.....	2	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.89	759.2	65.7	18.7	33	WNW	7.6	3.41	.....	.....	9	.....	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)	.....	.....	29.87	758.7	66.7	19.3	78	SW	10.0	4.47	.....	.....	10	.....	.....	0.020	0.5	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	29.95	760.8	61.0	16.1	57	SSW	9.8	4.4	.....	.....	7	SSW	.....	0	0	.....	The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h. 6 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	.....	.....	30.05	763.3	50.2	10.1	45	NE	9	4	.....	.....	9	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.24	768.0	37.9	3.3	88	E	11	5	.....	.....	10	.....	.....	...	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.44	773.2	46.4	8.0	36	NE	11	5	.....	.....	1	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.46	773.7	44.8	7.1	38	NE	7	3	.....	.....	0	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	30.45	773.4	46.6	8.1	59	E	7	3	.....	.....	0	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.02	762.4	42.6	5.9	87	E	9	4	.....	.....	10	.....	.....	.....	.....	Raining.....	Physical Cabinet.
Nikolaiev	.....	.....	29.96	761.0	49.6	9.8	83	ENE	18	8	.....	.....	9	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.87	758.6	65.8	18.8	70	E	9	4	.....	.....	6	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.41	772.4	43.9	6.6	49	S	9	4	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.04	763.1	46.9	8.3	57	E	34	15	.....	.....	10	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	30.41	772.5	39.6	3.9	50	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.61	726.6	29.94	760.4	80.4	26.9	41	SE	11	5	.....	.....	5	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.24	768.1	56.7	13.7	28	ESE	18	8	.....	.....	6	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.36	771.2	43.7	6.5	44	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.85	732.8	29.87	758.6	40.3	4.6	44	NNE	4	2	.....	.....	7	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.05	763.2	63.9	17.7	41	NNE	9	4	.....	.....	6	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Fuhrof.
Tashkend	28.34	719.8	29.98	761.4	60.6	20.9	56	Calm	0	0	.....	.....	10	.....	.....	.....	.....	Light rain...	Michelson.
Barnaul	.....	.....	29.68	753.8	37.8	3.2	87	N	2	1	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.49	749.0	42.8	6.0	58	NNW	3	1	.....	.....	1	.....	.....	.....	.....	.....	Marks.
Irkutsk	28.08	713.2	30.45	747.9	42.3	5.7	77	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.48	748.8	85.6	29.8	19	SW	9	4	.....	.....	1	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	34.9	1.6	96	ESE	22	10	.....	.....	10	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 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, 1,281.6 m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	29.79	756.7	70.3	21.3	41	SW	9.7	4.34	.....	1	0	NW	.....	0	0	.....	Royal Observatory.
San Fernando	.....	.....	29.92	760.0	64.2	17.9	54	WNW	7.6	3.4	.....	2	3	WSW	NW	0	0	.....	The Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight; 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	.....	.....	30.47	774.0	30.2	4.0	84	S	.....	.....	2	.....	5	.....	.....	0	0	.....	
Umea	.....	.....	30.49	774.5	44.6	7.6	74	SW	.....	.....	2	.....	1	.....	.....	0	0	.....	
Hernosand	.....	.....	30.48	774.3	45.3	7.4	59	S	.....	.....	4	.....	2	.....	.....	0	0	.....	
Stockholm	.....	.....	30.43	772.8	43.5	6.4	45	SE	.....	.....	4	.....	0	.....	.....	0	0	.....	
Wisby	.....	.....	30.48	774.1	46.8	8.2	39	E	.....	.....	6	.....	0	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.46	773.7	50.7	10.4	33	SE	7.0	3.4	.....	.....	0	.....	.....	0	0	.....	or. Hildebrandsson.

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

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0 10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather	Observer.
Geneva	28.49	723.7	29.93	760.2	50.0	10.0	70	N			2		9			3	0	Covered	The Observatory.
Zurich	28.32	719.2	29.98	761.6	45.7	7.6	81	E					10		NE	0	0	Raining	The Observatory.

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer −1.2 mm.; Thermometer, −5.9 cent.; Relative Humidity +13 per cent

NOTE.—The originals give the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople																			
Fao, (Persian Gulf)			30.28	769.2	93.2	34.0		SE			1		5						
Salonica			29.70	754.3	70.7	21.5		SE			4		5			Blank	Blank		
Valona			29.72	754.8	56.8	13.8		S			2		10					Raining	
Varna			29.74	755.5	62.6	17.0		SE			4		10						
Sub-Series.																			
Beirut, (Syria, Lee Obs'y			29.78	756.3	79.7	26.5	75	NW			2		1k		N	0	0	Fair	Prof. C. V. A. Van Dyck.

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B.			29.67	753.6	40.2	4.6	96	NE	3	1.3									Hon. J. Ferguson.
Brockville, Ontario			30.04	763.0	52	11.1		NW	10	4.5		0	0			0.02	0.5	Clear	W. R. Bigg.
*Chatham, N. B			29.77	756.1	40	4.4	98	NE	8	3.6			Fog		NE	0.24	6.1	Foggy	G. A. Blair.
Charlottetown, P. E. Island			29.74	755.4	38	3.3	94	N	5	2.2			10n			0.22	5.6	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.88	758.9	51.0	10.6	69	NW			2		1cs			0.110	2.8	Clearing	James Smith, M. A.
Dalhousie, N. B.			29.79	756.7	40.0	4.4	91	NW			1		0			0	0	Foggy	H. A. Johnson.
Esquimault, B. C.			30.16	766.1	44.3	6.8	100	N	1	0.4						0	0	Clear	W. H. Bevis.
Fredericton, N. B.			29.73	755.1	44.8	7.1	86	NE	13	5.8			10s			0.375	9.53	Raining	Prof. Harrison.
*Fort Garry, Manitoba			30.12	765.0	43	6.1	98	E	2	0.9		k	5n	NW	NW	0.03	0.8	Cloudy	James Stewart.
Goderich, Ontario			30.22	767.6	42.4	5.8	80	Calm			0	1c	1s	N		0	0	Fine	L. J. Strang, M. A.
Granton, Ontario			30.18	766.6	44	6.7		W			1					0	0	Clear	James Grant.
*Halifax, N. S.			29.70	754.4	50	10.0	96	Calm	0	0			8n			0.28	7.1	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.04	763.0	51	10.6	60	NW	15	6.7		0	0			0	0	Clear	S. Woods, M. A.
*Montreal, Quebec			29.83	757.7	45	7.2	78	N	9	4.0			10ks		N	0.29	7.4	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.96	761.0	48	8.9	62	NW	21	9.4		2cs	0	NW		0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.17	766.3	42	5.6	71	W	5	2.2		0	0			0.28	7.1	Clear	Rev. R. Mooley.
*Port Dover, Ontario			30.18	766.6	45	7.2	61	NW	18	8.0		0	0			0.07	1.8	Clear	H. Morgan.
Port Hastings, N. S.			29.70	754.4	42.3	5.7		N	16	7.2						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.19	766.8	46	7.8	59	W	12	5.4		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			29.79	756.7	39	3.9	91	N	6	2.7			1n			0.38	9.7	Light rain	Capt. Ash, R. N.
St. John, N. B.			29.75	755.6	46	7.8	96	E	2	0.9			10ks			0.280	7.11	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario			30.17	766.3	40	4.4	78	SW	2	0.9		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.16	766.1	45	7.2	53	NW	9	4.0		0	0			0.21	5.3	Clear	R. J. Cole.
Stratford, Ontario			30.20	767.1	39.8	4.3	81	W	3	1.3						0.084	2.3	Fine	C. J. Macgregor, M. A.
*Sydney, C. B.			29.69	754.1	42	5.6	97	W	4	1.8			Fog		NW	0.21	5.3	Foggy	T. C. Hill.
*Toronto, Ontario			30.14	765.5	47	8.3	57	NW	10	4.5		0	0			0.08	2.0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.18	766.6	45.4	7.4	69	W	4	1.8		0	0			Inap.	Inap.	Fine	I. Montgomery.

NOTE.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 m.

UNITED STATES SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	29.81	757.2	49	9.4	77	W	28	12.5	.....	5k	5ks	W	NW	0.87	22.1	Cloudy.	
Alpena, Mich	.....	.....	30.18	766.6	48	8.9	56	NW	8	3.6	.....	5c	0	NW	.. ..	0.01	0.3	Fair.	
Atlantic City, N. J.	.....	.....	30.08	764.0	54	12.2	55	NW	21	9.4	.....	1k	0	NW	.....	0.07	1.8	Clear.	
Augusta, Ga.	.....	.....	30.24	768.1	65	18.3	63	NE	1	0.4	.....	0	0	.....	.....	0	0	Clear.	
Baltimore, Md.	.....	.....	30.17	766.3	55	12.8	55	NW	12	5.4	.....	0	Haze	.....	.....	0.28	7.1	Clear.	
Barnegat, N. J.	.....	.....	30.04	763.0	56	13.3	57	NW	24	10.7	.....	0	0	.....	.....	0.19	4.8	Clear.	
Benton, Montana	27.44	697.0	30.24	768.1	37	2.8	90	Calm	0	0	.....	0	0	.....	.....	0.03	0.8	Clear.	
Bismarck, Dakota	28.36	720.3	30.02	762.5	46	7.8	61	N	17	7.6	.....	.....	10ks	.....	N	0	0	Cloudy.	
Boston, Mass	.....	.....	29.99	754.1	54	12.2	61	W	13	5.8	.....	8c	1k	W	W	0.09	2.3	Fair.	
Breckenridge, Minn	.....	.....	29.89	759.2	48	8.9	78	NE	14	6.3	.....	.....	10s	.....	N	0.23	5.8	Threatening	
Buffalo, N. Y.	.....	.....	30.13	765.3	40	4.4	73	SW	4	1.8	.....	0	0	.....	.....	0.12	3.0	Clear.	
Burlington, Vt.	.....	.....	29.79	756.7	44	6.7	100	NW	1	0.4	.....	.....	10n	.....	NW	0.45	11.4	Light rain	
Cairo, Ill.	.....	.....	30.17	766.3	59	15.0	54	SE	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
Cape Hatteras, N. C.	.....	.....	30.14	765.5	63	17.2	62	NE	13	5.8	.....	0	0	.....	.....	0.01	0.3	Clear.	
Cape Henry, Va.	.....	.....	30.22	767.8	58	14.4	58	NW	22	9.8	.....	0	0	.....	.....	0.19	4.8	Clear.	
Cape Lookout, N. C.	.....	.....	30.22	767.8	66	18.9	58	NE	16	7.2	.....	0	0	.....	.....	0	0	Clear.	
Cape May, N. J.	.....	.....	30.12	765.0	54	12.2	61	N	24	10.7	.....	0	0	.....	.....	0.08	2.0	Clear.	
Charleston, S. C.	.....	.....	30.21	767.3	68	20.0	51	NE	12	5.4	.....	0	0	.....	.....	0	0	Clear.	
Cheyenne, Wyoming	24.14	613.1	30.08	764.0	42	5.6	83	N	28	12.5	.....	8ks	2s	N	.....	0	0	Cloudy.	
Chicago, Ill.	.....	.....	30.16	766.1	55	12.8	50	SW	4	1.8	.....	Haze	5s	.....	.....	0	0	Fair.	
Cincinnati, Ohio	.....	.....	30.22	767.6	53	11.7	66	SE	2	0.9	.....	5c	Fog	W	.....	0	0	Fair.	
Cleveland, Ohio	.....	.....	30.23	767.8	47.2	8.4	78	W	8	3.6	.....	2c	0	W	.....	0.01	0.3	Clear.	
Colorado Springs, Col.	24.16	613.6	30.04	763.0	51	10.6	52	N	16	7.2	.....	0	0	.....	.....	0	0	Clear.	
Corsicana, Tex	.....	.....	30.14	765.5	61	16.1	77	S	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Davenport, Iowa	.....	.....	30.07	763.8	53	11.7	56	SE	16	7.2	.....	8cs	0	W	.....	0	0	Cloudy.	
Denison, Tex	.....	.....	30.12	765.0	68	20.0	69	S	14	6.3	.....	0	0	.....	.....	0	0	Clear.	
Denver, Col.	24.04	633.5	30.16	766.1	51	10.6	65	N	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Detroit, Mich	.....	.....	30.23	767.8	48	8.9	49	NW	3	1.3	.....	5ck	0	NW	.....	0	0	Fair.	
Dodge City, Kan	27.30	693.4	29.47	748.5	67	19.4	54	S	24	10.7	.....	2c	0	W	.....	0	0	Fair.	
Dubuque, Iowa	.....	.....	30.14	765.0	54	12.2	61	SE	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy.	
Duluth, Minn	.....	.....	30.09	764.3	37	2.8	80	Calm	0	0	.....	.....	10s	.....	.....	0.10	2.5	Cloudy.	
Eastport, Me	.....	.....	29.93	752.6	40	4.4	100	NE	12	5.4	.....	.....	Fog	.....	.....	0.02	0.5	Light rain	
Erie, Pa.	.....	.....	30.16	766.1	48	8.9	77	W	12	5.4	.....	2c	0	.....	.....	0.01	0.3	Clear.	
Escanaba, Mich	.....	.....	30.19	766.8	39	3.9	81	N	3	1.3	.....	.....	10s	.....	N	6	0	Cloudy.	
Fort Gibson, Indian Ter.	.....	.....	30.03	762.7	68	20.0	60	SE	10	4.5	.....	0	0	.....	.. ..	0	0	Clear.	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.82	732.0	29.92	760.0	57	13.9	53	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Fort Sully, Dakota	28.21	716.5	29.96	761.0	49	9.4	37	NW	32	14.3	.....	5k	0	NW	.....	0	0	Fair.	
Galveston, Tex	.....	.....	30.22	767.6	71	21.7	80	SE	5	2.2	.....	2ck	0	SE	.....	0	0	Fair.	
Grand Haven, Mich	.....	.....	30.20	767.1	43	6.1	83	SE	3	1.3	.....	.....	10s	.....	NW	0	0	Cloudy.	
Indianapolis, Ind	.....	.....	30.24	768.1	52	11.1	56	SE	1	0.4	.....	2cs	0	.....	.....	0	0	Fair.	
Indianola, Tex	.....	.....	30.20	767.1	71	21.7	71	S	7	3.1	.....	2k	0	S	.....	0	0	Fair.	
Jacksonville, Fla.	.....	.....	30.21	767.3	71	21.7	52	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Keokuk, Iowa	.....	.....	30.02	762.5	57	13.9	57	S	13	5.8	.....	8c	0	SW	.....	0	0	Fair.	
Key West, Fla.	.....	.....	30.14	765.5	75.0	23.9	68	NE	20	8.9	.....	.....	8s	.....	.....	0.02	0.5	Cloudy.	
Kittyhawk, N. C.	.....	.....	30.22	767.6	57	13.9	81	NE	10	4.5	.....	0	0	.....	.....	0.08	2.0	Clear.	
Knoxville, Penn	.....	.....	30.28	769.1	52	11.1	59	NE	8	3.6	.....	1c	0	NW	.....	0	0	Clear.	
La Crosse, Wis.	.....	.....	29.97	761.2	52	11.1	86	SE	12	5.4	.....	.....	10n	.....	SE	0.19	4.8	Light rain	
Leavenworth, Kan	.....	.....	29.89	759.2	64	17.8	73	S	12	5.4	.....	5k	0	W	.....	0	0	Fair.	
Lexington, Ky.	29.10	740.7	30.28	769.1	55	12.8	61	SE	6	2.7	.....	5c	0	.....	.....	0	0	Fair.	
Long Branch, N. J.	.....	.....	29.99	761.7	55	12.8	68	W	26	11.6	.....	2k	0	W	.....	0.23	5.8	Clear.	
Louisville, Ky.	.....	.....	30.26	768.6	50	10.0	86	Calm	0	0	.....	0	Fog	.....	.....	0	0	Clear.	
Lynchburg, Va.	.....	.....	30.26	768.6	58	14.4	42	W	5	2.2	.....	0	0	.....	.....	0	0	Clear.	
Malone, N. Y.	.....	.....	29.76	755.9	45	7.2	85	NW	12	5.4	.....	2c	0	N	.....	0.10	2.5	Fair.	
Manhattan, Kan.	28.71	729.2	29.82	757.4	65	18.3	73	SW	20	8.9	.....	0	0	.....	.....	0	0	Clear.	
Marquette, Mich	.....	.....	30.17	766.3	42	6.7	66	Calm	0	0	.....	.....	8s	.....	.....	0	0	Cloudy.	
Memphis, Penn	.....	.....	30.19	766.8	67	19.4	68	S	4	1.8	.....	0	Haze	.....	.....	0	0	Clear.	
Milwaukee, Wis	.....	.....	30.20	767.1	43	6.1	83	SE	6	2.7	.....	10s	Fog	W	.....	0	0	Cloudy.	
Mobile, Ala.	.....	.....	30.26	768.6	64	17.8	83	SW	2	0.9	.....	0	0	.....	.....	0	0	Clear.	
Montgomery, Ala.	.....	.....	30.26	768.6	64	17.8	81	SW	1	0.4	.....	0	Sm'e	.....	.....	0	0	Clear.	
Morgantown, W. Va.	.....	.....	30.21	767.3	58	14.4	63	S	2	0.9	.....	0	.....	.....	.....	0.24	6.1	Clear.	
Mt. Washington, N. H.	23.52	592.3	29.08	753.9	23	— 5.0	100	NW	48	21.5	.....	.....	10n	.....	NW	0.64	16.3	Heavy snow.	
Nashville, Penn	.....	.....	30.20	767.1	62	16.7	50	NE	2	0.9	.....	0	Haze	.....	.....	0	0	Clear.	
New Haven, Conn	.....	.....	29.89	759.2	57	13.9	57	W	16	7.2	.....	8k	0	NW	.....	0.10	2.5	Fair.	
New London, Conn	.....	.....	29.86	758.4	54	12.2	54	W	14	6.3	.....	5k	0	NW	.....	0.07	1.8	Fair.	
New Orleans, La	.....	.....	30.24	768.1	69	20.6	75	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Clear.	
Newport, R. I.	.....	.....	29.93	760.7	52	11.1	66	W	24	10.7	.....	5k	0	W	.....	0.03	0.8	Fair.	
New York, N. Y.	.....	.....	29.99	761.7	52	11.1	53	W	22	9.8	.....	0	0	.....	.....	0.49	12.4	Clear.	
Norfolk, Va.	.....	.....	30.23	767.8	58	14.4	41	N	16	7.2	.....	0	0	.....	.....	0.20	5.1	Clear.	
North Platte, Neb.	27.03	686.6	29.52	749.8	58	14.4	69	N	18	8.0	.....	1k	Haze	NW	.....	0	0	Fair.	
Omaha, Neb.	28.76	730.5	29.80	756.9	58	14.4	75	SE	3	1.3	.....	5c	0	W	.....	0	0	Fair.	
Oswego, N. Y.	.....	.....	30.05	763.3	41.5	5.3	87	W	19	8.5	.....	2cs, hz.	0	.....	.....	0	0	Fair.	
Pembina, Dakota	.....	.....	30.07	763.8	44	6.7	91	Calm	0	0	.....	0	5ks	.....	NW	0.53	13.5	Fair.	
Philadelphia, Penn	.....	.....	30.09	764.3	54	12.2	49	W	3	1.3	.....	0	0	.....	.....	0.18	3.3	Clear.	
Pike's Peak, Colorado	.....	.....	30.13	765.3	27	— 2.8	59	W	12	5.4	.....	5c	0	.....	.....	0	0	Fair.	
Pittsburgh, Penn	17.92	455.2	30.21	767.3	49	9.4	71	NW	6	2.7	.....	0	0	.....	.....	0.18	4.6	Clear.	
Port Huron, Mich	.....	.....	30.22	767.6	45	7.2	60	W	7	3.1	.....	2c	1s	.....	.....	0.02	0.5	Fair.	
Portland, Me.	.....	.....	29.55	750.6	47	8.3	92	W	8	3.6	.....	.....	10n	.....	W	0.74	18.8	Light rain	
Portland, Oregon	.....	.....	30.20	767.1	59	10.0	78	N	6	2.7	.....	.....	10s	.....	NW	0	0	Cloudy.	
Punta Rassa, Fla.	.....	.....	30.20	767.1	67.0	19.4	52	NE	12	5.4	.....	Haze	2s	.....	SW	0	0	Hazy.	
Rochester, N. Y.	.....	.....	30.06	763.5	48	8.9	62	W	10	4.5	.....	8k	0	NW	.....	0.03	0.8	Fair.	
Salt Lake City, Utah	25.63	651.0	29.96	761.0	54	12.2	56	Calm	0	0	.....	5k	0	SW	.....	0	0	Fair.	
Sandy Hook, N. J.	.....	.....	29.98	761.5	53	11.7	68	NW	28	12.5	.....	0	5ks	.....	NW	0.25	6.3	Fair.	
San Diego, Cal.	.....	.....	29.99	761.7	57	13.9	87	S	12	5.4	.....	.....	10s	.....	S	0	0	Cloudy.	
San Francisco, Cal.	.....	.....	29.98	761.5	50	10.0	86	SW	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy.	
Santa Fe, N. M.	.....	.....	29.84	757.9	50	10.0	32	E	6	2.7	.....	0	5s	.....	.....	0	0	Fair.	
Savannah, Ga.	23.30	591.8	30.21	767.3	68	20.0	60	N	6	2.7	.....	Haze	0	.....	.....	0	0	Clear.	
Shreveport, La.	.....	.....	30.23	767.8	69.5	17.5	86	SW	1	0.4	.....	0	0	.....	.....	0	0	Clear.	
Smithville, N. C.	.....	.....	30.21	767.3	65	18.3	64	N	10	4.5	.....	0	0	.....	.....	0	0	Clear.	
Springfield, Mass.	.....	.....	29.82	757.4	54	12.2	60	W	12	5.4	.....	8k	0	W	.....	0.50	12.7	Cloudy.	
St. Louis, Mo.	.....	.....	30.14	765.5	56	13.3	56	S	12	5.4	.....	0	0	.....	.....	0	0	Clear.	
St. Marks, Fla	.....	.....	30.23	767.8	64	17.8	73	N	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
St. Paul, Minn.	.....	.....	29.88	758.9	40.5	9.7	93	SE	16	7.2	.....	.....	10n	.....	SE	0.42	10.7	Light rain	
St. Paul's Island, Alaska	.....	.....	29.81	757.2	34	1.1	89	S	6	2.7	.....	.....	Fog	.....	.....	0.01	0.3	.....	
Thatcher's Island, Mass.	.....	.....	29.96	761.4	51	10.6	72	W	28	12.5	.....	2c	5ck	NW	NW	0.13	3.3	Clearing	
Toledo, Ohio	.....	.....	30.22	767.6	51	10.6	78	W	1	0.4	.....	5ck	Fo	W	.....	Inap.	Inap.	Fair.	
Tucson, Arizona	27.50	698.5	30.09	764.3	65	18.3	.....	S	.....	.....	.....	5c	0	W	.....	0	0	Fair.	
Tybee Island, Ga.	.....	.....	30.19	766.8	68	20.0	60	N	12	5.4	.....	0	0	.....	.....	0	0	Clear.	
Vicksburg, Miss.	.....	.....	30.26	768.6	65	18.3	83	S	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
Virginia City, M. T.	24.40	619.8	29.88	758.9	40	4.4	73	SE	2	0.9		8k	0	E		0.20	5.1	Cloudy	
Washington, D. C.			30.21	767.3	53.5	11.9	53	NW	12	5.4		Haze	0			0.18	4.6	Clear	
Wilmington, N. C			30.22	767.6	64	17.8	62	N	8	3.6		0	0			0	0	Clear	
Wood's Holl, Mass			29.80	756.9	54	12.2	93	W	18	8.0		0	0			0.07	1.8	Clear	
Wytheville, Va	27.90	708.6	30.08	764.0	48	8.9	62	Calm	0	0		0	0			0	0	Clear	
Yankton, Dakota	28.54	724.9	29.78	756.4	60	15.6	60	W	10	4.5		5cs	0	W		0	0	Fair	
Yuma, Arizona			29.85	758.2	74	23.3		SE				0	0			0	0	Clear	
SUB-SERIES.																			
Bridgetown, B'b'dos, W. I.			30.08	764.0	81	27.2	82	NE	6	2.7		5k	5ks	E		0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.08	764.0	81	27.2	82	E				5k	5k			0.27	6.9	air	L. V. Bigard.
St. Thomas, S. T., W. I																			W. S. Cameron.
Kingston, Jamaica, W. I.			30.21	767.3	79	26.1	78	Calm	0	0		2k	2s	SE		0	0		James Gall.
Santiago de Cuba, W. I.			29.84	757.9	80	26.7	74	NE	3.6	1.6		0	0			0	0	Clear	Robert Mason.
Havana, Cuba, W. I			30.07	763.8	76	24.4	86	NE	10.8	4.8			10n		NE	0.98	24.9	Light rain	Charles Hasselbrink.
St. Georges, Bermudas			30.23	767.8	76.5	24.7	79	SW	16.0	7.2		5c	1fk			0	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	29.95	760.7	69	20.6	90	S	1.0	0.4		5c	0	S		0.18	4.6	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.03	762.7	79	26.1	91	E			3		10n			0.870	22.10	Rainy	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.7			78.8	26		SE								0.239	6.08		Dr. H. Groot.
Medellin, Colombia, S. A.	25.21	640.3			67.0	19.4	78	Calm	0	0		7ck	3s			0.36	9.1	Cloudy	Thomas Herran.
St. John's, Newfoundland			29.86	758.4	56.0	13.3	87	S				10k	10s			0.02	0.5	Cloudy	John Delaney.
York Factory, B. A			29.95	760.7	35	1.7	95	SE	3	1.3			10s			0.04	1.0		J. Fortescue.
Honolulu, Oahu, H. I.																			Daniel Smith.
Makawao, Maui, H. I.	27.89	70.4	30.06	763.5	60	15.6	82	Calm	0	0		2c	0	SW		0	0	Threatening	F. L. Clarke.
MARINE SERIES.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Hibernian, N. 51° 40′, W. 8° 30′.	E	9½	30.14	765.5	53	11.7		E			5		4k			Rough		*D. clouds	Lieut F. Archer, R.N.R.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below −40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton about 2.89? ft., or 881.5 m.; Colorado Springs, 6 ?32.1 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft.. or 330.1 (?) m.; Makawao, 2,205 ft , or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City 4,268.8 ft., or 1,301.1 m.; Santa 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 consiants 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.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 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			29.80	756.8	68.5	20.3	68	N			1		3			0	0	Fair	Charnot.
Algiers			29.82	757.5	69.8	21.0	80	N			1		0			0	0	Clear	Peter.
La Calle					75.0	23.9		S			1		1			0	0	Clear	Kunts.
Tunis			29.95	760.7	80.4	26.9	52	ESE			4		0			0	0	Clear	Jacques
Sfax			30.03	762.7	75.2	24.0	67	SE			3		2			0	0	Clear	Chauvey.
Saida			29.95	760.7	86.0	30.0		S			3		2			0	0	Clear	Millot.
Tebessa			29.98	761.5	81.5	27.5		NW			3		5			0	0	Fair	Colin.
Gerlville			30.00	762.0	74.5	23.6	18	S			4		3			0	0	Fair	Buard.
Laghouat			30.05	763.3	84.2	29.0		W			2		1			0	0	Clear	Guyot.
Biskra			30.03	762.8	87.4	30.8	30	Calm			0		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			29.92	760.0	59.7	15.4	58	SW			1		5			0.039	1.0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.98	761.4	45.7	7.6	77	NE			3		10			0.039	1.0		I. R. Observatory.
Eperies			29.88	758.9	50.7	10.4	65	N			2		9		E	0	0		Julius Mikolik.
Gratz	28.71	729.2	29.91	759.6	55.4	13.0	55	SW			2		10			0.071	1.8		Andreas Rospini.
Hermannstadt	28.38	720.9	29.80	757.0	50.4	10.2	88	NW			3		10			0.809	20.55		Prof. Reissenberger.
Kremsmünster	28.57	725.7	29.91	759.8	50.4	10.2	49	E			3		5			0	0		Prof. C. Wagner.
Lemberg			29.83	757.7	45.7	7.6	94	NE			2		10			0.437	11.1		Dr. T. Stanecki.
Nyiregyhaza																			Habasuda Daniel.
Pola			29.92	759.9	57.2	14.4	70	ESE			2		8ks			0	0		I. R. Hydrographic Office
Szegedin			29.91	759.6	59.0	15.0	71	W			1		10			0	0		Karl Stancel.
Trieste			29.93	760.3	59.7	15.4	69	W			1		6			0.327	8.3	Thunderstorm	Prof. V. Farolfi.
Vienna			29.92	760.0	55.2	12.9	36	NE			1		3			0	0		I. R. Central Institute.

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

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.04	762.9	52.3	11.3	47	NE			3		4			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			30.34	770.6	46.9	8.3		ESE	11	4.9			5			0	0	Blue sky	William Boswell.
Ardrossan			30.28	769.1	53	11.7		NW			3		7					Hazy	William McNeil.
Armagh Observatory			30.28	769.1	59.0	15.0		SE	4	1.8			0					Blue sky	S. Call. for Dr. Robinson.
Bidston, Liverpool Obs			30.23	767.8	53.0	11.7		ENE	15	6.7			3					Blue sky	John Hartnup.
Birr Castle, (Parsonstown)			30.24	768.1	61.2	16.2		ESE			1		8					*D. clouds	J. Dreyer.
Bradford			30.26	768.6	52.0	11.1		E			1		4			0	0	*D. clouds	J. Mel'andsborough.
Bridgetown, (Barbadoes)			30.00	762.0	81.0	27.2		SE			6		8					Overcast	Sergt. J. F. Halanen, A.
Cambridge Observatory			30.21	767.3	53.0	11.7		ENE			3		7					*D. clouds	H. Todd. [H. C.
Cardington			30.22	767.6	56.0	13.3		E			2		2					Blue sky	John McLaren.
Carlisle			30.27	768.8	55.9	13.3		SE			1		10			0	0	Overcast	T. Bel . for J. Car mell.
Chatham, School M. E			30.17	766.3	48.5	9.2		NE			4		3					*D. clouds	Major C. N. Martin, R.E.
Dartmoor	28.70	729.0	30.21	767.3	54.0	12.2		NE			6		4					*D. clouds	R. E. Power.
Donaghadee			30.27	768.8	57	13.9		NE			2		3					*D. clouds	J. Mac Gowan.
Dover			30.13	765.3	48	8.9		ENE			5		2					¼ clouded	J. Costello.
Eccles (near Manchester)			30.24	768.1	56.5	13.6		E	5.2	2.3								Hazy	Thomas Mackereth.
Falmouth Observatory			30.14	765.5	54.3	12.4		E	18	8.0			1					Hazy	The Staff.
Fort Napier, (Natal)	27.93	709.4	30.16	766.1	66.7	19.3		E			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.05	763.3	78	25.6		W			2		9					Overcast	[tis.
Galway, Queen's College			30.17	766.3	62	16.7		NE			2		1					Blue sky	B. G. Cl re, for Prof. Cur
Gibral ar, (Mediterranean)			29.80	756.9	71.0	21.7		ESE			3		1					Blue sky	Pvt. C. Aitken, A. H. C.
Glasgow Observatory			30.27	768.8	52.0	11.1		NE			1		7					Fine	Lewis Stuart.
Great Yarmouth			30.25	767.8	48	8.9		ENE			5		4					*D. clouds	G. T. Watson.
Greenwich Royal Obs			30.18	766.6	55.3	12.9		ENE			3		1					Blue sky	The Staff, for G. B. Airy
Guernsey			30.07	763.8	54	12.2		NE			4		3					*D clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			30.28	769.1	52.6	11.4		E			2		3					*D. clouds	I. J. Crossley.
Helston			30.09	764.3	59	15.0		E			6		0			0	0	Blue sky	M. P. Moyle.
Holyhead			30.25	768.3	55	12.8		ENE			4		0					Blue sky	John Tilston.
Kew Observatory			30.18	766.6	51.0	10.6		NE	21	9.4			8					Threatening	The Staff.
Kingstown			30.29	769.4	53	11.7		E			4		6					*D. clouds	George Mitchell.
Leicester Museum			30.25	768.4	52.2	11.2		E			1		3					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.98	761.5	67.6	19.8		NE			1		2k						Sergt. F. Travis, A. H. C.
Nairn			30.25	769.1	51	10.6		E			1		2					¼ clouded	W. D. Fenny.
Nassau, (Bahamas)			30.14	765.5	71.4	21.9		E			3		1o					Raining	Surg. Maj. Henry.
Nottingham			30.26	768.6	54.2	12.3		ENE			5		3k		ENE	0	0	* clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.22	767.6	52.3	11.3		ENE			4		4					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.16	766.1	52	11.1		NE			2		4					*D. clouds	J. Lucas.
Plymouth			30.12	765.9	56.9	13.8		ENE			4		1					*D. clouds	John Merrifield.
Roche's Point			30.24	767.3	55	12.8		ESE			5		5					Fine	W. Kennedy.
Saint Ann's Head			30.19	766.8	54	12.2		EsE			2		7					*D. clouds	John C. Walker.
Saint Helier, Jersey			30.04	763.0	58.5	14.7		NE			6		0					Clear	A. P Amy.
Sandwick Manse, Orkneys)			30.36	771.1	48.5	9.2		SE	12	5.4			5					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough			30.30	769.6	46.8	8.2		ESE			2		1					*D. clouds	F. Shaw.
Scutari Cemetery Turkey			29.77	756.1	67.6	19 8		SW			2		5					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.25	768.3	54.3	12.4		SE			3		0			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			30.26	768.6	56.5	13.6	53	E			1		4			0	0	*D. clouds	Rev. Francis Redford
Stonyhurst Observatory			30.25	768.3	54.9	12.7		E			2		5					*D. clouds	Rev. S. J. Perry.
Stornoway, Lews C. Hbr.			30.28	769.1	52	11.1		NE			1		8					*D. clouds	John Smith.
Stratfield Turgiss			30.18	766.6	50.3	10.2		E			1		2					Blue sky	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			30.31	769.9	47	8.3		ESE			2		8					Overcast	John Trotter.
Truro, Royal Institution			30.13	765.3	63	17.2		E			6		4					*D. clouds	W. Newcombe.
Valencia Observatory			30.19	766.8	57.7	14.3		SW	13	5.8			10					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					53	11.7		E			2		0			0	0		Thomas Dawson.
Cape Good Hope Obs			29.96	761.0	85.4	29.7	28	WNW	10	4.5			1						The Staff, for E. J. Stone.
Leith, Restalrig Park			30.32	770.1	48.1	8.9		E			3					0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.11	764.8				E-E	8.2	3.7						0.22	5.6		C. Meldrum.
Melbourne, Observatory			30.06	763.5	48.9	9.4	66	WNW	25	11.2			1			0.58	14.7	Squally	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.28	769.1	55	12.8		NE			4	0	0			0	0		J. Youngclause.
North Unst, (Shetland Is.)			30.38	771.6	47	8.3		SW			2		10						Robert Burnet.

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 1. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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			30.22	767.6	42.3	5.7	79	SE			6		6						
Fanöe			30.24	768.0	41.7	5.4	77	ENE			6		9					Raining	
Godthaab, Greenland																			
Stykkisholm, Iceland			30.39	771.9	47.7	8.7	84	Calm			0		8						
Thorshavn, Faröe			30.41	772.3	45.7	7.6	74	NE			2		10						
Vestervig			30.22	767.6	48.6	9.2	41	ENE			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	.....	.....	29.96	761.0	55.4	13	47	NE	.....	.....	1	.....	8ck	.....	NE	0	0	Very cloudy	Normal School.
Amiens	.....	.....	30.03	762.8	61.5	16.4	67	ESE	.....	.....	3	.....	5	.....	SE	0	0	Cloudy	Normal School.
Avignon	.....	.....	29.89	759.3	64.8	18.2	67	SE	.....	.....	2	.....	5	.....	SW	0.508	12.9	Cloudy	Normal School.
Bar-sur-Seine	.....	.....	29.94	760.5	58.8	14.9	24	NE	.....	.....	2	.....	5	.....	.....	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.93	760.2	62.2	16.8	31	NE	4.9	2.2	.....	.....	8	.....	E	0	0	Very cloudy	Beaumette Observatory
Beauvais	.....	.....	30.02	762.4	58.3	14.6	24	NNE	.....	.....	3	.....	8	.....	NE	0	0	Very cloudy	Normal School.
Besançon	.....	.....	29.93	760.1	55.2	12.9	56	N	.....	.....	3	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	30.28	769.1	52.7	11.5	83	NW	.....	.....	2	.....	..n	.....	S	0	0	.....	Normal School.
Bourges	.....	.....	29.92	760.0	58.3	14.6	68	NNE	.....	.....	1	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	29.95	760.8	58.1	14.5	60	NE	.....	.....	4	.....	4k	.....	NE	0	0	.....	Naval Observatory.
Caen	.....	.....	30.662	778.7?	55.4	13	74	NE	.....	.....	6	.....	2	.....	S	0	0	Slightly cl'dy	Normal School
Carcassonne	.....	.....	29.88	759.0	61.0	16.1	60	NW	.....	.....	1	.....	5	.....	SE	0	0	Cloudy	Normal School.
Carrès	.....	.....	29.93	760.1	59.4	15.2	.....	NE	.....	.....	2	.....	6	.....	NE	0	0	Cloudy	Normal School.
Clermont	.....	.....	29.89	759.1	53.6	12.0	63	N	.....	.....	2	.....	10	.....	W	0	0	.....	Puy de Dome Obs.
Commercy	.....	.....	29.96	761.0	53.1	11.7	46	NE	.....	.....	2	.....	5k	.....	NE	0	0	Cloudy	Normal School.
Commune de Gréasque*	.....	.....	29.95	760.6	61.7	16.5	73	NW	.....	.....	2	.....	8	.....	W	0.031	0.8	.....	M. Kina.
Grenoble	.....	.....	29.87	758.6	54.5	12.5	96	SE	.....	.....	1	.....	2k8	.....	S	0	0	Slightly cl'dy	Normal School.
Le Mans	.....	.....	29.96	761.0	59.7	15.4	36	SE	.....	.....	4	.....	8	.....	SE	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	29.93	760.1	57.4	14.1	67	SW	.....	.....	1	.....	5	.....	W	0	0	.....	Normal School.
Mâcon	.....	.....	30.00	762.0	53.4	11.9	85	Calm	.....	.....	0	.....	10	.....	.....	0	0	.....	Normal School.
Mirecourt	.....	.....	29.92	760.0	51.6	10.9	28	N	.....	.....	4	.....	2	.....	S	0	0	Slightly cl'dy	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	29.91	759.8	70.5	21.4	54	S	.....	.....	2	.....	5	.....	N	0	0	Cloudy	Normal School.
Orleans	.....	.....	29.95	760.6	60.1	15.6	27	NE	.....	.....	4	.....	8	.....	NNE	0	0	Very cloudy	Normal School.
Paris Observatory	.....	.....	29.98	761.6	58.8	14.9	24	NE	.....	.....	2	.....	7	.....	ENE	0	0	.....	National Observatory.
Parthenay	.....	.....	29.92	760.0	77.0	25	65	NE	.....	.....	2	.....	5	.....	NE	0	0	Cloudy	Normal School.
Privas	.....	.....	29.84	757.8	60.4	15.8	.....	SW	.....	.....	2	.....	10	.....	SW	0.217	5.5	Covered	Normal School.
La Roche-sur-Yon	.....	.....	29.71	754.7	65.5	18.6	43	NE	.....	.....	2	.....	8	.....	W	0	0	Very cloudy	Normal School.
Rochefort, Observatory	.....	.....	29.94	760.4	66.6	19.2	46	ENE	.....	.....	3	.....	8	.....	SW	0	0	¾ Covered	Naval Observatory.
Rouen	.....	.....	30.02	762.4	59.4	15.2	44	NNE	.....	.....	2	.....	5	.....	NE	0	0	Cloudy	Normal School.
Saint Lo	.....	.....	29.74	755.3	55.2	12.9	66	E	.....	.....	2	.....	1	.....	E	0	0	.....	Normal School.
Tarbes	28.81	731.8	29.88	758.9	59.9	15.5	.....	N	.....	.....	4	.....	5	.....	E	0	0	Cloudy	Normal School
Villefranche	.....	.....	29.97	761.2	58.1	14.5	76	N	.....	.....	3	.....	8	.....	N	0	0	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.91	759.8	77.0	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.90	759.5	63.3	17.4	71	WSW	.....	.....	1–2	.....	9	.....	.....	0.047	1.20	Rainy	Marseilles Observatory.
Mont-Louis	24.74	628.3	30.05	763.3	51.4	10.8	91	ESE	18.6	8.33	.....	.....	8	.....	WSW	0	0	.....	—. Faguere.
Montsouris, Paris	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montsouris Observ'tory.
Perpignan	.....	.....	29.87	758.8	65.3	18.5	55	SE	7.4	3.33	.....	.....	2	.....	W	0	0	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.98	761.6	59.4	15.2	29	N	.....	.....	1	.....	10	.....	.....	0	0	Cloudy	E. Renou.
Toulouse	.....	.....	29.95	760.6	66.6	19.2	48	WNW	.....	.....	2	.....	4	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	29.93	760.3	64.0	17.8	30	ENE	.....	.....	2	.....	7	.....	N	0	0	.....	G. Marques.
Versailles, (near Paris)	.....	.....	29.98	761.5	59.4	15.2	29	NE	.....	.....	2	.....	9	.....	.....	0	0	Very cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	29.98	761.5	59.5	15.3	96	SSE	6.5	2.9	.....	1k	0	.....	.....	{ 0 / 0	{ 0 / 0	.....	H. Le Lec, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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	.....	.....	29.93	760.1	51.3	10.7	48	E	.....	.....	4	.....	8	E	.....	0.004	0.1	.....	Prof. T. Hoh.
Berlin	.....	.....	30.09	764.3	51.1	10.6	35	E	.....	.....	1	.....	8	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.07	763.7	48.6	9.2	42	NE	.....	.....	5	.....	10	.....	.....	0	0	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	29.93	760.1	55.0	12.8	34	NE	.....	.....	1	.....	10	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.07	763.6	49.6	9.8	56	NNE	.....	.....	2	.....	6	N	.....	0.08	0.2	.....	Dr. H. Möhl.
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.02	762.5	54.3	12.4	43	E	.....	.....	4	.....	5	.....	.....	Inap.	Inap.	.....	Physical Society.
Friedrichshafen	28.51	724.2	29.96	761.0	48.9	9.4	66	SW	.....	.....	1	.....	.....	.....	.....	0.043	1.1	Light rain	M. Wilhelm.
Hamburg	.....	.....	30.15	765.7	45.5	7.5	56	NNE	.....	.....	3	.....	10	.....	.....	0.012	0.3	Graupelnd	Captain F. Hegemann.
Kiel	.....	.....	30.17	766.4	43.9	6.6	70	N	.....	.....	2	.....	8	.....	.....	0.02	0.5	.....	Prof. G. Karsten.
Königsberg	.....	.....	30.13	765.2	48.7	9.3	57	E	.....	.....	2	.....	5	.....	.....	0.024	0.6	.....	Prof. E. Luther
Köslin	.....	.....	30.13	765.4	48.4	9.1	.....	NE	.....	.....	2	.....	4	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.07	763.6	50.9	10.5	43	NE	.....	.....	2	.....	9	.....	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	30.22	767.6	55.0	10.0	45	E	.....	.....	4	.....	10	.....	.....	0.008	0.2	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.11	764.7	49.6	9.8	60	NE	.....	.....	4	.....	2	.....	.....	0.039	1.0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.11	764.8	45.7	7.6	68	ESE	.....	.....	3	.....	10	.....	.....	0.08	0.7	.....	A. Lothes.
Posen	.....	.....	30.11	764.7	49.1	9.5	52	NE	.....	.....	7	.....	10	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.95	760.6	54.5	12.5	41	NE	.....	.....	1	.....	10	.....	N	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.93	760.2	52.7	11.5	39	NE	.....	.....	1	.....	9	.....	.....	0.008	0.2	Light rain	Prof. Schoder.
Thorn	.....	.....	30.07	763.6	49.1	9.5	54	E	.....	.....	4	.....	9	.....	.....	0.031	0.8	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.94	760.4	50.5	10.3	47	E	.....	.....	5	.....	10	.....	.....	0.024	0.6	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	30.10	764.6	46.2	7.9	76	NE	.....	.....	6	.....	6	.....	.....	0.043	1.1	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation. The elevation of Friedrichshafen is 434 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			29.01	759.8	56.7	13.7	50	SE	1.3	0.6			9			0	0		
Padua			29.91	759.6	53.8	12.1	67	NE	7.4	3.3			10	E		0.547	13.9		
Vicenza			29.88	759.0	50.7	10.4	90	NE	3.1	1.4			10	E		0.087	2.2		
Verona			29.89	759.2	55.4	13.0	87	E			2		10			0.118	3.0		
Bergamo	28.53	724.6	29.80	756.9	51.4	10.8	70	SE			4		10			0	0		
Domodossola																			
Milan			29.89	759.1	55.2	12.9	87	E			2		10	E		0.981	25.0		
Pavia			29.87	758.7	55.0	12.8	82	E			4		10			0	0		
Moncalieri			29.85	758.1	61.0	16.1	71	E	5.6	2.5			8	W		0.055	1.4		
Mondovi	27.95	709.9	29.85	758.3	57.4	14.1	76	SSE			2		10	S		0.055	1.4		
Porto Maurizio			29.93	760.3	63.9	17.7	78	SW			2		9	NE		0.059	1.5		
Genoa			29.89	759.1	59.9	15.5	81	SE	6.9	3.1			10	S		0.186	4.7		
Piacenza			29.87	758.8	53.8	12.1	87	E	7.6	3.3			10			0	0		
Parma			29.87	758.8	58.1	14.5	83	SE			4		10			0	0		
Bologna			29.90	759.4	63.0	17.2	40	ESE			1		5	N		0	0		
Florence			29.93	760.2	68.0	20.0	54	ENE			2		10	WSW		0	0		
Leghorn			29.90	759.5	67.1	19.5	56	WSW	4.3	1.9			6			0	0		
Siena	28.70	729.0	29.90	759.4	64.9	18.3	59	S	0	0			1	W		0	0		
Urbino																			
Pesaro																			
Ancona			29.92	759.9	63.3	17.4	72	SE			4		8			0	0		
Grosseto			29.95	760.7	67.6	19.8	62	ESE			4		7	S		0	0		
Rome			29.95	760.6	69.4	20.8	54	SSW	11.2	5.0			2			0	0		
Naples, O. U			30.02	762.5	70.5	21.4	54	SSW			4		4	NW		0	0		
Lecce			30.00	761.9	66.2	19.0	60	SE	7.4	3.3			8			0	0		
Cosenza			29.98	761.6	72.0	22.2	81	NW	5.6	2.5			4			0	0		
Riposto, (Sicily)			30.08	763.9	66.6	19.2	69	SSE			2		3	N		0	0		
Palermo			29.94	760.5	66.0	18.9	63	NE	4.9	2.2			0			0	0		
Caltanissetta	28.05	712.4	29.95	760.6	66.4	19.1	40	W			2		0			0	0		
Sub-Series.																			
Naples, S. R			30.02	762.5	67.6	19.8	64	SW	2.5	1.1			..cs	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.

Flushing			30.13	765.3	54.7	12.6		NE			5								
Groningen			30.11	764.7	47.8	8.8		NE			5								
Helder			30.18	766.6	46.4	8.0		NE			5								
Utrecht			30.09	764.2	51.3	10.7	40	NNE			5		5						Cloudy

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

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

Bergen			30.35	770.8	50.7	10.4	60	WNW	11.9	5.3			3			0	0		
Brönö			30.35	770.9	44.6	7.0	71	NNE	11	5			9			0	0		
Christiania			30.31	769.8	56.1	13.4	35	SW	5.8	2.6			3			0	0		
Tromsö			30.26	768.6	41.7	5.4	66	NW	2	1			10			0.134	3.4		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores,)	.....	.....	29.98	761.6	61.0	16.1	69	NE	11.4	5.11	.....	.....	3	.....	.....	0.094	2.4	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.80	757.0	77.9	25.5	21	ESE	5.6	2.50	.....	.....	1	.....	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)	.....	.....	29.65	753.2	65.8	18.8	74	S	15.1	6.73	.....	.....	10	.....	.....	0.142	3.6	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	29.84	757.8	70.9	21.6	32	NNE	3.8	1.7	.....	.....	1	.....	.....	0	0	.....	The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h. 6 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	.....	.....	30.00	762.0	42.1	5.6	86	NE	16	7	.....	.....	10	.....	.....	.....	.....	Light rain...	Astronomical Obs.
Wilna	.....	.....	30.12	765.0	46.8	8.2	62	E	4	2	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.37	771.5	49.5	9.7	36	ESE	13	6	.....	.....	6	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.41	772.4	50.5	10.3	35	SE	7	3	.....	.....	5	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	30.34	770.7	49.6	9.8	52	SE	13	6	.....	.....	0	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.84	757.9	48.0	8.9	92	NE	4	2	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet
Nikolaiev	.....	.....	29.78	756.5	63.3	17.4	80	NNE	4	2	.....	.....	9	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.74	755.3	73.9	23.3	67	S	4	2	.....	.....	3	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.41	772.3	50.9	10.5	38	SSE	4	2	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.93	760.1	57.2	14.0	38	E	40	18	.....	.....	9	.....	.....	.....	.....	Raining.	Meteorological Obs.
Archangel	.....	.....	30.28	769.1	41.5	5.3	66	W	18	8	.....	.....	9	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.51	725.0	29.87	758.8	80.1	26.7	41	SE	9	4	.....	.....	7	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.12	765.0	61.3	16.3	41	NE	18	8	.....	.....	10	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.45	773.3	46.2	7.9	46	W	4	2	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tchernischef.
Ekaterinburg	29.30	744.1	30.30	769.7	49.5	9.7	25	WNW	9	4	.....	4	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.14	765.5	66.7	19.3	20	NNE	9	4	.....	0	.....	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.47	723.2	30.12	765.0	72.7	22.6	42	NNE	13	6	.....	2	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.02	762.6	41.2	5.1	44	WNW	.....	.....	.....	0	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.65	753.1	42.8	6.0	57	WSW	4	2	.....	2	.....	.....	.....	.....	.....	.....	Marks.
Irkutsk	28.15	715.1	29.53	750.0	42.3	5.7	83	Calm	0	0	.....	10	.....	.....	.....	.....	.....	Raining.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.55	750.6	89.8	32.1	17	SW	9	4	.....	1	.....	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	33.6	0.9	94	NW	4	2	.....	.....	10	.....	.....	.....	.....	.....	

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 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, 502.0? m., or 1,642.2? 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	.....	.....	29.80	757.0	71.7	23.7	34	SW	13.5	6.05	.....	1	0	SW	.....	0	0	.....	Royal Observatory.
San Fernando	.....	.....	29.81	757.1	73.2	22.9	52	SW	0	0	.....	0	0	.....	.....	0	0	.....	The Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms; rain-fall for San Fernando from preceding to following midnight; 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	.....	.....	30.30	769.6	41.0	5.0	78	S	.....	.....	2	.....	10	.....	.....	0	0	.....	
Umea	.....	.....	30.34	770.5	46.8	8.2	57	SW	.....	.....	4	.....	9	.....	.....	0	0	.....	
Hernosand	.....	.....	30.33	770.3	46.0	7.8	38	S	.....	.....	6	.....	2	.....	.....	0	0	.....	
Stockholm	.....	.....	30.32	770.1	46.2	7.9	46	ESE	.....	.....	4	.....	0	.....	.....	0	0	.....	
Wisby	.....	.....	30.34	770.7	48.6	9.2	36	E	.....	.....	6	.....	0	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.33	770.3	54.1	12.3	26	E	7.8	3.5	.....	.....	0	.....	.....	0	0	.....	Dr. Hildebransson.

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

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28.51	724.1	29.95	760.8	47.8	8.8	84	NNE			1		10			0.185	4.7	Covered	The Observatory.
Zurich	28.29	718.6	29.95	760.7	48.2	9.0	77	E					10			0.307	7.8	Covered	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer —0.8 mm.; Thermometer, —7.2 cent.; Relative Humidity +27 per cent.

Note.—The originals give the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Constantinople																			
Fao, (Persian Gulf)			29.94	760.4	91.4	33.0		SE			1		10						
Salonica			29.89	759.2	72.1	22.3		N			2		0						
Valona			29.94	760.4	67.1	19.5		W			1		2						
Varna			29.96	761 0	62.6	17.0		W			3		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.43	757.6	81.9	27.7	74	NW			2		5c			0	0	Fair	Prof. C.V. A.Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. 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			29.92	760.0	45.8	7.7	86	NW	3	1.3									Hon. J. Ferguson.
Brockville, Ontario			30.10	764.5	45	7.2		SW	5	2.2			10s		SW	Inap.	Inap.	Light rain	W. R. Bigg.
*Chatham, N. B			29.96	761.0	46	7.8	61	NW	6	2.7		0	0			0.70	17.8	Clear	G. A. Blair.
Charlottetown P. E. Island			29.92	760.0	45	7.2	93	N	11	4.9		0	0			0.06	1.5	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			30.00	762.0	49.0	9.4	78	S			1		10s			0	0	Threatening	James Smith, M. A.
Dalhousie, N. B			29.95	760.7	45.8	7.7	65	W			1	4cs				0	0		H. A. Johnson.
Esquimault, B. C			30.00	762.0	49.3	9.6	78	W	1	0.4			10			0.02	0.5	Cloudy	W. H. Bevis.
Fredericton, N. B			30.01	762.2	45.3	7.4	76	NW	8	3.6						0.170	4.32	Fair	Prof. Harrison.
*Fort Garry, Manitoba			30.25	768.3	38	3.3	76	W	6	2.7		0	2s			0	0	Hazy	James Stewart.
Goderich, Ontario			30.05	763.3	45.7	7.6	88	Calm			0		10n			0.229	5.82	Threatening	J. J. Strang, M. A.
Granton, Ontario			30.00	762.0	43	6.1		NE			1	2cs		W		0.73	18.5	Clear	James Grant.
*Halifax, N. S.			29.95	760.7	59	10.0	65	N	9	4.0		0	0			0.03	0.8	Clear	F. Allison, M. A.
*Kingston, Ontario			30.05	763.3	43	6.1	92	Calm	0	0			10s			0.06	1.5	Cloudy	S. Woods, M. A.
*Montreal, Quebec			30.01	762.2	45	7.2	78	SW	9	4.0		Haze	Haze	SW	SW	0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.99	761.7	43	6.1	73	Calm	0	0			10n		S	0	0	Threatening	J. B. Haney.
*Parry Sound, Ontario			30.03	762.7	43	6.1	79	SW	3	1.3		2k	5ks	SW	SW	0	0	Fair	Rev. R. Mooley.
*Port Dover, Ontario			29.96	761.0	44	6.7	94	NE	14	6.3			10n		SW	0.32	8.1	Threatening	H. Morgan.
Port Hastings, N. S.			29.85	758.2	39.8	4.5		NW	20	8.9						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			29.97	761.2	45	7.2	84	N	8	3.6			10n		W	0.53	13.5	Cloudy	M. Payne.
*Quebec, Quebec			30.03	762.7	48	8.9	71	Calm	0	0			8n		N	0.06	1.5	Cloudy	Capt. Ash, R. N.
St. John, N. B.			30.02	762.5	45	7.2	84	Calm	0	0						Inap.	Inap.	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			30.02	762.5	42	5.6	74	Calm	0	0			10n			0	0	Cl udy	K. Stewart.
Stayner, Ontario			29.99	761.7	49	9.4	78	Calm	0	0		8k	0	N		0	0	Cloudy	R. J. Cole.
Stratford, Ontario			29.99	761.7	42.0	5.6	91	NE	4	1.8			10n			0.751	19.08	Cl udy	C. J. Macgregor, M. A.
*Sydney, C. B			29.77	756.1	46	7.8	71	NW	13	5.8		8k	5ks		NW	0.06	1.5	Fa r	T. C. Hill.
*Toronto, Ontario			30.00	762.0	46	7 8	87	NE	6	2.7			10n		NE	0.29	7.4	Cloudy	Magnetic Observatory.
Woodstock, Ontario			29.98	761.5	43.6	6.4	92	N	10	4.5			10s			0.53	13.5	Gloomy	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 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.	.....	.....	30.06	763.5	47	8.3	85	S	2	0.9	.....	.....	10n	.....	.....	0.10	2.5	Heavy rain.	
Alpena, Mich	.....	.....	30.03	762.7	42	5.6	91	NW	7	3.1	.....	.....	10s	.....	NW	0.16	4.1	Cloudy	
Atlantic City, N. J.	.....	.....	30.07	763.8	55	12.8	74	S	30	13.4	.....	0	Haze	.....	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.27	768.8	66	18.9	61	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Baltimore, Md.	.....	.....	30.04	763.0	58	14.4	69	SW	5	2.2	.....	5ck	5ks	W	SW	0	0	Cloudy	
Barnegat, N. J.	.....	.....	30.07	763.8	57	13.9	69	SW	21	9.4	.....	1ck	0	W	.....	0	0	Clear	
Benton, Montana	27.16	689.8	29.96	761.0	48	8.9	63	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.49	723.6	30.17	766.3	45	7.2	60	NE	5	2.2	.....	5c	Haze	NE	.....	0	0	Fair	
Boston, Mass	.....	.....	30.10	764.5	55	12.8	55	SW	2	0.9	.....	10cs	Fog	SW	.....	Inap.	Inap.	Cloudy	
Breckenridge, Minn	.....	.....	30.28	769.1	33	0.6	70	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Smoky	
Buffalo, N. Y.	.....	.....	29.89	759.2	45	7.2	92	NE	8	3.6	.....	.....	10n	.....	E	0.32	8.1	Light rain	
Burlington, Vt.	.....	.....	30.02	762.5	51	10.6	79	S	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Cairo, Ill.	.....	.....	30.14	765.5	69	20.6	61	SW	9	4.0	.....	2c	0	.....	.....	0	0	Clear	
Cape Hatteras, N. C.	.....	.....	30.21	767.3	69	20.6	65	SE	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Cape Henry, Va.	.....	.....	30.19	766.8	65	18.3	63	S	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Cape Lookout, N. C.	.....	.....	30.27	768.8	68	20.0	79	S	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Cape May, N. J.	.....	.....	30.09	764.3	56	13.3	87	SW	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Charleston, S. C.	.....	.....	30.28	769.1	63	17.2	82	E	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Cheyenne, Wyoming	24.15	613.4	30.09	764.3	41	5.0	83	SE	20	8.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Chicago, Ill	.....	.....	30.15	765.8	45	7.2	76	N	12	5.4	.....	2k	5s	N	.....	0	0	Fair	
Cincinnati, Ohio	.....	.....	29.91	759.7	71	21.7	49	SW	14	6.3	.....	5k	0	W	.....	0	0	Fair	
Cleveland, Ohio	.....	.....	29.95	760.7	43.3	6.3	76	N	16	7.2	.....	.....	10s	.....	.....	0.05	1.3	Cloudy	
Colorado Springs, Col.	24.28	616.7	30.15	765.8	45	7.2	87	SE	19	8.5	.....	.....	10s	.....	S	0.17	4.3	Cloudy	
Corsicana, Tex	.....	.....	30.16	766.1	64	17.8	83	S	6	2.7	.....	5c	0	.....	.....	0	0	Fair	
Davenport, Iowa	.....	.....	30.22	767.6	49	9.4	77	NE	8	3.6	.....	0	2ks	.....	NE	0	0	Fair	
Denison, Tex	.....	.....	30.18	766.6	69	20.6	79	S	14	6.3	.....	10c	0	.....	.....	0	0	Cloudy	
Denver, Col.	24.92	633.0	30.14	765.5	49	9.4	77	N	4	1.8	.....	.....	8s	.....	S	0.03	0.8	C earing	
Detroit, Mich	.....	.....	30.01	762.2	46	7.8	85	N	10	4.5	.....	.....	10s	.....	.....	0.29	7.4	Cloudy	
Dodge City, Kan.	27.62	701.5	29.94	760.5	48	8.9	85	N	13	5.8	.....	8c	0	.....	.....	0	0	Fair	
Dubuque, Iowa	.....	.....	30.22	767.6	49	9.4	64	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Duluth, Minn	.....	.....	30.18	766.6	47	8.3	55	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	30.00	762.0	47	8.3	76	W	4	1.8	.....	8c	0	SW	.....	0.15	3.8	Fair	
Erie, Pa.	.....	.....	29.88	758.9	44	6.7	91	NE	12	5.4	.....	.....	10s	.....	.....	0.66	16.8	Cloudy	
Escanaba, Mich	.....	.....	30.03	764.0	45	7.2	76	NW	12	5.4	.....	0	0	.....	.....	0.20	5.1	Clear	
Fort Gibson, Indian Ter.	.....	.....	30.10	764.5	71	21.7	57	SE	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.92	734.6	30.02	762.5	62	16.7	61	S	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.56	725.4	30.27	768.8	42	5.6	74	S	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.21	767.3	71	21.7	62	SE	3	1.3	.....	2c	0	W	.....	0	0	Fair	
Grand Haven, Mich.	.....	.....	30.10	764.5	48	8.9	85	NW	5	2.2	.....	2k	Sm'e	NW	.....	0.81	20.6	Fair	
Indianapolis, Ind.	.....	.....	30.09	764.0	63	17.2	78	NW	12	5.4	.....	8k	0	W	.....	0	0	Fair	
Indianola, Tex.	.....	.....	30.19	766.8	71	21.7	71	SE	8	3.6	.....	2c	0	W	.....	0	0	Fair	
Jacksonville, Fla.	.....	.....	30.25	768.3	75	23.9	76	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Keokuk, Iowa	.....	.....	30.18	766.6	50	10.0	71	NE	12	5.4	.....	.....	10s	.....	NE	0	0	Cloudy	
Key West, Fla.	.....	.....	30.11	764.3	76.0	24.4	78	NE	9	4.0	.....	1ck	0	SW	.....	0	0	Clear	
Kittyhawk, N. C.	.....	.....	30.26	768.6	66	18.9	71	SW	20	8.9	.....	0	0	.....	.....	0	0	Clear	
Knoxville, Tenn.	.....	.....	30.21	767.3	58	14.4	87	S	4	1.8	.....	0	Haze	.....	.....	0	0	Fair	
La Crosse, Wis.	.....	.....	30.23	767.8	47	8.3	85	N	4	1.8	.....	.....	10s	.....	N	0.04	1.0	Cloudy	
Leavenworth, Kan.	.....	.....	30.19	766.8	53	11.7	73	NE	10	4.5	.....	.....	10s	.....	NE	0	0	Cloudy	
Lexington, Ky.	28.99	736.3	30.06	763.5	69	20.6	58	SW	16	7.2	.....	Haze	Haze	.....	.....	0	0	Hazy	
Long Branch, N. J.	.....	.....	30.05	763.3	53	11.7	86	S	15	6.7	.....	10ck	0	SW	.....	0	0	Cloudy	
Louisville, Ky.	.....	.....	30.02	762.5	73	22.8	50	SW	16	7.2	.....	5k	Haze	SW	.....	0	0	Fair	
Lynchburg, Va.	.....	.....	30.11	764.8	66	18.9	45	S	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	29.98	761.5	48	8.9	63	SW	10	4.5	.....	.....	10s	.....	S	0	0	Cloudy	
Manhattan, Kan.	28.93	736.3	30.13	765.3	56	13.3	80	S	4	1.8	.....	5cs	0	.....	.....	0	0	Fair	
Marquette, Mich.	.....	.....	30.10	764.5	40	7.2	77	W	16	7.2	.....	0	0	.....	.....	0.14	3.6	Clear	
Memphis, Tenn.	.....	.....	30.20	767.1	70	21.1	66	SW	3	1.3	.....	0	Haze	.....	.....	0	0	Clear	
Milwaukee, Wis.	.....	.....	30.18	766.6	47	8.3	77	NW	9	4.0	.....	0	0	.....	.....	0.25	6.3	Clear	
Mobile, Ala.	.....	.....	30.25	768.3	65	18.3	83	S	4	1.8	.....	0	Sm'e	.....	.....	0	0	Clear	
Montgomery, Ala.	.....	.....	30.25	768.3	68	20.0	79	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Clear	
Morgantown, W. Va.	.....	.....	29.99	759.4	71	21.7	43	S	20	8.9	.....	0	0	.....	.....	0	0	Clear	
Mt. Washington, N. H.	23.75	603.2	30.11	764.8	23	— 5.0	86	NW	14	6.3	.....	10s	0	.....	.....	0.83	21.1	Fair	
Nashville, Tenn.	.....	.....	30.14	765.5	73	22.8	55	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
New Haven, Conn	.....	.....	30.07	763.8	53	11.1	73	Calm	0	0	.....	.....	10n	.....	.....	Ina.	Ina.	Light rain	
New London, Conn.	.....	.....	30.15	765.8	51	10.6	72	S	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy	
New Orleans, La.	.....	.....	30.24	768.1	70.5	21.4	73	W	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Newport, R. I.	.....	.....	30.14	765.5	51	10.6	72	SW	2	0.9	.....	.....	10s	.....	SW	0	0	Cloudy	
New York, N. Y.	.....	.....	30.10	764.5	55	12.8	68	SE	6	2.7	.....	0	8ks	.....	.....	0	0	Fair	
Norfolk, Va.	.....	.....	30.21	767.3	60	18.9	68	S	17	7.6	.....	0	0	.....	.....	0	0	Clear	
North Platte, Neb.	27.31	693.7	29.90	759.4	51	10.6	69	NE	2	0.9	.....	2c	Haze	.....	.....	0	0	Clear	
Omaha, Neb.	29.16	740.7	30.24	768.1	51	10.6	82	N	11	4.9	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	29.99	761.7	47	8.3	92	SE	9	4.0	.....	.....	10n	.....	S	0.20	5.1	Light rain	
Pembina, Dakota	.....	.....	30.21	767.1	38	3.3	71	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Penn	.....	.....	30.03	762.7	58	14.4	79	SW	22	9.8	.....	10k	0	SW	.....	0	0	Cloudy	
Pike's Peak, Colorado	17.88	454.1	30.10	764.5	22	— 5.6	72	W	12	5.4	.....	8cs	0	W	.....	0.11	2.8	Fair	
Pittsburgh, Penn.	.....	.....	29.92	759.4	72	22.2	45	SW	16	7.2	.....	10cs	0	W	.....	0	0	Cloudy	
Port Huron, Mich.	.....	.....	30.12	765.5	41	5.0	100	N	16	7.2	.....	.....	10s	.....	N	0.88	22.4	Thr atening	
Portland, Me.	.....	.....	30.11	764.8	49	9.4	57	W	5	2.2	.....	5k	8s	W	.....	0.05	1.3	Cloudy	
Portland, Oregon	.....	.....	30.15	765.8	48	8.9	77	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Punta Rassa, Fla.	.....	.....	30.16	766.1	70.3	21.3	79	N	10	4.5	.....	Haze	Sm'e	.....	N	0	0	Hazy	
Rochester, N. Y.	.....	.....	29.92	760.0	44	6.7	92	NE	9	4.0	.....	.....	10n	.....	SW	0.44	11.2	Light rain	
Salt Lake City, Utah	25.48	647.2	29.81	757.2	60	15.6	44	S	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Sandy Hook, N. J.	.....	.....	30.03	762.7	50	12.0	73	SE	4	1.8	.....	.....	10s	.....	SW	0	0	Threatening	
San Diego, Cal.	.....	.....	30.01	762.2	57	13.9	93	S	8	3.6	.....	.....	10n	.....	S	0.02	0.5	Light rain	
San Francisco, Cal.	.....	.....	29.95	760.7	51	10.6	86	S	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Santa Fe, N. M.	23.35	593.1	29.89	759.2	57	13.9	40	SE	14	6.3	.....	1c	2cs	SE	SE	0	0	Fair	
Savannah, Ga.	.....	.....	30.27	768.8	73	22.8	71	SE	2	0.9	.....	0	Sm'e	.....	.....	0	0	Clear	
Shreveport, La.	.....	.....	30.26	768.6	65.5	18.6	73	Calm	0	0	.....	0c	0	.....	.....	0	0	Fair	
Smithville, N. C.	.....	.....	30.27	768.8	67	19.4	90	NE	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Springfield, Mass.	.....	.....	30.13	765.3	54	10.0	77	S	4	1.8	.....	.....	10n	.....	.....	0.03	0.8	Light r in	
St. Louis, Mo.	.....	.....	30.12	765.0	60	11.6	55	NE	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
St. Marks, Fla.	.....	.....	30.25	768.3	68	20.0	79	SE	6	2.7	.....	0	0	.....	.....	0	0	Clear	
St. Paul, Minn.	.....	.....	30.21	767.3	47	8.3	85	NW	1	0.4	.....	0	0	.....	.....	0.28	7.1	Clear	
St. Paul's Island, Alaska	.....	.....	29.20	744.0	31	— 0.6	100	N	37	16.5	.....	.....	10n	.....	.....	0.33	8.4	.....	
Thatcher's Island, Mass.	.....	.....	30.10	764.5	48	8.9	71	SW	11	4.9	.....	2c	8s	NW	NW	0	0	Cloudy	
Toledo, Ohio	.....	.....	30.01	762.0	47	8.3	92	N	14	6.3	.....	.....	10s	.....	N	0	0	Cloudy	
Tucson, Arizona	27.50	698.5	30.08	764.0	66	18.9	.....	S	.....	.....	.....	5c	0	W	.....	0	0	Fair	
Tybee Island, Ga.	.....	.....	30.26	768.6	72	22.2	75	E	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Vicksburg, Miss.	.....	.....	30.27	768.8	70	21.1	77	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
Virginia City, M. T.	24.19	614.4	29.67	753.6	45	7.2	68	SE	2	0.9	...	2k	2ks	W	SW	0	0	Cloudy..	
Washington, D. C.	....	....	30.04	763.0	59	15.0	68	S	12	5.4	.....	1ck	8s	W	W	0	0	Cloudy.	
Wilmington, N. C	.....	.....	30.27	768.8	64	17.8	88	Calm	0	0	....	0	Str'e	.....	.....	0	0	Clear.	
Wood's Holl, Mass.	.....	.....	30.14	765.5	52	11.1	66	S	6	2.7	.....	.....	10s	... .	SW	0	0	Cloudy.	
Wytheville, Va.	27.82	706.6	29.93	760.2	63	17.2	52	W	6	2.7	.....	5cs	0	W	.....	0	0	Fair.	
Yankton, Dakota.	29.00	736.6	30.31	769.9	51	10.6	79	NE	1	0.4	.....	0	0	.....	.....	0	0	Clear.	
Yuma, Arizona	.....	.....	29.81	757.2	71	21.7	.....	SE	.....	.....	.....	2cs	0	S	.....	0	0	Fair..	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.07	763.8	81	27.2	82	E	4	1.8	.....	5k	5ks	NE	.....	0	0	Fair.	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	30.01	762.2	80	26.7	70	E	.....	.....	.....	2k	2k	.....	.....	0	0	air.	L. V. Bigard.
St. Thomas, S. T., W. I	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. S. Cameron.
Kingston, Jamaica, W. I.	.....	.....	30.18	766.6	79	26.1	78	Calm	0	0	.....	2c	0	SE	.....	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.83	757.7	80	26.7	74	NE	3.6	1.6	.....	4c	0	.....	.....	0	0	Fair.	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.07	763.8	77	25.0	82	NE	4.8	2.1	.....	sck,cs	5ks	.....	NE	0.51	13.0	Cloudy.	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.28	769.1	71.0	21.7	78	NE	12.0	5.4	.....	10pc	2k	NE	.....	0.08	2.0	Cloudy.	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	70	21.1	90	SE	3.0	1.3	.....	5c	5k	S	.....	0.69	17.5	Dull	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.02	762.5	78	25.6	87	E	.....	.....	2	.....	7ks	.....	.....	1.180	30.0	Cloudy.	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.03	762.7	.....	.....	77.0	25	.....	E	.....	.....	.....	.....	.....	.....	.....	0.571	14.50	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.23	640.8	.....	.....	65.0	18.3	87	NW	3	1.3	.....	6ck	3ks	.....	.....	0.21	5.3	Cloudy	Thomas Herran
St. John's, Newfoundland	.....	.....	29.65	753.1	51	10.6	65	W	.....	.....	.....	10k	10s	.....	.....	0.04	1.0	Cloudy.	John Delaney.
York Factory, B. A.	.....	.....	30.26	768.6	25	— 3.9	94	W	9	4.0	.....	2c	4s	N	.....	0.31	7.9	.....	J. Fortescue.
Honolulu, Oahu, H. I.	.....	.....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	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 Hibernian, N. 53° 25', W. 2° 59'.	.....	.....	.....	30.26	768.6	55	12.8	.....	E	.....	.....	4	.....	6k	.....	.....	Rough	.....	Hazy...	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 2.89? ft., or 881.5 m.; Colorado Springs, 6,312.1 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City 4,268.8 ft., or 1,301.1 m.; Santa Fè, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,291 8 ft., or 699.4 m; Yankton, 1,278 ft., or 389.5 m. The following constants are 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.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 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	.....	.....	29.80	757.0	68 9	20.5	71	NW	.....	.....	2	.....	2	.....	.....	0	0	Clear.....	Charnot.
Algiers	.....	.....	29.70	754.4	77 7	25.4	36	N	.....	.....	1	.....	6	.....	.....	0	0	Fair.....	Peter.
La Calle	.....	.....	.....	.....	95.0	35.5	.....	SW	.....	.....	3	.....	2	.....	.....	0	0	Clear.....	Kunts.
Tunis	.....	.....	29.82	757.3	93.6	34 2	21	W	.....	.....	3	.....	3	.....	.....	0	0	Fair.....	Jacques
Sfax	.....	.....	29.95	760.6	88.2	31.2	30	S	.....	.....	5	.....	2	.....	.....	0	0	Clear.....	Chauvey.
Saida	.....	.....	29.87	758.7	90.5	32.5	20	SSW	.....	.....	3	.....	1	.....	.....	0	0	Clear.....	Millot.
Tebessa	.....	.....	29.88	759.0	84 4	29.1	.....	S	.....	.....	4	.....	2	.....	.....	0	0	Clear.....	Colin.
Geriville	.....	.....	29.91	759.8	76.1	24.5	33	S	.....	.....	4	.....	2	.....	.....	0	0	Clear.....	Buard.
Laghouat	.....	.....	29.97	761.3	87.8	31.0	.....	S	.....	.....	3	.....	2	.....	.....	0	0	Clear.....	Guyot.
Biskra	.....	.....	29.91	759.6	90.5	32.5	.....	NE	.....	.....	3	.....	7	.....	.....	.....	.....	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	.....	.....	29.81	757.1	56.7	13.7	83	NE	.....	.....	2	.....	9	.....	.....	1.197	30.4	Raining.....	Prof. Ivan Stosir.
Buda-Pesth	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	I. R. Cen. M. I., Hungary
Cracow	.....	.....	29.95	760.7	51.8	11.0	63	W	.....	.....	1	.....	10	.....	.....	0.031	0.8	.....	I. R. Observatory.
Eperies	.....	.....	29.89	759.1	59.4	15.2	54	S	.....	.....	1	.....	6	.....	N	0	0	.....	Julius Mikolik.
Gratz	28.65	727.6	29.86	758.4	47.3	8.5	88	W	.....	.....	2	.....	10	.....	.....	0.532	13.5	.....	Andreas Rospini.
Hermannstadt	28.48	723.4	29.87	758.8	63.3	17.4	52	ESE	.....	.....	1	.....	4	.....	.....	0	0	.....	Prof. Reissenberger.
Kremsmünster	28.59	726.1	29.97	761.2	38.8	3.8	93	Calm	.....	.....	0	.....	10	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	.....	.....	29.91	759.7	48.7	9.3	65	NW	.....	.....	2	.....	5	.....	.....	0.008	0.2	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Pola	.....	.....	29.81	757.2	61.3	16.3	81	SSE	.....	.....	4	.....	9ks	.....	.....	0.066	1.67	.....	I. R. Hydrographic Office
Szegedin	.....	.....	29.88	759.0	61.0	16.1	73	W	.....	.....	1	.....	10	.....	.....	0.360	9.15	.....	Karl Stancel.
Trieste	.....	.....	29.81	757.2	58.5	14 7	88	ESE	.....	.....	1	.....	10	.....	.....	0.146	3.7	Threatening	Prof. V. Faroli.
Vienna	.....	.....	29.89	759.2	42.8	6.0	70	NE	.....	.....	1	.....	10	.....	.....	0.343	8.7	.....	I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 388.9 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	.....	.....	30.01	762.3	45.0	7.2	77	ESE	.....	.....	2	.....	10	.....	.....	0.272	6.90	.....	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	.....	.....	30.31	769.9	55.6	13.1	.....	S	13	5.8	.....	.....	4	.....	.....	0	0	Blue sky	William Boswell.
Ardrossan	.....	.....	30.35	770.9	56	13.3	.....	W	.....	.....	3	.....	1	.....	.....	.....	.....	Blue sky	William McNeil.
Armagh Observatory	.....	.....	30.37	771.4	57.7	14.3	.....	SSE	12	5.4	.....	.....	3	.....	.....	.....	.....	*D. clouds	S. Call. for Dr. Robinson.
Bidston, Liverpool Obs	.....	.....	30.33	770.4	49.3	9.6	.....	NW	14	6.3	.....	.....	4	.....	.....	.....	.....	*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)	.....	.....	30.32	770.1	58.3	14.6	.....	SE	.....	.....	1	.....	10	.....	.....	.....	.....	*D. clouds	J. Dreyer.
Bradford	.....	.....	30.32	770.1	53.4	11.9	.....	E	.....	.....	1	.....	4	.....	.....	0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	29.97	761.2	80.5	26.9	.....	NE	.....	.....	1	.....	9	.....	.....	.....	.....	Overcast	Sergt. J. F. Halanen, A. H. C.
Cambridge Observatory	.....	.....	30.26	768.6	50.0	13.3	.....	NE	.....	.....	3	.....	7	.....	.....	.....	.....	*D. clouds	H. Todd, [H. C.
Carlington	.....	.....	30.29	769.4	52.0	11.1	.....	NE	.....	.....	3	.....	6	.....	.....	.....	.....	*D. clouds	John McLaren.
Carlisle	.....	.....	30.31	769.9	58.5	14.7	.....	N	.....	.....	1	.....	1	.....	.....	0	0	Blue sky	T. Bel. for J. Carmell.
Chatham, School M. E	.....	.....	30.24	768.1	51.0	10.6	.....	NE	.....	.....	2	.....	4	.....	.....	.....	.....	*D. clouds	Major C. N. Martin, R.E.
Dartmoor	29.84	752.5	30.06	771.1	51.2	10.7	.....	NE	.....	.....	6	.....	6	.....	.....	.....	.....	*D. clouds	R. E. Power.
Donaghadee	.....	.....	30.36	771.1	56	13.3	.....	SE	.....	.....	2	.....	3	.....	.....	.....	.....	*D. clouds	J. Mac Gowan.
Dover	.....	.....	30.21	767.3	50	10.0	.....	NE	.....	.....	4	.....	3	.....	.....	.....	.....	¼ c o ded.	J. Costello.
Eccles (near Manchester.)	.....	.....	30.31	769.9	57.7	14.3	.....	NE	4.6	2.1	.....	.....	6	.....	.....	.....	.....	*D. clouds	Thomas Mackereth.
Falmouth Observatory	.....	.....	30.29	769.4	51.8	11.0	.....	SE	13	5.8	.....	.....	2	.....	.....	.....	.....	*D. clouds	The Staff.
Fort Napier, (Natal)	27.89	708.4	30.03	762.7	69.1	20.6	.....	E	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky	Pvt. G. Salmon, A. H. C. (tis.
Free Town, (Sierra Leone)	.....	.....	30.04	763.0	80	30.0	.....	N	.....	.....	2	.....	7	.....	.....	.....	.....	*D. clouds	
Galway, Queen's College	.....	.....	30.25	768.3	65	18.3	.....	N	.....	.....	1	.....	5	.....	.....	.....	.....	*D. clouds	B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)	.....	.....	29.72	754.9	72.0	22.2	.....	S	.....	.....	3	.....	9	.....	.....	.....	.....	Overcast	Pvt. C. Aitken, A. H. C.
Glasgow Observatory	.....	.....	30.31	769.9	55.2	12.9	.....	W	.....	.....	1	.....	2	.....	.....	.....	.....	Fine	Lewis Stuart.
Great Yarmouth	.....	.....	30.26	768.6	50	10.0	.....	NE	.....	.....	4	.....	3	.....	.....	.....	.....	Blue sky	G. T. Watson.
Greenwich Royal Obs	.....	.....	30.25	768.3	52.0	11.1	.....	NE	.....	.....	2	.....	6	.....	.....	.....	.....	*D. clouds	The Staff. for G. B. Airy
Guernsey	.....	.....	30.24	768.1	51	10.6	.....	NE	.....	.....	4	.....	0	.....	.....	.....	.....	Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs.	.....	.....	30.34	770.6	54.6	12.6	.....	E	.....	.....	2	.....	6	.....	.....	.....	.....	*D. clouds	L. J. Crossley.
Helston	.....	.....	30.03	763.5	58	14.4	.....	E	.....	.....	6	.....	0	.....	.....	0	0	Blue sky	M. P. Moyle.
Holyhead	.....	.....	30.34	770.6	50	10.0	.....	N	.....	.....	4	.....	0	.....	.....	.....	.....	Blue sky	John Tilston.
Kew Observatory	.....	.....	30.25	768.3	52.5	11.4	.....	ENE	17	7.6	.....	.....	7	.....	.....	.....	.....	Threatening	The Staff.
Kingstown	.....	.....	30.38	771.6	52	11.1	.....	ESE	.....	.....	4	.....	1	.....	.....	.....	.....	Blue sky	George Mitchell.
Leicester Museum	.....	.....	30.32	770.1	51.0	10.6	.....	E	.....	.....	1	.....	6	.....	.....	.....	.....	*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)	.....	.....	29.96	761.0	72.2	22.3	.....	SE	.....	.....	3	.....	2k	.....	.....	.....	.....	.....	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	30.29	769.4	60	15.6	.....	Calm	.....	.....	0	.....	2	.....	.....	.....	.....	¼ clo ded.	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.01	763.0	75.4	24.1	.....	NE	.....	.....	6	.....	8	.....	.....	Blank	Blank	D. clouds	Surg. Maj. Henry.
Nottingham	.....	.....	30.32	770.1	53.5	11.9	.....	N	.....	.....	5	.....	8k	.....	ENE	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.31	769.6	52.0	11.1	.....	NNE	.....	.....	4	.....	8	.....	.....	.....	.....	Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs	.....	.....	30.25	768.3	52	11.1	.....	NE	.....	.....	3	.....	6	.....	.....	.....	.....	*D. clouds	J. Lucas.
Plymouth	.....	.....	30.26	768.6	54	12.2	.....	NE	.....	.....	4	.....	2	.....	.....	.....	.....	*D. clouds	John Merrifield.
Roche's Point	.....	.....	30.32	770.1	57	13.9	.....	SE	.....	.....	4	.....	2	.....	.....	.....	.....	Fine	W. Kennedy.
Saint Ann's Head	.....	.....	30.32	770.1	51	10.6	.....	WNW	.....	.....	2	.....	2	.....	.....	.....	.....	Blue sky	John C. Walker.
Saint Helier, (Jersey)	.....	.....	30.22	767.6	53.2	11.8	.....	E	.....	.....	5	.....	5	.....	.....	.....	.....	½ clouded	A. P. Amy.
Sandwick Manse, Orkneys)	.....	.....	30.34	770.6	49.5	9.7	.....	SE	10	4.5	.....	.....	10	.....	.....	.....	.....	Misty	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	30.35	770.9	47.7	8.7	.....	NNE	.....	.....	2	.....	1	.....	.....	.....	.....	Blue sky	F. Shaw.
Scutari Cemetery Turkey	.....	.....	29.95	760.7	72.4	5.8	.....	NE	.....	.....	2	.....	1	.....	.....	.....	.....	Blue sky	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.34	770.6	53.6	12.0	.....	E	.....	.....	3	.....	6	.....	.....	0	0	*D. clouds	W. F. Cooper.
Silloth Rectory	.....	.....	30.31	770.6	58.1	14.5	45	SE	.....	.....	1	.....	0	.....	.....	0.045	1.14	Blue sky	Rev. Francis Redford.
Stonyhurst Observatory	.....	.....	30.31	769.9	56.0	13.3	.....	NE	.....	.....	1	.....	5	.....	.....	Blank	Blank	*D. clouds	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.	.....	.....	30.30	769.6	57	13.9	.....	NW	.....	.....	2	.....	0	.....	.....	.....	.....	Blue sky	John Smith.
Strathfield Turgiss	.....	.....	30.25	768.3	55.2	12.9	.....	NE	.....	.....	1–2	.....	5	.....	.....	.....	.....	D. clouds	Rev. Charles H. Griffith.
Streatley Vicarage	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Rev. John Slatter.
Thurso	.....	.....	30.31	769.9	51	10.6	.....	NNE	.....	.....	1	.....	9	.....	.....	.....	.....	Gloomy	John Trotter.
Truro, Royal Institution	.....	.....	30.31	769.9	60	15.6	.....	SE	.....	.....	4	.....	4	.....	.....	.....	.....	*D. clouds	W. Newcombe.
Valencia Observatory	.....	.....	30.3	769.6	57.6	14.2	.....	W	7	3.1	.....	.....	3	.....	.....	.....	.....	*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	54	12.2	.....	SE	.....	.....	2	.....	0	.....	.....	0	0	.....	Thomas Dawson.
Cape Good Hope Obs	.....	.....	29.95	760.7	62.2	16.8	82	NW	13	5.8	.....	.....	10	.....	.....	.....	.....	.....	The Staff. for E. J. Stone.
Leith, Restalrig Park	.....	.....	30.35	770.9	55.0	12.8	.....	NE	.....	.....	2	.....	.....	.....	.....	0	0	Fine	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.17	766.3	.....	.....	.....	ESE	20.1	9.0	.....	.....	.....	.....	.....	0.05	1.3	.....	C. Meldrum.
Melbourne, Observatory	.....	.....	30.50	774.7	49.1	9.5	85	WSW	13	5.8	.....	.....	6	.....	.....	0.02	0.5	Fine	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	30.32	770.1	52	11.1	.....	Calm	.....	.....	0	0	0	.....	.....	0	0	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	30.33	770.4	46	7.8	.....	N	.....	.....	4	.....	10	.....	.....	.....	.....	.....	Robert Burnet.

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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	.....	.....	30.10	764.4	47.1	8.4	65	N	.....	.....	4	.....	10	.....	.....	.....	.....	.....	.....
Fanöe	.....	.....	30.11	764.9	54.0	12.2	34	NE	.....	.....	4	.....	5	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stykkisholm, (Iceland)	.....	.....	30.32	770.2	47.7	8.7	84	S	.....	.....	2	.....	0	.....	.....	.....	.....	.....	.....
Thorshavn, (Faröe)	.....	.....	30.41	772.5	46.0	7.8	73	E	.....	.....	2	.....	10	.....	.....	.....	.....	.....	.....
Vestervig	.....	.....	30.13	765.4	53.6	12.0	39	N	.....	.....	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	.....	.....	30.13	765.3	53.0	12	24	NE	.....	.....	1	.....	5nk	.....	NE	0	0	Cloudy	Normal School.
Amiens	.....	.....	30.12	765.0	54.7	12.6	48	ESE	.....	.....	3	.....	10	.....	.....	0	0	Covered	Normal School.
Avignon	.....	.....	29.89	759.3	62.2	16.8	53	N	.....	.....	2	.....	5	.....	W	0	0	Cloudy	Normal School.
Barsur-Seine	.....	.....	30.08	764.1	45.3	7.4	56	N	.....	.....	2	.....	8	.....	.....	0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.08	764.0	52.3	11.3	43	NE	45.2	20.2	.....	.....	5	.....	E	0	0	Cloudy	Beaumette Observatory
Beauvais	.....	.....	30.15	765.8	50.7	10.4	33	NNE	.....	.....	3	...	8	.....	NNE	0	0	Very cloudy	Normal School.
Besançon	.....	.....	30.01	762.2	51.4	10.8	43	NE	.....	.....	3	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	29.97	761.3	59.5	15.3	45	W	.....	.....	4	.....	..k	.....	SE	0	0	.....	Normal School.
Bourges	.....	.....	30.04	763.1	52.5	11.4	55	NE	.....	.....	2	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	30.10	764.6	51.6	10.9	62	NE	.....	.....	5	.....	2k	.....	NE	0	0	.....	Naval Observatory.
Caen	.....	.....	30.082	779.37	52.5	11.4	74	N	.....	.....	6	.....	2	.....	S	0	0	Slightly cl'dy	Normal School.
Carcassonne	.....	.....	29.87	758.6	63.1	17.3	37	NW	.....	.....	2	.....	5	.....	SE	0.04	1.	Cloudy	Normal School.
Chartres	.....	.....	30.04	763.0	52.2	11.2	.....	NE	.....	.....	2	.....	5	.....	NE	0	0	Cloudy	Normal School.
Clermont	.....	.....	29.94	760.4	57.2	14.0	29	N	.....	.....	3	.....	2	.....	W	0	0	.....	Puy de Dome Obs.
Commercy	.....	.....	30.05	763.3	45.7	7.6	44	NNW	.....	.....	2	.....	8kn	.....	E	0	0	Very cloudy	Normal School.
Commune de Gréasque*	.....	.....	29.92	759.9	63.9	17.7	40	W	.....	.....	4	.....	8	.....	W	0.020	0.5	.....	M. Kina.
Grenoble	.....	.....	30.28	769.2	61.0	16.1	40	SE	.....	.....	4	.....	2k	.....	SE	0.069	1.75	.....	Normal School.
Le Mans	.....	.....	30.18	765.3	52.0	11.1	43	NE	.....	.....	4	.....	5	.....	NE	0	0	Cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.0	762.1	52.5	11.4	37	N	.....	.....	4	.....	1	.....	N	0	0	.....	Normal School.
Macon	.....	.....	30.08	764.0	53.8	12.1	67	W	.....	.....	2	.....	5	.....	NE	0	0	Cloudy	Normal School.
Mirecourt	.....	.....	29.98	761.6	49.5	9.7	39	NNW	.....	.....	4	.....	10	.....	SW	0	0	Covered	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Niames	.....	.....	29.91	759.8	64.8	18.2	28	N	.....	.....	2	.....	5	.....	W	0	0	Cloudy	Normal School.
Orleans	.....	.....	30.07	763.8	54.0	12.2	33	NNE	.....	.....	8	.....	2	.....	NNE	0	0	Slightly cl'dy	Normal School.
Paris Observatory	.....	.....	30.11	764.7	51.1	10.6	31	NNE	.....	.....	2	.....	5	.....	N	0	0	Cloudy	National Observatory.
Parthenay	.....	.....	29.97	761.2	63.5	17.5	76	NE	.....	.....	6	.....	1	.....	NE	0	0	Clear	Normal School.
Privas	.....	.....	29.94	760.5	59.4	15.2	.....	NW	.....	.....	2	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon	.....	.....	29.80	757.0	57.9	14.4	41	NE	.....	.....	8	.....	8	.....	SW	0	0	Very cloudy	Normal School.
Rochefort, Observatory	.....	.....	30.00	763.4	62.6	17.0	35	ENE	.....	.....	4	.....	2	.....	SW	0	0	½ covered	Naval Observatory.
Rouen	.....	.....	30.16	766.0	54.0	12.2	50	NE	.....	.....	2	.....	5	.....	NE	0	0	Cloudy	Normal School.
Saint Lo	.....	.....	29.80	759.2	48.9	9.4	66	NE	.....	.....	4	.....	6	.....	NE	0	0	.....	Normal School.
Tarbes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Villefranche	.....	.....	30.08	764.0	58.5	14.7	45	NE	.....	.....	3	.....	2	.....	N	0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.87	758.8	80.6	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchésl.
Marseilles	.....	.....	29.85	758.3	68.5	20.3	39	WNW	.....	.....	2	.....	9	.....	.....	0.008	0.20	Cloudy	Marseilles Observatory.
Mont-Louis	24.74	628.3	30.05	763.3	54.0	12.2	83	ESE	18.6	8.33	.....	.....	8	.....	SSW	0.012	0.3	.....	—. Falguère.
Montsouris, Paris	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montsouris Observ'tory.
Perpignan	.....	.....	29.89	759.3	62.6	17.0	47	S	9.3	4.17	.....	.....	6	.....	W	0	0	.....	Dr. Pines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.10	764.6	52.0	11.1	33	NNE	.....	.....	2	.....	6	.....	.....	0	0	.....	E. Renou.
Toulouse	.....	.....	29.96	760.9	61.4	18.0	36	NNW	.....	.....	2	.....	9	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.10	764.4	55.0	12.8	40	E	.....	.....	4	.....	7	.....	NNE	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.10	764.4	52.2	11.2	64	NE	.....	.....	2	.....	9	.....	.....	0	0	Very cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai	.....	.....	29.99	761.8	66.4	19.1	81	SSE	11.2	5.0	.....	.....	10	.....	.....	0 0	0 0	Misty	H. Le Lec, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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	.....	.....	29.91	759.6	45.1	7.3	93	NE	.....	.....	4	.....	10	E	.....	0.317	8.0	.....	Prof. T. Hohl.
Berlin	.....	.....	30.00	762.0	52.7	11.5	45	N	.....	.....	1	.....	9	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30. 0	762.1	53.2	11.8	58	SE.	.....	.....	2	.....	10	.....	.....	0	0	.....	Dr. P. Neumeyer.
Carlsruhe	.....	.....	29.97	761.3	50.4	10.2	61	NE	.....	.....	1	.....	10	.....	.....	0.134	3.4	.....	A. Senz.
Cassel	.....	.....	30.04	762.9	51.6	10.9	48	NNE	.....	.....	2	.....	10	NNW	.....	0.047	1.2	.....	Dr. H. Mohl
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.07	763.8	43.2	6.2	83	NE	.....	.....	1	...	10	.....	.....	0.232	5.9	Raining	Physical Society
Friedrichshafen	28.54	725.0	30.0	762.0	45.3	7.4	74	SW	.....	.....	1	.....	.....	.....	.....	0.201	5.1	Light rain	M. Wilhelm.
Hamburg	.....	.....	30.11	764.7	49.8	9.9	51	NNE	.....	.....	2	.....	9k	.....	.....	0 0.8	0.2	.....	Captain F. Hegemann.
Kiel	.....	.....	30.11	764.8	47.5	8.6	48	NNE	.....	.....	3	.....	7	.....	.....	0.055	1.4	.....	Prof. G. Karsten.
Königsberg	.....	.....	29.97	761.3	45.9	7.7	79	E	.....	.....	2	.....	9	.....	.....	0.138	3.5	.....	Prof. E. Luther
Koslin	.....	.....	30.02	762.4	41.2	6.8	...	NE	.....	.....	1	.....	4	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	29.98	761.5	52.9	11.6	42	NNE	.....	.....	2	.....	9	.....	.....	0.154	3.9	.....	Prof. Bruhns
Memel	.....	.....	30.00	762.1	43.8	8.2	74	NE	.....	.....	4	.....	10	.....	.....	0.016	0.4	.....	Reinbrecht & Skalweit
Münster	.....	.....	30.08	763.9	53.2	11.8	71	NE	.....	.....	4	.....	10	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.96	760.9	47.1	8.4	77	ENE	.....	.....	2	.....	10	.....	.....	0.118	3.0	Cloudy	A. Lothes.
Posen	.....	.....	30.01	762.3	51.8	11.0	61	NW	.....	.....	2	.....	10	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.99	761.7	51.4	10.8	36	NW	.....	.....	1	.....	9	NW	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.96	760.9	52.2	11.2	37	N	.....	.....	2	.....	6	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	29.97	761.2	49.0	9.8	68	E	.....	.....	3	.....	9	.....	W	Inap.	Inap.	.....	Dr. Hasenbalg
Trèves, (Trier)	.....	.....	29.97	761.3	46.2	7.9	60	WNW	.....	.....	5	.....	6	.....	.....	0.047	1.2	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	30.02	762.5	41.2	5.1	92	NE	.....	.....	3	.....	10	.....	.....	0	0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation. The elevation of Friedrichshafen is 413.4 meters or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Stations.																			
Udine			29.78	756.4	54.1	12.3	94	E	0.7	0.3			10			0.360	9.3		
Padua			29.77	756.2	55.2	12.9	86	ENE	5.6	2.5			9	W		0.213	5.4		
Vicenza			29.78	756.5	54.1	12.3	88	NE	1.8	0.8			10	E		0	0		
Verona			29.79	756.6	54.3	12.4	82	E			1		10			0	0		
Bergamo	28.42	721.9	29.69	754.2	52.5	11.4	88	SE			2		9			0	0		
Domodossola																			
Milan			29.78	756.5	58.1	14.5	84	E			2		9	W		0.020	0.5		
Pavia			29.78	756.5	57.2	14.0	82	NE			1		10			0.035	0.9		
Moncalieri			29.76	755.8	63.1	17.3	65	S	6.3	2.8			5	E		0	0		
Mondovi	27.86	707.5	29.76	755.9	61.2	16.2	66	NW			4		6			0	0		
Porto Maurizio			29.72	754.8	66.7	19.3	66	SW			6		7	NE		0	0		
Genoa			29.80	757.0	59.4	15.4	80	SE	4.3	1.9			10	SE		0.114	2.9		
Piacenza			29.77	756.1	61.2	16.2	75	NE	6.3	2.8			10			0	0		
Parma			29.76	755.8	63.0	17.2	59	SW			6		9			0	0		
Bologna			29.80	757.0	62.2	16.8	42	SSW			4		5	E		0.079	2.0		
Florence			29.85	758.2	67.6	19.8	78	ENE			2		10	WSW		0.197	5.0		
Leghorn			29.85	758.3	65.3	18.5	71	SSW	17.4	7.8			10			0	0		
Siena	28.05	727.8	29.85	758.2	66.2	19.0	63	WSW	2.5	1.1			9	SW		0	0		
Urbino																			
Pesaro																			
Ancona			29.85	758.2	63.3	17.4	64						10			0	0		
Grosseto			29.88	758.9	69.4	20.8	63	SSE			6		5	S		0	0		
Roma			29.93	760.1	70.5	21.4	56	SSW	11.2	5.0			2	SW		0	0		
Naples, O. P.			29.99	761.8	72.3	22.4	43	SW			2		2	S		0	0		
Lecce			29.95	760.6	73.8	23.2	42	WSW	12.5	5.6			9			0	0		
Cosenza			29.96	760.9	78.4	25.8	75	NW	2.5	1.1			0			0	0		
Riposto, (Sicily)			30.05	763.2	65.5	18.6	73	ENE			2		0			0	0		
Palermo			29.87	758.7	73.4	23.0	55	ENE	3.8	1.7			0			0	0		
Caltanissetta	28.05	712.5	29.95	760.7	68.4	20.2	40	S			4		0			0	0		
Sub-Series. Naples S. R.			29.98	761.6	70.2	21.2	46	S	2.5	1.1				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, 305 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.

Flushing			30.17	766.4	52.2	11.2		NNE			5								
Groningen			30.08	764.0	50.0	10.0		N			5								
Helder			30.19	766.8	48.2	9.0		NNE			4								
Utrecht			30.10	764.6	51.8	11.0	42	NNE			5		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

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

Bergen			30.23	767.8	48.9	9.4	66	N	9.2	4.1			8			0	0		
Brönö			30.28	769.2	44.6	7.0	57	NNE	13	6			3			0	0		
Christiania			30.13	765.4	61.0	16.1	27		1.8	0.8			4			0	0		
Tromsö			30.11	764.7	40.6	4.8	76	SW	20	9			9			0.165	4.2		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores,)	.....	.....	30.03	762.7	60.6	15.9	69	N	11.9	5.31	.....	.....	4	.....	.....	0.039	1.0	.....	Dr. J. A. N. Sampaio.
Campo Maior	.....	.....	29.65	753.0	78.8	26.0	26	SW	4.1	1.84	.....	.....	10	SSW	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)	.....	.....	29.46	748.3	63.3	17.4	70	W	14.0	6.28	.....	.....	9	.....	.....	1.161	29.6	....	Capt. D. A. da Cunha.
Lisbon	.....	.....	29.69	754.0	67.1	19.5	46	SW	9.8	4.4	.....	.....	9	SE	.....	0	0	.....	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

RUSSIAN SERIES.

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

Warsaw	.....	.....	29.03	760.3	50.5	10.3	71	N	2	1	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.91	759.8	48.2	9.0	88	E	4	2	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.11	764.9	46.4	8.0	86	S	11	5	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.22	767.5	54.0	12.2	44	ESE	13	6	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Knopio	.....	.....	30.23	767.9	53.6	12.0	54	SE	18	8	.....	.....	0	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.79	756.7	48.6	9.2	96	NW	7	3	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.97	761.3	51.3	12.4	76	WSW	18	8	.....	.....	9	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.97	761.2	57.8	19.9	69	N	4	8	.....	.....	8	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.25	768.4	58.5	14.7	87	SSE	18	2	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.86	758.4	68.9	20.5	58	SE	34	15	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.22	767.6	54.1	12.3	48	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.49	723.7	29 81	757.1	56.5	13.6	31	SSW	4	2	.....	.....	2	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.13	765.3	65.8	18.8	43	ESE	31	14	.....	.....	3	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.44	773.2	53.8	12.1	32	W	4	2	.....	.....	0	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tscherutischef.
Ekaterinburg	29.35	745.6	30.35	770.9	55.6	13.1	24	W	9	4	.....	.....	4	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.15	765.7	69.1	20.6	22	NNE	18	8	.....	.....	1	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.47	723.1	30.13	765.3	69.8	21.0	28	N	4	2	.....	.....	0	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.17	766.4	46.4	8.0	34	WSW	4	2	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniselsk	.....	.....	29.82	757.4	44.8	7.1	48	WNW	7	3	.....	.....	4	.....	.....	.....	.....	.....	Marks.
Irkutsk	28.53	724.7	29.95	760.6	35.4	1.9	69	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.78	756.4	84.4	29.1	22	SSW	9	4	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	32.2	0.1	87	Calm	0	0	.....	.....	6	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 400 meters, or 1,311.8 feet; Ekaterinburg, 275.44 m., or 1,005.2? ft.; Tashkend, in 494.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 502.0? m., or 1,942.2? ft.; Oorga, 1,281.0 m., or 4,202.8? 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	.....	.....	29.61	752.1	82.8	28.2	28	W	7.5	3 35	.....	3	0	W	.....	0	0	.....	Royal Observatory.
San Fernando	.....	.....	29.70	754.3	75.6	24.2	50	SSW	9.2	4.1	.....	2	7	SW	S	0.008	0.2	.....	The Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the weather in general terms; 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	.....	.....	30.26	768.5	46.0	7.8	59	SW	.....	.....	2	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	30.26	768.7	47.5	8.6	58	SSW	.....	.....	2	.....	8	.....	.....	0	0	.....	
Hernosand	.....	.....	30.24	768.1	46.8	8.2	39	S	.....	.....	4	.....	2	.....	.....	0	0	.....	
Stockholm	.....	.....	30.13	765.3	47.5	8.6	45	NNE	.....	.....	6	.....	5	.....	.....	0	0	.....	
Wisby	.....	.....	30.12	765.0	42.1	5.6	82	NE	.....	.....	6	.....	7	....	.....	0.020	0.5	.....	
Sub-Series.																			
Upsala	.....	.....	30.15	765.7	52.0	11.6	29	ENE	9.4	4.2	.....	.....	1	.....	E	0.039	0.99	.....	Dr. Hildebrandsson.

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

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0 10.	Clouds. Amount. Up'er 0 10.	Clouds. Amount. Low'r 0 10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28.51	724.1	29.93	760.2	56.5	13.6	36	WNW	.....	.....	3	.....	5	.....	.....	0.106	2.7	Cloudy.....	The Observatory.
Zurich	28.32	719.3	29.98	761.4	47.7	8.7	81	SE	.....	.....	.....	.....	7	.....	.....	0.181	4.6	Cloudy.....	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer —0.8 mm.; Thermometer, —2.6 cent.; Relative Humidity —21 per cent.

NOTE.—The originals give the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople	.....	.....	29.91	759.6	95.0	35.0	.....	SE	.....	.....	3	.....	3	.....	.....	.....	.....	.....	.....
Fao, (Persian Gulf)	.....	.....	29.93	760.2	75.2	24.0	.....	S	.....	.....	2	.....	5	.....	.....	.....	.....	.....	.....
Salonica	.....	.....	30.01	762.2	73.6	23.1	.....	SE	.....	.....	1	.....	0	.....	.....	.....	.....	.....	.....
Valona	.....	.....	29.93	760.2	75.2	24.0	.....	S	.....	.....	2	.....	5	.....	.....	.....	.....	.....	.....
Varna	.....	.....	30.12	765.0	73.4	23.0	.....	NW	.....	.....	3	.....	2	.....	.....	.....	.....	.....	.....
Sub-Series.																			
Beirut, (Syria, Lee Obs'y	.....	.....	29.71	754.6	84.5	31.4	51	ENE	.....	.....	1	.....	5k	.....	E	0	0	Fair	Prof. C. V. A. Van Dyck.

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B.	.....	.....	29.85	758.2	37.8	3.2	92	NE	6	2.7	.....	.....	.....	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.03	762.7	44	6.7	.....	SW	6	2.7	.....	.....	10s	.....	SW	0.02	0.5	Cloudy.....	W. R. Bigg.
*Chatham, N. B.	.....	.....	29.85	758.2	45	7.2	07	NW	1	0.4	.....	8ck	2ks	W	W	0	0	Fair.....	G. A. Blair.
Charlottetown, P. E. Island.	.....	.....	29.84	757.9	43	6.1	93	Calm	0	0	.....	.....	10s	.....	.....	0.13	3.3	Cloudy.....	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.92	760.0	44.0	6.7	96	S	.....	.....	1	.....	10n	.....	.....	0.288	7.30	Raining.....	James Smith, M. A.
Dalhousie, N. B.	.....	.....	29.89	759.2	39.0	3.9	59	S	.....	.....	1	.....	10	.....	.....	0	0	.....	H. A. Johnso
Esquimault, B. C.	.....	.....	29.99	761.7	41.1	5.1	100	W	2	0.9	.....	.....	.....	.....	.....	0.01	0.3	Clear.....	W. H. Bevis.
Fredericton, N. B.	.....	.....	29.87	758.7	45.1	7.3	84	SE	1	0.4	.....	.....	10ks	.....	.....	0.130	3.30	Fair.....	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.25	768.3	36	2.2	80	SE	5	2.2	.....	0	2s	.....	.....	0	0	Hazy.....	James Stewart.
Goderich, Ontario	.....	.....	30.25	768.3	40.1	4.5	78	NW	.....	.....	3	4k	.....	NW	.....	0	0	Fine.....	H. J. Strang, M. A.
Granton, Ontario	.....	.....	30.21	767.3	32	0.0	.....	Calm	.....	.....	0	.....	10n	.....	.....	0	0	Cloudy.....	James Grant.
*Halifax, N. S.	.....	.....	29.77	756.1	45	7.2	96	N	9	4.0	.....	.....	8n	.....	NE	0.33	8.4	Clearing.....	F. Allison, M. A.
*Kingston, Ontario	.....	.....	30.03	762.7	44	6.7	78	W	15	6.7	.....	.....	10ks	.....	W	0	0	Cloudy.....	S. Woods, M. A.
*Montreal, Quebec	.....	.....	29.91	759.7	47	8.3	83	SW	12	5.4	.....	.....	10n	.....	W	0.18	4.6	Light rain...	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.93	760.2	43	6.1	76	SW	6	2.7	.....	.....	10n	.....	W	0.10	2.5	Light rain...	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.12	765.0	39	3.9	91	W	10	4.5	.....	2k	8n	w	W	0.03	0.8	Light rain...	Rev. R. Mooley.
*Port Dover, Ontario	.....	.....	30.15	765.8	44	6.7	68	NW	14	6.3	.....	0	0	.....	.....	0	0	Clear.....	H. Morgan.
Port Hastings, N. S.	.....	.....	29.91	759.7	40.3	4.6	.....	E	6	2.7	.....	.....	.....	.....	.....	0.30	7.6	Rainy.....	P. ter Grant.
*Port Stanley, Ontario	.....	.....	30.17	766.3	46	7.8	68	NW	16	7.2	.....	0	0	.....	.....	0	0	Clear.....	M. Payne.
*Quebec, Quebec	.....	.....	29.89	759.2	50	10.0	72	SW	3	1.3	.....	0	0	.....	.....	0	0	Clear.....	Capt. Ash, R. N.
St. John, N. B.	.....	.....	29.90	759.4	43	6.1	87	Calm	0	0	.....	.....	9k	.....	.....	0.07	1.8	Cloudy.....	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.19	766.8	38	3.3	81	NW	2	0.9	.....	2k	0	N	.....	0	0	Clear.....	K. Stewart.
Stayner, Ontario	.....	.....	30.11	764 8	41	5.0	74	NW	15	6.7	.....	2k	8n	NW	N	0	0	Cloudy.....	R. J. Cole.
Stratford, Ontario	.....	.....	30.15	765.8	42 0	5.6	79	NW	14	6.3	.....	.....	.....	.....	.....	0	0	Fine.....	C. J. MacGregor, M. A.
*Sydney, C. B.	.....	.....	29.87	758.7	40	4.4	95	SE	4	1.8	.....	.....	1 n	.....	SE	0.13	3.3	Light rain...	T. C. Hill.
*Toronto, Ontario	.....	.....	30.12	765.0	46	7.8	64	NW	18	8.0	.....	2cs	0	NW	.....	0	0	Clear.....	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.15	765.8	43.6	6.4	72	NW	19	8.5	.....	0	0	.....	.....	Inap.	Inap.	Fine.....	J. Montgomery.
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NOTE.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 m.

UNITED STATES SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	29.97	761.2	52	11.1	65	W	7	3.1	.....	5k	0	W	.....	0.24	6.1	Fair	
Alpena, Mich.	.....	.....	30.21	767.3	43	6.1	66	NW	13	5.8	.....	0	0	.....	.....	0	0	Clear	
Atlantic City, N. J.	.....	.....	30.07	763.8	53	11.7	73	N	8	3.6	.....	5ck	5ks	SW	W	0.42	10.7	Cloudy	
Augusta, Ga.	.....	.....	30.07	763.8	71	21.7	60	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Baltimore, Md.	.....	.....	30.13	765.3	57	13.9	57	SW	7	3.1	.....	5k	2s	W	W	0.44	11.2	Fair	
Barnegat, N. J.	.....	.....	30.08	764.0	52	11.1	66	N	8	3.6	.....	.....	10ks	.....	W	0.12	3.0	Cloudy	
Benton, Montana	27.03	686.6	29.83	757.7	48	8.9	85	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.27	718.0	29.91	759.4	53	11.7	48	SE	5	2.2	.....	.....	10s	.....	.....	0.05	1.3	Cloudy	
Boston, Mass.	.....	.....	29.97	761.2	51	10.6	65	SW	5	2.2	.....	1cs	Haze	.....	.....	0.02	0.5	Hazy	
Breckenridge, Minn.	.....	.....	30.16	766.1	46	7.8	62	E	12	5.4	.....	8cs	0	E	.....	0	0	Cloudy	
Buffalo, N. Y.	.....	.....	30.09	764.3	46	7.8	57	NW	12	5.4	.....	1k	0	NW	.....	0	0	Clear	
Burlington, Vt.	.....	.....	29.91	759.7	50	10.0	72	S	2	0.9	.....	0	5ks	.....	.....	0.02	0.5	Fair	
Cairo, Ill.	.....	.....	30.16	766.1	61	16.1	77	W	8	3.6	.....	5k	8s	N	N	0.01	0.3	Cloudy	
Cape Hatteras, N. C.	.....	.....	29.98	761.5	70	21.1	79	SW	13	5.8	.....	2cs	Haze	.....	.....	0	0	Fair	
Cape Henry, Va.	.....	.....	30.04	762.7	65	18.3	89	NW	7	3.1	.....	5c	5ks	W	W	0.23	5.8	Cloudy	
Cape Lookout, N. C.	.....	.....	30.05	763.3	71	21.7	85	SW	12	5.4	.....	1ck	Haze	.....	.....	0	0	Fair	
Cape May, N. J.	.....	.....	30.08	764.0	55	12.8	68	NW	12	5.4	.....	.....	10s	.....	NW	0.35	8.9	Cloudy	
Charleston, S. C.	.....	.....	30.08	764.0	70	21.1	84	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Cheyenne, Wyoming	23.91	607.3	29.85	758.2	45	7.2	75	SE	4	1.8	.....	2c	8s	.....	.....	0	0	Cloudy	
Chicago, Ill.	.....	.....	30.25	768.3	50	10.0	64	N	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	30.16	766.1	55	12.8	61	E	5	2.2	.....	Haze	Sm'e	.....	E	0	0	Clear	
Cleveland, Ohio	.....	.....	30.21	767.3	48.4	9.1	65	NE	1	0.4	.....	0	Sm'e	.....	NE	0	0	Clear	
Colorado Springs, Col.	24.02	610.1	29.38	746.0	44	6.7	75	Calm	0	0	.....	.....	10s	.....	.....	0.03	0.8	Cloudy	
Corsicana, Tex.	.....	.....	30.02	762.5	60	15.6	88	SE	2	0.9	.....	2c	0	.....	.....	0	0	Clear	
Davenport, Iowa	.....	.....	30.24	768.1	54	12.2	67	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Clear	
Denison, Tex.	.....	.....	30.12	765.0	66	18.9	83	SW	8	3.6	.....	5c	0	.....	.....	0	0	Fair	
Denver, Col.	24.68	626.9	29.90	759.4	52	11.1	60	SW	2	0.9	.....	.....	10s	.....	.....	0.02	0.5	Cloudy	
Detroit, Mich.	.....	.....	30.22	767.6	48	8.9	63	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Dodge City, Kan.	27.43	696.7	29.66	753.4	60	15.6	70	SE	9	4.0	.....	8cs	0	.....	.....	0	0	Fair	
Dubuque, Iowa	.....	.....	30.24	768.1	54	12.2	67	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Duluth, Minn.	.....	.....	30.35	770.9	40	4.4	72	NE	4	1.8	.....	Haze	Haze	.....	.....	0	0	Hazy	
Eastport, Me.	.....	.....	29.84	757.9	44	6.7	84	Calm	0	0	.....	0	8s	.....	N	0.12	3.0	Clearing	
Erie, Pa.	.....	.....	30.14	765.5	47	8.3	69	W	12	5.4	.....	2k	0	.....	.....	0	0	Clear	
Escanaba, Mich.	.....	.....	30.30	769.6	41	5.0	65	N	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Fort Gibson, Indian Ter.	.....	.....	30.06	763.5	66	18.9	68	E	4	1.8	.....	5c	0	.....	.....	0	0	Fair	
Fort St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.87	733.3	29.66	761.0	62	16.7	70	Calm	0	0	.....	8cs	0	.....	.....	0	0	Fair	
Fort Sully, Dakota	28.31	719.1	29.94	760.5	56	13.3	62	SE	22	9.8	.....	.....	8s	.....	SE	0	0	Cloudy	
Galveston, Tex.	.....	.....	30.05	763.3	72	22.2	67	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Grand Haven, Mich.	.....	.....	30.27	768.8	59	10.0	71	NE	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Indianapolis, Ind.	.....	.....	30.20	767.1	54	12.2	55	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Indianola, Tex.	.....	.....	30.11	764.8	73	22.8	76	NE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Jacksonville, Fla.	.....	.....	30.04	764.0	75	23.9	75	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Keokuk, Iowa	.....	.....	30.17	766.3	55	12.8	68	NE	5	2.2	.....	5ck	0	.....	.....	0	0	Fair	
Key West, Fla.	.....	.....	30.01	762.7	76.3	24.6	76	NE	12	5.4	.....	5k	0	.....	NE	0	0	Fair	
Kittyhawk, N. C.	.....	.....	30.02	762.5	68	20.0	74	W	12	5.4	.....	2c	Haz	.....	.....	0	0	Fair	
Knoxville, Tenn.	.....	.....	30.08	764.0	62	16.7	83	SW	6	2.7	.....	1c	8ks	SW	SW	0	0	Cloudy	
La Crosse, Wis.	.....	.....	30.25	768.3	48	8.9	77	N	1	0.4	.....	Haze	Haze	.....	.....	0	0	Hazy	
Leavenworth, Kan.	.....	.....	30.12	765.0	58	14.4	75	E	6	2.7	.....	.....	10s	.....	W	0	0	Threatening	
Lexington, Ky.	29.11	739.4	30.21	767.3	60	15.6	50	N	12	5.4	.....	0	0	.....	.....	0.04	1.0	Clear	
Long Branch, N. J.	.....	.....	30.06	763.5	56	13.3	62	NW	10	4.5	.....	2k	2s	NW	NW	0.16	4.1	Fair	
Louisville, Ky.	.....	.....	29.17	766.3	57	13.9	63	N	8	3.6	.....	5k	0	NW	.....	0	0	Fair	
Lynchburg, Va.	.....	.....	30.09	764.3	64	17.8	57	NE	4	1.8	.....	10k	0	W	W	0.17	4.3	Cloudy	
Malone, N. Y.	.....	.....	29.88	758.9	45	7.2	84	SW	10	4.5	.....	.....	10n	.....	.....	0.10	2.5	Light rain	
Manhattan, Kan.	28.98	733.5	29.99	761.7	65	18.3	83	SW	8	3.6	.....	5ck	0	.....	.....	0	0	Fair	
Marquette, Mich.	.....	.....	30.36	771.1	33	3.9	81	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn.	.....	.....	30.12	765.0	68	20.0	74	Calm	0	0	.....	5cs	Haze	.....	.....	0	0	Fair	
Milwaukee, Wis.	.....	.....	30.12	770.1	44	6.7	75	NE	12	5.4	.....	0	Haze	.....	.....	0	0	Clear	
Mobile, Ala.	.....	.....	30.13	765.3	68	20.0	69	NW	6	2.7	.....	0	Sm'e	.....	.....	0	0	Clear	
Montgomery, Ala.	.....	.....	30.14	765.5	68.5	20.3	81	W	1	0.4	.....	0	Haze	.....	.....	0	0	Clear	
Morgantown, W. Va.	.....	.....	30.15	765.8	50	10.0	77	N	1	0.4	.....	.....	Fog	.....	.....	0.11	2.8	Foggy	
Mt. Washington, N. H.	23.58	598.9	29.94	760.5	25	− 3.9	100	NW	24	10.7	.....	.....	Fog	.....	.....	0.16	4.1	Foggy	
Nashville, Tenn.	.....	.....	30.07	764.8	67	19.4	79	NW	2	0.9	.....	5k	0	W	.....	0	0	Fair	
New Haven, Conn.	.....	.....	30.03	762.7	57	13.9	57	NW	4	1.8	.....	Haze	0	.....	.....	0.40	10.2	Fair	
New London, Conn.	.....	.....	30.03	762.7	55	12.8	56	NW	2	0.9	.....	Haze	0	.....	.....	0.19	4.8	Clear	
New Orleans, La.	.....	.....	30.14	765.5	72.5	22.5	69	N	6	2.7	.....	2cs	0	.....	.....	0	0	Clear	
Newport, R. I.	.....	.....	30.01	762.2	51	10.6	72	W	8	3.6	.....	0	0	.....	.....	0.11	2.8	Clear	
New York, N. Y.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.17	4.3	.....	
Norfolk, Va.	.....	.....	30.15	766.3	64	17.8	88	N	0	2.7	.....	.....	10s	.....	.....	0.15	3.8	Threatening	
North Platte, Neb.	27.07	687.6	29.59	751.8	55	12.8	80	SE	18	8.0	.....	.....	10s	.....	.....	0	0	Cloudy	
Omaha, Neb.	29.06	738.1	30.13	765.3	56	13.3	62	SE	7	3.1	.....	8c	0	W	.....	0	0	Fair	
Oswego, N. Y.	.....	.....	30.04	763.0	43.5	6.4	71	W	16	7.2	.....	0	1s	.....	.....	0.03	0.8	Clear	
Pembina, Dakota	.....	.....	30.15	765.8	42	5.6	66	SE	10	4.5	.....	5cs	Haze	.....	.....	0	0	Fair	
Philadelphia, Penn.	.....	.....	30.09	764.3	53	11.7	61	N	16	7.2	.....	10k	0	W	.....	0.11	2.8	Cloudy	
Pike's Peak, Colorado	17.75	451.6	29.99	761.7	22	− 5.6	85	W	16	7.2	.....	.....	Fog	.....	W	0.03	0.8	Foggy	
Pittsburgh, Penn.	.....	.....	30.15	765.8	45	7.2	84	N V	2	0.9	.....	.....	10ks	.....	.....	0.15	3.8	Cloudy	
Port Huron, Mich.	.....	.....	30.21	767.3	45	7.2	60	N	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Portland, Me.	.....	.....	29.93	760.2	48	8.9	77	SW	4	1.8	.....	5c	Haze	W	.....	0.03	0.8	Fair	
Portland, Oregon	.....	.....	30.08	764.0	44	6.7	84	Calm	0	0	.....	0	2s	.....	.....	0	0	Fair	
Punta Rassa, Fla.	.....	.....	30.07	763.8	70.4	21.3	95	NE	12	5.4	.....	.....	10s	.....	NE	0	0	Cloudy	
Rochester, N. Y.	.....	.....	30.01	763.0	46	7.8	61	W	18	8.0	.....	2k	0	W	.....	0.01	0.3	Clear	
Salt Lake City, Utah	25.46	646.7	29.79	756.7	55	12.8	50	E	4	1.8	.....	5c	2s	.....	.....	0	0	Fair	
Sandy Hook, N. J.	.....	.....	30.06	763.5	54	11.7	68	NW	12	5.4	.....	0	2ks	.....	W	0.25	6.3	Fair	
San Diego, Cal.	.....	.....	30.04	762.5	55	12.8	87	S	8	3.6	.....	.....	10s	.....	S	0.03	0.8	Cloudy	
San Francisco, Cal.	.....	.....	29.92	760.0	48	8.9	85	SW	16	7.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Santa Fe, N. M.	24.29	591.6	29.83	757.7	44	6.7	92	Calm	0	0	.....	2k	2s	NE	.....	0.20	5.1	Fair	
Savannah, Ga.	.....	.....	30.09	764.3	75	23.9	69	W	3	1.3	.....	0	Sm'e	.....	.....	0	0	Smoky	
Shreveport, La.	.....	.....	30.20	767.1	65	18.3	84	S	1	0.4	.....	1cs	0	SW	.....	0	0	Clear	
Smithville, N. C.	.....	.....	30.06	763.5	70	21.1	79	SW	11	4.9	.....	0	0	.....	.....	0	0	Clear	
Springfield, Mass.	.....	.....	30.01	762.2	55	12.8	61	W	4	1.8	.....	2k	0	.....	.....	0.36	9.1	Clear	
St. Louis, Mo.	.....	.....	30.20	767.1	58	14.4	53	E	8	3.6	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.11	764.8	69	20.6	75	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
St. Paul, Minn.	.....	.....	30.21	767.3	50.5	10.3	78	E	6	2.7	.....	0	0	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	29.39	746.5	28	− 2.2	76	WNW	38	17.0	.....	1c	5k	WNW	.....	0.36	9.1	.....	
Thatcher's Island, Mass.	.....	.....	29.93	760.0	49	9.4	77	W	12	5.4	.....	0	0	.....	.....	0.06	1.5	Hazy	
Toledo, Ohio	.....	.....	30.18	766.6	52	11.1	86	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Clear	
Tucson, Arizona	27.46	697.5	30.05	763.3	58	14.4	.....	S	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30.07	763.8	69	20.6	84	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Clear	
Vicksburg, Miss.	.....	.....	30.18	766.6	67.5	19.7	79	Calm	0	0	.....	5c	0	W	.....	0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Virginia City, M. T.	24.13	612.0	29.60	751.8	42	5.6	83	Calm	0	0		5c	0	W		0.03	0.8	Cloudy	
Washington, D. C.			30.13	765.3	54.5	12.5	71	N	8	3.6		Haze	8s		W	0.42	10.7	Fair	
Wilmington, N. C			30.05	763.3	71	21.7	75	SW	10	4.5		1cs	0	NW		0	0	Clear	
Wood's Holl, Mass			30.01	762.2	57	13.9	69	NW	6	2.7		0	0			0.11	2.8	Clear	
Wytheville, Va	27.75	704.8	29.87	758.7	57	13.9	87	Calm	0	0			10s		W	0.16	4.1	Threatening	
Yankton, Dakota	28.87	733.3	30.16	766.1	53	11.7	61	SE	12	5.4		5cs	0	SW		0	0	Fair	
Yuma, Arizona			29.83	757.7	65	18.3		SW				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown. B'b'dos, W. I.			30.08	764.0	82	27.8	74	NE	7	3.1		5k	5ks	NE		0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.95	760.7	78	25.6	82	E				10k	5ks			0.08	2.0	Cloudy	L. V. Bigard.
St. Thomas, S. T., W. I																			W. S. Cameron.
Kingston, Jamaica, W. I.			30.13	765.3	80	26.7	74	Calm	0	0		8c	5s	SE		0	0		James Gall.
Santiago de Cuba, W. I			29.78	756.4	80	26.7	78	SW	4.8	2.1		8ck	2s	SW	SE	0	0	Cloudy	Robert Mason.
Havana, Cuba, W. I.			30.00	762.0	80	26.7	74	NE	2.4	1.1		5k	0	NE		0	0	Fair	Charles Hasselbrink.
St. Georges, Bermudas			30.19	766.8	72.0	22.2	81	E	4.0	1.8		8, k	5k	S		0	0	Lowering	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I	27.16	689.8	29.96	761.0	68	20.0	90	SE	2.0	0.9		5c	2k	SE		0	0	Dull	C. Partridge.
Paramaribo, D. Guiana, S.A.			30.02	762.5	80	26.7	78	E			2		8ks			0	0	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.04	763.1			85.6	29.8		E								0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1			66.0	18.9	91	SW	2	0.9		4ck	5s			0.49	12.4	Cloudy	Thomas Herran.
St. John's, Newfoundland			30.15	765.8	47.0	8.3	55	SE				2c	5s			.0	0	air	John Delaney.
York Factory, B. A.			30.37	771.4	26	— 3.3	94	W	3	1.3		0	0s		NE	0	0		J. Fortescue.
Honolulu, Oahu, H. I.																			Daniel Smith.
Makawao, Maui, H. I.	27.89	708.4	30.06	763.5	59	15.0	76	Calm	0	0		0	0			0	0	Clear	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.
Steamer Hibernian, N. 53° 25′, W. 2° 59′.			30.28	769.1	58	14.4		NW			4		5k			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.; Colorado Springs, 6,032.1 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,802.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; 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.

Collated at the Office of the Chief Signal Officer of the Army, Washington, D. C.

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 14, 1876.

7:35 A. M. WASHINGTON mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours	.....	.....	29.84	757.8	69.3	20.7	80	NW	.....	.....	2	.....	3	.....	.....	0.362	9.2	Fair	Charnot.
Algiers	.....	.....	29.80	756.9	75.2	24.0	43	W	.....	.....	4	.....	7	.....	.....	Inap.	Inap.	Fair	Peter.
La Calle	.....	.....	.....	.....	71.1	21.7	.....	NW	.....	.....	3	.....	0	.....	.....	0	0	Clear	Kuntz.
Tunis	.....	.....	29.79	756.7	97.2	36.2	7	W	.....	.....	5	.....	3	.....	.....	0	0	Fair	Jacques.
Sfax	.....	.....	29.89	759.2	81.0	27.2	48	S	.....	.....	5	.....	5	.....	.....	0	0	Fair	Chauvey.
Saida	.....	.....	29.86	758.4	70.7	21.5	46	SSW	.....	.....	2	.....	3	.....	.....	0	0	Fair	Millot.
Tebessa	.....	.....	29.80	757.0	85.6	29.8	.....	SSW	.....	.....	5	.....	0	.....	.....	0	0	Clear	Colin.
Geriville	.....	.....	29.89	759.3	63.7	17.6	52	NNW	.....	.....	1	.....	2	.....	.....	0	0	Clear	Buard.
Lagouat	.....	.....	29.89	759.2	80.6	27.0	27	SW	.....	.....	3	.....	2	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	29.79	756.7	92.8	33.8	.....	NW	.....	.....	3	.....	7	.....	.....	0	0	Cloudy	Laromer.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

AUSTRIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram	.....	.....	29.91	759.6	41.5	5.3	91	SW	.....	.....	2	.....	10	.....	.....	0.038	16.2	Raining	Prof. Ivan Stozir.
Buda-Pesth	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	I. R. Cen. M. I., Hungary.
Cracow, I. R. Observatory	.....	.....	29.86	758.5	46.0	7.8	75	W	.....	.....	3	.....	10	.....	.....	0.201	5.1	.....	Dr. Wierzbiski.
Eperies	.....	.....	29.78	756.5	52.2	11.2	94	S	.....	.....	1	.....	10	.....	N	0.185	4.70	.....	Julius Mikolik.
Gratz	28.70	729.0	29.93	760.1	44.6	7.0	90	S	.....	.....	3	.....	10	.....	.....	0.465	11.8	.....	Andreas Rospini.
Hermannstadt	28.42	721.8	29.77	756.1	73.0	22.8	42	SE	.....	.....	4	.....	3	.....	.....	0	0	.....	Prof. Reissenberger.
Kremsmünster	28.59	726.2	29.95	760.8	45.1	7.3	70	SW	.....	.....	3	.....	10	.....	.....	0.709	18.0	.....	Prof. C. Wagner.
Lemberg	.....	.....	29.72	754.9	59.0	15.0	76	SW	.....	.....	2	.....	9	.....	.....	0.685	17.4	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habsuda Daniel.
Pola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Szegedin	.....	.....	29.71	754.6	61.5	16.4	92	SE	.....	.....	3	.....	108	.....	.....	0.081	2.08	.....	I.R.Hydrographic Office.
Trieste	.....	.....	29.76	755.8	59.0	15.0	78	N	.....	.....	1	.....	10	.....	.....	0.268	6.80	.....	Karl Stancel.
Vienna	.....	.....	29.79	756.6	46.0	7.8	82	ENE	.....	.....	4	.....	10	.....	.....	1.874	47.6	Rain, hail	Prof. V. Farolfi.
.....	.....	.....	29.9	759.4	45.9	7.7	78	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 Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels	.....	.....	30.00	761.9	52.3	11.3	55	NNE	.....	.....	1	.....	9	.....	.....	0.004	0.10	.....	Royal Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

BRITISH SERIES.

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, 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. D.rection. Upper. From—	Clouds. D.rection. Lower. From—	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	46.1	7.8	.....	N	23	10.3	.....	.....	7	.....	.....	0.030	0.76	Squally...	William Boswell.
Ardrossan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	William McNeil.
Armagh, Observatory	.....	.....	30.17	766.3	52.0	11.1	.....	NE	3	1.3	.....	.....	.....	.....	.....	.....	.....	.....	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs'y	.....	.....	30.15	765.3	51.3	10.7	.....	WNW	14	6.3	.....	.....	10	.....	.....	.....	.....	Overcast.....	John Hartnup.
Birr Castle. (Parsonstown).	.....	.....	30.17	766.3	58.8	14.9	.....	NNE	.....	.....	1	.....	10	.....	.....	.....	.....	*D. clouds.....	J. Dreyer.
Bradford	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. McLandsborough.
Bridgetown, (Barbadoes)	.....	.....	30.00	762.0	82.0	27.8	.....	SE	.....	.....	1	.....	7	.....	.....	.....	.....	Overcast.....	Sergt. J. F. Halanen, A. C.
Cambridge, Observatory	.....	.....	30.19	764.5	54.0	12.2	.....	N	.....	.....	1	.....	10	.....	.....	Blank	Blank	Overcast.....	H. Todd. [H. C.
Cardington	.....	.....	30.12	765.0	53.6	12.0	.....	N	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast.....	John McLaren.
Carlisle	.....	.....	30.14	765.5	48	8.9	.....	N	.....	.....	1	.....	10	.....	.....	0.12	3.0	Overcast.....	T. Bell, for J. Carmell.
Chatham, School M. E	.....	.....	30.10	764.5	52.7	11.5	.....	NE	.....	.....	1	.....	.....	.....	.....	.....	.....	Overcast.....	Major C. N. Martin, R.E.
Dartmoor	28.67	728.2	30.15	765.8	57.0	13.9	.....	E	.....	.....	3	.....	6	.....	.....	.....	.....	*D. clouds.....	R. E. Power.
Donaghadee	.....	.....	30.14	765.5	53	11.7	.....	N	.....	.....	2	.....	10	.....	.....	.....	.....	Overcast.....	J. Mac Gowan.
Dover	.....	.....	30.07	763.8	50	10.0	.....	NNE	.....	.....	1	.....	7	.....	.....	.....	.....	¾ clouded...	J. Costello.
Eccles (near Manchester.)	.....	.....	30.11	764.8	54.5	12.5	.....	NE	1.0	0.4	.....	.....	10	.....	.....	.....	.....	Gloomy.....	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.16	766.1	53.2	11.8	.....	SSE	8	3.6	.....	.....	1	.....	.....	.....	.....	*D. clouds.....	The Staff.
Fort Napier, (Natal)	27.64	702.0	29.87	758.7	78.6	25.9	.....	E	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	30.04	763.0	86	30.0	.....	E	.....	.....	3	.....	7	.....	.....	.....	.....	*D clouds.....	
Galway, Queen's College	.....	.....	30.13	765.3	64	17.8	.....	WNW	.....	.....	3	.....	4	.....	.....	.....	.....	*D. clouds.....	Prof. A. H. Curtis.
Gibraltar, (Mediterranean).	.....	.....	29.70	754.4	67.5	19.4	.....	W	.....	.....	6	.....	10	.....	.....	Blank	Blank	Overcast.....	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	30.16	766.1	51.3	10.7	.....	ENE	.....	.....	2	.....	10	.....	.....	.....	.....	Gloomy.....	Lewis Stuart.
Great Yarmouth	.....	.....	30.08	764.0	49	9.4	.....	NNW	.....	.....	2	.....	6	.....	.....	.....	.....	*D. clouds.....	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	30.08	764.0	56.5	13.6	.....	N	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast.....	The Staff, for G. B. Airy
Guernsey	.....	.....	30.12	765.0	53	11.7	.....	NE	.....	.....	3	.....	0	.....	.....	.....	.....	Blue sky.....	Dr. S. L. Hoskins.
Halifax, Moorside Obs'y	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L. J. Crossley.
Helston	.....	.....	30.14	765.5	59	15.0	.....	NE	.....	.....	4	.....	10	.....	.....	0	0	Fine.....	M. P. Moyle.
Holyhead	.....	.....	30.14	765.5	51	10.6	.....	N	.....	.....	2	.....	10	.....	.....	.....	.....	Overcast.....	John Tilston.
Kew, Observatory	.....	.....	30.09	764.3	54.9	12.7	.....	NNE	12	5.4	.....	.....	9	.....	.....	.....	.....	Threatening	The Staff.
Kingstown	.....	.....	30.16	766.1	53	12.8	.....	E	.....	.....	3	.....	10	.....	.....	.....	.....	Overcast....	George Mitchell.
Leicester Museum	.....	.....	30.12	765.0	52.9	11.6	.....	NE	.....	.....	1	.....	10	.....	.....	.....	.....	Gloomy.....	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)	.....	.....	29.84	758.3	81.4	27.4	.....	SE	.....	.....	6	.....	6k	.....	.....	.....	.....	.....	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	30.23	767.8	49	9.4	.....	NE	.....	.....	2	.....	5	.....	.....	.....	.....	½ clouded...	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.04	763.0	76.6	24.8	.....	N	.....	.....	8	.....	9	.....	.....	.....	.....	Raining.....	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	30.12	765.0	51.7	10.9	.....	NNW	.....	.....	3	.....	10d	.....	NNE	.....	.....	Raining.....	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.10	764.5	53.0	11.7	.....	NNE	.....	.....	3	.....	10	.....	.....	.....	.....	Overcast.....	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	30.08	764.0	55	12.8	.....	N	.....	.....	2	.....	10	.....	.....	.....	.....	Overcast.....	J. Lucas.
Plymouth	.....	.....	30.13	765.3	57.5	14.2	.....	S	.....	.....	2	.....	3	.....	.....	.....	.....	*D. clouds.....	John Merrifield.
Roche's Point	.....	.....	30.17	766.3	56	13.3	.....	SW	.....	.....	3	.....	5	.....	.....	.....	.....	Fine.....	W. Kennedy.
Saint Ann's Head	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John C. Walker.
Saint Helier, Jersey	.....	.....	30.11	764.8	57.4	14.1	.....	NE	.....	.....	2	.....	0	.....	.....	.....	.....	Clear.....	A. P. Amy.
Sandwick Manse, Orkneys)	.....	.....	30.38	771.6	47	8.3	.....	NE	24	10.7	.....	.....	0	.....	.....	.....	.....	Blue sky...	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. Shaw.
Scutari Cemetery Turkey	.....	.....	29.97	761.2	76.0	24.4	.....	NNE	.....	.....	2	.....	1	.....	.....	.....	.....	Blue sky.....	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.10	764.5	52.0	11.1	.....	N	.....	.....	2	.....	10	.....	.....	0	0	Misty.....	W. F. Cooper.
Silloth Rectory	.....	.....	30.15	765.8	48.2	9.0	85	E	.....	.....	3	.....	8	.....	.....	0	0	*D. clouds...	Rev. Francis Redford
Stonyhurst, Observatory	.....	.....	30.12	765.0	50.3	10.2	.....	NE	.....	.....	1	.....	10	.....	.....	.....	.....	Threateni g	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.	.....	.....	30.28	769.1	52	11.1	.....	NE	.....	.....	4	.....	0	.....	.....	.....	.....	Blue sky.....	John Smith.
Stratfield Turgiss	.....	.....	30.08	764.0	59.2	15.1	.....	N	.....	.....	1	.....	9	.....	.....	.....	.....	*D. clouds.....	Rev. Charles H. Griffith.
Streatley Vicarage	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Rev. John Slatter.
Thurso	.....	.....	30.25	768.3	47	8.3	.....	NNE	.....	.....	2	.....	8	.....	.....	.....	.....	Raining.....	John Trotter.
Truro, Royal Institution	.....	.....	30.16	766.1	63	17.2	.....	N	.....	.....	6	.....	4	.....	.....	.....	.....	*D. clouds.....	W. Newcombe.
Valencia, Observatory	.....	.....	30.22	767.6	55.8	13.2	.....	ENE	12	5.4	.....	.....	5	.....	.....	.....	.....	Hazy.....	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	53	11.7	.....	E	.....	.....	2	.....	5	.....	.....	0	0	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.01	763.0	56.6	13.7	96	WNW	6	2.7	.....	3	5	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Leith, Restalrig Park	.....	.....	30.19	766.8	46.0	7.8	.....	NE	.....	.....	2	.....	.....	.....	.....	0.08	2.0	Cloudy.....	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.20	767.1	.....	.....	.....	ESE	16.6	7.4	.....	.....	.....	.....	.....	0.10	2.5	.....	C. Meldrum.
Melbourne, Observatory	.....	.....	30.63	778.0	50.9	10.5	74	S	4	1.8	.....	.....	10	.....	.....	0.08	2.0	Threatening	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	30.24	768.1	50	10.0	.....	NE	.....	.....	4	3	0	NE	.....	0	0	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	30.26	768.6	45	7.2	.....	NE	.....	.....	6	2	4	N	.....	.....	.....	.....	Robert Burnet.

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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	.....	.....	29.84	758.0	44.1	6.7	86	NNE	.....	.....	4	.....	10	.....	.....	.....	.....	Raining.....	
Faröe	.....	.....	29.93	760.1	51.6	10.9	52	N	.....	.....	4	.....	9	.....	.....	.....	.....	.....	
Godthaab, (Greenland)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Stykkisholm, Iceland	.....	.....	30.31	769.8	52.3	11.3	83	S	.....	.....	4	.....	5	.....	.....	.....	.....	.....	
Thorshavn, (Faröe)	.....	.....	30.42	772.6	44.6	7.0	66	ENE	.....	.....	2	.....	5	.....	.....	.....	.....	.....	
Vestervig	.....	.....	29.93	760.1	51.3	12.4	46	ENE	.....	.....	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	.....	.....	30.07	763.6	53.6	12	41	NE	.....	.....	3	..c	5s,k	.....	NE	0	0	Cloudy.....	Normal School.
Amiens	.....	.....	30.04	763.1	56.8	13.8	69	ESE	.....	.....	3	.....	5	.....	ESE	0.047	1.2	Cloudy.....	Normal School.
Avignon	.....	.....	29.98	758.8	60.3	15.7	41	N	.....	.....	8	.....	5	.....	WSW	0	0	Cloudy.....	Normal School.
Bar-sur-Seine	.....	.....	30.11	764.9	54.5	12.5	29	E	.....	.....	2	.....	5	.....	ENE	0.075	1.9	Sprinkling..	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.97	761.2	53.8	12.1	37	NE	22.8	10.2	.....	.....	5	.....	E	0	0	Cloudy.....	Beaumette Observatory
Beauvais	.....	.....	30.11	764.7	52.7	11.5	44	N	.....	.....	2	.....	8	.....	NNE	0.002	0.05	Very cloudy	Normal School.
Besançon	.....	.....	29.95	760.6	55.4	13	47	ENE	.....	.....	3	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	29.96	760.9	57.4	14.1	39	N	.....	.....	2	.....	5	.....	S	0	0	Cloudy.....	Normal School.
Bourges	.....	.....	29.96	760.9	53.6	11.2	69	N	.....	.....	3	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	30.02	762.5	55.2	12.9	54	NE	.....	.....	4	.....	1k	.....	NE	0	0	.....	Naval Observatory.
Caen	.....	.....	30.077	778.07	53.6	12	75	N	.....	.....	2	.....	5	.....	S	0	0	Cloudy.....	Normal School.
Carcassonne	.....	.....	29.76	755.9	64.7	12.6	50	NW	.....	.....	2	.....	1	.....	SE	0	0	Clear.....	Normal School.
Chartres	.....	.....	30.13	765.3	53.8	12.1	.....	ENE	.....	.....	2	.....	8	.....	ENE	0	0	Cloudy.....	Normal School.
Clermont	.....	.....	29.88	759.0	55.8	13.2	41	N	.....	.....	4	.....	2	.....	N	0	0	.....	Puy de Dome Obs.
Commercy	.....	.....	30.02	762.6	49.5	9.7	46	NE	.....	.....	2	.....	5k	.....	NE	0	0	Cloudy.....	Normal School.
Commune de Grésque*	.....	.....	29.97	753.7	67 8	19.9	39	NW	.....	.....	1	.....	5	.....	SW	0	0	.....	M. Kina.
Grenoble	.....	.....	29.84	757.9	60.1	15.6	86	N.W	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
Le Mans	.....	.....	30.06	763.5	53.1	11.7	57	NE	.....	.....	4	.....	5	.....	NE	0	0	Cloudy.....	Normal School.
Lons-le-Saulnier	.....	.....	29.95	760.8	54.1	12.3	41	NE	.....	.....	6	.....	0	.....	.....	0	0	Clear.....	Normal School.
Mâcon	.....	.....	30.00	762.0	52.7	11.5	56	Calm	.....	.....	0	.....	0	.....	.....	0	0	Clear.....	Normal School.
Mirecourt	.....	.....	29.95	760.6	52.7	11.5	24	NE	.....	.....	1	.....	1	.....	SSE	0	0	Quite clear..	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Niamen	.....	.....	29.95	753.1	64.0	17.8	18	NW	.....	.....	6	.....	5	.....	N	0	0	Cloudy..	Normal School.
Orleans	.....	.....	29.98	761.4	53.6	12	33	NE	.....	.....	3	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Paris Observatory	.....	.....	30.04	763.1	52.5	11.4	41	NNE	.....	.....	2	.....	10	.....	NE	0.004	0.09	Covered	National Observatory.
Parthenay	.....	.....	29.91	759.6	60.8	16	78	NE	.....	.....	8	.....	2	.....	SE	0	0	Slightly cl'dy	Normal School.
Privas	.....	.....	29.78	756.4	55.6	13.1	.....	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
La Roche-sur-Yon	.....	.....	29.71	754.6	57.9	14.4	45	ENE	.....	.....	8	.....	8	.....	E	0	0	Very cloudy	Normal School.
Rochefort, Observatory	.....	.....	29.92	760.0	59.4	15.2	38	ENE	.....	.....	6	.....	5	.....	SW	0	0	½ covered ...	Naval Observatory.
Rouen	.....	.....	30.07	763.7	54.9	12.7	48	NNW	.....	.....	2	.....	5	.....	NE	0.020	0.5	Cloudy.....	Normal School.
Saint Lô	.....	.....	29.86	758.4	50.4	10.2	68	NE	.....	.....	5	.....	5	.....	NE	0	0	.....	Normal School.
Tarbes	28.71	729.3	29.78	756.3	59.0	15	.....	W	.....	.....	2	.....	10	.....	.....	0	0	Covered.....	Normal School.
Villefranche	.....	.....	29.93	760.3	58.1	14.5	46	NE	.....	.....	6	.....	2	.....	.....	0	0	.....	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.91	759.8	77.0	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchésl.
Marseilles	.....	.....	29.61	752.2	66.7	19.3	38	WNW	.....	.....	2	.....	9	.....	.....	0	0	Very cloudy	Marseilles Observatory.
Mont-Louis	24.57	624.1	29.89	759.1	45.9	7.7	80	ESE	18.6	8.33	.....	.....	8	.....	NE	0.020	0.5	.....	—. Faiguère.
Montsouris, Paris	.....	.....	29. 8	753 8	65.1	18.4	28	E	5.6	2.50	.....	.....	8	.....	W	0	0	.....	Montsouris Observ'tory.
Perpignan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	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	53.1	11.7	39	NNE	.....	.....	1	.....	9	.....	.....	0	0	.....	E. Renou.
Toulouse	.....	.....	29.79	756.6	62.1	16.7	27	NE	.....	.....	2	.....	3	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.00	762.1	56.3	13.5	33	NE	.....	.....	4	.....	1	.....	WSW	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.01	763 0	52.9	11.6	48	NNE	.....	.....	3	.....	8	.....	.....	0	0	Very cloudy	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai	.....	.....	29.96	760.9	64.4	18.0	80	SSE	10.7	4.8	.....	.....	10n	.....	.....	{Inap. Inap.}	{Inap. Inap.}	Sprinkling...	H. Le Lec, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

Bamberg	.....	.....	29.89	759 1	50.4	10.2	69	N	.....	.....	4	.....	7	N	.....	0.008	0.2	.....	Prof. T. Hoh.
Berlin	.....	.....	29.87	758.7	50.9	10.5	60	NW	.....	.....	1	.....	8	.....	.....	0.047	1.2	.....	Prof. Arndt.
Breslau	.....	.....	29.87	758.6	50.2	10.1	72	N	.....	.....	3	.....	10	.....	.....	0.398	10.1	Graupelnd...	Dr. P. Neugebauer.
Carlsruhe	.....	.....	29.98	761.5	49.3	9.6	52	SSW	.....	.....	1	.....	8	.....	.....	0.252	6.4	.....	A. Senz.
Cassel	.....	.....	29.96	761.0	50.5	10.3	67	N	.....	.....	3	.....	8	N	.....	0	0	.....	Dr. H. Möhl
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.02	762.5	47.8	8.8	65	NE	.....	.....	3	.....	7	.....	.....	0.157	4.0	.....	Physical Society.
Friedrichshafen	28.53	724.7	29.97	761 3	52.0	11.1	58	W	.....	.....	1	.....	0	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	29.92	759.9	43.7	6.5	86	WSW	.....	.....	2	.....	10	.....	.....	0.449	11.4	Rainy.....	Captain F. Hegemann.
Kiel	.....	.....	29.88	758.9	49.3	9.6	50	NE	.....	.....	3	.....	7	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg	.....	.....	29.82	757.4	45.3	7.4	86	E	.....	.....	2	.....	9	.....	.....	0.098	2.5	.....	Prof. E. Luther.
Koslin	.....	.....	29.82	7 7.5	39.7	4.3	.....	Calm	.....	.....	0	.....	5	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	29.92	759.9	49.5	9.7	61	WNW	.....	.....	2	.....	9	W	.....	0.008	0.2	.....	Prof. Brull us.
Memel	.....	.....	29.86	758.4	48.4	9.1	68	NNW	.....	.....	2	.....	10	.....	.....	0.016	0.4	Light rain....	Reinbrecht & Skalweit.
Munster	.....	.....	29.94	761.6	54.6	12.0	59	N	.....	.....	2	.....	6	.....	.....	0.059	1.5	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.78	756.3	44.1	6.7	83	Calm	.....	.....	0	.....	10	.....	.....	0.114	2.9	Rainy.....	A. Lothes.
Posen	.....	.....	29.87	758.8	49.1	9.5	76	NW	.....	.....	5	.....	10	.....	.....	0.220	5.6	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.99	761.7	52.0	11.1	44	Calm	.....	.....	0	.....	8	.....	.....	Inap.?	Inap.?	.....	Dr. Schur.
Stuttgart	.....	.....	29.97	761.3	49.1	9.5	55	W	.....	.....	2	.....	8	.....	.....	Inap.?	Inap.?	Light rain...	Prof. Schoder.
Thorn	.....	.....	29.80	757.0	47.1	8.4	83	N	.....	.....	2	.....	9	.....	.....	0.047	1.2	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.93	760.3	51.4	10.8	48	W	.....	.....	5	.....	7	.....	.....	0	0	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	29.80	757.0	48.2	9.0	82	NW	.....	.....	2	.....	10	.....	.....	0	0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low't 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens																			

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

ITALIAN SERIES.

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

Udine			29.81	757.2	46.8	8.2	77	NE	3.8	1.7			10			0.331	8.4		
Padua			29.78	756.4	48.9	9.4	89	ENE	16.1	7.2			10	NE		0.020	0.5		
Vicenza			29.78	756.5	51.4	10.8	85	NE	5.6	2.5			10	E		0.020	0.5		
Verona			29.76	755.7	53.2	13.8	88	SE			4		10			0	0		
Bergamo	28.37	720.7	29.65	753.0	60.8	16.0	52	S			2		3			0	0		
Domodossola																			
Milan			29.73	755.1	65.2	18.4	59	ESE			1		4	NNW		0	0		
Pavia			29.72	755.0	62.6	17.0	42	SE			1		2	SW		0	0		
Moncalieri			29.74	755.4	58.8	14.9	61	SSE	4.3	1.9			1	W		0	0		
Mondovi	27.84	707.2	29.75	755.6	56.1	13.4	35	N			4		7	W		0.224	5.7		
Porto Maurizio			29.64	752.9	60.8	21.0	25	NE			4		6	NE		0	0		
Genoa			29.67	753.6	65.8	18.8	25	N	3.8	1.7			4	N		0	0		
Piacenza																			
Parma			29.76	755.9	55.9	13.3	68	SSW			2		10			0	0		
Bologna			29.77	756.1	56.8	13.8	48	NW			1		10			0	0		
Florence			29.66	753.3	73.4	23.0	56	NE			4		10	NE		0	0		
Leghorn			29.62	752.3	71.6	22.0	52	NE	8.7	3.9			10			0	0		
Siena	28.44	722.4	29.64	752.8	65.5	18.6	46	ENE	1.3	0.6			10	SW		0.028	0.7		
Urbino																			
Pesaro																			
Ancona			29.69	754.1	62.2	16.8	58	E			4		10			0.024	0.6		
Grosseto			29.64	752.9	69.1	20.6	72	SSE			2		9			0	0		
Rome			29.67	753.7	71.4	21.9	62	SSE	11.2	5.0			10	WSW		0	0		
Naples, O. U.			29.76	756.0	77.4	25.2	45	SSW			4		10	SSW		0	0		
Lecce			29.91	759.8	74.8	23.8	52	SSW	31.1	13.9			10			0	0		
Cosenza			29.84	758.0	88.6	31.4	70	SW	25.5	11.4			7			0	0		
Riposto, (Sicily)			29.85	758.3	68.7	20.4	77	WSW			2		8	W		0	0		
Palermo			29.68	753.8	91.9	33.3	19	SW	28.0	12.5			3			0	0		
Caltanissetta	27.94	709.8	29.84	758.0	70.0	21.1	26	SE			6		10	N		0.110	2.8		
Sub-Series.																			
Naples, S. R.			29.74	755.4	74.3	23.5	45	SE	7.4	3.3			..ck	S		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.

Flushing			30.07	763.7	52.2	11.2		N			3								
Groningen			29.93	760.2	50.2	10.1		NNW			4								
Helder			30.02	762.5	48.2	9.0		NNW			2								
Utrecht			29.97	761.3	52.2	11.2	61	NE			2		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

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

Bergen			30.00	762.1	55.4	13.0	69	W	10.3	4.6			5			0	0		
Brönö			30.19	766.8	40.1	4.5	59	NW	11	5			5			0	0		
Christiania			29.97	761.2	54.7	12.6	40	N	13.0	5.8			4			0	0		
Tromsö			30.11	764.8	39.4	4.0	58	NE	2	1			5			0	0		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.01	762.3	62.1	16.7	80	WSW	5.3	2 36	.....	.....	3	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.88	759.0	59.7	15 4	89	ESE	24 2	10.83	.....	.....	10	SE	.....	0.388	9.72	Raining.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)	.....	.....	29.87	758 7	64.6	18.1	71	SSE	1.9	0.83	.....	.....	8	.....	.....	0.201	5.1	.....	Capt D. A. da Cunha.
Lisbon	.....	.....	29.48	748.7	59.7	15.4	95	NNE	21.0	9.4	.....	.....	10	NNE	.....	0.118	3.0	Raining.....	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

RUSSIAN SERIES.

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

Warsaw	.....	.....	29.74	755.4	50. 2	10. 1	76	WSW	22	10	.....	.....	9	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.86	758.4	52.0	11. 1	67	S	4	2	.....	.....	10	.....	.....	....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.83	757.6	50. 4	10. 2	93	ESE	7	3	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.86	758.4	56. 7	13. 7	59	SE	16	7	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Ob'y.
Knopih	.....	.....	29.97	761.2	54. 1	12. 3	69	E	13	6	.....	.....	10	.....	.....	.....	.....	Raining.....	Ch. Forsten.
Kieff	.....	.....	29.94	760.1	64. 2	17. 9	58	SSW	11	5	.....	.....	8	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.13	765.2	67. 6	19. 8	57	SSW	20	9	.....	.....	2	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.13	765.4	67. 8	19. 9	64	NE	9	4	.....	.....	3	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.97	761.2	50. 4	10. 2	96	S	4	2	.....	.....	10	.....	.....	.....	.....	Light rain...	Meteorological Obs.
Lugan	.....	.....	30.05	763.2	60. 3	20. 7	51	W	18	8	.....	.....	4	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.04	763 0	53. 1	11. 7	46	NW	9	4	.....	.....	2	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.72	729.6	30.07	763.6	78. 1	25. 6	44	Calm	0	0	.....	.....	9	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.30	769.6	64. 8	18. 2	47	SE	27	12	.....	.....	7	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.26	768.7	62. 1	16. 7	36	S	11	5	.....	.....	8	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.30	740.6	30.39	771.8	57. 2	14. 0	27	W	9	4	.....	.....	1	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.28	769.1	66. 7	19. 3	22	NE	18	8	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.48	723.4	30.13	765.2	73. 6	23. 1	15	NNW	7	3	.....	.....	0	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.22	767.6	50. 5	10. 3	30	SW	13	6	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.87	758 8	40. 3	4. 6	64	SW	4	2	.....	.....	2	.....	.....	.....	.....	Snow & graupel	Marks.
Irkutsk	28.56	725.5	29.97	761.1	39. 7	4. 3	47	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.84	757.8	79. 0	26. 1	50	Calm	0	0	.....	.....	3	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	32.7	0.4	90	E	2	1	.....	.....	6	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 401. m eters, or 1,341.8 feet; Ekaterinburg, 304. 1? m., or 1,005. 2? ft.; Tasnkend, m. 494. 2?, or 1,621. 3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchi sk, 592. 0? m., or 1,942. 2? ft.; Oorga, 1,281. 05 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.

Madrid	.....	.....	29.61	752.0	60.1	15.6	86	SE	17.9	8.00	.....	0	10	.....	.....	0.441	11.2	Raining.....	Royal Observatory.
San Fernando	.....	.....	29.65	753.0	66.0	18.9	77	SSW	17.0	7.6	.....	0	8	.....	SW	0.622	15.8	.....	The Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the weather in general terms; 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	.....	.....	30.10	764.4	46.0	7.8	64	SE	.. ....	.....	2	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	30.07	763.7	54.0	12.2	48	E	... .	.....	2	.....	6	.....	.....	0	0	.....	
Hernosand	.....	.....	30.03	762.8	48.6	9.2	51	ENE	.....	.....	4	.....	8	.....	.....	0	0	.....	
Stockholm	.....	.....	29.85	758.2	41.7	5.4	91	N	.....	.....	4	.....	10	.....	.....	0.039	1.0	.....	
Wisby	.....	.....	29.84	757.9	38.5	3.6	100	NE	.....	.....	4	.....	10	.....	.....	0.075	1.9	Foggy	
Sub-Series.																			
Upsala	.....	.....	29.93	760.3	42.1	5.6	81	NNE	16.1	7.2	.....	.....	10	.....	NNE	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; the weather by Vienna symbols, or, occasionally, in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28.45	722.6	29.88	759.0	50.7	10.4	39	NNE			6		1			0	0	Clear	The Observatory.
Zurich	28.32	719.3	29.97	761.2	50.0	10.0	67	SE					2			0.059	1.5	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —2.4 mm.; Thermometer, —5.0 cent.; Relative Humidity —18 per cent.

Note.—The originals give the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople			29.89	759.2	77.0	25.0		SE			1		0						
Fao, (Persian Gulf)			30.07	763.6	75.6	24.2		SE			1		0						
Salonica			29.85	758.2	81.7	27.6		S			3		1n						
Valona			30.04	763.0	69.8	21.0		E			2		1n						
Varna																			
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.88	758.9	83.8	28.8	64	SW			1		1m		S	0	0	Muggy	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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B.												8c	0						Hon. J. Ferguson.
Brockville, Ontario			30.33	770.4	44	6.7		Calm	0	0		8c	0			0.12	3.0	Fair	W. R. Bigg.
*Chatham, N. B.			29.94	760.5	41	5.0	89	NW	9	4 0		2k	8ks	NW	NW	0.23	5.8	Cloudy	G. A. Blair.
Charlottetown, P. E. Island.			29.91	759.7	38	3.3	92	E	6	2.7			10n			0.15	3.8	Light rain	H. J. Cundall, C. E.
Cornwall, Ontario			30.13	765.3	47.7	8.7	87	SW			1	10c	0			0.185	4.7	Fair	James Smith, M. A.
Dalhousie, N. B.																			H. A. Johnson.
Esquimault, B. C.			30.00	762.0	38.6	3.7	100	Calm	0	0		0	0			0.02	0.5	Clear	W. H. Bevis.
Fredericton, N. B.			29.98	761.5	43.5	6.4	72	N	4	1.8			10ks			Inap.	Inap.	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			29.83	757.7	48	8.9	92	E	16	7.2		5k	5n	SW	SW	0.12	3.0	Cloudy	James Stewart.
Goderich, Ontario			30.26	768.6	52.4	11.3	65	SW			2	8ck	0	SW		0	0	Cloudy	H. J. Strang, M. A.
Granton, Ontario	29.15	740.4	29.28	769.1	43	6.1		S			1	1cs	0	NW		0	0	Clear	James Grant.
*Halifax, N. S.			29.88	758.9	46	7.8	84	N	5	2.2			8n		N	0	0	Cloudy	F. Allison, M. A.
*Kingston, Ontario			30.31	769.9	44	6.7	60	NW	1	0.4		10c	0			0	0	Fair	S. Woods, M. A.
*Montreal, Quebec			30.21	767.3	46	7.8	50	NW	4	1.8		8c	0	NW		0.19	4.8	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.25	768.3	43	6.1	61	NW	4	1.8		5c	0	NW		0.05	1.3	Fair	J. B. Haney.
*Parry Sound, Ontario			30.20	769.4	38	3.3	86	S	7	3.1		2cs	2ks	S	S	0.02	0.5	Fair	Rev. R. Mooley.
*Port Dover, Ontario			30.33	770.6	41	5.0	82	SE	3	1.3		5c	0	NW		0	0	Fair	H. Morgan.
Port Hastings, N. S.																			Peter Grant.
*Port Stanley, Ontario			30.32	770.1	45	7.2	84	SE	12	5.4		8ck	0	NW		0	0	Fair	M. Payne.
*Quebec, Quebec			30.15	765.8	39	3.9	64	NW	11	4.9		5k	0	NW		0	0	Fair	Capt. Ash, R. N.
St. John, N. B.			29.97	761.2	44	6.7	84	N	4	1.8		0	3ks			0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			30.26	768.6	43	6.1	83	Calm	0	0			10ks			0	0	Cloudy	K. Stewart.
Stayner, Ontario																			R. J. Cole.
Stratford, Ontario	28.96	735.6	30.28	769.1	40.0	4.4	82	SW	8	3.6		5cs	0			0	0	Fine	C. J. Macgregor, M. A.
*Sydney, C. B.			29.90	759.4	38	3.3	85	NE	8	3.6			10s		NE	0.08	2.0	Cloudy	T. C. Hill.
*Toronto, Ontario			30.32	770.1	43	6.1	71	W	3	1.3		2cs	6stze			0	0	Fair	Magnetic Observatory.
Woodstock, Ontario			30.32	770.1	44.1	6.7	75	SW	15	6.7		2k	4s			0	0	Gloomy	J. Montgomery

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount Up'er 0—10.	Clouds. Amount Low'r 0—10.	Clouds. Direction. pper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.17	766.3	59	10.6	94	NW	4	1.8	.....	0	0	.....	.....	0.05	1.3	Clear.	
Alpena, Mich	.....	.....	30.21	767.3	41	5.0	73	W	1	0.4	.....	.....	10s	.....	W	0	0	Cloudy.	
Atlantic City, N. J	.....	.....	30.28	769.1	53	11.7	48	N	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
Augusta, Ga.	.....	.....	30.25	768.3	67	19.4	55	E	13	5.8	.....	.....	10s	.....	E	0	0	Cloudy.	
Baltimore, Md	.....	.....	30.34	770.6	54	12.2	49	NW	7	3.1	.....	2c	Sm'e	NW	.. ..	0	0	Fair.	
Barnegat, N. J	.....	.....	30.27	768.8	53	11.7	54	NW	15	6.7	.....	Haze	0	.....	.....	0	0	Clear.	
Benton, Montana	26.82	681.2	29.62	752.3	52	11.1	93	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
Bismarck, Dakota	27.78	705.6	29.35	745.5	54	12.2	67	NE	7	3.1	.....	.....	10s	.....	.....	0.37	9.4	Cloudy	
Boston, Mass	.....	.....	30.14	765.5	50	10.0	51	W	15	6.7	.....	1k	Haze	NW	.....	0	0	Clear.	
Breckenridge, Minn	.....	.....	29.61	752.1	55	12.8	74	E	24	10.7	.....	.....	10s	.....	NE	0.04	1.0	Cloudy.	
Burlington, Vt	.....	.....	30.30	769.6	42	5.6	83	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Cairo, Ill	.....	.....	30.17	766.3	45	7.2	76	NW	8	3.6	.....	0	0	.....	.....	0.06	1.5	Clear.	
Cape Hatteras, N. C	.....	.....	30.16	766.1	62	16.7	61	E	6	2.7	.....	0	0	.....	.....	0.27	6.9	Clear.	
Cape Henry, Va	.....	.....	30.22	767.6	61	16.1	49	NE	18	8.0	.....	Haze	Haze	.....	.....	0.01	0.3	Hazy.	
Cape Lookout, N. C	.....	.....	30.32	770.1	57	13.9	52	NE	12	5.4	.....	Haze	0	.....	.....	0	0	Clear.	
Cape May, N. J	.....	.....	30.20	769.4	64	17.8	83	NE	28	12.5	.....	0	0	.....	.....	0.10	2.5	Clear.	
Charleston, S. C	.....	.....	30.29	769.4	53	11.7	54	NW	18	8.0	.....	0	0	.....	.....	0	0	Clear.	
Cheyenne, Wyoming	.....	.....	30.23	767.8	69	20.6	50	E	18	8.0	.....	0	8ks	.....	E	0.03	0.8	Fair.	
Chicago, Ill	23.78	604.0	29.72	754.9	52	11.1	82	W	16	7.2	.....	1c	0	S	.....	0	0	Clear.	
Cincinnati, Ohio	.....	.....	30.13	765.3	56	13.3	45	SW	8	3.6	.....	2ck	0	W	.....	0	0	Fair.	
Cleveland, Ohio	.....	.....	30.24	768.1	54	12.2	47	SE	5	2.2	.....	0	0	.....	.....	0	0	Clear.	
Colorado Springs, Col	23.92	607.6	30.31	769.9	46.1	7.8	61	SE	7	3.1	.....	1c	0	W	.....	0	0	Clear.	
Corsicana, Tex	.....	.....	29.78	756.4	44	6.7	67	NW	9	4.0	.....	0	1s	.....	.....	0.01	0.3	Clear.	
Davenport, Iowa	.....	.....	30.05	763.3	62	16.7	94	SE	2	0.9	.....	5k	2s	S	S	0	0	Cloudy.	
Denison, Tex	.....	.....	30.05	763.3	55	12.8	55	SE	8	3.6	.....	7k	0	SW	.....	0	0	Fair.	
Denver, Col	.....	.....	30.04	763.0	68	20.0	79	S	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy.	
Detroit, Mich	24.58	624.3	29.80	756.9	54	12.2	43	S	11	4.9	.....	0	0	.....	.....	0	0	Clear.	
Dodge City, Kan	27.22	691.4	30.27	768.8	47	8.3	70	E	1	0.4	.....	Haze	Haze	.....	.....	0	0	Hazy.	
Dubuque, Iowa	.....	.....	29.42	747.3	60	15.6	76	SE	16	7.2	.....	10cs	0	.....	.....	0.14	3.6	Cloudy.	
Duluth, Minn	.....	.....	30.01	762.0	53	11.7	60	SE	12	5.4	.....	.....	10s	.....	.....	0.10	2.5	Cloudy.	
Eastport, Me	.....	.....	30.07	763.8	38	3.3	81	NE	8	3.6	.....	.....	10n	.....	.....	0.16	4.1	Heavy rain.	
Erie, Pa	.....	.....	29.94	760.5	45	7.2	67	NW	11	4.9	.....	5c	0	SW	.....	0	0	Fair.	
Escanaba, Mich	.....	.....	30.20	767.4	48	8.9	62	S	6	2.7	.....	5c	Haze	.....	.....	0	0	Fair.	
Fort Gibson, Indian Ter	.....	.....	30.18	766.6	44	6.7	67	Calm	0	0	.....	5cs	0	.....	.....	0	0	Fair.	
Ft. St. Michael, Alaska	.....	.....	29.98	761.5	70	21.1	61	SE	10	4.5	.....	5c,h	0	S	.....	0	0	Fair.	
Fort Sill, Indian T	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fort Sully, Dakota	28.76	730.5	29.84	757.9	66	18.9	73	SE	8	3.6	.....	.....	10s	.....	SE	0	0	Cloudy.	
Galveston, Tex	27.86	707.6	29.43	747.5	57	13.9	87	Calm	0	0	.....	5c	0	.....	.....	0.06	1.5	Fair.	
Grand Haven, Mich	.....	.....	30.08	764.0	72	22.2	71	SE	5	2.2	.....	2k	0	SE	.....	0	0	Fair.	
Indianapolis, Ind	.....	.....	30.19	766.8	52	11.1	66	SE	4	1.8	.....	5ck	Haze	W	.....	0	0	Fair.	
Indianola, Tex	.....	.....	30.24	768.1	56	13.3	45	SE	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
Jacksonville, Fla	.....	.....	30.05	763.3	76	24.4	69	SE	12	5.4	.....	2k	0	SE	.....	0	0	Fair.	
Keokuk, Iowa	.....	.....	30.13	765.3	77	25.0	69	N	3	1.3	.....	0	0	.....	.....	0	0	Clear.	
Key West, Fla	.....	.....	30.03	762.0	59	15.0	54	SE	12	5.4	.....	10k	0	SE	.....	0	0	Cloudy.	
Kittyhawk, N. C	.....	.....	30.06	763.5	75.7	24.3	72	E	13	5.8	.....	8cs	Haze	W	E	0.29	7.4	Cloudy.	
Knoxville, Penn	.....	.....	30.14	770.6	56	13.3	62	NE	20	8.9	.....	0	Haze	.....	.....	0	0	Clear.	
La Crosse, Wis	.....	.....	30.26	768.6	54	12.2	54	NE	8	3.6	.....	0	0	.....	.....	0.02	0.5	Clear.	
Leavenworth, Kan	.....	.....	30.03	762.7	49	9.4	71	S	9	4.0	.....	.....	10s	.. ..	S	0.08	2.0	Cloudy.	
Lexington, Ky	.....	.....	29.90	759.4	65	18.3	75	S	10	4.5	.....	0	0	.....	.....	0	0	Clear.	
Long Branch, N. J	29.14	740.1	30.23	767.8	61	16.1	35	E	8	3.6	.....	5c	Haze	.....	.....	0	0	Fair.	
Louisville, Ky	.....	.....	30.26	768.6	55	12.8	62	NW	14	6.3	.....	0	0	.....	.....	0	0	Clear.	
Lynchburg, Va	.....	.....	30.23	767.8	58	14.4	53	E	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Malone, N. Y	.....	.....	30.36	771.1	56	13.3	60	Calm	0	0	.....	0	Haze	.....	.....	0	0	Hazy.	
Manhattan, Kan	.....	.....	30.22	767.6	39	3.9	81	W	4	1.8	.....	8f	0	NW	.....	0.60	15.2	Fair.	
Marquette, Mich	28.71	729.2	29.80	756.9	66	18.9	78	SW	28	12.5	.....	5ck	0	SW	.....	0	0	Fair.	
Memphis, Penn	.....	.....	30.10	764.5	52	11.1	47	SW	20	8.9	.....	.....	10s	.....	W	0	0	Cloudy.	
Milwaukee, Wis	.....	.....	30.14	765.5	67	19.4	78	E	4	1.8	.....	0	Haz	.....	.....	0	0	Clear.	
Mobile, Ala	.....	.....	30.21	767.1	43	6.1	67	E	5	2.2	.....	10ks	Fog	W	.....	0	0	Cloudy.	
Montgomery, Ala	.....	.....	30.13	765.3	69	20.6	75	N	5	2.2	.....	0	0	.....	.....	0	0	Clear.	
Morgantown, W. Va	.....	.....	30.18	766.6	71	21.7	66	NE	6	2.7	.....	0	Haze	.....	.....	0	0	Clear.	
Mt. Washington, N. H	.....	.....	30.33	770.4	40	9.4	93	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear, frost.	
Nashville, Penn	23.04	690.4	30.10	762.0	15	— 9.4	100	NW	48	21.5	.....	.....	Fog	.....	.....	0.88	21.1	Foggy	
New Haven, Conn	.....	.....	30.17	766.3	64	17.8	52	NE	1	0.4	.....	0	0	.....	.....	0	0	Clear.	
New London, Conn	.....	.....	30.22	767.8	53	11.7	53	N	10	4.5	.....	Haze	0	.....	.....	Inap.	Inap.	Clear.	
New Orleans, La	.....	.....	30.21	767.3	55	12.8	79	NW	11	4.9	.....	0	0	.....	.....	Inap.	Inap.	Clear.	
Newport, R. I	.....	.....	30.12	765.0	74	23.3	70	S	3	1.3	.....	5cs	Sm'e	.....	.....	0	0	Fair.	
New York, N. Y	.....	.....	30.27	769.2	52	11.1	60	NW	12	5.4	.....	0	0	.....	.....	Inap.	Inap.	Clear.	
Norfolk, Va	.....	.....	30.26	768.6	49	9.4	57	NW	16	7.2	.....	0	0	.....	.....	0	0	Clear.	
North Platte, Neb	.....	.....	30.04	763.0	59	15.0	48	NE	10	4.5	.....	0	0	.....	.....	0	0	Clear.	
Omaha, Neb	29.16	679.7	29.17	741.4	61	16.1	77	SE	9	4.0	.....	.....	10s	.....	SE	0	0	Cloudy.	
Oswego, N. Y	28.74	730.0	29.77	756.1	62	16.7	77	S	12	5.4	.....	8c	0	.....	.....	0	0	Fair.	
Pembina, Dakota	.....	.....	30.33	769.6	41.8	5.4	66	NW	3	1.3	.....	Haze	2s	.....	.....	0	0	Fair.	
Philadelphia, Penn	.....	.....	29.73	755.1	47	8.3	100	E	20	8.9	.....	.....	10n	.....	.....	0.43	10.9	Heavy rain.	
Pike's Peak, Colorado	.....	.....	30.33	770.4	52	11.1	47	N	16	7.2	.....	0	0	.....	.....	Inap.	Inap.	Clear.	
Pittsburgh, Penn	17.67	448.8	29.88	758.9	16	— 8.9	74	SW	36	16 1	.....	0	2s	.....	SW	0.39	9.9	Fair.	
Port Huron, Mich	.....	.....	30.36	771.1	40	4.4	82	Calm	0	0	.....	0	Fog	.....	.....	0	0	Foggy.	
Portland, Me	.....	.....	30.28	769.1	44	6.7	67	S	8	3.6	.....	2c	1s	NW	.....	0	0	Fair.	
Portland, Oregon	.....	.....	30.10	764.5	49	9.4	80	NW	8	3.6	.....	0	0	.....	.....	0.18	4.6	Clear.	
Punta Rassa, Fla	.....	.....	30.13	765.3	83	28.6	91	SW	1	0.4	.....	0	2ks	.....	SW	0	0	Fair.	
Rochester, N. Y	.....	.....	30.10	764.5	73.2	22.9	85	NE	8	3.6	.....	Haze	1s	.....	.....	0	0	Hazy.	
Salt Lake City, Utah	25.31	643.4	29.96	761.0	45	7.2	60	NW	8	3.6	.....	8c	Haze	.....	.....	0	0	Fair.	
Sandy Hook, N. J	.....	.....	29.96	753.4	50	10.0	64	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy.	
San Diego, Cal	.....	.....	30.25	768.3	51	10.6	59	NW	10	7.2	.....	0	0	.....	.....	0	0	Clear.	
San Francisco, Cal	.....	.....	30.03	762.7	56	13.3	81	S	4	1.8	.....	.....	10s	.....	SE	0	0	Cloudy.	
Santa Fe, N. M	.....	.....	30.05	763.3	47	8.3	73	W	16	7.2	.....	Haze	0	.....	.....	0	0	Clear.	
Savannah, Ga	23.20	589.3	29.74	755.4	43	6.1	66	E	10	4.5	.....	0	0	.....	.....	0.11	2.8	Clear.	
Shreveport, La	.....	.....	30.21	767.1	70	21.1	71	E	16	7.2	.....	.....	10ks	.....	E	0	0	Cloudy.	
Smithville, N. C	.....	.....	30.14	765.5	67	19.4	79	S	1	0.4	.....	8c	0	W	.....	0	0	Fair.	
Springfield, Mass	.....	.....	30.28	769.1	62	16.7	57	NE	12	5.4	.....	2c	0	W	.....	0.14	3.6	Fair.	
St. Louis, Mo	.....	.....	30.21	767.1	53	11.7	53	NW	12	5.4	.....	5k	0	.....	.....	0	0	Fair.	
St. Marks, Fla	.....	.....	30.13	765.3	60	15.6	55	SE	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
St. Paul, Minn	.....	.....	30.10	764.5	72	22.2	67	NE	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
St. Paul's Island, Alaska	.....	.....	29.86	758.4	52.5	11.4	66	SE	18	8.0	.....	10cs	0	SW	.....	0.20	5.1	Clear.	
Thatcher's Island, Mass	.....	.....	29.33	770.4	31	— 0.6	89	SE	14	6.3	.....	10	.....	.....	.....	0.09	2.3	.....	
Toledo, Ohio	.....	.....	30.12	765.0	47	8.3	77	NW	20	8.9	.....	0	0	.....	.....	0	0	Clear.	
Tucson, Arizona	.....	.....	30.15	765.8	50	13.3	74	S	7	3.1	.....	2c	0	.....	.....	0	0	Clear.	
Tybee Island, Ga	27.45	697.2	30.04	763.0	55	12.8	.....	S	.....	.....	.....	8c	0	W	.....	0	0	Fair.	
Vicksburg, Miss	.....	.....	30.18	766.6	69	20.6	75	E	25	11.2	.....	5k	0	SE	.....	0	0	Fair.	
	.....	.....	30.05	763.3	69	20.6	79	NE	1	0.4	.....	8ck	0	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.	23.93	607.8	29.41	747.0	40	4.4	91	Calm	0	0	.....	7c	0	SW	.....	0.24	6.1	Cloudy	
Washington, D. C.	.....	.....	30.36	771.1	51.5	10.8	56	N	8	3.6	.....	Haze	Haze	.....	.....	0	0	Hazy	
Wilmington, N. C	.....	.....	30.29	769.4	60	15.6	54	NE	11	4.9	.....	0	0	.....	.....	0.67	17.0	Clear	
Wood's Holl, Mass.	.....	.....	30.16	766.1	55	12.8	50	NW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Wytheville, Va	27.96	710.2	30.16	766.1	48	8.9	77	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Yankton, Dakota	28.43	722.1	29.64	754.1	66	18.9	64	S	25	11.2	.....	5cs	0	SW	.....	0	0	Fair	
Yuma, Arizona	.....	.....	29.85	758.2	63	17.2	.....	NW	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.08	764.0	80	26.7	78	E	7	3.1	.....	5k	10ks	NE	.....	0	0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.95	760.7	78	25.6	78	E	.....	.....	.....	8k	2ks	.....	.....	0	0	Fair	L. V. Bigard.
St. Thomas, S. T., W. I	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. S. Cameron.
Kingston, Jamaica, W. I.	.....	.....	30.13	765.3	79	26.1	82	Calm	0	0	.....	2c	2s	.....	.....	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.76	755.9	79	26.1	78	NE	1.2	0.5	.....	0	2ks	.....	S	0.81	20.6	Fair	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.03	762.7	79	26.1	78	NE	6.0	2.7	.....	5k	2ks	NE	.....	0.11	2.8	Cloudy	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.00	764.3	77.0	25.0	75	SSW	9.5	4.2	.....	10ck	2k	SSW	.....	0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica W. I	27.18	690.4	29.95	760.7	68	20.0	79	SE	0.5	0.2	.....	5c	2k	SE	.....	0.32	8.1	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.02	762.5	81	27.2	87	E	.....	.....	1	.....	7k	.....	.....	0.240	6.10	Dry	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.6	.....	.....	85.6	29.8	.....	E	.....	.....	.....	.....	.....	.....	.....	1.024	26.00	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1	.....	.....	65.0	18.3	84	Calm	0	0	.....	4ck	3s	.....	.....	0.72	18.3	Fair	Thomas Herran.
St. John's, Newfoundland	.....	.....	30.01	762.2	35.0	1.7	100	NE	.....	.....	.....	.....	10n	.....	.....	0	0	Threatening	John Delaney.
York Factory, B. A.	.....	.....	30.42	772.7	26	— 3.3	94	SE	10	4.5	.....	4c	0	S	.....	0	0	.....	J. Fortescue.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Makawao, Maui, H. I.	27.84	707.1	30.01	762.2	60	15.6	82	Calm	0	0	.....	5c	2n	.....	.....	0	0	Threatening	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.
Steamer Hibernian, N. 53° 25′, W. 2° 59′.	At Liverpool	.....	30.76?	781.3?	50	10.0	.....	NW	.....	.....	3	.....	Haze	.....	.....	Smooth	.....	Nearly overcast	Lieut. F. Archer, R.M.B.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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 2.89? ft., or 881.5 m.; Colorado Springs, 6,032.1 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City 4,298.8 ft., or 1,301.1 m.; Santa Fè, 6,852.2 (?) 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.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

Brig. Gen. (Brt. Assg't.) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 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	...	.....	29.91	759.6	72 0	22.2	62	Calm	.....	.....	0	.....	2	.....	... .	0.181	4.6	Clear.....	Charnot.
Algiers	..	.....	29.9	761.7	66.2	19.0	69	Calm	.....	.....	0	.....	10	.....	.....	0	0	Hidden.....	Peter.
La Calle	.....	.....	.....	.....	64.9	18.3	.....	NNE	.....	.....	3	.....	0	.....	.....	0.079	2.0	Clear.....	Kunts.
Tunis	.....	.....	29.94	760.5	74.1	23.4	65	E	.....	.....	4	.....	0	.....	.....	0.039	1.0	Clear.....	Jacques.
Sfax	.....	.....	29.90	760.0	76.3	24.6	59	E	.....	.....	3	.....	5	.....	.....	0	0	Fair.....	Chauvey.
Saida	.....	.....	29.94	760.2	62.6	17.0	61	Calm	.....	.....	0	.....	4	.....	.....	0.272	6.9	Fair.....	Millot.
Tebessa	.....	.....	29.99	759.4	81.7	29.3	.....	SE	.....	.....	3	.....	3	.....	.....	0	0	Fair.....	Colin.
Geriville	.....	.....	29.97	761.2	58.8	14.9	54	NW	.....	.....	1	.....	2	.....	.....	0	0	Clear.....	Buard.
Laghouat	.....	.....	29.99	761.7	77.0	25.0	28	NW	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Guyot.
Biskra	.....	.....	29.89	759.1	90.5	32.5	.....	NNE	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Laromer.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

AUSTRIAN SERIES.

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

Agram	.....	.....	29.97	761.3	45.7	7.6	82	NE	.....	.....	2	.....	10	.....	.....	0.472	12.0	Raining.....	Prof. Ivan Stosir.
Buda-Peath	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	I.R.Cen. M. I., Hungary.
Cracow, I. R. Observatory	.....	.....	29.94	760.4	55.8	13.2	49	W	.....	.....	1	.....	7	.....	.....	0	0	.....	Dr. Wierzbiski.
Eperies	.....	.....	29.94	760.5	54.9	12.7	69	N	.....	.....	1	.....	9	.....	.....	0.677	17.20	.....	Julius Mikolik.
Gratz	28.77	730.7	29.97	761.3	51.4	10.8	65	S	.....	.....	2	.....	10	.....	.....	0.201	5.1	.....	Andreas Rospini.
Hermannstadt	28.43	722.1	29.80	757.0	66.6	19.2	67	NW	.....	.....	1	.....	10	.....	.....	0.165	4.20	.....	Prof. Reissenberger.
Kremsmunster	28.57	725.6	29.91	759.6	52.2	11.2	45	E	.....	.....	2	.....	5	.....	.....	0.244	6.2	.....	Prof. C. Wagner.
Lemberg	.....	.....	29.91	759.6	47.1	8.4	70	SW	.....	.....	2	.....	9	.....	.....	0.059	1.5	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habesuda Daniel.
Pola	.....	.....	29.74	755.4	52.3	11.3	80	E	.....	.....	5	.....	108	.....	.....	0.087	2.21	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	29.91	759.7	51.6	10.9	85	NE	.....	.....	1	.....	10	.....	.....	0.313	7.95	.....	Karl Stancel.
Trieste	.....	.....	29.80	756.8	46.4	8.0	72	E E	.....	.....	4	.....	10	.....	.....	0.449	11.4	Hail, rain.....	Prof. V. Farolfi.
Vienna	.....	.....	29.93	760.3	55.9	13.3	43	E	.....	.....	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 always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Brussels	.....	.....	30.00	761.9	54.5	12.5	54	N	.....	.....	1	.....	7	.....	.....	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			30.21	767.3	49.0	9.4		NNE	24	10.7			5			0	0	Blue sky	William Boswell.
Ardrossan			30.20	767.1	53	11.7		WNW			3		6					*D. clouds	William McNeill.
Armagh, Observatory			30.24	768.1	51.4	10.8		NE	9	4.0			8					Overcast	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs'y			30.14	765.5	50.0	10.0		E	10	4.5			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			30.20	767.1	51.4	10.8		ESE			1		10					*D. clouds	J. Dreyer.
Bradford			30.14	765.5	50.7	10.4		N			0		10			0.08	2.0	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.00	762.0	83.0	28.3		SE			1		8					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			30.08	764.0	55.2	12.9		NNE			2		7					*D. clouds	H. Todd.
Cardington			30.10	764.5	52.0	11.1		E			1		8					Overcast	John McLaren.
Carlisle			30.18	766.6	50.1	10.1		N			4		9			0	0	*D. clouds	T. Bell, for J. Carmell.
Chatham, School M. E			30.03	764.0	52.7	11.5		NE			2		3			Blank	Blank	*D. clouds	Major C. N. Martin, R.E.
Dartmoor	28.64	727.4	30.15	765.8	50.6	10.3		E			3		8					Gloomy	R. F. Power.
Donaghadee			30.21	767.3	52	11.1		NE			3		5					*D. clouds	J. Mac Gowan.
Dover			30.04	763.0	50	10.0		NE			3		5					½ clouded	J. Costello.
Eccles (near Manchester.)			30.13	765.3	52.0	11.1		NE	4.2	1.9			10					Overcast	Thomas Mackereth.
Falmouth, Observatory			30.07	763.8	52.1	11.2		ESE	14	6.3			10					Foggy	The Staff.
Fort Napier, (Natal)	27.70	703.6	29.94	760.5	66.5	19.2		E			3		7					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	86	30.0		E			0		7					*D. clouds	
Galway, Queen's College			30.14	765.5	60	15.6		NE			1		10					Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.87	758.7	70.0	21.1		SW			4		6					Fine	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			30.18	766.6	51.6	10.9		SSW			1		9					*D. clouds	Lewis Stuart.
Great Yarmouth			30.12	765.0	52	11.1		NNE			3		4					*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y			30.08	764.0	57.7	14.3		ESE			2		2			Blank	Blank	Blue sky	The Staff, for G. B. Airy.
Guernsey			30.05	763.3	49	9.4		NE			2		10					Foggy	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y			30.16	766.1	49.1	9.5		NE			2		10					*D. clouds	L. J. Crossley.
Helston			30.02	762.5	57	13.9		E			4		10			0	0	Hazy	M. P. Moyle.
Holyhead			30.17	766.3	50	10.0		NE			4		2					Blue sky	John Tilston.
Kew, Observatory			30.06	763.5	52.0	11.1		E	14	6.3			9					Threatening	The Staff.
Kingstown			30.21	767.3	49	9.4		NE			4		5			Blank	Blank	*D. clouds	George Mitchell.
Leicester Museum			30.12	765.0	53.9	12.2		NE			1		8					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.86	758.4	78.0	25.6		SE			1		6k						Sergt. F. Travis, A. H. C.
Nairn			30.25	768.3	51	10.6		NE			3		8					¾ clouded	W. D. Fenny.
Nassau, (Bahamas)			30.10	764.5	76.4	24.7		NE			7		8					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.12	765.0	55.7	13.2		N			2		5k		NNE	0.012	0.30	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.09	764.3	54.1	12.3		NE			3		9					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.05	763.3	56	13.3		E			1		8					Overcast	J. Lucas.
Plymouth			30.06	763.5	51.9	11.1		ENE			3		10					Overcast	John Merrifield.
Roche's Point			30.14	765.5	55	12.8		ESE			3		5					Fine	W. Kennedy.
Saint Ann's Head			30.11	764.8	50	10.0		NE			2		8					Overcast	John C. Walker.
Saint Helier, (Jersey)			30.01	762.2	56.4	13.6		NE			3		8					¾ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			30.28	769.1	48.5	9.2		NE	23	10.3			2					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough			30.14	765.5	47.9	8.8		N			3		8					Overcast	F. Shaw.
Scutari Cemetery (Turkey)			29.88	758.9	67.6	19.8		SW			1		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			30.14	765.5	51.0	10.6		NE			2		9			0	0	Overcast	W. F. Cooper.
Silloth Rectory			30.17	766.3	53.1	11.7	56	SE			2		5			0	0	D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.15	765.8	48.4	9.1		N			1		10					Gloomy	Rev. S. J. Perry.
Stornoway, Lews (. Hebr.			30.30	769.6	52	11.1		NE			4		5					*D. clouds	John Smith.
Stratfield Turgiss			30.07	763.8	51.5	10.8		NE			1		10					Showery	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			30.25	768.3	47	8.3		NNE			4		8					Gloomy	John Trotter.
Truro, Royal Institution			30.07	763.8	58	14.4		SE			6		10					Gloomy	W. Newcombe.
Valencia, Observatory			30.17	766.3	52.4	11.3		NW	14	6.3			10					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					52	11.1		N			3		10			0	0		Thomas Dawson.
Cape Good Hope, Obs'y			30.29	769.4	61.4	16.3	58	SSE	8	3.6		0	2						The Staff, for E. J. Stone.
Leith, Restalrig Park			30.23	767.8	49.8	9.9		E			2		10k			0	0	Cloudy	Andrew Gibb.
Mauritius, Observatory			30.20	767.1				ESE	18.6	8.3						0.45	11.4		C. Meldrum.
Melbourne, Observatory			30.60	777.2	51.0	10.6	87	E	1	0.4			10			0	0	Dull	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.30	769.6	49	9.4		NE			4	5	0	NE		0	0	Solar halo	J. Youngclause.
North Unst, (Shetland Is.)			30.25	768.3	46	7.8		N			6	0	4						Robert Burnet.

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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. Inches.	Barometer. Corrected. Millimeters.	Barometer. Reduced. Inches.	Barometer. Reduced. Millimeters.	Fahrenheit.	Centigrade.	Per cent.	Wind. From—	Miles per hour.	Meters per second.	Force. 0–10.	Clouds. Up'er. 0–10.	Clouds. Low'r. 0–10.	Upper. From—	Lower. From—	Rain. Inches.	Rain. Millimeters.	Weather.
Copenhagen			29.88	759.0	47.7	8.7	72	N			4		10					
Fanöe			29.98	761.4	54.5	12.5	60	N			4		8					
Godthaab, (Greenland)																		
Stykkisholm, (Iceland)			30.21	767.2	50.0	10.0	73	S			4		5					
Thorshavn, (Faröe)			30.35	771.0	49.6	9.8	68	WSW			5		4					
Vestervig			29.98	761.6	54.3	12.4	50	NNE			4		0					

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

FRENCH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	29.96	760.9	55.4	13	42	NE	.....	.....	1	..c	8sk	.....	NE	0	0	Very cloudy	Normal School.
Amiens	.....	.....	29.98	761.4	61.2	16.2	50	N	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	29.80	757.0	56.5	14.7	50	N	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Bar-sur-Seine	.....	.....	29.90	759.4	55.4	13.0	29	ENE	.....	.....	3	.....	5	.....	E	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.87	758.8	58.3	14.6	44	NE	35.1	15.7	.....	.....	5	.....	E	0	0	Cloudy	Beaumette Observatory
Beauvais	.....	.....	30.01	762.0	55.9	13.3	33	E	.....	.....	3	.....	5	.....	ENE	0	0	Cloudy	Normal School.
Besançon	.....	.....	29.84	758.0	60.1	15.6	39	NE	.....	.....	6	.....	0	.....	.....	0	0	Clear	Normal School.
Bourg en Bresse	.....	.....	29.88	758.9	59.2	15.1	43	W	.....	.....	2	.....	.....	.....	.....	0	0	Misty	Normal School.
Bourges	.....	.....	29.84	757.8	59.4	15.2	61	NW	.....	.....	2	.....	2	.....	SW	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	29.93	760.2	57.9	13.9	69	NE	.....	.....	3	.....	10k	.....	NE	0	0	.....	Naval Observatory.
Caen	.....	.....	30.667	778.77	54.1	12.3	80	NW	.....	.....	6	.....	2	.....	SE	0	0	Slightly cl'dy	Normal School.
Carcassonne	.....	.....	29.74	755.2	62.4	16.9	47	SE	.....	.....	2	.....	10	.....	NW	0	0	Covered	Normal School.
Cauterets	.....	.....	29.93	760.2	55.4	13	.....	NE	.....	.....	2	.....	6	.....	NE	0	0	Cloudy	Normal School.
Clermont	.....	.....	29.70	756.7	66.0	18.9	44	E	.....	.....	2	.....	2	.....	S	0	0	.....	Puy de Dome Obs.
Commercy	.....	.....	29.98	761.4	54.5	12.5	40	NE	.....	.....	2	.....	2k	.....	NE	0	0	Slightly cl'dy	Normal School.
Commune de Gréasque*	.....	.....	29.84	757.8	60.6	15.9	41	NW	.....	.....	3	.....	8	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	29.77	756.2	58.6	14.8	90	ENE	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Le Mans	.....	.....	29.95	760.6	57.9	14.4	27	E	.....	.....	4	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier	.....	.....	29.84	757.8	60.3	15.7	36	NE	.....	.....	6	.....	0	.....	.....	0	0	.....	Normal School.
Mâcon	.....	.....	29.91	759.8	57.4	14.1	57	NW	.....	.....	4	.....	10	.....	.....	0	0	Covered	Normal School.
Mirecourt	.....	.....	29.82	757.5	54.9	12.7	31	NNE	.....	.....	6	.....	1	.....	SW	0	0	Clear	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	29.75	755.7	65.1	18.4	19	NW	.....	.....	2	.....	5	.....	NW	0	0	Cloudy	Normal School.
Orleans	.....	.....	29.98	761.5	57.2	14	35	ENE	.....	.....	4	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Paris, Observatory	.....	.....	29.95	760.8	56.3	13.5	31	NE	.....	.....	3	.....	5	NE	SW	0	0	Cloudy	National Observatory.
Parthenay	.....	.....	29.83	757.6	68.0	20	64	NE	.....	.....	6	.....	5	.....	NW	0	0	Cloudy	Normal School.
Privas	.....	....	29.76	755.8	60.4	15.8	.....	NNE	.....	.....	2	.....	10	.....	NNE	0	0	Covered	Normal School.
La Roche-sur-Yon	.....	.....	29.68	753.8	60.1	15.6	44	NE	.....	.....	8	.....	5	.....	SW	0	0	Partly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	29.80	758.5	60.3	15.7	42	ENE	.....	.....	5	.....	5	.....	SW	0	0	.....	Naval Observatory.
Rouen	.....	.....	30.00	761.9	57.4	14.1	42	NE	.....	.....	2	.....	5	.....	NE	0	0	Cloudy	Normal School.
Saint Lo	.....	.....	29.85	758.1	55.6	13.1	59	E	.....	.....	2	.....	7	.....	E	0	0	.....	Normal School.
Tarbes	28.62	726.9	29.08	753.9	59.0	15	13	NE	.....	.....	6	.....	5	.....	E	0	0	Cloudy	Normal School.
Villefranche	.....	.....	29.93	760.1	61.0	16.1	51	N	.....	.....	1	.....	2	.....	.....	0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.89	759.3	77.0	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.76	755.9	64.4	18.0	44	W	.....	.....	1	.....	9	.....	.....	0	0	Lightly cov'd	Marseilles Observatory.
Mont-Louis	24.58	624.3	29.89	759.3	49.6	9 8	82	ESE	5.6	2.50	.....	.....	8	.....	SW	0.055	1.4	.....	—. Faiguère.
Montsouris, Paris	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montsouris Observ'tory.
Perpignan	.....	.....	29.72	755.0	65.1	18.4	66	SE	5.6	2.50	.....	.....	7	.....	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	58.8	14.7	84	NE	.....	.....	3	.....	4	.....	.....	0	0	.....	E. Renou.
Toulouse	.....	.....	29.78	756.4	63.0	17.2	45	SW	.....	.....	1	.....	10	.....	.....	0.118	3.0	.....	Toulouse Observatory.
Tours	.....	.....	29.91	759.6	59.5	15.3	95	NE	.....	.....	4	.....	1	.....	E	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.95	760.7	58.6	14.8	33	ENE	.....	.....	3	.....	4	.....	.....	0	0	.....	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai	.....	.....	29.95	760.7	64.6	18.1	90	ESE	9.8	4.4	.....	.....	10	.....	.....	{ 0 / 0	{ 0 / 0	Misty	H. Le Lec, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,580.40 meters, or 5,204.8 feet; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,360 m., or 7,702.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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.

Bamberg	.....	.....	29.91	759.7	62.2	11.2	42	N	.....	.....	4	.....	3	N	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.97	761.1	54.7	12.6	62	W	.....	.....	2	.....	8	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.01	762.2	50.0	10.0	56	W	.....	.....	5	.....	10	.....	.....	0	0	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	29.91	759.6	58.6	14.8	36	ENE	.....	.....	2	.....	2	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	29.99	761.7	58.3	14.6	46	NW	.....	.....	2	.....	7	WNW	.....	0	0	.....	Dr. H. Möll
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.02	762.5	58.1	14.5	44	NE	.....	.....	1	.....	5	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	28.44	722.4	29.87	758.6	55.4	13.0	38	NE	.....	.....	6	.....	.....	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	29.99	761.8	50.7	10.4	63	NNW	.....	.....	2	.....	10sk	.....	.....	0 008	0.2	Smoky	Captain F. Hegemann.
Kiel	.....	.....	29.98	761.4	51.4	10.8	58	N	.....	.....	3	.....	10	.....	.....	0.010	0.4	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.77	756.1	43.7	6.5	82	W	.....	.....	5	.....	5	.....	.....	0.150	3.8	.....	Prof. E. Luther.
Köslin	.....	.....	29.85	758.1	44.4	6.9	.....	W	.....	.....	2	.....	4	.....	.....	0.077	17.2	.....	H. Müller.
Leipsic	.....	.....	30.01	762.2	52.0	11.1	59	NW	.....	.....	2	.....	10	NW	.....	0.075	1.9	.....	Prof. Bruhns.
Memel	.....	.....	29.71	754.5	45.9	7.7	76	WSW	.....	.....	4	.....	10	.....	.....	0.220	5.6	Raining	Reinbrecht & Skalweit.
Münster	.....	.....	30.02	762.4	55.4	13.0	61	SE	.....	.....	2	.....	7	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.73	755.1	47.1	8.4	73	W	.....	.....	2	.....	10	.....	.....	0.031	0.8	.....	A. Lothes.
Posen	.....	.....	29.96	760 9	50.0	10.0	75	WNW	.....	.....	6	.....	10	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.89	759.3	58 1	14.5	36	Calm	.....	.....	0	.....	6	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.9	759.5	59.0	15.0	30	NE	.....	.....	3	.....	5	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	29.84	757.9	50.5	10 3	75	W	.....	.....	5	.....	9	.....	.....	0.028	0.7	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.92	760 0	55.0	13.3	41	NE	.....	.....	5	.....	4	.....	.....	0	0	.....	Prof. Fiesch.
Wustrow, Naval School	.....	.....	29.87	758.6	49.8	8.9	77	NW	.....	.....	2	.....	10	.....	.....	0.197	5.0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			29.84	757.8	50.4	10.2	59	E	10.5	4.7		10				0.055	1.4		
Padua			29.82	757.4	52.0	11.1	63	NE	15.0	6.7		10		E		0.181	4.6		
Vicenza			29.83	757.6	54.7	12.6	59	E	5.6	2.5		9		S		0	0		
Verona			29.83	757.6	56.5	13.6	79	SE			1	10				0	0		
Bergamo	28.46	723.0	29.74	755.3	57.2	14.0	57	SE			2	7				0	0		
Domodossola																			
Milan			29.81	757.1	61.0	16.1	64	WSW			4		10	E		0	0		
Pavia			29.85	758.1	55.0	12.8	63	NE			4		9	E		0	0		
Moncalieri			29.84	758.0	57.0	13.9	67	ESE	1.3	0.6			9	SW		0	0		
Mondovi	27.93	709.4	29.84	757.8	51.4	10.8	68	N			2		10			0	0		
Porto Maurizio			29.82	757.5	60.8	16.0	75	SW			2		10	NE		0.150	3.8		
Genoa			29.76	755.9	60.3	15.7	46	N	4.2	1.9			10			0.063	1.6		
Piacenza			29.86	758.5	50.5	10.3	78	SE	9.8	4.4			10	SE		0.043	1.1		
Parma			29.85	758.3	49.5	9.7	84	NE			2		10			0.228	5.8		
Bologna			29.89	759.3	48.2	9.0	57	NW			1		10			0.098	2.5		
Florence			29.76	756.0	52.7	11.5	74	NE			6		10	NE		0.031	0.8		
Leghorn			29.74	755.4	54.1	12.3	84	ENE	9.8	4.4			10			1.039	26.4		
Siena	28.49	723.7	29.69	754.1	55.6	13.1	97	E	0.7	0.3			10	SW		0.276	7.0		
Urbino																			
Pesaro																			
Ancona			29.78	756.4	53.6	12.0	91	W			6		10			0.197	5.0		
Grosseto			29.71	754.6	64.4	18.0	81	SSW			4		9	S		0.169	4.3		
Rome			29.77	756.2	68.0	20.0	65	SW	9.4	4.2			10	SW		0.035	0.9		
Naples, O. U			29.88	758.9	73.8	23.2	58	SW			4		5	S W		0.039	1.0		
Lecce			29.86	758.5	74.8	23.8	50	SSW	37.4	16.7			9	S		0	0		
Cosenza			29.83	757.7	82.0	27.8	79	NW	3.1	1.4			9			0	0		
Ripasto, (Sicily)			29.91	759.7	68.7	20.4	66	E			2		1	S		0	0		
Palermo			29.77	756 1	75.6	24.2	41	N	6.9	3.1			0			0	0		
Caltanissetta	27.89	708.3	29.77	756.2	73.4	23.0	50	ESE			4		10	WNW		0	0		
Sub-Series.																			
Naples, S. R			29.86	758.5	66.7	19.3	72	WNW	4.3	1.9			k,c	SW		0.007	1.7		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather 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.

Flushing			30.07	763.8	54.1	12.3		NE			3								
Groningen			29.98	761.0	53.2	11.8		N			2								
Helder			30.05	763.3	50.4	10.2		NNW			4								
Utrecht			30.00	761.9	53.2	11.8	64	N			3		8						Very cloudy

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

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

Bergen			29.95	760.8	59.0	15.0	32	NNW	13.2	5.9			3			0	0		
Brönö			29.99	761.7	43.2	6.2	82	W	11	5			9			0.016	0.4		
Christiania			29.92	760.0	57.4	14.1	25	NNE	12.1	5.4			0			0	0		
Tromsö			29.88	758.9	38.5	3.6	69	SSW	2	1			10			0.232	5.9		

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

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luis 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	60.6	15.9	71	N	11.9	5.31	.....	.....	6	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.90	759.4	58.5	14.7	89	SSW	13.0	5.83	.....	.....	10	WSW	.....	1.183	30.04	Raining	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)	.....	.....	29.97	761.3	65.1	18.4	57	W	16.4	7.33	.....	.....	2	.....	.....	0	0	.....	Capt D. A. da Cunha.
Lisbon	.....	.....	29.75	755.7	60.8	16.0	82	SW	26.2	11.7	.....	.....	9	SW	.....	0.709	18.0	.....	The Observatory.

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

RUSSIAN SERIES.

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

Warsaw	.....	.....	29.87	758.8	59.5	10.3	66	SW	25	11	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.74	755.4	52.2	11.2	53	SSW	13	6	.....	.....	9	.....	.....	.....	.....	Raining	Astronomical Obs.
Dorpat	.....	.....	29.53	750.0	45.1	7.3	76	SSW	7	3	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.43	747.5	47.1	8.4	92	ENE	9	4	.....	.....	10	.....	.....	.....	.....	Raining	Central Physical Obs
Kuopio	.....	.....	29.64	752.8	43.3	6.3	86	NE	7	3	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.83	757.6	63.5	17.5	79	WNW	4	2	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.02	762.6	75.6	24.2	36	SW	20	9	.....	.....	3	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.04	763.1	77.0	25.0	65	SSE	2	1	.....	.....	3	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.82	757.4	62.1	16.7	69	SSW	9	4	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.90	761.0	81.3	27.4	42	W	9	4	.....	.....	4	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.75	755.6	39.0	3.9	78	NE	13	6	.....	.....	10	.....	.....	.....	.....	Raining	Ogorodnikof.
Tiflis	28.73	729.7	30.00	763.5	82.1	28.4	31	SW	11	5	.....	.....	4	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.30	769.7	65.7	18.7	43	ESE	18	8	.....	.....	0	.....	.....	.....	.....	.....	Sebastianof.
Kazan	.....	.....	30.00	762.0	61.0	16.1	71	SW	9	4	.....	.....	6	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tchernischef.
Ekaterinburg	29.21	742.0	30.23	767.8	47.1	8.4	67	SW	13	6	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.31	769.9	73.4	23.0	19	ENE	16	7	.....	.....	6	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.65	727.7	30.32	770.0	67.6	19.8	41	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.24	768.0	53.2	11.8	46	WSW	9	4	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.96	761.0	39.6	4.2	66	WNW	4	2	.....	.....	1	.....	.....	.....	.....	Snowing	Marks.
Irkutsk	28.57	725.7	29.97	761.2	40.8	4.9	48	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Usoltef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.89	759.1	70.5	21.4	74	NNE	4	2	.....	.....	9	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	31.8	— 0.1	85	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 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, 552.0? m., or 1,042.2? 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	.....	.....	29.68	753.9	60.8	16.0	70	S	24.6	11.00	.....	0	10	.....	.....	0.287	7.3	.....	Royal Observatory.
San Fernando	.....	.....	29.88	759.0	65.1	18.4	78	SW	11.4	5.1	.....	0	8	.....	SW	0.118	3.0	.....	The Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals give the weather in general terms; 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	.....	.....	29.87	758.7	45.3	7.4	53	N	.....	.....	4	.....	7	.....	.....	0	0	.....	
Umea	.....	.....	29.86	758.4	50.0	10.0	48	NE	.....	.....	6	.....	5	.....	.....	0	0	.....	
Hernosand	.....	.....	29.86	758.4	48.6	9.2	44	E	.....	.....	4	.....	6	.....	.....	0	0	.....	
Stockholm	.....	.....	29.84	758.0	46.0	7.8	55	N	.....	.....	6	.....	8	.....	.....	0.217	5.5	.....	
Wisby	.....	.....	29.73	755.1	38.5	3.6	93	N	.....	.....	6	.....	10	.....	.....	0.193	4.9	.....	
Sub-Series.																			
Upsala	.....	.....	29.76	756.0	48.0	8.9	43	N	28.0	12.5	.....	.....	3	NNE	.....	0	0	.....	Dr. Hildebrandsson.

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

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. 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	28.41	721.6	29.81	757.8	53.6	12.0	47	NNW			2		9			0	0	Vapory	The Observatory.
Zurich	28.23	717.0	29.86	758.4	55.9	13.3	53	E			1		3			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —3.5 mm.; Thermometer, —4.4 cent.; Relative Humidity, —10 per cent.

Note.—The originals give the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Constantinople			29.95	760.7	100.6	38.1		E			1		0						
Fao, (Persian Gulf)			29.98	761.5	77.4	25.2		NE			2		2						
Salonica			29.85	758.2	79.7	26.5		S			3		10						
Valona			29.92	760.0	68.0	20.0		NE			3		10						
Varna																			
Sub-Series.																			
Beirut, (Syria, Lee Obs'y			29.91	759.8	74.1	25.6	64	E			1		10m		SW	0.27	6.9	Rainy	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. 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.			30.08	764.0	44.2	6.8	72	N	6	2.7		0						Clear	Hon. J. Ferguson.
Brockville, Ontario			30.31	769.9	44	6.7		NE	4	1.8			10s		NW	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B.			30.10	764.5	45	7.2	44	W	8	3.6		2k	0	W		0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island.			30.08	764.0	42	5.6	59	N	10	4.5		0	0			Inap.	Inap.	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			30.22	767.6	45.0	7.2	53	E			1	0	10s			0	0	Threatening	James Smith, M. A.
Dalhousie, N. B.			30.14	765.5	42.0	5.6	65	W			1	5k	0			0.02	0.5		H. A. Johnson.
Esquimault, B. C.			29.85	758.2	44.3	6.8	100	N	3	1.3		10cs	0			0.11	2.8	Cloudy	W. H. Bevis.
Fredericton, N. B.			30.19	766.8	41.1	5.1	50	NW	10	4.5		1k	1s			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.90	759.4	45	7.2	88	SE	20	8.9		5k	5ks	S	S	0.15	3.8	Cloudy	James Stewart.
Goderich, Ontario			30.19	766.8	46.1	7.8	87	NE			1		10m			0	0	Threatening	H. J. Strang, M. A.
Granton, Ontario	28.97	735.8	30.08	764.0	48	8.9		E			2		10m			0	0	Cloudy	James Grant.
*Halifax, N. S.			30.11	764.8	45	7.2	47	N	14	6.3		0	0			0.01	0.3	Clear	F. Allison, M. A.
*Kingston, Ontario			30.28	769.1	44	6.7	61	NE	11	4.9		10cs	0			0	0	Cloudy	S. Woods, M. A.
*Montreal, Quebec			30.27	768.8	42	5.6	58	NE	4	1.8		5ck	5ks			Inap.	Inap.	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.30	769.6	42	5.6	67	N	10	4.5		8cs	0	N		0	0	Fair	J. B. Haney.
*Parry Sound, Ontario			30.29	769.4	37	2.8	91	N	6	2.7		2k	5ks	N	N	0.05	1.3	Cloudy	Rev. R. Mooley.
*Port Dover, Ontario			30.14	765.5	52	11.1	47	E	11	4.9		10k	0	W		0	0	Fair	H. Morgan.
Port Hastings, N. S.			30.10	764.5	34.9	1.6		NW	5	2.2						0	0	Fine	P. ter Grant.
*Port Stanley, Ontario			30.09	764.3	53	11.7	65	E	20	8.9		8k	0	E		0.08	2.0	Fair	M. Payne.
*Quebec, Quebec			30.25	768.3	41	5.0	49	NW	7	3.1		0	0			0	0	Clear	Capt. Ash, R. N.
St. John, N. B.			30.20	767.1	41	5.0	74	W	6	2.7		0	0			0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario			30.21	767.3	40	4.4	91	E	9	4.0			10s			0.18	4.6	Heavy rain	K. Stewart.
Stayner, Ontario			30.23	767.8	41	5.0	91	Calm	0	0			10m			0.17	4.3	Rain	R. J. Cole.
Stratford, Ontario	28.82	732.0	30.10	764.5	47.0	8.3	74	E	20	8.9			10s			0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			30.04	763.0	41	5.0	74	W	9	4.0		2k	8ks	NW	W	0	0	Cloudy	T. C. Hill.
*Toronto, Ontario			30.23	767.8	44	6.7	70	E	10	4.5			10ks		W	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.10	764.5	50.1	10.1	58	E	22	9.8		4ck	6s	W		0.11	2.8	Fine	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 m.

UNITED STATES SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount Up'er 0—10	Clouds. Amount Low'r 0—10	Clouds. Direction. pper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.18	766.6	51	10.6	64	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Alpena, Mich	.....	.....	30.19	766.8	36	2.2	100	NE	23	10.3	.....	.....	10n	.....	NE	1.21	30.7	Light rain	
Atlantic City, N. J	.....	.....	30.23	767.8	55	12.8	80	S	8	3.6	.....	2cs	Haze	SW	.....	0	0	Fair	
Augusta, Ga.	.....	.....	30.30	769.6	70	21.1	63	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Baltimore, Md	.....	.....	30.21	767.3	57	13.9	69	SW	5	2.2	.....	Haze	2s	.....	.....	0	0	Fair	
Barnegat, N. J	.....	.....	30.22	767.6	56	13.3	88	SW	16	7.2	.....	8k	0	NW	.....	0	0	Cloudy	
Benton, Montana	27.11	688.6	29.91	759.7	48	8.9	70	W	8	3.6	.....	.....	10s	.....	W	0	0	Cloudy	
Bismarck, Dakota	27.88	708.1	29.47	748.5	49	9.4	57	NE	4	1.8	.....	.....	10s	.....	.....	0.42	10.7	Cloudy	
Boston, Mass	.....	.....	30.25	768.3	48	8.9	57	E	3	1.3	.....	5cs	Fog	W	.....	0	0	Foggy	
Breckenridge, Minn	.....	.....	29.62	752.3	48	8.9	70	E	28	12.5	.....	.....	10s	.....	S	0	0	Cloudy	
Buffalo, N. Y.	.....	.....	30.14	765.5	51	10.6	46	E	12	5.4	.....	0	8ks	.....	SW	0	0	Fair	
Burlington, Vt.	.....	.....	30.43	767.8	45	7.2	76	NE	2	0.9	.....	.....	10s	.....	.....	0.02	0.5	Cloudy	
Cairo, Ill.	.....	.....	30.02	762.5	70	21.1	66	S	13	5.8	.....	5c	0	.....	.....	0	0	Fair	
Cape Hatteras, N. C.	.....	.....	30.27	768.8	66	18.9	68	SW	7	3.1	.....	0	Haze	.....	.....	0	0	Clear	
Cape Henry, Va	.....	.....	30.27	768.8	62	16.7	67	S	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Cape Lookout, N. C.	.....	.....	30.32	770.1	66	18.9	78	E	8	3.6	.....	0	Haze	.....	.....	0	0	Fair	
Cape May, N. J	.....	.....	30.22	767.6	58	14.4	81	S	14	6.3	.....	2ck	0	W	.....	0	0	Clear	
Charleston, S. C.	.....	.....	30.31	769.9	71	21.7	53	E	9	4.0	.....	0	Haze	.....	.....	0	0	Clear	
Cheyenne, Wyoming	23.78	604.0	29.72	754.9	38	3.3	56	NW	24	10.7	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill	.....	.....	29.81	757.2	66	18.9	68	SW	14	6.3	.....	0	Haze	.....	.....	0.01	0.3	Clear	
Cincinnati, Ohio	.....	.....	30.00	762.0	69	20.6	65	SW	11	4.9	.....	5c	0	W	.....	0	0	Fair	
Cleveland, Ohio	.....	.....	30.00	762.0	59.4	15.2	43	SE	13	5.8	.....	8ck	0	W	.....	0	0	Fair	
Colorado Springs, Col.	23.86	606.0	29.73	755.1	53	11.7	30	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Corsicana, Tex	.....	.....	29.93	760.2	71	21.7	80	S	12	5.4	.....	5cs	5s	.....	S	0	0	Cloudy	
Davenport, Iowa	.....	.....	29.78	756.4	67	19.4	64	SW	12	5.4	.....	5cs	2ks	SW	SW	0	0	Fair	
Denison, Tex	.....	.....	29.89	759.2	69	20.6	84	SE	16	7.2	.....	.....	10s	.....	.....	0.02	0.5	Cloudy	
Denver, Col.	24.54	622.8	29.76	755.9	50	10.0	32	S	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich	.....	.....	29.94	760.5	59	15.0	43	S	6	2.7	.....	5k	0	W	.....	Inap.	Inap.	Fair	
Dodge City, Kan	27.09	688.1	29.23	742.2	62	16.7	77	S	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	29.71	754.6	70	21.1	52	SW	12	5.4	.....	10k	0	SW	.....	0	0	Cloudy	
Duluth, Minn	.....	.....	29.89	759.2	38	3.3	81	NE	28	12.5	.....	.....	10s	.....	.....	0.69	17.5	Cloudy	
Eastport, Me	.....	.....	30.18	766.6	45	7.2	45	NW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Erie, Pa	.....	.....	30.05	763.3	55	12.8	68	E	3	1.3	.....	5ck	Haze	.....	.....	0.10	2.5	Fair	
Escanaba, Mich	.....	.....	30.02	762.5	41	5.0	91	E	28	12.5	.....	.....	10n	.....	.....	0.78	19.8	Light rain	
Fort Gibson, Indian Ter.	.....	.....	29.80	756.9	69	20.6	69	S	13	5.8	.....	10cs	0	W	.....	0.50	12.7	Fair	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.60	726.4	29.67	753.6	59	15.0	87	S	12	5.4	.....	.....	10s	.....	S	3.50	88.9	Cloudy	
Fort Sully, Dakota	27.81	706.4	29.39	746.5	54	12.2	87	NW	3	1.3	.....	2k	0	NW	.....	6	0	Fair	
Galveston, Tex	.....	.....	30.01	762.2	74	23.3	81	SE	8	3.6	.....	.....	10s	.....	SE	0	0	Cloudy	
Grand Haven, Mich	.....	.....	29.90	759.4	55	12.8	70	E	10	4.5	.....	.....	10s	.....	W	Inap.	Inap.	Cloudy	
Indianapolis, Ind	.....	.....	29.97	761.2	69	20.6	70	S	9	4.0	.....	8cs	0	W	.....	0	0	Fair	
Indianola, Tex	.....	.....	29.97	761.2	74	23.3	85	S	16	7.2	.....	5ck	2ks	SW	S	0	0	Cloudy	
Jacksonville, Fla	.....	.....	30.26	768.6	76	24.4	59	NE	6	2.7	.....	0	0	.....	.....	0.05	1.3	Clear	
Keokuk, Iowa	.....	.....	29.74	755.4	69	20.6	61	S	13	5.8	.....	8c	0	SW	.....	0	0	Fair	
Key West, Fla	.....	.....	30.11	764.8	76.3	24.6	81	E	18	8.0	.....	2k	Haze	E	E	0	0	Hazy	
Kittyhawk, N. C.	.....	.....	30.33	770.4	64	17.8	67	SW	13	5.8	.....	0	0	.....	.....	0	0	Clear	
Knoxville, Tenn	.....	.....	30.22	767.6	61	16.1	82	SW	2	0.9	.....	0	Haze	.....	.....	0	0	Fair	
La Crosse, Wis.	.....	.....	29.65	753.1	65	18.3	83	SE	3	1.3	.....	.....	10s	.....	SE	1.16	29.5	Cloudy	
Leavenworth, Kan	.....	.....	29.70	754.4	65	18.3	78	S	10	4.5	.....	.....	10n	.....	S	0.01	0.3	Light rain	
Lexington, Ky.	29.04	737.3	30.11	764.8	65	18.3	73	S	20	8.9	.....	2c	0	.....	.....	0	0	Clear	
Long Branch, N. J	.....	.....	30.22	767.6	54	12.2	79	SE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Louisville, Ky.	.....	.....	30.05	763.3	71	21.7	66	S	16	7.2	.....	0	5ks	.....	SW	0	0	Fair	
Lynchburg, Va	.....	.....	30.23	767.8	63	17.2	50	SW	3	1.3	.....	0	Haze	.....	.....	0	0	Hazy	
Malone, N. Y.	.....	.....	30.21	767.3	44	6.7	52	NE	6	2.7	.....	10cs	0	W	.....	0	0	Cloudy	
Manhattan, Kan.	28.57	725.7	29.66	753.4	61	16.1	88	SW	24	10.7	.....	.....	10ks	.....	.....	0	0	Threatening	
Marquette, Mich	.....	.....	30.07	763.8	40	4.4	41	E	2	0.9	.....	.....	10n	.....	.....	1.29	32.8	Light rain	
Memphis, Tenn	.....	.....	30.04	763.0	71	21.7	71	SE	4	1.8	.....	5cs	2s	S	.....	0	0	Fair	
Milwaukee, Wis.	.....	.....	29.79	756.7	63	17.2	78	SW	8	3.6	.....	8ks	Fog	SW	.....	0.07	1.8	Cloudy	
Mobile, Ala.	.....	.....	30.15	765.8	74	23.3	85	SE	8	3.6	.....	5c	0	.....	.....	0	0	Fair	
Montgomery, Ala.	.....	.....	30.21	767.3	69	20.6	79	E	8	3.6	.....	10cs	Haze	S	S	0	0	Cloudy	
Morgantown, W. Va.	.....	.....	30.09	764.3	58	11.4	63	Calm	0	0	.....	0	8s	.....	.....	0	0	Fair	
Mt. Washington, N. H.	23.78	604.0	30.14	765.5	22	— 5.6	100	NW	24	10.7	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	30.10	764.5	71	21.7	67	S	4	1.8	.....	8k	0	SW	.....	0	0	Fair	
New Haven, Conn	.....	.....	30.24	768.1	54	12.2	55	E	4	1.8	.....	Haze	10s	.....	.....	0	0	Cloudy	
New London, Conn	.....	.....	30.27	768.8	52	11.1	53	E	8	3.6	.....	.....	10s	.....	W	0	0	Cloudy	
New Orleans, La	.....	.....	30.10	764.5	70	21.1	82	S	4	1.8	.....	5ck	0	W	.....	0	0	Fair	
Newport, R. I.	.....	.....	30.26	768.6	52	11.1	60	E	8	3.6	.....	5ck	5s	SW	SW	0	0	Cloudy	
New York, N. Y.	.....	.....	30.23	767.8	53	11.7	60	Calm	0	0	.....	5ck	Fog	.....	.....	0	0	Fair	
Norfolk, Va	.....	.....	30.30	769.6	64	17.8	67	SW	13	5.8	.....	0	0	.....	.....	0	0	Clear	
North Platte, Neb.	26.64	676.4	29.95	737.9	59	15.0	76	Calm	0	0	.....	2k	Haze	SW	.....	0	0	Fair	
Omaha, Neb.	28.54	724.9	29.54	750.3	67	19.4	74	SE	14	6.3	.....	8c	0	.....	.....	0	0	Fair	
Oswego, N. Y.	.....	.....	30.26	768.6	42.8	6.0	87	NW	3	1.3	.....	.....	10n	.....	.....	Inap.	Inap.	Light rain	
Pembina, Dakota	.....	.....	29.75	755.6	45	7.2	87	E	16	7.2	.....	.....	10s	.....	E	0.92	23.4	Cloudy	
Philadelphia, Penn	.....	.....	30.22	767.6	57	13.9	81	SW	7	3.1	.....	8k	0	W	.....	0	0	Cloudy	
Pike's Peak, Colorado	17.58	446.5	29.70	754.7	14	—10.0	61	W	32	14.3	.....	0	0	.....	.....	0	0	Clear	
Pittsburgh, Penn	.....	.....	30.07	763.8	57	13.9	52	E	3	1.3	.....	2ck	5k	.....	.....	0	0	Fair	
Port Huron, Mich	.....	.....	30.03	762.7	51	10.6	59	NE	9	4.0	.....	5k	2s	W	.....	0.11	2.8	Cloudy	
Portland, Me.	.....	.....	30.26	768.6	47	8.3	62	Calm	0	0	.....	10k	0	NW	.....	0	0	Cloudy	
Portland, Oregon	.....	.....	30.13	765.3	46	7.8	76	SW	3	1.3	.....	.....	10s	.....	S	0.22	5.6	Cloudy	
Punta Rassa, Fla.	.....	.....	30.17	766.3	73.7	23.2	76	NE	14	6.3	.....	Haze	Smoke	.....	.....	0	0	Hazy	
Rochester, N. Y.	.....	.....	30.21	767.3	45	7.2	68	E	7	3.1	.....	.....	10s	.....	NW	Inap.	Inap	Cloudy	
Salt Lake City, Utah	25.67	652.0	30.04	762.0	38	3.3	54	Calm	0	0	.....	0	0	.....	.....	0.80	20.3	Clear	
Sandy Hook, N. J.	.....	.....	30.20	767.1	57	13.9	76	S	10	4.5	.....	0	8ks	.....	.....	0	0	Cloudy	
San Diego, Cal.	.....	.....	30.00	762.0	51	10.6	86	NE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.07	763.8	49	9.4	93	W	16	7.2	.....	0	Fog	.....	W	0	0	Fair	
Santa Fe, N. M	23.15	588.0	29.69	754.1	42	5.6	58	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.30	769.6	70	21.1	79	E	3	1.3	.....	2k	Smoke	NE	.....	0	0	Fair	
Shreveport, La.	.....	.....	30.03	763.5	68	20.0	74	S	3	1.3	.....	8ck	5s	SW	.....	0	0	Cloudy	
Smithville, N. C.	.....	.....	30.33	770.4	67	19.4	60	S	10	4.5	.....	1ck	0	.....	.....	0	0	Clear	
Springfield, Mass.	.....	.....	30.25	768.3	50.5	10.3	58	W	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
St. Louis, Mo	.....	.....	29.90	759.4	68	20.2	69	S	8	3.6	.....	2c	2s	.....	.....	0	0	Fair	
St. Marks, Fla	.....	.....	30.23	767.8	73	22.8	81	SE	8	3.6	.....	2k	0	SE	.....	0	0	Fair	
St. Paul, Minn	.....	.....	29.62	752.3	52	11.1	86	N	12	5.4	.....	.....	10n	.....	.....	0.80	20.3	Light rain	
St. Paul's Island, Alaska	.....	.....	29.04	737.6	27	— 2.8	88	N	43	19.2	.....	.....	10	.....	.....	0.36	9.1	.....	
Thatcher's Island, Mass.	.....	.....	30.26	768.6	47	8.3	77	SW	2	0.9	.....	.....	10s	.....	NW	0	0	Cloudy	
Toledo, Ohio	.....	.....	30.02	762.5	62	16.7	78	SE	6	2.7	.....	2ck	2ks	W	SW	0	0	Fair	
Tucson, Arizona	27.58	700.5	30.11	764.8	55	12.8	.....	SE	.....	.....	.....	2c	0	W	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30.09	764.3	72	22.2	52	SE	6	2.7	.....	1cs	0	.....	.....	0	0	Clear	
Vicksburg, Miss.	.....	.....	30.11	764.8	68	20.0	74	Calm	0	0	.....	5ck	2k	SW	SW	0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	BAROMETER. Corrected for instrumental errors. Inches.	BAROMETER. Corrected for instrumental errors. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per Cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10	CLOUDS. Amount. Up'er 0—10	CLOUDS. Amount. Low'r 0—10	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Virginia City, M. T.	24.15	613.4	29.63	752.6	31	— 0.6	89	SW	8	3.6	.....	.....	10n	.....	W	0.13	3.3	Light snow..	
Washington, D. C.	.....	.....	30.19	766.8	60.5	15.8	66	SW	12	5.4	.....	Haze	Haze	.....	.....	0	0	Hazy.....	
Wilmington, N. C	.....	.....	30.32	770.1	66	18.9	68	S	2	0.9	.....	0	0	.....	.....	0	0	Clear.....	
Wood's Holl, Mass.	.....	.....	30.28	769.1	52	11.1	53	SE	8	3.6	.....	5k	0	NW	.....	0	0	Fair.....	
Wytheville, Va.	27.88	708.1	30.05	763.3	54	12.2	79	Calm	0	0	.....	0	1s	.....	.....	0	0	Clear.....	
Yankton, Dakota	28.28	718.3	29.48	748.0	66	18.9	79	S	4	1.8	.....	5cs	0	SW	.....	0	0	Fair..	
Yuma, Arizona	.....	.....	29.92	760.0	64	17.8	.....	NW	.....	.....	.....	0	0	.....	.....	0	0	Clear.....	
SUB SERIES.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.02	762.5	82	27.8	70	SE	6	2.7	.....	5ck	5ks	NE	.....	0	0	Fair.....	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.99	761.7	81	27.2	87	E	.....	.....	.....	5k	5ks	.....	.....	0.90	22.9	Fair.	L. V. Bigard.
St. Thomas, S. T., W. I	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. S. Cameron.
Kingston, Jamaica, W. I.	.....	.....	30.15	765.8	80	26.7	78	Calm	0	0	.....	8c	2s	.....	.....	0	0	.....	James Hall.
Santiago de Cuba, W. I.	.....	.....	29.79	756.7	79	26.1	78	Calm	0	0	.....	0	4s	.....	.....	0.123	3.13	Fair.....	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.06	763.5	79	26.1	74	E	7.2	3.2	.....	2k	0	E	.....	0	0	Fair.....	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.26	768.1	69.0	20.6	92	NE	20.5	9.2	.....	0	1k	.....	.....	0.02	0.5	Fair.....	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica W. I	27.20	690.9	29.98	761.5	69	20.6	90	E	0.5	0.2	.....	8c	0	E	.....	0.49	12.4	Fine.....	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.04	763.0	80	26.7	83	E	.....	.....	2	.....	10n	.....	.....	0.05	1.27	Rainy.....	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.11	764.7	.....	.....	86 0	30	.....	E	.....	.....	.....	.....	.....	.....	.....	0.098	2.50	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.23	640.8	.....	.....	64.0	17.8	85	NW	2	0.9	.....	... ..	10n	.....	.....	0.42	10.7	Cloudy.....	Thomas Herran.
St. John's, Newfoundland	.....	.....	30.08	764.0	38.0	3.3	81	W	.....	.....	.....	10ks	10s, n	.....	.....	Blank	Blank	Cloudy.....	John Delaney.
York Factory, B. A.	.....	.....	30.30	769.6	35.5	1.9	85	S	5	2.2	.....	0	0	.....	.....	0	0	.....	J. Fortescue.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Makawao, Maui, H. I.	27.88	708.1	30.05	763.3	60	15.6	82	Calm	0	0	.....	... ..	10n	.....	.....	0	0	Threatening	F. L. Clarke.
MARINE SERIES.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from		
Steamer Hibernian, N. 53° 25′, W. 2° 59′.	At Liverpool.	.....	30.16	766.1	50	10.0	.....	E	.....	.....	3	.....	Haze	.....	.....	Smooth	.....	Overcast.....	Lieut. F. Archer, R.N.R.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057 3 ft., or 1,846.2 m.; Clifton about 2,892 ft., or 881.5 m.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft , or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,012 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 4,208.8 ft., or 1,301.1 m.; Santa Fè, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,291 8 ft., or 699.4 m ; Yankton, 1,278 ft., or 389.5 m. The following constants are 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.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 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			29.87	758.8	70.9	21.6	70	Calm			0		3			0	0	Fair	Charnot.
Algiers			29.96	761.0	72.7	22.6	51	N			2		1			0	0	Clear	Peter.
La Calle					69.3	20.7		NE			1		0			0	0	Clear	Kuntz.
Tunis			29.55	750.5	74.5	23.6	55	E			3		0			0	0	Clear	Jacques.
Sfax			30.05	763.2	75.2	24.0	60	NE			5		1			0	0	Clear	Chauvey.
Saïda			29.83	758.0	70.7	26.5	10	SSW			3		2			0	0	Clear	Millot.
Tebessa			29.98	761.4	66.1	24.5		NNW			2		5			0	0	Fair	Colin.
Geriville			29.9	760.8	71.6	22.0	18	SSE			4		2			0	0	Clear	Buard.
Laghouat			29.99	761.7	78.8	26.0	33	E			3		0			0	0	Clear	Guyot.
Biskra			29.99	761.8	85.1	29.5	30	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			30.00	762.0	60.7	10.4	80	SW			1		10			0.067	1.7	Raining	Prof. Ivan Stosir.
Buda-Pesth																			I. R. Cen. M. I., Hungary.
Cracow, I. R. Observatory			30.10	764.6	54.7	12.6	61	NE			3		10			0	0		Dr. Wiersbiski.
Eperies			30.09	762.1	53.8	13.2	64	N			2		10			0.039	1.00		Julius Mikolik.
Gratz	28.82	732.1	30.03	762.7	52.3	11.8	71	NW			3		10			0.142	3.6		Andreas Rospini.
Hermannstadt	28.43	722.7	29.82	757.5	69.1	20.6	42	E			3		8			0	0		Prof. Reissenberger.
Kremsmünster	28.64	727.5	29.98	761.4	54.3	12.4	64	E			5		10			0	0		Prof. C. Wagner.
Lemberg			30.00	761.9	54.5	12.5	61	NE			1		8			0.020	0.5		Dr. T. Stanecki.
Nyiregyhaza																			Hubsauda Daniel.
Pola			29.95	760.6	57.7	14.3	75	ESE			1		1 ks			0.124	3.16		I. R. Hydrographic Office.
Szegedin			29.95	760.6	54.9	12.7	93	N			1		10			0	0		Karl Stancel.
Trieste			29.89	759.3	77.4	25.2	63	SW			1		8			0.071	1.8		Prof. V. Faroli.
Vienna			29.99	761.8	59.7	15.4	36	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, 388.9 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	763.6	59.4	15.2	48	ENE			5		8			0.045	1.15		Royal Observatory.

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

BRITISH SERIES.

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, 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			30.34	770.6	50.4	10.2		N	16	7.2			3			0	0	Blue sky	William Boswell.
Ardrossan			30.33	770.4	54	12.2		E			3		2					Hailing	William McNeil.
Armagh, Observatory			30.32	770.1	47.0	8.3		NNE	11	4.9									S. Call, for Dr. Robinson.
Bidston, Liverpool Obs'y			30.22	767.6	53.0	11.7		ENE	11	4.9			7					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			30.26	768.6	50.3	10.2		NNE			1		9					Drizzling	J. Dreyer.
Bradford			30.24	768.1	52.2	11.2		NE			1		10			0.01	0.3	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	84.0	28.9		NE			2		6					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory																			H. Todd.
Cardington			30.20	767.1	57.0	13.9		NE			1		5					*D. clouds	John McLaren.
Carlisle			30.28	769.1	50.1	10.1		N			3		10			0	0	Threatening	T. Bell, for J. Carmell.
Chatham, School M. E.			30.19	766.8	52.7	11.5		NE			2		5					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.67	728.2	30.18	766.6	51.6	10.9		NE			5		5					*D. clouds	R. E. Power.
Donaghadee			30.30	769.6	52	11.1		NE			4		10					Raining	J. MacGowan.
Dover			30.12	765.0	52	11.1		NE			4		4					½ clouded	J. Costello.
Eccles (near Manchester.)			30.22	767.6	55.0	12.8		E	6.6	3.0			8					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.12	765.0	51.5	10.8		E	21	9.4			1					*D. clouds	The Staff.
Fort Napier, (Natal)	27.72	704.1	29.96	761.0	64.9	18.3		E			2		9					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.95	760.7	86.0	30.0		N			0		5					*D. clouds	
Galway, Queen's College			30.21	767.3	58	14.4		ENE			4		10					Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.87	757.7	68.0	20.0		SW			3		7					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			30.30	769.6	51.6	10.9		ENE			1		9					Threatening	Lewis Stuart.
Great Yarmouth			30.21	767.3	49	9.4		ENE			3		6					*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y			30.15	765.8	61.5	16.4		E			4		4					*D. clouds	The Staff, for G. B. Airy
Guernsey			30.03	762.7	54	12.2		NE			6		0					Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y			30.27	768.8	50.1	10.1		ENE			2		10					*D. clouds	L. J. Crossley.
Helston			30.06	763.5	59	15.0		E			4		0			0	0	Fine	M. P. Moyle.
Holyhead			30.22	767.6	52	11.1		NE			4		0					Blue sky	John Tilston.
Kew, Observatory			30.14	765.5	54.7	12.6		NE	15	6.7			0					Hazy	The Staff.
Kingstown			30.27	768.8	50	10.0		ENE			4		10					Overcast	George Mitchell.
Leicester Museum			30.23	767.8	53.5	11.9		E			3		7					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.90	759.4	72.6	22.6		NW			1		2k						Sergt. F. Travis, A. H. C.
Nairn			30.36	771.1	54	12.2		NE			2		5					½ clouded	W. D. Penny.
Nassau, (Bahamas)			30.13	765.3	79.0	26.1		NE			6		7					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.23	767.8	53.8	12.1		NNE			3		9k,d		NE	0	0	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.20	767.1	54.7	12.7		E			3		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.15	765.8	55	12.8		NE			2		9					Overcast	J. Lucas.
Plymouth			30.11	764.8	55	12.8		E			4		6					*D. clouds	John Merrifield.
Roche's Point			30.20	767.1	54	12.2		ESE			4		8					Cloudy	W. Kennedy.
Saint Ann's Head			30.17	766.3	52	11.1		E			1		7					*D. clouds	John C. Walker.
Saint Helier, Jersey)			29.99	761.7	59.8	15.4		ENE			5		2					¼ clouded	A. P. Amy.
Sandwick Manse, Orkneys)			30.38	771.6	49.8	9.9		NW	18	8.0			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough			30.26	768.6	50.2	10.1		N			1		7					*D. clouds	F. Shaw.
Scutari Cemetery Turkey			29.78	756.4	71	21.7		NNE			3		3					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.23	767.8	54.0	12.2		E			2		7			0	0	Overcast	W. F. Cooper.
Silloth Rectory			30.28	769.1	50.5	10.3	70	SE			3		7			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.23	767.8	54.4	12.4		E			2		10					Gloomy	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.			30.37	771.4	53	11.7		NE			4		0					Blue sky	John Smith.
Stratfield Turgiss			30.16	766.1	56.3	13.5		E			1–2		8					*D. clouds	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			30.36	771.1	52	11.1		NE			2		4					*D. clouds	John Trotter.
Truro, Royal Institution			30.12	765.0	62	16.7		E			6		4					*D. clouds	W. Newcombe.
Valencia, Observatory			30.20	767.1	57.4	14.1		NE	25	11.2			7					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					50	10.0		E			2								Thomas Dawson.
Cape Good Hope, Obs'y			30.31	769.9	64.0	17.8	55	SE	10	4.5		5	5						The Staff, for E. J. Stone.
Leith, Restalrig Park			30.34	770.6	51.0	10.6		NE			3	6ck				0	0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.16	766.1				ESE	15.1	6.8						0.13	3.3		C. Meldrum.
Melbourne, Observatory			30.60	777.2	51.8	11.0	82	S	6	2.7			6			0.06	1.5	Fine	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.35	770.9	50	10.0		NE			4	0	0			0	0		J. Youngclause.
North Unst, (Shetland Is.)			30.31	769.9	48	8.9		N			2		10						Robert Burnet.

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Fahrenheit.	Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Miles per hour.	Meters per second.	Force. 0–10.	Clouds. Up'er 0–10.	Low'r 0–10.	Upper. From—	Lower. From—	Rain. Inches.	Millimeters.	Weather.
Copenhagen			30.17	766.3	56.5	13.6	41	NW			2		1					
Fanöe			30.23	767.7	56.5	13.6	53	W			4		1					
Godthaab, (Greenland)																		
Stykkisholm, (Iceland)			30.32	770.1	47.8	8.8	88	S			2		10					Raining
Thorshavn, (Faröe)			30.34	770.5	54.1	12.3	63	WNW			4		0					
Vestervig			30.20	767.0	50.0	10.0	76	WNW			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	.....	.....	29.93	760.2	57.2	14	52	NE	.....	.....	3	.....	8ck	.....	NE	0	0	Very cloudy	Normal School.
Amiens	.....	.....	30.06	763.4	66.2	19.0	47	NE	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	29.94	760.4	62.8	17.1	67	SE	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Bar-sur-Seine	.....	.....	29.89	759.1	55.3	18.5	28	E	.....	.....	2	.....	2	.....	.....	0	0	Slightly cl'dy	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.87	758.6	61.3	16.3	41	E	12.5	5.6	.....	.....	10	.....	SSE	0	0	Covered	Beaumette Observatory
Beauvais	.....	.....	30.01	762.3	61.3	16.3	24	ENE	.....	.....	3	.....	2	.....	ENE	0	0	Slightly cl'dy	Normal School.
Besançon	.....	.....	29.91	759.6	65.5	18.6	59	E	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Bourg en Bresse	.....	.....	30.00	762.0	69.3	20.7	39	S	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Bourges	.....	.....	30.06	763.5	65.1	18.4	67	NE	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	29.91	759.8	56.3	13.5	73	NNE	.....	.....	5	.....	4k	.....	NE	Inap.	Inap.	.....	Naval Observatory.
Caen	.....	.....	30.05?	778.5?	57.2	14	80	NE	.....	.....	6	.....	2	.....	W	0	0	Slightly cl'dy	Normal School.
Carcassonne	.....	.....	29.87	758.8	61.2	16.2	50	E	.....	.....	3	.....	10	.....	W	0	0	Covered	Normal School.
Chartres	.....	.....	29.90	761.0	60.6	19.2	.....	ENE	.....	.....	4	.....	3	.....	.....	0	0	.....	Normal School.
Clermont	.....	.....	29.80	756.8	65.8	18.8	43	E	.....	.....	2	.....	2	.....	.....	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	29.97	761.1	61.2	16.2	27	E	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Commune de Gréasque*	.....	.....	29.98	761.5	59.9	15.5	64	SE	.....	.....	2	.....	10	.....	SE	0	0	.....	M. Kina.
Grenoble	.....	.....	29.87	758.8	64.2	17.9	62	NW	.....	.....	2	.....	2k	.....	SE	0	0	Slightly cl'dy	Normal School.
Le Mans	.....	.....	29.93	760.3	63.5	17.5	40	E	.....	.....	4	.....	8	.....	E	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	29.91	759.7	63.1	17.3	49	NW	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Macon	.....	.....	29.99	761.8	62.1	16.7	72	Calm	.....	.....	0	.....	0	.....	.....	0	0	Clear	Normal School.
Mirecourt	.....	.....	29.91	759.8	55.2	12.9	40	N	.....	.....	2	.....	1	.....	SW	0	0	Clear	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	29.93	760.1	60.4	15.8	73	S	.....	.....	2	.....	5	.....	S	0	0	Cloudy	Normal School.
Orleans	.....	.....	29.89	759.2	65.1	18.4	28	E	.....	.....	3	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Paris, Observatory	.....	.....	29.97	761.1	64.0	17.8	27	E	.....	.....	3	.....	4	.....	E	0	0	Cloudy	National Observatory.
Parthenay	.....	.....	29.78	756.4	59.0	15	83	NE	.....	.....	4	.....	5	.....	NE	0	0	Cloudy	Normal School.
Privas	.....	.....	29.98	761.6	66.2	19	.....	SE	.....	.....	2	.....	5	.....	SE	0	0	Cloudy	Normal School.
La Roche-sur-Yon	.....	.....	29.65	753.0	64.0	12.2	78	NE	.....	.....	6	.....	8	.....	S	0	0	Very cloudy	Normal School.
Rochefort, Observatory	.....	.....	29.80	758.5	68.6	14.8	70	ENE	.....	.....	2	.....	10	.....	S	0.079	2.0	Raining	Naval Observatory.
Rouen	.....	.....	30.00	762.1	66.4	19.1	28	NE	.....	.....	2	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Saint Lo	.....	.....	30.12	765.1	53.4	11.9	76	N	.....	.....	2	.....	10	.....	E	0	0	.....	Normal School.
Tarbes	28.73	729.7	29.79	756.6	60.8	16	.....	NW	.....	.....	2	.....	2	.....	E	0	0	slightly cl'dy	Normal School.
Villefranche	.....	.....	29.97	761.2	71.8	22.1	57	SE	.....	.....	1	.....	8	.....	.....	0	0	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.91	759.7	79.5	26.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.93	760.2	61.9	16.6	68	SE	.....	.....	2	.....	10	.....	.....	0	0	Raining	Marseilles Observatory.
Mont-Louis	24.69	627.2	30.01	762.2	48.0	8.9	90	SSW	18.6	8.33	.....	.....	10	.....	SSW	0.205	5.2	.....	—. Faiguère.
Montsouris, Paris	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montsouris Observ'tory.
Perpignan	.....	.....	29.84	757.9	61.3	16.3	89	SE	22.4	10.00	.....	.....	7	.....	SW	0.520	13.2	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.96	761.0	65.8	18.8	.....	E	.....	.....	2	.....	1	.....	.....	0	0	Clear	E. Renou.
Toulouse	.....	.....	29.84	757.8	65.7	18.7	66	SE	.....	.....	3	.....	9	.....	.....	0.031	0.8	.....	Toulouse Observatory.
Tours	.....	.....	29.88	758.9	66.6	19.2	30	ENE	.....	.....	3	.....	9	.....	E	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.96	761.0	64.8	18.2	42	ENE	.....	.....	3	.....	3	.....	.....	0	0	.....	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	29.93	760.3	68.4	20.2	94	SE	15.0	6.7	.....	.....	8k	.....	.....	{Inap. 0.020}	{Inap. 0.5}	.....	H. Le Lec, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,580.40 meters, or 5,204.8 feet; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,360 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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.

Bamberg	.....	.....	29.97	761.3	58.6	14.8	43	N	.....	.....	3	.....	4	E	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.19	766.9	54.1	12.3	52	E	.....	.....	1	.....	9	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.20	767.0	52.5	11.4	57	NE	.....	.....	3	.....	10	.....	.....	0	0	.....	Dr. P. Naugebauer.
Carlsruhe	.....	.....	29.97	761.2	64.0	17.8	33	NE	.....	.....	4	.....	1	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.11	764.7	57.9	14.4	45	E	.....	.....	4	.....	8	ENE	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.10	764.5	63.7	17.6	34	NE	.....	.....	2	.....	3	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	29.95	760.7	59.7	15.4	50	W	.....	.....	.....	.....	5	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.21	767.4	53.6	12.0	64	ENE	.....	.....	1	.....	10	.....	.....	0	0	Cloudy	Captain F. Hegemann.
Kiel	.....	.....	30.20	767.0	55.0	12.8	54	NNE	.....	.....	2	.....	5	.....	.....	0	0	.....	Prof. G. Karsten
Königsberg, (Prussia.)	.....	.....	30.15	765.9	53.6	12.0	33	NW	.....	.....	5	.....	0	.....	.....	0.035	0.9	.....	Prof. E. Luther.
Köslin	.....	.....	30.16	766.1	54.5	12.5	.....	NW	.....	.....	2	.....	0	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.16	766.0	55.0	12.8	51	ENE	.....	.....	1	.....	9	E	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	30.16	766.0	47.5	8.6	54	NW	.....	.....	3	.....	0	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.13	765.3	57.7	14.3	60	NE	.....	.....	2	.....	3	.....	.....	0	0	.....	Prof. E. Hels.
Neufahrwasser	.....	.....	30.15	765.7	50.2	10.1	53	N	.....	.....	1	.....	1	.....	.....	0	0	.....	A. Lothes.
Posen	.....	.....	30.23	767.8	56.2	12.9	61	W	.....	.....	5	.....	9	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.95	760.8	65.1	18.4	35	NE	.....	.....	3	.....	1	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.97	761.2	63.5	17.5	31	E	.....	.....	2	.....	4	.....	.....	0	0	Fair	Prof. Schoder.
Thorn	.....	.....	30.16	766.0	58.6	14.8	37	NE	.....	.....	4	.....	2	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.98	761.4	63.5	17.5	33	E	.....	.....	6	.....	2	.....	.....	0	0	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	30.15	765.7	50.2	10.1	79	N	.....	.....	2	.....	6	.....	.....	0	0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation. The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet. The rain-fall is measured at Neufahrwasser at 8 p. m., local time.

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			29.93	760.1	57.0	13.9	55	E	8.0	3.6			10			0	0		
Padua			29.97	761.1	56.3	13.5	53	NE	7.4	3.3			10	NE		0.063	1.6		
Vicenza			29.97	761.1	57.7	14.3	62	NE	3.1	1.4			9	E		0	0		
Verona			29.87	758.7	54.5	12.5	80	E			1		10			0	0		
Bergamo	28.60	726.5	29.87	758.8	55.8	13.2	69	SSW			2		9			0	0		
Domodossola																			
Milan			29.97	761.1	61.7	16.5	66	SE			2		9	N		0	0		
Pavia			29.97	761.2	60.4	15.8	61	ENE			2		8	SW		0.024	0.6		
Moncalieri			29.95	760.6	62.8	17.1	60	ESE	3.8	1.7			8	N		0	0		
Mondovi	28.05	712.4	29.95	760.8	58.3	14.6	55	NW			4		1			0	0		
Porto Maurizio			30.00	762.0	64.6	18.1	67	E			2		6	SE		0.087	2.2		
Genoa			29.96	761.0	60.6	15.9	60	Calm	0	0			10			0	0		
Piacenza			29.98	761.4	58.1	14.5	65	SE	7.4	3.3			10	SE		0	0		
Parma			29.97	761.3	59.9	15.5	64	SE			2		9			0	0		
Bologna			30.02	762.6	55.2	12.9	46	NNW			1		6	E		0.591	15.0		
Florence			30.00	761.9	63.5	17.5	63	NW			2		10	W		0	0		
Leghorn			29.96	761.0	61.3	16.3	76	WSW	1.8	0.8			5			0.067	1.7		
Siena	28.76	730.4	29.95	760.8	53.8	12.1	84	NW	0	0			7	W		0	0		
Urbino																			
Pesaro																			
Ancona			29.99	761.8	56.8	13.8	82	NW			4		10			0	0		
Grosseto			29.98	761.4	65.1	18.4	19	NNW			4		6	SW		0.059	1.5		
Rome			29.95	760.7	71.6	22.0	48	W	4.2	1.9			4	S-W		0	0		
Naples, O. U			29.98	761.5	71.6	22.0	67	SW			2		7	SW		0	0		
Lecce			29.95	760.7	68.2	20.1	66	NNE	13.6	6.1			4			0	0		
Cosenza			29.92	759.9	78.6	25.9	73	NW	0.7	0.3			2			0	0		
Riposto (Sicily)			30.01	762.2	69.1	20.6	76	ESE			2		3			0	0		
Palermo			29.91	759.8	70.2	21.2	52	NE	6.3	2.8			1			0	0		
Caltanissetta	27.95	710.0	29.85	758.2	73.6	23.1	45	WNW			2		0			0	0		
Sub-Series.																			
Naples, S. R			29.98	761.5	66.9	19.4	73	SW	1.8	0.8			k c	NW		0.024	0.6		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Tokio																			

NETHERLANDS' SERIES.

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

Flushing			30.14	765.6	59.4	15.2		NE			4								
Groningen			30.13	765.3	56.3	13.5		NE			4								
Helder			30.19	766.8	51.8	11.0		NE			1								
Utrecht			30.11	764.7	58.3	14.6	55	NE			3		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

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

Bergen			30.13	765.4	55.4	13.0	55	WNW	5.6	2.5			0			0	0		
Brönö			29.88	759.0	39.9	4.4	93	W	18	8			10			0.236	6.0	Raining	
Christiania			30.05	763.3	62.1	16.7	29	SSW	10.1	4.5			0			0	0		
Tromsö			29.78	756.4	34.2	1.2	73	NE	2	1			5			0.059	1.5		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores,)	.....	.....	30.20	766.3	60.1	15.6	69	NE	9.0	4.03	.....	.....	6	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.78	756.4	59.0	15.0	76	SSW	10.1	4.50	.....	.....	9	SSE	.....	0.438	11.0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)	.....	.....	29.90	759.4	63.5	17.5	57	Calm	0	0	.....	.....	10	.....	.....	0.189	4.8	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	29.76	755.9	59.9	15.5	76	SSW	24.8	11.1	.....	.....	9	.....	.....	0.063	1.6	.....	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 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	.....	.....	30.13	765.2	50.9	10.5	70	NNW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.05	763.3	55.2	12.9	48	W	11	5	.....	.....	8	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.16	766.0	54.1	12.3	41	NNW	9	4	.....	.....	7	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.87	758.6	47.5	9.6	55	WNW	13	6	.....	.....	5	.....	.....	.....	.....	.....	Central Physical Obs
Kuopio	.....	.....	29.76	755.8	48.2	9.0	48	NNE	7	3	.....	.....	0	.....	.....	.....	.....	.....	Ob. Forsten.
Kieff	.....	.....	29.95	760.7	55.9	15.5	49	N	4	2	.....	.....	7	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.92	760.0	75.6	24.2	54	NE	20	9	.....	.....	3	.....	.....	.....	.....	.....	Kurdukof.
Kertch	.....	.....	29.76	755.9	76.3	24.6	63	N	9	4	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.80	756.9	52.2	11.2	66	SSE	13	6	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Lutgan	.....	.....	29.71	754.7	85.8	29.9	32	WSW	9	4	.....	.....	6	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.54	750.4	30.6	0.8	88	NNW	40	18	.....	.....	2	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.54	724.8	29.87	758.6	80.2	26.8	42	SW	9	4	.....	.....	6	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.06	763.5	71.1	21.7	30	SE	22	10	.....	.....	6	.....	.....	.....	.....	.....	Sebastianof.
Rasan	.....	.....	29.67	753.5	51.4	10.8	90	NW	7	3	.....	.....	10	.....	.....	.....	Raining	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.82	732.0	29.78	756.3	68.0	20.0	44	SW	20	9	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.11	764.7	76.1	24.5	18	E	9	4	.....	.....	2	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.49	723.7	30.14	765.6	70.9	21.6	32	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.22	767.6	60.3	15.7	39	S	13	6	.....	.....	7	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.87	758.8	52.7	11.5	46	SW	7	3	.....	.....	10	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usoltzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.28	769.0	57.7	14.3	46	Calm	0	0	.....	.....	9	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	37.2	2.9	94	SE	2	1	.....	.....	10	.....	.....	.....	Light rain	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 502.0? m., or 1,042.2? 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	.....	.....	29.80	756.9	61.0	16.1	71	W	15.7	7.00	.....	0	5	.....	.....	0.028	0.7	Cloudy	Royal Observatory.
San Fernando	.....	.....	29.90	759.4	65.8	18.8	65	SSW	11.9	5.3	.....	1	7	E	ENE	0.024	0.6	.....	The Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals give the weather in general terms; 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	.....	.....	29.75	755.7	44.6	7.0	61	SW	.....	.....	4	.....	7	.....	.....	0	0	.....	
Umea	.....	.....	29.80	757.0	56.8	13.8	71	NW	.....	.....	2	.....	10	.....	.....	0	0	.....	
Hernosand	.....	.....	29.87	758.6	54.3	12.4	40	WNW	.....	.....	4	.....	9	.....	.....	0	0	.....	
Stockholm	.....	.....	29.97	761.2	57.9	14.4	47	SW	.....	.....	2	.....	7	.....	.....	0	0	.....	
Wisby	.....	.....	30.15	765.8	47.5	8.6	65	N	.....	.....	4	.....	0	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.98	761.4	59.4	15.2	38	W	9.8	4.4	.....	.....	9	.....	NW	0	0	.....	Dr. Hildebrandsson.

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

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28.51	724.1	29.92	759.9	59.2	15.1	44	N	.....	.....	1	.....	6	.....	.. ..	0	0	Vapory	The Observatory.
Zurich	28.33	719.6	29.95	760.6	60.4	15.8	59	NE	.....	.....	1	.....	2	.....	.. ..	0	0	Clear	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, —1.0 mm.; Thermometer, —1.5 cent.; Relative Humidity, —13 per cent.

NOTE.—The originals give the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople	.....	.....	29.91	759.8	91.9	33.3	.....	NW	.....	.....	6	.....	10	.....	.....	.....	.....	.....	.....
Fao, (Persian Gulf)	.....	.....	29.86	758.4	77.0	25.0	.....	NW	.....	.....	2	.....	2	.....	.....	.....	.....	.....	.....
Salonica	.....	.....	29.91	759.6	81.0	27.2	.....	W	.....	.....	2	.....	2	.....	.....	.....	.....	.....	.....
Valona	.....	.....	29.88	759 0	68.0	20.0	.....	SW	.....	.....	2	.....	8	.....	.....	.....	.....	.....	.....
Varna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.85	758.2	81.0	27.2	55	NNE	.....	.....	1	.....	7cs	.....	.....	0.01	0.3	Fair	Prof. C. V. A. Van Dyck.

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B.	.....	.....	30.26	768.1	40.8	4.9	90	NW	6	2.7	.....	9	.....	.....	.....	.....	.....	Cloudy	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.48	774.2	49	9.4	.....	Calm	0	0	.....	5c	0	NE	.....	0	0	Fair	W. R. Bigg.
*Chatham, N. B.	.....	.....	30.26	768.6	44	6.7	52	NW	8	3.6	.....	.....	10ks	.....	NW	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island.	.....	.....	30.25	768.3	44	6.7	61	W	10	4.5	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.38	771.6	53.0	11.7	48	SE	.....	.....	1	0	0	.....	.....	0	0	Bright	James Smith, M. A.
Dalhousie, N. B.	.....	.....	30.01	762.2	41.8	5.4	70	W	.....	.....	1	0	5n	.....	.....	0	0	.....	H. A. Johnson.
Esquimault, B. C.	.....	.....	30.08	764.0	42.1	5.6	92	N	1	0.4	.....	.....	10n	.....	.....	0	0	Cloudy	W. H. Bevis.
Fredericton, N. B.	.....	.....	30.30	769.6	42.1	5.6	49	NW	8	3.6	.....	.....	10s	.....	.....	0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.89	759.2	44	6.7	84	SE	9	4.0	.....	.....	10n	.....	.....	0	0	Cloudy	James Stewart.
Goderich, Ontario	.....	.....	30.25	768.3	47.1	8 4	70	E	.....	.....	4	10k	0	E	.....	0.853	21.67	Unsettled	H. J. Strang, M. A.
Granton, Ontario	29.14	740.1	30.26	768.6	43	6.1	.....	E	.....	.....	3	.....	10n	.....	.....	0.26	6.3	Cloudy	James Grant.
*Halifax, N. S.	.....	.....	30.23	767.8	45	7.2	61	N	5	2.2	.....	2c	2ks	.....	NW	0	0	Fair	F. Allison, M. A.
*Kingston, Ontario	.....	.....	30.46	773.7	47	8.3	55	NE	2	0.9	.....	5c	0	.....	.....	0	0	Clear	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.43	772.9	48	8.9	53	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario.	.....	.....	30.45	773.4	45	7.2	61	N	3	1.3	.....	2c	0	.....	.....	0	0	Clear	J. B. Haney.
*Parry Sound, Ontario.	.....	.....	30.39	771.9	48	8.9	40	E	18	8.0	.....	2cs	2ks	E	E	0	0	Fair	Rev. R. Mooley.
*Port Dover, Ontario	.....	.....	30.28	769.1	44	6.7	92	NE	10	4.5	.....	.....	10n	.....	S	0.03	0.8	Threatening	H. Morgan.
Port Hastings, N. S.	.....	.....	30.23	767.8	34.4	1.3	.....	N	4	1.8	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
*Port Stanley, Ontario	.....	.....	30.25	768.3	46	7.8	87	E	16	7.2	.....	.....	10n	.....	SE	0.05	1.3	Light rain	M. Payne.
*Quebec, Quebec	.....	.....	30.39	771.9	44	6.7	45	W	6	2.7	.....	5c	0	NW	.....	0	0	Fair	Capt. Ash, R. N.
St. John, N. B.	.....	.....	30.32	770.1	44	6.7	44	W	3	1.3	.....	3c	0	.....	.....	0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.26	768.6	46	7.8	54	SE	10	4.5	.....	.....	10n	.....	.....	0.52	13.2	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	30.37	771.4	43	6.1	75	SE	6	2.7	.....	10c	0	S	.....	0.46	11.7	Cloudy	R. J. Cole.
Stratford, Ontario	28.95	735.3	30.26	768.6	42.3	5.7	82	SE	21	9.4	.....	.....	10n	.....	.....	0.255	6.48	Rainy	C. J. MacGregor, M. A.
*Sydney, C. B.	.....	.....	30.22	767.6	43	6.1	55	W	4	1.8	.....	5k	0	W	.....	0	0	Fair	T. C. Hill.
*Toronto, Ontario	.....	.....	30.38	771.6	45	7.2	57	E	16	7.2	.....	.....	10p	.....	W	0.35	8.9	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.29	769.4	42.6	5.9	88	E	18	8.0	.....	.....	10s	.....	.....	0.08	2.0	Gloomy	J. Montgomery.
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NOTE.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 m.

UNITED STATES SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. pper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.30	769.6	47	8.3	70	NW	1	0.4	.....	5c	Haze	W	.....	0.08	2.0	Fair.	
Alpena, Mich	.....	.....	30.26	768.6	41	5.0	62	E	10	4.5	.....	.....	10n	.....	.....	1.43	36.4	Light rain.	
Atlantic City, N. J	.....	.....	30.32	770.1	51	10.6	93	NE	30	13.4	.....	.....	10n	.....	NW	0.54	13.7	Light rain.	
Augusta, Ga.	.....	.....	30.28	769.1	66	18.9	79	SE	1	0.4	.....	.....	10s	.....	SE	0	0	Cloudy.	
Baltimore, Md.	.....	.....	30.34	770.4	54	12.2	79	NE	6	2.7	.....	.....	10n	.....	E	2.34	59.4	Light rain.	
Barnegat, N. J.	.....	.....	30.34	770.6	49	9.4	93	NE	23	10.3	.....	.....	10n	.....	.....	0.24	6.1	Light rain.	
Benton, Montana	27.16	689.8	29.96	761.0	40	4.4	63	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Bismarck, Dakota	28.05	712.5	29.68	753.9	45	7.2	60	N	3	1.3	.....	.....	10s	.....	.....	1.40	35.6	Cloudy.	
Boston, Mass	.....	.....	30.37	771.4	52	11.1	41	N	8	3.6	.....	8cs	Haze	W	.....	Inap.	Inap.	Hazy.	
Breckenridge, Minn	.....	.....	29.67	753.6	45	7.2	100	E	12	5.4	.....	.....	10s	.....	.....	0.85	21.6	Cloudy.	
Buffalo, N. Y.	.....	.....	30.30	769.6	48	8.9	77	E	10	4.5	.....	.....	10n	.....	.....	0.34	8.6	Light rain.	
Burlington, Vt.	.....	.....	30.41	772.4	44	6.7	68	E	3	1.3	.....	0	0	.....	.....	0	0	Clear.	
Cairo, Ill.	.....	.....	30.11	764.8	27	— 2.8	79	S	8	3.6	.....	.....	10s	.....	S	0	0	Cloudy.	
Cape Hatteras, N. C.	.....	.....	30.23	767.8	69	20.6	65	SW	10	4.5	.....	5c	Haze	.....	.....	0	0	Fair.	
Cape Henry, Va.	.....	.....	30.21	767.3	65	18.3	68	SW	12	5.4	.....	5k	Haze	W	.....	0	0	Fair.	
Cape Lookout, N. C.	.....	.....	30.31	769.9	68	20.0	74	W	4	1.8	.....	5ck	Haze	W	.....	0	0	Fair.	
Cape May, N. J.	.....	.....	30.28	769.1	52	11.1	93	NE	24	10.7	.....	.....	10s	.....	NE	0.80	20.3	Threatening	
Charleston, S. C.	.....	.....	30.30	769.6	68	20.0	69	NW	1	0.4	.....	Haze	5s	.....	.....	0	0	Hazy.	
Cheyenne, Wyoming	24.04	610.9	29.99	761.7	31	— 0.6	59	SW	4	1.8	.....	1cs	0	.....	.....	0	0	Clear.	
Chicago, Ill.	.....	.....	29.94	760.5	65	18.3	73	SW	6	2.7	.....	.....	10n	.....	.....	0.04	1.0	Light rain.	
Cincinnati, Ohio	.....	.....	30.06	763.5	69	20.6	70	SW	5	2.2	.....	5k	0	SW	.....	0.38	9.7	Fair.	
Cleveland, Ohio	.....	.....	30.16	766.	52.8	11.6	93	NE	4	1.8	.....	.....	10ks	.....	.....	0.23	5.8	Cloudy.	
Colorado Springs, Col.	24.12	612.6	29.99	761.7	45	7.2	45	SW	16	7.2	.....	1cs	0	.....	.....	0	0	Clear.	
Constance, Tex.	.....	.....	30.02	762.5	71	21.7	90	S	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy.	
Davenport, Iowa	.....	.....	29.84	757.9	67	19.4	79	SW	4	1.8	.....	5ck	0	SW	.....	0.01	0.3	Fair.	
Denison, Tex.	.....	.....	30.00	762.0	70	21.1	90	SE	16	7.2	.....	.....	10s	.....	.....	0.02	0.5	Cloudy.	
Denver, Col.	24.81	630.2	30.03	762.7	43	6.1	43	Calm	0	0	.....	8c	0	.....	.....	0	0	Fair.	
Detroit, Mich	.....	.....	30.17	766.3	48	8.9	92	E	10	4.5	.....	.....	10n	.....	E	0.29	7.4	Light rain.	
Dodge City, Kan	27.41	696.2	29.66	753.4	54	12.2	43	NW	15	6.7	.....	0	0	.....	.....	0	0	Clear.	
Dubuque, Iowa	.....	.....	29.81	757.2	64	17.8	83	S	12	5.4	.....	0	0	.....	.....	0.95	24.1	Clear.	
Duluth, Minn	.....	.....	29.92	760.0	36	2.2	90	NE	20	8.9	.....	.....	10s	.....	.....	0.40	10.2	Cloudy.	
Eastport, Me.	.....	.....	30.28	769.1	47	8.3	41	SW	3	1.3	.....	8c	0	W	.....	0	0	Fair.	
Erie, Pa.	.....	.....	30.22	767.8	51	10.6	86	NE	3	1.3	.....	.....	10n	.....	.....	0.12	3.0	Light rain.	
Escanaba, Mich	.....	.....	30.10	764.5	41	5.0	100	E	20	8.9	.....	.....	1on	.....	.....	1.76	44.7	Heavy rain.	
Fort Gibson, Indian Ter.	.....	.....	29.92	760.0	73	22.8	71	SE	11	4.9	.....	8c	1ks	.....	S	0	0	Fair.	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.71	729.2	29.79	756.7	66	18.9	68	S	8	3.6	.....	5k	0	S	W	0	0	Fair.	
Fort Sully, Dakota	28.16	715.3	29.78	756.4	53	11.7	93	NW	12	5.4	.....	.....	10s	.....	.....	0.20	5.1	Cloudy.	
Galveston, Tex.	.....	.....	30.09	764.3	76	24.4	85	SE	5	2.2	.....	0	0	.....	.....	0	0	Clear.	
Grand Haven, Mich	.....	.....	30.03	762.7	60	10.0	93	E	20	8.9	.....	.....	10n	.....	E	0.31	7.9	Light rain.	
Indianapolis, Ind	.....	.....	30.02	762.5	70	21.1	61	S	4	1.8	.....	8k	0	S	.....	0	0	Fair.	
Indianola, Tex.	.....	.....	30.00	763.5	75	23.9	90	S	16	7.2	.....	0	8ks	.....	S	0	0	Cloudy.	
Jacksonville, Fla.	.....	.....	30.26	768.6	67	19.4	73	NE	5	2.2	.....	8ck	0	N	.....	0	0	Fair.	
Keokuk, Iowa	.....	.....	29.81	757.2	71	21.7	71	SW	8	3.6	.....	2c	0	SW	.....	0	0	Clear.	
Key West, Fla.	.....	.....	30.13	765.3	77.3	25.2	82	E	13	5.8	.....	2k	Haze	E	E	0	0	Hazy.	
Kittyhawk, N. C.	.....	.....	30.28	769.1	65	18.3	78	SW	12	5.4	.....	8k	0	N	.....	0	0	Fair.	
Knoxville, Tenn.	.....	.....	30.28	769.1	65	18.3	73	SW	3	1.3	.....	8cs	1ks	SW	SW	0	0	Cloudy.	
La Crosse, Wis.	.....	.....	29.79	756.7	53	11.7	86	E	6	2.7	.....	.....	10s	.....	.....	1.06	26.9	Cloudy.	
Leavenworth, Kan	.....	.....	29.99	759.4	67	19.4	59	W	2	0.9	.....	2c	0	SW	.....	0.35	8.9	Clear.	
Lexington, Ky.	29.07	738.4	30.15	765.8	68	20.0	70	S	12	5.4	.....	5c	0	.....	.....	0	0	Fair.	
Long Branch, N. J.	.....	.....	30.36	771.1	50	10.0	79	NE	18	8.0	.....	.....	10n	.....	.....	0.14	3.6	Light rain.	
Louisville, Ky.	.....	.....	30.11	764.5	73	22.8	63	S	12	5.4	.....	5ck	Haze	SW	.....	0	0	Fair.	
Lynchburg, Va.	.....	.....	30.20	767.1	68	20.0	68	NE	3	1.3	.....	10ck	0	W	.....	0	0	Cloudy.	
Malone, N. Y.	.....	.....	30.38	771.6	45	7.2	53	Calm	0	0	.....	2c	0	NW	.....	0	0	Fair.	
Manhattan, Kan.	28.90	731.5	29.92	760.0	59	15.0	76	W	2	0.9	.....	0	0	.....	.....	0.75	19.1	Clear.	
Marquette, Mich	.....	.....	30.12	765.0	43	6.1	83	E	12	5.4	.....	.....	10n	.....	SE	0.44	11.2	Light rain.	
Memphis, Tenn.	.....	.....	30.15	765.8	72	22.2	71	S	5	2.2	.....	5ck	0	S	.....	0	0	Fair.	
Milwaukee, Wis.	.....	.....	29.95	760.7	46	7.8	92	SE	26	11.6	.....	.....	10s	.....	W	2.29	58.2	Threatening	
Mobile, Ala.	.....	.....	30.24	768.1	74	23.3	85	SE	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
Montgomery, Ala.	.....	.....	30.27	768.8	71	21.7	80	SE	4	1.8	.....	8ck	2ks	W	SE	0.21	5.3	Cloudy.	
Morgantown, W. Va.	.....	.....	30.20	767.1	64	17.8	83	S	4	1.8	.....	.....	10s	.....	SW	0.69	17.5	Cloudy.	
Mt. Washington, N. H.	23.89	606.8	30.25	768.3	17	— 8.3	83	NW	36	16.1	.....	0	0	.....	.....	0	0	Clear.	
Nashville, Tenn.	.....	.....	30.16	766.1	71	21.7	67	SE	6	2.7	.....	5k	0	SW	.....	0	0	Fair.	
New Haven, Conn	.....	.....	30.38	771.6	49	9.4	64	NE	10	4.5	.....	Haze	10s	.....	.....	0.10	2.5	Cloudy.	
New London, Conn	.....	.....	30.38	771.6	53	11.7	53	N	6	2.7	.....	5c	0	W	.....	0.04	1.0	Fair.	
New Orleans, La.	.....	.....	30.14	765.5	74	23.3	81	SE	3	1.3	.....	5ck	0	W	.....	0	0	Fair.	
Newport, R. I.	.....	.....	30.36	771.1	48	8.9	77	N	8	3.6	.....	8cs	0	SW	.....	0.06	1.5	Cloudy.	
New York, N. Y.	.....	.....	30.38	771.6	51	10.6	78	NE	14	6.3	.....	.....	10ks	.....	NE	Inap.	Inap.	Cloudy.	
Norfolk, Va.	.....	.....	30.24	768.1	67	19.4	61	SW	12	5.4	.....	8c	0	.....	.....	0	0	Fair.	
North Platte, Neb.	27.05	687.3	29.61	752.1	49	9.4	63	W	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
Omaha, Neb.	28.81	731.5	29.84	757.9	59	15.0	54	W	7	3.1	.....	0	0	.....	.....	0	0	Clear.	
Oswego, N. Y.	.....	.....	30.10	772.4	49	9.4	62	SE	4	1.8	.....	.....	10s	.....	.....	0.11	2.8	Cloudy.	
Pembina, Dakota	.....	.....	29.82	757.4	42	5.6	91	E	4	1.8	.....	.....	10s	.....	.....	0.01	1.0	Cloudy.	
Philadelphia, Penn	.....	.....	30.37	771.4	50	10.0	82	E	15	6.7	.....	.....	10n	.....	NE	0.26	6.6	Light rain.	
Pike's Peak, Colorado	17.77	451.4	29.98	761.5	17	— 8.3	67	SW	32	14.3	.....	2c	0	SW	.....	0	0	Fair.	
Pittsburg, Penn.	.....	.....	30.19	766.8	58	14.4	93	NE	9	4.0	.....	.....	10n	.....	.....	0.43	10.9	Light rain.	
Port Huron, Mich	.....	.....	30.21	767.3	47	8.3	77	E	5	2.2	.....	.....	10n	.....	.....	0.01	0.3	Light rain.	
Portland, Me.	.....	.....	30.38	771.6	47	8.3	55	Calm	0	0	.....	2c	Haze	.....	.....	0	0	Fair.	
Portland, Oregon	.....	.....	30.19	766.8	58	3.3	90	Calm	0	0	.....	.....	8s	.....	W	0.03	0.8	Cloudy.	
Punta Rassa, Fla.	.....	.....	30.17	766.3	72.9	22.7	81	NE	16	7.2	.....	Haze	m'c	.....	NE	0	0	Hazy.	
Rochester, N. Y.	.....	.....	30.36	771.1	46	7.8	76	SE	8	3.6	.....	2c	8s	.....	.....	0.31	7.9	Cloudy.	
Salt Lake City, Utah	25.40	645.2	29.73	755.1	50	10.0	32	S	4	1.8	.....	2k	2s	SW	.....	0	0	Fair.	
Sandy Hook, N. J.	.....	.....	30.34	770.6	50	10.0	77	NE	25	11.2	.....	.....	10s	.....	N	0.07	1.8	Cloudy.	
San Diego, Cal.	.....	.....	30.04	763.0	58	14.4	70	S	8	3.6	.....	.....	10s	.....	S	0	0	Cloudy.	
San Francisco, Cal.	.....	.....	30.07	763.8	48	8.9	56	W	8	3.6	.....	Haze	0	.....	.....	0	0	Clear.	
Santa Fe, N. M.	23.27	591.0	29.81	757.2	44	6.7	49	E	6	2.7	.....	2c	0	SW	.....	0	0	Fair.	
Savannah, Ga.	.....	.....	30.30	769.6	64	17.8	83	NW	1	0.4	.....	5c	5s	.....	SE	0	0	Cloudy.	
Shreveport, La.	.....	.....	30.14	765.5	68.5	20.3	92	S	5	2.2	.....	.....	10s	.....	S	0	0	Threatening	
Smithville, N. C.	.....	.....	30.31	769.6	68	20.0	68	W	2	0.9	.....	10ck	0	W	.....	0	0	Cloudy.	
Springfield, Mass.	.....	.....	30.40	772.1	50.5	10.3	51	NE	8	3.6	.....	10cs	0	.....	.....	0.03	0.8	Fair.	
St. Louis, Mo.	.....	.....	29.98	761.5	69	20.6	56	SW	12	5.4	.....	.....	10s	.....	.....	0.63	0.8	Cloudy.	
St. Marks, Fla.	.....	.....	30.26	768.6	70	21.1	71	NE	4	1.8	.....	2ck	0	W	.....	0	0	Fair.	
St. Paul, Minn.	.....	.....	29.74	755.4	48	8.9	100	E	12	5.4	.....	.....	10n	.....	.....	0.02	0.5	Light rain.	
St. Paul's Island, Alaska	.....	.....	29.16	748.3	32	0.0	79	SW	16	7.2	.....	2ck	1k	WSW	.....	0.16	4.1	.....	
Thatcher's Island, Mass.	.....	.....	30.38	771.6	47	8.3	69	NE	7	3.1	.....	5c	0	NW	.....	0	0	Clearing.	
Toledo, Ohio	.....	.....	30.13	765.3	49	9.4	100	E	13	5.8	.....	.....	10n	.....	.....	0.61	15.5	Light rain.	
Tucson, Arizona	27.49	698.2	30.08	764.0	66	18.9	.....	S	.....	.....	.....	.....	10ks	.....	W	0	0	Threatening	
Tybee Island, Ga.	.....	.....	30.28	769.1	69	20.6	75	NE	4	1.8	.....	10cs	0	.....	.....	0	0	Cloudy.	
Vicksburg, Miss.	.....	.....	30.21	767.3	69.5	20.8	84	S	6	2.7	.....	5c	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. 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.
Virginia City, M. T.	24.08	611.6	29.58	751.3	41	5.0	41	E	8	3.6	...	8k	0	SW	...	0.03	0.8	Cloudy	
Washington, D. C.	...	...	30.31	769.9	53.5	11.9	90	E	8	3.0	...	...	10s	...	NE	0.38	9 7	Cloudy	
Wilmington, N. C	...	...	30.30	769.6	66	18.9	78	Calm	0	0	...	10cs	0	NW	...	0	0	Cloudy	
Wood's Holl, Mass	...	...	30.36	771.1	51	10.6	72	N	7	3.1	...	8c	0	...	...	0	0	Fair	
Wytheville, Va	27.90	708.6	30.02	762.5	62	16.7	78	SW	4	1.8	...	...	10s	...	SW	0	0	Threatening	
Yankton, Dakota	28.53	724.6	29.78	756.4	56	13.3	69	W	16	7.2	...	0	8s	...	W	0	0	Cloudy	
Yuma, Arizona	...	...	29.88	758.9	70	21.1	...	SE	...	...	...	0	0	...	...	0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.	...	...	30.04	763.0	82	27.8	70	SE	4	1.8	...	5ck	5ks	E	...	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	...	...	30.01	762.0	77	25.0	90	E	...	...	...	10c	0	...	...	0.88	22.4	Hazy	L. V. Bigard.
St. Thomas, S. T., W. I.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	W. S. Cameron.
Kingston, Jamaica, W. I.	...	...	30.18	766.6	80	26.7	77	Calm	0	0	...	5c	2s	...	...	0	0	...	James Gall.
Santiago de Cuba, W. I.	...	...	29.84	757.9	79	26.1	74	Calm	0	0	...	...	8ks	...	...	0	0	Cloudy	Robert Mason.
Havana, Cuba, W. I.	...	...	30.07	763.8	76	24.4	86	NE	3.6	1.6	...	2ck	8n	E	E	Inap.	Inap.	...	Charles Hasselbrink.
St. Georges, Bermudas	...	...	30.30	769.6	71.0	21.7	69	ENE	18.0	8.0	...	0	1fk	...	...	0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Leon M. Acuña.
Navassa, W. I.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Clifton, Jamaica W. I.	27.21	691.1	29.99	761.7	70	21.1	90	E	1.0	0.4	...	5c	5k	E	...	0.053	1.35	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.	...	...	30.04	763.0	80	26.7	87	E	...	...	2	5k	5k	E	...	0	0	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.03	762 8	...	...	78.8	26	...	...	...	...	...	...	...	...	...	0.226	5.75	...	Dr. H. Groot.
Medellin, Colombia, S. A.	25.25	641.3	...	...	62.5	16.9	85	Calm	0	0	...	7ck	3s	...	...	0.38	9.7	Cloudy	Thomas Hannan.
St. John's, Newfoundland	...	...	30.19	766.8	38.0	3.3	85	W	...	...	...	...	10n	...	...	0.85	21.6	Misting	John Delaney.
York Factory, B. A.	...	...	30.03	762.7	46	7.8	66	S	6	2.7	...	0	0	...	...	0	0.	...	J. Fortescue.
Honolulu, Oahu, H. I.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Daniel Smith.
Makawao, Maui, H. I.	27.89	708.4	30.06	763.5	59	15.0	76	Calm	0	0	...	5c	4ks	S	...	0	0	Threatening	F. L. Clarke.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	Weather.	Observer.
Steamer Hibernian, N. 53° 25′, W. 2° 59′.	At Liverpool,	...	Smooth	...	Hazy	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 2.89? ft., or 881.5 m.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,208.8 ft., or 1,301.1 m.; Santa 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.

Collated at the Office of the Chief Signal Officer of the Army, Washington, D. C.

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 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	.....	.....	29.88	758.9	63 9	17.7	72	Calm	.....	.....	0	.....	10	.....	.....	0	0	Hidden	Charnot.
Algiers	.....	.....	29.91	759.7	73.8	23.2	65	N	.....	.....	3	.....	2	.....	.....	0	0	Clear	Peter.
La Calle	.....	.....	.....	.....	88.7	31.5	.....	S	.....	.....	2	.....	3	.....	.....	0	0	Fair	Kuntz.
Tunis	.....	.....	29.84	757.9	86.0	30.0	28	S	.....	.....	3	.....	10	.....	.....	0	0	Hidden	Jacques.
Sfax	.....	.....	30.07	763.8	73.8	23.2	62	E	.....	.....	2	.....	6	.....	.....	0	0	Fair	Chauvey.
Salvia	.....	.....	29.84	757.9	71.6	22.0	40	NNW	.....	.....	2	.....	2	.....	.....	0	0	Clear	Millot.
Tebessa	.....	.....	29.92	760.0	75.6	24.2	.....	S	.....	.....	3	.....	10	.....	.....	0	0	Hidden	Colin.
Gerlville	.....	.....	29.92	760.0	74.8	23.8	16	SSW	.....	.....	4	.....	2	.....	.....	0	0	Clear	Ruard.
Laghouat	.....	.....	29.87	758.7	77.0	25.0	12	SW	.....	.....	5	.....	1	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	29.94	760.5	83.5	28.6	22	NE	.....	.....	3	.....	6	.....	.....	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	.....	.....	29.98	761.4	59.4	15.2	69	Calm	.....	.....	0	.....	10	.....	.....	0	0	.....	Prof. Ivan Stozir.
Buda-Pesth	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	I. R. Cen. M. I., Hungary.
Cracow, I. R. Observatory	.....	.....	30.02	762.5	54.0	12.2	67	NE	.....	.....	1	.....	10	.....	.....	0	0	.....	Dr. Wierzbiski.
Eperies	.....	.....	29.94	760.4	54.0	12.2	74	N	.....	.....	2	.....	10	.....	.....	0	0	.....	Julius Mikolik.
Gratz	.....	.....	29.94	760.4	54.0	12.2	74	N	.....	.....	2	.....	10	.....	.....	0.012	0.3	.....	Andreas Rospini.
Hermannstadt	28.78	750.9	29.97	761.1	57.9	14.4	57	W	.....	.....	3	.....	10	.....	.....	0.484	12.30	Raining	Prof. Reissenberger.
Kremsmünster	28.41	721.3	29.79	756.7	58.3	14.6	89	W	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	28.08	728.1	30.01	762.3	56 1	13.4	56	Calm	.....	.....	0	.....	10	.....	.....	0.189	4.8	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	29.86	759.3	48.9	9.4	89	NE	.....	.....	1	.....	10	.....	.....	.....	.....	.....	Habzeuda Daniel.
Pola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	.....	I.R. Hydrographic Office.
Szegedin	.....	.....	29.94	761.5	61.5	16.4	74	WNW	.....	.....	1	.....	9ks	.....	.....	0.035	0.90	.....	Karl Stancel.
Trieste	.....	.....	30.29	769.3	59.2	15.1	80	NE	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. V. Farolfi.
Vienna	.....	.....	29.99	761.8	65.8	18.8	71	WSW	.....	.....	1	.....	7	.....	.....	0	0	.....	I. R. Central Met. Obs'y.
.....	.....	.....	30.00	761.9	56.8	13.8	45	N	.....	.....	3	.....	3	.....	.....	0	0	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 388.9 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	763.6	60.3	15.7	44	ENE	.....	.....	4	.....	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			30.39	771.9	48.0	8.9		ENE	13	5.8			3			0	0	Blue sky	William Boswell.
Ardrossan			30.33	770.4	61	16.1		E			3		2					Blue sky	William McNeil.
Armagh, Observatory			30.33	770.4	50.9	10.5		ENE	12	5.4			7					*D. clouds	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs'y			30.23	767.8	57.6	14.2		ENE	16	7.2			1					Hazy	John Hartnup.
Birr Castle, (Parsonstown)			30.27	768.8	57.0	13.9		NE			1–2		2					*D. clouds	J. Dreyer.
Bradford			30.26	768.6	53.3	11.8		NE			1		6			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.00	762.0	81.5	27.5		SE			1		9					Overcast	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			30.22	767.6	56.0	13.3		NNE			2		7					*D. clouds	H. Todd.
Cardington			30.23	767.8	57.0	13.9		NE			5		7					Overcast	John McLaren.
Carlisle			30.27	768.8	57.7	14.3		E			3		2			0	0	*D. clouds	T. Bell, for J. Carmell.
Chatham, School M. E			30.19	766.8	52.2	11.2		NE			3		5					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.68	728.5	30.17	766.3	58.0	14.4		E			6		0					Blue sky	R. F. Power.
Donaghadee			30.33	770.4	57	13.9		NE			4		3					*D. clouds	J. Mac Gowan.
Dover			30.13	765.3	54	12.2		NE			1		2					¼ clouded	J. Costello.
Eccles (near Manchester.)			30.24	768.1	57.4	14.1		NE	4.0	1.8								Blue sky	Thomas Mackereth.
Falmouth, Observatory			30.09	764.3	55.5	13.1		ENE	36	16.1			7					Gloomy	The Staff.
Fort Napier, (Natal)	27.79	705.8	30.02	762.5	64.9	18.3		E			1		4					D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.93	760.2	85.0	29.4		N			2		7					*D. clouds	
Galway, Queen's College			30.21	767.3	61	16.1		NE			1		3					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.81	757.9	69.0	20.6		W			5		7					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			30.32	770.1	55.0	12.8		E			2		2					Fine	Lewis Stuart.
Great Yarmouth			30.23	767.8	49	9.4		NE			3		6					*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y			30.18	766.6	57.0	13.9		ENE			3		10					Overcast	The Staff, for G. B. Airy
Guernsey			30.04	762.7	55.5	13.1		NE			6		0					Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y			30.28	769.1	52.1	11.2		E			2		6					*D. clouds	L. J. Crossley.
Helston			30.03	762.7	60	15.6		NE			6		4c			0	0	Fine	M. P. Moyle.
Holyhead			30.24	768.1	52	11.1		NE			5		0					Blue sky	John Tilston.
Kew, Observatory			30.18	766.6	54.8	12.7		NE	20	8.9			9					Hazy	The Staff.
Kingstown			30.30	769.6	50	10.0		ENE			4		1					Blue sky	George Mitchell.
Leicester Museum			30.26	768.6	52.8	11.6		E			2		4					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.95	760.7	71.4	21.9		SE			1		0						Sergt. F. Travis, A. H. C.
Nairn			30.39	771.9	52	11.1		Calm			0		2					¼ clouded	W. D. Penny.
Nassau, (Bahamas)			30.13	765.3	79.6	26.4		E			6		7					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.26	768.6	55.7	13.2		ENE			4		7k		NE	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.23	767.8	54.8	12.7		NE			3		7					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.18	766.6	55	12.8		NE			2		5					*D. clouds	J. Lucas.
Plymouth			30.07	763.8	59.8	15.4		ENE			6		2					*D. clouds	John Merrifield.
Roche's Point			30.20	767.1	50	10.0		E			4		5					Fine	W. Kennedy.
Saint Ann's Head			30.16	766.1	59	15.0		ESE			2		3					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.97	761.2	61.0	16.1		E			6		5					¼ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			30.42	772.7	49.4	9.7		NE	12	5.4			10					Misty	Rev. C. Clouston, LL. D.
Scarborough			30.30	769.6	49.2	9.6		NE			2		7					*D. clouds	F. Shaw.
Scutari Cemetery Turkey			29.74	754.9	68.2	20.1		SW			1		2			Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.2[illegible]	758.3	56.0	13.3		E			3		5			0	0	*D. clouds	W. F. Cooper.
Silloth Rectory			30.30	769.6	61.4	16.3	53	SE			4		0			0	0	Blue sky	Rev. Francis Redford.
Stonyhurst, Observatory			30.25	768.3	53.2	13.4		NE			2		4					*D. clouds	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.			30.37	771.4	52	11.1		NE			4		5					*D. clouds	John Smith.
Stratfield Turgiss			30.17	766.3	57.2	14.0		NE			1		9					Squally	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			30.40	772.1	50	10.0		NE			1		10					Overcast	John Trotter.
Truro, Royal Institution			30.04	764.0	64	17.8		E			6		3					*D. clouds	W. Newcombe.
Valencia, Observatory			30.21	767.3	58.1	14.5		NNE	14	6.3			10					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)					53	11.7		E			1		5						Thomas Dawson.
Cape Good Hope, Obs'y			30.37	771.4	62.5	16.9	60	WNW	12	5.4		0	1						The Staff for E. J. Stone.
Leith, Restalrig Park			30.38	771.6	54.2	12.3		E			3					0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.15	765.8				SE	16.1	7.2						0.14	3.6		C. Meldrum.
Melbourne, Observatory			30.58	776.7	51.0	10.6	87	S	2	0.9		8	0			0	0	Fine	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.36	771.1	52	11.1		ENE			3	0	0			0	0		J. Youngclause.
North Unst, (Shetland Is.)			30.41	772.4	43	6.1		N			3		10						Robert Burnet.

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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. Inches.	Barometer. Corrected. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Fahrenheit.	Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Miles per hour.	Meters per second.	Force.	Clouds. Amount. Up'er.	Clouds. Amount. Low'r.	Direction. Upper.	Direction. Lower.	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.
Copenhagen			30.06	763.4	50.2	10.1	87	NW			2		1					
Fanöe			30.13	765.4	51.3	10.7	72	W			4		2					
Godthaab, (Greenland)																		
Stykkisholm, (Iceland)			30.29	760.4	50.0	10.0	73	S			6		8					
Thorshavn, (Faröe)			30.51	774.9	43.9	6.6	76	NE			2		1					
Vestervig			30.09	764.2	60.8	16.0	46	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	.....	.....	29.91	759.7	62.6	17	39	E	.....	.....	1	8c	.....	E	.....	0	0	Very cloudy	Normal School.
Amiens	.....	.....	30.00	763.5	68.7	20.4	44	ESE	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	29.94	760.4	69.8	21	53	SE	.....	.....	1	.....	10	.....	.....	0.020	0.5	.....	Normal School.
Bar-sur-Seine	.....	.....	29.93	760.1	71.4	21.9	26	E	.....	.....	2	.....	8	.....	.....	0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.85	758.3	64.6	18.1	72	NE	4.5	2.0	.....	.....	8	.....	E	0.102	2.6	Very cloudy	Beaumette Observatory
Beauvais	.....	.....	30.02	762.4	65.7	18.7	32	E	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Besançon	.....	.....	29.95	760.2	70.2	21.2	44	E	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Bourg en Bresse	.....	.....	30.00	762.1	68.7	20.4	57	SE	.....	.....	2	.....	10n	.....	NW	0	0	Covered	Normal School.
Bourges	.....	.....	30.01	762.1	68.7	20.4	75	NE	.....	.....	2	.....	2	.....	W	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	29.88	758.9	59.2	15.1	82	NE	.....	.....	3	.....	10	.....	NE	0.059	1.50	Raining	Naval Observatory.
Caen	.....	.....	29.80?	758.4?	59.7	15.4	88	NNE	.....	.....	8	.....	2	.....	WSW	0	0	Slightly cl'dy	Normal School.
Carcassonne	.....	.....	29.94	760.5	61.3	16.3	83	W	.....	.....	4	.....	10	.....	E	0	0	Covered	Normal School.
Charleville	.....	.....	29.91	759.7	70.5	21.4	.....	E	.....	.....	4	.....	2	.....	.....	0	0	.....	Normal School.
Clermont	.....	.....	29.79	756.7	69.8	21.0	87	SE	.....	.....	3	.....	8	.....	S	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	29.98	761.6	63.7	17.6	32	E	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Commune de Gréasque*	.....	.....	29.98	761.5	68.7	20.4	46	SE	.....	.....	2	.....	8	.....	SE	0	0	.....	M. Kina.
Grenoble	.....	.....	29.86	758.4	67.8	19.9	59	NW	.....	.....	4	.....	5kn	.....	N	0	0	Cloudy	Normal School.
Le Mans	.....	.....	29.91	759.8	68.7	20.4	45	ESE	.....	.....	3	.....	8	.....	ESE	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	29.94	760.4	68.0	20	61	NW	.....	.....	2	.....	5	.....	N	0.213	5.4	Cloudy	Normal School.
Mâcon	.....	.....	30.02	762.4	66.9	19.4	76	Calm	.....	.....	0	.....	0	.....	.....	0	0	Clear	Normal School.
Mirecourt	.....	.....	29.91	759.8	59.9	15.5	36	NE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	29.97	761.2	74.5	23.6	43	NW	.....	.....	2	.....	2	.....	S	0.04	1.	Slightly cl'd	Normal School.
Orleans	.....	.....	29.89	759.1	69.4	20.8	44	E	.....	.....	4	.....	8	.....	ESE	0	0	Very cloudy	Normal School.
Paris, Observatory	.....	.....	29.96	761.0	68.5	20.3	31	ENE	.....	.....	3	1c	.....	N	NE	0	0	Clear	National Observatory.
Partinenay	.....	.....	29.84	757.9	71.6	22	67	N	.....	.....	2	.....	5	.....	N	0.020	0.5	Cloudy	Normal School.
Privas	.....	.....	29.92	759.9	70.5	21.4	.....	S	.....	.....	2	.....	2	.....	S	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon	.....	.....	29.69	754.2	63.3	17.4	82	NE	.....	.....	1	.....	8	.....	S	0	0	Very cloudy	Normal School.
Rochefort, Observatory	.....	.....	29.87	758.8	71.1	21.7	62	ENE	.....	.....	2	.....	5	.....	SW	0.197	5.0	½ covered	Naval Observatory.
Rouen	.....	.....	29.99	761.8	69.1	20.6	39	NNE	.....	.....	4	.....	1	.....	NE	0	0	Clear	Normal School.
Saint Lo	.....	.....	29.72	754.8	58.6	14.8	93	E	.....	.....	1	.....	2	.....	E	0	0	.....	Normal School.
Tarbes	28.71	729.2	29.77	756.1	61.7	16.5	.....	N	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Villefranche	.....	.....	29.98	761.6	76.1	24.5	64	SE	.....	.....	2	.....	5	.....	NE	0.063	1.60	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.90	759.5	78.8	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchésl.
Marseilles	.....	.....	29.91	759.8	68.7	20.4	51	SE	.....	.....	2	.....	10	.....	.....	0.020	0.50	Raining	Marseilles Observatory.
Mont-Louis	24.73	628.1	30.01	763.1	46.0	7.8	100	ESE	5.6	2.50	.....	.....	10	.....	SSE	0.035	0.9	.....	—. Faiguère.
Montsouris, Paris	.....	.....	29.91	759.6	60.1	15.6	85	SE	13.0	5.83	.....	.....	10	.....	E	Inap.	Inap.	.....	Montsouris Observ'tory.
Perpignan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.95	760.8	72.5	22.5	31	ENE	.....	.....	2	.....	0	.....	.....	0	0	Clear	E. Renou.
Toulouse	.....	.....	29.87	758.8	64.2	17.9	60	SSE	.....	.....	6	.....	7	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	29.83	759.1	71.2	21.8	48	ESE	.....	.....	2	.....	7	.....	SE	0.008	0.2	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.96	761.0	69.8	21.0	41	E	.....	.....	3	.....	4	.....	.....	0	0	.....	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai	.....	.....	29.84	757.9	68.9	20.5	88	SSE	13.0	6.1	.....	.....	9k	.....	.....	{ 0	0 }	.....	H. Le Lec, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	{ 0	0 }	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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	.....	.....	30.00	762.0	59.5	15.3	42	NE	.....	.....	4	.....	6	NE	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.12	765.1	58.5	14.7	41	W	.....	.....	1	.....	8	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.10	764.6	58.8	14.9	37	NW	.....	.....	2	.....	9	.....	.....	0	0	.....	Dr. P. Naugebauer.
Carlsruhe	.....	.....	29.97	761.3	66.7	19.3	36	NE	.....	.....	3	.....	1	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.10	764.4	62.8	17.1	42	NE	.....	.....	2	.....	6	NE	.....	0	0	.....	Dr. H. Möhl
Cuxhaven	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.07	763.8	65.5	18.6	35	E	.....	.....	1	.....	4	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	29.97	761.2	64.0	17.8	40	SW	.....	.....	.....	.....	2	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.15	765.8	57.7	14.3	46	NW	.....	.....	1	.....	5ck	.....	.....	0	0	Fair	Captain F. Hegemann.
Kiel	.....	.....	30.12	765.1	57.4	14.1	47	NW	.....	.....	3	.....	5	.....	.....	0	0	.....	Prof. G. Karsten
Königsberg, (Prussia.)	.....	.....	29.97	761.1	57.2	14.0	42	W	.....	.....	2	.....	2	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	30.06	763.4	44.6	7.0	.....	Calm	.....	.....	0	.....	0	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.13	765.4	56.1	13.4	53	NNE	.....	.....	2	.....	10	E	.....	0	0	.....	Prof. Brühns.
Memel	.....	.....	30.00	761.9	46.6	8.1	82	W\W	.....	.....	2	.....	4	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.12	765.0	61.0	16.1	58	NE	.....	.....	2	.....	0	.....	.....	0	0	.....	Prof. E. Reis.
Neufahrwasser	.....	.....	29.96	760.9	57.9	14.4	48	E	.....	.....	3	.....	4	.....	.....	0	0	.....	A. Lothes.
Posen	.....	.....	30.11	764.8	60.4	15.8	43	NW	.....	.....	5	.....	8	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.97	761.1	67.3	19.6	39	NE	.....	.....	1	.....	2	NE	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.97	761.1	66.2	19.0	36	E	.....	.....	1	.....	2	.....	.....	0	0	Clear	Prof. Schoder.
Thorn	.....	.....	30.03	762.7	63.5	17.5	36	N	.....	.....	3	.....	4	.....	.....	0	0	.....	Dr. Hasenbalg
Treves, (Trier)	.....	.....	29.96	761.0	66.9	19.4	29	NE	.....	.....	2	.....	1	.....	.....	0	0	.....	Prof. Fiesch.
Wilstrow, Naval School	.....	.....	30.05	763.2	49.3	9.6	85	WSW	.....	.....	3	.....	0	.....	.....	0	0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			29.97	761.1	63.5	17.5	51	SW	1.3	0.6			5			0	0		
Padua			29.97	761.1	63.1	17.3	56	NNW	1.8	0.8			7	SW		0	0		
Vicenza			29.97	761.1	64.9	18.3	56	SE	1.3	0.6			3	W		0	0		
Verona			29.98	761.4	61.2	16.2	84	E			1		10			0	0		
Bergamo	28.61	726.7	29.91	759.8	62.6	17.0	61	W			2		5			0	0		
Domodossola																			
Milan			29.93	760.3	69.4	20.8	67	E			2		8	W		0	0		
Pavia			29.97	761.1	65.1	18.4	51	NE			1		4	SW		0	0		
Moncalieri			29.96	760.9	64.6	18.1	70	ESE	3.8	1.7			7	NW		0	0		
Mondovi	28.06	712.7	29.97	761.1	63.7	17.6	51	NNE			2		8	NW		0	0		
Porto Maurizio			30.03	762.8	65.1	18.4	71	E			4		3	NE		0	0		
Genoa			29.99	761.7	63.1	17.3	64	SW	0.7	0.3			2			0	0		
Piacenza			29.97	761.3	64.9	18.3	52	N	3.8	1.7			4	N		0	0		
Parma			29.97	761.1	65.5	18.6	57	NE			2		2			0	0		
Bologna			30.04	763.0	63.9	17.7	40	NW			1		5	SW		0	0		
Florence			30.01	762.2	68.9	20.5	50	NE			4		4	SE		0	0		
Leghorn			29.98	761.5	65.3	18.5	67	WSW	4.9	2.2			5			0	0		
Siena	28.77	730.7	29.97	761.1	64.8	18.2	64	WSW	0	0			7	W		0	0		
Urbino																			
Pesaro																			
Ancona			30.02	762.4	59.7	15.4	77	NNW			4		3			0	0		
Grosseto			29.99	761.8	71.6	22.0	45	NNW			4		7	NW		0	0		
Rome			29.99	761.8	72.0	22.2	52	W	4.9	2.2			1			0	0		
Naples, O. U.			30.02	762.5	72.0	22.2	58	SW			4		4	NW		0	0		
Lecce			29.99	761.8	66.2	19.0	58	NW	12.5	5.6			4	W		0	0		
Cosenza			29.97	761.3	78.8	26.0	76	NW	4.9	2.2			1			0	0		
Riposto, (Sicily)			29.95	760.6	68.0	20.0	84	ESE			2		8	NW		0	0		
Palermo			29.95	760.8	67.5	19.7	71	NE	5.6	2.5			9			0	0		
Caltanissetta	28.04	712.1	29.93	760.3	73.8	23.2	25	SW			2		6	NE		0	0		
Sub-Series.																			
Naples, S. R.			30.02	762.5	70.7	21.5	51	SW	2.5	1.1			0	W		0	0		Prof. F. Briosci.

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.

Flushing			30.15	765.9	61.2	16.2		ENE			4								
Groningen			30.13	765.3	56.3	13.5		NE			4								
Helder			30.19	766.8	51.8	11.0		NE			1								
Utrecht			30.11	764.9	58.8	14.9	58	NNE			4		8						Very cloudy

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

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

Bergen			30.18	766.5	51.8	11.0	61	NNW	20.1	9.0			0			0	0		
Brönö			30.21	767.4	37.4	3.0	66	N	38	17			10						Light snow.
Christiania			30.10	764.5	56.1	13.4	33	NNE	9.4	4.2			6			0	0		
Tromsö			30.03	762.8	28.0	— 2.2	94	NW	2	1			10			0.079	2.0		

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

PORTUGUESE SERIES.

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

Stations.	Barometer corrected for instrumental errors.		Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Winds. Direction.	Winds. Velocity.		Winds. Force.	Clouds. Amount.		Clouds. Direction.		Rain-fall or melted snow in the past 24 hours.		Weather.	Observer.
	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.		
Angra, (Azores,)	.....	.....	30.30	769.7	61.7	16.5	70	WSW	5.0	2.22	.....	.....	6	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.77	756.2	60.6	15.9	71	SSW	3.7	1.67	.....	.....	9	SSW	.....	0.079	2.0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)	.....	.....	30.13	765.3	64.6	18.1	56	SSE	2.5	1.11	.....	.....	7	.....	.....	0.047	1.2	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	29.84	757.9	58.6	14.8	62	W	15.0	6.7	.....	.....	7	.....	.....	0	0	.....	The Observatory.

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

RUSSIAN SERIES.

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

Warsaw	.....	.....	29.98	761.6	58.6	14.8	41	NW	11	5	.....	.....	6	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.92	759.9	57.7	14.3	40	NW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.80	756.9	47.5	8.6	77	NW	9	4	.....	.....	5	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.70	754.4	43.0	6.1	88	WNW	18	8	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.80	757.0	32.9	0.5	85	N	22	10	.....	.....	10	.....	.....	.....	.....	Light rain...	Ch. Forsten.
Kief	.....	.....	29.88	759.0	57.0	13.9	53	NNE	7	3	.....	.....	9	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.82	757.5	70.5	21.4	38	NNW	20	9	.....	.....	4	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.64	752.8	65.8	18.8	84	N	9	4	.....	.....	10	.....	.....	.....	.....	Raining.	Lagorio.
Moscow	.....	.....	29.88	758.9	55.8	13.2	45	SSW	9	4	.....	.....	7	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.57	751.0	72.1	22.3	45	N	22	10	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.58	751.3	25.5	— 3.6	87	NNE	20	13	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.30	720.3	29.71	754.7	71.8	22.1	55	S	9	4	.....	.....	8	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.87	758.5	71.1	21.7	34	SE	34	15	.....	.....	10	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.82	757.4	55.6	13.1	44	S	4	2	.....	.....	1	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.76	730.5	29.75	755.6	53.6	12.0	54	W	13	6	.....	.....	6	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.94	760.4	80.1	26.7	15	E	9	4	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.41	721.7	30.05	763.3	75.0	23.9	32	Calm	0	0	.....	.....	5	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.98	761.5	68.0	20.0	23	SW	9	4	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.61	752.2	65.1	18.4	39	SW	9	4	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	30.15	765.9	56.5	13.6	73	SW	11	5	.....	.....	3	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	33.6	0.9	85	NW	9	4	.....	.....	0	.....	.....	.....	.....	.....	

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 404 meters, or 1,311.8 feet; Ekaterinburg, 398.4? m., or 1,005.2? ft.; Tashkend, in. 494.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0? 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	.....	.....	29.73	755.2	67.8	19.9	93	S	8.0	4.00	.....	0	7	.....	.....	0.031	0.8	Cloudy.....	Royal Observatory.
San Fernando	.....	.....	29.86	758.5	64.8	18.2	69	SW	7.8	3.5	.....	0	8	.....	SW	0.752	19.1	.....	The Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms; 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	.....	.....	30.00	762.0	32.4	0.2	60	N	.....	.....	3	.....	7	.....	.....	0	0	.....	
Umea	.....	.....	30.05	763.2	35.2	1.8	63	S	.....	.....	2	.....	10	.....	.....	0	0	.....	
Hernosand	.....	.....	30.10	764.6	36.7	2.6	75	E	.....	.....	3	.....	10	.....	.....	0	0	.....	
Stockholm	.....	.....	30.00	762.0	43.2	6.2	74	SW	.....	.....	1	.....	7	.....	.....	0	0	.....	
Wisby	.....	.....	30.04	763.0	47.1	8.4	67	NE	.....	.....	3	.....	7	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.06	763.4	42.1	5.6	61	NNE	19.0	8.5	.....	.....	10	.....	N	0.006	0.16	.....	Dr. Hildebrandsson.

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

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28.53	724.6	29.52	760.0	65.5	18.6	41	NNE			1		6			0	0	Cloudy	The Observatory.
Zurich	28.35	720.0	29.95	760.6	65.7	18.7	55	NW			1		3			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, −0.5 mm.; Thermometer, +1.9 cent.; Relative Humidity, −10 per cent.

Note.—The originals give the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople																			
Fao, (Persian Gulf)			29.89	759.2	93.2	34.0		NW			1		10						
Salonica			29.82	757.5	78.4	25.8		S			2		5					Thunder-storm	
Valona			29.93	760.2	67.1	19.5		NW			2		2						
Varna			29.76	756.0	62.6	17.0		NW			2		10						
Sub-Series.																			
Beirut, (Syria, Lee Obs'y			29.89	759.3	81.1	27.3	61	SW			3		5k		W	3	0	Fair	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) and Constantinople also velocity in meters per second; the weather in general terms 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B.			30.40	772.1	40.8	4.9	72	Calm	0	0		0						Clear	Hon. J. Ferguson.
Brockville, Ontario			30.32	770.1	61	16.1		NE	4	1.8		2c	5s	SW	NE	0	0	Fair	W. R. Bigg.
*Chatham, N. B.			30.43	772.9	47	8.3	47	W	1	0.4		0	0			0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island			30.43	772.9	42	5.6	51	Calm	0	0		0	0			0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			30.29	769.4	55.0	12.8	74	E			1	7c	0			0	0	Fair	James Smith, M. A.
Dalhousie, N. B.			30.27	768.8	41.6	5.3	70	NW			1	0	0			0	0		H. A. Johnso
Esquimault, B. C.			30.11	764.8	47.3	8.5	85	W	6	2.7		2cs	0			0	0	Clear	W. H. Bevis.
Fredericton, N. B.			30.49	774.4	43.1	6.2	43	N	4	1.8		0	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.97	761.2	45	7.2	98	W	3	1.3		2ck	2ks	NW	NW	0	0	Fair	James Stewart.
Goderich, Ontario			30.08	764.0	57.1	13.9	95	S			2		10n			0.920	23.60	Dull	H. J. Strang, M. A.
Granton, Ontario	29.00	736.6	30.10	764.5	51	10.6		SE			2		10n			0.26	6.6	Cloudy	James Grant.
*Halifax, N. S.			30.41	772.4	46	7.8	58	N	9	4.0		0	2ks		NW	0	0	Fair	F. Allison, M. A.
*Kingston, Ontario			30.28	769.1	54	12.2	68	SE	12	5.4		10c	0			0	0	Fair	S. Woods, M. A.
*Montreal, Quebec			30.35	770.9	50	10.6	65	SE	7	3.1		0	0			0	0	lear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.30	769.6	49	9.4	65	E	5	2.2		8cs	0	SE		0	0	Fair	J. B. Haney.
*Parry Sound, Ontario			30.07	763.8	47	8.3	89	SE	22	9.8		2ck	5ks	NW	W	0.24	6.1	Fair	Rev. R. Mooley.
*Port Dover, Ontario			30.16	766.1	50	10.0	93	NW	24	10.7			10n		NW	0.07	1.8	Heavy rain	H. Morgan.
Port Hastings, N. S.			30.44	773.2	34.0	1.1		NE	2	0.9						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.15	765.8	51	10.6	96	E	16	7.2			10n		SE	0.51	13.0	Heavy rain	M. Payne.
*Quebec, Quebec			30.43	772.9	48	8.9	49	E	4	1.8		0	0			0	0	Clear	Capt. Ash, R. N.
St. John, N. B.			30.50	774.7	44	6.7	60	NE	2	0.9		0	0			0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario			30.02	762.5	54	12.2	90	SE	6	2.7			10ks		S	0.29	7.4	Light rain	K. Stewart.
Stayner, Ontario			30.63	762.7	49	9.4	94	SE	10	4.5			8n		W	0.22	5.6	Clearing	R. J. Cole.
Stratford, Ontario	28.84	732.5	30.12	765.0	51.2	10.7	97	SE	10	4.5			10s			1.120	28.45	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			30.40	772.1	39	3.9	52	N	10	4.5		8k	2ks	N	N	0	0	Fair	T. C. Hill.
*Toronto, Ontario			30.19	766.8	46	7.8	97	E	8	3.6			10n			0.15	3.8	Heavy rain	Magnetic Observatory.
Woodstock, Ontario			30.18	766.6	49.7	9.8	94	S	9	4.0			10s			0.15	3.8	Cloudy	J. Montgomery

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 m.

UNITED STATES SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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.	.....	.....	30.37	771.4	58	14.4	69	S	2	0.9	.....	2c	Haze	SW	S	0	0	Fair.	
Alpena, Mich	.....	.....	30.07	763.8	45	7.2	100	S	4	1.8	.....	.....	Fog	.....	.....	0.58	14.7	F ggy.	
Atlantic City, N. J	.....	.....	29.42	772.7	51	10.6	78	E	16	7.2	.....	.....	10s	.....	SW	0.06	1.5	Cloudy.	
Augusta, Ga.	.....	.....	30.29	769.4	69	20.6	77	NE	3	1.3	.....	0	0	.....	.....	Inap.	Inap.	Clear.	
Baltimore, Md	.....	.....	30.41	772.4	54	12.2	73	SE	12	5.4	.....	.....	10s	.....	.....	0.02	0.5	Cloudy.	
Barnegat, N. J	.....	.....	30.43	772.9	51	10.6	78	E	12	5.4	.....	.....	10s	.....	.....	0.04	1.0	Cloudy.	
Benton, Montana	27.12	688.8	29.92	760.0	51	10.6	64	E	8	3.6	.....	2c	2s	W	E	0	0	Fair.	
Bismarck, Dakota	28.21	716.5	29.84	757.9	52	11.1	59	NW	4	1.8	.....	2c	1s	NW	.....	0	0	Fair.	
Boston, Mass	.....	.....	30.46	773.7	58	14.4	42	SW	3	1.3	.....	2cs	Haze	.....	.....	0	0	Hazy.	
Breckenridge, Minn	.....	.....	30.01	762.2	42	5.6	66	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Buffalo, N. Y	.....	.....	30.18	766.6	54	12.2	79	SW	3	1.3	.....	.....	10s	.....	.....	0.02	0.5	Cloudy.	
Burlington, Vt	.....	.....	30.36	771.1	53	11.7	61	S	4	1.8	.....	0	Sm'e	.....	.....	0	0	Smoky	
Cairo, Ill	.....	.....	30.16	766.1	69	20.6	79	S	4	1.8	.....	5c	0	.....	.....	0	0	Fair.	
Cape Hatteras, N. C	.....	.....	30.26	768.6	62	16.7	83	NE	14	6.3	.....	.....	10s	.....	NE	0	0	Cloudy.	
Cape Henry, Va	.....	.....	30.36	771.1	57	13.9	87	E	16	7.2	.....	2ck	5s	.....	E	0	0	Fair.	
Cape Lookout, N. C	.....	.....	30.33	770.4	63	17.2	88	NE	20	8.9	.....	5k	5s	NE	NE	0	0	Cloudy.	
Cape May, N. J	.....	.....	29.40	772.1	52	11.1	70	E	8	3.6	.....	.....	10ks	.....	.....	0	0	Cloudy.	
Charleston, S. C	.....	.....	30.30	769.6	68	20.0	74	NE	5	2.2	.....	0	0	.....	.....	0	0	Clear.	
Cheyenne, Wyoming	23.93	607.8	29.87	758 7	39	3.9	71	W	1	0.4	.....	1cs	0	.....	.....	0	0	Clear.	
Chicago, Ill	.....	.....	30.00	762 0	70	21.1	66	W	2	0.9	.....	0	Sm'e	.....	.....	0.04	1.0	Clear.	
Cincinnati, Ohio	.....	.....	30.14	765.0	71	21.7	71	SE	4	1.8	.....	Haze	0	.....	.....	0	0	Clear.	
Cleveland, Ohio	.....	.....	30.09	764.3	61.8	16.6	88	SE	20	8.9	.....	.....	10ks	.....	SW	0.60	15.2	Cloudy.	
Colorado Springs, Col	24.02	610.1	29.88	758.9	50	10.0	51	N	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Corsicana, Texas	.....	.....	30.07	763.8	71.4	21.9	83	SE	6	2.7	.....	2ck	8s	S	.....	0	0	Cloudy.	
Davenport, Iowa	.....	.....	30.03	762.7	66	18.9	78	NW	1	0.4	.....	5ck	Sm'e	W	.....	0	0	Fair.	
Denison, Texas	.....	.....	30.07	763.8	72	22.2	90	S	17	7.6	.....	.....	10s	.....	.....	0	0	Cloudy.	
Denver, Col.	24.70	627.4	29.92	760.0	47	8.3	48	SE	2	0.9	.....	0	0	.....	.....	0	0	Clear.	
Detroit, Mich	.....	.....	30.03	762.7	64	17.8	75	S	8	3.6	.....	0	Sm'e	.....	.....	0.03	0.8	Clear.	
Dodge City, Kan	27.34	694.4	29.57	751.1	58	14.4	64	S	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy.	
Dubuque, Iowa	.....	.....	30.02	762.5	62	16.7	77	NW	1	0.4	.....	0	2s	.....	.....	0	0	Fair.	
Duluth, Minn	.....	.....	29.96	761.0	47	8.3	92	SW	4	1.8	.....	8k	0	NW	.....	0.21	5.3	Fair.	
Eastport, Me	.....	.....	30.47	773.9	46	7.8	47	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
Erie, Pa	.....	.....	30.05	763.5	58	14.4	81	SE	28	12.5	.....	.....	10n	.....	.....	0.10	2.5	Light rain.	
Escanaba, Mich	.....	.....	29.97	761.2	45	7.2	92	S	5	2.2	.....	.....	Fog	.....	.....	0.66	16.8	Foggy	
Fort Gibson, Indian Ter	.....	.....	29.98	761.5	72	22.2	67	W	4	1.8	.....	10cs	0	SW	.....	0	0	Cloudy.	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T	28.80	731.5	29.87	758.7	69	20.6	90	S	4	1.8	.....	.....	10s	.....	S	0.27	6.9	Cloudy.	
Fort Sully, Dakota	28.21	716.5	29.85	758.2	52	11.1	86	S	16	7.2	.....	5cs	0	.....	.....	0	0	Fair.	
Galveston, Tex	.....	.....	30.13	765.3	76	24.4	79	SE	4	1.8	.....	2c	2s	W	S	0	0	Fair.	
Grand Haven, Mich	.....	.....	30.00	762.0	63	17.2	72	SW	8	3.6	.....	2c	0	W	.....	Inap.	Inap.	Clear.	
Indianapolis, Ind	.....	.....	30.07	763.8	73	22.8	71	SW	4	1.8	.....	Haze	0	.....	.....	Inap.	Inap.	Fair.	
Indianola, Texas	.....	.....	30.10	764.5	75	23.9	85	SE	14	6.3	.....	2c	5ks	SW	S	0	0	Cloudy.	
Jacksonville, Fla	.....	.....	30.25	768.3	74	23.3	76	NE	3	1.3	.....	0	0	.....	.....	0	0	Clear.	
Keokuk, Iowa	.....	.....	29.98	761.5	71	21.7	80	SW	4	1.8	.....	.....	10s	E	SW	0	0	Cloudy.	
Key West, Fla	.....	.....	30.09	764.3	78.2	25.7	86	E	11	4.9	.....	2k	Haze	.....	E	0.33	8.4	Fair.	
Kittyhawk, N. C	.....	.....	30.31	770.0	58	14.4	87	E	10	4.5	.....	.....	10ks	.....	NE	0	0	Cloudy.	
Knoxville, Tenn	.....	.....	30.27	768.8	66	18.9	84	S	2	0.9	.....	1ck	Haze	S	.....	0	0	Fair.	
La Crosse, Wis	.....	.....	30.02	762.5	58	14.4	81	W	2	0.9	.....	5ck	0	.....	.....	0	0	Fair.	
Leavenworth, Kan	.....	.....	29.92	760.0	65	18.3	78	SE	2	0.9	.....	5k	0	SW	.....	0.48	12.2	Threatening	
Lexington, Ky	9.11	739.4	30.20	767.1	60	18.9	78	S	12	5.4	.....	5ck	0	SW	.....	0	0	Fair.	
Long Branch, N. J	.....	.....	30.46	773.7	51	10.6	72	SE	6	2.7	.....	5cs	5ks	.....	.....	Inap.	Inap	Cloudy.	
Louisville, Ky	.....	.....	30.13	765.3	75	23.9	60	S	5	2.2	.....	2c	Haze	.....	.....	0	0	Clear.	
Lynchburg, Va	.....	.....	30.36	771.1	59	15.0	87	NE	3	1.3	.....	.....	10s	.....	NE	Inap.	Inap.	Cloudy.	
Malone, N. Y	.....	.....	30.20	768.0	56	13.3	40	S	12	5.4	.....	2c	0	NW	.....	0	0	Fair.	
Manhatian, Kan	28.81	731 8	29.92	760.0	64	17.8	89	SE	4	1.8	.....	2ck	0	.....	.....	0.35	8.9	Clear.	
Marquette, Mich	.....	.....	29.93	76 .2	52	11.1	86	Calm	0	0	.....	8ck	2s	W	W	0.61	15.5	Cloudy.	
Memphis, Tenn	.....	.....	30.17	766.3	71	21.7	75	S	2	0.9	.....	2k	2ks	SW	SW	0	0	Fair.	
Milwaukee, Wis	.....	.....	30.03	762.7	62	16.7	77	SW	6	2.7	.....	5c	Fog	W	.....	0	0	Fair.	
Mobile, Ala	.....	.....	30.25	768.3	71	21.7	90	S	3	1.3	.....	.....	Fog	.....	S	0	0	Foggy	
Montgomery, Ala	.....	.....	30.27	768.8	72	22.2	83	E	1	0.4	.....	5c	Haze	.....	.....	0	0	Fair.	
Morgantown, W. Va	.....	.....	30.16	766 1	66	18.9	78	S	2	0.9	.....	2c	8s	W	SW	0.50	12.7	Cloudy.	
Mt. Washington, N. H	24.07	611.4	30.43	772.9	31	— 0.6	79	NW	10	4.5	.....	0	Haze	.....	.....	0	0	Clear.	
Nashville, Tenn	.....	.....	30.18	766.6	75	23.9	68	Calm	0	0	.....	8k	2s	SW	S	0	0	Cloudy.	
New Haven, Conn	.....	.....	30.46	773.7	58	14.4	62	S	4	1.8	.....	0	Haze	.....	.....	0	0	Clear.	
New London, Conn	.....	.....	30.49	774.4	52	11.1	72	Calm	0	0	.....	2c	0	W	.....	0	0	Clear.	
New Orleans, La	.....	.....	30.20	767.1	74	23.3	83	NE	5	2.2	.....	8c	Haze	W	.....	0	0	Fair.	
Newport, R. I	.....	.....	30.49	774.4	51	10.6	78	SE	6	2.7	.....	2c	0	SW	.....	0	0	Fair.	
New York, N. Y	.....	.....	30.47	773.9	53	11.7	67	E	5	2.2	.....	5ck	Sm'e	W	.....	0	0	Fair.	
Norfolk, Va	.....	.....	30.47	773.9	53	11.7	67	E	5	2.2	.....	.....	10s	.....	.....	Inap.	Inap.	Threatening	
North Platte, Neb	.....	.....	30.17	771.4	57	13.9	86	E	7	3.1	.....	.....	10s	.....	.....	0	0	Clear.	
Omaha, Neb	29.93	681.8	29.44	747.	60	15.6	76	SE	5	2.2	.....	0	0	.....	.....	0	0	Clear.	
Oswego, N. Y	29.80	733.0	29.89	759.2	65	18.3	73	SE	9	4.0	.....	2k	0	W	.....	0.04	1.0	Clear.	
Pembina, Dakota	.....	.....	30.24	768.1	57	13.9	47	SE	12	5.4	.....	5ck,cs	5s	W	SW	0	0	Cloudy.	
Philadelphia, Penn	.....	.....	29.93	760.2	46	7.8	84	NW	4	1.8	.....	0	0	.....	.....	0.05	1.3	Clear	
Pike's Peak, Colorado	.....	.....	30.45	773.4	70	10.6	78	E	5	2.2	.....	.....	10s	.....	E	0.10	2.5	Cloudy.	
Pittsburg, Penn	17.09	449.3	29.90	759.4	15	— 9.4	83	W	42	18.8	.....	1c	0	.....	.....	0.01	0.3	Clear.	
Port Huron, Mich	.....	.....	30.19	766.8	59	15.0	81	S	4	1.8	.....	.....	10s	.....	.....	0.14	3.6	Cloudy.	
Portland, Me	.....	.....	30.04	763.0	59	15.0	87	S	7	3.1	.....	.....	10s	.....	.....	0.18	4.6	Cloudy.	
Portland, Oregon	.....	.....	30.49	774.4	47	8.3	77	NE	2	0.9	.....	0	Haze	.....	.....	0	0	Clear.	
Punta Rassa, Fla	.....	.....	30.26	768.6	47	8.3	69	NW	3	1.3	.....	.....	10s	.....	SW	0.19	4.8	Cloudy.	
Rochester, N. Y	.....	.....	30.15	765.8	71.2	23.4	85	NE	20	8.9	.....	.....	8ks	.....	NE	0	0	Threatening	
Salt Lake City, Utah	25.38	644.6	29.71	754.6	42	5.6	83	Calm	0	0	.....	.....	1 s	.....	.....	0.09	2.3	Cloudy.	
Sandy Hook, N. J	.....	.....	30.42	772.7	53	11.7	68	SE	8	3.6	.....	5c	2s	SW	.....	0	0	Cloudy.	
San Diego, Cal	.....	.....	30.06	763.5	56	13.3	81	Calm	0	0	.....	0	5s	.....	W	0	0	Fair.	
San Francisco, Cal	.....	.....	30.14	765.5	47	8.3	77	E	2	0.9	.....	Haze	Haze	.....	.....	0	0	Hazy.	
Santa Fe, N. M	23.24	590.3	29.78	756.4	47	8.3	50	SE	12	5.4	.....	2c	2cs	SW	SW	0.06	1.5	Fair.	
Savannah, Ga	.....	.....	30.28	769.1	72	22.2	71	NE	5	2.2	.....	0	Sm'e	.....	.....	0	0	Clear.	
Shreveport, La	.....	.....	30.20	767.1	70.5	21.4	87	S	3	1.3	.....	5ck	Haze	W	.....	0	0	Cloudy.	
Smithville, N. C	.....	.....	30.32	770.1	69	20.6	84	NE	5	2.2	.....	10k	0	NE	.....	0	0	Cloudy.	
Springfield, Mass	.....	.....	30.15	773.4	55	12.8	61	S	4	1.8	.....	5cs	Sm'e	.....	.....	0	0	Fair.	
St. Louis, Mo	.....	.....	30.07	763 8	70	21.1	75	SW	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy.	
St. Marks, Fla	.....	.....	30.24	768.1	71	21.7	75	E	6	2.7	.....	5c	0	.....	.....	0	0	Fair.	
St. Paul, Minn	.....	.....	29.98	761.5	53.5	11.9	70	W	3	1.3	.....	2c	0	.....	.....	Inap.	Inap.	Clear.	
St. Paul's Island, Alaska	.....	.....	29.75	755.6	31	— 0.6	78	WSW	12	5.4	.....	2ck	0	W	.....	0.01	0.3	.....	
Thatcher's Island, Mass	.....	.....	30.47	773.9	49	9.4	85	S	9	4.0	.....	0	0	.....	.....	0	0	Hazy.	
Toledo, Ohio	.....	.....	30.01	762.2	69	20.6	84	S W	10	4.5	.....	5k	Sm'e	SW	.....	Inap.	Inap.	Fair.	
Tybee Island, Ga	27.46	697.5	30.06	763.5	64	17.8	.....	SE	.....	.....	.....	2c	0	W	.....	0	0	Clear.	
Vicksburg, Miss	.....	.....	30.27	768.8	69	20.6	84	NE	4	1.8	.....	5k	0	E	.....	0	0	Fair.	
	.....	.....	30.25	768.3	69.5	20.8	90	S	4	1.8	.....	10ck,hz	Haze	.....	.....	0	0	Fair.	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Virginia City, M. T.	24.06	611.1	29.54	750.3	41	5.0	87	Calm	0	0	.....	5k	5ks	NE	NE	0.01	0.3	Cloudy.	
Washington, D. C.	.....	.....	30.40	772.1	53	11.7	83	Sl.	4	1.8	.....	.....	10s	.....	SE	Inap.	Inap.	Cloudy.	
Wilmington, N. C.	.....	.....	30.32	770.1	65	18.3	93	NE	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy.	
Wood's Holl, Mass.	.....	.....	30.48	774.2	53	11.7	48	SE	7	3.1	.....	5c	0	SW	.....	0	0	Fair.	
Wytheville, Va.	27.94	709.7	30.06	763.5	64	17.8	83	Calm	0	0	.....	1ck	8ks	E	SE	0	0	Cloudy.	
Yankton, Dakota.	28.71	729.2	29.98	761.5	54	12.2	83	E	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy.	
Yuma, Arizona.	.....	.....	29.96	761.0	63	17.2	.....	W	.....	.....	.....	0	0	.....	.....	0	0	Clear.	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.04	763.0	83	28.3	70	E	4	1.8	.....	5ck	5ks	NE	.....	0	0	Fair.	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.98	761.5	80	26.7	82	E	.....	.....	.....	10k	0	.....	.....	0.29	7.4	Hazy.	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.14	765.5	79	26.1	86	Calm	0	0	.....	8c	2s	SE	.....	0.64	16.3	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.80	756.9	79	26.1	74	NW	2.4	1.1	.....	8c	0	N	.....	0.02	0.5	Fair.	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.06	763.5	80	26.7	78	Calm	0	0	.....	2k	0	E	.....	0.24	6.1	.....	Charles Hasselbrink.
St. Georges, Bermudas.	.....	.....	30.24	768.1	71.5	21.9	80	NE	10.0	4.5	.....	2c	2k	.....	.....	0	0	Fair.	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica, W. I.	27.21	691.1	30.00	762.0	67	19.4	90	W	0.5	0.2	.....	8c	0	.....	.....	1.85	47.0	Fair.	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.02	762.5	81	27.2	87	E	.....	.....	1	.....	10n	.....	E	0.050	1.27	Rainy.	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.3	762.8	.....	.....	78.8	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.827	21.00	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.24	641.1	.....	.....	64.0	17.8	85	Calm	0	0	.....	6ck	4s	.....	.....	0.52	13.2	Cloudy.	Thomas Herran.
St. John's, Newfoundland.	.....	.....	30.34	770.6	37.5	3.1	53	NE	.....	.....	.....	5k	5s	.....	.....	0.03	0.8	Fair.	John Delaney.
York Factory, B. A.	.....	.....	29.74	755.4	43.5	6.4	68	N	4	1.8	.....	3c	3s	N	.....	0	0	.....	J. Fortescue.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Makawao, Maui, H. I.	27.90	708.6	30.07	763.8	60	15.6	82	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	F. L. Clarke.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Hibernian, N. 52° 6', W. 7° 6'.	W½N	11	30.22	767.6	70	21.1	.....	ESE	.....	.....	3	.....	--c, k	.....	.....	Smooth	.....	*D. clouds.	Lieut. F. Archer, R.N.R.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057 3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft, or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fè, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,291 8 ft., or 699.4 m; Yankton, 1,278 ft., or 389.5 m. The following constants are 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. * Detached clouds.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 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	.. ....	.....	29.97	761.1	64.2	17.9	76	NNW	.....	.....	3	.....	8	.....	... .	0.630	16.0	Cloudy..	Charnot.
Algiers	.. ....	.....	29.93	760.2	59.4	15.2	93	WNW	.....	.....	1	.....	10	.....	.....	0.276	7.0	Hidden.....	Peter.
La Calle	.....	.....	.... ..	.....	67.1	19.5	.....	WSW	.....	.....	1	.....	5	.....	.....	0	0	Fair.....	Kunts.
Tunis	.....	.....	29.73	755.2	77.4	25.2	64	E	.....	.....	3	.....	5	.....	.....	0	0	Fair.....	Jacques.
Sfax	.....	.....	29.82	757.5	82.4	28.0	33	S	.....	.....	4	.....	3	.....	.....	0	0	Fair.....	Chauvey.
Saida	.....	.....	29.90	759.5	48.2	9.0	89	W	.....	.....	1	.....	6	.....	.....	0.142	3.6	Fair.....	Millot.
Tebessa	.....	.....	29.83	757.6	82 0	27.8	.....	S	.....	.....	4	.....	4	.....	.....	0	0	Fair.....	Colin.
Gerlville	.....	.....	29.97	761.1	51.6	10.9	56	NW	.....	.....	3	.....	6	.....	.....	0	0	Fair..... ..	Buard.
Laghonat	.....	.....	29.87	758.7	73.4	23.0	25	SW	.....	.....	2	.....	1	.....	.....	0	0	Clear.....	Guyot.
Biskra	.....	.....	29.90	759.5	77.5	25.3	60	NE	.....	.....	3	.....	6	.....	.....	0.173	4.4	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	.....	.....	30.00	761.9	62.2	16.8	52	SW	.....	.....	3	.....	7	.....	.....	0	0	....	Prof. Ivan Stozir.
Ofen-Peath	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	I. R. Cen. M. I., Hungary.
Cracow, I. R. Observatory	.....	.....	30.28	769.2	39.2	4.0	82	N	.....	.....	3	.....	10	.....	.....	0.173	4.4	....	Dr. Wierzbiskl.
Leipsic	.....	.....	29.91	759.8	56.5	13.6	55	N	.....	.....	2	.....	10	.....	S	0	0	....	Julius Mikolik.
Gratz	.....	.....	29.91	759.8	56.5	13.6	55	N	.....	.....	2	.....	10	.....	S	0	0	....	Julius Mikolik.
Hermannstadt	28.78	731.1	29.97	761.1	61.9	16.6	43	SW	.....	.....	3	.....	3	.....	.....	0	0	....	Andreas Rospini.
Kremsmunster	28.44	722.3	29.82	757.3	63.7	17.6	69	NNE	.....	.....	1	.....	10	.....	.....	0.150	3.80	....	Prof. Reissenberger.
Lemberg	28.66	727.9	29.99	761.7	57.2	14.0	44	ENE	.....	.....	3	.....	0	.....	.....	0	0	....	Prof. C. Wagner.
Tetschen	.....	.....	29.81	757.1	53.6	12.0	52	N	.....	.....	3	.....	8	.....	.....	0.087	2.2	....	Dr. T. Stanecki.
Trieste	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	Habsauda Daniel.
Pola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	....	I.R.Hydrographic Office.
Szegelin	.....	.....	29.97	761.1	64.4	18.0	68	WNW	.....	.....	1	.....	3cs	.....	.....	0.037	0.95	....	Karl Stancel.
Trieste	.....	.....	29.93	760.3	60.8	16.0	73	E	.....	.....	2	.....	8	.....	.....	0	0	....	Prof. V. Farolfi.
Vienna	.....	.....	29.97	761.2	70.0	21.1	58	Calm	.....	.....	0	.....	7	.....	.....	0	0	....	I. R. Central Met. Obs'y.
	.....	.....	29.99	761.7	60.1	15.6	40	N	.....	.....	3	.....	5	.....	.....	0	0	....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

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

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels	.....	.....	30.07	763.7	60.8	16.0	48	NE	.....	.....	3	.....	3	.....	.....	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	.....	.....	30.41	772.4	45.5	7.5	.....	ENE	23	10.3	.....	.....	3	.....	.....	0	0	Blue sky.....	William Boswell.
Ardrossan	.....	.....	30.38	771.6	55	12.8	.....	E	.....	.....	3	.....	5	.....	.....	.....	.....	Hailing	William McNeil.
Armagh, Observatory	.....	.....	30.38	771.6	51.6	10.9	.....	NNE	6	2.7	.....	.....	10	.....	.....	.....	.....	Overcast.....	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs'y	.....	.....	30.30	769.6	53.9	12.2	.....	ENE	10	4.5	.....	.....	5	.....	.....	.....	.....	*D. clouds.....	John Hartnup.
Birr Castle, (Parsonstown)	.....	.....	30.33	770.4	59.0	15.0	.....	NE	.....	.....	1–2	.....	2	.....	.....	.....	.....	*D clouds.....	J. Dreyer.
Bradford	.....	.....	30.30	769.6	49.9	9.9	.....	NE	.....	.....	2	.....	10	.....	.....	0	0	Overcast.....	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.00	762.0	82.0	27.8	.....	E	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast.....	Sergt. J. F. Halanen, A.
Cambridge, Observatory	.....	.....	30.25	768.3	52.0	11.1	.....	NE	.....	.....	2	.....	10	.....	.....	.....	.....	*D. clouds.....	H. Todd. [H. C.
Cardington	.....	.....	30.26	768.6	52.4	11.3	.....	NE	.....	.....	2	.....	10	.....	.....	.....	.....	Overcast.....	John McLaren.
Carlisle	.....	.....	30.32	770.1	54.2	12.3	.....	E	.....	.....	5	.....	2	.....	.....	0	0	*D. clouds.....	T. Bel , for J. Carmell.
Chatham, School M. E	.....	.....	30.22	767.6	50.5	10.3	.....	NE	.....	.....	2	.....	9	.....	.....	.....	.....	Gloomy.....	Capt. J. Fellowes, R.E.
Dartmoor	28.75	730.2	30.25	768.3	55.4	13.0	.....	NE	.....	.....	7	.....	5	.....	.....	.....	.....	*D clouds.....	R. E. Power.
Donaghadee	.....	.....	30.36	771.1	52	11.1	.....	N	.....	.....	2	.....	0	.....	.....	.....	.....	Blue sky.....	J. Mac Gowan.
Dover	.....	.....	30.18	766.6	51	10.6	.....	NE	.....	.....	4	.....	7	.....	.....	.....	.....	¾ clouded...	J. Costello.
Eccles, (near Manchester)	.....	.....	30.29	769.4	54.7	12.6	.....	NE	3.8	1.7	.....	.....	7	.....	.....	.....	.....	*D. clouds.....	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.21	767.3	54.3	12.4	.....	SSE	11	4.9	.....	.....	1	.....	.....	.....	.....	Hazy.....	The Staff.
Fort Napier, (Natal)	27.93	709.4	30.17	766.3	67.6	19.8	.....	S	.....	.....	3	.....	0	.....	.....	.....	.....	Blue sky.....	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.94	760.5	85.0	29.4	.....	E	.....	.....	2	.....	6	.....	.....	.....	.....	*D. clouds.....	
Galway, Queen's College	.....	.....	30.28	769.1	64	17.8	.....	NE	.....	.....	1	.....	2	.....	.....	.....	.....	*D. clouds.....	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	29.97	761.2	60.8	16.0	.....	W	.....	.....	6	.....	9	.....	.....	.....	.....	Raining.....	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	30.35	770.9	51.6	10.9	.....	E	.....	.....	2	.....	3	.....	.....	.....	.....	Fine.....	Lewis Stuart.
Great Yarmouth	.....	.....	30.23	767.8	50	10.0	.....	NNE	.....	.....	3	.....	6	.....	.....	.....	.....	*D. clouds.....	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	30.22	767.6	59.5	15.3	.....	NNE	.....	.....	3	.....	9	.....	.....	.....	.....	Nearly cov'd	The Staff, for G. B. Airy
Guernsey	.....	.....	30.14	765.5	52	11.1	.....	NE	.....	.....	6	.....	8	.....	.....	.....	.....	*D. clouds.....	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	30.33	770.4	50.0	10.0	.....	NE	.....	.....	2	.....	9	.....	.....	.....	.....	*D. clouds.....	L. J. Crossley.
Helston	.....	.....	30.16	766.1	62	16.7	.....	NE	.....	.....	6	.....	2c	.....	.....	0	0	Blue sky.....	M. P. Moyle.
Holyhead	.....	.....	30.30	769.6	51	10.6	.....	NNE	.....	.....	4	.....	0	.....	.....	.....	.....	Blue sky.....	John Tilston.
Kew, Observatory	.....	.....	30.22	767.6	52.3	11.3	.....	NNE	18	8.0	.....	.....	7	.....	.....	.....	.....	Threatening	The Staff.
Kingstown	.....	.....	30.36	771.1	49	9.4	.....	NE	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast.....	George Mitchell.
Leicester Museum	.....	.....	30.30	769.6	49.0	9.4	.....	NE	.....	.....	2	.....	10	.....	.....	.....	.....	Overcast.....	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)	.....	.....	29.86	758.4	75.0	23.9	.....	SE	.....	.....	1	.....	2k	.....	.....	.....	.....	.....	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	30.40	772.1	52	11.1	.....	ENE	.....	.....	4	.....	0	.....	.....	.....	.....	Clear.....	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.15	765.8	76 3	24.6	.....	NE	.....	.....	6	.....	10	.....	.....	.....	.....	Raining.....	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	30.34	769.6	50.3	10.2	.....	NE	.....	.....	4	.....	9k	.....	NE	0	0	Overcast.....	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.28	769.1	49.3	9.6	.....	NNE	.....	.....	3	.....	9	.....	.....	.....	.....	Overcast.....	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	30.22	767.6	52	11.1	.....	NNE	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast.....	J. Lucas.
Plymouth	.....	.....	30.19	766.8	58.1	14.5	.....	ENE	.....	.....	2	.....	4?	.....	.....	.....	.....	Overcast?.....	John Merrifield.
Roche's Point	.....	.....	30.28	769.1	57	13.9	.....	SE	.....	.....	4	.....	2	.....	.....	.....	.....	Fine.....	W. Kennedy.
Saint Ann's Head	.....	.....	30.25	768.3	55	12.8	.....	SW	.....	.....	1	.....	2	.....	.....	.....	.....	Hazy.....	John C. Walker.
Saint Helier, Jersey	.....	.....	30.09	764.3	55.6	13.1	.....	NE	.....	.....	7	.....	0	.....	.....	.....	.....	Clear.....	A. P. Amy.
Sandwick Manse, Orkneys)	.....	.....	30.15	773.4	49.5	9.7	.....	E	16	7.2	.....	.....	6	.....	.....	.....	.....	*D. clouds.....	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	30.30	769.6	47.7	8.7	.....	NNE	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast.....	F. Shaw.
Scutari Cemetery Turkey	.....	.....	29.74	755.4	66.6	19.2	.....	S	.....	.....	1	.....	10	.....	.....	.....	.....	* clouds.....	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.39	769.6	51.2	10.7	.....	NE	.....	.....	2	.....	8	.....	.....	0	0	Overcast.....	W. F. Cooper.
Silloth Rectory	.....	.....	30.32	770.1	55.1	12.8	53	SE	.....	.....	2	.....	3	.....	.....	0	0	*D. clouds.....	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	30.31	769.9	51.8	11.0	.....	NE	.....	.....	2	.....	8	.....	.....	.....	.....	Hazy.....	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.	.....	.....	30.35	770.9	56	13.3	.....	SE	.....	.....	1	.....	2	.....	.....	.....	.....	Blue sky.....	John Smith.
Stratfield Turgiss	.....	.....	30.24	768.1	53.1	11.7	.....	E	.....	.....	2–3	.....	4	.....	.....	.....	.....	*D. clouds.....	Rev. Charles H. Griffith.
Streatley Vicarage	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Rev. John Slatter.
Thurso	.....	.....	30.42	772.7	52	11.1	.....	E	.....	.....	2	.....	7	.....	.....	.....	.....	*D. clouds.....	John Trotter.
Truro, Royal Institution	.....	.....	30.20	767.1	66	18.9	.....	SE	.....	.....	6	.....	4	.....	.....	.....	.....	*D. clouds.....	W. Newcombe.
Valencia, Observatory	.....	.....	30.30	769.6	60.1	15.6	.....	N	13	5.8	.....	.....	0	.....	.....	.....	.....	Hazy.....	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	53	11.7	.....	NE	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.32	770.1	68.3	20.2	56	WNW	4	1.8	.....	0	0	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Leith, Restalrig Park	.....	.....	30.40	772.1	50.9	10.5	.....	E	.....	.....	3	.....	.....	.....	.....	0	0	Fine.....	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.14	765.5	.....	.....	.....	SSE	15.1	6.8	.....	.....	.....	.....	.....	0.08	2.0	.....	C. Meldrum.
Melbourne, Observatory	.....	.....	30.44	773.2	52.0	11.1	87	SSE	3	1.3	.....	.....	10	.....	.....	0	0	Dull	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	30.35	770.9	53	11.7	.....	S	.....	.....	3	0	0	.....	.....	0	0	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	30.46	773.7	46	7.8	.....	NE	.....	.....	4	.....	10	.....	.....	.....	.....	.....	Robert Burnet.

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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	.....	.....	30.15	765.8	47.3	8.5	58	N	.....	.....	4	.....	0	.....	.....	.....	.....	.....	.....
Fanöe	.....	.....	30.16	766.0	57.6	14.2	57	SE	.....	.....	2	.....	1	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stykkisholm, (Iceland)	.....	.....	30.09	764.3	48.0	8.9	78	SE	.....	.....	4	.....	8	.....	.....	.....	.....	.....	.....
Thorshavn, (Faröe)	.....	.....	30.46	773.7	47.7	8.7	73	SE	.....	.....	2	.....	10	.....	.....	.....	.....	.....	.....
Vestervig	.....	.....	30.23	767.9	50.4	10.2	46	SE	.....	.....	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.
Alencon	.....	.....	29.99	761.7	60.8	16	46	NE	.....	.....	1	.....	2ck	.....	NE	0	0	Slightly cl'dy	Normal School.
Amiens	.....	.....	30.07	763.6	66.6	19.2	46	ENE	.....	.....	6	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	29.87	758.7	62.2	16.8	85	E	.....	.....	1	.....	8	.....	.....	0.55	14.	Raining	Normal School.
Ear-sur-Seine	.....	.....	29.92	760.0	70.3	21.3	26	E	.....	.....	3	.....	0	.....	.....	0	0	Clear	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.89	759.3	68.4	20.2	42	NE	18.3	8.2	.....	.....	1	.....	ESE	0	0	Clear	Beaumette Observatory
Beauvais	.....	.....	30.04	763.0	64.0	17.8	31	ENE	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Besançon	.....	.....	29.88	759.0	70.7	21.5	39	ENE	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Bourg en Bresse	.....	.....	29.92	759.9	72.1	22.3	51	NE	.....	.....	2	.....	10n	.....	SW	0	0	Covered	Normal School.
Bourges	.....	.....	29.93	760.2	69.1	20.6	57	NE	.....	.....	2	.....	2	.....	N	0.110	2.8	Slightly cl'dy	Normal School.
Brest	.....	.....	30.02	762.6	54.1	12.3	83	NE	.....	.....	5	.....	6k	.....	NE	0.030	0.75	.....	Naval Observatory.
Caen	.....	.....	30.662	778.77	56.3	13.5	86	NW	.....	.....	6	.....	0	.....	.....	0	0	Clear	Normal School.
Carcassonne	.....	.....	29.82	757.3	59.9	15.5	82	W	.....	.....	5	.....	10	.....	E	0	0	Covered	Normal School.
Clairvaux	.....	.....	29.94	760.5	69.4	20.8	.....	NE	.....	.....	4	.....	1	.....	NE	0	0	.....	Normal School.
Clermont	.....	.....	29.77	756.1	71.1	21.7	47	NE	.....	.....	3	.....	8	.....	.....	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	29.96	761.0	63.3	17.4	38	E	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Commune de Gréasque*	.....	.....	29.90	759.4	60.3	15.7	70	SE	.....	.....	4	.....	10	.....	SE	0	0	.....	M. Kina.
Grenoble	.....	.....	29.85	758.1	73.6	23.1	50	NE	.....	.....	1	.....	5k	.....	SE	0	0	Partly cloudy	Normal School.
Le Mans	.....	.....	29.98	761.5	67.6	19.8	42	SE	.....	.....	4	.....	2	.....	SE	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier	.....	.....	29.84	758.0	70.0	21.1	43	NNE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Mâcon	.....	.....	29.98	761.4	67.3	19.6	67	C. lm	.....	.....	0	.....	0	.....	.....	0	0	Clear	Normal School.
Mirecourt	.....	.....	29.91	759.7	60.1	15.6	56	NE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	29.83	757.7	65.1	18.4	78	NW	.....	.....	2	.....	10	.....	.....	0.138	3.5	Covered	Normal School.
Orleans	.....	.....	29.91	759.8	70.2	21.2	31	NE	.....	.....	4	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Paris, Observatory	.....	.....	29.99	761.8	67.3	19.6	30	ENE	.....	.....	3	.....	2k	.....	.....	0	0	Slightly cl'dy	National Observatory.
Parthenay	.....	.....	29.85	758.3	78.8	26	55	NE	.....	.....	4	.....	5	.....	NE	0	0	Cloudy	Normal School.
Privas	.....	.....	29.81	757.1	72.9	22.7	.....	SE	.....	.....	2	.....	5	.....	SE	0.008	0.2	Cloudy	Normal School.
La Roche-sur-Yon	.....	.....	29.70	754.4	70.2	21.2	57	NE	.....	.....	1	.....	5	.....	SW	0	0	Cloudy	Normal School.
Rochefort, Observatory	.....	.....	29.90	759.5	72.0	22.2	56	ENE	.....	.....	3	.....	5	.....	SW	0	0	½ covered	Naval Observatory.
Rouen	.....	.....	30.04	763.1	69.6	20.9	35	NNE	.....	.....	2	.....	1	.....	NE	0	0	Clear	Normal School.
Saint Lo	.....	.....	29.71	754.7	62.4	16.9	68	E	.....	.....	1	.....	2	.....	E	0	0	.....	Normal School.
Tarbes	28.79	731.2	29.85	758.1	60.8	16	.....	W	.....	.....	2	.....	10	.....	E	0.39	10.	Raining	Normal School.
Villefranche	.....	.....	29.95	760.6	74.3	23.5	75	NE	.....	.....	1	.....	2	.....	N	0.283	7.2	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.91	759.8	80.6	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.83	757.7	61.7	16.5	85	ENE	.....	.....	0–1	.....	10	.....	.....	0.008	0.2	Raining	Marseilles Observatory.
Mont-Louis	24.69	627.1	30.00	762.1	40.3	4.6	95	ENE	5.6	2.50	.....	.....	10	.....	.....	0.417	10.6	.....	—. Faiguère.
Montsouris, Paris	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montsouris Observ'tory.
Perpignan	.....	.....	29.85	758.2	55.8	13.2	98	NW	7.4	3.33	.....	.....	10	.....	NE	0.583	14.8	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.99	761.7	70.2	21.2	30	NNE	.....	.....	3	.....	0	.....	.....	0	0	Clear	E. Renou.
Toulouse	.....	.....	29.91	759.7	56.8	13.8	93	SE	.....	.....	2	.....	10	.....	.....	0.134	3.4	.....	Toulouse Observatory.
Tours	.....	.....	29.93	760.2	71.6	22.0	36	NE	.....	.....	3	.....	1	.....	E	0.039	1.0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.01	762.0	68.0	20.0	.....	E	.....	.....	4	.....	0	.....	.....	0	0	Very clear	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai)	.....	.....	30.05	763.2	55.0	12.8	87	NNW	8.5	3.8	.....	0	0	.....	.....	{0.169 0.311	4.3 7.9	.....	H. Le Lec, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

Bamberg	.....	.....	30.00	761.9	61.2	16.2	36	NE	.....	.....	4	.....	3	NE	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.06	763.4	61.7	16.5	39	N	.....	.....	4	.....	8	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.08	763.9	56.5	13.6	59	NNE	.....	.....	4	.....	5	.....	.....	0.008	0.2	.....	Dr. P. Nangebauer.
Carlsruh	.....	.....	29.97	761.1	65.8	18.8	40	.....	.....	.....	3	.....	0	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.06	763.4	67.3	19.6	37	NNE	.....	.....	2	.....	3	NNW	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.08	763.9	65.3	18.5	32	NE	.....	.....	1	.....	1	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	29.92	760.0	64.4	18.0	44	NE	.....	.....	4	.....	1	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.11	764.9	58.5	14.7	50	NNW	.....	.....	2	.....	4k	.....	.....	0	0	Good	Captain F. Hegemann.
Kiel	.....	.....	30.13	765.2	55.9	13.3	65	NE	.....	.....	3	.....	2	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	30.08	764.0	45.1	7.3	25	N	.....	.....	5	.....	2	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	30.08	764.1	52.5	11.4	.....	E	.....	.....	1	.....	4	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.09	764.2	61.5	16.4	43	N	.....	.....	2	.....	7	.....	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	30.10	764.5	41.0	5.0	49	NW	.....	.....	4	.....	9	.....	.....	0.031	0.8	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.12	765.1	62.8	17.1	55	NE	.....	.....	2	.....	0	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.05	763.3	44.1	6.7	86	E	.....	.....	2	.....	8	N	.....	0	0	.....	A. Lothes.
Posen	.....	.....	30.09	764.2	55.0	12.8	46	NW	.....	.....	5	.....	2	.....	.....	0.055	1.4	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.96	761.0	65.5	18.6	36	NE	.....	.....	1	.....	0	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.97	761.2	65.3	18.5	31	NE	.....	.....	1	.....	1	.....	.....	0	0	Clear	Prof. Schoder.
Thorn	.....	.....	30.07	763.6	51.1	10.6	36	NE	.....	.....	4	.....	7	N	.....	0	0	.....	Dr. Hasenbalg
Treves, (Trier)	.....	.....	29.97	761.3	66.2	19.0	33	E	.....	.....	5	.....	0	.....	.....	0	0	.....	Prof. Fiesch.
Wustrow, Naval School	.....	.....	30.06	763.5	53.1	11.8	70	NE	.....	.....	2	.....	4	.....	.....	0	0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			29.96	760.9	66.6	19.2	58	S	1.3	0.6			7			0	0		
Padua			29.95	760.6	65.3	18.5	41	SE	8 7	3.9			5	W		0	0		
Vicenza			29.94	760.5	67.1	19.5	54	SE	3.1	1.4			3	E		0	0		
Verona			29.93	760 2	62.1	16.7	82	E			2		10			0	0		
Bergamo	28.58	726.0	29.85	758.3	64.4	18.0	58	SSE			2		8			0	0		
Domodossola																			
Milan			29.93	760.3	71.4	21.9	71	SSE			4		8	E		0	0		
Pavia			29.93	760.1	68.7	20.4	51	NE			4		5	NE		0	0		
Moncalieri			29.94	760.5	63.1	17.3	68	NNW	3.1	1.4			9			0	0		
Mondovi	28.04	712.1	29.94	760.5	59.7	15.4	75	WNW			6		10			0.591	15.0		
Porto Maurizio			29.93	760.1	67 6	19.8	56	E			6		10	NW		0.094	2.4		
Genoa			29.91	759.6	67.3	19.6	49	Calm	0	0			10	S		0.020	0.5		
Piacenza			29.93	760.3	68.0	20.-	50	E	9.8	4.4			10			0	0		
Parma			29.95	760.6	68.4	20.2	54	SSE			4		8			0	0		
Bologna			29.97	761.3	69.3	20.7	36	E			6		4	N		0	0		
Florence			29.91	759.6	78.8	26.0	45	E			2		9	SE		0	0		
Leghorn			29.90	759.4	68.2	20.1	63	SSW	4.2	1.9			10			0.118	3.0		
Siena	28.70	728.9	29.89	759.3	69.4	20.8	57	SE	0	0			10	W		0	0		
Urbino																			
Pesaro																			
Ancona			29.97	762.3	63 7	17.6	62	SE			4		3			0	0		
Grosseto			29.93	760.1	71.8	22.0	64	WSW			2		9	SE		0	0		
Rome			29.88	758.9	74.3	23.5	58	W	4.2	1.9			2			0	0		
Naples, O. U			29.89	759.3	77.5	25.3	45	SSE			2		0			0	0		
Lecce			29.99	761.8	68.0	20.0	59	WNW	4.9	2.2			1	WNW		0	0		
Cosenza			29.93	760.3	75.2	24.0	80	ENE	3.1	1.4			2			0	0		
Riposto, (Sicily)			29.92	760.0	69.4	20.8	77	E			2		7	W		0	0		
Palermo			29.76	756.0	86.0	30.0	38	S	4.9	2.2			4			0	0		
Caltanissetta	27.94	709.7	29.84	757.9	71.6	22.0	51	S			6		4	N		0	0		
Sub-Series.																			
Naples, S. R			29.91	759.6	77.4	25.2	43	S	1.3	0.6			.8	S		0	0	Foggy	Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known; Domodossola, 305 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.

Flushing			30.18	766 5	55.4	13.0		NNE			5								
Groningen			30.11	764.8	52.3	11.3		NNW			2								
Helder			30.18	766.5	50.4	10.2		N			2								
Utrecht			30.12	765.1	56.3	13.5	56	N			3		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the amount of cloudiness without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

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

Bergen			30.21	767.3	55.4	13.0	25	N	17.9	8.0			0			0	0		
Bröno			30.38	771.7	37.4	3.0	50	NNE	9	4			5			0	0		
Christiania			30.29	769.3	47.3	8.5	24	NNE	13.9	6.2			8			0	0		
Tromsö			30.28	769.0	30.2	— 1.0	61	NNE	2	1			5			0.079	2.0		

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

PORTUGUESE SERIES.

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

Stations.	Barometer corrected for instrumental errors.		Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Winds. Direction.	Winds. Velocity.		Winds. Force.	Clouds. Amount.		Clouds. Direction.		Rain-fall or melted snow in the past 24 hours.		Weather.	Observer.
	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.		
Angra, (Azores,)	.....	.....	30.44	773.2	63.5	17.5	78	W	2.5	1.11	.....	.....	4	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.89	759.1	65.3	18.5	63	NW	4.8	2.16	.....	.....	9	NW	.....	0.075	1.9	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)	.....	.....	30.32	770.2	65.3	18.5	46	SW	5.0	2.25	.....	.....	5	.....	.....	0	0	.....	Capt D. A. da Cunha.
Lisbon	.....	.....	30.09	762.1	60.6	15.9	68	N	32.2	14.4	.....	.....	8	.....	.....	0	0	.....	The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon, local time, instead of 0 h. 6 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	.....	.....	30.01	762.2	49.0	9.8	39	NW	16	7	.....	.....	3	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.91	760.5	49.8	4.9	48	NNW	13	6	.....	.....	7	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.97	761.2	36.3	2.4	67	NNW	9	4	.....	.....	8	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.92	760.0	27.1	— 2.7	80	NE	4	2	.....	.....	10	.....	.....	.....	.....	Snowing	Central Physical Obs
Kasan	.....	.....	30.01	762.3	29.1	— 1.6	100	NNW	22	10	.....	.....	8	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.67	753.5	59.2	15.1	48	WS	4	2	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.71	754.7	69.4	20.8	40	NW	11	5	.....	.....	5	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.81	756.2	66.4	19.1	65	NNW	13	6	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.62	752.3	44.4	6.9	93	NNW	4	2	.....	.....	10	.....	.....	.....	.....	Raining	Meteorological Obs.
Lugan	.....	.....	29.44	747.7	70.2	21.2	52	NW	9	4	.....	.....	6	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	29.81	757.1	23.4	— 4.8	81	NW	34	15	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.27	718.1	29.62	752.3	71.4	21.9	47	N	13	6	.....	.....	10	.....	.....	.....	.....	.....	Physical Observatory.
Tetrakhan	.....	.....	29.59	749.4	76.1	24.5	45	SE	13	6	.....	.....	4	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.48	748.9	66.0	18.9	50	N	4	2	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Uralsuirsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.77	730.8	29.74	755.3	64.4	18.0	42	W	4	2	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.73	755.2	86.2	30.1	14	SE	18	8	.....	.....	7	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.39	721.0	30.01	762.2	79.3	26.3	32	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.91	759.8	64.9	18.3	45	W	13	6	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.72	755.0	41.4	5.2	77	WNW	7	3	.....	.....	2	.....	.....	.....	.....	Rainy	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	30.00	762.0	68.0	20.0	36	SSW	13	6	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	36.7	2.6	91	E	4	2	.....	.....	3	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds, and the weather by the Vienna symbols. The elevation of Tiflis is 401 meters, or 1,311.8 feet; Ekaterinburg, 295.42 m., or 1,005.22 ft.; Tasnkend, in 494.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 502.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	29.81	757.2	66.7	19.3	70	N	7.1	3.17	.....	6	10	.....	.....	Inap.	Inap.	Covered	Royal Observatory.
San Fernando	.....	.....	30.00	762.0	60.6	15.9	77	WSW	4.9	2.2	.....	2	7	NE	WSW	0.197	5.0	.....	The Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms; 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	.....	.....	30.20	767.1	29.5	— 1.4	64	N	.....	.....	3	.....	10	.....	.....	0	0	.....	
Umea	.....	.....	30.27	768.9	36.0	2.2	36	N	.....	.....	4	.....	9	.....	.....	0	0	.....	
Hernosand	.....	.....	30.20	769.4	40.6	4.8	52	ESE	.....	.....	1	.....	2	.....	.....	0.020	0.5	.....	
Stockholm	.....	.....	30.17	766.3	38.1	3.4	37	N	.....	.....	4	.....	5	.....	.....	0	0	.....	
Wisby	.....	.....	30.24	768.2	38.8	3.8	48	ENE	.....	.....	4	.....	0	.....	.....	0.016	0.4	.....	
Sub-Series.																			
Upsala	.....	.....	30.24	768.0	36.7	2.6	90	NNE	19.5	8.7	.....	.....	8	.....	N	0	0	.....	Dr. Hildebrandsson.

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

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28 48	723.3	29.87	758.7	64 4	18.0	53	N			2		1			0.228	5.8	Clear	The Observatory.
Zurich	28.32	719.3	29.91	759.8	67.1	19.5	48	NE			2		1			0	0	Vaporous	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —1.9 mm.; Thermometer, +1.1 cent.; Relative Humidity —4 per cent.

Note.—The originals give the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople																			
Fao. (Persian Gulf)			29.92	760 0	95.7	35.4		SE			3		10						
Salonica			29.89	759.1	78.3	25.7		S			4		0						
Valona			29.93	760.3	68.9	20.5		W			1		0						
Volo			29.80	757.0	62.6	17.0		NE			2		10					Raining	
Sub-Series.																			
Beirut, Syria, Lee Obs'y			29.85	758.2	84.9	29.4	49	SW			3		1c			0	0	Fair	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B.			29.93	760.2	45.8	7.7	83	SW	16	7.2		5						Fair	Hon. J. Ferguson.
Brockville, Ontario			29.06	763.5	54	12.2		SW	5	2.2			10s		SW	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B.			30.06	763.5	49	9.4	57	SW	6	2.7		5k	5ks	SW	SW	0	0	Fair	G. A. Blair.
Charlottetown P. E. Island.			30.18	766.6	48	8.9	61	S	13	5.8		2cs	0			0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			29.96	761.0	56.5	13.6	78	SE			1	0	10s			0	0	Threatening	James Smith, M. A.
Dalhousie, N. B.			30.05	763.3	39.2	4 0	77	E			1	10cs	0			0	0		H. A. Johnso
Esquimault, B. C.			30.19	766.8	47.3	8.5	92	Calm	0	0		10cs	0			0.04	1.0	Cloudy	W. H. Beyls.
Fredericton, N. B.			30.12	765.0	47.8	8.8	63	SW	6	2.7			10s			0.030	0.76	Showery	Prof. Harrison.
*Fort Garry, Manitoba			30.00	762.0	51	10.6	83	E	4	1.8		2cs	2s	S W	S W	0	0	Fair	James Stewart.
Goderich, Ontario			30.12	765.0	55.2	10.1	82	SW			1	2c	2s	W		0	0	Fine	H. J. Strang, M. A.
Granton, Ontario	28.98	736.1	30.07	763.8	56	13.3		W			1	0	0			0	0	Clear	James Grant.
*Halifax, N. S.			30.24	768.1	49	9.4	57	W	10	4 5		2cs	0			0	0	Fair	F. Allison, M. A.
*Kingston, Ontario			30.05	763.3	49	9.4	81	SW	8	3.6		10cs	0			0	0	Cloudy	S. Woods, M. A.
*Montreal, Quebec			29.97	761.2	50	10.0	90	S	7	3.1			10n			0.05	1.5	Heavy rain	C. H. McLeod, C. E.
*Ottawa, Ontario			29.96	761.0	55	12 8	69	S	10	4.5			10ks		S	0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario			30.06	763.5	50	10.0	86	W	4	1.8		0	0			0.01	0.3	Clear	Rev. R. Mooley.
*Port Dover, Ontario			30.07	763.8	57	13.9	94	NW	7	3.1		5ck	0	W		0.08	2.0	Fair	H. Morgan.
Port Hastings N. S.			30.22	767.6	34.7	1.5		Calm	0	0						0.070	1.78	Fine	Peter Grant.
*Port Stanley Ontario			30.06	763.5	60	15.6	77	W	6	2.7		8ck	0	W		0.03	0.8	Clear	M. Payne.
*Quebec, Quebec			29.98	761.5	57	13.9	36	Calm	0	0			10n			0.09	2.3	Cloudy	Capt. Ash, R. N.
St. John, N. B.			30.23	767.8	46	7.8	69	S	9	4.0			8ks			0.210	5.33	Cloudy	G. Murdoch, C. E.
*Saugeen, Ontario			30.07	763.8	42	5.6	91	NW	2	0.9			10n			0	0	Cloudy	K. Stewart.
Stayner, Ontario			30.06	763.5	53	11.7	83	NW	4	1.8		2cs	0			0	0	Fair	R. J. Cole.
Stratford, Ontario	28.80	731.5	30.07	763.8	53.9	12.2	93	NW	8	3.6		2k	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			30.21	767.3	55	12.8	41	W	8	3.6		8c	0			0	0	Fair	T. C. Hill.
*Toronto, Ontario			30.06	763.5	59	15.0	75	NW	12	5.4		2cs	2ks	W	W	0.16	4.1	Fair	Magnetic Observatory.
Woodstock, Ontario			30.05	763.3	58.8	14.9	82	NW	9	4.0		1k	0			0	0	Fine	J. Montgomery

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 m.

UNITED STATES SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Force. 0—10.	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	51	10.6	86	S	6	2.7	.....	.....	10s	.....	S	0.03	0.8	Threatening	
Alpena, Mich.	.....	.....	30.06	763.5	54	12.2	73	NW	5	2.2	.....	0	0	.....	.....	0	0	Clear.	
Atlantic City, N. J.	.....	.....	30.17	766.3	54	12 2	93	S	6	2.7	.....	.....	Fog	.....	.....	0	0	Foggy.	
Augusta, Ga.	.....	.....	30.20	767.0	69	20.6	75	Calm	0	0	.....	Haze	0	.....	.....	0	0	Clear.	
Baltimore, Md.	.....	.....	30.20	767.1	56	13.3	87	E	4	1.8	.....	.....	10s	.....	.....	0.21	5.3	Cloudy.	
Barnegat, N. J.	.....	.....	30.18	766.6	55	12.8	93	SE	3	1.3	.....	.....	Fog	.....	.....	0	0	Foggy	
Benton, Montana	27.03	686.6	29.83	757.7	47	8.3	70	N	18	8.0	.....	.....	10n	.....	N	1.11	28.2	Heavy rain.	
Bismarck, Dakota	28.03	711.9	29.62	752.3	56	13.3	56	SE	10	4.5	.....	5c	Haze	SE	.....	0	0	Fair.	
Boston, Mass.	.....	.....	30.21	767.3	53	11.7	73	SW	10	4.5	.....	10s	Haze	SW	.....	0	0	Threatening	
Breckenridge, Minn	.....	.....	29.74	755.4	54	12.2	80	E	15	6.7	.....	.....	10s	.....	.....	0	0	Cloudy.	
Buffalo, N. Y.	.....	.....	30.03	762.7	51	10.6	93	W	9	4.0	.....	.....	10s	.....	W	0	0	Cloudy.	
Burlington, Vt.	.....	.....	30.03	762.7	53	11.7	73	S	14	6.3	.....	.....	10s	.....	.....	0.05	1.3	Cloudy	
Cairo, Ill.	.....	.....	30.13	765.3	68	20.0	90	S	5	2.2	.....	2cs	0	.....	.....	1.00	25.4	Clear.	
Cape Hatteras, N. C.	.....	.....	30.19	766.8	71	21.7	80	SW	2	0.9	.....	5c	Haze	.....	.....	0	0	Fair.	
Cape Henry, Va.	.....	.....	30.20	767.1	64	17.8	92	SE	8	3.6	.....	5k	5s,hz	S	.....	0.03	0.8	Cloudy.	
Cape Lookout, N. C.	.....	.....	30.25	768.3	68	20.0	90	N	4	1.8	.....	2c	Haze	N	.....	0	0	Fair.	
Cape May, N. J.	.....	.....	30.17	766.3	55	12.8	100	SE	8	3.6	.....	.....	Fog	.....	.....	0.13	3.3	Foggy	
Charleston, S. C.	.....	.....	30.26	768.6	71	21.7	80	E	3	1.3	.....	1c	Haze	.....	.....	0	0	Clear.	
Cheyenne, Wyoming	23.82	605.3	29.76	755.9	35	1.7	48	NW	12	5.4	.....	0	0	.....	.....	0	0	Clear.	
Chicago, Ill.	.....	.....	30.01	762.2	66	18.9	84	SW	4	1.8	.....	.....	10n	.....	.....	0.34	8.6	Light rain.	
Cincinnati, Ohio.	.....	.....	30.01	762.2	73	22.8	67	S	6	2.7	.....	10ck	0	.....	.....	0	0	Cloudy	
Cleveland, Ohio.	.....	.....	30.08	764.0	59.5	15.3	92	S	1	0.4	.....	5k	1ks	SW	SW	1.52	38.6	Fair.	
Colorado Springs, Col.	23.90	607.0	29.77	756.1	50	10.0	39	N	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Corsicana, Texas	.....	.....	30.02	762.5	69.4	20.8	90	SE	10	4.5	.....	.....	10s	.....	.....	0	0	Cloudy.	
Davenport, Iowa.	.....	.....	29.98	761.5	68	20.0	84	SE	6	2.7	.....	7ck	0	SW	.....	0.61	15.5	Fair.	
Delison, Texas	.....	.....	30.00	762.0	68	20.0	90	SE	20	8.9	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy.	
Denver, Col.	24.59	624.6	29.81	757.2	40	9.4	29	S	3	1.3	.....	0	0	.....	.....	0	0	Clear.	
Detroit, Mich.	.....	.....	30.06	763.5	58	14.4	75	NE	8	3.6	.....	10cs	0	.....	.....	1.01	25.7	Cloudy.	
Dodge City, Kan.	27.25	692.1	29.43	747.5	64	17.8	83	E	16	7.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Dubuque, Iowa.	.....	.....	29.99	761.7	65	18.3	89	S	2	0.9	.....	.....	10n	.....	.....	0.15	3.8	Light rain.	
Duluth, Minn.	.....	.....	30.04	763.0	45	7.2	76	Calm	0	0	.....	0	2s	.....	.....	0	0	Clear.	
Eastport, Me.	.....	.....	30.15	765.	46	7.8	60	SW	16	7.2	.....	.....	10s	.....	.....	0	0	Cloudy.	
Erie, Pa.	.....	.....	30.04	763.0	60	15.6	82	S	6	2.7	.....	.....	10ks	.....	.....	0.25	6.3	Cloudy.	
Escanaba, Mich.	.....	.....	30.09	764.3	49	9.4	85	S	5	2.2	.....	0	0	.....	.....	0	0	Clear.	
Fort Gibson, Indian Ter.	.....	.....	29.98	761.5	72	22.2	71	SE	9	4.0	.....	.....	10ks	.....	S	0	0	Cloudy.	
Fort, St. Michael, Alaska.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.72	729.5	29.79	756.7	68	20.0	79	S	16	7.2	.....	.....	10s	.....	S	0	0	Cloudy.	
Fort Sully, Dakota.	27.98	710.7	29.54	750.3	64	17.8	78	SE	16	7.2	.....	0	0	.....	.....	0	0	Clear.	
Galveston, Texas	.....	.....	30.13	765.3	76	24.4	76	S	5	2.2	.....	1c	1s	W	S	0	0	Fair.	
Grand Haven, Mich.	.....	.....	30.04	763.0	59	15.0	97	E	3	1.3	.....	.....	Fog	.....	.....	0	0	Foggy	
Indianapolis, Ind.	.....	.....	30.06	763.5	70	21.1	79	NW	5	2.2	.....	10cs,k	0	W	.....	0.21	5.3	Fair.	
Indianola, Texas	.....	.....	30.10	764.5	75	23.9	85	SE	8	3.6	.....	5k	0	S	.....	0	0	Fair.	
Jacksonville, Fla.	.....	.....	30.21	767.3	76	24.4	72	NE	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
Keokuk, Iowa.	.....	.....	29.94	760 5	69	20.6	84	NE	4	1.8	.....	.....	10s	.....	NE	0.57	14.5	Threatening	
Key West, Fla.	.....	.....	30.08	764.0	79.2	26.2	78	E	16	7.2	.....	5k	1ks	E	.....	0.55	14.0	Fair.	
Kittyhawk, N. C.	.....	.....	30.26	768.6	63	17.2	100	NE	6	2.7	.....	.....	1c n	.....	NE	0.04	1.0	Light rain.	
Knoxville, Tenn.	.....	.....	30.21	767.3	65	18.3	94	SW	1	0.4	.....	.....	10n	.....	W	0.51	13.0	Light rain.	
La Crosse, Wis.	.....	.....	29.95	760.7	62	16.7	71	NE	3	1.3	.....	8c	0	.....	.....	0	0	Fair.	
Leavenworth, Kan.	.....	.....	29.90	759.4	67	19.4	84	S	12	5.4	.....	.....	10s	.....	SW	0.44	11.2	Threatening	
Lexington, Ky.	29.05	737.9	30.13	765.3	68	20.0	70	SW	12	5.4	.....	5c	0	SW	.....	0.50	12.7	Fair.	
Long Branch, N. J.	.....	.....	30.19	766.8	52	11.1	93	S	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy.	
Louisville, Ky.	.....	.....	30.09	764.3	74	23.3	72	S	6	2.7	.....	2c	0	.....	.....	0	0	Clear.	
Lynchburg, Va.	.....	.....	30.17	766.3	64	17.8	85	S	1	0.4	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy.	
Malone, N. Y.	.....	.....	29.93	760.2	58	14.4	75	SW	12	5.4	.....	.....	10n	.....	.....	Inap.	Inap.	Light rain.	
Manhattan, Kan.	28.75	730.2	29.85	758.2	65	18.3	78	SW	12	5.4	.....	5cs	0	.....	.....	0	0	Fair.	
Marquette, Mich.	.....	.....	30.08	764.0	54	12.2	79	W	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Memphis, Tenn.	.....	.....	30.15	765.8	72	22.2	75	Calm	0	0	.....	5ck	Haze	.....	.....	0	0	Fair.	
Milwaukee, Wis.	.....	.....	30.10	764.5	43	6.1	100	NE	6	2.7	.....	.....	Fog	.....	.....	0	0	Foggy	
Mobile, Ala.	.....	.....	30.22	767.6	73	22.8	86	S	3	1.3	.....	5c	Haze	SW	.....	0	0	Fair.	
Montgomery, Ala.	.....	.....	30.23	767.8	72.5	22.5	67	SE	6	2.7	.....	5c	Sm'e	.....	.....	0	0	Fair.	
Morgantown, W. Va.	.....	.....	30.08	764.0	65	18.3	89	S	4	1.8	.....	.....	10n	.....	S	0.36	9.1	Light rain.	
Mt. Washington, N. H.	23.85	605.8	30.21	767.3	39	3.9	100	NW	16	7.2	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	30.15	765.8	70	21.1	84	Calm	0	0	.....	10k	0	W	.....	0.19	4.8	Cloudy.	
New Haven, Conn.	.....	.....	30.18	766.6	53	11.7	79	S	2	0.9	.....	Haze	10s	.....	.....	Inap.	Inap.	Cloudy.	
New London, Conn.	.....	.....	30.23	767.8	55	12.8	79	SW	5	2.2	.....	.....	10s	.....	SW	0	0	Cloudy.	
New Orleans, La.	.....	.....	30.17	766.3	74	23.3	78	SE	2	0.9	.....	0	Sm'e	.....	.....	0	0	Clear.	
Newport, R. I.	.....	.....	30.21	767.3	54	12.2	79	S	10	4.5	.....	.....	10ks	.....	SW	0	0	Cloudy.	
New York, N. Y.	.....	.....	30.19	766.8	52	11.1	79	SE	4	1.8	.....	.....	10ks	.....	.....	Inap.	Inap.	Cloudy.	
Norfolk, Va.	.....	.....	30.21	767.3	69	20.6	75	S	12	5.4	.....	0	8s	.....	.....	0	0	Fair.	
North Platte, Neb.	26.79	680.4	29.22	742.2	62	16.7	77	E	4	1.8	.....	2c	8s	.....	S	0	0	Cloudy.	
Omaha, Neb.	28.81	731.5	29.82	757.4	69	20.6	84	S	8	3.6	.....	10cs	0	S	.....	Inap.	Inap.	Cloudy.	
Oswego, N. Y.	.....	.....	30.03	762.7	57	13.9	75	S	12	5.4	.....	.....	10s	.....	W	Inap.	Inap.	Threatening	
Pembina, Dakota.	.....	.....	29.93	760.2	54	12.2	80	SE	8	3.6	.....	0	2ks	.....	.....	0	0	Fair.	
Philadelphia, Penn.	.....	.....	30.22	767.6	54	12.2	94	S	7	3.1	.....	.....	10s	.....	S	Inap.	Inap.	Threatening	
Pike's Peak, Colorado.	17.05	448.3	29.86	758.4	16	— 8.9	49	SW	16	7.2	.....	2c	0	.....	.....	0	0	Fair.	
Pittsburgh, Penn.	.....	.....	30.07	763.8	62	16.7	94	Calm	0	0	.....	.....	Fog	.....	.....	0.33	8.4	Foggy	
Port Huron, Mich.	.....	.....	30.11	764.8	45	7.2	82	N	8	3.6	.....	2c	1s	.....	.....	0.05	1.3	Fair.	
Portland, Me.	.....	.....	30.16	766.1	49	9.4	71	S	13	5.8	.....	.....	10s	.....	.....	0	0	Cloudy.	
Portland, Oregon.	.....	.....	30.29	769.4	48	8.9	85	Calm	0	0	.....	.....	10s	.....	.....	0.02	0.5	Cloudy.	
Punta Rassa, Fla.	.....	.....	30.14	765.5	74.5	23.6	84	NE	10	4.5	.....	Haze	2s	NE	NE	0.26	6.6	Hazy	
Rochester, N. Y.	.....	.....	30.03	762.9	59	15.0	76	W	10	4.5	.....	.....	10s	.....	W	Inap.	Inap.	Cloudy.	
Salt Lake City, Utah	25.56	649.2	29.89	759.2	38	3.3	71	Calm	0	0	.....	2c	2s	SE	.....	1.26	32.0	Fair.	
Sandy Hook, N. J.	.....	.....	30.16	766.1	55	12.8	87	S	2	0.9	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy.	
San Diego, Cal.	.....	.....	30.03	762.7	51	10.6	71	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
San Francisco, Cal.	.....	.....	30.12	765.0	49	9.4	70	Calm	0	0	.....	Haze	0	.....	.....	0	0	Clear.	
Santa Fe, N. M.	23.19	589.0	29.73	755.1	39	3.9	55	SE	7	3.1	.....	0	0	.....	.....	0	0	Clear.	
Savannah, Ga.	.....	.....	30.20	767.0	69	20.6	84	Calm	0	0	.....	2cs	Sm'e	.....	.....	0	0	Smoky	
Shreveport, La.	.....	.....	30.18	766.6	72	22.2	80	Calm	0	0	.....	5ck	Haze	SW	S	0	0	Fair.	
Smithville, N. C.	.....	.....	30.27	768.8	69	20.6	90	NE	1	0.4	.....	5c	0	NE	.....	0	0	Fair.	
Springfield, Mass.	.....	.....	30.18	766.6	51.5	10.8	78	S	8	3.6	.....	.....	10ks,s	.....	SW	0.11	2.8	Cloudy.	
St. Louis, Mo.	.....	.....	30.05	763.3	70	21.1	75	SW	8	3.6	.....	.....	10s	.....	.....	0.51	13.0	Cloudy.	
St. Marks, Fla.	.....	.....	30.22	767.6	69	20.6	79	E	8	3.6	.....	2c	0	.....	.....	0	0	Fair.	
St. Paul, Minn.	.....	.....	29.90	759.4	60.5	15.8	66	E	6	2.7	.....	8c	0	.....	.....	0	0	Fair.	
St. Paul's Island, Alaska.	.....	.....	29.40	748.3	35	1.7	89	S	36	16.1	.....	.....	10s	.....	W	0.14	3.6	.....	
Thatcher's Island, Mass.	.....	.....	30.20	767.1	48	8.9	85	SW	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy.	
Toledo, Ohio.	.....	.....	30.02	762.5	60	15.9	84	W	2	0.9	.....	2k	0	NW	.....	0.23	5.8	Fair.	
Tucson, Arizona.	27.55	699 8	30.14	765 5	49	9.4	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear.	
Tybee Island, Ga.	.....	.....	30.25	768.3	74	23.3	72	E	6	2.7	.....	5c	0	.....	.....	0	0	Fair.	
Vicksburg, Miss.	.....	.....	30.12	765.0	70	21.1	84	S	1	0.4	.....	2c	10ck	.....	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.	24.05	610.9	29.53	750.0	30	— 1.1	95	Calm	0	0	.....	.....	10n	.....	.....	0.99	25.1	Light snow..	
Washington, D. C.	.....	.....	30.19	766.8	56	13.3	90	Calm	0	0	.....	.....	10s	.....	S	0.03	0.8	Smoky.....	
Wilmington, N. C	.....	.....	30.27	768.8	70	21.1	79	E	2	0.9	.....	5c	Sm'e	NW	.....	0	0	Smoky	
Wood's Holl, Mass.	.....	.....	30.22	767.6	55	12.8	74	S	18	8.0	.....	5k	5s	SW	NW	0	0	Fair..	
Wytheville, Va.	27.86	707.6	29.97	761.2	63	17.2	88	W	4	1.8	.....	2ck	8ks	.....	.....	Inap.	Inap.	Cloudy.....	
Yankton, Dakota	28.54	724.9	29.77	756.1	66	18.9	79	SE	15	6.7	.....	5k	0	S	.....	0	0	Fair.....	
Yuma, Arizona	.....	.....	30.01	762.2	65	18.3	.....	NW	.....	.....	.....	0	0	.....	.....	0	0	Clear.....	
.....	.....	.....	.....	.....	...	...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	...	...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
SUB SERIES.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.03	762.7	83	28.3	64	SE	4	1.8	.....	5ck	5ks	NE	.....	0	0	Fair.....	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.97	761.2	80	26.7	78	E	.....	.....	.....	10c, ck	0	.....	.....	1.49	37.8	Cloudy	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.14	765.5	80	26.7	86	Calm	0	0	.....	2c	2s	.....	.....	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.77	756.1	77	25.0	76	NE	9.6	4.3	.....	0	2s	.....	SW	1.237	31.27	Fair.	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.04	763.0	79	25.6	74	E	4.8	2.1	.....	2ck, k	0	SE	.....	0	0	.....	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.25	768.3	66.5	19.2	69	E	22.0	9.8	.....	0	5fk	.....	.....	0	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	29.97	761.2	67	19.4	90	NE	1.0	0.4	.....	5c	0	NE	.....	0.92	23.4	Fair.....	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.04	763.0	80	26.7	82	E	.....	.....	1	.....	10n	.....	E	0.25	6.35	Rainy.....	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.02	762.4	.....	.....	80.6	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.51	13.08	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.21	640.3	.....	.....	62.5	16.9	85	Calm	0	0	.....	8k	2s	.....	.....	0.03	0.8	Clo dy.....	Thomas Herran.
St. John's, Newfoundland	.....	.....	30.16	766.1	47.0	8.3	41	E	.....	.....	.....	0	0	.....	.....	0	0	Clear.....	John Delaney.
York Factory, B. A.	.....	.....	29.99	761.7	36	2.2	80	N	12	5.4	.....	4ck	0	NE	.....	0	0	.....	J. Fortescue.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Makawao, Maui, H. I.	27.91	708.9	30.08	764.0	59	15.0	70	Calm	0	0	.....	2c	0	.....	.....	0	0	Clear.....	F. L. Clarke.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

MARINE SERIES.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—		
Steamer Hibernian, N. 51° 37', W. 13° 42'.	NW by W	10½	30.38	771.6	56	.... NNW .... 4 ....c .... Smooth ..... Hazy..... Lieut F. Archer, R. N. R.
.....	.....	.....	.....	.....	.....	....
.....	.....	.....	.....	.....	.....	....
.....	.....	.....	.....	.....	.....	....

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057 3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft , or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,916.6 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 4,268.8 ft., or 1,301.1 m.; Santa Fè, 6,862.2 (? ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,291 8 ft., or 699.4 m ; Yankton, 1,278 ft., or 389.5 m. The following constants are 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.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

Brig. Gen. (Brt. Ass't) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 19, 1876.

7:35 A. M. WASHINGTON mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:48 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours	.....	.....	30.04	763.0	69.8	21.0	64	NNW	.....	.....	1	.....	9	.....	.....	0.079	2.0	Hidden	Charnot.
Algiers	.....	.....	30.07	763.6	66.2	19.0	75	NW	.....	.....	1	.....	10	.....	.....	0.563	14.3	Hidden	Peter.
La Calle	.....	.....	.....	.....	69.8	21.0	.....	WNW	.....	.....	2	.....	2	.....	.....	1.614	41.0	Clear	Kunts.
Tunis	.....	.....	29.84	757.9	78.8	26.0	33	W	.....	.....	4	.....	7	.....	.....	0	0	Cloudy	Jacques.
Sfax	.....	.....	29.96	760.9	56.1	13.4	12	SW	.....	.....	6	.....	3	.....	.....	0	0	Fair	Chauvey.
Saida	.....	.....	30.00	762.1	59.0	15.0	58	WNW	.....	.....	2	.....	4	.....	.....	0.063	1.6	Fair	Millot.
Tebessa	.....	.....	29.91	759.6	68.7	20.4	.....	NW	.....	.....	3	.....	5	.....	.....	0	0	Fair	Colin.
Gertville	.....	.....	30.08	763.9	67.0	18.9	50	NW	.....	.....	2	.....	3	.....	.....	0.012	0.3	Fair	Buard.
Laghouat	.....	.....	29.98	761.5	77.0	25.0	28	W	.....	.....	2	.....	0	.....	.....	0	0	Fair	Guyot.
Biskra	.....	.....	30.01	762.2	76.3	24.6	33	NW	.....	.....	3	.....	0	.....	.....	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.

Agram	.....	.....	29.98	761.5	60.3	15.7	53	NE	.....	.....	4	.....	7	.....	.....	0	0	.....	Prof. Ivan Stosir.
Buda-Pesth	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	I. R. Cen. M. I., Hungary.
Cracow, I. R. Observatory	.....	.....	30.28	769.2	41.1	6.7	45	N	.....	.....	2	.....	10	.....	.....	0	0	.....	Dr. Wierzbiski.
Eperies	.....	.....	30.16	766.1	49.3	4.6	42	N	.....	.....	5	.....	10	.....	S	Inap.	Inap.	.....	Julius Mikolik.
Gratz	28.88	733.5	30.10	764.4	48.9	9.4	58	SW	.....	.....	4	.....	10	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	28.45	722.7	29.87	758.8	52.9	11.6	70	NW	.....	.....	5	.....	10	.....	.....	0.131	3.35	.....	Prof. Reissenberger.
Kremsmünster	28.79	731.2	30.15	765.9	46.0	7.8	61	E	.....	.....	5	.....	7	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	.....	.....	30.09	764.2	37.0	2.8	53	NE	.....	.....	4	.....	4	.....	.....	0.055	1.4	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habsauda Daniel.
Pola	.....	.....	29.70	756.0	62.2	16.8	52	E	.....	.....	5	.....	1 Cs	.....	.....	0	0	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	30.02	762.4	54.0	12.2	71	N	.....	.....	4	.....	10	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	29.81	757.8	64.9	18.3	40	ENE	.....	.....	4	.....	7	.....	.....	0	0	.....	Prof. V. Farolfi.
Vienna	.....	.....	30.19	766.9	47.5	8.6	42	NNE	.....	.....	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 1,126.0 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Brussels	.....	.....	30.15	765.8	61.3	16.3	42	E	.....	.....	4	.....	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	.....	.....	30.38	771.6	52.6	11.4	.....	S	20	8.9	.....	.....	2	.....	.....	0	0	Blue sky.....	William Boswell.
Ardrossan	.....	.....	30.43	772.9	55	12.8	.....	WNW	.....	.....	4	.....	3	.....	.....	.....	.....	Hailing.....	William McNeil.
Armagh, Observatory	.....	.....	30.42	772.7	58.5	14.7	.....	NNE	4	1.8	.....	.....	3	.....	.....	.....	.....	*D. clouds....	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs'y	.....	.....	30.36	771.1	57.0	13.9	.....	SSE	7	3.1	.....	.....	1	.....	.....	.....	.....	Blue sky.....	John Hartnup.
Birr Castle, (Parsonstown)	.....	.....	30.40	772.1	62.3	16.8	.....	NNW	.....	.....	1	.....	7	.....	.....	.....	.....	*D. clouds....	J. Dreyer.
Bradford	.....	.....	30.37	771.4	50.7	10.4	.....	NE	.....	.....	1	.....	10	.....	.....	0	0	Overcast.....	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.00	762.0	83.5	28.6	.....	SE	.....	.....	1	.....	7	.....	.....	.....	.....	*D. clouds....	Sergt. J. F. Halanen, A.
Cambridge, Observatory	.....	.....	30.30	769.6	64.3	17.9	.....	NW	.....	.....	2	.....	0	.....	.....	.....	.....	Blue sky.....	H. Todd. [H. C.
Cardington	.....	.....	30.31	769.9	61.0	16.1	.....	E	.....	.....	1	.....	6	.....	.....	.....	.....	*D. clouds....	John McLaren.
Carlisle	.....	.....	30.35	770.9	63	17.2	.....	S	.....	.....	1	.....	3	.....	.....	0	0	*D. clouds....	T. Bell, for J. Carmell,
Chatham, School M. E	.....	.....	30.20	769.4	56.0	13.3	.....	NE	.....	.....	3	.....	.....	.....	.....	.....	.....	Blue sky.....	Capt. J. Fellowes, R.E.
Dartmoor	28.86	733.0	30.37	771.4	55.6	13.1	.....	NE	.....	.....	5	0	.....	.....	.....	.....	.....	Blue sky.....	R. E. Power.
Donaghadee	.....	.....	30.42	772.7	52	11.1	.....	ENE	.....	.....	1	0	.....	.....	.....	.....	.....	Blue sky.....	J. Mac Gowan.
Dover	.....	.....	30.23	767.8	54	12.2	.....	NE	.....	.....	4	7	.....	.....	.....	.....	.....	¾ c o ded...	J. Costello.
Eccles, (near Manchester.)	.....	.....	30.36	771.1	54.8	12.7	.....	SE	2.0	0.9	.....	10	.....	.....	.....	.....	.....	Gloomy.....	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.31	769.9	51.6	10.9	.....	SSE	9	4.0	.....	1	.....	.....	.....	.....	.....	Hazy.....	Th. Staff.
Fort Napier, (Natal)	27.91	708.9	30.15	765.8	67.7	19.8	.....	NE	.....	.....	1	8	.....	.....	.....	.....	.....	Overcast.....	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.94	760.5	88.0	31.1	.....	N	.....	.....	1	7	.....	.....	.....	.....	.....	*D. clouds....	
Galway, Queen's College	.....	.....	30.37	771.4	65	18.3	.....	N	.....	.....	2	3	.....	.....	.....	.....	.....	*D. clouds....	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.04	762.7	66.0	18.9	.....	W	.....	.....	6	6	.....	.....	.....	.....	.....	*D. clouds....	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	30.37	771.4	55.0	12.8	.....	W	.....	.....	1	1	.....	.....	.....	.....	.....	Fine.....	Lewis Stuart.
Great Yarmouth	.....	.....	30.34	770.6	52	11.1	.....	E	.....	.....	4	0	.....	.....	.....	.....	.....	Blue sky.....	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	30.28	769.1	65.1	18.4	.....	E	.....	.....	4	0	.....	.....	.....	.....	.....	Blue sky.....	The Staff, for G. B. Airy
Guernsey	.....	.....	30.25	768.3	51	10.6	.....	NNE	.....	.....	3	5	.....	.....	.....	.....	.....	*D clouds....	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	30.40	772.1	51.6	10.9	.....	E	.....	.....	1	10	.....	.....	.....	.....	.....	*D. clouds....	L. J. Crossley.
Helston	.....	.....	30.26	768.6	63	17.2	.....	N	.....	.....	4	2k	.....	.....	.....	0	0	Fine.....	M. P. Moyle.
Holyhead	.....	.....	30.36	771.1	50	10.0	.....	N	.....	.....	4	1	.....	.....	.....	.....	.....	Blue sky.....	John Tilston.
Kew, Observatory	.....	.....	30.27	768.8	61.3	16.3	.....	E	24	10.7	.....	7	.....	.....	.....	.....	.....	Hazy.....	The Staff.
Kingstown	.....	.....	30.42	772.7	49	9.4	.....	N	.....	.....	3	1	.....	.....	.....	.....	.....	Blue sky.....	George Mitchell.
Leicester Museum	.....	.....	30.35	770.9	58.8	14.9	.....	E	.....	.....	1	7	.....	.....	.....	.....	.....	*D. clouds....	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)	.....	.....	29.76	755.9	73.0	22.8	.....	NW	.....	.....	1	6k	.....	.....	.....	.....	.....	.....	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	30.30	770.9	55	12.8	.....	NW	.....	.....	1	0	.....	.....	.....	.....	.....	Clear.....	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.18	766.6	79.2	26.2	.....	E	.....	.....	6	4	.....	.....	.....	.....	.....	*D. clouds....	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	30.35	770.9	57.7	14.3	.....	ENE	.....	.....	3	10k	.....	.....	E	0	0	Overcast.....	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.34	770.1	53.8	12.1	.....	ENE	.....	.....	3	9	.....	.....	.....	.....	.....	Overcast.....	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	30.28	769.1	58	14.4	.....	N	.....	.....	1	8	.....	.....	.....	.....	.....	Overcast.....	J. Lucas.
Plymouth	.....	.....	30.28	769.1	58.7	14.8	.....	SSW	.....	.....	2	0	.....	.....	.....	.....	.....	Blue sky.....	John Merrifield.
Roche's Point	.....	.....	30.38	771.6	60	15.6	.....	NNE	.....	.....	2	2	.....	.....	.....	.....	.....	Fine.....	W. Kennedy.
Saint Ann's Head	.....	.....	30.33	770.4	56	13.3	.....	NNE	.....	.....	3	3	.....	.....	.....	.....	.....	.....	John C. Walker.
Saint Helier, Jersey	.....	.....	30.20	767.1	57.0	13.9	.....	NE	.....	.....	5	5	.....	.....	.....	.....	.....	½ clouded..	A. P. Amy.
Sandwick Manse, Orkneys)	.....	.....	30.35	770.9	51.6	10.9	.....	W	14	6.3	.....	2	.....	.....	.....	.....	.....	*D. clouds....	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	30.42	772.7	48.5	9.2	.....	E	.....	.....	2	1	.....	.....	.....	.....	.....	Blue sky.....	F. Shaw.
Scutari Cemetery Turkey	.....	.....	29.93	760.2	68.6	20.3	.....	S	.....	.....	1	1	.....	.....	.....	.....	.....	*D. clouds....	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.34	770.6	58.7	14.8	.....	E	.....	.....	1	8	.....	.....	.....	0	0	Overcast.....	W. F. Cooper.
Silloth Rectory	.....	.....	30.34	770.6	55.6	18.7	50	SE	.....	.....	1	1	.....	.....	.....	0	0	*D. clouds....	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	30.36	771.1	55.8	13.2	.....	E	.....	.....	2	4	.....	.....	.....	.....	.....	*D. clouds....	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.	.....	.....	30.35	770.9	56	13.3	.....	WNW	.....	.....	2	2	.....	.....	.....	.....	.....	Blue sky.....	John Smith.
Stratfield Turgiss	.....	.....	30.39	771.9	59.1	15.1	.....	E	.....	.....	1	2	.....	.....	.....	.....	.....	Blue sky.....	Rev. Charles H. Griffith.
Streatley Vicarage	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Rev. John Slatter.
Thurso	.....	.....	30.34	770.6	53	11.7	.....	NNE	.....	.....	2	.....	3	.....	.....	.....	.....	Blue sky.....	John Trotter.
Truro, Royal Institution	.....	.....	30.30	769.6	63	17.2	.....	N	.....	.....	5	.....	0	.....	.....	.....	.....	Blue sky.....	W. Newcombe.
Valencia, Observatory	.....	.....	30.44	773.2	58.2	14.6	.....	NNW	17	7.6	.....	.....	5	.....	.....	.....	.....	*D. clouds....	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	50	10.0	.....	N	.....	.....	2	.....	5	.....	.....	.....	.....	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.14	765.5	74.0	23.3	62	NW	2	0.9	.....	0	0	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Leith, Restalrig Park	.....	.....	29.41	772.4	51.8	11.0	.....	NE	.....	.....	2	4cs	.....	.....	.....	0	0	Fine.....	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.12	765.0	.....	.....	.....	ESE	11.7	5.2	.....	.....	.....	.....	.....	0.5	12.7	.....	C. Meldrum.
Melbourne, Observatory	.....	.....	30.40	772.1	47.8	8.8	79	SE	3	1.3	.....	.....	4	.....	.....	0.02	0.5	Fine.....	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	30.37	771.4	55	12.8	.....	NW	.....	.....	3	0	0	.....	.....	0	0	.....	J. Youngehause.
North Unst, (Shetland Is.)	.....	.....	30.33	770.4	46	7.8	.....	SW	.....	.....	4	.....	10	.....	.....	.....	.....	.....	Robert Burnet.

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 1. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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	.....	.....	30.39	772.0	46.4	8.0	48	NNW	.....	.....	4	.....	0	.....	.....	.....	.....	.....	.....
Fanöe	.....	.....	30.47	773.8	50.0	10.0	52	NW	.....	.....	4	.....	3	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stykkisholm, (Iceland)	.....	.....	29.91	759.7	44.1	6.7	87	W	.....	.....	6	.....	8	.....	.....	.....	.....	.....	.....
Thorshavn, (Faröe)	.....	.....	30.19	766.8	50.7	10.4	72	SW	.....	.....	5	.....	5	.....	.....	.....	.....	Raining.....	.....
Vestervig	.....	.....	30.42	772.6	51.1	10.6	51	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	.....	.....	30.07	763.8	59.0	15	65	NE	.....	.....	1	2o	.....	NE	.....	0	0	Slightly cl'dy	Normal School.
Amiens	.....	.....	30.08	763.9	66.9	19.4	47	NE	.....	.....	6	.....	0	.....	.....	0	0	Clear.....	Normal School.
Avignon	.....	.....	29.66	753.4	67.3	19.6	53	N	.....	.....	3	.....	5	.....	NNE	Inap.	Inap.	Cloudy.....	Normal School.
Bar-sur-Seine	.....	.....	29.95	760.6	67.8	19.9	27	E	.....	.....	10	.....	2	.....	.....	0	0	Slightly cl'dy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.03	762.8	65.5	18.6	49	N	34.0	15.2	.....	.....	1	.....	E	0	0	Clear.....	Beaumette Observatory
Beauvais	.....	.....	30.11	764.8	64.9	18.3	34	NE	.....	.....	6	.....	0	.....	.....	0	0	Clear.....	Normal School.
Besançon	.....	.....	29.83	757.6	69.1	20.6	40	N	.....	.....	8	.....	0	.....	.....	0	0	Clear.....	Normal School.
Bourg en Bresse	.....	.....	29.78	756.5	67.3	19.6	40	NE	.....	.....	2	.....	10k	.....	SW	0	0	Covered	Normal School.
Bourges	.....	.....	29.80	759.2	68.0	20	68	NE	.....	.....	2	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	30.16	766.1	51.6	10.9	77	NNE	.....	.....	5	.....	8k	.....	NE	0	0	.....	Naval Observatory.
Caen	.....	.....	30.67	778.92	55.4	13	83	NW	.....	.....	4	.....	5	.....	S	0	0	Partly cloudy	Normal School.
Carcassonne	.....	.....	29.85	758.3	62.1	16.7	79	W	.....	.....	2	.....	10	.....	E	1.61	41.	Cloudy.....	Normal School.
Castres	.....	.....	30.00	762.0	68.4	20.2	.....	NE	.....	.....	3	.....	4	.....	NE	0	0	.....	Normal School.
Clermont	.....	.....	29.79	756.7	63.3	17.4	46	N	.....	.....	3	.....	3	.....	.....	0.264	6.7	.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.03	762.7	61.9	16.6	38	NE	.....	.....	6	.....	0	.....	.....	0	0	Clear	Normal School.
Commune de Gréasque*	.....	.....	29.69	754.2	63.3	17.4	76	W	.....	.....	2	.....	10	.....	W	0.378	9.6	.....	M. Kina.
Grenoble	.....	.....	29.76	755.9	64.0	17.8	67	NNW	.....	.....	4	.....	5kn	.....	NE	0	0	Partly cl'dy.	Normal School.
Le Mans	.....	.....	30.06	763.4	64.0	17.8	44	NE	.....	.....	6	.....	0	.....	.....	0	0	Clear.....	Normal School.
Lons-Le-Saulnier	.....	.....	29.76	755.8	70.2	21.2	25	NE	.....	.....	8	.....	5	.....	.....	0	0	Cloudy.....	Normal School.
Mâcon	.....	.....	29.90	759.4	64.9	18.3	78	N	.....	.....	4	.....	0	.....	.....	0	0	Clear.....	Normal School.
Mirecourt	.....	.....	29.87	758.0	60.8	16	44	NE	.....	.....	6	.....	0	.....	.....	0	0	Clear.....	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	29.67	753.7	70.5	21.4	62	N	.....	.....	2	.....	2	.....	N	0.12	3.	Slightly cl'dy	Normal School.
Orleans	.....	.....	29.95	760.7	67.6	19.8	31	NE	.....	.....	6	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Paris, Observatory	.....	.....	30.04	762.9	66.4	19.1	36	NE	.....	.....	3	.....	2	.....	NE	0	0	Slightly cl'dy	National Observatory.
Parthenay	.....	.....	29.96	760.9	73.4	23	37	NE	.....	.....	4	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Privas	.....	.....	29.72	754.9	67.3	19.6	.....	NNW	.....	.....	2	.....	10	.....	N	0.402	10.2	Covered	Normal School.
La Roche-sur-Yon	.....	.....	29.82	757.3	67.3	19.6	58	NNE	.....	.....	6	.....	0	.....	.....	0	0	Clear	Normal School.
Rochefort, Observatory	.....	.....	29.98	761.6	71.6	22.0	43	NNE	.....	.....	3	.....	2	.....	SW	0	0	¼ covered..	Naval Observatory.
Rouen	.....	.....	30.11	764.9	67.6	19.8	54	NE	.....	.....	2	.....	1	.....	NE	0	0	Clear.....	Normal School.
Saint Lo	.....	.....	29.87	758.6	53.1	11.7	78	E	.....	.....	1	.....	8	.....	E	0	0	.....	Normal School.
Tarbes	28.83	732.2	29.80	759.3	60.1	15.6	.....	W	.....	.....	6	.....	2	.....	E	0.31	8.	Slightly cl'dy	Normal School.
Villefranche	.....	.....	29.83	757.6	69.1	20.6	45	N	.....	.....	6	.....	10	.....	N	0	0	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.91	759.6	77.4	25.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.63	752.7	64.6	18.1	69	W	.....	.....	2	.....	10	.....	.....	0.382	9.70	Raining.....	Marseilles Observatory.
Mont-Louis	24.66	626.4	29.98	761.4	46.9	8.3	74	NNW	14.9	6.66	.....	.....	7	.....	NNW	1.602	40.7	....	—. Falguère.
Montsouris, Paris	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montsouris Observ'tory.
Perpignan	.....	.....	29.75	755.6	66.2	19.0	54	N	22.4	10.00	.....	.....	7	.....	NW	1.000	25.4	.....	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	68.9	20.5	31	ENE	.....	.....	3	.....	0	.....	.....	0	0	Clear.....	E. Renou.
Toulouse	.....	.....	29.87	758.7	65.5	18.6	61	NW	.....	.....	3	.....	9	.....	.....	0.240	6.1	.....	Toulouse Observatory.
Tours	.....	.....	29.98	761.5	68.7	20.4	35	N	.....	.....	6	.....	0	.....	.....	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.05	763.2	66.6	19.2	38	NE	.....	.....	6	.....	5	.....	.....	0	0	Fair.....	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai	.....	.....	30.10	764 4	57.6	14.2	74	SSE	0.2	0.1	.....	0	1k	.....	.....	{ 0	0 }	.....	H. Le Lec, S. J.
																{ 0	0 }		

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,580.40 meters, or 5,204.8 feet; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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	.....	.....	30.10	764.6	53.1	11.7	46	ENE	.....	.....	4	.....	3	E	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.41	772.5	64.9	18.3	22	NE	.....	.....	1	.....	2	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.40	772.2	41.2	5.1	32	NE	.....	.....	7	.....	9	.....	.....	0	0	.....	Dr. P. Nasgebauer.
Carlsruhe	.....	.....	30.04	763.0	59.7	15.4	43	NE	.....	.....	5	.....	1	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.20	769.4	52.7	11.5	20	E	.....	.....	7	.....	0	.....	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.23	767.8	58.3	14.6	40	NE	.....	.....	5	.....	1	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	29.95	760.8	60.6	15.9	44	NE	.....	.....	6	.....	2	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.41	772.4	46.8	8.2	37	ENE	.....	.....	3	.....	4k	.....	.....	0	0	Fair.....	Captain F. Hegemann.
Kiel	.....	.....	30.46	773.7	47.5	8.6	36	NE	.....	.....	3	.....	2	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	30.34	770.5	38.3	3.5	52	NW	.....	.....	7	.....	6	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	30.43	773.0	40.1	4.5	.....	NNE	.....	.....	2	.....	0	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.37	771.3	46.4	8.0	29	NE	.....	.....	5	.....	0	.....	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	30.34	770 5	36.7	2.6	58	NNW	.....	.....	6	.....	4	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.29	769.4	57.2	14.0	42	NE	.....	.....	4	.....	0	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.35	771.0	37.9	3.3	58	NNW	.....	.....	4	.....	3	.....	.....	0.012	0.3	.....	A. Lothes.
Posen	.....	.....	30.44	773.1	41.7	5.4	31	N	.....	.....	6	.....	9	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.06	763.4	63.0	17.7	36	NE	.....	.....	4	.....	2	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	30.05	763.2	61.3	16.3	31	NE	.....	.....	4	.....	5	.....	.....	0	0	Fair.....	Prof. Schoder.
Thorn	.....	.....	30.36	771.1	40.3	4.6	36	N	.....	.....	5	.....	7	.....	.....	0.067	1.7	Snowing.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.04	763.1	64.0	17.8	35	E	.....	.....	7	.....	1	.....	.....	0	0	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	30.41	772.3	42.3	5.7	81	NNE	.....	.....	3	.....	8	.....	.....	0	0	.....	E. F. Schütz.

Note.—In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation. The elevation of Friedrichshafen is 414.4 meters, or 1,359.3 feet.

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			29.84	757.8	66.7	19.3	38	E	11.2	5.0			9			0	0		
Padua			29.79	756.7	65.7	18.7	80	E	21.0	9.4			10	E		0	0		
Vicenza			29.80	756.8	67 1	19.5	41	E	8.7	3.9			8	NE		0	0		
Verona			29.78	756.3	63.1	17.3	65	E			6		6			0	0		
Bergamo	28.45	722.7	29.72	755.0	63.3	17.4	70	SSE			4		9			0	0		
Domodossola																			
Milan			29.80	757.0	65.3	18.5	62	ENE			4		10	E		0	0		
Pavia			29 78	756.5	64.0	17.8	51	NE			6		9	NE		0.047	1.2		
Moncalieri			29.85	758.2	53.4	11.9	91	NNW	2.5	1.1			10	E		0.378	9.6		
Mondovi	27.92	709.1	29.82	757.5	47.7	8.7	97	NW			6		10			0.677	17.2		
Porto Maurizio			29.87	753.6	62.2	16.8	55	NE			6		10			0.142	3.6		
Genoa			29.66	753.3	64.0	17.8	46	NW	4.0	1.8			10	S		0.305	7.7		
Piacenza			29.77	756.2	62.1	16.7	51	ESE	18.1	8.1			10			0 008	0.2		
Parma			29.80	756.9	62 4	16.9	61	NE			6		10			0	0		
Bologna			29.80	756.9	57.2	14.0	48	E			8		8	SW		0	0		
Florence			29.60	751.8	62.6	17.0	62	NE			8		10	NE		0.059	1.5		
Leghorn			29.50	749.3	66.7	19.3	40	ENE	19.9	8.9			10			0.913	23.2	Showery	
Siena	28.30	718.7	29.49	749.1	54.9	12.7	86	NE	64.6	28.9			10			1.409	35.8	Storm	
Urbino																			
Pesaro																			
Ancona			29.75	755.6	61.5	16.4	86	SE			6		10			0.709	18.0		
Grosseto			29.46	748.2	57.2	14.0	48	NNE			6		10	SE		0.988	25.1		
Rome			29.47	748.6	66.9	19.4	77	W	29.8	13.3			10	SSW		0.201	5.1		
Naples, O. U			29.63	752.5	72.5	22.5	67	SW			8		8	SSW		0.118	3.0		
Lecce			29.79	756.7	70.9	21.6	53	ESE	29.8	13.3			9	S		0	0		
Cosenza			29.74	755.5	77.4	25.2	82	ESE	3.1	1.4			5			0.079	2.0		
Riposto, (Sicily)			29.67	753.7	68.7	20.4	78	NE			2		2			0	0		
Palermo			29.61	752 1	74.7	23.7	41	WSW	21.0	9.4			2			0	0		
Caltanissetta	27.73	704.4	29.63	752.6	72.0	22.2	43	SW			6		2	NE		0	0		
Sub-Series.																			
Naples, S. R			29.63	752.5	68.4	20.2	68	SW	3.8	1.7			..k,c	SW		0.039	1.0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known: Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Tokio																			

NETHERLANDS' SERIES.

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

Flushing			30.24	768.2	60.8	16 0		NE			4								
Groningen					57.2	11.5		ENE			5								
Helder			30.34	770.6	51.4	10.8		ENE			4								
Utrecht			30.24	768.0	57.4	14.1	33	ENE			5		0						Clear

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.

Bergen			30.36	771.1	51.1	10.6	61	SSW	15.7	7.0			8			0.110	2.8		
Brönö			30.37	771 3				W	2	1			9			0	0		
Christiania			30.32	770.2	52.2	11.2	32	SSW	7.8	3.5			0			0	0		
Tromsö			30.10	764.6	33.8	1.0	85	SW	13	6			10			0.185	4.7	Rain & snow	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 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.		Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Winds. Direction.	Winds. Velocity.		Winds. Force.	Clouds. Amount.		Clouds. Direction.		Rain-fall or melted snow in the past 24 hours.		Weather.	Observer.
	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.		
Angra, (Azores,)	.....	.....	30.40	774.5	65.5	18.6	77	SSW	6.5	2.92	.....	.....	5	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.96	760.9	70.0	21.1	43	NNW	12.1	5.42	.....	.....	8	WNW	.....	0.031	0.8	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.33	770.3	65.7	18.7	48	SW	6.0	2.69	.....	.....	1	.....	.....	0	0	.....	Capt D. A. da Cunha.
Lisbon	.....	.....	30.06	763.5	64.4	18.0	66	NNW	16.1	7.2	.....	.....	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 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.		Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Winds. Direction.	Winds. Velocity.		Winds. Force.	Clouds. Amount.		Clouds. Direction.		Rain-fall or melted snow in the past 24 hours.		Weather.	Observer.
	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.		
Warsaw	.....	.....	30.25	768.3	38.7	3.7	43	NNW	34	15	.....	.....	5	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.16	766.0	34.0	1.1	35	N	13	6	.....	.....	7	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.11	764.7	31.8	— 0.1	92	NNW	13	6	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.00	761.9	27.0	— 2.8	80	N	9	4	.....	.....	10	.....	.....	.....	.....	Snowing	Central Physical Obs
Knopio	.....	.....	30.07	763.7	28.6	— 1.9	100	N	18	8	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.87	758.8	43.7	6.5	58	NW	4	2	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.93	760.3	57.9	14.4	45	N	9	4	.....	.....	2	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.84	757.8	62.1	16.6	64	NNW	13	6	.....	.....	6	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.75	755.6	26.5	2.5	47	N	18	8	.....	.....	7	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.90	759.6	54.7	12.6	58	WNW	22	10	.....	.....	6	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.91	759.6	22.6	— 5.2	80	NNE	18	8	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.33	719.6	29.68	753.8	69.3	20.7	40	N	25	11	.....	.....	4	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.53	750.1	75.9	24.4	37	WNW	18	8	.....	.....	10	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.27	743.5	61.0	16.1	75	W	13	6	.....	.....	10	.....	.....	.....	.....	Raining.	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.58	725.9	29.52	749.9	71.6	22.0	33	SSW	4	2	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.52	749.8	93.7	34.3	11	SE	9	4	.....	.....	6	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.25	717.6	29.81	758.1	82.2	27.9	48	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.11	764.7	67.6	19.8	39	Calm	0	0	.....	.....	4	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.89	759.4	49.1	9.5	42	NW	2	1	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.87	759.8	75.2	24.0	22	SSW	11	5	.....	.....	2	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoo	.....	.....	.....	.....	33.1	0.6	90	E	7	3	.....	.....	4	.....	.....	.....	.....	Raining	

Note.—The originals give the wind velocity in meters per second; 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 490 meters, or 1,411.8 feet; Ekaterinburg, 305.42 m., or 1,005.27 ft.; Tasnkend, m. 494.27, or 1,621.37 ft.; Irkutsk, 392 m. or 1,286. ft.; Nertchinsk 592.07 m., or 1,942.27 ft.; Oorga, 1,281.06 m., or 4,202.67 ft.

SPANISH SERIES.

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

Stations.	Barometer corrected for instrumental errors.		Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Winds. Direction.	Winds. Velocity.		Winds. Force.	Clouds. Amount.		Clouds. Direction.		Rain-fall or melted snow in the past 24 hours.		Weather.	Observer.
	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.		
Madrid	.....	.....	29.93	760.1	64.4	18.0	57	N	17.2	7.67	.....	0	10	.....	.....	0.028	0.7	Covered	Royal Observatory.
San Fernando	.....	.....	30.07	763.8	63.9	17.7	64	WSW	13.2	5.9	.....	4	4	WSW	WSW	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.		Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Winds. Direction.	Winds. Velocity.		Winds. Force.	Clouds. Amount.		Clouds. Direction.		Rain-fall or melted snow in the past 24 hours.		Weather.	Observer.
	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.		
Raparanda	.....	.....	30.19	766.9	37.4	3.0	57	N	.....	.....	2	.....	7	.....	.....	0	0	.....	
Umea	.....	.....	30.25	768.3	42.3	5.7	30	N	.....	.....	2	.....	9	.....	.....	0	0	.....	
Hernosand	.....	.....	30.30	769.6	41.4	5.2	29	N	.....	.....	2	.....	3	.....	.....	0	0	.....	
Stockholm	.....	.....	30.26	768.7	39.2	4.0	30	NNW	.....	.....	2	.....	6	.....	.....	0	0	.....	
Wisby	.....	.....	30.34	770.7	39.6	4.2	58	NNW	.....	.....	3	.....	0	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.30	769.7	40.1	4.5	65	N	15.7	7.0	.....	.....	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 rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28.36	720.4	29.77	756.2	59.7	15.4	53	NE			5		8			0	0	Vapory	The Observatory.
Zurich	28.29	718.6	29.90	759.4	63.1	17.3	46	NE			4		3			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, —4.8 mm; Thermometer, —1.6 cent.; Relative Humidity, —4 per cent.

Note.—The originals give the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Constantinople																			
Fao, (Persian Gulf)			29.92	760.0	95.7	35.4		SE			3		0						
Salonica			29.97	761.2	73.6	23.1		NW			2		5						
Valona			29.67	753.7	81.7	27.6		SW			1		5						
Varna			29.88	759.0	64.4	18.0		NE			3		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			29.91	759.7	71.8	22.1	61	SW			3		1k		SW	3	0	Fair	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Bathurst, N. B.			29.83	757.7	49.8	9.9	86	Calm	0	0		9						Cloudy	Hon. J. Ferguson.
Brockville, Ontario			30.17	766.3	63	17.2		S	8	3.6		0	2s		S	0	0	Fair	W. R. Bigg.
*Chatham, N. B.			29.84	757.9	53	11.7	73	NW	13	5.8		8c	2ks	NW	NW	0.02	0.5	Fair	G. A. Blair.
Charlottetown, P. E. Island.			29.86	758.4	48	8.9	93	Calm	0	0			Fog			0.02	0.5	Foggy	H. J. Cundall, C. E.
Cornwall, Ontario			30.07	763.8	62.0	16.7	56	N			1	0	0			0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			29.87	758.7	50.2	10.1	78	W			1	0	1cn			0.23	5.8		H. A. Johnson.
Esquimault, B. C.			29.95	760.7	48.8	9.3	82	N	2	0.9		5cs	0			0	0	Cloudy	W. H. Bevis.
Fredericton, N. B.			29.89	759.2	52.0	11.1	67	NW	7	3.1			10ks			0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			29.59	751.6	55	12.8	99	E	26	11.6		5k	2n	W	SW	0.34	8.6	Clearing	James Stewart.
Goderich, Ontario			30.06	763.5	57.7	14.3	82	Calm			0	4ck	2s	W		0	0	Fine	H. J. Strang, M. A.
Granton, Ontario	29.02	737.1	30.09	764.3	60	15.6		E			1	1cs	0	E		0	0	Clear	James Grant.
*Halifax, N. S.			29.78	756.4	46	7.8	100	S	2	0.9			Fog			0.35	8.9	Foggy	F. Allison, M. A.
*Kingston, Ontario			30.18	766.6	60	15.6	54	Calm	0	0		5k	0	NW		0	0	Fair	S. Woods, M. A.
*Montreal, Quebec			30.08	764.0	57	13.9	67	NW	10	4.5		2k	2ks	N		0.01	0.3	Fair	C. H. McLeod, C. E.
*Ottawa, Ontario			30.12	765.0	57	13.9	58	N	4	1.8		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.15	765.8	54	12.2	74	S	2	0.9		0	0			0	0	Clear	Rev. R. Mooley.
*Port Dover, Ontario			30.16	766.1	56	13.3	87	E	8	3.6		10cs	0	N		0	0	air	H. Morgan.
Port Hastings, N. S.			29.90	759.4	50.6	10.3		SE	5	2.2						0.054	1.37	Rain and fog	Peter Grant.
*Port Stanley Ontario			30.14	765.5	53	11.7	91	E	12	5.4			10ks		W	0	0	Cloudy	M. Payne.
*Quebec, Quebec			30.00	762.0	53	11.7	67	W	9	4.0		5k	2ks	W	W	0.03	0.8	Fair	Capt. Ash, R. N.
St. John, N. B.			29.88	758.9	45	7.2	96	N	2	0.9			10s			0.020	0.51	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario			30.09	764.3	62	16.7	58	Calm	0	0		5cs	0			0	0	Fair	K. Stewart.
Stayner, Ontario			30.11	764.8	62	16.7	61	SE	5	2.2		2cs	0			0	0	Fair	R. J. Cole.
Stratford, Ontario	28.84	732.5	30.10	764.5	56.6	13.7	82	SE	5	2.2		4cs	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.93	760.2	46	7.8	95	SW	10	4.5			1cn		SW	0.18	4.6	Light rain	T. C. Hill.
*Toronto, Ontario			30.15	765.8	59	15.0	59	E	3	1.3		2c	0	W		0	0	Fair	Magnetic Observatory.
Woodstock, Ontario			30.12	765.0	59.5	15.3	93	E	9	4.0		8c	0			Inap.	Inap.	Fine	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 m.

UNITED STATES SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.04	763.0	63	17.2	61	NW	1	0.4	.....	0	0	.....	.....	0.20	5.1	Clear.	
Alpena, Mich.	.....	.....	30.07	763.8	52	11.1	79	Calm	0	0	.....	Haze	Haze	.....	.....	0	0	Hazy.	
Atlantic City, N. J.	.....	.....	30.09	764.3	61	16.1	100	N	4	1.8	.....	2cs	Haze	NW	.....	0.04	1.0	Fair.	
Augusta, Ga.	.....	.....	30.19	766.8	74	23.3	72	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Baltimore, Md.	.....	.....	30.11	764.8	63	17.2	74	NW	8	3.6	.....	2k	2ks	NW	NW	Inap.	Inap.	Fair.	
Barnegat, N. J.	.....	.....	30.09	764.3	64	17.8	78	NW	5	2.2	.....	2c	0	NW	.....	0.04	1.0	Fair.	
Benton, Montana	26.55	674.6	29.76	755.9	41	5.0	72	N	10	4.5	.....	.....	10n	.....	N	3.00	76.2	Light rain.	
Bismarck, Dakota	27.87	707.9	29.51	750.3	58	14.4	58	SE	6	2.7	.....	8ck	0	SE	.....	0.88	22.4	Fair.	
Boston, Mass.	.....	.....	30.09	762.0	62	16.7	56	NW	15	6.7	.....	1k	Haze	NW	.....	0.32	8.1	Fair.	
Breckenridge, Minn.	.....	.....	29.62	752.3	66	18.9	89	SE	18	8.0	.....	.....	10s	.....	SE	0	0	Cloudy.	
Buffalo, N. Y.	.....	.....	30.12	765.0	52	11.1	86	Calm	0	0	.....	2c	Sm'e	.....	.....	0	0	Clear.	
Burlington, Vt.	.....	.....	30.09	764.3	55	12.8	92	N	7	3.1	.....	8k	0	N	.....	0.02	0.5	Cloudy.	
Cairo, Ill.	.....	.....	30.11	764.8	73	22.8	54	Calm	0	0	.....	8c	0	.....	.....	0	0	Fair.	
Cape Hatteras, N. C.	.....	.....	30.07	763.8	71	21.7	80	SW	16	7.2	.....	5c	Haze	.....	.....	0	0	Fair.	
Cape Henry, Va.	.....	.....	30.03	764.0	72	22.2	76	W	8	3.6	.....	5c	Haze	.....	.....	0	0	Fair.	
Cape Lookout, N. C.	.....	.....	30.16	766.1	72	22.2	85	SW	14	6.3	.....	2c	0	.....	.....	Inap.	Inap.	Clear.	
Cape May, N. J.	.....	.....	30.10	764.5	58	14.4	100	N	8	3.6	.....	.....	Fog	.....	.....	0	0	Foggy.	
Charleston, S. C.	.....	.....	30.20	767.1	73	22.8	85	W	7	3.1	.....	1k	0	W	.....	0	0	Clear.	
Cheyenne, Wyoming	23.90	607.0	29.84	757.9	43	6.1	30	W	16	7.2	.....	0	0	.....	.....	0	0	Clear.	
Chicago, Ill.	.....	.....	29.96	761.0	63	17.2	83	NE	7	3.1	.....	5k	2s	N	.....	0.15	3.8	Fair.	
Cincinnati, Ohio.	.....	.....	30.04	763.0	71	21.7	80	W	2	0.9	.....	2cs	Haze	W	.....	0.12	3.0	Fair.	
Cleveland, Ohio.	.....	.....	30.10	764.5	61	16.1	78	E	8	3.6	.....	.....	10n	.....	W	0.01	0.3	Light rain.	
Colorado Springs, Col.	24.00	609.6	29.87	758.7	42	5.6	42	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Columbia, Tex.	.....	.....	30.04	763.0	69	20.6	70	SE	9	4.0	.....	8k	0	S	.....	0	0	Cloudy.	
Davenport, Iowa.	.....	.....	29.95	760.7	70	21.1	84	W	1	0.4	.....	5ck	2ks	.....	W	2.32	58.9	Fair.	
Denison, Tex.	.....	.....	30.04	763.0	71	21.7	80	SE	17	7.6	.....	.....	10s	.....	.....	0	0	Cloudy.	
Denver, Col.	24.09	627.1	29.91	759.7	43	6.1	21	S	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Detroit, Mich.	.....	.....	30.06	763.5	61	16.1	88	SE	2	0.9	.....	.....	10n	.....	.....	0.24	6.1	Light rain.	
Dodge City, Kan.	27.29	693.2	29.51	749.5	58	14.4	69	W	18	8.0	.....	0	0	.....	.....	0	0	Clear.	
Dubuque, Iowa.	.....	.....	29.92	760.0	64	17.8	89	Calm	0	0	.....	.....	Fog	.....	.....	1.15	29.2	Foggy.	
Duluth, Minn.	.....	.....	29.95	760.7	43	6.1	75	NE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy.	
Eastport, Me.	.....	.....	29.86	758.4	47	8.3	92	NW	6	2.7	.....	.....	Fog	.....	.....	0.26	6.6	Light rain.	
Erie, Pa.	.....	.....	30.19	766.5	60	15.6	70	Calm	0	0	.....	6cs	Haze	.....	.....	0	0	Fair.	
Escanaba, Mich.	.....	.....	30.03	762.7	53	11.7	60	N	6	2.7	.....	8k	0	N	.....	0	0	Fair.	
Fort Gibson, Indian Ter.	.....	.....	29.97	761.2	73	22.8	71	S	14	6.3	.....	10cs	0	SW	.....	Inap.	Inap.	Cloudy.	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.77	730.7	29.84	757.9	67	19.4	84	S	12	5.4	.....	.....	10s	.....	S	0.08	2.0	Cloudy.	
Fort Sully, Dakota	27.90	708.6	29.48	748.8	59	15.0	54	NW	4	1.8	.....	0	2s	.....	.....	6	0	Clear.	
Galveston, Tex.	.....	.....	30.12	765.0	77	25.0	82	SE	4	1.8	.....	2c	2s	W	SE	0	0	Fair.	
Grand Haven, Mich.	.....	.....	29.96	761.0	65	18.3	94	S	5	2.2	.....	.....	10s	.....	W	0.76	19.3	Cloudy.	
Indianapolis, Ind.	.....	.....	30.04	763.0	73	22.8	76	SW	6	2.7	.....	5cs	2k	.....	W	0.41	10.4	Fair.	
Indianola, Tex.	.....	.....	30.10	764.5	75	23.9	85	SE	4	1.8	.....	1c	0	.....	.....	0	0	Clear.	
Jacksonville, Fla.	.....	.....	30.22	767.6	77	25.0	72	Calm	0	0	.....	0	0	.....	.....	Inap.	Inap.	Clear.	
Keokuk, Iowa.	.....	.....	29.90	759.4	73	22.8	67	SW	7	3.1	.....	0	0	.....	.....	0.32	8.1	Clear.	
Key West, Fla.	.....	.....	30.13	765.3	79.3	26.3	73	E	16	7.2	.....	5k	Haze	E	E	0	0	Fair.	
Kittyhawk, N. C.	.....	.....	30.11	764.8	68	20.0	79	W	19	8.5	.....	2c	0	W	.....	Inap.	Inap.	Fair.	
Knoxville, Tenn.	.....	.....	30.00	762.7	63	17.2	94	E	4	1.8	.....	.....	Fog	.....	.....	0.30	7.6	Foggy.	
La Crosse, Wis.	.....	.....	29.88	758.9	67	19.4	84	SE	5	2.2	.....	5cs	5n	.....	SE	0.02	0.5	Light rain.	
Leavenworth, Kan.	.....	.....	29.81	757.9	71	21.7	75	S	10	4.5	.....	2c	0	.....	.....	0.01	0.3	Clear.	
Lexington, Ky.	29.07	738.4	30.15	765.8	69	20.6	84	S	4	1.8	.....	5c	0	.....	.....	0.05	1.3	Fair.	
Long Branch, N. J.	.....	.....	30.08	764.0	68	20.0	69	NW	7	3.1	.....	0	Haze	.....	.....	0.09	2.3	Clear.	
Louisville, Ky.	.....	.....	30.10	764.5	74	23.3	72	S	5	2.2	.....	0	Haze	.....	.....	0	0	Clear.	
Lynchburg, Va.	.....	.....	30.11	764.8	70	21.1	76	Calm	0	0	.....	5k	0	W	.....	0.35	8.9	Fair.	
Malone, N. Y.	.....	.....	30.06	763.5	53	11.7	66	NW	10	4.5	.....	0	0	.....	.....	0.02	0.5	Clear.	
Manhattan, Kan.	28.57	725.7	29.66	753.4	70	21.1	84	SW	16	7.2	.....	0	0	.....	.....	0	0	Clear.	
Marquette, Mich.	.....	.....	30.03	763.5	47	8.3	77	Calm	0	0	.....	8ck	0	SE	.....	0	0	Cloudy.	
Memphis, Tenn.	.....	.....	30.14	765.5	74	23.3	76	Calm	0	0	.....	5cs	Haze	.....	.....	0	0	Fair.	
Milwaukee, Wis.	.....	.....	30.03	762.7	48	8.9	100	N	7	3.1	.....	.....	Fog	.....	.....	0.54	13.7	Foggy.	
Mobile, Ala.	.....	.....	30.19	766.8	72	22.2	85	S	3	1.3	.....	0	Sm'e	.....	.....	0	0	Clear.	
Montgomery, Ala.	.....	.....	30.20	767.1	72	22.2	80	SE	1	0.4	.....	2c	Sm'e	.....	.....	0	0	Hazy.	
Morgantown, W. Va.	.....	.....	30.10	764.5	68	20.0	84	SW	5	2.2	.....	.....	10s	.....	SW	0	0	Cloudy.	
Mt. Washington, N. H.	23.66	601.0	30.02	762.5	29	− 1.7	100	NW	54	24.1	.....	.....	Fog	.....	.....	1.32	33.5	Foggy.	
Nashville, Tenn.	.....	.....	30.12	765.0	74	23.3	76	Calm	0	0	.....	2c	Sm'e	.....	.....	0.47	11.9	Clear.	
New Haven, Conn.	.....	.....	30.04	763.0	65	18.3	57	N	4	1.8	.....	Haze	0	.....	.....	0.27	6.9	Clear.	
New London, Conn.	.....	.....	30.05	763.3	66	18.9	67	N	3	1.3	.....	0	Haze	.....	.....	0.19	4.8	Clear.	
New Orleans, La.	.....	.....	30.16	766.1	73	22.8	76	SE	4	1.8	.....	2c	Sm'e	.....	SE	0	0	Clear.	
Newport, R. I.	.....	.....	30.03	762.7	58	14.4	81	Calm	0	0	.....	0	0	.....	.....	0.18	4.6	Clear.	
New York, N. Y.	.....	.....	30.08	764.0	64	17.8	62	NW	5	2.2	.....	2cs	Fog	.....	.....	0.17	4.3	Fair.	
Norfolk, Va.	.....	.....	30.10	764.5	73	22.8	75	W	2	0.9	.....	5c	0	.....	.....	0.02	0.5	Fair.	
North Platte, Neb.	26.88	682.7	29.35	745.5	58	14.4	31	NW	12	5.4	.....	Haze	2s	.....	NW	0	0	Clear.	
Omaha, Neb.	28.72	729.5	29.73	755.1	69	20.6	84	S	13	5.8	.....	2c	8s	.....	S	0.26	6.6	Cloudy.	
Oswego, N. Y.	.....	.....	30.15	765.8	52	11.1	75	SW	8	3.6	.....	Haze	Haze	.....	.....	0	0	Clear.	
Pembina, Dakota.	.....	.....	29.59	751.6	67	15.0	94	SE	12	5.4	.....	.....	10s	.....	SE	0.68	17.3	Cloudy.	
Philadelphia, Penn.	.....	.....	30.11	764.8	64	17.8	78	E	6	2.7	.....	5ck	Sm'e	W	.....	0	0	Fair.	
Pike's Peak, Colorado.	17.61	448.0	29.35	758.2	11	−11.7	60	W	40	17.9	.....	0	0	.....	.....	0	0	Clear.	
Pittsburgh, Penn.	.....	.....	30.12	765.0	61	16.1	77	NE	2	0.9	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy.	
Port Huron, Mich.	.....	.....	30.09	764.3	58	14.4	87	SE	4	1.8	.....	.....	10s	.....	.....	0.23	5.8	Cloudy.	
Portland, Me.	.....	.....	29.99	761.7	58	14.4	58	N	12	5.4	.....	2k	Haze	NW	.....	0.28	7.1	Fair.	
Portland, Oregon.	.....	.....	29.92	760.0	43	6.1	91	Calm	0	0	.....	2cs	0	.....	.....	0	0	Fair.	
Punta Rassa, Fla.	.....	.....	30.17	766.3	74.6	23.7	72	E	10	4.5	.....	Haze	Sm'e	.....	E	0.40	10.2	Hazy.	
Rochester, N. Y.	.....	.....	30.11	764.8	61	16.1	61	W	2	0.9	.....	0	Sm'e	.....	.....	0	0	Clear.	
Salt Lake City, Utah	25.62	651.7	29.95	760.7	42	5.6	35	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Sandy Hook, N. J.	.....	.....	30.07	763.8	59	15.0	81	W	6	2.7	.....	2c	Haze	SW	.....	0.07	1.8	Fair.	
San Diego, Cal.	.....	.....	30.00	762.0	54	12.2	100	Calm	0	0	.....	0	Fog	.....	.....	0	0	Foggy.	
San Francisco, Cal.	.....	.....	30.00	762.0	50	10.0	88	W	8	3.6	.....	.....	10ks	.....	W	0	0	Cloudy.	
Santa Fe, N. M.	23.23	590.0	29.78	756.4	35	1.7	44	N	6	2.7	.....	1c	0	.....	.....	0	0	Clear.	
Savannah, Ga.	.....	.....	30.22	767.6	76	24.4	72	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Clear.	
Shreveport, La.	.....	.....	30.16	766.1	73	22.8	78	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Smithville, N. C.	.....	.....	30.18	766.6	71	21.7	77	SW	8	3.6	.....	2ck	0	W	.....	0	0	Fair.	
Springfield, Mass.	.....	.....	30.02	762.5	61	17.8	67	S	4	1.8	.....	0	Sm'e	.....	.....	0.26	6.6	Clear.	
St. Louis, Mo.	.....	.....	30.04	763.0	74	23.3	68	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
St. Marks, Fla.	.....	.....	30.21	767.3	74	23.3	81	SE	4	1.8	.....	2k	0	S	.....	0	0	Fair.	
St. Paul, Minn.	.....	.....	29.81	757.2	64.5	18.1	86	SE	25	11.2	.....	8ck	2ks	NW	SE	0.27	6.9	Fair.	
St. Paul's Island, Alaska.	.....	.....	29.14	740.1	32	0.0	89	WSW	23	10.3	.....	.....	10s	.....	.....	0.70	17.8	.....	
Thatcher's Island, Mass.	.....	.....	29.99	761.7	57	13.9	69	NW	19	8.5	.....	0	0	.....	.....	0.33	8.4	Clear.	
Toledo, Ohio.	.....	.....	30.03	762.7	63	17.2	100	Calm	0	0	.....	.....	10n	.....	.....	0.65	16.5	Heavy rain.	
Tucson, Arizona.	27.54	699.5	30.13	765.3	48	8.9	.....	S	.....	.....	.....	0	0	.....	.....	0	0	Clear.	
Tybee Island, Ga.	.....	.....	30.20	767.1	70	21.1	95	Calm	0	0	.....	1k	Fo	SW	.....	0	0	Fair.	
Vicksburg, Miss.	.....	.....	30.18	766.6	73	22.8	81	Calm	0	0	.....	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.
Virginia City, M. T.	24.14	613.1	29.62	752.3	33	0.6	95	NW	2	0.9	.....	.....	10n	.....	N	1.56	39.6	Heavy snow	
Washington, D. C.	.....	.....	30.12	765.0	63.5	17.5	91	SW	1	0.4	.....	8k	Fog	NW	.....	0	0	Fair	
Wilmington, N. C	.....	.....	30.16	766.1	71	21.7	75	W	10	4.5	.....	0	5ks	.....	W	0	0	Fair	
Wood's Holl, Mass.	.....	.....	30.02	762.5	61	16.1	77	SW	4	1.8	.....	0	0	.....	.....	0.09	2.3	Clear	
Wytheville, Va.	27.85	707.4	29.95	760.7	67	19.4	79	W	5	2.2	.....	2c	1ks	W	W	0.01	0.3	Clear	
Yankton, Dakota	28.40	721.3	29.61	752.1	70	21.1	80	SE	20	8.9	.....	0	2s	.....	SE	0	0	Fair	
Yuma, Arizona	.....	.....	29.94	760.5	59	15.0	.....	NE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.02	762.5	82	27.8	87	E	3	1.3	.....	5k	5ks	NE	.....	0	0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.98	761.5	79	26.1	90	E	.....	.....	.....	5k	5n	.....	.....	0	0	Cloudy	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.16	766.1	79	26.1	86	Calm	0	0	.....	2c	2n	NE	.....	0.28	7.1	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.83	757.7	78	25.6	74	NNE	8.4	3.8	.....	0	0	.....	.....	0.16	4.1	Clear	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.08	764.0	80	26.7	78	NE	4.8	2.1	.....	0	0	.....	.....	0	0	.....	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.24	768.1	71.5	21.9	54	Calm	0	0	.....	5c	0	N	.....	0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica W. I.	27.21	691.1	29.98	761.5	69	20.6	90	N	2.0	0.9	.....	5c	0	N	.....	1.78	45.2	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	....	30.00	762.0	80	26.7	87	E	.....	.....	3	.....	10n	.....	E	0.190	4 83	Rainy	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.03	762.8	.....	.....	77.9	25.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.413	10.5	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640.6	.....	.....	65.0	18.3	87	SW	2	0.9	.....	4c	3s	.....	.....	0.34	8.6	Fair	Thomas Herran.
St. John's, Newfoundland	.....	.....	30.12	765.0	53	11.7	59	W	.....	.....	.....	0	5s	.....	.....	0	0	Fair	John Delaney.
York Factory, B. A.	.....	.....	29.90	759.4	49.5	9.7	65	SW	5	2.2	.....	4ck	0	N	.....	0	0	.....	J. Fortescue.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Makawao, Maui, H. I.	27.89	708.4	30.06	763.5	60	15.6	70	NE	2.4	1.1	.....	0	5k	.....	.....	0	0	Cloudy	F. L. Clarke.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Hibernian, N. 51° 49′, W. 20° 30′.	NW by W	10½	30.44	773.2	56	13.3	.....	SW	.....	.....	4	2c	4k	.....	.....	Rough	.....	*D. clouds	Lieut F. Archer, R N.R.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057 3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft , or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medillin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fè, 6,862.2 (? ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m ; Yankton, 1,278 ft., or 389.5 m. The following constants are 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. *Detached clouds.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 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	.....	.....	30.13	765.2	68.9	20.5	61	NNW	.....	.....	1	.....	0	.....	.....	0	0	Clear	Charnot.
Algiers	.....	.....	30.19	766.8	68.0	20.0	72	WNW	.....	.....	4	.....	2	.....	.....	0	0	Clear	Peter.
La Calle	.....	.....	.....	.....	.....	.....	.....	Calm	.....	.....	0	.....	0	.....	.....	0.079	2.0	Clear	Kunts.
Tunis	.....	.....	30.10	764.6	77.7	25.4	44	W	.....	.....	4	.....	5	.....	.....	0	0	Fair	Jacques.
Sfax	.....	.....	30.02	762.5	73.4	23.0	52	S	.....	.....	3	.....	5	.....	.....	0	0	Fair	Chauvey.
Saïda	.....	.....	30.10	764.6	71.6	22.0	40	SW	.....	.....	1	.....	4	.....	.....	0	0	Fair	Millot.
Tebessa	.....	.....	30.12	765.0	72.0	22.2	.....	NW	.....	.....	1	.....	7	.....	.....	0	0	Cloudy	Colin.
Geriville	.....	.....	30.14	765.5	67.1	19.5	25	SSE	.....	.....	2	.....	2	.....	.....	0.004	0.1	Clear	Buard.
Laghouat	.....	.....	30.13	765.2	73.4	23.0	44	W	.....	.....	2	.....	0	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	30.13	765.2	81.7	27.6	20	Calm	.....	.....	0	.....	6	.....	.....	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.

Agram	.....	.....	30.24	768.0	52.3	11.3	41	SW	.....	.....	2	.....	3	.....	.....	0	0	.....	Prof. Ivan Stosir.
Cracow, I. R. Observatory	.....	.....	30.28	769.2	41.1	6.7	45	N	.....	.....	2	.....	10	.....	.....	0	0	.....	Dr. Wiersbiski.
Eperies	.....	.....	30.23	767.9	43.2	6.2	39	N	.....	.....	3	.....	9	.....	S	0	0	.....	Julius Mikolik.
Gratz	.....	.....	30.31	769.9	50.9	10.5	35	SW	.....	.....	5	.....	0	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	29.09	738.9	30.31	769.9	50.9	10.5	35	SW	.....	.....	5	.....	0	.....	.....	0	0	.....	Prof. Reissenberger.
Kremsmunster	28.79	731.2	30.15	765.9	46.0	7.8	61	E	.....	.....	5	.....	7	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	28.85	732.7	30.22	767.6	45.3	7.4	36	E	.....	.....	5	.....	0	.....	.....	0	0	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	30.10	766.1	38.5	3.6	52	N	.....	.....	4	.....	9	.....	.....	Inap.	Inap.	.....	Habsuda Daniel.
Pola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	30.10	764.6	53.8	12.1	36	E	.....	.....	4	.....	0	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	30.23	767.8	47.3	8.5	28	N	.....	.....	3	.....	0	.....	.....	0	0	.....	Prof. V. Farolfi.
Vienna	.....	.....	30.14	765.5	54.5	12.5	24	ENE	.....	.....	5	.....	0	.....	.....	0	0	.....	I. R. Central Met. Obs'y.
.....	.....	.....	30.26	768.5	48.7	9.3	30	NE	.....	.....	1	.....	0	.....	.....	0	0	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

BELGIAN SERIES.

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

Brussels	.....	.....	30.19	766.8	55.9	13.3	44	E	.....	.....	1	1	0	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			30.24	768.1	55.0	12.8		WNW	12	5.4			4			0.01	0.25	Blue sky	William Boswell.
Ardrossan			30.30	769.6	57	13.9		WNW			4		3					Blue sky	William McNeil.
Armagh, Observatory			30.34	770.6	58.4	14.7		NW	3	1.3			4					*D. clouds	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs'y			30.30	769.6	53.4	11.9		WNW	21	9.4			1					Blue sky	John Hartnup.
Birr Castle, (Parsonstown)			30.33	770.4	61.6	16.4		Calm			0		8					Hazy	J. Dreyer.
Bradford			30.22	767.6	62.5	16.9		W			1		4					*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			29.96	761.0	83.0	28.3		SE			1		9					Overcast	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			30.26	768.6	64.5	18.1		N			1		1					Hazy	H. Todd.
Cardington			30.28	769.1	63.0	17.2		N			1		4					*D. clouds	John McLaren.
Carlisle			30.21	767.3	62.1	16.7		W			1		4			0	0	*D. clouds	T. Bet, for J. Carmell.
Chatham, School M. E			30.25	767.8	62.0	16.7		Calm			0							Blue sky	Capt. J. Fe lowes, R.E.
Dartmoor	28.83	732.3	30.31	769.9	64.0	17.8		NE			1		0					Blue sky	R. E. Power.
Donaghadee			30.33	770.4	53	11.7		NNE			2		5					*D. clouds	J. Mac Gowan.
Dover			30.26	768.3	53	11.7		NE			3		0					Clear	J. Costello.
Eccles (near Manchester.)			30.31	769.9	59.7	15.4		NW	5.6	2.5								Blue sky	Thomas Mackereth.
Falmouth, Observatory			30.34	769.9	57.7	14.3		SSE	10	4.5			1					Hazy	The Staff.
Fort Napier, (Natal)	27.78	705.6	30.01	762.2	67.5	19.7		E			2		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	82.0	27.8		E			2		8					Overcast	
Galway, Queen's College			30.29	769.4	61	16.1		W			1		4					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.01	763.8	75.0	23.9		W			3		2					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			30.27	768.8	57.1	13.9		W			2		3					Fine	Lewis Stuart.
Great Yarmouth			30.26	769.1	53	11.7		ESE			2		0					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			30.26	768.6	66.5	19.2		N			1		0					Blue sky	The Staff, for G. B. Airy
Guernsey			30.27	768.8	56.5	13.6		NE			1		0					Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y			30.24	768.1	62.5	16.9		NNW			2		1					*D. clouds	L. J. Crossley.
Helston			30.21	768.8	62	16.7		NE			2		2c			0	0	Blue sky	M. P. Moyle.
Holyhead			30.33	770.4	52	11.1		NNW			3		1					Blue sky	John Tilston.
Kew, Observatory			30.26	768.6	59.5	15.3		N	6	2.7			0					Blue sky	The Staff.
Kingstown			30.38	771.6	52	11.1		ENE			4		1					Blue sky	George Mitchell.
Leicester Museum			30.26	768.6	60.0	15.6		W			1		6					Hazy	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.01	763.0	70.2	21.2		NW			1		10k						Sergt. F. Travis, A. H. C.
Nairn			30.22	767.6	60	15.6		W			2		5					½ clouded	W. D. Penny.
Nassau, (Bahamas)			30.18	766.6	80.4	26.9		E			6		7					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.20	768.3	55.7	13.2		WSW			4		1ck.k	WNW	NW	0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.25	768.3	61.0	16.1		NW			3		7					Hazy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.23	768.3	61	16.1		Calm			0		0					Hazy	J. Lucas.
Plymouth			30.29	769.4	61.1	16.2		SSW			3		0					Blue sky	John Merrifield.
Roche's Point			30.36	771.1	60	15.6		SE			3		2					Fine	W. Kennedy.
Saint Ann's Head			30.32	770.1	59	15.0		N			2		3					*D. clouds	John C. Walker.
Saint Helier, Jersey)			30.24	768.1	61.8	16.6		NNE			4		0					Clear	A. P. Amy.
Sandwick Manse, Orkneys)			30.27	767.1	49.8	9.9		W	24	10.7			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough			30.24	768.1	51.7	10.9		N			5		1					Blue sky	F. Shaw.
Scutari Cemetery Turkey			30.01	762.2	46.2	7.9		NNE			3		10					Drizzling	Sergt. W. H. Lyne.
Sheffield			30.22	767.6	62.0	16.7		W			2		5			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			30.25	767.8	67.8	19.9	45	SE			1		1			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.25	768.3	66.9	13.8		W			3		3					*D. clouds	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.			30.24	768.1	55	12.8		W			3		10					Showery	John Smith.
Strathfield Turgiss			30.28	769.1	63.9	17.7		NE			1		0					Blue sky	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			30.20	767.1	55	12.8		NW			4		4					*D. clouds	John Trotter.
Truro, Royal Institution			30.31	769.9	65	18.3		NW			6		2					*D. clouds	W. Newcombe.
Valencia, Observatory			30.35	770.9	59.2	15.1		WSW	17	7.6			2					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					53	11.7		N			2		0						Thomas Dawson.
Cape Good Hope, Obs'y			29.97	761.2	68.0	20.0	74	SSE	12	5.4		0	1						The Staff, for E. J. Stone.
Leith, Restairig Park			30.26	768.6	54.0	12.2		W			2	4ck				0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.09	764.3				E	13.6	6.1									C. Meldrum.
Melbourne, Observatory			30.30	769.6	44.4	6.9	91	SW	4	1.8			0			0	0	Fine, h'y dew	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.20	767.1	50	10.0		W			3	10	5	SW		0	0		J. Youngclause.
North Unst, (Shetland Is.)			30.32	762.5	47.5	8.6		W			6	3	2	NW					Robert Burnet.

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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			30.15	765.7	51.8	11.0	42	WNW			4		9						
Fanöe			30.21	767.4	51.4	10.8	50	W			4		7						
Godthaab, (Greenland)			29.87	758.8	30.2	— 1.0	88	SSW			2		10						
Stykkisholm, (Iceland)			30.09	764.3	42.3	5.7	79	NW			2		0						
Thorshavn, (Faröe)			30.03	762.8	50.4	10.2	62	WNW			4		7					Raining	
Vestervig			30.12	765.0	49.3	9.6	80	WNW			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	.....	.....	30.17	766.4	60.8	16	34	NE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Amiens	.....	.....	30.17	766.3	67.3	19.6	60	NE	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	30.02	762.5	72.0	22.2	44	NNW	.....	.....	2	.....	0	.....	.....	0	0	Very clear	Normal School.
Bar-sur-Seine	.....	.....	30.11	764.9	62.6	17.0	26	NE	.....	.....	2	.....	0	.....	.....	0	0	Clear	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.14	765.5	64.2	17.9	39	N	5.8	2.6	.....	.....	0	.....	.....	0	0	Clear	Beaumette Observatory
Beauvais	.....	.....	30.20	767.1	59.5	15.3	20	ENE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Besançon	.....	.....	30.08	763 9	63.5	17.5	83	NE	.....	.....	6	.....	0	.....	.....	0	0	Clear	Normal School.
Bourg en Bresse	.....	.....	30.19	766.7	64.9	18.3	47	W	.....	.....	2	2c	.....	E	.....	0	0	Slightly cl'dy	Normal School.
Bourges	.....	.....	30.06	763.5	62.6	17	61	NE	.....	.....	2	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	30.18	766.6	60.3	15.7	76	NNE	.....	.....	4	.....	0	.....	.....	0	0	.....	Naval Observatory.
Caen	.....	.....	30.663	778.87	57.7	14.3	66	NW	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Carcassonne	.....	.....	29.89	759.2	62.2	16.8	69	W	.....	.....	1	.....	10	.....	E	0	0	Covered	Normal School.
Chartres	.....	.....	30.12	765.0	66.7	19.3	.....	NE	.....	.....	2	.....	1	.....	NE	0	0	Clear	Normal School.
Clermont	.....	.....	30.02	762.4	63.0	17.2	43	NE	.....	.....	2	.....	0	.....	.....	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.16	766.1	57.9	14.4	24	NE	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Commune de Gréasque*	.....	.....	29.92	759.9	63.5	17.5	68	NW	.....	.....	3	.....	10	.....	SW	0.167	4.0	.....	M. Kina.
Grenoble	.....	.....	30.00	762.0	69.3	20.7	50	NNW	.....	.....	2	.....	2ck	.....	SE	0	0	Slightly cl'dy	Normal School.
Le Mans	.....	.....	30.17	766.3	63.0	17.2	26	NE	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Lons-Le-Saulnier	.....	.....	30.07	763.7	62.2	16.8	56	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Mâcon	.....	.....	30.15	765.9	62.2	16.8	73	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Mirecourt	.....	.....	30.07	763.8	55.8	13.2	42	N	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	29.98	761.6	74.1	23.4	36	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	30.10	764.6	62.6	17	19	NE	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Paris, Observatory	.....	.....	30.17	766.3	61.2	16.2	15	ENE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Parthenay	.....	.....	30.11	764.7	70.1	24.5	46	NE	.....	.....	2	.....	0	.....	.....	0	0	Clear	National Observatory.
Privas	.....	.....	30.04	762.9	67.1	19.8	.....	SSW	.....	.....	2	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon	.....	.....	29.95	760.6	67.6	19.8	39	N	.....	.....	2	.....	2	.....	S	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.18	766.5	71.6	22.0	49	NE	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Rouen	.....	.....	30.21	767.4	68.0	20.0	24	NE	.....	.....	3	.....	0	.....	.....	0	0	Blue sky	Naval Observatory.
Saint Lo	.....	.....	29.93	760.1	60.9	16.6	86	N	.....	.....	2	.....	1	.....	NE	0	0	Clear	Normal School.
Tarbes	29.03	737.3	30.10	764.6	69.9	15.5	.....	W	.....	.....	5	.....	10	.....	NE	0	0	.....	Normal School.
Villefranche	.....	.....	30.16	766.0	68.0	20	61	SE	.....	.....	4	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Sub-Series.											3	.....	2	.....	.....	0	0	Slightly cl'dy	Normal School.
Fort de France, Martinique	.....	.....	29.89	759.3	80.6	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.03	762.7	66.0	18.9	65	WSW	.....	.....	1–2	.....	8	.....	.....	0.236	6.00	Very cloudy	Marseilles Observatory.
Mont-Louis	24.89	632.3	30.21	767.3	49.3	9.6	68	SSW	3.74	1.67	.....	.....	8	.....	SW	0.020	0.5	.....	—. Falguère.
Montsouris, Paris	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montsouris Observ'tory.
Perpignan	.....	.....	29.66	753 4	68.5	20.3	52	N	7.4	3.33	.....	.....	5	.....	WSW	0.012	0.3	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.17	766.2	65.5	18.6	21	NE	.....	.....	2	.....	0	.....	.....	0	0	Clear	E. Renou.
Toulouse	.....	.....	30.13	765.2	65.7	18.7	56	WNW	.....	.....	3	.....	7	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.13	765.4	66.6	19.2	24	ENE	.....	.....	2	.....	0	.....	.....	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.17	766.4	63.7	17.6	17	NE	.....	.....	4	.....	0	.....	.....	0	0	Very cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai	.....	.....	30.01	762.2	59.0	15.0	80	SE	11.2	5.0	.....	0	0	.....	.....	{ 0 0	0 0 }	Clear	H. Le Lec, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,886.40 meters, or 5,204.8 feet; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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.

Barmen	.....	.....	30.16	766.0	53.2	11.8	37	E	.....	.....	3	.....	1	E	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.25	768.4	55.2	12.9	84	NW	.....	.....	1	.....	2	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.32	770.1	47.5	8.6	42	NNW	.....	.....	5	.....	10	.....	.....	0	0	.....	Dr. P. Nangebauer.
Carlsruhe	.....	.....	30.12	765.1	56.8	13.8	80	NE	.....	.....	3	.....	0	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.21	767.4	57.2	14.0	24	SE	.....	.....	6	.....	0	.....	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.26	768.6	56.3	13.5	19	ESE	.....	.....	2	.....	0	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	30.13	765.2	55.4	13.0	44	NE	.....	.....	4	.....	0	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.26	768.7	53.8	12.1	40	S	.....	.....	2	.....	5ck	.....	.....	0	0	Very good	Captain F. Hegemann.
Kiel	.....	.....	30 24	768.1	51.3	10.7	43	WNW	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	30.17	766.4	43.0	6.1	43	W	.....	.....	5	.....	2	.....	.....	0.008	0.2	Snowing	Prof. E. Luther.
Köslin	.....	.....	30.19	766.8	50.2	10.1	.....	W	.....	.....	2	.....	2	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.28	769.0	54.0	12.2	21	SE	.....	.....	2	.....	0	.....	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	30.15	765.9	42.6	5.9	62	W	.....	.....	5	.....	1	.....	.....	0.012	0.3	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.19	766.7	57.9	14.4	27	NE	.....	.....	3	.....	0	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.10	764.6	48.0	8.9	48	NE	.....	.....	1	.....	5	W	.....	0	0	.....	A. Lothes.
Posen	.....	.....	30.28	769.1	52.7	11.5	45	NW	.....	.....	7	.....	10	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (In Alsace)	.....	.....	30.14	765.5	58.6	14.8	24	NE	.....	.....	2	.....	0	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	30.14	765.5	58.6	14.8	25	NE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Prof. Schoder.
Thorn	.....	.....	30.20	767.1	49.1	9.5	38	W	.....	.....	4	.....	4	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.12	765.0	59.7	15.4	24	NE	.....	.....	5	.....	0	.....	.....	0	0	.....	Prof. Fiesch.
Wustrow, Naval School	.....	.....	30.12	765.1	50.2	10.1	64	W	.....	.....	2	.....	4	.....	.....	0	0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			30.11	764.7	59.5	15.3	28	E	1.8	0.8			0			0	0		
Padua			30.13	765.2	54.5	12.5	54	SE	10.5	4.7			0			0	0		
Vicenza			30.12	765.0	57.4	14.1	42	S	3.1	1.4			0			0	0		
Verona			30.09	764.3	60.8	16.0	73	NE			4		4			0	0		
Bergamo	28.71	729.2	30.01	762.2	57.6	14.2	41	SE			2		0			0	0		
Domodossola																			
Milan			30.12	765.1	62.1	16.7	56	E			2		7	E		0	0		
Pavia			30.11	764.9	58.1	14.5	40	NE			6		0			0	0		
Moncalieri			30.10	764.5	59.9	15.5	57	NNE	2.5	1.1			3	E		0	0		
Mondovi	28.18	715.8	30.09	764.2	54.0	12.2	54	NNW			4		1			0	0		
Porto Maurizio			30.08	763.9	67.1	19.5	63	E			4		8			0	0		
Genoa			30.02	762.6	67.6	19.8	29	NW	8.0	3.6			0			0	0		
Piacenza			30.11	764.9	57.4	14.1	43	SE	11.9	5.3			0			0	0		
Parma			30.13	765.2	59.4	15.2	51	NE			4		0			0	0		
Bologna			30.15	765.8	55.2	12.9	39	E			6		3	N		0	0		
Florence			30.06	763.5	60.8	16.0	34	NE			4		0			0	0		
Leghorn			30.01	762.3	61.3	16.3	38	ESE	15.0	6.7			0			0	0		
Siena	28.80	731.5	30.00	761.9	55.2	12.9	47	N	9.8	4.4			0			0	0		
Urbino																			
Pesaro																			
Ancona			30.11	764.8	57.9	14.4	62	NE			6		1			0.47	12.0		
Grosseto			29.99	761.8	62.2	16.8	52	ENE			6		3	SE		0.528	13.4		
Rome			29.91	759.6	69.3	20.7	45	NNE	13.6	6.1			4	E E		0	0		
Naples, O. U.			29.90	759.5	60.3	15.7	70	E			1		10	N		0.803	20.4		
Lecce			29.87	758.8	70.5	21.4	53	SW	24.8	11.1			9			0	0		
Cosenza			29.95	760.8	64.4	18.0	80	SE	1.8	0.8			9			0	0		
Riposto, (Sicily)			29.87	758.8	69.1	20.6	74	E					10			0.232	5.9		
Palermo			29.93	760.1	70.7	21.5	40	WSW	11.9	5.3	2		4	W		0	0		
Caltanissetta	28.06	712.8	29.96	761.0	65.8	18.8	54	W					9			0	0		
Sub-Series.											6		8	E		0	0		
Naples, S. R.			29.91	759.8	59.7	15.4	81	NE	7.4	3.3			..k	W		0.990	25.3		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 550 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Tokio																			

NETHERLANDS' SERIES.

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

Flushing			30.27	768.8	54.0	12.2		N			4								
Groningen			30.21	767.2	55.0	12.8		S			1								
Helder			30.24	768.1	50.4	10.2		NE			2								
Utrecht			30.21	767.3	56.7	13.7	32	SSE			3		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.

Bergen			29.89	759.3	47.8	8.8	71	WNW	7.6	3.4			8						
Bróno			29.91	759.8	45.0	7.2	83	W	9	4			5			0.142	3.6		
Christiania			29.86	758.5	57.9	14.4	36	SSW	8.0	3.6			8			0	0		
Tromsö			29.87	758.7	38.7	3.7	80	SW	9	4			10			0	0		
																0.031	0.8		

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,)	.....	.....	30.46	773.6	66.7	19.3	77	W	5.0	2.22	.....	.....	4	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.03	762.8	72.5	22.5	44	S	3.5	1.56	.....	.....	7	NE	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.27	768.9	66.0	18.9	48	SW	4.6	2.05	.....	.....	5	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.10	764.4	68.2	20.1	39	E	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 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	.....	.....	30.21	767.2	43.2	6.2	46	NW	20	9	.....	.....	9	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.03	762.8	41.2	5.1	45	WNW	13	6	.....	.....	8	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.87	758.8	33.3	0.7	82	NW	0	0	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.80	756.9	29.8	— 1.2	60	WNW	16	7	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs
Kuopio	.....	.....	29.73	755.1	33.4	0.8	100	N	7	3	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kief	.....	.....	29.94	760.5	39.6	4.2	36	WNW	11	5	.....	.....	6	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.97	761.1	41.4	5.2	68	N	31	14	.....	.....	8	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.65	753.1	51.3	10.7	83	NNW	13	6	.....	.....	10	.....	.....	.....	.....	Raining	Lagorio.
Moscow	.....	.....	29.74	755.4	30.6	— 0.8	48	N	13	6	.....	.....	7	.....	.....	.....	.....	Light snow	Meteorological Obs.
Lugan	.....	.....	29.72	755.0	36.5	2.5	91	NE	20	13	.....	.....	10	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	29.51	749.5	17.6	— 8.0	83	N	40	18	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.35	720.0	29.68	753.8	80.1	26.7	29	SE	11	5	.....	.....	1	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.76	755.9	63.5	17.5	33	NE	9	4	.....	.....	4	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.68	753.9	37.0	2.8	52	W	13	6	.....	.....	8	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.54	724.8	29.51	749.6	51.3	10.7	78	W	9	4	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.76	755.9	70.3	20.3	30	W	13	6	.....	.....	8	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.28	718.2	29.85	758.5	84.6	29.2	51	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.67	761.1	74.7	23.7	34	Calm	0	0	.....	.....	3	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.91	759.8	60.1	15.6	56	S	2	1	.....	.....	10	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Orga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.82	757.3	74.8	23.8	39	Calm	0	0	.....	.....	3	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	39.9	4.4	79	E	22	10	.....	.....	8	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the wind velocity in meters per second; 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, m. 494.2?, or 1,621.3? ft.; Irkutsk, 392 m. or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Orga, 1,281.6 m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	30.05	763.2	66.2	19.0	55	E	7.4	3 33	.....	0	7	.....	.....	0	0	Cloudy	Royal Observatory.
San Fernando	.....	.....	30.13	765.4	66.0	18.9	70	SW	12.5	5.6	.....	3	6	SW	SW	0	0	.....	The Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

SWEDISH SERIES.

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

Haparanda	.....	.....	29.85	758.2	39.2	4.0	42	NE	.....	.....	1	.....	10	.....	.....	0	0	.....	
Umea	.....	.....	29.82	757.5	40.6	4.8	84	SE	.....	.....	1	.....	10	.....	.....	0	0	Raining	
Hernosand	.....	.....	29.82	757.5	44.6	7.0	55	SSW	.....	.....	1	.....	10	.....	.....	0	0	.....	
Stockholm	.....	.....	29.85	758.3	54.7	12.6	28	W	.....	.....	2	.....	5	.....	.....	0	0	.....	
Wisby	.....	.....	30.00	761.0	48.6	9.2	61	WSW	.....	.....	2	.....	5	.....	.....	0.083	2.1	.....	
Sub-Series.																			
Upsala	.....	.....	29.85	758.1	58.6	14.8	20	NNW	10.3	4.6	.....	.....	9	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. Mill meters.	Weather.	Observer.
Geneva	28.66	727.9	30.08	764.0	56.1	13.4	53	NW	.....	.....	2	.....	3	.....	.....	0	0	Vapory	The Observatory.
Zurich	28.48	723.3	30.11	764.7	56.7	13.7	53	NE	.....	.....	1	.....	0	.....	.....	0	0	Clear	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note—For Geneva the corresponding departures from the normal values are: Barometer, +2.6 mm; Thermometer, −3.8 cent.; Relative Humidity, −4 per cent.

Note.—The originals give the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fao, (Persian Gulf)	.....	.....	29.89	759.2	95.0	35.0	.....	SE	.....	.....	1	.....	0	.....	.....	.....	.....	.....	.....
Salonica	.....	.....	29.95	760.7	68.7	20.4	.....	NE	.....	.....	8	.....	0	.....	.....	.....	.....	.....	.....
Valona	.....	.....	29.85	758.1	71.6	22.0	.....	SE	.....	.....	1	.....	10	.....	.....	.....	.....	.....	.....
Varna	.....	.....	30.08	764 0	42.8	6.0	.....	N	.....	.....	2	.....	10	.....	.....	.....	.....	.....	.....
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.99	761.7	81.7	27.6	66	W	.....	.....	4	.....	10c	.....	.....	0	0	Fair	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B.	.....	.....	30.09	764.3	53.7	12.1	76	NE	5	2.2	.....	0	.....	.....	.....	.....	.....	Fair	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.19	766.8	64	17.8	.....	Calm	0	0	.....	2c	0	.....	.....	0	0	Fair	W. R. Bigg.
*Chatham, N. B.	.....	.....	30.11	764.8	57	13.9	53	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.03	762.7	44	6.7	84	N	10	4.5	.....	0	0	.....	.....	0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.13	765.3	60.3	15.7	53	SE	.....	.....	1	3c	0	.....	.....	0	0	Bright	James Smith, M. A.
Dalhousie, N. B.	.....	.....	30.14	765.5	53.2	11.8	63	W	.....	.....	1	0	0	.....	.....	0	0	.....	H. A. Johnson.
Esquimault, B. C.	.....	.....	29.72	754.9	50.3	10.2	79	W	4	1.8	.....	10cs	0	.....	.....	0	0	Cloudy	W. H. Bevis.
Fredericton, N. B.	.....	.....	30.13	765.3	55.0	12.8	52	NE	4	1.8	.....	0	0	.....	.....	0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.52	749.8	54	12.2	87	S	6	2.7	.....	2cs	0	S	.....	0.69	17.5	Fair	James Stewart.
Goderich, Ontario	.....	.....	29.94	760.5	61.9	16.6	93	SW	.....	.....	1	5k	3n	SW	.....	1.388	35.25	Clearing	H. J. Strang, M. A.
Granton, Ontario	28.93	734.8	30.02	762.5	58	14.4	.....	N	.....	.....	1	.....	10n	.....	.....	0.44	11.2	Cloudy	James Grant.
*Halifax, N. S.	.....	.....	29.95	760.7	53	11.7	64	N	15	6.7	.....	0	2ks	.....	N	0.05	1.3	Fair	F. Allison, M. A.
*Kingston, Ontario	.....	.....	30.15	765.8	58	14.4	64	S	1	0.4	.....	0	0	.....	.....	0	0	Clear	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.18	766.6	56	13.3	62	Calm	0	0	.....	2c	0	N	.....	0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.15	765.8	55	12.8	59	E	9	4.0	.....	2c	0	E	.....	0	0	Clear	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.02	762.5	56	13.3	78	S	14	6.3	.....	.....	10n	.....	S	0.06	1.5	Light rain	Rev. R. Mooley.
*Port Dover, Ontario	.....	.....	30.04	763.0	58	14.4	76	E	4	1.8	.....	10k	0	SW	.....	0	0	Cloudy	H. Morgan.
Port Hastings, N. S.	.....	.....	30.04	763.0	37.7	3.2	.....	N	7	3.1	.....	.....	.....	.....	.....	0	0	Foggy	Peter Grant.
*Port Stanley Ontario	.....	.....	30.04	763.0	56	13.3	90	E	6	2.7	.....	.....	10n	.....	SW	0.03	0.8	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	30.21	767.3	53	11.7	67	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	Capt. Ash, R. N.
St. John, N. B.	.....	.....	30.12	765.0	53	11.7	60	NW	4	1.8	.....	0	0	.....	.....	0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.93	760.2	61	16.1	88	SE	10	4.5	.....	.....	10n	.....	S	0.16	4.1	Light rain	K. Stewart.
Stayner, Ontario	.....	.....	30.02	762.5	56	13.3	93	SE	5	2.2	.....	.....	10n	.....	NW	0.25	6.3	Heavy rain	R. J. Cole.
Stratford, Ontario	28.75	730.2	30.01	762.2	56.9	13.8	97	SW	5	2.2	.....	.....	10n	.....	.....	0.267	6.78	Rainy	C. J. MacGregor, M. A.
*Sydney, C. B.	.....	.....	29.89	759.2	40	4.4	98	NE	10	4.5	.....	.....	10n	.....	.....	0.11	2.8	Light rain	T. C. Hill.
*Toronto, Ontario	.....	.....	30.05	763.3	55	12.8	79	NE	6	2.7	.....	8ck	5ks	W	W	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.05	763.3	56.8	13 8	94	SE	4	1.8	.....	.....	10s	.....	.....	0.70	17.8	Gloomy	J. Montgomery.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 m.

UNITED STATES SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.15	765.8	60	15.6	70	Calm	0	0	.....	2c	Haze	W	.....	0	0	Fair.	
Alpena, Mich	.....	.....	29.85	758.2	47	8.3	92	Calm	0	0	.....	.....	Fog	.....	.....	0.20	5.1	Foggy.	
Atlantic City, N. J	.....	.....	30.14	765.5	55	12.8	93	NE	8	3.6	.....	.....	Fog	.....	NE	0	0	Foggy	
Augusta, Ga.	.....	.....	30.14	765.5	76	24.4	70	Calm	0	0	.....	2cs	0	.....	.....	0	0	Clear.	
Baltimore, Md.	.....	.....	30.14	765.5	69	20.6	61	NE	5	2.2	.....	Haze	0	.....	.....	Inap.	Inap.	Clear.	
Barnegat, N. J.	.....	.....	30.15	765.8	63	17.2	72	SE	7	3.1	.....	2c	Haze	.....	.....	0	0	Fair.	
Benton, Montana	27.06	687.3	29.86	758.4	49	9.4	85	W	10	4.5	.....	.....	10s	.....	W	0.68	17.3	Cloudy.	
Bismarck, Dakota	27.85	707.4	29.43	747.5	52	11.1	53	NW	10	4.5	.....	5k	Haze	NW	.....	0	0	Fair.	
Boston, Mass	.....	.....	30.19	766.8	59	15.0	43	S	10	4.5	.....	5cs	Haze	NW	.....	0	0	Fair.	
Breckenridge, Minn	.....	.....	29.92	752.3	61	16.1	59	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Buffalo, N. Y.	.....	.....	30.00	762.0	65	18.3	58	S	5	2.2	.....	5k	5ks	W	SW	0	0	Cloudy.	
Burlington, Vt.	.....	.....	30.18	766.6	54	12.2	61	S	1	0.4	.....	2c	0	.....	.....	0	0	Fair.	
Cairo, Ill.	.....	.....	30.07	763.8	73	22.8	76	S	5	2.2	.....	2cs	Haze	.....	.....	0	0	Fair.	
Cape Hatteras, N. C.	.....	.....	30.04	763.0	70	21.1	84	NE	10	4.5	.....	Haze	5s	.....	N	0	0	Fair.	
Cape Henry, Va.	.....	.....	30.15	765.8	65	18.3	100	Calm	0	0	.....	.....	10n	.....	.....	0.85	21.6	Light rain.	
Cape Lookout, N. C.	.....	.....	30.11	764.8	71	21.7	85	W	5	2.2	.....	2c	0	NW	.....	0.02	0.5	Clear.	
Cape May, N. J.	.....	.....	30.11	764.8	60	15.6	88	S	10	4.5	.....	2ck	Haze	W	.....	0	0	Fair.	
Charleston, S. C.	.....	.....	30.15	765.8	76	24.4	70	W	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
Cheyenne, Wyoming	23.95	608.3	29.89	759.2	40	4.4	42	W	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
Chicago, Ill	.....	.....	29.88	758.9	73	22.8	71	S	9	4.0	.....	2cs	Sm'e	.....	.....	0	0	Fair.	
Cincinnati, Ohio	.....	.....	30.00	762.0	73	22.8	71	SE	4	1.8	.....	Haze	Haze	.....	.....	0	0	Clear.	
Cleveland, Ohio	.....	.....	29.99	761.7	70.9	21.6	77	S	7	3.1	.....	5c	Sm'e	W	SE	0.25	6.3	Smoky.	
Colorado Springs, Col.	24.05	610.9	29.92	760.0	47	8.3	34	Calm	0	0	.....	1c	0	.....	.....	0	0	Clear.	
Corsicana, Tex.	.....	.....	29.99	761.7	70	21.1	88	S	6	2.7	.....	8c	0	S	.....	0	0	Cloudy.	
Davenport, Iowa	.....	.....	29.84	757.9	72	22.2	80	SW	4	1.8	.....	0	8ks	.....	SW	0.03	0.8	Cloudy.	
Denison, Tex.	.....	.....	29.99	761.7	72	22.2	80	SE	16	7.2	.....	5c	0	S	.....	0	0	Fair.	
Denver, Col.	24.74	628.4	29.96	761.0	46	7.8	26	S	5	2.2	.....	0	0	.....	.....	0	0	Clear.	
Detroit, Mich	.....	.....	29.99	761.0	62	16.7	94	E	3	1.3	.....	5cs	Fog	.....	.....	0.19	4.8	Fair.	
Dodge City, Kan.	27.28	692.9	29.47	748.5	63	17.2	61	S	7	3.1	.....	2c	0	E	.....	0	0	Fair.	
Dubuque, Iowa	.....	.....	29.82	757.4	68	20.0	84	S	4	1.8	.....	.....	10s	.....	.....	0.30	7.6	Cloudy.	
Duluth, Minn.	.....	.....	29.70	754.4	48	8.9	92	Calm	0	0	.....	.....	Fog	.....	.....	0.32	8.1	Foggy	
Eastport, Me.	.....	.....	30.09	764.3	54	12.2	61	N	10	4.5	.....	0	0	.....	.....	0.12	3.0	Clear.	
Erie, Pa.	.....	.....	29.97	761.2	68	20.0	74	SE	16	7.2	.....	8ck	Haze	W	.....	0	0	Fair.	
Escanaba, Mich	.....	.....	29.78	756.4	52	11.1	93	S	12	5.4	.....	.....	Fog	.....	.....	0.09	2.3	Foggy	
Fort Gibson, Indian Ter.	.....	.....	29.99	761.7	64	17.8	83	SE	7	3.1	.....	.....	10n	.....	S	0.12	3.0	Light rain.	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	24.70	720.0	29.78	756.4	67	19.4	79	S	12	5.4	.....	.....	10s	.....	S	0	0	Cloudy.	
Fort Sully, Dakota	28.04	712.2	29.65	753.1	53	11.7	67	W	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Galveston, Tex.	.....	.....	30.09	764.3	77	25.0	85	SE	5	2.2	.....	0	5s	.....	S	0	0	Fair.	
Grand Haven, Mich.	.....	.....	29.90	759.4	68	20.0	84	SE	10	4.5	.....	2ck	2s	SW	W	1.16	29.5	Fair.	
Indianapolis, Ind.	.....	.....	30.0	762.0	74	23.3	72	S	4	1.8	.....	8k	0	SW	.....	0	0	Fair.	
Indianola, Tex.	.....	.....	30.01	763.0	76	24.4	86	SE	12	5.4	.....	0	8ks	.....	S	0	0	Cloudy.	
Jacksonville, Fla.	.....	.....	30.19	766.8	78	25.6	65	SE	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
Keokuk, Iowa	.....	.....	29.83	757.7	71	21.7	80	W	4	1.8	.....	0	5s	.....	W	0.86	21.8	Fair.	
Key West, Fla.	.....	.....	30.13	765.3	79.4	26.3	73	SE	11	4.9	.....	5k	1ks	SE	.....	1.03	26.2	Fair.	
Kittyhawk, N. C.	.....	.....	30.15	765.8	66	18.9	94	Calm	0	0	.....	.....	10n	.....	N	Inap.	Inap.	Light rain.	
Knoxville, Tenn.	.....	.....	30.16	766.1	68	20.0	94	SW	1	0.4	.....	2c	Fog	SW	.....	0	0	Fair.	
La Crosse, Wis.	.....	.....	29.75	755.6	69	20.6	84	S	14	6.3	.....	.....	10s	.....	S	Inap.	Inap.	Cloudy.	
Leavenworth, Kan.	.....	.....	29.84	757.9	65	18.3	73	S	1	0.4	.....	.....	10s	.....	SW	0.04	1.0	Cloudy.	
Lexington, Ky.	29.03	737.3	30.09	764.3	73	22.8	80	S	6	2.7	.....	2c	0	.....	.....	0.23	5.8	Clear.	
Long Branch, N. J.	.....	.....	30.16	766.1	58	11.4	81	NE	3	1.3	.....	2c	0	SW	.....	0	0	Clear.	
Louisville, Ky.	.....	.....	30.05	763.3	76	24.4	64	S	1	0.4	.....	0	Haze	.....	.....	0	0	Clear.	
Lynchburg, Va.	.....	.....	30.09	764.3	73	22.8	79	Calm	0	0	.....	5k	0	W	.....	0.02	0.5	Fair.	
Malone, N. Y.	.....	.....	30.10	764.5	61	16.1	45	S	8	3.6	.....	2c	0	NW	.....	0	0	Fair.	
Manhattan, Kan.	28.72	729.5	29.82	757.4	66	18.9	90	SW	12	5.4	.....	0	0	.....	.....	0	0	Clear.	
Marquette, Mich.	.....	.....	29.76	755.9	56	13.3	87	Calm	0	0	.....	.....	8ks	.....	SW	0	0	Cloudy.	
Memphis, Tenn.	.....	.....	30.10	764.5	77	25.0	65	Calm	0	0	.....	2c	Haze	.....	.....	0	0	Fair.	
Milwaukee, Wis.	.....	.....	29.88	758.9	66	18.9	84	SE	3	1.3	.....	5c	Fog	SW	.....	0.42	10.7	Fair.	
Mobile, Ala.	.....	.....	30.18	766.6	70	24.4	86	S	3	1.3	.....	5c	5s	W	E	0	0	Cloudy.	
Montgomery, Ala.	.....	.....	30.18	766.8	75	23.9	76	SW	2	0.9	.....	2ck	Haze	.....	.....	0	0	Fair.	
Morgantown, W. Va.	.....	.....	30.06	763.5	71	21.7	95	Calm	0	0	.....	0	Fog	.....	.....	0	0	Fair.	
Mt. Washington, N. H.	23.01	607.3	30.27	768.8	32	0.0	79	N	16	7.2	.....	0	0	.....	.....	0	0	Clear.	
Nashville, Tenn.	.....	.....	30.09	764.3	77	25.0	65	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
New Haven, Conn	.....	.....	30.18	766.6	64	17.8	52	N	4	1.8	.....	Haze	0	.....	.....	0	0	Clear.	
New London, Conn.	.....	.....	30.19	766.8	64	17.8	48	N	4	1.8	.....	5c	0	NW	.....	0	0	Clear.	
New Orleans, La.	.....	.....	30.15	765.8	75	23.9	81	Calm	0	0	.....	2k	Sm'e	.....	.....	0	0	Clear.	
Newport, R. I.	.....	.....	30.18	766.6	60	15.6	49	NE	7	3.1	.....	0	0	.....	.....	0	0	Clear.	
New York, N. Y.	.....	.....	30.18	766.6	63	17.2	46	NE	10	4.5	.....	2c	Sm'e	N	.....	0	0	Fair.	
Norfolk, Va.	.....	.....	30.5	765.8	67	19.4	90	E	8	3.6	.....	2k	8s	.....	.....	0.19	4.8	Cloudy.	
North Platte, Neb.	26.88	682.7	29.35	745.5	57	13.9	57	SW	2	0.9	.....	8k	0	W	.....	0	0	Fair.	
Omaha, Neb.	28.72	729.5	29.72	754.9	69	20.6	75	S	8	3.6	.....	2c	0	.....	.....	0	0	Clear.	
Oswego, N. Y.	.....	.....	30.12	765.0	61	16.1	63	SE	7	3.1	.....	Haze	2s	.....	.....	0	0	Fair.	
Pembina, Dakota	.....	.....	29.48	748.8	55	12.8	80	SE	12	5.4	.....	0	0	.....	.....	0.63	16.0	Clear.	
Philadelphia, Penn	.....	.....	30.15	765.8	60	15.6	76	E	9	4.0	.....	0	Sm'e	.....	.....	0	0	Clear.	
Pike's Peak, Colorado	17.72	450.1	29.93	760.2	13	—10.6	60	W	31	13.9	.....	0	0	.....	.....	0	0	Clear.	
Pittsburgh, Penn	.....	.....	30.05	763.3	66	18.9	90	SE	4	1.8	.....	0	Fog	.....	.....	0.23	5.8	Foggy.	
Port Huron, Mich.	.....	.....	29.99	761.0	60	15.6	94	S	8	3.6	.....	.....	10s	.....	SW	0.44	11.2	Cloudy.	
Portland, Me.	.....	.....	30.19	766.8	58	14.4	47	N	10	4.5	.....	1c	Haze	.....	.....	0	0	Fair.	
Portland, Oregon	.....	.....	29.99	759.4	47	8.3	85	S	2	0.9	.....	.....	10n	.....	S	0.21	5.3	Light rain.	
Punta Rassa, Fla.	.....	.....	30.16	766.1	75.5	24.2	70	E	10	4.5	.....	Haze	0	.....	.....	0	0	Hazy.	
Rochester, N. Y.	.....	.....	30.05	763.3	65	18.3	48	S	8	3.6	.....	8c	Haze	W	.....	0	0	Fair.	
Salt Lake City, Utah	25.46	646.7	29.79	756.7	50	10.0	51	S	4	1.8	.....	5cs	Haze	.....	.....	0	0	Fair.	
Sandy Hook, N. J.	.....	.....	30.15	765.8	60	15.6	66	NE	8	3.6	.....	2c	0	NW	.....	0	0	Clear.	
San Diego, Cal.	.....	.....	30.04	763.0	57	13.9	76	S	8	3.6	.....	.....	10s	.....	S	0	0	Cloudy.	
San Francisco, Cal.	.....	.....	30.04	763.0	47	8.3	69	W	8	3.6	.....	2k	0	.....	.....	0.24	6.1	Clear.	
Santa Fe, N. M.	.....	.....	30.04	763.0	37	2.8	62	Calm	0	0	.....	.....	0	.....	.....	0	0	Clear.	
Savannah, Ga.	23.24	590.3	29.78	756.4	67	19.4	65	SW	6	2.7	.....	0	Sm'e	.....	.....	0	0	Clear.	
Shreveport, La.	.....	.....	30.16	766.1	80	26.7	65	SW	6	2.7	.....	0	Sm'e	.....	.....	0	0	Cloudy.	
Smithville, N. C.	.....	.....	30.11	764.8	72.5	22.5	85	S	4	1.8	.....	.....	8ks	.....	S	0	0	Clear.	
Springfield, Mass.	.....	.....	30.10	764.5	75	23.9	72	W	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
St. Louis, Mo.	.....	.....	30.19	766.8	64	17.8	51	NE	8	3.6	.....	8cs	0	W	.....	0	0	Fair.	
St. Marks, Fla	.....	.....	29.95	760.7	72	22.2	67	S	12	5.4	.....	5k	0	SW	.....	0	0	Fair.	
St. Paul, Minn.	.....	.....	30.10	766.8	70	21.1	95	NW	3	1.3	.....	.....	Fog	.....	.....	0	0	Dense fog.	
St. Paul's Island, Alaska	.....	.....	29.65	753.1	67	19.4	79	SE	7	3.1	.....	10cs	0	.....	.....	0.28	7.1	Cloudy.	
Thatcher's Island, Mass.	.....	.....	29.52	749.8	30	— 1.1	89	WNW	23	10.3	.....	.....	10s	.....	.....	0.05	1.3	.....	
Toledo, Ohio	.....	.....	30.18	766.6	52	11.1	66	N	5	2.2	.....	0	0	.....	.....	0	0	Clear.	
Tucson, Arizona	27.53	699.2	29.96	761.0	69	20.6	90	NW	2	0.9	.....	8cs	0	.....	.....	0.38	9.7	Fair.	
Tybee Island, Ga.	.....	.....	30.12	765.0	55	12.8	.....	S	.....	.....	.....	0	0	.....	.....	0	0	Clear.	
Vicksburg, Miss.	.....	.....	30.15	765.8	75	23.9	81	W	4	1.8	.....	0	Sm'e	.....	.....	0	0	Clear.	
	.....	.....	30.10	766.1	76	24.4	79	S	3	1.3	.....	0	10ks	.....	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.	24.13	612.9	29.61	752.1	30	— 1.1	84	Calm	0	0		0	0			0.23	5.8	Clear	
Washington, D. C.			30.11	764.8	73	22.8	84	SW	4	1.8		1c, k	Haze	E		Inap.	Inap.	Hazy	
Wilmington, N. C.			30.10	764.5	75	23.9	76	W	5	2.2		1cs	0			0	0	Clear	
Wood's Holl, Mass.			30.18	766.6	65	18.3	35	NE	4	1.8		2c	0	N		0	0	Clear	
Wytheville, Va.	27.84	707.1	29.93	760.2	67	19.4	90	W	3	1.3		1ks	0	W		0	0	Clear	
Yankton, Dakota	28.48	723.4	29.71	754.6	62	16.7	56	SE	7	3.1		0	0			0	0	Clear	
Yuma, Arizona			29.90	759.4	62	16.7		NE				2c	0	NE		0	0	Fair	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.02	762.5	84	28.9	70	E	6	2.7		5c	10s	NE		0	0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.94	760.5	82	27.8	78	E				5k	5ks			0.28	7.1	Cloudy	L. V. Bigard.
Kingston, Jamaica, W. I.			30.18	766.6	78	25.6	90	Calm	0	0		8c	2n	SE		1.12	28.4		James Gall.
Santiago de Cuba, W. I.			29.83	757.7	78	25.6	69	NNE	9.6	4.3		0	0			0.25	6.3	Clear	Robert Mason.
Havana, Cuba, W. I.			30.09	764.3	78	25.6	78	NE	2.4	1.1		0	0			0	0		Charles Hasselbrink.
St. Georges, Bermudas			30.11	764.8	70.5	21.4	78	SW	18.0	8.0			10k			0	0	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa W. I.																			
Clifton, Jamaica W. I.	27.22	691.4	29.99	761.7	68	20.0	90	NE	1.0	0.4		2c	0	NE		0.20	5.1	Fine, clear	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.02	762.5	79	26.1	91	E			3	7ks	7ks	E		1.744	44.3	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.04	762.9			84	29										0.157	4.0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640.6			63.8	17.7	80	SE	2	0.9		8k	2s			0.98	24.9	Cloudy	Thomas Herran.
St. John's, Newfoundland			30.16	766.1	54	12.2	65	SE				10k	10s			0	0	Cloudy	John Delaney.
York Factory, B. A.			29.68	753.9	43	6.1	71	N	14	6.3		3k	4s	N		0	0		J. Fortescue.
Honolulu, Oahu, H. I.																			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 Hibernian, N. 51° 44′, W. 27° 48′.	NW by W, ½W	8½	29.84	757.9	51	10.6	NNW	6	Rough	*D. clouds	Lieut. F. Archer, R. N. R.

Note.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057 3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft, or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) 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.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 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	.....	.....	30.19	766.8	68.5	20.3	60	Calm	.....	.....	0	.....	2	.....	.....	0	0	Clear	Charnot.
Algiers	.....	.....	30.21	767.0	68.7	20.4	78	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	Peter.
La Calle	.....	.....	.....	.....	66.2	19.0	.....	WSW	.....	.....	2	.....	1	.....	.....	0	0	Clear	Kunts.
Tunis	.....	.....	30.20	767.0	76.6	24.8	52	ENE	.....	.....	3	.....	0	.....	.....	0	0	Clear	Jacques.
Sfax	.....	.....	30.24	768.2	73.4	23.0	59	E	.....	.....	3	.....	6	.....	.....	0	0	Fair	Chauvey.
Saida	.....	.....	30.16	766.1	71.6	22.0	40	NE	.....	.....	1	.....	3	.....	.....	0.110	2.8	Fair	Millot.
Tebessa	.....	.....	30.20	767.1	81.7	27.6	.....	W	.....	.....	1	.....	10	.....	.....	0	0	Hidden	Colin.
Geriville	.....	.....	30.14	765.6	77.2	25.1	14	ESE	.....	.....	2	.....	2	.....	.....	0	0	Clear	Buard.
Laghouat	.....	.....	30.07	763.6	77.0	25.0	40	W	.....	.....	2	.....	0	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	30.15	765.9	84.9	29.4	34	NNE	.....	.....	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. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	60.4	15.8	41	NE	.....	.....	1	.....	0	.....	.....	0	0	.....	Prof. Ivan Stosir.
Cracow, I. R. Observatory	.....	.....	30.01	762.3	53.2	11.8	38	WSW	.....	.....	3	.....	8	.....	.....	0	0	.....	Dr. Wiersbiski.
Eperies	.....	.....	29.99	761.8	54.3	12.4	49	S	.....	.....	3	.....	9	.....	.....	0	0	.....	Julius Mikolik.
Gratz	28.81	731.9	30.00	762.0	59.7	15.4	43	S	.....	.....	2	.....	0	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	28.60	726.4	30.03	762.7	50.7	10.4	55	SE	.....	.....	3	.....	5	.....	.....	0	0	.....	Prof. Reissenberger.
Kremsmünster	28.71	729.3	30.04	763.1	57.6	14.2	48	NW	.....	.....	3	.....	1	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	.....	.....	29.97	761.3	46.9	8.3	52	NW	.....	.....	4	.....	4	.....	.....	0.024	0.6	.....	Dr. T. Stanecki.
Mytickyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habasuda Daniel.
Pola	.....	.....	30.11	764.7	57.7	14.3	62	SW	.....	.....	1	.....	3c	.....	.....	0	0	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	30.20	767.0	54.0	12.7	34	SE	.....	.....	1	.....	0	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	30.13	765.2	58.8	14.9	52	W	.....	.....	1	.....	0	.....	.....	0	0	Clear	Prof. V. Farolfi.
Vienna	.....	.....	30.00	762.0	61.8	16.0	27	NW	.....	.....	2	.....	2	.....	.....	0	0	.....	I. R. Central Met. Obs'y.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels	.....	.....	30.13	765.3	58.6	14.8	46	N	.....	.....	2	5	0	WNW	.....	0	0	.....	Royal Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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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	48.4	9.2	.....	SW	12	5.4	.....	.....	9	.....	.....	0.055	1.4	Drizzling.....	William Boswell.
Ardrossan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	William McNeil.
Armagh, Observatory	.....	.....	29.96	761.0	61.3	16.3	.....	SSW	12	5.4	.....	.....	.....	.....	.....	.....	.....	.....	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs'y	.....	.....	30.03	762.7	61.2	16.2	.....	NW	7	3.1	.....	.....	1	.....	.....	.....	.....	Blue sky.....	John Hartnup.
Birr Castle, (Parsonstown)	.....	.....	29.99	761.7	60.7	15.9	.....	SW	.....	.....	1	.....	10	.....	.....	.....	.....	*D. clouds....	J. Dreyer.
Bradford	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.01	762.2	84.0	28.9	.....	NE	.....	.....	2	.....	8	.....	.....	.....	.....	*D. clouds....	Sergt. J. F. Halancn, A. H. C.
Cambridge, Observatory	.....	.....	30.06	763.5	70.0	21.1	.....	SW	.....	.....	1	.....	7	.....	.....	.....	.....	*D. clouds....	H. Todd.
Cardington	.....	.....	30.08	764.0	70.0	21.1	.....	W	.....	.....	1	.....	4	.....	.....	.....	.....	*D. clouds....	John McLaren.
Carlisle	.....	.....	29.98	761.5	59.2	15.1	.....	S	.....	.....	1	.....	10	.....	.....	0	0	Overcast.....	T. Bell, for J. Carmell.
Chatham, School M. E	.....	.....	30.09	764.3	68.5	20.3	.....	WSW	.....	.....	2	.....	2	.....	.....	.....	.....	*D. clouds....	Capt. J. Fellowes, R.E.
Dartmoor	28.71	729.2	30.29	769.4	59.4	15.2	.....	NW	.....	.....	3	.....	2	.....	.....	.....	.....	Blue sky.....	R. E. Power.
Donaghadee	.....	.....	29.98	761.5	60	15.6	.....	SSW	.....	.....	4	.....	8	.....	.....	.....	.....	*D. clouds....	J. Mac Gowan.
Dover	.....	.....	30.12	765 0	57	13.9	.....	SSW	.....	.....	3	.....	0	.....	.....	.....	.....	Clear.....	J. Costello.
Eccles (near Manchester.)	.....	.....	30.02	762.5	66.3	19.1	.....	WSW	4.2	1.9	.....	.....	.....	.....	.....	.....	.....	Blue sky.....	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.13	765.3	64.0	17.8	.....	WSW	14	6.3	.....	.....	7	.....	.....	.....	.....	Hazy.....	The Staff.
Fort Napier, (Natal)	27.72	704.1	29.95	760.7	74.4	23.6	.....	NE	.....	.....	2	.....	0	.....	.....	.....	.....	Blue sky.....	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.94	760.5	81.0	27.2	.....	E	.....	.....	1	.....	8	.....	.....	.....	.....	Overcast.....	
Galway, Queen's College	.....	.....	29.92	760.0	60	15.6	.....	WSW	.....	.....	3	.....	5	.....	.....	.....	.....	*D. clouds....	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.14	765.3	72.5	22.5	.....	E	.....	.....	3	.....	1	.....	.....	.....	.....	*D. clouds....	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	29.95	760.7	57.4	14.1	.....	WSW	.....	.....	2	.....	10	.....	.....	.....	.....	Overcast.....	Lewis Stuart.
Great Yarmouth	.....	.....	30.13	765.3	52	11.1	.....	SSE	.....	.....	3	.....	3	.....	.....	.....	.....	Hazy.....	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	30.08	764.0	71.5	21.9	.....	SW	.....	.....	1	.....	4	.....	.....	.....	.....	*D. clouds....	The Staff, for G. B. Airy
Guernsey	.....	.....	30.16	766.1	60	15.6	.....	ENE	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L. J. Crossley.
Helston	.....	.....	30.10	764.5	63	17.2	.....	S	.....	.....	2	.....	10	.....	.....	0	0	Blue sky.....	M. P. Moyle.
Holyhead	.....	.....	30.03	762.7	58	14.4	.....	SSW	.....	.....	4	.....	4	.....	.....	.....	.....	*D. clouds....	John Tilston.
Kew, Observatory	.....	.....	30.08	764.0	63.7	17.6	.....	SW	12	5.4	.....	.....	8	.....	.....	.....	.....	Threatening..	The Staff.
Kingstown	.....	.....	29.99	761.7	60	15.6	.....	SSE	.....	.....	4	.....	5	.....	.....	.....	.....	*D. clouds....	George Mitchell.
Leicester Museum	.....	.....	30.06	763.5	65.3	18.5	.....	W	.....	.....	2	.....	5	.....	.....	.....	.....	*D. clouds....	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)	.....	.....	30.16	766.1	71.2	21.8	.....	NW	.....	.....	1	.....	6k	.....	.....	.....	.....	.....	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	29.88	758.9	53	11.7	.....	Calm	.....	.....	0	.....	10	.....	.....	.....	.....	Overcast.....	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.14	765.5	80.7	27.1	.....	NE	.....	.....	3	.....	7	.....	.....	.....	.....	*D. clouds....	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	30.04	763.0	68.3	20.2	.....	S	.....	.....	2	.....	5c	.....	SW	0	0	*D. clouds....	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.01	762.2	68.0	20.0	.....	SW	.....	.....	2	.....	9	.....	.....	.....	.....	Hazy.....	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	30.05	763.3	67	19.4	.....	W	.....	.....	2	.....	10	.....	.....	.....	.....	Hazy.....	J. Lucas.
Plymouth	.....	.....	30.14	765.5	60.2	15.7	.....	S	.....	.....	2	.....	1	.....	.....	.....	.....	*D. clouds....	John Merrifield.
Roche's Point	.....	.....	30.05	763.3	57	13.9	.....	SW	.....	.....	4	.....	8	.....	.....	.....	.....	Cloudy.....	W. Kennedy.
Saint Ann's Head	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John C. Walker.
Saint Helier, Jersey)	.....	.....	30.10	764.5	64.5	18.1	.....	ESE	.....	.....	2	.....	0	.....	.....	.....	.....	Clear.....	A. P. Amy.
Sandwick Manse, Orkneys)	.....	.....	29.92	760.0	47.5	8.6	.....	WSW	16	7.2	.....	.....	10	.....	.....	.....	.....	Raining.....	Rev. C. Clouston, LL.D.
Scarborough	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. Shaw.
Scutari Cemetery Turkey	.....	.....	30.05	763.3	62.6	17.0	.....	NE	.....	.....	2	.....	5	.....	.....	.....	.....	*D. clouds....	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.02	762.5	66.8	19.3	.....	W	.....	.....	2	.....	3	.....	.....	0	0	Blue sky.....	W. F. Cooper.
Silloth Rectory	.....	.....	30.00	762.0	59.2	15.1	56	W	.....	.....	3	.....	3	.....	.....	0.105	2.67	*D. clouds....	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	30.01	762.2	62.5	16.9	.....	W	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.	.....	.....	29.90	759.4	51	10.6	.....	SSE	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast.....	John Smith.
Stratfield Turgiss	.....	.....	30.08	764 0	68.8	20.4	.....	SW	.....	.....	1	.....	9	.....	.....	.....	.....	Overcast.....	Rev. Charles H. Griffith.
Streatley Vicarage	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Rev. John Slatter.
Thurso	.....	.....	29.89	759.2	50	10.0	.....	WSW	.....	.....	2	.....	9	.....	.....	.....	.....	Raining.....	John Trotter.
Truro, Royal Institution	.....	.....	30.13	765.3	68	20.0	.....	W	.....	.....	4	.....	6	.....	.....	.....	.....	*D. clouds....	W. Newcombe.
Valencia, Observatory	.....	.....	30.03	762.7	55.9	13.3	.....	SW	21	9.4	.....	.....	7	.....	.....	.....	.....	*D. clouds....	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	51	10.6	.....	SW	.....	.....	4	.....	5	.....	.....	.....	.....	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	29.96	761.0	59.2	15.1	93	NW	6	2.7	.....	5	5	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Leith, Restalrig Park	.....	.....	29.96	761.0	58.4	14.7	.....	W	.....	.....	1	.....	10ks	.....	.....	0.01	0.3	Overcast.....	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.09	764.3	.....	.....	.....	ESE	13.1	5.9	.....	.....	.....	.....	.....	0.9	23	.....	C. Meldrum.
Melbourne, Observatory	.....	.....	30.21	767.3	44.2	6.8	96	E	2	0.9	.....	.....	10	.....	.....	0	0	Dense fog...	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	29.75	755.6	51	10.6	.....	S	.....	.....	3	.....	10	.....	.....	0	0	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	29.90	759.4	45	7.2	.....	W	.....	.....	4	.....	10	.....	.....	Blank	Blank	.....	Robert Burnet.

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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	.....	.....	29.88	758.9	55.6	13.1	47	NW	.....	.....	6	.....	5	.....	.....	.....	.....	.....	.....
Fanöe	.....	.....	30.04	762.9	52.3	11.3	77	WNW	.....	.....	6	.....	8	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	29.96	761.9	33.1	0.6	85	S	.....	.....	2	.....	10	.....	.....	.....	.....	Snowing.....	
Stykkisholm, (Iceland)	.....	.....	29.91	759.8	45.9	7.7	80	E	.....	.....	2	.....	0	.....	.....	.....	.....	.....	.....
Thorshavn, (Faröe)	.....	.....	29.93	760.1	46.6	8.1	79	ENE	.....	.....	2	.....	8	.....	.....	.....	.....	.....	.....
Vestervig	.....	.....	29.95	760.8	51.8	11.0	68	WSW	.....	.....	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	.....	.....	30.13	765.2	60.8	16	41	SW	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Normal School.
Amiens	.....	.....	30.15	765.7	70.9	21.6	50	NE	.....	.....	3	.....	0	.....	.....	0	0	Clear.....	Normal School.
Avignon	.....	.....	30.08	764.1	75.2	24	33	NW	.....	.....	2	.....	0	.....	.....	0	0	Very clear...	Normal School.
Bar-sur-Seine	.....	.....	30.12	765.1	66.0	18.9	25	N	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.12	765.0	70.8	21.3	22	W	2.2	1.0	.....	.....	0	.....	.....	0	0	Clear.....	Beaumette Observatory
Beauvais	.....	.....	30.17	766.3	62.4	16.9	37	SE	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
Besançon	.....	.....	30.12	765.1	66.6	19.2	30	E	.....	.....	3	.....	0	.....	.....	0	0	Clear.....	Normal School.
Bourg en Bresse	.....	.....	30.17	766.3	72.5	22.5	31	N	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
Bourges	.....	.....	30.07	763.6	63.7	17.6	57	NE	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Normal School.
Brest	.....	.....	30.09	764.2	67.1	19.5	56	SW	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Naval Observatory.
Caen	.....	.....	30.057	778.67	60.8	16	54	SW	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
Carcassonne	.....	.....	30.13	765.2	63.0	17.2	71	W	.....	.....	1	.....	10	.....	E	0	0	Covered	Normal School.
Cherbourg	.....	.....	30.10	764.4	68.7	20.4	.....	E	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Normal School.
Clermont	.....	.....	30.05	763.2	70.3	21.3	29	NE	.....	.....	2	.....	0	.....	.....	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.15	765.9	60.1	15.6	53	NW	.....	.....	.....	.....	0	.....	.....	0	0	Clear.....	Normal School.
Commune de Gréasque*	.....	.....	30.15	765.8	71.8	22.1	42	NW	.....	.....	2	.....	5	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.01	763.0	70.2	21.2	54	NW	.....	.....	4	.....	2ks	.....	SE	0	0	Slightly cl'dy	Normal School.
Le Mans	.....	.....	30.15	765.8	64.4	18	29	N	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
Lons-Le-Saulnier	.....	.....	30.11	764.8	64.8	18.2	37	NE	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Normal School.
Mâcon	.....	.....	30.22	767.5	66.4	18.9	75	N	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
Mirecourt	.....	.....	30.08	764.1	59.7	15.4	31	SW	.....	.....	2	.....	2	.....	S	0	0	Slightly cl'dy	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	30.05	763.3	78.4	25.8	54	NW	.....	.....	2	.....	2	.....	W	0	0	Slightly cl'dy	Normal School.
Orleans	.....	.....	30.10	764.4	66.6	19.2	29	NE	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
Paris, Observatory	.....	.....	30.15	765.8	65.7	18.7	27	E	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	National Observatory.
Parthenay	.....	.....	30.07	763.6	76.1	24.5	71	N	.....	.....	4	.....	0	.....	.....	0	0	Clear.....	Normal School.
Privas	.....	.....	30.08	763.9	72.3	22.4	.....	SE	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
La Roche-sur-Yon	.....	.....	29.93	760.1	75.0	23.9	33	N	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Normal School.
Rochefort, Observatory	.....	.....	30.28	769.2	75.2	24.0	38	ENE	.....	.....	3	.....	0	.....	.....	0	0	Blue sky.....	Naval Observatory.
Rouen	.....	.....	30.15	765.9	68.2	20.1	81	SSW	.....	.....	2	.....	1	.....	NE	0	0	Clear.....	Normal School.
Saint Lo	.....	.....	29.94	760.4	67.0	14.4	75	NE	.....	.....	1	.....	1	.....	E	0	0	.....	Normal School.
Tarbes	29.06	738.2	30.13	765.3	60.8	16	.....	Calm	.....	.....	0	.....	0	.....	.....	0	0	Clear.....	Normal School.
Villefranche	.....	.....	30.19	766.8	73.0	22.8	61	SE	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.80	759.3	80.6	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchesi.
Marseilles	.....	.....	30.09	764.2	67.3	19.6	72	WSW	.....	.....	1–2	.....	1	.....	.....	0	0	Clear.....	Marseilles Observatory.
Mont-Louis	24.95	633.8	30.27	768.8	51.8	11.0	82	ESE	13.0	5.83	.....	.....	7	.....	W	0.020	0.5	.....	—. Falguère.
Montsouris, Paris	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montsouris Observ'tory.
Perpignan	.....	.....	30.10	764.5	70.0	21.1	51	S	9.3	4.17	.....	.....	5	.....	W	0	0	.....	Dr. Pines.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.15	765.7	68.0	20.0	28	SE	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	E. Renou.
Toulouse	.....	.....	30.20	767.1	65.3	18.5	56	NW	.....	.....	1	.....	0	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.13	765.3	68.4	20.2	29	ESE	.....	.....	1	.....	0	.....	.....	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.15	765.8	66.6	19.2	29	SE	.....	.....	2	.....	0	.....	.....	0	0	Very clear...	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai	.....	.....	29.92	759.9	69.1	20.6	75	S	4.7	2.1	.....	.....	10k	.....	.....	{ 0	{ 0	Covered	H. Le Lec, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals venerally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,886.40 meters, or 5,204.8 feet; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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.

Aschberg	.....	.....	30.04	762.9	59.9	15.5	26	WNW	.....	.....	4	.....	1	W	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.06	763.4	56.7	13.7	52	NW	.....	.....	1	.....	7	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.03	762.8	56.5	13.6	24	NW	.....	.....	7	.....	6	.....	.....	0	0	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	30.08	764.1	61.0	17.8	33	NW	.....	.....	1	.....	6	.....	.....	0	0	.....	A. Senz.
Cuxhaven	.....	.....	30.18	766.6	65.3	18.5	43	NW	.....	.....	5	.....	0	.....	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.14	765.5	64.9	18.3	24	SW	.....	.....	2	.....	0	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	30.13	765.2	55.6	13.1	48	S	.....	.....	.....	.....	0	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.10	764.4	52.2	11.2	59	NW	.....	.....	4	.....	9ks	.....	.....	0	0	Good.....	Captain F. Hegemann.
Kiel	.....	.....	30.04	763.1	50.2	10.1	74	NW	.....	.....	4	.....	7	.....	.....	0.004	0.1	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.84	758.4	48.4	9.1	70	W	.....	.....	5	.....	5	.....	.....	0.110	2.8	.....	Prof. E. Luther.
Köslin	.....	.....	29.93	760.1	51.4	10.8	.....	W	.....	.....	5	.....	2	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.08	764.0	57.7	14.3	30	NW	.....	.....	3	.....	2	NW	.....	0	0	.....	Prof. Brühns.
Memel	.....	.....	29.85	758.3	45.1	7.3	80	NW	.....	.....	3	.....	10	.....	.....	0.039	1.0	Misty.....	Reinbrecht & Skalweit.
Munster	.....	.....	30.11	764.9	59.0	15.0	55	NE	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.84	758.0	52.2	11.2	62	WNW	.....	.....	5	.....	9	.....	.....	0	0	.....	A. Lothes.
Posen	.....	.....	30.02	762.4	56.5	13.6	31	NW	.....	.....	8	.....	7	.....	.....	0.028	0.7	.....	Dr. Mageuer.
Strassburg, (in Alsace)	.....	.....	30.11	764.7	64.0	17.8	26	Calm	.....	.....	0	.....	1	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	30.10	764.5	63.1	17.3	29	NE	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Prof. Schoder.
Thorn	.....	.....	29.92	760.0	54.7	12.6	41	W	.....	.....	4	.....	8	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.07	763.8	63.1	17.3	28	NE	.....	.....	4	.....	0	.....	.....	0	0	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	29.94	760.4	51.9	10.9	69	W	.....	.....	3	.....	10	.....	.....	0	0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			30.07	763.7	60.6	15.9	40	SW	1.3	0.6			0			0	0		
Padua			30.06	763.5	60.3	15.7	44	NW	2.5	1.1			2	NW		0	0		
Vicenza			30.05	763.3	61.9	16.6	46	S	3.1	1.4			0			0	0		
Verona			30.03	762 8	67.1	19.5	54	E			1		0			0	0		
Bergamo	28.68	728.5	29 98	761.4	64.4	18.0	36	W			4		1			0	0		
Domodossola	29.07	738.3	30.07	763.7	68.9	20.5	49	SSW			4		3			0	0		
Milan			30.05	763.3	66.4	19.1	50	WSW			2		3	WSW		0	0		
Pavia			30.05	763.2	65.3	18.5	35	NW			6		0			0	0		
Moncalieri			30.04	763.1	64.4	18.0	51	SE	3.1	1.4			3	S		0	0		
Mondovi	28.14	714.8	30.01	762.3	62.6	17.0	61	N			2		1			0	0		
Porto Maurizio			30.14	765.6	67.8	19.9	63	SSW			2		8	E		0	0		
Genoa			30.11	764.9	65.5	18.6	49	S	3.1	1.4			2	S		0	0		
Piacenza			30.06	763.5	63.0	17.2	43	N	5.6	2.5			0			0	0		
Parma			30.06	763.5	64.4	18.0	50	NE			2		1			0	0		
Bologna			30.11	764.8	63 1	17.3	38	N			1		0			0	0		
Florence			30.12	765.0	67.1	19.5	33	NW			4		0			0	0		
Leghorn			30.11	764.8	64.0	17.8	56	SSW	4.9	2.2			7			0	0		
Siena	28.88	733.5	30.07	763.7	65.5	18.6	37	WSW	0	0			0			0	0		
Urbino																			
Pesaro																			
Ancona			30.13	765.4	57.9	14.4	67	SE			4		0			0	0		
Grosseto			30.13	765.2	65.1	18.4	53	SSW			2		2	SE		0	0		
Rome			30.13	765.2	65.7	18.7	47	SW	6.3	2.8			1			0	0		
Naples, O. U			30.14	765.6	70.3	21.3	54	SSW			4		7	NNW		0	0		
Lecce			30.13	765.3	63.9	17.7	49	NNE	9.4	4.2			7			0	0		
Cosenza			30.14	765.5	66.6	19.2	79	NW	3.8	1.7			5			0.012	0.3		
Riposto, (Sicily)			30.13	765.4	69.8	21.0	73	ESE			2		2			0	0		
Palermo			30.10	764.6	70.2	21.2	33	W	11.9	5.3			0			0	0		
Caltanissetta	28.14	714.7	30.04	763.0	68.0	20.0	40	WNW			2		1	ESE		0	0		
Sub-Series.																			
Naples, S. R			30.14	765.5	64.0	17.8	70	ESE						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.

Tokio																			

NETHERLANDS' SERIES.

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

Flushing			30.18	766.6	54.7	12 6		NW			2								
Groningen			30.08	763.9	54.3	12.4		NW			3								
Helder			30.15	765.7	53.2	11.8		NNW			1								
Utrecht			30.11	764.9	60.8	16.0	44	WSW			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.

Bergen			29.78	756.4	55.4	13, 0	55	W	6.3	2.8			0			0	0		
Brönö			29.84	758.0	45.0	7.2	74	NW	11	5			8			0	0		
Christiania			29.80	757.0	56.5	13.6	36	SSW	6.7	3.0			4			0.012	0.3		
Tromsö			29.74	755.4	37.0	2.8	66	SW	2	1			10			0.008	0.2		Rain & snow

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 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	773.9	63.7	17.6	80	NE	11.4	5.11	.....	.....	6	.....	.....	0.079	2.0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.10	764.5	71.6	22.0	46	SSW	8.0	3.58	.....	.....	8	SSW	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.30	769.6	64.6	18.1	53	.....	1.4	0.64	.....	.....	1	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.18	766.5	66.7	19.3	62	SSW	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 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	.....	.....	29.93	760.3	50.9	10.5	49	W	25	11	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.91	757.2	44.4	6.9	84	WNW	11	5	.....	.....	10	.....	.....	.....	.....	Raining.....	Astronomical Obs.
Dorpat	.....	.....	29.73	755.1	43.9	6.6	61	NNE	7	3	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.75	755.6	34.3	1.3	49	N	4	2	.....	.....	8	.....	.....	.....	.....	.....	Central Physical Obs
Kuopio	.....	.....	29.66	753.3	36.9	2.7	65	NNW	7	3	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.94	760.4	49.3	9.6	43	WSW	11	5	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.18	766.6	50.4	10.2	43	SW	13	6	.....	.....	8	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.19	766.8	52.4	11.9	48	NNE	4	2	.....	.....	7	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.86	758.4	38.7	3.7	41	S	9	4	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.98	761.6	48.4	9.1	36	W	29	13	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.52	749.9	25.9	— 3.4	82	NW	34	15	.....	.....	10	.....	.....	.....	.....	Snowing.....	Ogorodnikof.
Tiflis	28.56	725.4	29.96	760.9	57.4	14.1	38	NW	31	14	.....	.....	1	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.97	761.3	48.7	9.3	43	NW	31	14	.....	.....	9	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.70	754.3	36.9	2.7	74	W	13	6	.....	.....	10	.....	.....	.....	.....	Snowing.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.71	729.3	29.69	754.1	51.8	11.0	39	SE	4	2	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.66	753.3	80.6	27.0	45	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.16	715.3	29.73	755.1	88.9	31.6	51	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.85	758.3	71.6	22.0	48	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.76	756.0	78.3	25.7	38	W	2	1	.....	.....	1	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	30.08	763.9	73.6	23.1	9	NNW	13	6	.....	.....	7	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	30.3	2.4	91	SE	22	10	.....	.....	10	.....	.....	.....	.....	.....	.....	Light rain...	

Note.—The originals give the wind velocity in meters per second; 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 1,411.8 feet; Ekaterinburg, 303.4? m., or 1,005.2? ft.; Tashkend, m. 494.27, or 1,621.3? ft.; Irkutsk, 392 m. or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0 m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	30.07	763.6	72.7	22.6	49	SW	7.4	3.33	.....	2	3	E	.....	0	0	Cloudy.....	Royal Observatory.
San Fernando	.....	.....	30.18	766.6	67.6	19.8	64	W	12.5	5.6	.....	0	3	.....	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. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.80	756.9	38.1	3.4	60	N	.....	.....	2	.....	10	.....	.....	0	0	.....	
Umea	.....	.....	29.75	755.6	41.0	5.0	60	S	.....	.....	1	.....	6	.....	.....	0.071	1.8	.....	
Hernosand	.....	.....	30.74	755.5	49.6	9.8	57	SW	.....	.....	1	.....	7	.....	.....	0	0	.....	
Stockholm	.....	.....	29.76	755.8	45.3	7.4	77	N	.....	.....	1	.....	8	.....	.....	0	0	Raining.....	
Wisby	.....	.....	29.84	757.8	45.0	7.2	86	NNW	.....	.....	2	.....	5	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.76	755.9	51.3	10.7	52	NNW	5.4	2.4	.....	.....	10	.....	.....	0.037	0.96	Raining.....	Dr. G

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	728.4	30.08	763.9	65.1	18.4	40	N			1		1			0	0	Clear	The Observatory.
Zurich	28.48	723.5	30.08	764.1	65.7	18.7	35	NW			1		1			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +3.1 mm; Thermometer, +1.0 cent.; Relative Humidity, —17 per cent.

Note.—The originals give the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople			29.98	761.4	93.2	34.0		NW			3		0						
Fao, (Persian Gulf)			30.18	766.5	62.8	17.1		SW			1		10						
Salonica			30.04	762.9	67.1	19.5		W			2		10						
Valona			30.12	765.0	57.3	14.0		SW			2		2						
Varna																			
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.85	758.3	81.5	27.5	64	S			3		10cs			0	0	Fair	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B																			Hon. J. Ferguson.
Brockville, Ontario			29.86	758.4	63	17.2		NW	3	1.3			10s		NW	0.17	4.3	Cloudy	W. R. Bigg.
*Chatham, N. B			30.01	762.2	52	11.1	62	E	1	0.4		5c	0			0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island			30.07	763.8	46	7.8	80	Calm	0	0		0	0			0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			29.78	756.4	64.5	18.1	89	E			1	10k	0			0.234	5.94	Unsettled	James Smith, M. A.
Dalhousie, N. B																			H. A. Johnson.
Esquimault, B. C			30.02	762.5	48.3	9.1	85	N	2	0.9		10cs	0			0	0	Cloudy	W. H. Revis.
Fredericton, N. B			30.02	762.5	55.0	12.8	69	SW	8	3.6		1cs	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.82	757.4	51	10.6	93	W	17	7.6		5k	2ks	N	N	0.05	1.3	Clearing	James Stewart.
Goderich, Ontario			29.84	757.7	65.9	18.8	79	SW			2	6k	0	W		0.216	5.48	Cloudy	H. J. Strang, M. A.
Granton, Ontario	28.80	731.5	29.85	758.2	69	20.6		W			1	1ck	0	E		0	0	Clear	James Grant.
*Halifax, N. S			30.03	762.7	52	11.1	64	N	7	3.1		2cs	0			0	0	Fair	F. Allison, M. A.
*Kingston, Ontario			29.85	758.2	58	14.4	97	S	7	3.1			Fog			0.34	8.6	Foggy	S. Woods, M. A.
*Montreal, Quebec			29.85	758.3	59	15.0	92	SW	16	7.2		10n			W	Inap.	Inap.	[illegible]	C. H. McLeod, C. E.
*Ottawa, Ontario			29.82	757.4	62	16.7	58	S	3	1.3		10k	0			0.15	3.8	Cloudy	J. B. Haney.
*Parry Sound, Ontario			29.78	756.4	60	15.6	94	W	10	4.5			10n		W	1.39	35.3	Cloudy	Rev. R. Mooley.
*Port Dover, Ontario			29.91	759.7	57	13.9	94	SW	7	3.1		5ck	0	SW		0.03	0.8	Fair	H. Morgan.
Port Hastings, N. S																			Peter Grant.
*Port Stanley, Ontario			29.91	759.7	59	15.0	85	SE	6	2.7		2ck	0	W		0.03	0.8	Clear	M. Payne.
*Quebec, Quebec			29.89	758.9	57	13.9	63	Calm	0	0			10n			0	0	Cloudy	Capt. Ash, R. N.
St. John, N. B.			30.07	763.8	50	10.0	65	S	4	1.8		0	0			0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario			29.77	756.1	65	18.3	82	SW	7	3.1		5cs	2s	SW		0.06	1.5	Cloudy	K. Stewart.
Stayner, Ontario																			R. J. Cole.
Stratford, Ontario	28.61	726.7	29.84	757.9	67.8	19.9	88	SW	8	3.6		3cs	0	SW		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			30.06	763.5	40	4.4	97	NW	3	1.3			10n			0.07	1.8	Foggy	T. C. Hill.
*Toronto, Ontario			29.85	758.2	60	15.6	93	W	7	3.1		2cs	Haze	W		0.79	20.1	Fair	Magnetic Observatory.
Woodstock, Ontario			29.85	758.2	70.5	21.4	71	W	12	5.4		7k	0			0.05	1.3	Fine	J. Montgomery

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the cooperation 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	61	16.1	82	SE	3	1.3	.....	.....	10s	.....	.....	0.11	2.8	Threatening	
Alpena, Mich	.....	.....	29.68	753.9	65	18.3	89	SW	4	1.8	.....	2ck	Haze	SW	.....	0.68	17.3	Fair	
Atlantic City, N. J.	.....	.....	30.04	763.0	63	17.2	78	SW	8	3.6	.....	1ck	Haze	NW	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.06	763.5	77	25.0	73	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Clear	
Baltimore, Md.	.....	.....	30. .	763.0	70	21.1	79	S	4	1.8	.....	2cs	Haze	W	.....	0	0	Fair	
Barnegat, N. J.	.....	.....	30.04	763.0	63	17.2	78	SW	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Benton, Montana	27.24	691.9	30.04	763.0	51	10.6	78	N	1	0.4	.....	2c	0	.....	.....	0.11	2.8	Fair	
Bismarck, Dakota	28.10	713.7	29.7.	754.6	54	12.2	73	N	13	5.8	.....	.....	10ks	.....	N	0	0	Cloudy	
Boston, Mass	.....	.....	30.01	762.2	59	15.0	76	S	9	4.0	.....	10cs	Haze	.....	.....	0	0	Cloudy	
Breckenridge, Minn	.....	.....	29.61	752.8	55	12.8	87	N	8	3.6	.....	.....	10ks	.....	NE	0.03	0.8	Cloudy	
Buffalo, N. Y.	.....	.....	29.87	758.7	54	12.2	79	SW	10	4.5	.....	0	0	.....	.....	0.13	3.3	Clear	
Burlington, Vt.	.....	.....	29.	761.0	56	13.3	100	W	11	4.9	.....	.....	10n	.....	.....	0.07	1.8	Light rain	
Cairo, Ill.	.....	.....	29.	760.5	71	21.7	85	S	10	4.5	.....	0	5ks	.....	SW	0.30	7.6	Fair	
Cape Hatteras, N. C.	.....	.....	30.04	763.0	74	23.3	76	SE	11	4.9	.....	8c	0	W	.....	0	0	Fair	
Cape Henry, Va.	.....	.....	30.0.	764.3	72	22.2	76	S	9	4.0	.....	5c	5ks	.....	SW	0.18	4.6	Cloudy	
Cape Lookout, N. C.	.....	.....	30.	764.0	72	22.2	90	E	12	5.4	.....	2c	0	.....	.....	0	0	Clear	
Cape May, N. J.	.....	.....	30.0	763.3	60	15.6	88	SE	16	7.2	.....	2k	Haze	W	.....	0	0	Fair	
Charleston, S. C.	.....	.....	30.09	764.3	78	25.6	69	SW	8	3.6	.....	Haze	0	.....	.....	0.04	1.0	Clear	
Cheyenne, Wyoming	23.98	609.1	29.92	760.0	41	5.0	75	N	8	3.6	.....	5ck	2s	.....	.....	0	0	Fair	
Chicago, Ill	.....	.....	29.76	755.9	72	22.2	67	SW	12	5.4	.....	2cs	0	.....	.....	0	0	Fair	
Cincinnati, Ohio	.....	.....	29.93	760.2	76	24.4	64	SE	2	0.9	.....	5k	0	.....	.....	0	0	Fair	
Cleveland, Ohio	.....	.....	29.90	759.4	71.1	21.7	69	S	1	0.4	.....	.....	10ks	.....	W	0	0	Cloudy	
Colorado Springs, Col.	24.00	609.6	29.87	758.7	47	8.3	41	NW	12	5.4	.....	5ck	5s	.....	.....	0	0	Cloudy	
Corsicana, Tex.	.....	.....	29.93	760.2	68	20.0	90	SE	6	2.7	.....	5c	Haze	W	.....	0	0	Fair	
Davenport, Iowa	.....	.....	29.77	756.1	69	20.6	84	SW	10	4.5	.....	5ck	0	SW	.....	0.09	2.3	Fair	
Denison, Tex.	.....	.....	29.91	759.7	71	21.7	66	S	16	7.2	.....	0	0	.....	.....	1.47	37.3	Clear	
Denver, Col.	24.76	628.9	29.98	761.5	40	9.4	43	N	2	0.9	.....	.....	10s	.....	.....	0.09	2.3	Cloudy	
Detroit, Mich	.....	.....	29.84	757.9	69	20.6	79	SW	6	2.7	.....	.....	10s	.....	SW	0	0	Cloudy	
Dodge City, Kan.	27.24	691.9	29.42	747.3	65	18.3	73	E	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	29.72	754.9	68	20.0	84	SW	8	3.6	.....	5cs	0	.....	.....	0.05	1.3	Fair	
Duluth, Minn.	.....	.....	29.62	752.3	45	7.2	92	Calm	0	0	.....	.....	Fog	.....	.....	0.03	0.8	Foggy	
Eastport, Me.	.....	.....	30.01	762.2	49	9.4	77	Calm	0	0	.....	Haze	Haze	W	.....	0	0	Hazy	
Erie, Pa.	.....	.....	29.87	758.7	75	23.9	59	W	12	5.4	.....	5ck	Sm'e	NW	.....	0.06	1.5	Fair	
Escanaba, Mich	.....	.....	29.67	753.6	54	12.2	86	E	5	2.2	.....	0	0	.....	.....	0.15	3.8	Clear	
Fort Gibson, Indian Ter.	.....	.....	29.87	758.7	65	18.3	83	SE	3	1.3	.....	0	8ks	.....	W	0.65	16.5	Fair	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.66	728.0	29.74	755.4	60	15.6	81	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.17	715.5	29.80	756.9	54	12.2	80	W	12	5.4	.....	.....	8s	.....	W	0	0	Cloudy	
Galveston, Tex.	.....	.....	30.05	763.5	78	25.6	82	S	4	1.8	.....	2c	2s	.....	S	0	0	Fair	
Grand Haven, Mich.	.....	.....	29.78	756.4	69	20.6	75	S	7	3.1	.....	4c	0	W	.....	0.39	9.9	Fair	
Indianapolis, Ind.	.....	.....	29.89	759.2	75	23.9	68	SW	5	2.2	.....	8qs	2ks	.....	SW	0	0	Cloudy	
Indianola, Tex.	.....	.....	30.01	763.0	77	25.0	90	Calm	0	0	.....	.....	10ks	.....	SW	0.12	3.0	Cloudy	
Jacksonville, Fla.	.....	.....	30.12	765.0	78	25.6	69	S	8	3.6	.....	0	0	.....	.....	6	0	Clear	
Keokuk, Iowa	.....	.....	29.77	756.1	72	22.2	80	W	8	3.6	.....	.....	10s	.....	W	0	0	Cloudy	
Key West, Fla.	.....	.....	30.10	764.5	79.6	26.4	69	E	9	4.0	.....	5k	Haze	E	E	Inap.	Inap.	Fair	
Kittyhawk, N. C.	.....	.....	30.10	764.5	74	23.3	68	S	22	9.8	.....	5cs	Haze	.....	.....	0	0	Fair	
Knoxville, Tenn.	.....	.....	30.06	763.5	68	20.0	90	SW	1	0.4	.....	10ck	Haze	SW	.....	0	0	Cloudy	
La Crosse, Wis.	.....	.....	29.63	752.6	67	19.4	84	SW	22	9.8	.....	5k	0	SW	.....	0.40	10.2	Clearing	
Leavenworth, Kan.	.....	.....	29.80	756.9	68	20.0	90	S	3	1.3	.....	.....	10s	.....	.....	0.16	4.1	Threatening	
Lexington, Ky.	29.03	737.3	30.09	764.3	72	22.2	75	S	12	5.4	.....	8c	0	SW	.....	0	0	Cloudy	
Long Branch, N. J.	.....	.....	30.03	762.7	61	16.1	82	S	11	4.9	.....	2ck	0	.....	.....	0	0	Clear	
Louisville, Ky.	.....	.....	29.97	760.7	77	25.0	65	S	4	1.8	.....	0	5ks	.....	SW	0	0	Fair	
Lynchburg, Va.	.....	.....	30.03	762.7	71	21.7	86	W	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Malone, N. Y.	.....	.....	29.80	756.9	63	17.2	83	S	12	5.4	.....	.....	10s	.....	SW	0.18	4.6	Cloudy	
Manhattan, Kan.	28.70	729.0	29.79	756.7	70	21.1	75	SW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Marquette, Mich.	.....	.....	29.65	753.1	60	15.6	70	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn.	.....	.....	29.98	761.5	73	22.8	85	SW	3	1.3	.....	2k	10ks,n	SW	SW	0.04	1.0	Cloudy	
Milwaukee, Wis.	.....	.....	29.75	755.6	69	20.6	84	SE	7	3.1	.....	5c	Fog	.....	.....	1.54	39.1	Fair	
Mobile, Ala.	.....	.....	30.09	764.3	75	23.9	85	Calm	0	0	.....	5c	0	.....	.....	0	0	Fair	
Montgomery, Ala.	.....	.....	30.11	764.8	73.5	23.1	83	W	3	1.3	.....	8ck	Haze	S	.....	0	0	Fair	
Morgantown, W. Va.	.....	.....	29.96	761 0	78	25.6	65	Calm	0	0	.....	0	Haz	.....	.....	0	0	Clear	
Mt. Washington, N. H.	23.82	605.0	30.18	766.6	47	8.3	85	NW	12	5.4	.....	5c	Haze	NW	.....	0.24	6.1	Fair	
Nashville, Tenn.	.....	.....	29.98	761.5	79	26.1	61	SE	2	0.9	.....	8ck	0	S	.....	0	0	Fair	
New Haven, Conn.	.....	.....	30.02	762.5	66	18.9	68	S	10	4.5	.....	0	5ks	.....	W	0.15	3.8	Fair	
New London, Conn.	.....	.....	30.06	763.5	66	18.3	87	S	8	3.6	.....	2c	8s	.....	W	0.08	2.0	Fair	
New Orleans, La.	.....	.....	30.09	764.3	73	22.8	83	S	2	0.9	.....	2c	0	W	.....	Inap.	Inap.	Clear	
Newport, R. I.	.....	.....	30.05	763.3	55	12.8	87	S	8	3.6	.....	10cs	0	W	.....	0	0	Cloudy	
New York, N. Y.	.....	.....	30.03	762.7	60	15.	76	SW	2	0.9	.....	2c	Haze	.....	.....	0	0	Clear	
Norfolk, Va.	.....	.....	30.09	764.3	75	23.9	72	S	9	4.0	.....	8k	0	.....	.....	0	0	Fair	
North Platte, Neb.	26.99	685.5	29.47	748.5	58	14.4	53	NW	4	1.8	.....	2c	Haze	NW	.....	0	0	Fair	
Omaha, Neb.	28.74	730.0	29.78	756.4	60	15.	60	NW	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	29.86	758.4	64.8	18.2	84	SE	8	3.6	.....	Haze	8s	.....	W	0.34	8.6	Cloudy	
Pembina, Dakota	.....	.....	29.73	755.1	52	11.1	89	NW	12	5.4	.....	.....	10s	.....	NW	0.48	12.2	Cloudy	
Philadelphia, Penn.	.....	.....	30.04	763.0	64	17.8	78	SW	9	4.0	.....	1c	0	W	.....	0	0	Clear	
Pike's Peak, Colorado	17.76	451.1	29.98	761.5	20	— 6.7	41	SW	35	15.6	.....	10k	Haze	.....	.....	0	0	Cloudy	
Pittsburgh, Penn.	.....	.....	29.91	759.7	76	24.4	64	SW	6	2.7	.....	2c	0	.....	.....	0.93	23.6	Clear	
Port Huron, Mich.	.....	.....	29.84	757.9	70	21.1	75	SW	7	3.1	.....	2c	5s	W	W	0.05	1.3	Cloudy	
Portland, Me.	.....	.....	30.02	762.5	55	12.8	74	S	8	3.6	.....	.....	10s	.....	W	0	0	Cloudy	
Portland, Oregon	.....	.....	30.16	766.1	40	4.4	91	Calm	0	0	.....	.....	Fog	.....	.....	0.03	0.8	Foggy	
Punta Rassa, Fla.	.....	.....	30.12	765.0	76.3	24.6	85	E	7	3.1	.....	Haze	Sm'e	.....	E	0	0	Hazy	
Rochester, N. Y.	.....	.....	29.81	757.2	70	21.1	70	SW	5	2.2	.....	2c	Sm'e	SW	.....	0.35	8.9	Clear	
Salt Lake City, Utah	25.51	648.7	29.87	758.7	34	1.1	100	NE	12	5.4	.....	.....	10n	.....	.....	0.12	3.0	Heavy snow	
Sandy Hook, N. J.	.....	.....	30.01	762.2	63	17.2	78	S	4	1.8	.....	2c	Haze	.....	.....	0	0	Fair	
San Diego, Cal.	.....	.....	30.06	763.5	60	15.0	77	NE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.16	766.1	47	8.3	81	W	2	0.9	.....	0	0	.....	.....	Inap.	Inap	Clear	
Santa Fe, N. M.	23.25	590.5	29.79	756.7	44	6.7	30	E	7	3.1	.....	2c	2cs	NW	.....	0	0	Fair	
Savannah, Ga.	.....	.....	30.09	764.3	82	27.8	55	W	5	2.2	.....	Haze	0	.....	.....	0	0	Clear	
Shreveport, La.	.....	.....	29.91	759.0	67	19.4	84	S	4	1.8	.....	.....	10ks	.....	.....	0.40	10.2	Cloudy	
Smithville, N. C.	.....	.....	30.08	764.0	74	23.0	85	SE	2	0.9	.....	1c	0	.....	.....	0.52	13.2	Clear	
Springfield, Mass.	.....	.....	30.00	762.0	58.5	14.7	81	S	4	1.8	.....	.....	10ks	.....	S	0.12	3.0	Cloudy	
St. Louis, Mo.	.....	.....	29.87	758.7	73	22.8	67	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
St. Marks, Fla.	.....	.....	30.11	764.8	74	23.0	81	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
St. Paul, Minn.	.....	.....	29.58	751.3	62	16.7	71	SW	9	4.0	.....	0	0	.....	.....	0.16	4.1	Clear	
St. Paul's Island, Alaska	.....	.....	29.59	751.6	31	— 0.6	89	SE	16	7.2	.....	.....	10s	.....	.....	0.01	0.3	.....	
Thatcher's Island, Mass.	.....	.....	30.02	762.5	51	10.6	86	S	9	4.0	.....	.....	10s	.....	NW	0	0	Cloudy	
Toledo, Ohio	.....	.....	29.93	760.2	74	23.0	72	SW	8	4.6	.....	5ck	0	.....	.....	0	0	Fair	
Tucson, Arizona	27.52	699.0	30.11	764.8	56	13.3	.....	S	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30.08	764.0	77	25.0	72	Calm	0	..	.....	2c	0	.....	.....	0	0	Clear	
Vicksburg, Miss.	.....	.....	30.08	764.0	73	22.8	90	SW	1	0.4	.....	8ck	5k	SW	SW	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.	24.14	613.1	29.62	752.3	43	6.1	66	NE	26	11.6	.....	1ck	0	NE	.....	0	0	Cloudy	
Washington, D. C.	.....	.....	30.03	762.7	72	22.2	75	S	8	3.6	.....	1c	Haze	W	.....	0.01	0.3	Hazy	
Wilmington, N. C.	.....	.....	30.08	764.0	73	22.8	85	Calm	0	0	.....	0	5ks	.....	SE	0	0	Fair	
Wood's Holl, Mass.	.....	.....	30.07	763.8	56	13.3	74	SW	10	4.5	.....	.....	10s	.....	SW	0	0	Cloudy	
Wytheville, Va.	27.77	705.4	29.80	758.4	66	18.9	90	Calm	0	0	.....	1c	5k	NW	NW	0	0	Fair	
Yankton, Dakota	28.58	725.9	29.82	757.4	58	14.4	70	NW	12	5.4	.....	0	0	.....	.....	0.07	1.8	Clear	
Yuma, Arizona	.....	.....	29.95	760.7	65	18.3	.....	E	.....	.....	.....	0	0	.....	.....	0	0	Clear	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
SUB-SERIES.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.00	762.0	83	28.3	70	E	5	2.2	.....	2ck	5ks	E	.....	0	0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.95	760.7	79	26.1	86	E	.....	.....	.....	10pc	0	.....	.....	0	0	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.16	766.1	78	25.6	90	Calm	0	0	.....	8c	2n	.....	.....	1.21	30.7	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.81	757.2	78	25.6	72	NE	6.0	2.7	.....	0	0	.....	.....	0.21	5.3	Clear	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.06	763.5	78	25.6	65	E	4.8	2.1	.....	0	0	.....	.....	0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.08	764.0	74.5	23.6	68	N	4.0	1.8	.....	0	2k	.....	.....	0.03	0.8	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica, W. I.	27.19	690.6	29.98	761.5	66	18.9	90	NW	0.5	0.2	.....	0	0	.....	.....	0	0	Clear	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.01	762.2	79	26.1	87	E	.....	.....	2	8ks	8ks	E	.....	0.780	19.8	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.03	762.7	.....	.....	79.7	26.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.575	40.00	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.19	639.8	.....	.....	63.0	17.2	83	Calm	0	0	.....	3c	2s	.....	.....	1.45	36.8	Fair	Thomas Herran.
St. John's, Newfoundland.	.....	.....	30.21	767.3	41.0	5.0	91	NE	.....	.....	.....	.....	10n	.....	.....	0.01	0.3	Cloudy	John Delaney.
York Factory, B. A.	.....	.....	30.09	764.8	29.5	— 1.4	95	N	19	8.5	.....	2c	0	N	.....	0	0	.....	J. Fortescue.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Makawao, Maui, H. I.	27.92	709.2	29.98	761.5	57	13.9	87	NE	2.4	1.1	.....	2c	4kn	NW	.....	0.25	6.3	Rainy	F. L. Clarke.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

MARINE SERIES.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Hibernian, N. 51° 30', W. 31° 50'.	NW by W, ½W	9	30.30	769.6	50	10.0	.....	NW	.....	.....	5	.....	..n	.....	.....	Heavy sea.	.....	Squally	Lieut F. Archer, R. N. R.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5.25 p. m on the same day. The altitude of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa 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.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 22, 1876.

7:85 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	.....	.....	30.21	767.2	69 8	21.0	69	N	.....	.....	1	.....	0	.....	.....	0	0	Clear	Charnot.
Algiers	.....	.....	30.21	768.0	70.5	21.4	72	N	.....	.....	1	.....	0	.....	.....	Inap.	Inap.	Clear	Peter.
La Calle	.....	.....	.....	.....	.....	.....	.....	NW	.....	.....	2	.....	0	.....	.....	0	0	Clear	Kunts.
Tunis	.....	.....	30.20	767.0	73.4	23.0	68	E	.....	.....	3	.....	10	.....	.....	0.012	0.3	Hidden	Jacques.
Sax	.....	.....	30.24	768.0	77.0	25.0	40	NE	.....	.....	3	.....	3	.....	.....	0	0	Fair	Chauvey.
Saida	.....	.....	30.19	766.9	74.3	23.5	46	E	.....	.....	2	.....	2	.....	.....	0.087	2.2	Clear	Millot.
Tebessa	.....	.....	30.21	767.4	76.6	24.8	.....	NE	.....	.....	2	.....	6	.....	.....	0.039	1.0	Fair	Colin.
Gerlville	.....	.....	30.19	766.9	76.8	24.9	20	NW	.....	.....	1	.....	1	.....	.....	0.008	0.2	Clear	Buard.
Laghouat	.....	.....	30.10	764.6	78.8	26.0	30	E	.....	.....	2	.....	0	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	30.19	766.8	85 6	29 8	19	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	.....	.....	30.01	762.3	70.7	21.5	38	SW	.....	.....	1	.....	0	.....	.....	0	0	.....	Prof. Ivan Stosir.
Cracow, I. R. Observatory	.....	.....	30.03	762.8	68.6	14.8	49	W	.....	.....	2	.....	7	.....	.....	0	0	.....	Dr. Wiersbiski.
Eperies	.....	.....	29.97	761.3	62.4	16.9	46	Calm	.....	.....	0	.....	7	.....	SE	0	0	.....	Julius Mikolik.
Gratz	.....	.....	29.97	761.2	65.3	18.5	52	SW	.....	.....	3	.....	0	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	28.80	731.4	29.97	761.2	65.3	18.5	52	SW	.....	.....	3	.....	0	.....	.....	0	0	.....	Prof. Reissenberger.
Kremsmünster	28.64	727.4	30.05	763.3	55.4	13.0	39	NW	.....	.....	2	.....	6	.....	.....	0.051	1.30	.....	Prof. C. Wagner.
Lemberg	28.63	727.1	29.93	760.3	65.1	18.4	49	ENE	.....	.....	1	.....	3	.....	.....	0	0	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	29.94	760.5	52.9	11.6	52	NW	.....	.....	3	.....	6	.....	.....	0.094	2.4	.....	Habsuda Daniel.
Pola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Segedin	.....	.....	30.13	765.2	61.9	16.6	69	SE	.....	.....	2	.....	locks	.....	.....	0	0	.....	I.R.Hydrographic Office.
Triest	.....	.....	30.02	762.6	69.3	20.7	31	W	.....	.....	2	.....	6	.....	.....	0	0	.....	Karl Stancel.
Vienna	.....	.....	30.14	765.6	64.4	18.0	58	Calm	.....	.....	0	.....	0	.....	.....	0	0	.....	Prof. V. Farolfi.
	.....	.....	29.99	761.7	64.2	17.9	40	SE	.....	.....	2	.....	7	.....	.....	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 Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels	.....	.....	29.84	758.0	69.8	21.0	37	WSW	.....	.....	3	4	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	.....	.....	29.60	751.8	53.0	11.7	.....	SSE	10	4.5	.....	.....	9	.....	.....	0.105	2.67	Showery	William Boswell.
Ardrossan	.....	.....	29.60	751.8	56	13.3	.....	SSW	.....	.....	2	.....	5	.....	.....	.....	.....	*D. clouds	William McNeil.
Armagh, Observatory	.....	.....	29.61	752.1	55.9	13.3	.....	SW	3	1.3	.....	.....	10	.....	.....	.....	.....	Overcast	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs'y	.....	.....	29.64	752.8	52.5	11.4	.....	W	13	5.8	.....	.....	10	.....	.....	.....	.....	Overcast	John Hartnup.
Birr Castle, (Parsonstown)	.....	.....	29.65	753.1	55.5	13.1	.....	WNW	.....	.....	1–3	.....	10	.....	.....	.....	.....	Raining	J. Dreyer.
Bradford	.....	.....	29.75	755.6	49.1	9.5	.....	W	.....	.....	1	.....	10	.....	.....	0.02	0.5	Overcast	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	29.98	761.5	80.0	26.7	.....	SE	.....	.....	2	.....	9	.....	.....	.....	.....	Overcast	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory	.....	.....	29.77	756.1	60.0	15.6	.....	SW	.....	.....	2	.....	1	.....	.....	.....	.....	Showery	H. Todd.
Cardington	.....	.....	29.80	756.9	62.0	16.7	.....	W	.....	.....	2	.....	9	.....	.....	.....	.....	Overcast	John McLaren.
Carlisle	.....	.....	29.60	751.8	55.9	13.3	.....	W	.....	.....	0	.....	10	.....	.....	0.10	2.5	Showery	T. Bel, for J. Car mell.
Chatham, School M. E	.....	.....	29.84	757.7	60.5	15.8	.....	WSW	.....	.....	3	.....	9	.....	.....	.....	.....	Overcast	Capt. J. Fellowes, R.E.
Dartmoor	28.41	721.6	29.92	760.0	49.4	9.7	.....	SW	.....	.....	6	.....	10	.....	.....	.....	.....	Rain and fog	R. E. Power.
Donaghadee	.....	.....	29.60	751.8	52	11.1	.....	S	.....	.....	3	.....	10	.....	.....	.....	.....	Raining	J. Mac Gowan.
Dover	.....	.....	29.88	758.9	52	11.1	.....	WSW	.....	.....	4	.....	7	.....	.....	.....	.....	¾ clouded	J. Costello.
Eccles, (near Manchester.)	.....	.....	29.64	752.8	56.9	13.8	.....	SW	6.6	3.0	.....	.....	10	.....	.....	.....	.....	Gloomy	Thomas Mackereth.
Falmouth, Observatory	.....	.....	29.87	758.2	59.0	15.0	.....	WSW	29	13.0	.....	.....	9	.....	.....	.....	.....	Squally	The Staff.
Fort Napier, (Natal)	27.70	703.6	29.93	760.2	79.6	26.4	.....	NE	.....	.....	1	.....	1	.....	.....	.....	.....	*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.94	760.5	84.0	28.9	.....	Calm ?	.....	.....	1?	.....	6	.....	.....	.....	.....	*D. clouds	
Galway, Queen's College	.....	.....	29.64	752.8	59	15.0	.....	NW	.....	.....	4	.....	8	.....	.....	.....	.....	Showery	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.21	767.3	70.7	21.5	.....	SW	.....	.....	2	.....	1	.....	.....	.....	.....	*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	29.58	751.3	52.1	11.2	.....	W	.....	.....	1	.....	10	.....	.....	.....	.....	Threatening	Lewis Stuart.
Great Yarmouth	.....	.....	29.78	756.4	62	16.7	.....	SW	.....	.....	4	.....	7	.....	.....	.....	.....	*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	29.82	757.4	60.5	15.8	.....	SSW	.....	.....	4	.....	9	.....	.....	.....	.....	Nearly cov'd	The Staff, for G. B. Airy
Guernsey	.....	.....	29.04	760.5	57.5	14.2	.....	SW	.....	.....	3	.....	8	.....	.....	.....	.....	*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	29.66	753.4	58.6	14.8	.....	WSW	.....	.....	2	.....	10	.....	.....	.....	.....	Raining	L. J. Crossley.
Helston	.....	.....	29.87	758.7	61	16.1	.....	SW	.....	.....	4	.....	10k	.....	.....	0	0	Fine	M. P. Moyle.
Holyhead	.....	.....	29.83	757.6	54	12.2	.....	SW	.....	.....	2	.....	5	.....	.....	Blank	Blank	*D. clouds	John Thomas.
Kew, Observatory	.....	.....	29.81	757.2	60.2	15.7	.....	SW	26	11.6	.....	.....	9	.....	.....	.....	.....	Threatening	The Staff.
Kingstown	.....	.....	29.60	751.8	57	13.9	.....	WSW	.....	.....	3	.....	8	.....	.....	Blank	Blank	Overcast	George Mitchell.
Leicester Museum	.....	.....	29.74	755.4	58.2	14.6	.....	W	.....	.....	1	.....	9	.....	.....	.....	.....	Showery	Wm. J. Harrison, F.G.S.
Malta, Mediterranean	.....	.....	30.20	767.1	68.6	20.3	.....	NE	.....	.....	2	.....	8k	.....	.....	.....	.....	.....	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	29.60	751.8	56	13.3	.....	Calm	.....	.....	0	.....	10	.....	.....	.....	.....	Overcast	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.08	764.0	80.3	26.8	.....	E	.....	.....	4	.....	6	.....	.....	.....	.....	*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	29.69	754.1	61.0	16.1	.....	S	.....	.....	5	.....	8k.d	.....	SW	0.270	6.8	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	29.69	754.1	56.8	13.8	.....	SSW	.....	.....	5	.....	10	.....	.....	.....	.....	Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	29.75	755.6	61	16.1	.....	SW	.....	.....	3	.....	10	.....	.....	.....	.....	Overcast	J. Lucas.
Plymouth	.....	.....	29.86	758.4	57.6	14.3	.....	WSW	.....	.....	5	.....	6	.....	.....	.....	.....	*D. clouds	John Merrifield.
Roche's Point	.....	.....	29.74	755.4	55	12.8	.....	NW	.....	.....	6	.....	8	.....	.....	.....	.....	Cloudy	M. Kennedy.
Saint Ann's Head	.....	.....	29.72	754.9	53	11.7	.....	WSW	.....	.....	5	.....	8	.....	.....	.....	.....	Raining	John C. Walker.
Saint Helier, Jersey	.....	.....	29.97	761.2	57.0	13.9	.....	W	.....	.....	4	.....	8	.....	.....	.....	.....	¾ clouded	A. P. Amy.
Sandwick Manse, Orkneys	.....	.....	29.64	752.8	51.3	10.7	.....	N	5	2.2	.....	.....	10	.....	.....	.....	.....	Showery	Rev. C. Clouston, LL.D.
Scarborough	.....	.....	29.66	753.6	57.7	14.3	.....	WSW	.....	.....	2	.....	7	.....	.....	.....	.....	*D. clouds	F. Shaw.
Scutari Cemetery Turkey	.....	.....	30.11	764.8	66.4	19.1	.....	NE	.....	.....	2	.....	1	.....	.....	.....	.....	Blue sky	Sergt. W. H. Lyne.
Sheffield	.....	.....	29.65	753.1	61.7	16.5	.....	SW	.....	.....	4	.....	8	.....	.....	Inap.	Inap.	Overcast	W. F. Cooper.
Silloth Rectory	.....	.....	29.62	752.3	58.0	14.4	75	W	.....	.....	1	.....	6	.....	.....	0.020	0.51	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	29.64	752.8	52.6	11.4	.....	W	.....	.....	2	.....	10	.....	.....	.....	.....	Raining	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.	.....	.....	29.59	751.6	55	12.8	.....	W	.....	.....	1	.....	10	.....	.....	.....	.....	Showery	John Smith.
Strathfield Turgiss	.....	.....	29.81	757.2	52.7	11.5	.....	S	.....	.....	1	.....	9	.....	.....	.....	.....	Showery	Rev. Charles H. Griffith.
Streatley Vicarage	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Rev. John Slatter.
Thurso	.....	.....	29.59	751.6	52	11.1	.....	NNE	.....	.....	1	.....	7	.....	.....	.....	.....	*D. clouds	John Trotter.
Truro, Royal Institution	.....	.....	29.91	759.7	61	16.1	.....	W	.....	.....	4	.....	4	.....	.....	.....	.....	*D. clouds	W. Newcombe.
Valencia, Observatory	.....	.....	29.81	757.2	55.7	13.2	.....	WNW	25	11.2	.....	.....	10	.....	.....	.....	.....	*D. clouds	The Staff.
Sub-Stations.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	51	10.6	.....	SW	.....	.....	2	.....	5	.....	.....	.....	.....	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	29.96	761.0	60.5	15.3	75	WNW	14	6.3	.....	4	4	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Leith, Restalrig Park	.....	.....	29.62	752.3	53.0	11.7	.....	W	.....	.....	1	.....	10ks	.....	.....	.....	.....	.....	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.14	765.5	.....	.....	.....	NE	12.1	5.4	.....	.....	.....	.....	.....	0	0	Overcast	C. Meldrum.
Melbourne, Observatory	.....	.....	30.09	764.3	51.5	10.8	71	NNE	10	4.5	.....	.....	0	.....	.....	0	0	.....	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	29.59	751.6	55	12.8	.....	N	.....	.....	3	.....	10	.....	.....	0.1	2.5	Fine, clear	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	29.69	754.1	45.5	7.5	.....	E	.....	.....	6	.....	10	.....	.....	Blank	Blank	.....	Robert Burnet.

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,280 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	53.4	11.9	58	S	.....	.....	2	.....	8	.....	.....	.....	.....	.....	.....
Fanöe	.....	.....	29.94	760.0	54.7	12.6	72	S	.....	.....	6	.....	10	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	29.82	757.5	38.8	3.8	60	S	.....	.....	2	.....	10	.....	.....	.....	.....	.....	.....
Stykkisholm, Iceland	.....	.....	29.93	760.2	45.5	7.5	64	E	.....	.....	4	.....	5	.....	.....	.....	.....	.....	.....
Thorshavn, (Faröe)	.....	.....	29.80	757.0	48.6	9.2	78	NE	.....	.....	4	.....	5	.....	.....	.....	.....	.....	.....
Vestervig	.....	.....	29.86	758.2	49.6	9.8	76	SSE	.....	.....	6	.....	10	.....	.....	.....	.....	.....	.....

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

FRENCH SERIES.

Furnished by the 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	60.8	16	62	S	.....	.....	3	.....	5c	.....	SW	0	0	Cloudy.....	Normal School.
Amiens	.....	.....	29.89	759.2	74.1	23.4	42	SW	.....	.....	3	.....	0	.....	.....	0	0	Clear.....	Normal School.
Avignon	.....	.....	30.08	763.9	75.2	24	48	S	.....	.....	2	.....	0	.....	.....	0	0	Very clear...	Normal School.
Ear-sur-Seine	.....	.....	29.95	760.8	72.0	22.2	22	W	.....	.....	2	.....	5	.....	.....	0	0	Cloudy.....	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.02	762.4	64.8	18.2	87	SW	17.9	8.0	.....	.....	10	.....	W	0	0	Covered	Beaumette Observatory
Beauvais	.....	.....	29.97	761.1	66.4	19.1	30	W	.....	.....	3	.....	2	.....	SSW	0	0	Slightly cl'dy	Normal School.
Besançon	.....	.....	30.01	762.3	73.4	23	34	S	.....	.....	3	.....	0	.....	.....	0	0	Clear.....	Normal School.
Bourg en Bresse	.....	.....	30.10	764.6	76.5	24.7	32	N	.....	.....	3	.....	5ck	.....	N	0	0	Cloudy.....	Normal School.
Bourges	.....	.....	30.02	762.4	68.0	20	61	SW	.....	.....	2	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	29.95	760.6	59.9	15.5	76	WSW	.....	.....	4	.....	9n	.....	WSW	0.020	0.50	.....	Naval Observatory.
Caen	.....	.....	30.037	778.12	61.0	16.1	85	SW	.....	.....	2	.....	5	.....	E	0	0	Cloudy.....	Normal School.
Carcassonne	.....	.....	30.15	765.7	64.8	18.2	84	W	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Cherbourg	.....	.....	29.94	760.5	67.6	19 8	.....	W	.....	.....	4	.....	1	.....	W	0	0	Clear.....	Normal School.
Clermont	.....	.....	29.98	761.4	74.5	23.6	33	W	.....	.....	3	.....	5	.....	W	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.00	761 9	67.6	19.8	36	SW	.....	.....	2	.....	2k	.....	.....	0	0	Slightly cl'dy	Normal School.
Commune de Gréasque*	.....	.....	29.92	760.0	66.0	18.9	41	SW	.....	.....	3	.....	2	.....	SW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.04	762.9	72.3	22.4	93	WNW	.....	.....	4	.....	1ck	.....	NE	0.108	2.75	.....	Normal School.
Le Mans	.....	.....	30.02	762.4	62.2	16.8	46	NW	.....	.....	2	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saunier	.....	.....	30.03	762.7	71.6	22	28	S	.....	.....	3	.....	0	.....	.....	0	0	Clear.....	Normal School.
Mâcon	.....	.....	30.12	765.0	71.1	21.7	62	E	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
Mirecourt	.....	.....	29.97	761.1	66.6	19.2	34	SW	.....	.....	4	.....	2	.....	S	0	0	Slightly cl'dy	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	30.07	763.6	79.5	26.4	44	SW	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
Orleans	.....	.....	29.95	760.7	67.3	19.6	34	W	.....	.....	4	.....	2	.....	W	0	0	Slightly cl'dy	Normal School.
Paris, Observatory	.....	.....	29.94	760.5	68.7	20.4	21	WSW	.....	.....	3	.....	2	.....	W	0.008	0.2	Slightly cl'dy	National Observatory.
Parthenay	.....	.....	30.04	763.0	65.3	18.5	40	W	.....	.....	4	.....	2	.....	W	0.020	0.5	Slightly cl'dy	Normal School.
Privas	.....	.....	30.05	763.3	74.5	23.6	.....	SW	.....	.....	2	.....	5	.....	SW	0	0	Cloudy.....	Normal School.
La Roche-sur-Yon	.....	.....	29.91	759.8	64.0	17.8	55	W	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Rochefort, Observatory	.....	.....	29.95	760.8	64.9	18.3	52	WSW	.....	.....	4	.....	5	.....	NE	0.039	1.0	¼ covered...	Naval Observatory.
Rouen	.....	.....	29.95	760.7	67.8	19.9	37	SW	.....	.....	2	.....	2	.....	SW	0	0	Slightly cl'd	Normal School.
Saint Lo	.....	.....	29.68	753.8	60.4	15.8	76	W	.....	.....	5	.....	6	.....	NW	0	0	.....	Normal School.
Tarbes	.....	.....	30.15	765.9	60.8	16	.....	W	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
Villefranche	29.08	738.7	30.02	762.6	77.7	25.4	48	NW	.....	.....	2	.....	2	.....	.....	0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.87	758.7	82.4	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchésl.
Marseilles	.....	.....	30.11	764.9	69.1	20.6	63	SSE	.....	.....	1	.....	1	.....	.....	0	0	Clear.....	Marseilles Observatory.
Mont-Louis	24.96	634.0	30.28	769.0	51.6	10.9	87	ENE	9.3	4.17	.....	.....	8	.....	W	0.106	2.7	.....	—. Falguère.
Montsouris, Paris	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montsouris Observ'tory.
Perpignan	.....	.....	30.09	764.3	69.8	21.0	55	S	9.3	4.17	.....	.....	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)	.....	.....	29.95	760.6	71.8	22.1	20	SW	.....	.....	3	.....	0	.....	.....	0	0	.....	E. Renou.
Toulouse	.....	.....	30.19	766.9	68 7	20.4	48	NW	.....	.....	3	.....	0	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.03	762.7	67.6	19.8	33	WSW	.....	.....	3	.....	3	.....	W	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.95	760 6	69.1	20.6	29	SW	.....	.....	4	.....	5	.....	.....	0	0	.....	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai)	.....	.....	30.06	763 5	57.7	14.3	95	NNE	1.3	0.6	.....	.....	.....	.....	.....	{0.087 0.126}	{2.2 3.2}	Foggy	H. Le Lec, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,580.40 meters, or 5,204.8 feet; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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	.....	.....	29.91	759.7	66.7	19.3	26	WSW	.....	.....	3	.....	3	SW	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.03	762.8	60.4	15.8	43	N	.....	.....	1	.....	8	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.07	763.8	58.6	14.8	40	W	.....	.....	5	.....	10	.....	.....	0	0	.....	Dr. P. Naumebaum r.
Carlsruh	.....	.....	29.91	759.7	72.3	22.4	33	SW	.....	.....	5	.....	0	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	29.91	759.7	70.5	21.4	32	SE	.....	.....	2	.....	4	S	.....	0	0	.....	Dr. H. Möll.
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.97	761.1	72.5	22.5	28	SW	.....	.....	1	.....	4	.....	.....	0	0	.....	Physical Society
Friedrichshafen	.....	.....	29.99	761.8	62.6	17.0	53	S	.....	.....	.....	.....	2	.....	.....	0.013	1.1	.....	M. Wilhelm.
Hamburg	.....	.....	29.94	760.5	55.8	13.2	60	SSE	.....	.....	2	.....	10	.....	.....	0.031	0.8	Covered	Captain F. Hegemann.
Kiel	.....	.....	29.91	759.8	53.8	12.1	67	SSE	.....	.....	2	.....	10	.....	.....	0.039	1.0	.....	Prof. G. Karsten
Königsberg, (Prussia.)	.....	.....	29.95	760.6	54.5	12.5	54	NW	.....	.....	2	.....	6	.....	.....	Inap.	Inap.	.....	Prof. E. Luther.
Köslin	.....	.....	29.99	761.8	54.6	12.0	.....	NW	.....	.....	2	.....	0	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	29.98	761.5	63.1	17.3	38	W	.....	.....	2	.....	7	.....	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	29.97	761.3	46.0	7.8	79	NW	.....	.....	3	.....	10	.....	.....	0.008	0.2	Misty.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.89	759.2	70.0	21.1	79	W	.....	.....	2	.....	3	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.92	760.0	51.8	11.0	77	E	.....	.....	2	.....	8	W	.....	0.028	0.7	.....	A. Lothes.
Posen	.....	.....	30.07	763.6	62.6	17.0	40	W	.....	.....	5	.....	9	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.93	760.3	73.0	22.8	27	SW	.....	.....	1	.....	2	SW	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.92	759.9	71.2	21.8	25	N	.....	.....	1	.....	1	.....	.....	0	0	Clear.....	Prof. Schoder.
Thorn	.....	.....	29.97	761.3	62.4	16.9	36	NW	.....	.....	4	.....	6	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.89	759 2	71.2	21.8	28	W	.....	.....	5	.....	10	.....	.....	0	0	.....	Prof. Fiesch.
Wustrow, Naval School	.....	.....	29.90	759.5	61.0	16.1	53	SE	.....	.....	2	.....	7	.....	.....	0	0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—In the originals the distinction between the amount of upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation. The elevation of Friedrichshafen is 414 meters, or 1,356.3 feet.

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			30.09	764.3	63.5	17.5	51	SW	2.5	1.1			9			0	0		
Padua			30.11	764.7	62.8	17.1	51	ESE	8.0	3.6			8	WNW		0	0		
Vicenza			30.10	764.4	65.3	18.5	51	S	1.3	0.6			5	N		0	0		
Verona			30.08	764.0	68.0	20.1	52	E			2		5			0	0		
Bergamo	28.73	729.7	30.02	762.5	66.2	19.0	45	SW			2		7			0	0		
Domodossola	29.13	740.0	30.13	765.4	64.4	18.0	72	SSW			4		9			0	0		
Milan			30.09	764.2	71.2	21.8	69	W			2		9	W		0	0		
Pavia			30.09	764.2	68.4	20.2	59	NE			2		9	NE		0	0		
Moncalieri			30.07	763.8	66.6	19.2	61	ESE	4.9	2.2			9	NW		0	0		
Mondovi	28.18	715.7	30.05	763.2	64.8	18.2	64	SE			4		3			0	0		
Porto Maurizio			30.15	765.9	67.8	19.9	63	SSW			2		8	E		0	0		
Genoa			30.15	765.7	62.2	16.8	79	SE	2.5	1.1			10	S		0.02	0.5		
Piacenza			30.10	764.5	65.8	18.8	57	E	3.8	1.7			10			0	0		
Parma			30.11	764.8	70.9	21.6	52	NW			4		9			0	0		
Bologna			30.13	765.3	67.5	19.7	34	E			1		5	N		0	0		
Florence			30.16	766.0	71.6	22.0	48	NW			4		2	NW		0	0		
Leghorn			30.17	766.4	68 7	20.4	55	SSW	6.9	3.1			6			0	0		
Siena	28.98	736.0	30.17	766.2	64.0	17.8	61	N	1.3	0.6			10	S		0	0		
Urbino																			
Pesaro																			
Ancona			30.14	765.6	65.5	18.6	63	SE			4		6			0	0		
Grosseto			30.18	766.5	70.5	21.4	65	SSE			4		6	S		0	0		
Rome			30.19	769.9	71.8	22.1	56	SW	7.4	3.3			6	SW		0	0		
Naples, O. U.			30.23	767.7	69.6	20.9	66	SW			4		6	WNW		0	0		
Lecce			30.24	768.0	65.8	18.8	41	NNE	11.2	5.0			1			0	0		
Cosenza			30.19	766.7	73.4	23.0	74	NW	6.9	3.1			4			1	0		
Riposto, (Sicily)			30.19	766.7	68.0	20.0	61	NE			2		4	W		0	0		
Palermo			30.15	765.8	68.5	20.3	52	ENE	5.6	2.5			2			0	0		
Caltanissetta	28.20	716.4	30.11	764.7	72.5	22.4	22	W			2		6	E		0	0		
Sub-Series.																			
Naples, S. R.			30.23	767.8	65.7	18.7	72	SW	4.2	1.9			k,e	SW		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known: Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Tokio																			

NETHERLANDS' SERIES.

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

Flushing			29.89	759.3	56.1	13.4		WNW			4								
Groningen			29.78	756.3	63.1	17.3		S			5								
Helder			29.81	757 2	56.8	13.8		SSW			2								
Utrecht			29.82	757.3	68.5	20.3	39	WSW			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.

Bergen			29.78	756.4	55.4	13.0	55	W	6.3	2.8			0			0	0		
Brönö			29.84	758.0	48.2	9.0	73	W	2	1			8			0	0		
Christiania			29.80	757.0	60.3	15.7	28	SW	8.5	3.8			3			0.016	0.4		
Tromsö			29.70	754.3	39.7	4.3	66	E	1	1			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 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,)	.....	.....	30.53	775.5	64.8	18.2	76	SE	11.0	4.94	.....	.....	4	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.19	766.9	71.1	21.7	44	WSW	9.9	4.44	.....	.....	3	.....	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.36	771.1	66.0	18.9	59	NW	6.0	2.69	.....	.....	7	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.31	769.9	61.5	16.4	59	NNW	15.0	6.7	.....	.....	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 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	.....	.....	29.96	761.0	52.5	11.4	71	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.89	759.2	51.6	10.9	83	WNW	4	2	.....	.....	3	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.87	758.8	44.4	6.9	55	N	9	4	.....	.....	10	.....	.....	.....	.....	Raining.....	Physical Cabinet.
St. Petersburg	.....	.....	29.78	756.6	37.6	3.1	87	WNW	9	4	.....	.....	10	.....	.....	.....	.....	Light snow..	Central Physical Obs
Knopio	.....	.....	29.74	755.4	43.2	6.2	60	NW	7	3	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kief	.....	.....	29.85	758.3	45.5	7.5	98	NW	4	2	.....	.....	4	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.02	762.5	52.9	11.6	54	W	20	9	.....	.....	6	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.00	761.9	56.7	13.7	54	N	7	3	.....	.....	6	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.81	757.2	41.4	5.2	66	SSW	9	4	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Logan	.....	.....	29.91	759.4	53.8	12.1	33	SW	13	6	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.72	755.0	28.4	− 2.0	84	NW	18	8	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.65	727.7	30.07	763.8	50.0	10.0	76	S	11	5	.....	.....	9	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.13	765.3	55.2	12.9	31	ESE	18	8	.....	.....	3	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.83	757.6	40.1	4.5	62	W	18	8	.....	.....	6	.....	.....	.....	.....	Snowing.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tchernischef.
Ekaterinburg	28.65	727.6	29.66	753.4	34.7	− 1.5	87	W	25	11	.....	.....	9	.....	.....	.....	.....	Light snow	Meteorological Obs.
Nukuss	.....	.....	30.09	764.3	51.1	10.6	65	N	13	6	.....	.....	10	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.35	720.1	29.94	760.5	87.8	31.0	53	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.70	754.4	84.7	29.3	36	SE	13	6	.....	.....	2	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29 67	753.5	78.8	26.0	30	Calm	0	0	.....	.....	0	.....	.....	.....	.....	F ggy	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Orga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.76	756.0	74.1	23.4	25	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	30.9	− 0.6	94	NE	9	4	.....	.....	10	.....	.....	.....	.....	Snowing.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind velocity in meters per second; 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, m. 494.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Orga, 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	.....	.....	30.12	765.0	71.6	22.0	49	W	14.7	6.67	.....	0	6	.....	.....	Inap.	Inap.	Cloudy.....	Royal Observatory.
San Fernando	.....	.....	30.26	768.7	66.7	19.3	69	WNW	11.2	5.0	.....	0	4	.....	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. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.79	756.7	41.0	5.0	66	S	.....	.....	1	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	29.75	755.7	47.7	8.7	80	SW	.....	.....	1	.....	9	.....	.....	0	0	.....	
Hernosand	.....	.....	29.77	756.2	51.3	10.7	45	SSW	.....	.....	1	.....	10	.....	.....	0.039	1.0	Raining.....	
Stockholm	.....	.....	29.83	757.6	51.4	10.8	57	NNE	.....	.....	1	.....	8	.....	.....	0.028	0.7	Drizzling.....	
Wisby	.....	.....	29.93	760.3	48.6	9.2	71	W	.....	.....	3	.....	3	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.83	757.7	52.9	11.6	43	NW	6.9	3.1	.....	.....	10	WNW	.....	0	0	.....	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; 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	28.62	727.0	30.00	762.0	72.3	22.4	29	SSW			4		1			0	0	Clear	The Observatory.
Zurich	28.39	721.2	29.98	761.6	71.6	22.0	44	W			3		2			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +1.6 mm; Thermometer, +4.9 cent.; Relative Humidity, −2 per cent.

Note.—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. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople																			
Fao, (Persian Gulf)			29.92	760.0	105.8	41.0		SE			3		0						
Salonica			30.14	765.6	63.0	17.2		NW			1		0						
Valona			30.10	764.6	67.5	19.7		NW			2		2						
Varna			30.12	765.0	59.0	15.0		N			3		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.88	759.0	81.1	27.3	62	SW			4		6k8		SW	0	0	Fair	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B.			29.65	753.1	55.9	13.3	86	SW	19	8.5		8				0.20	5.1	Threatening	Hon. J. Ferguson.
Brockville, Ontario			29.70	754.4	59	15.0		SW	6	2.7			10s		NW	0.10	2.5	Light rain	W. R. Bigg.
*Chatham, N. B.			29.73	755.1	56	13.3	79	S	19	8.5			10ks		S	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island.			29.84	757.9	50	10.0	68	SE	18	8.0		5cs	0			0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			29.60	751.8	66.0	18.9	88	SE			1		10n			0.140	3.56	Unsettled	James Smith, M. A.
Dalhousie, N. B.			29.68	753.9	44.2	6.8	88	S			1	0	10n			0	0		H. A. Johnson.
Esquimault, B. C.			30.05	763.3	50.3	10.2	86	N	1	0.4			10s			0	0	Cloudy	W. H. Bevis.
Fredericton, N. B.			29.78	756.4	52.4	11.3	82	SE	8	3.6			10s			0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			30.40	772.1	41	5.0	82	N	2	0.9		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			29.89	759.2	47.4	8.6	83	NW			3	10k	0	NW		Inap.	Inap.	Unsettled	H. J. Strang, M. A.
Granton, Ontario	28.68	728.5	29.76	755.9	54	12.2		W			1		1cn			0.43	10.9	Cloudy	James Grant.
*Halifax, N. S.			29.93	760.2	41	5.0	100	S	12	5.4			Fog		S	0.01	0.3	Foggy	F. Allison, M. A.
*Kingston, Ontario			29.72	754.9	51	10.6	97	SW	7	3.1			Fog		SW	0.09	2.3	Light rain	S. Woods, M. A.
*Montreal, Quebec			29.58	751.3	65	18.3	87	Calm	0	0			10n			0.32	8.1	Heavy rain	C. H. McLeod, C. E.
*Ottawa, Ontario			29.59	751.6	64	17.8	74	NW	12	5.4			10n		W	0.07	1.8	Light rain	J. B. Haney.
*Parry Sound, Ontario			29.88	758.9	41	5.0	83	N	20	8.9		5k	5ks			0.01	0.3	Cloudy	Rev. R. Mooley.
*Port Dover, Ontario			29.73	755.1	55	12.8	100	S	5	2.2			10n		W	0.14	3.6	Light rain	H. Morgan.
Port Hastings, N. S.			29.94	760.5	43.6	6.4		NW	8	3.6						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			29.80	756.9	58	14.4	96	W	12	5.4			10n		W	0.27	6.9	Cloudy	M. Payne.
*Quebec, Quebec			29.58	751.3	61	16.1	77	Calm	0	0		Fog	Fog			0.12	3.0	Foggy	Capt. Ash, R. N.
St. John, N. B.			29.85	758.2	48	8.9	92	S	6	2.7			Fog			0.170	4.32	Cloudy	G. Murdoch, C. E.
*Saugeen, Ontario			29.86	758.4	44	6.7	76	N	8	3.6			10n		W	0	0	Cloudy	R. Stewart.
Stayner, Ontario			29.86	758.4	40	4.4	97	NW	5	2.2			10n		NW	0.30	7.6	Thunder rain	R. J. Cole.
Stratford, Ontario	28.48	723.4	29.72	754.9	57.9	14.4	92	NW	13	5.8			1cn			0.140	3.56		C. J. MacGregor, M. A.
*Sydney, C. B.			30.00	762.0	42	5.6	86	SW	8	3.6			10s			0	0	Cloudy	T. C. Hill.
*Toronto, Ontario			29.69	754.1	61	16.1	92	Calm	0	0			10ks		SW	0.25	6.3	Cloudy	Magnetic Observatory.
Woodstock, Ontario			29.68	753.9	62.0	16.7	87	N	12	5.4			10s			0.01	0.3	Gloomy	J. Montgomery

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 m.

UNITED STATES SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Force. 0—10.	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	29.68	753.9	71	21.7	75	S	6	2.7	.....	5k	5s	S	S	0.09	2.3	Cloudy	
Alpena, Mich.	.....	.....	29.98	761.5	42	5.6	58	N	19	8.5	.....	5ck	0	.....	.....	Inap.	Inap.	Fair	
Atlantic City, N. J.	.....	.....	29.84	757.9	60	15.6	94	SW	8	3.6	.....	2cs	8s	SW	S	0.40	10.2	Cloudy	
Augusta, Ga.	.....	.....	29.93	760.0	72	22.2	77	Calm	0	0	.....	2cs	0	S	.....	0.02	0.5	Fair	
Baltimore, Md.	.....	.....	29.84	757.9	70	21.1	84	SW	6	2.7	.....	.....	10s	.....	SW	0.23	5.8	Cloudy	
Barnegat, N. J.	.....	.....	29.84	757.9	67	19.4	84	SW	15	6.7	.....	5ck	2s	W	.....	0.22	5.6	Fair	
Benton, Montana	27.45	697.2	30.25	768.3	54	12.2	73	SE	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.51	724.9	30.26	768.6	50	10.0	58	N	6	2.7	.....	2c	Haze	N	.....	0	0	Fair	
Boston, Mass.	.....	.....	29.68	753.9	72	22.2	71	SW	3	1.3	.....	5cs	Haze	SW	.....	0.12	3.0	Fair	
Breckenridge, Minn.	.....	.....	30.37	771.4	45	7.2	68	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	29.70	754.4	50	10.0	100	SW	6	2.7	.....	.....	Fog	.....	SW	0.12	3.0	Foggy	
Burlington, Vt.	.....	.....	29.64	752.8	63	17.2	100	SW	5	2.2	.....	.....	10n	.....	.....	0.19	4.8	Light rain	
Cairo, Ill.	.....	.....	29.97	761.2	66	18.9	90	W	3	1.3	.....	8k	0	W	.....	0	0	Fair	
Cape Hatteras, N. C.	.....	.....	29.91	759.7	74	23.3	90	S	13	5.8	.....	5cs	5ks	W	S	0	0	Cloudy	
Cape Henry, Va.	.....	.....	29.91	759.7	72	22.2	90	SW	13	5.8	.....	8c	Haze	W	.....	0.15	3.8	Fair	
Cape Lookout, N. C.	.....	.....	29.98	761.5	75	23.9	81	SW	14	6.3	.....	1c	Haze	SW	.....	0	0	Fair	
Cape May, N. J.	.....	.....	29.84	757.9	61	16.1	88	S	26	11.6	.....	.....	10ks	.....	W	0.31	7.9	Cloudy	
Charleston, S. C.	.....	.....	29.99	761.7	78	25.6	82	SW	9	4.0	.....	.....	10s	.....	SW	0	0	Cloudy	
Cheyenne, Wyoming	24.11	612.4	30.05	763.3	40	4.4	100	NE	32	14.3	.....	.....	10h	.....	.....	0.07	1.8	Light rain	
Chicago, Ill.	.....	.....	29.96	761.0	45	7.2	76	N	28	12.5	.....	.....	10s	.....	N	0.04	1.0	Cloudy	
Cincinnati, Ohio	.....	.....	29.75	755.6	69	20.6	79	SW	5	2.2	.....	.....	10ks	.....	W	0.30	7.6	Cloudy	
Cleveland, Ohio	.....	.....	29.73	755.1	62.5	16.9	90	SW	4	1.8	.....	.....	10h	.....	W	1.25	31.7	Heavy rain	
Colorado Springs, Col.	24.02	610.1	29.89	759.2	37	2.8	90	NW	5	2.2	.....	.....	10h	.....	.....	0.40	10.2	Light rain	
Corsicana, Tex.	.....	.....	29.89	759.2	68.4	18.0	85	S	6	2.7	.....	2ck	0	.....	.....	0.22	5.6	Clear	
Davenport, Iowa	.....	.....	29.97	761.2	61	16.1	77	NE	8	3.6	.....	.....	10ks	.....	NE	0	0	Cloudy	
Denison, Tex.	.....	.....	29.89	759.2	70	21.1	75	S	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Denver, Col.	24.79	629.6	30.01	762.2	40	4.4	100	NW	28	12.5	.....	.....	10h	.....	.....	2.10	53.3	Heavy rain	
Detroit, Mich.	.....	.....	29.76	755.9	59	15.0	87	N	15	6.7	.....	.....	10s	.....	N	0.27	6.9	Cloudy	
Dodge City, Kan.	27.18	690.4	29.33	745.0	70	21.1	61	E	15	6.7	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	30.00	762.5	59	15.0	59	NE	12	5.4	.....	5c	0	.....	.....	0	0	Fair	
Duluth, Minn.	.....	.....	30.29	769.4	44	6.7	67	N	12	5.4	.....	0	0	.....	.....	0.15	3.8	Clear	
Eastport, Me.	.....	.....	29.74	755.4	44	6.7	92	S	10	4.5	.....	.....	Fog	.....	S	0	0	Foggy	
Erie, Pa.	.....	.....	29.70	754.4	64	17.8	89	SW	12	5.4	.....	.....	10n	.....	.....	0.56	14.2	Heavy rain	
Escanaba, Mich.	.....	.....	30.16	766.1	40	4.4	63	N	26	11.6	.....	5k	5s	N	N	Inap.	Inap.	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	29.86	758.4	74	23.3	81	SE	3	1.3	.....	8c	0	.....	.....	0	0	Fair	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.64	727.4	29.71	754.6	66	18.9	73	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.57	725.7	30.26	768.6	51	10.6	65	S	8	1.3	.....	5c	0	.....	.....	0	0	Fair	
Galveston, Tex.	.....	.....	29.99	761.7	78	25.6	82	SE	6	2.7	.....	5c	2s	W	SE	0	0	Foggy	
Grand Haven, Mich.	.....	.....	29.93	760.2	50	10.0	78	N	24	10.7	.....	.....	10s	.....	N	0	0	Cloudy	
Indianapolis, Ind.	.....	.....	29.70	754.7	67	19.4	84	NW	6	2.7	.....	.....	10s	.....	NW	0.85	8.9	Cloudy	
Indianola, Tex.	.....	.....	29.97	760.0	75	23.9	95	SE	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Jacksonville, Fla.	.....	.....	30.02	762.5	80	26.7	95	S	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Keokuk, Iowa	.....	.....	29.94	760.5	65	18.3	73	N	8	3.6	.....	2c	0	NE	.....	0	0	Clear	
Key West, Fla.	.....	.....	30.04	763.0	80.3	26.8	74	E	7	3.1	.....	2k	Haze	E	E	0	0	Hazy	
Kittyhawk, N. C.	.....	.....	29.95	760.7	74	23.3	90	SW	16	7.2	.....	5ck	Haze	SW	.....	0	0	Fair	
Knoxville, Tenn.	.....	.....	29.91	759.7	69	20.6	79	SW	5	2.2	.....	2ck	0	SW	.....	Inap.	Inap.	Fair	
La Crosse, Wis.	.....	.....	30.12	765.0	52	11.1	53	N	20	8.9	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan.	.....	.....	29.94	760.5	67	19.4	94	NE	6	2.7	.....	3k	0	SW	.....	0	0	Fair	
Lexington, Ky.	28.78	731.0	29.81	757.0	65	18.3	89	W	12	5.4	.....	.....	10h	.....	W	0.62	15.7	Light rain	
Long Branch, N. J.	.....	.....	29.78	756.4	74	23.3	81	SW	11	4.9	.....	5ck	5s	SW	SW	0.24	6.1	Cloudy	
Louisville, Ky.	.....	.....	29.81	757.2	69	20.6	85	SW	4	1.8	.....	0	2ks	.....	SW	0.67	17.0	Clear	
Lynchburg, Va.	.....	.....	29.84	757.9	75	23.9	69	W	3	1.3	.....	5c	0	.....	.....	0.13	3.3	Fair	
Malone, N. Y.	.....	.....	29.87	758.1	65	18.3	84	SW	12	5.4	.....	.....	10h	.....	SW	0.09	2.3	Light rain	
Manhattan, Kan.	28.71	729.2	29.82	757.4	67	18.9	87	SW	16	7.2	.....	.....	10s	.....	.....	0	0	Threatening	
Marquette, Mich.	.....	.....	30.25	768.3	38	3.3	71	NW	12	5.4	.....	.....	10s	.....	NW	0.63	16.0	Cloudy	
Memphis, Tenn.	.....	.....	29.90	759.4	72	22.2	67	E	2	0.9	.....	0	0	.....	.....	0.01	0.3	Clear	
Milwaukee, Wis.	.....	.....	30.07	763.8	44	6.7	75	NE	29	13.0	.....	.....	10ks	.....	NE	0	0	Cloudy	
Mobile, Ala.	.....	.....	30.03	762.7	74	23.3	85	SW	5	2.2	.....	10cs	0	.....	.....	0	0	Cloudy	
Montgomery, Ala.	.....	.....	30.01	762.2	75	23.9	74	W	4	1.8	.....	10cs	0	W	.....	0	0	Cloudy	
Morgantown, W. Va.	.....	.....	29.75	755.6	74	23.3	71	SW	8	3.6	.....	2c	2s	SW	SW	0.78	19.8	Fair	
Mt. Washington, N. H.	23.67	601.2	30.03	762.7	40	9.4	93	W	16	7.2	.....	5c	2s	W	W	0	0	Fair	
Nashville, Tenn.	.....	.....	29.93	760.2	70	21.1	84	W	6	2.7	.....	10k	0	W	.....	0.62	15.7	Cloudy	
New Haven, Conn.	.....	.....	29.74	755.4	66	18.9	78	S	12	5.4	.....	10ks	Fog	W	.....	Inap.	Inap.	Cloudy	
New London, Conn.	.....	.....	29.77	756.1	65	18.3	83	SW	8	3.6	.....	2c	5s	.....	SW	0.04	1.0	Fair	
New Orleans, La.	.....	.....	30.04	763.0	73	22.8	88	S	1	0.4	.....	5c	Fog	W	.....	0.07	1.8	Fair	
Newport, R. I.	.....	.....	29.76	755.9	59	15.0	87	S	5	2.2	.....	8ck	0	W	.....	0.05	1.3	Cloudy	
New York, N. Y.	.....	.....	29.77	756.1	66	18.9	90	SW	8	3.6	.....	10k	Fog	W	.....	0.14	3.6	Cloudy	
Norfolk, Va.	.....	.....	29.93	760.2	70	24.4	81	SW	10	4.5	.....	5k	0	SW	.....	0.22	5.6	Fair	
North Platte, Neb.	27.01	686.1	29.6	75..8	56	13.3	74	NE	26	11.6	.....	.....	10s	.....	NE	0	0	Cloudy	
Omaha, Neb.	29.01	736.6	30.06	763.5	59	15.0	82	NE	10	4.5	.....	10cs	0	.....	.....	0	0	Cloudy	
Oswego, N. Y.	.....	.....	29.88	75.9	67.5	19.7	84	NW	6	2.7	.....	.....	10ks	.....	W	0.06	1.5	Cloudy	
Pembina, Dakota	.....	.....	30.34	770.6	43	6.1	83	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Penn.	.....	.....	29.80	756.9	71	21.7	80	SW	13	5.8	.....	10k	0	W	.....	1.09	27.7	Cloudy	
Pike's Peak, Colorado	17.61	447.4	29.82	757.4	12	-11.1	100	N	20	8.9	.....	.....	Fog	.....	.....	0.10	2.5	Heavy show	
Pittsburgh, Penn.	.....	.....	29.72	754.9	68	20.0	79	S	8	3.6	.....	3cs	0	SW	.....	0.24	6.1	Fair	
Port Huron, Mich.	.....	.....	29.84	757.9	45	7.2	92	N	27	12.1	.....	.....	10s	.....	N	0.63	16.0	Cloudy	
Portland, Me.	.....	.....	29.72	754.9	53	11.7	86	NE	7	3.1	.....	.....	Fog	.....	.....	0.01	0.3	Foggy	
Portland, Oregon	.....	.....	30.07	763.8	49	9.4	85	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Punta Rassa, Fla.	.....	.....	30.05	763.3	78.8	26.0	76	S	8	3.6	.....	Haze	8ks	.....	SE	0	0	Cloudy	
Rochester, N. Y.	.....	.....	29.66	753.4	66	18.9	89	W	12	5.4	.....	.....	10n	.....	W	0.03	0.8	Light rain	
Salt Lake City, Utah	25.82	655.8	30.15	765.8	43	6.1	75	Calm	0	0	.....	5c	0	E	.....	0.74	18.8	Fair	
Sandy Hook, N. J.	.....	.....	29.75	755.6	67	19.4	90	W	14	6.3	.....	8cs	0	SW	.....	0.37	9.4	Cloudy	
San Diego, Cal.	.....	.....	29.98	761.5	53	11.7	89	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.0	762.0	50	10.0	84	W	4	1.8	.....	Haze	Haze	.....	.....	0	0	Hazy	
Santa Fe, N. M.	23.20	589.3	29.74	755.4	43	6.1	30	NW	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	29.98	761.5	82	27.8	58	SW	6	2.7	.....	5ck	Sm'e	SW	.....	0	0	Fair	
Shreveport, La.	.....	.....	29.99	761.7	73	22.7	74	SW	2	0.9	.....	5k	0	SW	.....	0	0	Fair	
Smithville, N. C.	.....	.....	29.98	761.5	75	23.9	85	SW	8	3.6	.....	2ck	0	.....	.....	0	0	Fair	
Springfield, Mass.	.....	.....	29.69	754.1	70.5	21.4	79	S	8	3.6	.....	5ck	5s	S	.....	0.07	1.8	Cloudy	
St. Louis, Mo.	.....	.....	29.92	760.0	66	18.9	83	NW	4	1.8	.....	0	5s	.....	.....	0.21	5.3	Fair	
St. Marks, Fla.	.....	.....	30.03	762.7	72	22.2	86	W	5	2.2	.....	2c	0	W	.....	0	0	Fair	
St. Paul, Minn.	.....	.....	30.17	766.3	52	11.1	53	NE	9	4.0	.....	0	0	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	29.14	740.1	34	1.1	89	SSE	13	5.8	.....	.....	10s	.....	.....	0.54	13.7	.....	
Thatcher's Island, Mass.	.....	.....	29.70	754.4	56	12.8	87	SW	14	6.3	.....	5c	0	NW	.....	0	0	Hazy	
Toledo, Ohio	.....	.....	29.72	754.9	68	18.3	90	NW	12	5.4	.....	.....	10ks	.....	NW	0.35	8.9	Cloudy	
Tucson, Arizona	27.51	698.7	30.10	764.5	60	15.6	.....	SE	.....	.....	.....	0	Haze	.....	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	29.96	761.0	79	26.1	69	S	2	0.9	.....	2c	Sm'e	SW	.....	0	0	Fair	
Vicksburg, Miss.	.....	.....	30.06	763.5	70	21.1	87	S	1	0.4	.....	.....	10ks	.....	SW	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.	24.47	621.5	29.95	760.7	42	5.6	66	SE	7	3.1	.....	0	0	.....	.....	0	0	Clear.	
Washington, D. C.	.....	.....	29.83	757.7	70.5	21.4	87	SW	8	3.6	.....	1ck	8s	W	W	0.35	8.9	Fair	
Wilmington, N. C	.....	.....	29.96	761.0	74	23.3	81	SW	9	4.0	.....	2cs	0	W	.....	0	0	Fair	
Wood's Holl, Mass.	.....	.....	29.76	755.9	58	14.4	81	SW	8	1.3	.....	2k	8s	W	SW	0	0	Fair	
Wytheville, Va.	27.61	701.3	29.68	753.9	63	17.2	88	NW	3	1.3	.....	2ck	8s	W	W	0.06	1.5	Cloudy	
Yankton, Dakota.	28.90	734.0	30.19	766 8	54	12.2	74	NE	7	3.1	.....	10cs	0	.....	.....	0	0	Cloudy	
Yuma, Arizona	.....	.....	29.88	757.9	65	18.3	.....	SW	.....	.....	.....	0	0	.....	.....	0	0	Clear	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.01	762.2	83	28.3	70	E	4	1.8	.....	5ck	5ks	.....	.....	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.93	760.2	80	26.7	86	E	.....	.....	.....	5k	5ks	.....	.....	0.48	12.2	Cloudy	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.12	765.0	77	25.0	90	Calm	0	0	.....	5c	2n	NE	.....	0.83	21.1	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.79	756.7	77	25.0	69	NNW	4.8	2.1	.....	2ck	0	N	.....	0.62	15.7	Fair	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.01	762.2	76	24.4	72	NE	3.6	1.6	.....	8c,ck	0	.....	.....	0	0	Fair	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.06	763.5	70.5	21.4	78	.....	.....	.....	.....	0	2fk	.....	.....	0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica, W. I.	27.17	690.1	29.96	761.0	68	20.0	90	N	2.0	0.9	.....	2c	2k	N	.....	0.18	4.6	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.00	762.0	80	26.7	87	E	.....	.....	3	6k	5k	E	.....	0	0	Dry	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.03	762.7	.....	.....	79.7	26.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.256	6.50	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.18	639.6	.....	.....	63.8	17.7	88	Calm	0	0	.....	.....	10n	.....	.....	0.49	12.4	Cloudy	Thomas Herran.
St. John's, Newfoundland.	.....	.....	30.15	765.8	46.0	7.8	92	SE	.....	.....	.....	0	2s	.....	.....	0	0	Fair	John Delaney.
York Factory, B. A.	.....	.....	30.21	767.3	35	1.7	95	SW	7	3.1	.....	5k	2s	NW	.....	0	0	.....	J. Fortescue.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Makawao, Maui, H. I.	27.89	708.4	30.06	763.5	58	14.4	76	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	F. L. Clarke.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Marine Series.	True course towards.	Hourly rate in knots.										State of ocean.	Direction of swell from—		
Steamer Hibernian, N. 54° 15', W. 37° 50'.	WNW	11	30.24	768.1	57	13.9	.....	SSE	.....	.....	4	.....	..c,k	.....	.....	Smooth	.....	Threatening	Lieut F. Archer, R N.R.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2.892 ft., or 881.5 m.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City. 4,268.8 ft., or 1,301.1 m.; Santa 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.; 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.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 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			30.16	766.0	73.0	22.8	53	N			1		0			0	0	Clear	Charnot.
Algiers			30.21	767.3	70.9	21.6	86	N			1		0			0	0	Clear	Peter.
La Calle					73.2	22.9		S			1		0			0	0	Clear	Kunts.
Tunis			30.16	766.0	70.3	20.3	52	N			3		5			0.020	0.5	Fair	Jacques.
Sax			30.22	767.5	77.0	25.0	61	E			3		2			0	0	Clear	Chauvey.
Saida			30.15	765.8	77.9	25.5	29	NNW			2		1			0	0	Clear	Millot.
Tebessa			30.17	766.4	76.5	24.7		NE			2		1			0.070	2.0	Clear	Colin.
Gerlville			30.19	766.9	81.1	27.3	14	SW			3		2			0	0	Clear	Buard.
Laghouat			30.19	766.8	86.0	30.0	16	SW			1		0			0	0	Clear	Guyot.
Biskra			30.17	766.4	85.1	29.5	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.

Agram			29.91	759.6	65.1	18.4	63	SW			3		6			0.209	5.3		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.82	757.3	69.8	21.0	41	WSW			2		8			0.012	0.3		Dr. Wierzbiski.
Eperies			29.84	758.0	65.7	18.7	53	SE			2		10			0.439	11.15		Julius Mikolik.
Gratz																			Andreas Rospini.
Hermannstadt	28.69	728.7	29.85	758.2	66.7	19.3	45	NNW			3		8			0	0		Prof. Reissenberger.
Kremsmünster	28.54	724.9	29.92	759.9	67.8	19.9	34	NNW			1		7			0	0		Prof. C. Wagner.
Lemberg	28.66	727.9	29.98	761.4	64.4	18.8	68	W			2		10			0	0		Dr. T. Stanecki.
Mytenyhaza			29.87	758.6	64.3	18.7	49	S			1		4			0.004	0.1		Habsuda Daniel.
Pola																			I.R.Hydrographic Office.
Szegedin			30.03	762.7	66.9	19.4	71	S			2		8 clds			0	0		Karl Stancel.
Trieste			29.89	759.3	71.6	22.0	49	W			2		5			0	0		Prof. V. Farolfi.
Vienna			30.01	762.2	69.6	20.9	69	Calm			0		2			0.193	4.9	Threatening	I. R. Central Met. Obs'y.
			29.87	758.6	69.1	20.6	48	W			3		5			0	0		

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

BELGIAN SERIES.

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

Brussels			29.83	757.6	62.1	16.7	55	WSW			3	1	8	WSW		0.000	0.15		Royal Observatory.

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

BRITISH SERIES.

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, 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	51.0	10.6	.....	ESE	4	1.8	.....	.....	6	.....	.....	0.120	3.05	*D. clouds	William Boswell.
Ardrossan	.....	.....	29.59	751.6	56	13.3	.....	SW	.....	.....	3	.....	4	.....	.....	.....	.....	*D. clouds	William McNeil.
Armagh, Observatory	.....	.....	29.63	752.6	55.0	12.8	.....	W	8	3.6	.....	.....	7	.....	.....	.....	.....	*D. clouds	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs'y	.....	.....	29.64	752.8	54.3	12.4	.....	W	28	12.5	.....	.....	9	.....	.....	.....	.....	Overcast	John Hartnup.
Birr Castle, (Parsonstown)	.....	.....	29.70	754.4	57.5	14.2	.....	WNW	.....	.....	1–3	.....	7	.....	.....	.....	.....	*D clouds	J. Dreyer.
Bradford	.....	.....	29.64	752.8	51.1	10.6	.....	SW	.....	.....	2	.....	10	.....	.....	0.32	8.1	Raining	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.01	762.2	81.5	27.5	.....	SW	.....	.....	3	.....	7	.....	.....	.....	.....	*D. clouds	Sergt. J. F. Halanen, A. [H C.
Cambridge, Observatory	.....	.....	29.72	754.9	57.1	13.9	.....	WSW	.....	.....	2	.....	10	.....	.....	.....	.....	Showery	H. Todd.
Cardington	.....	.....	29.75	755.6	59.0	15.0	.....	W	.....	.....	3	.....	9	.....	.....	.....	.....	Overcast	John McLaren.
Carlisle	.....	.....	29.61	752.1	54.1	12.3	.....	W	.....	.....	5	.....	9	.....	.....	0.18	4.6	Showery	T. Bel , for J. Car mell.
Chatham, School M. E	.....	.....	29.89	759.2	55.5	13.1	.....	W	.....	.....	2	.....	10	.....	.....	.....	.....	Raining	Capt. J. Fellowes, R.E.
Dartmoor	24.44	722.4	29.95	760.7	69.0	20.6	.....	W	.....	.....	6	.....	8	.....	.....	.....	.....	Gloomy	R. F. Power.
Donaghadee	.....	.....	29.60	751.8	55	12.8	.....	SSW	.....	.....	3	.....	8	.....	.....	.....	.....	*D. clouds	J. Mac Gowan.
Dover	.....	.....	29.79	756.7	56	13.3	.....	WSW	.....	.....	4	.....	5	.....	.....	.....	.....	½ clouded	J. Costello.
Eccles, (near Manchester.)	.....	.....	29.64	752.8	51.4	10.8	.....	W	1.8	0.8	.....	.....	10	.....	.....	.....	.....	Raining	Thomas Mackereth.
Falmouth, Observatory	.....	.....	29.90	759.4	56.3	13.5	.....	W	28	12.5	.....	.....	9	.....	.....	.....	.....	Squally	The Staff.
Fort Napier, (Natal)	27.64	702.0	29.87	758.7	77.4	25.2	.....	E	.....	.....	1	.....	1	.....	.....	.....	.....	*D. loads	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.95	760.7	89.0	31.7	.....	N	.....	.....	0	.....	5	.....	.....	.....	.....	*D. clouds	
Galway, Queen's College	.....	.....	29.68	753.9	58	14.4	.....	NE	.....	.....	4	.....	5	.....	.....	.....	.....	*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.17	766.3	77.0	25.0	.....	W	.....	.....	6	.....	0	.....	.....	.....	.....	Blue sky	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	29.56	750.8	54.9	12.7	.....	WSW	.....	.....	2	.....	8	.....	.....	.....	.....	*D. clouds	Lewis Stuart.
Great Yarmouth	.....	.....	29.73	755.1	55	12.8	.....	ESE	.....	.....	3	.....	6	.....	.....	.....	.....	*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	29.79	756.7	62.0	16.7	.....	WSW	.....	.....	3	.....	8	.....	.....	Blank	Blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey	.....	.....	29.93	760.2	55	12.8	.....	WSW	.....	.....	4	.....	7	.....	.....	.....	.....	*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	29.67	753.6	50.5	10.3	.....	SW	.....	.....	1	.....	10	.....	.....	.....	.....	Raining	L. J. Crossley.
Helston	.....	.....	29.90	759.4	59	15.0	.....	SW	.....	.....	4	.....	2k	.....	.....	0.8	20.	Fine	M. P. Moyle.
Holyhead	.....	.....	29.67	753.6	53	11.7	.....	WSW	.....	.....	3	.....	4	.....	.....	.....	.....	*D. clouds	John Tilston.
Kew, Observatory	.....	.....	29.77	756.1	56.2	13.4	.....	WSW	14	6.3	.....	.....	10	.....	.....	.....	.....	Threatening	The Staff.
Kingstown	.....	.....	29.68	753.9	52	11.1	.....	WNW	.....	.....	4	.....	4	.....	.....	Blank	Blank	*D. clouds	George Mitchell.
Leicester Museum	.....	.....	29.71	754.6	55.6	13.1	.....	W	.....	.....	3	.....	10	.....	.....	.....	.....	Threatening	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)	.....	.....	30.14	765.5	76.8	24.9	.....	SE	.....	.....	1	.....	6k	.....	.....	.....	.....	.....	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	29.58	751.3	51	10.6	.....	NE	.....	.....	2	.....	10	.....	.....	.....	.....	Overcast	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.21	767.3	81.4	27.4	.....	E	.....	.....	4	.....	7	.....	.....	.....	.....	*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	29.68	753.9	53.4	11.9	.....	Calm	.....	.....	0	.....	10d, 8k	.....	WSW	0.093	2.36	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	29.70	754.4	52.5	11.4	.....	SW	.....	.....	3	.....	10	.....	.....	Blank	Blank	Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	29.74	755.4	50	13.3	.....	SW	.....	.....	5	.....	10	.....	.....	.....	.....	Gloomy	J. Lucas.
Plymouth	.....	.....	29.87	758.7	57	13.9	.....	WSW	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast	John Merrifield.
Roche's Point	.....	.....	29.80	756.9	55	12.8	.....	WNW	.....	.....	5	.....	5	.....	.....	.....	.....	Cloudy	W. Kennedy.
Saint Ann's Head	.....	.....	29.77	756.1	52	11.1	.....	W	.....	.....	5	.....	7	.....	.....	.....	.....	Showery	John C. Walker.
Saint Helier, Jersey)	.....	.....	29.95	760.7	57.0	13.9	.....	W	.....	.....	5	.....	8	.....	.....	.....	.....	¾ clouded	A. P. Amy.
Sandwick Manse, Orkneys)	.....	.....	29.70	754.4	47.8	8.8	.....	NE	30	13.4	.....	.....	10	.....	.....	.....	.....	Raining	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	29.63	752.6	56.6	13.7	.....	WSW	.....	.....	2	.....	8	.....	.....	.....	.....	Showery	F. Shaw.
Scutari Cemetery Turkey	.....	.....	30.05	763.3	71.8	22.1	.....	NE	.....	.....	2	.....	2	.....	.....	.....	.....	*D. clouds	Sergt. W. H. Lyne.
Sheffield	.....	.....	29.64	752.8	54.0	14.4	.....	WSW	.....	.....	1	.....	9	.....	.....	0.165	4.19	Overcast	W. F. Cooper.
Silloth Rectory	.....	.....	29.60	751.8	60.1	15.6	71	W	.....	.....	2	.....	4	.....	.....	0.255	6.48	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	29.62	752.3	51.8	11.0	.....	SW	.....	.....	3	.....	10	.....	.....	Blank	Blank	Threatening	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.	.....	.....	29.65	753.4	47	8.3	.....	NE	.....	.....	3	.....	10	.....	.....	.....	.....	Raining	John Smith.
Stratfield Turgiss	.....	.....	29.79	756 7	55.5	13.1	.....	NW	.....	.....	1–2	.....	10	.....	.....	.....	.....	Squally	Rev. Charles H. Griffith.
Streatley Vicarage	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Rev. John Slatter.
Thurso	.....	.....	29.63	752.6	47	8.3	.....	ENE	.....	.....	5	.....	10	.....	.....	.....	.....	Raining	John Trotter.
Truro, Royal Institution	.....	.....	29.90	759.4	59	15.0	.....	W	.....	.....	6	.....	6	.....	.....	.....	.....	*D. clouds	W. Newcombe.
Valencia, Observatory	.....	.....	29.86	758.4	53.0	11.7	.....	WNW	23	10.3	.....	.....	7	.....	.....	.....	.....	*D. clouds	The Staff.
Sub-Stations.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	50	10.0	.....	S	.....	.....	3	.....	10	.....	.....	.....	.....	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	29.97	761.2	57.6	14.2	92	N	2	0.9	.....	5	5	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Leith, Restalrig Park	.....	.....	29.60	751.8	52.8	11.6	.....	SW	.....	.....	2	.....	10k	.....	.....	0.37	9.4	Overcast	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.08	764.0	.....	.....	.....	NE	11.2	5.0	.....	.....	.....	.....	.....	0.04	1.0	.....	C. Meldrum.
Melbourne, Observatory	.....	.....	30.22	767.6	48.6	9.2	82	W	5	2.2	.....	.....	0	.....	.....	0	0	Fine, clear.	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	29.64	752.8	50	10.0	.....	NE	.....	.....	1	5	5	NE	.....	0.2	5.1	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	29.78	756.4	46	7.8	.....	NE	.....	.....	6	2	5	NE	.....	.....	.....	.....	Robert Burnet.

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the observers, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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	753.3	53.1	11.7	74	SSE	.....	.....	2	.....	10	.....	.....	.....	.....	.....	
Fanöe	.....	.....	29.61	752.0	48.2	9.0	89	WSW	.....	.....	4	.....	10	.....	.....	.....	.....	.....	
Godthaab, (Greenland)	.....	.....	29.47	748.4	38.1	3.4	95	S	.....	.....	8	.....	10	.....	.....	.....	.....	Raining	
Stykkisholm, (Iceland)	.....	.....	30.12	765.0	46.9	8.3	87	NW	.....	.....	2	.....	8	.....	.....	.....	.....	.....	
Thorshavn, (Faröe)	.....	.....	29.97	761.3	48.6	9.2	63	ENE	.....	.....	4	.....	7	.....	.....	.....	.....	.....	
Vestervig	.....	.....	29.58	751.4	54.7	12.6	91	SW	.....	.....	2	.....	4	.....	.....	.....	.....	.....	

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

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	.....	.....	29.99	761.8	59.0	15	60	N	.....	.....	4	.....	10n	.....	.....	0.248	6.3	Covered	Normal School.
Amiens	.....	.....	29.90	759.4	59.0	15.0	80	NW	.....	.....	6	.....	8	.....	NW	0	0	Very cloudy	Normal School.
Avignon	.....	.....	30.10	764.5	71.6	22	37	NW	.....	.....	2	.....	1	.....	NW	0.177	4.5	Clear.....	Normal School.
Bar-sur-Seine	.....	.....	30.00	762.1	61.0	16.1	53	SSW	.....	.....	2	.....	8	.....	W	0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.01	762.2	60.1	15.6	66	SW	46.1	20.6	.....	.....	10	.....	SW	0.028	0.7	Covered	Beaumette Observatory
Beauvais	.....	.....	29.93	760.2	60.1	15.6	65	W	.....	.....	3	.....	8	.....	W	0.020	0.50	Very cloudy	Normal School.
Besançon	.....	.....	30.04	763.1	62.8	17.1	64	SW	.....	.....	3	.....	2	.....	SW	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	30.12	765.0	62.6	17	50	SW	.....	.....	3	.....	10en	.....	E	0.126	3.2	Covered	Normal School.
Bourges	.....	.....	30.02	762.4	60.4	15.8	87	SW	.....	.....	2	.....	8n	.....	NE	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	29.95	760.8	61.0	16.1	61	W	.....	.....	5	.....	8n	.....	W	0.049	1.25	.....	Naval Observatory.
Caen	.....	.....	30.637	778.07	60.8	16	85	W	.....	.....	2	.....	5	.....	E	0.04	1.	Cloudy.....	Normal School.
Carcassonne	.....	.....	30.20	767.1	61.7	16.5	81	W	.....	.....	6	.....	10	.....	E	0	0	Covered.....	Normal School.
Chartres	.....	.....	29.95	760.6	60.4	15.8	.....	SW	.....	.....	4	.....	7	.....	SW	0.150	3.8	.....	Normal School.
Clermont	.....	.....	30.06	763.5	59.4	15.2	44	W	.....	.....	3	.....	10	.....	W	0	0	.....	Puy de Dome Obs'y.
Commercy	....	....	29.99	761.8	60.0	15	60	SW	.....	.....	4	.....	5kn	.....	SW	0.098	2.5	Cloudy.....	Normal School.
Commune de Gréasque*	.....	.....	29.92	760.0	66.6	18.9	41	NW	.....	.....	3	.....	5	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	29.93	760.3	64.9	18.3	57	WNW	.....	.....	2	.....	5k	.....	NW	0	0	Partly cov'd	Normal School.
Le Mans	.....	.....	29.99	761.8	57.6	14.2	65	NW	.....	.....	3	.....	8	.....	W	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.15	765.8	58.1	14.5	61	SW	.....	.....	2	.....	10	.....	SW	0.08	2.	Raining.....	Normal School.
Mâcon	.....	.....	30.17	766.3	63.7	17.6	63	S	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
Mirecourt	.....	.....	30.02	762.5	56.6	13.6	83	SW	.....	.....	2	.....	10	.....	NE	0	0	Covered	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	30.09	764.2	68.7	20.4	45	NW	.....	.....	4	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Orleans	.....	.....	29.97	761.1	63.3	17.4	40	WSW	.....	.....	4	.....	8	.....	W	0	0	Very cloudy	Normal School.
Paris, Observatory	.....	.....	29.95	760.7	61.2	16.2	55	SW	.....	.....	4	.....	8	.....	WSW	0.035	0.90	Very cloudy	National Observatory.
Parthenay	.....	.....	30.07	763.-	59.4	15	78	W	.....	.....	2	.....	5	.....	W	0.08	2.	Cloudy.....	Normal School.
Privas	.....	.....	30.11	764.9	67.1	19.5	.....	SW	.....	.....	2	.....	5	.....	SW	0	0	Cloudy.....	Normal School.
La Roche-sur-Yon	.....	.....	29.88	759.0	59.0	15.0	76	NW	.....	.....	4	.....	5	.....	E	0.063	1.6	Cloudy.....	Normal School.
Rochefort, Observatory	.....	.....	30.17	766.3	61.7	16.5	74	WSW	.....	.....	4	.....	10	.....	NE	0.157	4.0	Covered	Naval Observatory.
Rouen	.....	.....	29.93	760.1	56.1	13.4	84	SW	.....	.....	6	.....	10	.....	SW	0	0	Covered	Normal School.
Saint Lo	.....	.....	29.67	753.7	59.5	15.3	53	NW	.....	.....	7	.....	10	.....	W	0.059	1.5	.....	Normal School.
Tarbes	29.14	740.2	30.21	767.4	60.4	15.8	.....	W	.....	.....	6	.....	8	.....	E	0	0	Very cloudy	Normal School.
Villefranche	.....	.....	30.21	767.4	64.6	17.8	60	SW	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.91	759 8	80.6	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.08	764.0	68.7	20.4	38	WNW	.....	.....	2	.....	3	.....	.....	0	0	.....	Marseilles Observatory.
Mont-Louis	24.95	633.7	30.26	768.7	44.2	6.8	100	ESE	9.3	4.17	.....	.....	7	.....	SSW	0.350	8.9	.....	—. Falguère.
Montsouris, Paris	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montsouris Observ'tory.
Perpignan	.....	.....	30.15	765.9	64.4	18.0	51	NW	9.3	4.17	.....	.....	9	.....	W	0.036	0.9	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.96	760.9	60.8	16.0	59	SW	.....	.....	3	.....	9	.....	.....	0	0	Very cloudy	E. Renou.
Toulouse	.....	.....	30.24	767.8	59.0	15 0	67	W	.....	.....	3	.....	8	.....	.....	0.008	0.2	.....	Toulouse Observatory.
Tours	.....	.....	30.01	762 3	61.9	16.6	47	WNW	.....	.....	3	.....	5	.....	WNW	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.94	760 5	61.2	16.2	55	W	.....	.....	3	.....	10	.....	.....	0.047	1.20	Covered.....	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai	.....	.....	29.81	757.2	62.4	16.9	71	ESE	4.7	2.1	.....	.....	10	.....	.....	{ 0	0 }	Misty.....	H. Le Lec, S. J.
																{ 0	0 }		
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,360 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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	.....	.....	29.85	758.3	59.4	15.2	55	W	.....	.....	6	.....	8	WSW	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.79	756.6	66.2	19.0	41	S	.....	.....	1	.....	5	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	29.86	758.5	68.2	20.1	43	SSW	.....	.....	3	.....	8	.....	.....	0.035	0.9	.....	Dr. P. Saugebauer.
Carlsruhe	.....	.....	29.97	761.2	58.3	14.6	68	NW	.....	.....	5	.....	10	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	29.82	757.5	66.7	19.3	47	WSW	.....	.....	6	.....	6	SW	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.95	760.7	64.9	18.3	48	W	.....	.....	4	.....	8	.....	.....	Inap.	Inap.	.....	Physical Society.
Friedrichshafen	.....	.....	30.04	762.9	60.3	15.7	43	W	.....	.....	.....	.....	10	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	29.72	754.8	59.2	15.1	64	SW	.....	.....	4	.....	10	.....	.....	0.043	1.1	.....	Captain F. Hegemann.
Kiel	.....	.....	29.69	754.0	55.8	13.2	73	WSW	.....	.....	6	.....	10	.....	.....	0.091	2.3	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.82	757.3	60.6	15.9	43	S	.....	.....	2	.....	9	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	29.71	754.9	63.3	17.4	.....	S	.....	.....	1	.....	4	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	29.85	758.3	63.7	17.6	47	SW	.....	.....	6	.....	8	SW	.....	Inap.?	Inap.?	Stormy.....	Prof. Bruhns.
Memel	.....	.....	29.91	759.6	57.9	14.4	48	SSE	.....	.....	3	.....	0	.....	.....	0.008	0.2	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.84	757.8	58.1	14.5	75	SW	.....	.....	6	.....	8	.....	.....	0.205	5.2	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.75	755.7	63.3	17.4	44	SSE	.....	.....	3	.....	10	.....	.....	0.094	2.4	.....	A. Lothes.
Posen	.....	.....	29.80	756.9	72.9	22.7	36	NW	.....	.....	6	.....	9	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.00	761.9	60.1	15.6	56	SW	.....	.....	2	.....	10	SW	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.97	761 1	62.6	17.0	38	W	.....	.....	3	.....	8	.....	.....	Inap.	Inap.	Sprinkling...	Prof. Schoder.
Thorn	.....	.....	29.79	756.6	68.0	20.0	36	S	.....	.....	3	.....	5	.....	.....	0.370	9.4	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.88	759.0	62.2	16.8	52	W	.....	.....	6	.....	10	.....	.....	0.150	3.8	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	29.65	753.1	55.2	12.9	76	WSW	.....	.....	3	.....	10	.....	.....	0.059	1.5	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			29.98	761.5	64.6	18.1	65	SW	1.8	0.8			10			0	0		
Padua			29.97	761.1	65.8	18.8	65	NE	4.2	1.9			10	SW		0.004	0.1		
Vicenza			29.96	761.0	66.4	19.1	60	E	1.8	0.8			6	W		0	0		
Verona			29.97	761.1	62.2	16.8	64	E			1		10			0	0		
Bergamo	28.63	727.3	29.95	760.7	54.7	12.6	81	N			2		9			0	0		
Domodossola	28 60	726.5	30.00	761.9	64.0	17.8	83	SSE			4		10			0	0		
Milan			29.98	761.6	68.0	20.0	67	ENE			2		9	ENE		0	0		
Pavia			29.98	761.4	66.2	19.0	65	NE			4		8	NE		0	0		
Moncalieri			29.94	760.4	68.5	20.3	60	ESE	6.9	3.1			8	NW		0	0		
Mondovi	28.06	712.8	29.93	760.3	64.8	18.2	66	9E			4		5	WNW		0	0		
Porto Maurizio			30.03	762.8	68.4	20.2	77	SSW			2		4	NE		0	0		
Genoa			30.04	763.1	62.6	17.0	83	SE	5.6	2.5			10	S		0	0		
Piacenza			29.97	761.3	67.5	19.7	64	NNE	6.3	2.8			6	SSW		0	0		
Parma			29.97	761.3	71.4	21.9	49	SSW			6		8			0	0		
Bologna			30.02	762 4	70.0	21.1	41	SW			6		4	N		0	0		
Florence			30.09	764.2	73.4	23.0	50	NW			2		10	NW		0	0		
Leghorn			30.09	764.2	67.1	19.5	59	SSW	9.4	4.2			4			0	0		
Siena	28.85	732.8	30.04	763.0	69.3	20.7	51	SSW	1.3	0.6			9	W		0	0		
Urbino																			
Pesaro																			
Ancona			30.07	763.8	70.5	21.4	62	SE			4		4			0	0		
Grosseto			30.10	764.6	72.0	22.2	60	SSE			4		3	S		0	0		
Rome			30.13	765.4	70.5	21.4	52	SSW	12.5	5.6			2			0.004	0.1		
Naples, O. U			30.18	766.6	71.1	21.7	58	SW			2		2	WSW		0	0		
Lecce			30.11	764.9	70.2	21.2	45	S	12.5	5.6			6	NW		0	0		
Cosenza			30.14	765.5	78.8	26.0	76	NW	6.9	3.1			4			0	0		
Rhosto, (Sicily)			30.09	764.8	70.2	21.2	59	SE			2		5	NE		0	0		
Palermo			30.11	764.7	69.6	20.9	54	NE	9.4	4.2			6			0	0		
Caltanissetta	28.18	715.7	30.08	764.0	72.3	22.4	28	SW			2		2	NE		0	0		
Sub-Series.																			
Naples, S. R			30.18	766.5	68.5	20.3	66	SW	3.8	1.7			..c	W		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known: Domodossola, 806 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.

Flushing			29.85	758.1	57.2	14.0		W			1								
Groningen			29.69	754.0	59.5	15.3		WSW			5								
Helder			29.74	755.4	56.1	13.4		SW			4								
Utrecht			29.75	755.6	63.9	17.7	60	WSW			5		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.

Bergen			29.61	752 1	56.1	13.4	48	W	9.0	4.0			0			0	0		
Brönö			29.79	756.7	46.4	8.0	72	N	11	5			6			0	0		
Christiania			29.70	754.4	52.2	11.2	33	ENE	1.8	0.8			10			0	0		
Tromsö			29.72	754.8	40.8	4.9	70	SW	2	1			10			0.083	2.1		

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 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,)	.....	.....	30.54	775.7	63.9	17.7	72	ESE	2.0	1.28	.....	.....	6	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.19	766.9	73.2	22.9	40	WNW	7.4	3.33	.....	.....	3	NW	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.39	772.0	65.8	18.8	60	SW	6.2	2.78	.....	.....	10	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.33	770.3	64.6	18.1	48	N	24.8	11.1	.....	.....	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 the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia at St. Petersburg.

Warsaw	.....	.....	29.82	757.5	66.9	19.4	42	SE	16	7	.....	.....	10	.....	.....	.....	.....	Solar corona	Astronomical Obs.
Wilna	.....	.....	29.92	760.9	55.0	12.8	51	W	4	2	.....	.....	6	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.89	759.2	50.7	10.4	72	SSW	2	1	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.87	758.6	49.3	9.6	56	S	11	5	.....	.....	4	.....	.....	.....	.....	.....	Central Physical Obs
Kuopio	.....	.....	29.70	754.3	45.7	7.6	91	E	7	3	.....	.....	10	.....	.....	.....	.....	Raining	Ch. Forsten.
Kieff	.....	.....	29.93	760.1	54.7	12.6	50	NW	2	1	.....	.....	7	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.04	762.9	65.1	18.4	41	NNW	9	4	.....	.....	7	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.04	763.0	57.7	14.3	47	S	13	6	.....	.....	6	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.93	760.1	47.8	8.8	55	SSW	9	4	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.89	759.3	57.0	13.9	42	W	9	4	.....	.....	6	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	29.84	757.9	34.9	1.6	71	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.55	725.2	29.95	760.7	57.2	14.0	38	NW	18	8	.....	.....	4	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.03	762.8	58.8	12.1	50	SE	13	6	.....	.....	10	.....	.....	Blank	Blank	.....	Sebastianof.
Kasan	.....	.....	29.93	760.2	49.8	9.9	61	SW	13	6	.....	.....	6	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	.9.12	739.7	30.11	764.8	53.2	11.8	39	SW	11	5	.....	.....	5	.....	.....	.....	.....	.....	Meteorological Obs.
Nukirs	.....	.....	29.94	757.8	66.4	19.1	54	NE	9	4	.....	.....	5	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Sobrof.
Tashkend	28.23	717.0	29.80	756.8	89 4	31.9	99	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.75	755.6	74.1	23.4	54	NW	31	14	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.63	752.6	70.0	21.1	40	WNW	7	3	.....	.....	9	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usoltzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.49	749.0	81.9	27.7	23	Calm	0	0	.....	.....	3	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	34.0	1.1	90	Calm	0	0	.....	.....	8	.....	.....	.....	.....	Raining	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the wind velocity in meters per second; 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 488. meters, or 1,411.8 feet; Ekaterinburg, 303.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0 m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	30.10	764.5	74.5	23.6	42	SW	10.5	4.69	.....	0	3	.....	.....	0.157	4.0	Cloudy	Royal Observatory.
San Fernando	.....	.....	30.26	768.5	67.3	19.9	65	WNW	10.7	4.8	.....	0	3	.....	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. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.76	755 9	45.7	7.6	51	E	.....	.....	1	.....	10	.....	.....	0	0	.....	
Umea	.....	.....	29.70	754.3	53.1	11.7	54	NNW	.....	.....	1	.....	8	.....	.....	0.193	4.9	.....	
Hernosand	.....	.....	29.73	755.1	52.9	11.6	55	SW	.....	.....	1	.....	5	.....	.....	0	0	.....	
Stockholm	.....	.....	29.72	754.8	54.7	12.6	67	NE	.....	.....	2	.....	8	.....	.....	0	0	.....	
Wisby	.....	.....	29.82	757.5	52.2	11.2	96	SSW	.....	.....	2	.....	10	.....	.....	0.134	3.4	.....	
Sub-Series.																			
Upsala	.....	.....	29.69	754.1	58.3	14 6	40	SSW	15.4	6.9	.....	.....	8	.....	.....	0.048	1.22	Thunder-storm	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	728.1	30.08	763.9	60.8	16.0	47	SSW	.....	.....	2	.....	9	.....	.. ..	0.142	3.6	Covered	The Observatory.
Zurich	28.41	721.7	30.03	762.7	60.6	15.9	60	NW	.....	.....	1	.....	9	.....	.. ..	0.012	0.3	Covered	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE—For Geneva the corresponding departures from the normal values are: Barometer, +2.7 mm; Thermometer, —1.7 cent.; Relative Humidity, —9 per cent.

NOTE.—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. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.09	764 3	70. 5	21. 4	.....	NW	.....	.....	2	.....	5	.....	.....	.....	.....	.....	
Valona	.....	.....	30.05	763.2	72. 5	22. 5	.....	NW	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	30.00	762.0	68. 0	20. 0	.....	NE	.....	.....	6	.....	5	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.93	762.0	80. 6	27. 0	59	WSW	.....	.....	3	.....	5ks	.....	SW	0	0	Fair.....	Prof. C. V. A. Van Dyck.

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B.	.....	.....	29.93	760.2	41.0	5.0	82	N	3	1.3	.....	3	.....	.....	.....	0	0	Fine.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.32	770.1	37	2.8	.....	N	1	0.4	.....	.....	10s	.....	.....	0.03	0.8	Cloudy.....	W. R. Bigg.
*Chatham, N. B.	.....	.....	29.91	759.7	40	4.4	71	NW	13	5.8	.....	.....	10ks	.....	NW	0.46	11.7	Cloudy.....	G. A. Blair.
Charlottetown, P. E. Island.	.....	.....	29.94	760.5	38	3.3	91	N	12	5.4	.....	.....	10n	.....	.....	0.19	4.8	Light rain....	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.20	767.1	39. 0	3.9	55	NE	.....	.....	1	10k	0	.....	.....	0.123	3.13	Unsettled....	James Smith, M. A.
Dalhousie, N. B.	.....	.....	29.96	761.0	41.1	5.1	78	W	.....	.....	1	0	0	.....	.....	0.15	3.8	.. ..	H. A. Johnson.
Esquimault, B. C.	.....	.....	29.68	753.9	63. 0	17. 2	73	N	4	1.8	.....	8os	0	.....	.....	0	0	Cloudy.....	W. H. Bevis.
Fredericton, N. B.	.....	.....	29.96	761.0	37.9	3.3	82	N	9	4.0	.....	.....	10s	.....	.....	0.460	11.68	Raining.....	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.25	768.3	52	11.1	82	W	9	4.0	.....	0	0	.....	.....	0	0	Clear.....	James Stewart.
Goderich, Ontario	.....	.....	30.38	771.6	44.3	6.8	79	N	.....	.....	1	0	0	.....	.....	0	0	Fine.....	H. J. Strang, M. A.
Granton, Ontario	29.19	741.4	30.32	770.1	40	4.4	.....	N	.....	.....	1	0	0	.....	.....	0	0	Clear.....	James Grant.
*Halifax, N. S.	.....	.....	29.74	755.4	46	7 8	98	NE	12	5.4	.....	.....	10n	.....	.....	0.10	2.5	Light rain....	F. Allison, M. A.
*Kingston, Ontario	.....	.....	30.31	769.9	37	2.8	64	N	5	2.2	.....	.....	10ks	.....	.....	0.03	0.8	Cloudy.....	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.21	767.3	38	3.3	71	NW	8	3.6	.....	Haze	5ks	.....	.....	0.47	11.9	Cloudy.....	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.24	768.1	46	7.8	55	NW	6	2.7	.....	2k	0	.....	.....	0	0	Clear.....	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.36	771.1	40	4.4	64	W	8	3 6	.....	0	0	.....	.....	0	0	Clear.....	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	30.35	770.9	39	3.9	55	NE	10	4.5	.....	5k	0	NE	.. ..	0.03	0.8	Fair.	H. Morgan.
Port Hastings, N. S.	.....	.....	29.81	757.2	38.7	3.7	.....	N	7	3.1	.....	.....	.....	.....	.....	0	0	Foggy	Peter Grant.
*Port Stanley, Ontario	.....	.....	30.32	770.1	42	5.6	57	N	8	3.6	.....	0	0	.....	.....	0	0	Clear.....	M. Payne.
*Quebec, Quebec	.....	.....	30.11	764.8	40	4.4	56	W	8	3.6	.....	5k	2ks	W	W	0.48	12.2	Fair.....	Capt. Aslett, R. N.
St. John, N. B.	.....	.....	29.90	759.4	41	5.0	82	N	11	4.9	.....	.....	10n	.....	.....	0 330	8.38	Raining.....	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.34	770.6	79	26.1	33	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	K. Stewart.
Stayner, Ontario	.....	.....	30.31	770.6	40	4.4	61	N	1	0.4	.....	0	0	.....	.....	0	0	Clear.....	R. J. Cole.
Stratford, Ontario	29.00	736.6	30.32	770.1	37. 0	2.8	74	NE	5	2.2	.....	0	0	.....	.....	0	0	Fine.....	C. J. Macgregor, M. A.
*Sydney, C. B.	.....	.....	29.74	755.4	48	8.9	97	SW	5	2.2	.....	.....	10n	.....	.....	0.03	0.8	Cloudy.....	T. C. Hill.
*Toronto, Ontario	.....	.....	30.34	770.6	40	4.4	63	N	8	3.6	.....	2k	0	W	.....	0	0	Fair.....	Magnetic Observatory.
Woodstock, Ontario	.. ..	.....	30.35	770.9	40.1	4.5	69	N	6	2.7	....	0	0	.....	.....	0	0	Fine.....	J. Montgomery
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NOTE.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y	.....	.....	30.13	765.3	39	3.9	71	NW	11	4.9	.....	.....	10ks	.....	W	0.22	5.6	Cloudy	
Alpena, Mich	.....	.....	30.34	770.6	43	6.1	58	Calm	8	0	.....	0	0	.....	.....	0	0	Clear	
Atlantic City, N. J	.....	.....	30.05	763.3	53	11.7	73	N	12	5.4	.....	.....	10s	.....	N	0.04	16.3	Cloudy	
Augusta, Ga	.....	.....	30.00	762.0	72	22.2	73	NW	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Baltimore, Md	.....	.....	30.16	766.1	35	1.7	44	NW	16	7.2	.....	2cs	0	NW	.....	0.70	17.8	Clear	
Barnegat, N. J	.....	.....	30.04	763.0	51	10.6	82	NE	17	7.6	.....	.....	10s	.....	.....	0.45	11.4	Cloudy	
Benton, Montana	27.85	694.7	30.15	765.8	48	8.9	42	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.57	725.7	30.25	768.3	48	8.9	62	NE	3	1.3	.....	Haze	Haze	NE	NE	0	0	Hazy	
Boston, Mass	.....	.....	30.01	762.2	42	5.6	65	NW	23	10.3	.....	10s	Haze	NW	.....	0.80	20.3	Cloudy	
Breckenridge, Minn	.....	.....	30.36	771.1	43	6.1	68	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y	.....	.....	30.32	770.1	37	2.8	62	N	5	2.2	.....	1ok	0	NW	.....	0.01	0.3	Cloudy	
Burlington, Vt	.....	.....	30.20	767.1	38	3.3	72	N	9	4.0	.....	.....	10s	.....	.....	0.53	13.5	Cloudy	
Cairo, Ill	.....	.....	30.28	767.8	54	12.2	79	W	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Cape Hatteras, N. C	.....	.....	29.90	759.4	70	21.1	79	NE	16	7.2	.....	.....	10s	.....	NE	0	0	Cloudy	
Cape Henry, Va	.....	.....	30.03	762.7	61.5	16.4	74	NW	28	12.5	.....	.....	10ks	.....	NW	0.22	5.6	Cloudy	
Cape Lookout, N. C	.....	.....	29.96	761 0	70	21.1	90	N	10	4.5	.....	2c	5ks	NW	N	Inap.	Inap.	Cloudy	
Cape May, N. J	.....	.....	30.07	763.8	55	12.8	62	N	24	10.7	.....	5ck	0	W	.....	0.16	4.1	Fair	
Charleston, S. C	.....	.....	30.00	762.0	75	23.9	68	NW	6	2.7	.....	1cs	0	.....	.....	0.37	9.4	Clear	
Cheyenne, Wyoming	24.26	616.2	30.20	767.1	37	2.8	100	NW	1	0.4	.....	.....	Fog	.....	.....	2.00	50.8	Foggy	
Chicago, Ill	.....	.....	30.34	770.6	50	10.0	58	NE	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	30.25	768.3	48	8.9	56	NE	9	4.0	.....	0	0	.....	.....	0.28	7.1	Clear	
Cleveland, Ohio	.....	.....	30.32	770.1	45	7 2	61	N	8	3.6	.....	0	0	.....	.....	0.08	2.0	Clear	
Colorado Springs, Col	24.20	617.0	30.16	766.1	39	3.9	67	NW	12	5.4	.....	2k	8s	.....	.....	2.22	56.4	Cloudy	
Corsicana, Texas	.....	.....	30.01	76 2	67	19.4	92	E	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy	
Davenport, Iowa	.....	.....	30.37	771.4	47	8.3	56	NE	10	4.5	.....	2c	0	.....	.....	0	0	Clear	
Denison, Texas	.....	.....	30.06	763.5	66	18.9	80	SE	4	1.8	.....	.....	10n	.....	.....	1.47	37.3	Heavy rain	
Denver, Col	25.06	636.5	30.28	769.1	41	5.0	83	Calm	0	0	.....	.....	10s	.....	.....	4.60	116.8	Cloudy	
Detroit, Mich	.....	.....	30.36	771.1	45	7.2	68	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Dodge City, Kan	27.48	698.0	29.70	754.4	62	16.7	83	E	12	5.4	.....	.....	10s	.....	.....	0.12	3.0	Cloudy	
Dubuque, Iowa	.....	.....	30.39	771.9	48	8.9	56	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Duluth, Minn	.....	.....	30.34	770.6	44	6.7	75	NE	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me	.....	.....	29.88	758.9	38	3.3	100	N	21	9.4	.....	.....	10n	.....	N	0.34	8.6	Light rain	
Erie, Pa	.....	.....	30.30	769.6	41	5.0	73	NE	16	7.2	.....	5k	0	N	.....	0.60	15.2	Fair	
Escanaba, Mich	.....	.....	30.33	771.6	42	5.6	75	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Fort Gibson, Indian Ter	.....	.....	30.03	762.7	64	17.8	78	E	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T	28.74	730.0	29.82	757.4	60	15.6	94	E	20	8.9	.....	.....	10n	.....	E	1.70	43.2	Light rain	
Fort Sully, Dakota	28.62	726.9	30.38	770.4	45	7.2	68	SE	2	0.9	.....	5c	0	.....	.....	0	0	Fair	
Galveston, Texas	.....	.....	30.03	762.7	78	25.6	77	SE	4	1.8	.....	2k	0	SW	.....	0	0	Fair	
Grand Haven, Mich	.....	.....	30.36	771.1	50	10.0	54	E	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Indianapolis, Ind	.....	.....	30.31	769.9	51	10.6	52	NE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Indianola, Texas	.....	.....	29.98	761.5	76	24.4	86	SE	6	2.7	.....	8k	0	S	.....	0	0	Cloudy	
Jacksonville, Fla	.....	.....	30.02	762.5	76	24.4	76	S	4	1.8	.....	5ck	0	.....	.....	0.09	2.3	Fair	
Keokuk, Iowa	.....	.....	30.30	769.6	49	9.4	62	NE	12	5.4	.....	8c	0	.....	.....	0	0	Fair	
Key West, Fla	.....	.....	30.04	763.5	79.7	26.5	66	SE	8	3.6	.....	2cs	0	W	.....	0	0	Fair	
Kittyhawk, N. C	.....	.....	30.01	762.2	61	16.1	82	N	26	11.6	.....	.....	10ks	.....	N	0	0	Cloudy	
Knoxville, Tenn	.....	.....	30.12	765.0	62	16.7	70	NE	12	5.4	.....	2ck,k	0	NE	.....	0.05	1.3	Fair	
La Crosse, Wis	.....	.....	30.37	771.4	53	11.7	66	SE	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan	.....	.....	30.22	767.6	57	13.9	69	E	10	4.5	.....	.....	10s	.....	.....	0.15	3.8	Cloudy	
Lexington, Ky	9.11	739.4	30.24	768.1	45	7.2	76	N	16	7.2	.....	0	0	.....	.....	0.07	1.8	Clear	
Long Branch, N. J	.....	.....	30.07	763.8	48	8.9	77	N	22	9.8	.....	.....	10s	.....	NE	0.80	20.3	Cloudy	
Louisville, Ky	.....	.....	30.21	768.1	53	11.7	61	NE	18	8.0	.....	0	0	.....	.....	0	0	Clear	
Lynchburg, Va	.....	.....	30.05	763.3	70	21.1	52	NE	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y	.....	.....	30.21	767.3	36	2.2	70	NW	8	3.6	.....	.....	10s	.....	NW	0.78	19.8	Cloudy	
Manhattan, Kan	9.04	737.6	30.20	767.1	50	10.0	100	NE	16	7.2	.....	.....	10n	.....	.....	0.30	7.6	Light rain	
Marquette, Mich	.....	.....	30.33	77 .4	53	11.7	56	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn	.....	.....	30.13	765.3	65	18.3	73	NE	10	4.5	.....	5ck	0	.....	.....	0	0	Fair	
Milwaukee, Wis	.....	.....	30.43	772 9	42	5.6	75	NE	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Mobile, Ala	.....	.....	30.04	763.0	72	22.2	80	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Montgomery, Ala	.....	.....	30.07	763.8	70.5	21.4	82	NW	2	0.9	.....	2c	Haze	.....	.....	0.81	20.6	Clear	
Morgantown, W. Va	.....	.....	30.22	767.6	49	9.4	43	N	5	2.2	.....	0	5s	.....	N	0.32	8.1	Fair	
Mt. Washington, N. H	25.68	601.5	30.04	763.0	27	— 2.8	77	N	30	13.4	.....	0	5s	.....	N	0.74	18.8	Fair	
Nashville, Tenn	.....	.....	30.13	765.3	65	18.3	68	N	5	2.2	.....	2k	0	NE	.....	0	0	Fair	
New Haven, Conn	.....	.....	30.04	763.0	49	9.4	59	N	12	5.4	.....	0	0	.....	.....	0.55	14.0	Clear	
New London, Conn	.....	.....	30.02	762.5	52	11.1	53	N	10	4.5	.....	2ck	2s	N	W	0.09	2.3	Fair	
New Orleans, La	.....	.....	30.03	762.7	76.5	24.7	75	SW	4	1.8	.....	2c	0	W	.....	0	0	Clear	
Newport, R. I	.....	.....	30.00	762.0	48	8.9	70	N	12	5.4	.....	.....	10s	.....	NW	0	0	Cloudy	
New York, N. Y	.....	.....	30.07	763.8	48	8.9	63	N	15	6.7	.....	5k	5ks	N	N	0.58	14.7	Cloudy	
Norfolk, Va	.....	.....	30.06	763.5	62	16.7	66	NE	20	8.9	.....	0	8ks	.....	NE	Inap.	Inap.	Fair	
North Platte, Neb	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Omaha, Neb	7.34	694.4	29.94	760.5	49	9.4	71	NE	4	1.8	.....	.....	10n	.....	.....	0.54	13.7	Light rain	
Oswego, N. Y	29.20	741.7	30.27	768.8	55	12.8	68	E	5	2.2	.....	10cs	0	.....	.....	0	0	Cloudy	
Pembina, Dakota	.....	.....	30.29	769.4	38.5	3.6	63	N	12	5.4	.....	.....	10s	.....	.....	0.07	1.8	Cloudy	
Philadelphia, Penn	.....	.....	30.24	768.1	53	11.7	66	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Pike's Peak, Colorado	.....	.....	30.11	764.8	51	10.6	46	N	16	7.2	.....	0	0	.....	.....	0.88	22.4	Clear	
Pittsburgh, Penn	17.83	452.9	30.04	763.0	18	— 7.8	100	NE	15	6.7	.....	.....	Fog	.....	.....	3.09	78.5	Foggy	
Port Huron, Mich	.....	.....	30.23	767.8	46	7.8	54	N	5	2.2	.....	0	0	.....	.....	0.22	5.6	Clear	
Portland, Me	.....	.....	30.37	771.4	42	5.6	49	NE	15	6.7	.....	0	0	.....	.....	0	0	Clear	
Portland, Oregon	.....	.....	30.03	762.7	44	6.7	90	N	15	6.7	.....	2k	0	.....	.....	1.18	30.0	Fair	
Punta Rassa, Fla	.....	.....	29.81	757.2	53	11.7	73	Calm	0	0	.....	2cs	0	S	.....	6	0	Fair	
Rochester, N. Y	.....	.....	30.08	764.0	70.5	20.4	69	SE	1	0.4	.....	8cs	1ks	SW	SE	0	0	Cloudy	
Salt Lake City, Utah	.....	.....	30.29	769.4	38	3.3	63	N	10	4.5	.....	.....	10s	.....	.....	0.09	2.3	Cloudy	
Sandy Hook, N. J	25.67	652.0	30.00	762.0	56	13.3	45	SE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
San Diego, Cal	.....	.....	30.06	763.5	49	9.4	71	NE	20	8.9	.....	.....	10s	.....	NE	0.87	22.1	Cloudy	
San Francisco, Cal	.....	.....	29.94	760.5	54	12.2	86	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M	.....	.....	29.87	758.7	51	12.2	79	SE	6	2.7	.....	0	Fog	.....	SE	0	0	Fair	
Savannah, Ga	23.34	592.8	29.98	758.9	44	6.7	52	NE	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Shreveport, La	.....	.....	29.99	761.7	76	24.4	72	Calm	0	0	.....	2cs	Haze	.....	.....	0.84	21.3	Fair	
Smithville, N. C	.....	.....	30.07	763.8	68	20.0	87	E	5	2.2	.....	.....	10ks	.....	SE	0.77	19.6	Threatening	
Springfield, Mass	.....	.....	30.08	764.5	74	23.3	81	NW	3	1.3	.....	5c,ck	0	W	.....	0.14	3.6	Fair	
St. Louis, Mo	.....	.....	30.05	763.3	47	8.3	54	N	12	5.4	.....	0	0	.....	.....	0.53	13.5	Clear	
St. Marks, Fla	.....	.....	30.27	768.8	48	8.9	70	NE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
St. Paul, Minn	.....	.....	30.04	763.0	75	23.9	85	W	5	2.2	.....	0	0	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	30.35	770.9	52.5	11.4	45	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Thatcher's Island, Mass	.....	.....	30.35	745.5	31	— 0.6	89	NNE	23	10.3	.....	.....	10s	.....	.....	0.05	1.3	.....	
Toledo, Ohio	.....	.....	30.01	762.2	44	6.7	75	N	21	9.4	.....	.....	10s	.....	N	0.65	16.5	Cloudy	
Tucson, Arizona	.....	.....	30.32	770.1	48	8.9	70	N	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga	27.50	698.5	30.08	764 0	62	16.7	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Vicksburg, Miss	.....	.....	29.98	761.5	71	21.7	90	NW	2	0.9	.....	0	0	.....	.....	0.75	19.1	Clear	
	.....	.....	30.07	763.8	74	23.3	72	E	1	0.4	.....	8ck	0	NW	.....	0.20	5.1	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
Virginia City, M. T.	24.37	619.0	29.85	758.2	44	6.7	67	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Washington, D. C.	.....	.....	30.14	765.5	54.5	12.5	62	N	12	5.4	.....	1k	0	N	.....	0.63	16.0	Clear.	
Wilmington, N. C	.....	.....	29.98	761.5	72	22.2	80	N	8	3.6	.....	5ck	1ks	W	N	0.09	2.3	Fair.	
Wood's Holl, Mass.	.....	.....	29.98	761.5	49	9.4	77	NW	8	3.6	.....	.....	10s	.....	NW	0.08	2.0	Cloudy.	
Wytheville, Va.	27.76	705.1	29.89	759.2	56	13.3	80	N	6	2.7	.....	.....	10ks	.....	N	0.04	1.0	Cloudy.	
Yankton, Dakota.	29.05	737.9	30.36	771.1	53	11.7	61	Calm	0	0	.....	5c	0	W	.....	0	0	Fair.	
Yuma, Arizona	.....	.....	29.85	758.2	65	18.3	.....	E	.....	.....	.....	0	0	.....	.....	0	0	Clear.	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.03	762.7	83	28.3	70	E	6	2.7	.....	5k	0	NE	.....	0	0	Fair.	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.98	761.5	81	27.2	87	E	.....	.....	.....	10c	0	.....	.....	0	0	Fair.	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.13	765.3	78	25.6	90	Calm	0	0	.....	8c	2s, k	NE	.....	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.81	757.2	79	26.1	70	N	1.2	0.5	.....	5c	0	N	.....	0	0	Fair.	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.03	762.7	79	26.1	72	E	7.2	3.2	.....	10c	0	SW	.....	0	0	Fair.	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.10	764.5	72.0	22.2	88	SW	13.0	5.8	.....	0	8fk	.....	.....	0.15	3.8	Cloudy.	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica W. I.	27.20	690.4	29.97	761.2	69	20.6	90	NE	1.0	0.4	.....	5c	0	NE	.....	0.24	6.1	Fine.	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.02	762.5	81	27.2	83	E	.....	.....	3	5k	4k	E	.....	0.150	3.8	Dry.	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	762.7	.....	.....	85.1	29.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.19	639.8	.....	.....	65.0	18.3	85	SW	1	0.4	.....	3ck	2s	.....	.....	0.57	14.5	Fair.	Thomas Herran.
St. John's, Newfoundland	.....	.....	30.04	763.0	59.0	15.0	75	E	.....	.....	.....	2c	2s	.....	.....	0	0	Fair.	John Delaney.
York Factory, B. A.	.....	.....	29.99	761.7	33	0.6	95	N	16	7.2	.....	.....	8s	.....	.....	0	0	.....	J. Fortescue.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Makawao, Maui, H. I.	27.86	706.6	30.03	762.7	61	16.1	76	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	F. L. Clarke.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	Weather.	Observer
Steamer Hibernian, N. 49° 26′, W. 44° 25′.	WNW	11	Rough	.....	Fog and mist	Lieut. F. Archer, R. N. R.
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Farenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) 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.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 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.
0:58 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:18 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	75.0	23.9	41	N			1		0			0	0	Clear	Charnot.
Algiers			30.05	763.2	71.6	22.0	55	N			2		0			0	0	Clear	Peter.
La Calle																			Kunts.
Tunis			30.02	762.4	82.0	27.8	45	ENE			2		6			0	0	Fair	Jacques.
Sfax			30.11	764.7	75.4	24.1	75	SE			3		2			0	0	Clear	Chauvey.
Setda			30.02	762.6	84.2	29.0	37	NNW			1		2			0	0	Clear	Millot.
Tebessa			30.07	763.8	81.3	27.4		SW			2		6			0	0	Fair	Colin.
Geriville			30.09	764.3	82.4	28.0	0	SW			3		3			0	0	Fair	Buard.
Laghouat			30.10	764.5	86.0	30.0		SW			3		3			0	0	Fair	Guyot.
Biskra			30.03	762.8	84.6	29.2	37	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.

Agram			29.87	758.8	63.1	17.3	68	SW			2		7			0.031	0.8		Prof. Ivan Stosir.
Cracow, I. R. Observatory			29.79	756.6	64.4	18.0	49	WSW			2		8			0	0		Dr. Wiersbiski.
Eperies			29.80	756.9	60.8	16.0	82	Calm			0		10			0	0		Julius Mikolik.
Gratz	28.67	728.1	29.84	757.9	62.6	17.0	59	SW			2		7			0.213	5.4		Andreas Rospini.
Hermannstadt	28.44	722.5	29.95	758.2	54.7	12.6	87	WNW			1		10			0.679	17.25		Prof. Reissenberger.
Kremsmünster	28.52	724.3	29.83	757.6	61.2	16.2	58	W			2		8			0	0		Prof. C. Wagner.
Lemberg			29.73	755.2	58.8	14.9	69	SW			2		9			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.89	759.2	67.8	19.9	72	S			2		4ks			0	0		I.R.Hydrographic Office.
Szegedin			29.80	757.0	66.2	19.0	50	W			1		10			0	0		Karl Stancel.
Trieste			29.90	759.5	66.6	19.2	75	Calm			0		9			0	0		Prof. V. Farolfi.
Vienna			29.80	756.8	66.9	19.4	43	S			2		8			0.020	0.5		I. R. Central Met. Obs'y.

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

BELGIAN SERIES.

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

Brussels			29.74	755.4	61.0	16.1	55	SW			1		10			0	0		Royal Observatory.

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

BRITISH SERIES.

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, 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	47.0	8.3		NNE	22	9.8			9			0.080	2.03	*D. clouds	William Boswell.
Ardrossan			29.87	758.7	55	12.8		NE			2		7					*D. clouds	William McNeil.
Armagh, Observatory			29.88	758.9	51.3	10.7		NNE	14	6.3			9					Squally	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs'y			29.70	754.4	50.0	13.8		NNE	17	7.6			5					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			29.83	757.7	53.6	12.0		NNE					10					*D. clouds	J. Dreyer.
Bradford			29.74	755.4	49.9	9.9		NE			1		10			0.06	1.5	Raining	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	82.0	27.8		NE			2		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.68	753.9	58.0	14.4		E			1		10					Overcast	H. Todd. [H. C.
Cardington			29.69	754.1	59.0	15.0		SW			1		9					Overcast	John McLaren.
Carlisle			29.83	757.7	47.9	8.8		NE			6		10			0.58	14.7	Showery	T. Bel, for J. Car mell.
Chatham, School M. E			29.69	754.1	49.5	9.7		W			2		9					Raining	Capt. J. Fellowes, R.E.
Dartmoor	28.30	718.8	29.80	756.9	50.4	10.2		N			3		8					Gloomy	R. E. Power.
Donaghadee			29.85	758.2	50	10.0		NE			4		10					Overcast	J. Mac Gowan.
Dover			29.69	754.1	50	10.0		SSE			2		8					Raining	J. Costello.
Eccles, (near Manchester.)			29.69	754.1	56.8	13.8		NE	6.4	2.9			8					Squally	Thomas Mackereth.
Falmouth, Observatory			29.72	754.9	55.8	13.2		NW	15	6.7			6					Overcast	The Staff.
Fort Napier, (Natal)	27.57	700.3	29.80	756.9	67.7	19.8		NE			1		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	82.0	27.8		N			2		8					Overcast	
Galway, Queen's College			29.79	756.7	60	15.6		W			6		10					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.02	762.5	72.0	22.2		W			6		0					Blue sky	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			29.86	758.4	51.5	10.8		E			3		5					Fine	Lewis Stuart.
Great Yarmouth			29.73	755.1	51	10.6		SSE			3		6					Raining	G. T. Watson.
Greenwich, Royal Obs'y			29.70	754.4	51.3	10.7		ENE			1		10					Raining	The Staff, for G. B. Airy.
Guernsey			29.74	754.9	53.5	11.9		WNW			2		5					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y			29.75	755.6	47.8	8.8		NNE			2		10					Raining	L. J. Crossley.
Helston			29.69	754.1	60	15.6		NW			2		2k			0	0	Fine	M. P. Moyle.
Holyhead			29.77	756.1	52	11.1		NNE			5		4					*D. clouds	John Tilston.
Kew, Observatory			29.70	754.4	50.0	10.0		ESE	6	2.7			10					Raining	The Staff.
Kingstown			29.81	757.2	51	10.6		NNE			5		9					Overcast	George Mitchell.
Leicester Museum			29.72	754.9	50.0	10.0		E			1		10					Raining	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)			30.07	763.8	78.6	26.0		NW			1		6k						Sergt. F. Travis, A. H. C.
Nairn			29.97	761.2	51	10.6		NE			3		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.13	765.3	82.1	27.8		NE			6		5					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.72	754.9	57.0	13.9		ESE			2		10k. d		ESE	0.021	0.53	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.70	754.4	51.0	10.6		NNE			3		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.67	753.6	54	12.2		E			1		10					Gloomy	J. Lucas.
Plymouth			29.70	754.4	56.5	13.6		NW			1		10					Showery	John Merrifield.
Roche's Point			29.79	756.7	54	12.2		NNE			4		8					Showery	W. Kennedy.
Saint Ann's Head			29.71	754.6	52	11.1		NW			2		8					Overcast	John C. Walker.
Saint Helier, Jersey)			29.71	754.6	55.8	13.2		NNW			3		8					¾ clouded	A. P. Amy.
Sandwick Manse, Orkneys)			29.99	761.7	46	7.8		N	25	11.2			10					Overcast	Rev. C. Clouston, LL. D.
Scarborough			29.76	755.9	48.8	9.3		NE			2		10					Overcast	F. Shaw.
Scutari Cemetery Turkey)			29.96	761.0	69.4	20.8		SW			1		3					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.68	758.9	57.5	14.2		SE			1		8					Overcast	W. F. Cooper.
Silloth Rectory			29.90	759.4	54.5	12.5	73	SE			4		7			0.410	10.41	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.72	754.9	52.7	11.5		NE			2		10			0.010	0.25	Threatening	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.			30.00	762.0	48	8.9		NE			4		8			Blank	Blank	*D. clouds	John Smith.
Strathfield Turgiss			29.71	754.6	49.4	9.7		SE			0-1		10					Raining	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.95	760.7	49	9.4		N			4		6					*D. clouds	John Trotter.
Truro, Royal Institution			29.76	755.9	52	10.7		NW			4		5					*D. clouds	W. Newcombe.
Valencia, Observatory			29.82	757.4	51.7	12.6		N	21	9.4			10					*D. clouds	The Staff.
Sub-Stations.																			
Calf of Man, (Isle of Man)					51	10.6		N			4		5						Thomas Dawson.
Cape Good Hope, Obs'y			30.10	764.5	57.0	13.9	74	NW	17	7.6		5	5						The Staff, for E. J. Stone.
Leith, Restalrig Park			29.92	760.0	47.0	8.3		NE			5		10ks			0.19	4.8	Cloudy	Andrew Gibb.
Mauritius, Observatory			30.09	764.3				ENE	9.2	4.1						0	0		C. Meldrum.
Melbourne, Observatory			30.20	767.1	49.0	9.4	86	WNW	3	1.3			4			0	0	Fine	R. L. J. Ellery.
Monach Lt-house, Hebrides			29.98	761.5	50	10.0		NE			6	5	5	NE		0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.92	760.0	43.5	6.4		E			6		10						Robert Burnet.

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 1. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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	753.3	57.2	14.0	62	SSW			2		7						
Fanöe			29.69	754.2	54.3	12.4	80	WSW			4		9						
Godthaab, (Greenland)			29.79	756.6	35.1	1.7	96	Calm			0		10						
Stykkisholm, (Iceland)			30.13	765.1	48.0	8.9	87	W			4		5						
Thorshavn, (Faröe)			30.04	762.9	49.8	9.9	92	NW			5		10						
Vestervig			29.65	753.1	50.0	10.0	95	Calm			0		10					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.
Alencon	.....	.....	30.09	764.3	59.0	15	86	W	.....	.....	2	.....	8cn	.....	W	0.197	5.0	Very cloudy	Normal School.
Amiens	.....	.....	29.69	754.2	56.8	13.8	82	SW	.....	.....	3	.....	10	.....	.....	0.094	2.4	Covered	Normal School.
Avignon	.....	.....	29.95	760.7	68.5	20.3	37	SW	.....	.....	2	.....	0	.....	.....	0	0	Very clear...	Normal School.
Bar-sur-Seine	.....	.....	29.83	757.7	60.4	10.2	42	SSW	.....	.....	2	.....	10	.....	WSW	0.063	1.6	Raining.....	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.67	753.6	56.3	13.5	84	SW	12.1	5.4	.....	.....	10	.....	SW	0.232	5.9	Covered	Beaumette Observatory
Beauvais	.....	.....	29.72	754.9	55.9	13.3	73	SSE	.....	.....	3	.....	10	.....	S	0	0	Covered	Normal School.
Besançon	.....	.....	29.88	759.0	63.7	17.6	52	SW	.....	.....	3	.....	5	.....	SW	0.091	2.3	Cloudy.....	Normal School.
Bourg en Bresse	.....	.....	29.96	761.0	63.0	17.2	67	SE	.....	.....	3	.....	10cn	.....	W	0.051	1.3	Covered	Normal School.
Bourges	.....	.....	29.80	756.8	56.5	13.6	82	S	.....	.....	4	.....	8	.....	NE	0.165	4.2	Very cloudy	Normal School.
Brest	.....	.....	29.70	754.4	61.3	16.3	58	WNW	.....	.....	3	.....	8n	.....	WNW	0.324	8.25	.....	Naval Observatory.
Caen	.....	.....	30.617	777.47	57.9	14.4	86	W	.....	.....	2	.....	5	.....	E	0.339	8.6	Cloudy.....	Normal School.
Carcassonne	.....	.....	29.95	760.8	63.0	17.2	62	W	.....	.....	4	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Chartres	.....	.....	29.71	754.7	52.7	11.5	.....	SW	.....	.....	4	.....	10	.....	SW	0.28	7.	Covered	Normal School.
Clermont	.....	.....	29.84	757.8	57.4	14.1	43	SW	.....	.....	3	.....	10	.....	W	0.075	1.9	.....	Puy de Dome Obs'y.
Commercy	.....	.....	29.85	758.1	58.1	14.5	55	SW	.....	.....	2	.....	8kn	.....	SW	0.209	5.3	Very cloudy	Normal School.
Commune de Gréasque*	.....	.....	30.02	762.5	66.4	19.1	39	NW	.....	.....	3	.....	2	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	29.87	758.7	66.4	19.1	84	NW	.....	.....	4	.....	10	.....	SE	0.31	8.	Covered	Normal School.
Le Mans	.....	.....	29.89	759.1	54.5	12.5	83	SW	.....	.....	3	.....	8	.....	SW	0.20	5.	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	29.87	758.7	65.3	18.5	50	SW	.....	.....	4	.....	10	.....	SW	0	0	Covered	Normal School.
Mâcon	.....	.....	29.97	761.3	64.0	17.8	63	SE	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Mirecourt	.....	.....	29.84	757.8	56.8	13.8	50	SSE	.....	.....	4	.....	8	.....	NE	0	0	Very cloudy	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	29.58	751.2	72.5	22.4	49	SW	.....	.....	2	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Orleans	.....	.....	29.74	755.3	56.1	13.4	80	SW	.....	.....	4	.....	8	.....	SW	0	0	Very cloudy	Normal School.
Paris, Observatory	.....	.....	29.74	755.5	53.4	11.9	93	S	.....	.....	4	.....	10	.....	.....	0.181	4.60	Raining.....	National Observatory.
Parthenay	.....	.....	29.79	756.6	60.5	10.5	86	SW	.....	.....	2	.....	8	.....	SW	0.039	1.5	Very cloudy	Normal School.
Privas	.....	.....	29.89	759.2	66.2	19	.....	SSE	.....	.....	2	.....	5	.....	SSE	0	0	Cloudy.....	Normal School.
La Roche-sur-Yon	.....	.....	29.59	751.5	58.6	14.8	78	SW	.....	.....	2	.....	5	.....	SE	0.142	3.6	Cloudy.....	Normal School.
Rochefort, Observatory	.....	.....	29.84	757.8	58.6	14.8	78	W	.....	.....	4	.....	8	.....	E	0.551	14.0	¾ Covered...	Naval Observatory.
Rouen	.....	.....	29.67	753.7	54.3	11.8	86	SW	.....	.....	2	.....	10	.....	SW	0.256	6.5	Covered	Normal School.
Saint Lo	.....	.....	29.41	747.1	52.0	11.1	90	NW	.....	.....	1	.....	1	.....	SW	0.295	7.5	.....	Normal School.
Tarbes	28.86	733.1	29.92	760.0	63.0	17.2	.....	W	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Villefranche	.....	.....	29.93	760.1	55.1	18.4	52	SE	.....	.....	2	.....	10	.....	SW	0.024	0.60	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.89	759.3	80.6	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.97	761.2	64.6	18.1	44	WSW	.....	.....	1	.....	8	.....	.....	0	0	.....	Marseilles Observatory.
Mont-Louis	24.76	629.0	30.08	764.0	51.8	11.0	64	SSW	35.4	15.83	.....	.....	5	.....	W	0.189	4.8	.....	—. Falguère.
Montsouris, Paris	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montsouris Observ'tory.
Perpignan	.....	.....	29.86	758.4	67.3	19.6	55	NE	7.4	3.33	.....	.....	3	.....	W	0	0	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.74	755.5	54.7	12.6	86	S	.....	.....	3	.....	10	.....	.....	0.157	4.0	Very cloudy	E. Renou.
Toulouse	.....	.....	29.95	760.6	63.7	17.6	46	W	.....	.....	2	.....	10	.....	.....	0.205	5.2	.....	Toulouse Observatory.
Tours	.....	.....	29.76	755.8	54.9	12.7	83	SW	.....	.....	2	.....	10	.....	SW	0.169	4.3	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.74	755.3	54.3	12.4	90	SW	.....	.....	4	.....	10	.....	.....	0.155	3.94	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai	.....	.....	29.82	757.4	73.0	23.1	72	NNW	3.1	1.4	.....	.....	5	.....	.....	0	0	Misty.....	H. Le Lee, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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	.....	.....	29.83	757.6	58.3	14.6	61	W	.....	.....	6	.....	7	W	.....	0.098	2.5	.....	Prof. T. Hoh.
Berlin	.....	.....	29.77	756.2	62.6	17.0	56	S	.....	.....	1	.....	7	.....	.....	0.031	0.8	.....	Prof. Arndt.
Breslau	.....	.....	29.82	757.5	60.9	19.4	40	SSW	.....	.....	4	.....	1	.....	.....	0.154	3.9	.....	Dr. P. Nasgebauer.
Carlsruhe	.....	.....	29.83	757.6	60.8	16.0	65	SW	.....	.....	5	.....	9	.....	.....	0.091	2.4	.....	A. Senz.
Cassel	.....	.....	29.80	756.8	65.3	18.5	41	W	.....	.....	2	.....	8	S	.....	0.035	0.9	.....	Dr. H. Möll
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.88	758.9	63.3	17.4	43	SW	.....	.....	1	.....	5	.....	.....	0.110	2.8	.....	Physical Society
Friedrichshafen	.....	.....	29.87	758.8	60.8	16.0	57	W	.....	.....	.....	.....	9	.....	.....	0.689	17.5	.....	M. Wilhelm.
Hamburg	.....	.....	29.75	755.6	58.3	14.6	56	W	.....	.....	4	.....	8k	.....	.....	0.039	1.0	Good.....	Captain F. Hegemann.
Kiel	.....	.....	29.70	754.3	58.6	14.8	48	W	.....	.....	2	.....	8	.....	.....	0.051	1.3	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.71	754.7	56.7	13.7	65	W	.....	.....	5	.....	5	.....	.....	0.043	1.1	.....	Prof. E. Luther.
Koslin	.....	.....	29.73	755.2	53.8	12.1	.....	Calm	.....	.....	0	.....	4	.....	.....	0.154	3.9	.....	H. Müller.
Leipsic	.....	.....	29.82	757.5	60.1	15.6	73	SW	.....	.....	2	.....	9	SW	.....	Inap.?	Inap.?	Rainy.....	Prof. Bruhns.
Memel	.....	.....	29.74	755.3	50.4	10.2	82	WNW	.....	.....	4	.....	10	.....	.....	0.102	2.6	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.80	756.9	59.4	15.2	6	SW	.....	.....	6	.....	3	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.67	753.7	54.0	12.0	80	NE	.....	.....	3	.....	8	.....	.....	0.008	0.2	.....	A. Lothes.
Posen	.....	.....	29.82	757.4	60.8	16.0	58	NW	.....	.....	5	.....	10	.....	.....	0.051	1.3	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.85	758.2	64.0	17.8	43	SW	.....	.....	2	.....	10	SW	.....	0.020	0.5	.....	Dr. Schur.
Stuttgart	.....	.....	29.84	758.0	63.5	17.5	40	NW	.....	.....	3	.....	8	.....	.....	Inap.?	Inap.?	Light rain ...	Prof. Schoder.
Thorn	.....	.....	29.75	755.6	62.4	16.9	57	N	.....	.....	2	.....	5	SW	.....	0.201	5.1	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.78	756.5	59.5	15.3	60	S	.....	.....	1	.....	10	.....	.....	0.012	0.3	Graupel.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	29.65	753.1	56.5	13.6	86	SW	.....	.....	3	.....	4	.....	.....	0.055	1.4	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

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. Directions. Upper. From—	Clouds. Directions. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens																			

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

ITALIAN SERIES.

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

Udine			29.89	759.2	55.2	12.9	81	NE	2.5	1.1			5			0	0		
Padua			29.86	758.5	61.5	16.4	69	NNE	11.2	5.0			4	ENE		0	0		
Vicenza			29.87	758.8	62.6	17.0	64	ESE	3.8	1.7			6	E		0	0		
Verona			29.84	757.9	68.9	20.5	64	E			1		10			0.295	7.5		
Bergamo	28.50	723.9	29.79	756.7	66.6	19.2	55	SSE			4		5			0	0		
Domodossola	28.90	734.1	29.90	759.5	68.9	20.5	54	SW			4		9			0	0		
Milan			29.84	757.9	72.3	22.4	71	WSW			4		6	WNW		0	0		
Pavia			29.84	758.0	71.2	21.8	52	S			4		7	SW		0	0		
Moncalieri			29.84	757.8	67.8	19.9	53	ESE	4.2	1.9			6	NE		0	0		
Mondovi	27.94	709.6	29.81	757.1	66.6	19.2	65	NE			4		4	WNW		0	0		
Porto Maurizio			29.94	760.4	67.6	19.8	64	SSW			2		1			0	0		
Genoa			29.92	760.0	64.0	17.8	63	SE	3.8	1.7			4	SE		0	0		
Piacenza			29.85	758.2	69.1	20.6	44	SE	4.2	1.9			4	W		0	0		
Parma			29.86	758.4	67.5	19.7	55	NW			4		8			0	0		
Bologna			29.91	759.6	72.0	22.2	45	SW			8		4	N		0	0		
Florence			29.99	761.7	67.6	19.8	44	NW					4	NW		0	0		
Leghorn			29.97	761.2	66.0	18.9	59	WSW	16.8	7.5			1			0	0		
Siena	28.74	730.1	29.93	760.3	67.1	19.5	45	NW	16.8	7.5			4	W		0	0		
Urbino																			
Pesaro																			
Ancona			29.94	760.4	67.6	19.8	60	SSW			4		6			0.02	0.5		
Grosseto			29.98	761.4	71.2	21.8	49	SSE			4		4	S		0	0		
Rome			30.04	762.9	70.2	21.2	56	SSW	8.7	3.9			4	SW		0	0		
Naples, O. U.			30.07	763.8	72.3	22.4	60	SW			2		3	W		0	0		
Lecce			30.02	762.4	74.8	23.5	35	W	11.2	5.0			3	W		0	0		
Cosenza			30.07	763.6	73.4	23.0	76	NW	0	0			8			1	0		
Ripusto, (Sicily)			30.06	763.4	75.6	24.2	61	Calm			0		2			0	0		
Palermo			30.03	762.7	72.5	22.5	50	NE	8.7	3.9			1			0	0		
Caltanissetta	28.10	713.7	30.00	762.0	73.4	23.0	29	W			4		1	E		0	0		
Sub-Seriza.																			
Naples, S. R.			30.08	764.0	69.3	20.7	72	SW	2.5	1.1			k,0	W		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally, the weather in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 550 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Tokio																			

NETHERLANDS SERIES.

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

Flushing			29.78	756.3	57.6	14.2		SSW			4								
Groningen			29.69	754.0	59.5	15.3		WSW			3								
Helder			29.74	755.5	55.9	13.3		SW			2								
Utrecht			29.72	755.0	60.1	15.6	61	WSW			3		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.

Bergen			29.62	752.4	54.3	12.4	61	W	11.0	4.9			0			0	0		
Brönö			29.71	754.5	42.8	6.0	67	WNW	7	3			9			0	0		
Christiania			29.61	752.1	61.5	16.4	44	SSW	12.8	5.7			8			0	0		
Tromsö			29.83	757.6	39.9	4.4	70	W	0	0			10			0.146	3.7		Rain & snow

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h. 1p. 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)	.....	.....	30.42	772.6	67.8	19.9	72	W	7.3	3.28	.....	.....	3	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.08	764.1	65.1	18.4	52	W	12.3	5.50	.....	.....	9	WNW	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.30	769.6	65.3	18.5	58	SW	5.8	2.58	.....	.....	10	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.17	766.3	60.4	15.8	72	SW	16.1	7.2	.....	.....	10	.....	.....	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	.....	.....	29.74	755.4	63.9	17.7	52	WSW	9	4	.....	.....	5	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.67	753.7	61.0	16.1	49	SW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.63	752.7	49.5	9.7	86	SSE	7	3	.....	.....	10	.....	.....	.....	.....	.....	Physic l Cabinet.
St. Petersburg	.....	.....	29.69	754.2	47.7	8.7	85	SW	7	3	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.61	751.9	52.5	11.4	73	S	7	3	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kief	.....	.....	30.07	763.8	66.6	19.2	34	S	9	4	.....	.....	8	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.02	762.5	65.5	18.6	38	S	20	9	.....	.....	2	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.06	763.4	60.3	15.7	65	SSW	7	3	.....	.....	4	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.90	761.0	50.5	10.3	45	NNE	4	2	.....	.....	4	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.91	759.7	63.7	17.6	26	WSW	13	6	.....	.....	4	.....	.....	.....	.....	.....	Meteorological Obs.
Arohangel	.....	.....	29.77	755.2	41.2	5.1	88	ESE	9	4	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.59	726.2	29.98	761.4	63.3	17.4	28	N	11	5	.....	.....	2	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.02	762.5	55.8	14.2	57	W	4	2	.....	.....	5	.....	.....	.....	.....	Raining.....	Sebastianof.
Kasan	.....	.....	29.93	760.2	52.0	11.1	57	W	4	2	.....	.....	5	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.08	738.6	30.07	763.6	55.0	12.8	49	W	9	4	.....	.....	7	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.80	758.5	61.0	16.1	59	NNW	9	4	.....	.....	1	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Robrof.
Tashkend	28.07	712.9	29.64	752.9	80.5	30.3	64	Calm	0	0	.....	.....	9	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.98	761.6	62.1	16.7	65	N	22	10	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	30.08	763.9	50.5	10.3	43	NW	9	4	.....	.....	1	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.80	758.5	66.2	19.0	23	Calm	0	0	.....	.....	0	.....	.....	Bla	n.	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	34.0	1.1	100	Calm	0	0	.....	.....	10	.....	.....	.....	.....	Raining.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the wind-velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 400 meters, or 1,311.8 feet; Ekaterinburg, 208.4? m., or 1,005.9? ft.; Tashkend, 494.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.6 m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	29.93	760.2	70.7	21.5	38	W	18.6	8.33	.....	4	0	W	.....	0	0	.....	Royal Observatory.
San Fernando	.....	.....	30.13	765.3	67.8	19.9	57	W	11.2	5.0	.....	0	2	.....	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. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Raparanda	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Umea	.....	.....	29.64	752.9	48.5	6.4	86	SSW	.....	.....	1	.....	10	.....	.....	0	0	.....	
Hernosand	.....	.....	29.64	752.9	50.2	10.1	83	SSW	.....	.....	1	.....	8	.....	.....	0.043	1.1	Raining.....	
Stockholm	.....	.....	29.63	752.6	52.2	11.2	69	SE	.....	.....	1	.....	4	.....	.....	0.177	4.5	.....	
Wisby	.....	.....	29.67	753.6	46.0	7.8	89	NE	.....	.....	1	.....	7	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.63	752.7	54.3	12.4	55	SSW	9.4	4.2	.....	.....	9	.....	.....	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	28.46	723.0	29.87	758.6	62.1	16.7	42	S			4		10			0.028	0.7	Covered	The Observatory.
Zurich	28.27	718.1	29.93	760.1	59.9	15.5	59	NW			1		8			0	0	Cloudy	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, —2.5 mm; Thermometer, —1.1 cent.; Relative Humidity, —14 per cent.

Note.—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. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople																			
Fao, (Persian Gulf)			29.84	758.0	93.2	34.0		NW			3		0						
Salonica			30.01	762.3	72.3	22.4		NW			4		0						
Valona			29.96	761.0	78.4	25.8		SW			2		2						
Varna			30.12	765.0	69.8	21.0		S			3		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.90	759.5	76.8	24.9	58	W			2		2k		SW	0	0	Fair	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B																			Hon. J. Ferguson.
Brockville, Ontario			30.24	768.1	52	11.1		SW	6	2.7		0	0			0	0	Clear	W. R. Bigg.
*Chatham, N. B			30.02	762.5	54	12.2	48	SW	6	2.7		0	0			0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island			30.07	763.8	45	7.2	87	S	5	2.2		0	0			0.06	1.5	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			30.13	765.3	56.2	13.4	54	NW			3	0	0			0	0	Bright	James Smith, M. A.
Dalhousie, N. B			29.97	761.2	44.0	6.7	79	N			1	0	0			0	0		H. A. Johnson.
Esquimault, B. C			29.83	757.7	53.2	11.8	80	SW	2	0.9		10cs	0			0.04	1.0	Cloudy	W. H. Bevis.
Fredericton, N. B			30.10	764.5	45.1	7.3	66	N	1	0.4		0	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			30.15	765.8	53	11.7	73	W	3	1.3		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.29	769.4	53.7	12.1	61	SW			1	0	0			0	0	Fi	H. J. Strang, M. A.
Granton, Ontario	29.16	740.7	30.26	768.6	53	11.7		W			1	0	0			0	0	Clear	James Grant.
*Halifax, N. S.			30.08	764.0	52	11.1	66	NW	1	0.4		0	0			0.21	5.3	Clear	F. Allison, M. A.
*Kingston, Ontario			30.25	768.3	49	9.4	82	SW	3	1.3		Haze	0	SW		0	0	Clear	S. Woods, M. A.
*Montreal, Quebec			30.10	764.5	51	10.6	60	SW	22	9.8		0	Haze			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.12	765.0	55	12.8	56	SW	6	2.7		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.19	766.8	52	11.1	60	S	8	3.6		2cs	0	S		0	0	Fair	Rev. R. Mosley.
*Port Dover, Ontario			30.25	768.3	50	10.0	72	W	4	1.8		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.			30.11	764.8	44.6	7.0		NW	5	2.2						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.31	769.9	52	11.1	79	W	9	4.0		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			30.04	763.0	51	10.6	59	SW	18	8.0		0	0			0	0	Clear	Capt. Astle, R. N.
St. John, N. B.			30.14	765.5	48	8.9	70	Calm	0	0		0	0			0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			30.20	767.1	54	12.2	40	SW	10	4.5		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.17	766.3	59	15.0	43	Calm	0	0		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario	28.97	735.8	30.24	768.1	49.1	9.5	77	W	9	4.0		0	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			30.07	763.8	50	10.0	48	N	5	2.2		0	0			0.05	1.3	Clear	T. C. Hill.
*Toronto, Ontario			30.25	768.3	50	10.0	70	SW	3	1.3		0	Haze			0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.24	768.1	52.7	11.5	72	E	8	3.6		0	0			0	0	Fine	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 m.

UNITED STATES SERIES.

Furnished by the cooperation 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.	.....	.....	30.21	767.3	54	12.2	67	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear.	
Alpena, Mich.	.....	.....	30.13	765.3	50	15.0	38	W	12	5.4	.....	0	0	.....	.....	0	0	Clear.	
Atlantic City, N. J.	.....	.....	30.28	769.1	56	13.3	68	NE	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
Augusta, Ga.	.....	.....	30.22	767.6	70	21.1	75	E	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy.	
Baltimore, Md.	.....	.....	30.34	770.1	50	13.3	45	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
Barnegat, N. J.	.....	.....	30.29	769.4	55	12.8	68	N	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
Benton, Montana	27.17	690.1	29.97	761.2	50	10.0	70	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Bismarck, Dakota	28.43	722.1	30.09	764.3	50	10.0	44	E	4	1.8	.....	Haze	Haze	E	E	0	0	Hazy.	
Boston, Mass.	.....	.....	30.20	767.1	54	12.2	64	SE	2	0.9	.....	Haze	Fog	.....	.....	0	0	Foggy	
Breckenridge, Minn	.....	.....	30.29	769.4	47	8.3	77	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Buffalo, N. Y.	.....	.....	30.27	768.8	47	8.3	69	SW	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
Burlington, Vt.	.....	.....	30.30	767.1	48	8.9	63	SW	5	2.2	.....	0	0	.....	.....	0	0	Clear.	
Cairo, Ill.	.....	.....	30.20	767.1	58	14.4	69	N	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy.	
Cape Hatteras, N. C.	.....	.....	30.20	767.1	60	15.6	49	NE	21	9.4	.....	2cs	0	.....	.....	Inap.	Inap.	Fair.	
Cape Henry, Va.	.....	.....	30.30	769.6	60	15.6	55	NE	5	2.2	.....	0	0	.....	.....	0	0	Clear.	
Cape Lookout, N. C.	.....	.....	30.26	768.6	62	16.7	57	NE	26	11.6	.....	2c	2cs	NE	.....	0	0	Fair.	
Cape May, N. J.	.....	.....	30.29	769.4	53	11.7	67	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Charleston, S. C.	.....	.....	30.22	767.6	69	20.6	70	NE	12	5.4	.....	0	5ks	.....	E	1.95	49.5	Fair.	
Cheyenne, Wyoming	24.12	612.6	30.06	763.5	43	6.1	96	S	8	3.6	.....	.....	Fog	.....	.....	0	0	Foggy.	
Chicago, Ill.	.....	.....	30.27	768.8	56	13.3	56	NE	3	1.3	.....	0	0	.....	.....	0	0	Clear.	
Cincinnati, Ohio	.....	.....	30.26	768.6	56	13.3	45	E	6	2.7	.....	5ck	0	.....	.....	0	0	Fair.	
Cleveland, Ohio	.....	.....	30.35	770.9	47.5	8.6	70	E	3	1.3	.....	0	Sm'e	.....	E	0	0	Smoky.	
Colorado Springs, Col.	24.22	615.2	30.09	764.3	42	5.6	100	SE	10	4.5	.....	.....	Fog	.....	.....	0.98	2.0	Heavy rain.	
Corsicana, Tex.	.....	.....	30.05	763.3	69	20.6	95	E	4	1.8	.....	5cs	5k	.....	E	0.88	22.4	Cloudy.	
Davenport, Iowa	.....	.....	30.31	769.9	55	12.8	68	E	1	0.4	.....	7cs	0	SW	.....	0	0	Fair.	
Denison, Tex.	.....	.....	30.05	763.3	69	20.6	90	SE	4	1.8	.....	.....	10s	.....	.....	0.21	5.3	Cloudy.	
Denver, Col.	24.91	632.7	30.13	765.3	43	6.1	83	SE	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	
Detroit, Mich.	.....	.....	30.31	769.9	53	11.7	48	SW	6	2.7	.....	0	Sm'e	.....	.....	0	0	Clear.	
Dodge City, Kan.	27.58	700.5	29.90	759.4	47	8.3	100	N	12	5.4	.....	.....	10n	.....	.....	0.42	10.7	Light rain.	
Dubuque, Iowa	.....	.....	30.31	769.9	55	12.8	80	E	1	0.4	.....	0	0	.....	.....	0	0	Clear.	
Duluth, Minn.	.....	.....	30.19	766.8	57	13.9	57	NW	4	1.8	.....	Haze	Haze	.....	.....	0	0	Hazy.	
Eastport, Me.	.....	.....	30.08	764.0	55	12.8	60	SW	5	2.2	.....	0	Haze	.....	.....	0	0	Clear.	
Erie, Pa.	.....	.....	30.29	769.4	52	11.1	53	S	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
Escanaba, Mich.	.....	.....	30.16	766.1	54	12.2	73	S	3	1.3	.....	0	0	.....	.....	0	0	Clear.	
Fort Gibson, Indian Ter.	.....	.....	30.06	763.5	63	17.2	88	E	2	0.9	.....	.....	10s	.....	.....	0.17	4.3	Cloudy.	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.86	733.0	29.95	760.7	65	18.3	94	N	8	3.6	.....	.....	10s	.....	N	0.12	3.0	Cloudy.	
Fort Sully, Dakota	28.49	724.0	30.16	766.1	50	10.0	72	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Galveston, Tex.	.....	.....	30.07	763.8	78	25.6	77	Calm	0	0	.....	5c	0	SW	.....	0	0	Fair.	
Grand Haven, Mich.	.....	.....	30.30	769.6	56	13.3	62	W	6	2.7	.....	1c	Sm'e	W	.....	0	0	Clear.	
Indianapolis, Ind.	.....	.....	30.29	769.4	55	12.8	55	E	4	1.8	.....	2ck	0	W	.....	0	0	Fair.	
Indianola, Tex.	.....	.....	30.04	763.0	74	23.3	90	SE	2	0.9	.....	2k	0	.....	.....	0	0	Fair.	
Jacksonville, Fla.	.....	.....	30.12	765.0	77	25.0	65	Calm	0	0	.....	5k	0	N	.....	0.34	8.6	Fair.	
Keokuk, Iowa	.....	.....	30.25	768.3	56	13.3	68	E	6	2.7	.....	5c	0	E	.....	0	0	Fair.	
Key West, Fla.	.....	.....	30.08	764.0	80.2	26.8	74	E	10	4.5	.....	2k	1ks	E	E	0	0	Fair.	
Kittyhawk, N. C.	.....	.....	30.30	769.6	57	13.9	68	NE	16	7.2	.....	0	0	.....	.....	0	0	Clear.	
Knoxville, Tenn.	.....	.....	30.21	767.3	58	14.4	64	NE	5	2.2	.....	1ck	0	NE	.....	0	0	Clear.	
La Crosse, Wis.	.....	.....	30.28	769.1	55	12.8	80	S	4	1.8	.....	2c	0	.....	.....	0	0	Fair.	
Leavenworth, Kan.	.....	.....	30.18	766.6	57	13.9	69	NE	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy.	
Lexington, Ky.	29.16	740.4	30.26	768.6	54	12.2	90	NE	4	1.8	.....	2c	0	.....	.....	0	0	Clear.	
Long Branch, N. J.	.....	.....	30.28	769.1	61	16.4	55	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Louisville, Ky.	.....	.....	30.25	768.3	56	13.3	57	NE	8	3.6	.....	5cs	0	NE	.....	0	0	Fair.	
Lynchburg, Va.	.....	.....	30.33	770.4	62	16.7	57	NE	2	0.4	.....	0	0	.....	.....	0	0	Clear.	
Malone, N. Y.	.....	.....	30.12	765.0	53	11.7	48	SW	11	4.9	.....	0	0	.....	.....	0	0	Clear.	
Manhattan, Kan.	29.02	737.1	30.16	766.1	57	13.9	87	NE	16	7.2	.....	.....	10ks	.....	.....	0.39	9.9	Cloudy.	
Marquette, Mich.	.....	.....	30.10	764.5	67	19.4	57	W	16	7.2	.....	0	0	.....	.....	0	0	Clear.	
Memphis, Tenn.	.....	.....	30.13	765.8	62	16.7	61	NE	6	2.7	.....	.....	10ks	.....	SW	Inap.	Inap.	Cloudy.	
Milwaukee, Wis.	.....	.....	30.33	770.4	52	11.1	66	W	6	2.7	.....	2c	Sm'e	.....	.....	0	0	Clear.	
Mobile, Ala.	.....	.....	30.08	764.0	76	24.4	90	NW	5	2.2	.....	0	0	.....	.....	0	0	Clear.	
Montgomery, Ala.	.....	.....	30.12	765.0	71	21.7	62	NE	5	2.2	.....	8cs	0	S	.....	0	0	Fair.	
Morgantown, W. Va.	.....	.....	30.30	769.6	52	11.1	78	Calm	0	0	.....	0	Fog	.....	.....	0	0	Fair.	
Mt. Washington, N. H.	25.92	607.6	30.28	769.1	38	3.3	63	N	5	2.2	.....	0	0	.....	.....	0	0	Clear.	
Nashville, Tenn.	.....	.....	30.17	766.3	61	16.1	61	NE	4	1.8	.....	10k	0	SW	.....	0	0	Cloudy.	
New Haven, Conn.	.....	.....	30.24	768.1	56	13.3	43	N	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
New London, Conn.	.....	.....	30.24	768.1	58	14.4	57	N	1	0.4	.....	0	0	.....	.....	0	0	Clear.	
New Orleans, La.	.....	.....	30.09	764.5	77	25.0	77	SW	4	1.8	.....	0	0	.....	.....	Inap.	Inap.	Clear.	
Newport, R. I.	.....	.....	30.22	767.6	52	11.1	59	NW	3	1.3	.....	0	0	.....	.....	0	0	Clear.	
New York, N. Y.	.....	.....	30.28	769.1	52	11.1	53	NW	2	0.9	.....	0	Haze	.....	.....	0	0	Fair.	
Norfolk, Va.	.....	.....	30.31	769.9	62	16.7	56	E	3	1.3	.....	0	0	.....	.....	0	0	Clear.	
North Platte, Neb.	27.27	692.6	29.84	757.9	51	10.6	78	Calm	0	0	.....	2ck	2s	SE	SE	0.22	5.6	Fair.	
Omaha, Neb.	29.16	740.6	30.22	767.6	56	13.3	68	Calm	0	0	.....	8cs	0	.....	.....	0	0	Fair.	
Oswego, N. Y.	.....	.....	30.26	768.6	51	10.8	76	SW	8	3.6	.....	0	Haze	.....	.....	0	0	Clear.	
Pembina, Dakota	.....	.....	30.13	765.3	54	12.2	67	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Philadelphia, Penn.	.....	.....	30.31	769.9	53	11.7	54	E	2	0.9	.....	0	0	.....	.....	0	0	Clear.	
Pike's Peak, Colorado	17.88	454.1	30.09	764.3	22	— 5.6	85	W	18	8.0	.....	1k	2ks	.....	.....	Inap.	Inap.	Clear.	
Pittsburgh, Penn.	.....	.....	30.3	769.6	45	7.2	84	N	3	1.3	.....	0	Fog	.....	.....	0	0	Fair.	
Port Huron, Mich.	.....	.....	30.28	769.1	54	12.2	61	SW	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
Portland, Me.	.....	.....	30.7	766.3	54	12.2	49	SW	3	1.3	.....	0	Haze	.....	.....	0	0	Clear.	
Portland, Oregon	.....	.....	29.99	761.0	51	10.6	86	Calm	0	0	.....	0	2s	.....	SE	0.01	0.3	Fair.	
Punta Rassa, Fla.	.....	.....	30.09	764.3	77 8	25.4	82	NE	5	2.2	.....	Haz	Sm'e	NE	NE	0	0	Cloudy.	
Rochester, N. Y.	.....	.....	30.23	767.8	51	10.6	59	SW	7	3.1	.....	0	Haze	.....	.....	0	0	Clear.	
Salt Lake City, Utah	25.52	648.2	29.85	758 2	55	12.8	55	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Sandy Hook, N. J.	.....	.....	30.26	768.6	52	11.1	64	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
San Diego, Cal.	.....	.....	29.97	761.2	57	13.9	93	N	4	1.8	.....	0	5s	.....	N	0	0	Fair.	
San Francisco, Cal.	.....	.....	30.04	763.0	51	10.6	86	W	4	1.8	.....	0	0	.....	.....	Inap.	Inap.	Clear.	
Santa Fé, N. M.	23.39	594.1	29.93	760.2	50	10.0	78	SE	16	7.2	.....	2k	0	S	.....	0	0	Fair.	
Savannah, Ga.	.....	.....	30.19	766.8	70	21.1	79	E	16	7.2	.....	.....	10s	.....	NE	0	0	Cloudy.	
Shreveport, La.	.....	.....	30.11	764.8	69	20.6	87	S	3	1.3	.....	8cs	0	SW	.....	0	0	Fair.	
Smithville, N. C.	.....	.....	30.24	768.1	63	17.2	73	N	15	6.7	.....	2k	0	NE	.....	0	0	Fair.	
Springfield, Mass.	.....	.....	30.22	767.6	56.5	13.6	56	W	4	1.8	.....	0	Sm'e	.....	.....	0	0	Clear.	
St. Louis, Mo.	.....	.....	30.25	768.3	57	13.9	63	E	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy.	
St. Marks, Fla.	.....	.....	30.10	764.5	71	21.7	85	Calm	0	0	.....	0	0	.....	.....	0.07	1.8	Clear.	
St. Paul, Minn.	.....	.....	30.22	767.6	58	14.4	61	SW	2	0.9	.....	2c	0	.....	.....	0	0	Clear.	
St. Paul's Island, Alaska	.....	.....	29.76	755.9	30	— 1.1	89	NNW	30	13.4	.....	8ck	0	N	.....	0.01	0.3	.....	
Thatcher's Island, Mass.	.....	.....	30.21	767.3	51	10.6	78	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Toledo, Ohio	.....	.....	30.29	769.4	55	12.8	55	W	1	0.4	.....	0	0	.....	.....	0	0	Clear.	
Tucson, Arizona	27.46	697 5	30.05	763.3	62	16.7	.....	S	.....	.....	.....	0	Haze	.....	.....	0	0	Clear.	
Tybee Island, Ga.	.....	.....	30.16	766.	71	21.7	85	NE	22	9.8	.....	.....	10ks	.....	NE	0	0	Cloudy.	
Vicksburg, Miss.	.....	.....	30.12	765.0	72	22.2	85	Calm	0	0	.....	10ck	0	S	.....	0.19	4 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.
Virginia City, M. T.	24.23	615.4	29.71	754.6	52	11.1	47	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Washington, D. C.	.....	.....	30.34	770.6	55	12.8	57	N	8	3.6	.....	0	Haze	.....	.....	0	0	Hazy.	
Wilmington, N. C.	.....	.....	30.26	768.6	61	16.1	61	NE	10	4.5	.....	2cs	0	.....	.....	Inap.	Inap.	Clear.	
Wood's Holl, Mass.	.....	.....	30.23	767.8	54	12.2	61	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear.	
Wytheville, Va.	27.92	709.2	30.08	764.0	55	12.8	68	E	4	1.8	.....	2ck	1s	NE	NE	0	0	Fair.	
Yankton, Dakota.	28.98	736.1	30.29	769.4	50	10.0	85	Calm	0	0	.....	10cs	0	W	.....	0	0	Cloudy.	
Yuma, Arizona.	.....	.....	29.82	757.4	68	20.0	.....	W	.....	.....	.....	0	0	.....	.....	0	0	Clear.	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	29.99	761.7	83	28.3	67	E	4	1.8	.....	5k	5s	E	.....	0	0	Fair.	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.95	760.7	79	26.1	95	E	.....	.....	.....	5k	5n	.....	.....	0.85	21.6	Rainy.	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.17	766.3	79	26.1	95	Calm	0	0	.....	8c	0	E	.....	0.33	8.4	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.81	757.2	80	26.7	70	N	7.2	3.2	.....	8cs	0	N	.....	0	0	Fair.	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.09	764.3	79	26.1	74	NE	6.0	2.7	.....	5c	0	.....	.....	0	0	Fair.	Charles Hasselbrink.
St. Georges, Bermudas.	.....	.....	30.14	765.5	77.0	25.0	69	W	9.0	4.0	.....	0	0	.....	.....	0.03	0.8	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	29.99	761.7	70	21.1	90	E	2.0	0.9	.....	5c	0	E	.....	0.08	2.0	Fine.	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	29.99	761.7	82	27.8	79	E	.....	.....	3	7ks	7ks	E	.....	0.030	0.76	Dry.	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.02	762.6	.....	.....	86.9	30.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.19	639.8	.....	.....	64.5	18.1	85	Calm	0	0	.....	6ck	4s	.....	.....	0.72	18.3	Cloudy.	Thomas Herran.
St. John's, Newfoundland.	.....	.....	29.97	761.2	51.5	10.8	86	SE	.....	.....	.....	.....	10n	.....	.....	0.05	1.3	Rain and mist	John Delaney.
York Factory, B. A.	.....	.....	30.28	769.1	26.5	— 3.1	94	N	3	1.3	.....	.....	9s	.....	.....	0	0	.....	J. Fortescue.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Makawao, Maui, H. I.	27.86	707.6	30.03	762.7	60	15.6	70	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	F. L. Clarke.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Hibernian, N. 48° 12', W. 48° 15'.	W by N	11½	30.04	763.0	41	5.0	.....	SW	.....	.....	4	.....	Fog	.....	.....	Smooth	.....	Fog and mist	Lieut. F. Archer, R. N.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The temperatures at York Factory, when below —40° Fahrenheit, are read from a spirit thermometer. The rain-fall at St. John's, Porto Rico, is measured at 5 25 p. m on the same day. The altitude of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2.892 ft., or 881.5 m.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) 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.; 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.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

Brig. Gen. (Bvt. Assg't.) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 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	.....	.....	29.95	760.7	75.4	24.1	41	Calm	.....	.....	0	.....	0	.....	.....	0	0	Clear	Charnot.
Algiers	.....	.....	29.93	760.3	77.0	25.0	45	NW	.....	.....	3	.....	6	.....	.....	0	0	Fair	Peter.
La Calle	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Kunts.
Tunis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sétif	.....	.....	29.87	758.6	90.0	32.2	41	E	.....	.....	3	.....	6	.....	.....	0.071	1.8	Fair	Jacques.
Saida	.....	.....	29.95	760.7	79.5	26.4	53	SE	.....	.....	4	.....	2	.....	.....	0	0	Clear	Chauvey.
Tebessa	.....	.....	29.99	761.8	73.4	23.0	31	NNW	.....	.....	1	.....	2	.....	.....	0	0	Clear	Millot.
Geriville	.....	.....	29.93	760.3	84.6	29.2	.....	S	.....	.....	4	.....	6	.....	.....	0	0	Fair	Colin.
Laghouat	.....	.....	30.01	762.3	76.3	24.6	14	SW	.....	.....	3	.....	2	.....	.....	0	0	Clear	Buard.
Biskra	.....	.....	29.98	761.4	93.2	34.0	22	SW	.....	.....	4	.....	0	.....	.....	0	0	Clear	Guyot.
	.....	.....	29.91	759.6	92.3	33.5	.....	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. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	.....	.....	29.76	755.9	70.2	21.2	46	SW	.....	.....	4	.....	5	.....	.....	0.028	0.7	.....	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	29.72	754.8	66.4	19.1	45	W	.....	.....	2	.....	9	.....	.....	0.051	1.3	.....	Dr. Wierzbiski.
Sperles	.....	.....	29.71	754.6	66.2	19.0	64	S	.....	.....	2	.....	7	.....	N	0	0	.....	Julius Mikolik.
Gratz	.....	.....	29.69	754.0	63.5	17.5	64	SSW	.....	.....	4	.....	5	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	28.52	724.4	29.69	754.0	63.5	17.5	64	SSW	.....	.....	4	.....	5	.....	.....	0	0	.....	Andreas Rospini.
Kremsmünster	28.40	721.3	29.77	756.2	65.8	18.8	49	NNW	.....	.....	3	.....	4	.....	.....	0.118	3.00	.....	Prof. Reissenberger.
Lemberg	28.37	720.5	29.67	753.6	61.2	16.2	67	WNW	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. C. Wagner.
Nyirekyhaza	.....	.....	29.69	754.1	62.2	16.8	80	SW	.....	.....	2	.....	3	.....	.....	0.138	3.5	.....	Dr. T. Stanecki.
Pola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Segedin	.....	.....	29.84	757.8	64.0	17.8	84	SSE	.....	.....	2	.....	108	.....	.....	0	0	.....	I.R.Hydrographic Office.
Triest	.....	.....	29.78	756.5	69.3	20.7	73	S	.....	.....	3	.....	8	.....	.....	0	0	.....	Karl Stancel.
Vienna	.....	.....	29.85	758.3	64.4	18.0	83	SW	.....	.....	1	.....	10	.....	.....	0.276	7.0	Threatening	Prof. V. Farolfi.
	.....	.....	29.66	753.3	65.5	18.6	58	SE	.....	.....	2	.....	7	.....	.....	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, 388.9 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels	.....	.....	29.63	752.7	67.9	14.4	67	SW	.....	.....	3	.....	10	S?	.....	0.187	4.75	.....	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	.....	.....	29.85	758.2	49.0	9.4	.....	NW	19	8.5	.....	.....	6	.....	.....	0.090	2.29	*D. clouds.....	William Boswell.
Ardrossan	.....	.....	29.90	759.4	54	12.2	.....	WNW	.....	.....	4	.....	6	.....	.....	.....	.....	*D clouds.....	William McNeil.
Armagh, Observatory	.....	.....	30.00	762.0	52.7	14.0	.....	NW	4	1.8	.....	.....	10	.....	.....	.....	.....	Gloomy.....	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs'y	.....	.....	29.89	759.2	50.8	10.4	.....	NW	19	8.5	.....	.....	10	.....	.....	.....	.....	Overcast.....	John Hartnup.
Birr Castle, (Parsonstown)	.....	.....	30.01	762.2	53.5	11.9	.....	NNW	.....	.....	1–3	.....	10	.....	.....	.....	.....	Overcast.....	J. Dreyer.
Bradford	.....	.....	29.84	757.9	50.3	10.2	.....	E	.....	.....	1	.....	10	.....	.....	0.10	2.5	Raining.....	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	29.97	761.2	83.0	28.3	.....	NE	.....	.....	2	.....	9	.....	.....	.....	.....	Overcast.....	Sergt. J. F. Halanen, R. A.
Cambridge, Observatory	.....	.....	29.79	756 7	56.5	13.6	.....	N	.....	.....	3	.....	2	.....	.....	Blank	Blank	*D. clouds.....	H. Todd. [H. C.
Cardington	.....	.....	29.83	757.7	54.0	12.2	.....	N	.....	.....	2	.....	9	.....	.....	.....	.....	Overcast.....	John McLaren.
Carlisle	.....	.....	29.84	757.9	52.1	11.2	.....	NW	.....	.....	4	.....	10	.....	.....	0	0	Overcast.....	T. Bell, for J. Car mell.
Chatham, School M. E	.....	.....	29.77	756.1	49.5	9.7	.....	N	.....	.....	2	.....	9	.....	.....	.....	.....	Raining.....	Capt. J. Fellowes, R.E.
Dartmoor	28.42	721.9	29.92	760.0	49.0	9.4	.....	N	.....	.....	2	.....	9	.....	.....	.....	.....	Gloomy.....	R. E. Power.
Donaghadee	.....	.....	29.95	760.7	54	12.2	.....	NNE	.....	.....	4	.....	5	.....	.....	.....	.....	*D. cl uds.....	J. Mac Gowan.
Dover	.....	.....	29.72	754.9	49	9.4	.....	NE	.....	.....	4	.....	10	.....	.....	.....	.....	Raining.....	J. Costello.
Eccles (near Manchester.)	.....	.....	29.86	758.4	48.9	9.4	.....	N	2.2	1.0	.....	.....	10	.....	.....	.....	.....	Gloomy.....	Thomas Mackereth.
Falmouth, Observatory	.....	.....	29.89	759.2	54.9	12.7	.....	NNW	20	8.9	.....	.....	10	.....	.....	.....	.....	Foggy	The Staff.
Fort Napier, (Natal)	27.52	701.5	29.86	758.4	72.7	22.6	.....	NE	.....	.....	2	.....	5	.....	.....	.....	.....	*D. clouds.....	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.96	761.0	80.0	30.0	.....	N	.....	.....	6	.....	4	.....	.....	.....	.....	*D clouds.....	
Galway, Queen's College	.....	.....	29.98	761.5	59	15.0	.....	WNW	.....	.....	2	.....	5	.....	.....	.....	.....	*D. clouds.....	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	29.98	761.5	73.0	22.8	.....	NW	.....	.....	5	.....	5	.....	.....	.....	.....	*D. clouds.....	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	29.86	758.4	55.6	13.1	.....	W	.....	.....	1	.....	8	.....	.....	.....	.....	Fine.....	Lewis Stuart.
Great Yarmouth	.....	.....	29.76	755.9	51	10.6	.....	N	.....	.....	4	.....	5	.....	.....	.....	.....	*D. clouds.....	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	29.80	756.9	49.1	9.5	.....	N	.....	.....	2	.....	10	.....	.....	Blank	Blank	Overcast.....	The Staff, for G. B. Airy
Guernsey	.....	.....	29.84	757.9	53	11.7	.....	NNE	.....	.....	2	.....	8	.....	.....	.....	.....	*D. clouds.....	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	29.87	758.7	49.0	9.4	.....	NNW	.....	.....	2	.....	10	.....	.....	Blank	Blank	*D. clouds.....	L. J. Crossley.
Helston	.....	.....	29.84	757.9	57	13.9	.....	N	.....	.....	2	.....	2k	.....	.....	0	0	Fair.....	M. P. Moyle.
Holyhead	.....	.....	29.93	760.2	51	10.6	.....	NNW	.....	.....	3	.....	4	.....	.....	.....	.....	Hazy.....	John Tilston.
Kew, Observatory	.....	.....	29.82	757.4	49.1	9.5	.....	NNW	17	7.6	.....	.....	10	.....	.....	.....	.....	Threatening..	The Staff.
Kingstown	.....	.....	29.98	761.5	52	11.1	.....	N	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast.....	George Mitchell.
Leicester Museum	.....	.....	29.85	758.2	52.9	11.6	.....	N	.....	.....	1	.....	10	.....	.....	Blank	Blank	Overcast.....	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)	.....	.....	29.96	761.0	78.0	25.6	.....	SE	.....	.....	2	.....	4	.....	.....	.....	.....	*D. clouds.....	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	29.88	758.9	51	10.6	.....	NNW	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast.....	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.08	764.0	80.6	27.0	.....	E	.....	.....	4	.....	8	.....	.....	.....	.....	*D. clouds.....	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	29.85	758.2	51.2	10.7	.....	NW	.....	.....	4	.....	10k.d	.....	NNW	0.091	2.31	Overcast.....	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	29.86	758.4	49.3	9.6	.....	N	.....	.....	3	.....	10	.....	.....	.....	.....	Overcast.....	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	29.82	757.4	52	11.1	.....	N	.....	.....	2	.....	10	.....	.....	Blank	Blank	Overcast.....	J. Lucas.
Plymouth	.....	.....	29.89	759.2	57.3	14.1	.....	NW	.....	.....	2	.....	10	.....	.....	.....	.....	Overcast.....	John Merrifield.
Roche's Point	.....	.....	29.98	761.5	54	12.2	.....	NNE	.....	.....	4	.....	5	.....	.....	.....	.....	Cloudy.....	W. Kennedy.
Saint Ann's Head	.....	.....	29.92	760.0	52	11.1	.....	N	.....	.....	5	.....	5	.....	.....	.....	.....	*D clouds.....	John C. Walker.
Saint Helier, Jersey)	.....	.....	29.81	757.2	57.2	14.0	.....	NNE	.....	.....	4	.....	8	.....	.....	.....	.....	¾ clo ded...	A. P. Amy.
Sandwick Manse (Orkneys)	.....	.....	29.87	758.7	47.5	8.6	.....	NW	22	9.8	.....	.....	4	.....	.....	.....	.....	*D. clouds.....	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	29.82	757.4	47.2	8.4	.....	WNW	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast.....	F. Shaw.
Scutari Cemetery Turkey	.....	.....	29.90	759.4	69.0	20.6	.....	SW	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	Sergt. W. H. Lyne.
Sheffield	.....	.....	29.84	757.9	49.0	4.9	.....	NW	.....	.....	2	.....	10	.....	.....	0.0 9	1.75	Gloomy.....	W. F. Cooper.
Silloth Rectory	.....	.....	29.87	758.7	53.9	12.2	68	Calm	.....	.....	0	.....	8	.....	.....	0.035	0 89	*D. clouds.....	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	29.86	758.4	49.2	9.6	.....	NW	.....	.....	1	.....	10	.....	.....	.....	.....	Threate ing	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.	.....	.....	29.92	760.0	54	12.2	.....	NNW	.....	.....	3	.....	5	.....	.....	.....	.....	*D. clouds.....	John Smith.
Stratfield Turgiss	.....	.....	29.82	757.4	47.2	8.4	.....	N	.....	.....	1	.....	10	.....	.....	.....	.....	*D. clouds.....	Rev. Charles H. Griffith.
Streatley Vicarage	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Rev. John Slatter.
Thurso	.....	.....	29.80	758.4	50	10.0	.....	N	.....	.....	4	.....	4	.....	.....	.....	.....	*D. clouds.....	John Trotter.
Truro, Royal Institution	.....	.....	29.88	758.9	57	13.9	.....	N	.....	.....	6	.....	8	.....	.....	.....	.....	Gloomy.....	W. Newcombe.
Valencia, Observatory	.....	.....	30.05	763.3	53.7	12 1	.....	N	19	8.5	.....	.....	10	.....	.....	.....	.....	*D. clouds.....	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	50	10.0	.....	N	.....	.....	4	.....	10	.....	.....	.....	.....	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.32	770.1	57.3	14.1	75	S	11	4.9	.....	2	3	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Leith, Restalrig Park	.....	.....	29.88	758.9	52.1	11.2	.....	NW	.....	.....	2	.....	10ks	.....	.....	0.01	0.3	Cloudy.....	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.12	765.0	.....	.....	.....	ESE	12.1	5.4	.....	.....	.....	.....	.....	0	0	.....	C. Meldrum.
Melbourne, Observatory	.....	.....	30.30	769.6	48.0	8.9	83	NNE	10	4.5	.....	.....	0	.....	.....	0	0	Very fine.....	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	29.98	761.5	50	10.0	.....	N	.....	.....	3	5	0	NW	.....	0	0	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	29.78	756.4	46	7.8	.....	N	.....	.....	4	.....	10	.....	.....	.....	.....	.....	Robert Burnet.

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 1. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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	.....	.....	29.56	750.9	54.9	12 7	70	W	.....	.....	2	.....	9	.....	.....	.....	.....	.....	.....
Færöe	.....	.....	29.62	752.5	50.9	10.5	68	W	.....	.....	4	.....	3	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	29.74	755.4	37.6	3.1	78	S	.....	.....	7	.....	10	.....	.....	.....	.....	.....	.....
Stykkisholm, (Iceland)	.....	.....	29.78	756.3	49.8	9.9	95	W	.....	.....	6	.....	10	.....	.....	.....	.....	.....	.....
Thorshavn, (Faröe)	.....	.....	29.76	756.0	49.6	9.8	83	WNW	.....	.....	6	.....	10	.....	.....	.....	.....	.....	.....
Vestervig	.....	.....	29.55	750.5	47.5	8.6	76	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	.....	.....	29.80	756.8	57.2	14	72	NE	.....	.....	3	.....	8cn	.....	NE	0.047	1.2	Very cloudy	Normal School.
Amiens	.....	.....	29.68	753.8	56.5	13.6	78	NW	.....	.....	3	.....	10	.....	NNW	0.178	4.4	Covered	Normal School.
Avignon	.....	.....	29.82	757.3	63.0	17.2	63	SW	.....	.....	1	.....	10	.....	.....	0.094	2.4	Covered	Normal School.
Bar-sur-Seine	.....	.....	29.77	756.1	58.5	14.7	54	W	.....	.....	2	.....	8	.....	WSW	0.102	2.6	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.78	756.5	58.3	14.6	44	W	8.7	3.9	.....	.....	5	.....	W	0.012	0.3	Cloudy.....	Beaumette Observatory
Beauvais	.....	.....	29.75	755.6	54.1	12.3	63	WNW	.....	.....	2	.....	10	.....	WNW	0.209	5.3	Covered	Normal School.
Besançon	.....	.....	29.83	757.6	58.6	14.8	63	ESE	.....	.....	3	.....	5	.....	W	0.268	6.8	Cloudy.....	Normal School.
Bourg en Bresse	.....	.....	29.91	759.8	63.9	17.7	61	NE	.....	.....	3	.....	10cn	.....	NW	0.165	4.2	Covered.....	Normal School.
Bourges	.....	.....	29.84	757.9	57.2	14	86	SW	.....	.....	2	.....	2	.....	W	0.094	2.4	Slightly cl'dy	Normal School.
Brest	.....	.....	29.73	755.2	56.7	13.7	64	NNE	.....	.....	4	.....	4k	.....	NW	0.009	0.25	.....	Naval Observatory.
Caen	.....	.....	30.022	777.87	57.2	14	81	N	.....	.....	2	.....	5	.....	E	0.08	2.	Cloudy.....	Normal School.
Carcassonne	.....	.....	29.90	759.4	59.5	15.3	87	N	.....	.....	2	.....	5	.....	S	0	0	Cloudy.....	Normal School.
Chartres	.....	.....	29.74	755.5	56.1	13.4	.....	N	.....	.....	4	.....	6	.....	N	0.457	11.6	Cloudy.....	Normal School.
Clermont	.....	.....	29.78	756.3	59.2	15.1	39	W	.....	.....	3	.....	8	.....	W	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	29.77	756.2	53.4	11.9	86	SW	.....	.....	4	.....	5kn	.....	SW	0.063	1.6	Cloudy.....	Normal School.
Commune de Gréasque*	.....	.....	29.84	758.0	63.1	17.3	67	NW	.....	.....	1	.....	8	.....	NW	0.130	3.3	.....	M. Kina.
Grenoble	.....	.....	29.87	758.8	55.6	13.1	96	NW	.....	.....	2	.....	5k	.....	SW	0.20	5.	Cloudy.....	Normal School.
Le Mans	.....	.....	29.80	757.0	51.8	11.0	83	NW	.....	.....	3	.....	8	.....	NW	0.47	12.	Very cloudy	Normal School.
Louis-Le-Saulnier	.....	.....	29.89	759.1	53.4	11.9	80	S	.....	.....	2	.....	10	.....	SW	0.24	6.	Raining.....	Normal School.
Mâcon	.....	.....	29.85	758.2	58.3	14.6	82	Calm	.....	.....	0	.....	10	.....	.....	0	0	Covered	Normal School.
Mirecourt	.....	.....	29.74	755.3	57.4	14.1	57	W	.....	.....	4	.....	5	.....	NW	0	0	Cloudy.....	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	29.79	756.6	67.6	19.8	74	S	.....	.....	1	.....	5	.....	W	0	0	Cloudy.....	Normal School.
Orleans	.....	.....	29.76	756.0	60.8	16	41	WSW	.....	.....	3	.....	8	.....	W	0.425	10.8	Very cloudy	Normal School.
Paris, Observatory	.....	.....	29.75	755.6	56.1	13.4	64	NW	.....	.....	2	.....	8	.....	WNW	0.115	2.91	Very cloudy	National Observatory.
Parthenay	.....	.....	29.77	756.2	59.0	15	95	SW	.....	.....	2	.....	5	.....	SW	0	0	Cloudy.....	Normal School.
Privas	.....	.....	29.85	758.2	58.6	14.8	.....	E	.....	.....	2	.....	10	.....	SE	0.24	6.	Covered	Normal School.
La Roche-sur-Yon	.....	.....	29.00	751.8	59.2	15.1	51	WSW	.....	.....	2	.....	5	.....	NE	0.220	5.6	Cloudy.....	Normal School.
Rochefort, Observatory	.....	.....	29.88	759.0	60.3	15.7	59	WSW	.....	.....	4	.....	10	.....	NE	0	0	Covered	Naval Observatory.
Rouen	.....	.....	29.78	756.4	53.2	11.8	78	W	.....	.....	2	.....	10	.....	SW	0.319	8.1	Covered	Normal School.
Saint Lo	.....	.....	29.53	750.1	53.8	12.1	76	NW	.....	.....	1	.....	9	.....	NE	0.04	1.	.....	Normal School.
Tarbes	28.81	731.8	29.87	758.8	59.0	15	.....	W	.....	.....	1	.....	10	.....	.....	0.35	9.	Covered.....	Normal School.
Villefranche	.....	.....	29.94	760.5	62.6	17	64	SE	.....	.....	3	.....	8	.....	.....	0.244	6.20	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.92	760.0	79.5	26.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.78	756.4	66.7	19.3	63	W	.....	.....	1-2	.....	10	.....	.....	0.039	1.00	raining.....	Marseilles Observatory.
Mont-Louis	24.65	626.2	29.97	761.2	42.4	5.8	92	SSW	16.8	7.50	.....	.....	10	.....	SW	0.169	4.3	.....	—. Falguère.
Montsouris, Paris	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montsouris Observ'tory.
Perpignan	.....	.....	29.86	758.5	59.5	15.3	54	N	5 6	2.50	.....	.....	10	.....	.....	0	0	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.75	755.6	57.6	14.2	70	WNW	.....	.....	1	.....	7	.....	.....	0.209	5.3	Raining.....	E. Renou.
Toulouse	.....	.....	29.89	759.1	59.0	15.0	58	W	.....	.....	1	.....	10	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	29.79	756.6	61.7	16.5	49	WSW	.....	.....	2	.....	6	.....	WNW	0.638	16.2	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.80	75 8	53.2	11.8	86	W	.....	.....	3	.....	10	.....	.....	0.280	7.09	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai	.....	.....	29.96	761.0	59.9	15.5	84	E	6.9	3.1	.....	.....	0	.....	.....	{ 0 / 0	{ 0 / 0	.....	H. Le Lec, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Gréasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,580.40 meters, or 5,204.8 feet; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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	.....	.....	29.70	754.3	60.3	15.7	62	SW	.....	.....	3	.....	10	W	.....	0.094	2.4	.....	Prof. T. Hoh.
Berlin	.....	.....	29.62	752.4	65.3	18.5	44	SW	.....	.....	1	.....	8	.....	.....	0.004	0.1	.....	Prof. Arndt.
Breslau	.....	.....	29.72	755.0	65.1	18.4	48	SW	.....	.....	5	.....	5	.....	.....	0.003	1.6	.....	Dr. P. Naugebauer.
Carlsruhe	.....	.....	29.72	754.9	55.8	13.2	74	SE	.....	.....	3	.....	9	.....	.....	0.218	5.4	.....	A. Senz.
Cassel	.....	.....	29.65	753.1	62.6	17.0	38	SW	.....	.....	8	.....	7	SSW	.....	0.047	1.2	.....	Dr. H. Möhl.
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.75	755.7	64.0	17.8	45	SW	.....	.....	6	.....	7	.....	.....	0.098	2.5	.....	Physical Society.
Friedrichshafen	.....	.....	29.85	758.2	50.0	10.0	84	N	.....	.....	.....	.....	10	.....	.....	0.421	10.7	Raining.....	M. Wilhelm.
Hamburg	.....	.....	29.61	752.1	66.8	13.8	69	NNE	.....	.....	1	.....	8kn	.....	.....	0.079	2.0	.....	Captain F. Hegemann.
Kiel	.....	.....	29.61	752.0	56.7	13.7	66	SW	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.64	752.8	60.1	15.6	55	SW	.....	.....	2	.....	6	.....	.....	0.028	0 7	.....	Prof. E. Luther.
Kösslin	.....	.....	29.64	752.9	58.6	14.8	.....	NE	.....	.....	2	.....	0	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	29.65	753.0	64.8	18.2	55	SW	.....	.....	2	.....	9	SW	.....	0.161	4 1	.....	Prof. Bruhns.
Memel	.....	.....	29.68	754.9	52.9	11.1	76	WSW	.....	.....	2	.....	3	.....	.....	0.020	0.5	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.67	753.5	57.7	14.3	65	SW	.....	.....	6	.....	7	.....	.....	0.150	3.8	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.60	751.9	57.9	14.4	59	W	.....	.....	3	.....	5	.....	.....	0.071	1.8	.....	A. Lothes.
Posen	.....	.....	29.73	755 1	63.3	17.4	57	S	.....	.....	6	.....	9	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.76	755.8	59.9	15.5	66	Calm	.....	.....	0	.....	10	SW	.....	0.024	0.6	.....	Dr. Schur.
Stuttgart	.....	.....	29.74	755.4	55.4	13.0	67	W	.....	.....	2	.....	9	.....	.....	0.083	2.1	Light rain...	Prof. Schoder.
Thorn	.....	.....	29.68	753.8	66.2	19.0	43	W	.....	.....	3	.....	6	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.67	753.6	58.6	14.8	54	SW	.....	.....	5	.....	6	.....	.....	0.098	2.5	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	29.58	751.4	56.1	13.4	62	WNW	.....	.....	3	.....	4	.....	.....	0	0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Udine			29.80	756.9	61.0	16.1	76	S	3.1	1.4			10			0.004	0.1		
Padua			29.77	756.2	63.5	17.5	74	SE	6.3	2.8			10			0	0		
Vicenza			29.78	756.5	58.6	14.8	89	N	3.8	1.7			10			0	0		
Verona			29.78	756.3	57.2	14.0	63	NE			2		6			0	0		
Bergamo	28.39	721.1	29.69	754.0	56.8	13.8	78	NE			6		10			0	0		
Domodossola	28 79	731.3	29.79	756.7	58.1	14.5	89	Calm			0		10			0.154	3.9		
Milan			29.73	755.2	61.2	16.2	82	ENE			2		10	ENE		0	0		
Pavia			29.72	755.0	61.9	16.6	72	NE			2		9	SW		0.020	0.5		
Moncalieri			29.70	754.4	62.8	17.1	72	WNW	4.2	1.9			9	NE		0.035	0.9		
Mondovi	27.80	706.1	29.67	753.6	64.0	17.8	61	NW			4		8			0	0		
Porto Maurizio			29.80	756.8	65.5	18.6	79	SW			2		10	E		0	0		
Genoa			29.78	756.5	62.1	16.7	82	SE	8.7	3.9			10	SE		0	0		
Piacenza			29.72	754.8	64.6	18.1	66	E	16.8	7.5			10	SW		0	0		
Parma			29.75	755.6	67.6	19.8	54	SE			2		9			0.051	1.3		
Bologna			29.82	757.5	66.6	19.2	51	SE			6		6	W		0	0		
Florence			29.84	757.9	73 4	23.0	67	NW			2		10	NE		0.067	1.7		
Leghorn			29.82	757 4	66.2	19.0	75	S	13.6	6.1			10			0	0		
Siena	28.64	727.4	29.83	757.6	68.4	20.2	52	SSW	8.0	3.6			8	W		0.028	0.7		
Urbino																			
Pesaro																			
Ancona			29.84	757.8	70.2	21.2	53	SE			4		5			0	0		
Grosseto			29.87	758.8	69.4	20.8	73	SSE			6		7	SE		0	0		
Rome			29.91	759.7	72.7	22.6	57	S	24.2	10.8			4	WSW		0	0		
Naples, O. U			29.98	761.5	72.9	22.7	61	SSW			4		0			0	0		
Lecce			29.98	761.6	75.2	24.0	31	WSW	15.0	6.7			8	W		0	0		
Cosenza			29.96	761.0	83.1	28.4	75	SW	1.3	0.6			1			0	0		
Riposto, (Sicily)			29.97	761.3	68.0	20.0	77	NE			2		1	SW		0	0		
Palermo			29.88	759.0	73.9	23.3	58	ENE	4.9	2.2			2			0	0		
Caltanissetta	28.02	711.6	29.92	759.9	72.1	22.4	29	SE			2		2	NW		0	0		
Sub-Series.																			
Naples, S. R			29.99	761.7	72.0	22.2	50	SW	3.8	1.7						0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

NETHERLANDS' SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Flushing			29.69	754.1	55.2	12.9		W			2								
Groningen			29.61	752.0	51.1	10.6		N			2								
Helder			29.69	754.0	50.5	10.3		N			4								
Utrecht			29.62	752.3	53.1	11.7	83	WNW			3		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			29.51	749.5	52.9	11.6	46	NNW	18.3	8.2			0			0	0		
Brönö			29.64	752.8	42.8	6.0	42	NNE	18	8			4			0	0		
Christiania			29.52	749.8	49.6	9.8	59	NNE	3.1	1.4			7			0.177	4.5		
Tromsö			29.59	751 6	35.4	1.9	64	W	2	1			10			0.083	2.1		

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 1 h., 4 min.

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From —	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores,)	.....	.....	30.34	770.6	61.5	16.4	92	SE	8.8	3.93	.....	.....	8	.....	.....	0.055	1.4	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.97	761.1	64.0	17.8	37	WNW	13.0	5.83	.....	.....	7	WNW	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.17	766.4	65.5	18.6	57	SW	4.0	1.78	.....	.....	8	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.06	763.4	61.0	16.6	40	NNW	15.0	6.7	.....	.....	4	.....	.....	0.020	0.5	.....	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	.....	.....	29.68	753.9	63.9	17.7	50	WSW	20	9	.....	.....	5	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.65	753.0	56.7	13.7	70	W	4	2	.....	.....	3	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.59	751.5	50.5	10.3	72	SW	4	2	.....	.....	5	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.58	751.3	48.2	9.0	76	WNW	16	7	.....	.....	8	.....	.....	.....	.....	.....	Central Physical Obs
Kuopio	.....	.....	29.47	748.6	53.6	12.0	63	WSW	7	3	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.69	754.0	58.1	14.5	87	SSW	4	2	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.95	760.6	60.8	16.0	62	SSW	25	11	.....	.....	8	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.04	763.1	62.6	17.0	64	S	13	6	.....	.....	4	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.67	753.6	61.3	16.3	60	SSW	4	2	.....	.....	7	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.92	760.0	65.1	18.4	40	SW	34	15	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.58	751.2	53.1	11.7	48	S	13	6	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.75	730.3	30.15	765.9	62.2	16.8	44	E	11	5	.....	.....	7	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.16	766.0	60.5	15.7	50	N	4	2	.....	.....	9	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.85	758.1	57.0	13.9	44	W	4	2	.....	.....	6	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.83	732.2	29.82	757.5	50.4	10.2	67	NNE	4	2	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.03	762.7	62.6	17.0	57	NE	9	4	.....	.....	10	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.34	719.7	29.95	760.6	76.8	24.9	49	NNW	25	11	.....	.....	5	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.87	758.7	66.7	19.3	65	E	4	2	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	30.05	763.3	51.4	10.8	46	NW	2	1	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.81	757.1	69.4	20.8	46	ESE	18	8	.....	.....	4	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	37.6	3.1	96	NE	11	5	.....	.....	10	.....	.....	.....	.....	.....	

Note.—The originals give the wind velocity in meters per second; 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 1,411.8 feet; Ekaterinburg, 303.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, or 1,621.3? ft.; Irkutsk, 392 m. or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	29.82	757.5	64.4	18.0	43	W	14.9	6.67	.....	0	2	.....	.....	1nap.	Inap.	Somew't c'dy	Royal Observatory.
San Fernando	.....	.....	30.03	762.8	65.5	18.6	75	WNW	11	5.5	.....	3	6	W	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. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.52	749.7	45.3	7.4	68	SW	.....	.....	1	.....	8	.....	.....	0	0	.....	
Umea	.....	.....	29.48	748.9	46.0	7.8	69	S	.....	.....	1	.....	8	.....	.....	0	0	.....	
Hernosand	.....	.....	29.50	749.4	46.4	8.0	64	ESE	.....	.....	1	.....	9	.....	.....	0.071	1.8	Raining	
Stockholm	.....	.....	29.54	750.3	51.4	10.8	70	SSE	.....	.....	2	.....	4	.....	.....	0	0	.....	
Wisby	.....	.....	29.59	751.5	47.5	8.6	81	WNW	.....	.....	2	.....	5	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.47	748.6	56.8	13.8	46	SSW	10.5	4.7	.....	.....	10	.....	.....	0.075	1.90	.....	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 Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is meaured 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	28.44	722.3	29.86	758.5	53.6	12.0	65	WSW			2		10			0.362	9.2	Covered	The Observatory.
Zurich	28.22	716.9	29.88	759.0	48.4	9.1	92	E			1		10			0.472	12.0	Raining	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, −3.3 mm; Thermometer, −5.9 cent.; Relative Humidity, +9 per cent.

Note.—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. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Constantinople																			
Fao, (Persian Gulf)			30.00	762.0	87.8	31.0		NW			3		5						
Salonica			29.97	761.2	72.7	22.6		NW			6		0						
Valona			29.96	761.0	79.7	26.5		SW			2		2						
Varna			29.88	759.0	64.4	18.0		NW			2		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			30.01	762.3	75.2	24.0	62	NW			1		0			0	0	Fair	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. 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.			29.87	758.7	43.8	6.6	98	NE	4	1.8		10				Inap.	Inap.	Raining	Hon. J. Ferguson.
Brockville, Ontario			30.17	766.3	47	8.3		N	5	2.2		0	2s	W	W	0	0	Fair	W. R. Bigg.
*Chatham, N. B.			29.87	758.7	48	8.9	88	N	2	0.9		2k	8ks	NW	NW	0.03	0.8	Cloudy	G. A. Blair.
Charlottetown, P. E. Island.			29.88	758.9	49	9.4	73	S	11	4.9		5c	0			0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			30.05	763.3	50.0	10.0	66	N			4	1k	0			0.078	1.98	Bright	James Smith, M. A.
Dalhousie, N. B.			29.90	759.4	41.9	5.5	100	W			1		10n			0.45	11.4		H. A. Johnson.
Esquimault, B. C.			30.01	762.2	48.3	9.1	100	NE	2	0.9			10ks			0.03	0.8	Cloudy	W. H. Bevis.
Fredericton, N. B.			29.85	758.2	49.2	9.6	74	SE	3	1.3			10n			Inap.	Inap.	Showering	Prof. Harrison.
*Fort Garry, Manitoba			30.09	764.3	55	12.8	74	SW	3	1.3		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.14	765.5	54.5	12.5	72	Calm			0	0	0			0	0	Fine	H. J. Strang, M. A.
Granton, Ontario	29.00	736.6	30.09	764.3	57	13.9		NW			1	0	0			0	0	Clear	James Grant.
*Halifax, N. S.			29.90	759.4	55	12.8	50	W	18	8.0		0	0			0	0	Clear	F. Allison, M. A.
*Kingston, Ontario			30.14	765.5	50	10.0	66	NE	11	4.9		8c	0	W		0	0	Fair	S. Woods, M. A.
*Montreal, Quebec			30.05	763.3	46	7.8	68	N	10	4.5		2k	2ks	N	W	0.01	0.3	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.14	765.5	41	5.0	66	NW	12	5.4		0	2k		NW	0.03	0.8	Clear	J. B. Haney.
*Parry Sound, Ontario			30.15	765.8	46	7.8	47	N	15	6.7		2cs	0	N		0	0	Fair	Rev. R. Mosley.
*Port Dover, Ontario			30.12	765.0	56	13.3	75	S	3	1.3		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.			29.96	761.0	35.9	2.2		Calm	0	0						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.13	765.3	57	13.9	75	W	2	0.9		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			29.98	761.5	47	8.3	62	NW	5	2.2			10n		NW	0.22	5.6	Cloudy	Capt. Ashe, R. N.
St. John, N. B.			29.91	759.7	48	8.9	78	S	8	3.6		1ck	0			0.200	5.08	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			30.12	765.0	54	12.2	72	E	3	1.3		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.13	765.3	51	10.6	72	NW	3	1.3		5ck	0	N		0	0	Fair	R. J. Cole.
Stratford, Ontario	28.82	732.0	30.09	764.3	56.1	13.4	76	W	5	2.2		1c	0	NW		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.92	760.0	62	16.7	54	W	8	3.6		0	0			0	0	Clear	T. C. Hill.
*Toronto, Ontario			30.12	765.0	56	13.3	62	N	10	4.5		2ck	0	W		0	0	Fair	Magnetic Observatory.
Woodstock, Ontario			30.07	763.8	59.8	15.4	70	W	8	3.6		0	0			0	0	Fine	J. Montgomery

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the cooperation 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	64	17.8	62	Calm	0	0	.....	5k	0	W	.....	0	0	Fair	
Alpena, Mich	.....	.....	30.19	766.8	45	7.2	76	E	12	5.4	.....	.....	10s	.....	E	0	0	Cloudy	
Atlantic City, N. J	.....	.....	30.10	764.5	64	17.8	67	SW	8	3.6	.....	5cs	Haze	W	.....	0	0	Fair	
Augusta, Ga	.....	.....	30.19	766.8	69	20.6	58	E	2	0.9	.....	2cs	0	.....	.....	0	0	Fair	
Baltimore, Md	.....	.....	30.16	766.1	63	17.2	62	SW	4	1.8	.....	Haze	Sm'e	.....	.....	0	0	Smoky	
Barnegat, N. J	.....	.....	30.19	766.5	64	18.3	67	W	10	4.5	.....	5cs	0	W	.....	0	0	Fair	
Benton, Montana	27.02	686.4	29.82	757.4	69	20.6	42	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.39	721.1	30.03	762.7	54	12.2	43	S	12	5.4	.....	5k	Haze	S	S	0	0	Fair	
Boston, Mass	.....	.....	29.94	760.5	69	20.6	43	SW	4	1.8	.....	5ck	Haze	W	.....	0	0	Hazy	
Breckenridge, Minn	.....	.....	30.17	766.3	49	9.4	78	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y	.....	.....	30.10	764.5	49	9.4	71	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Burlington, Vt	.....	.....	30.01	762.2	47	8.3	77	N	2	0.9	.....	.....	10s	.....	.....	0.19	4.8	Cloudy	
Cairo, Ill	.....	.....	30. 5	765.8	60	15.6	82	N	4	1.8	.....	.....	10s	.....	.....	0.06	1.5	Cloudy	
Cape Hatteras, N. C	.....	.....	30.15	765.8	65	18.3	39	E	4	1.8	.....	5cs	0	W	.....	0	0	Fair	
Cape Henry, Va	.....	.....	30.19	766.8	61	16.1	63	SW	12	5.4	.....	5c	0	W	.....	0	0	Fair	
Cape Lookout, N. C	.....	.....	30.21	767.3	64	17.8	62	N	8	3.6	.....	2c	0	.....	.....	0	0	Clear	
Cape May, N. J	.....	.....	30.13	765.3	60	15.6	82	SW	16	7.2	.....	5cs	2s	W	W	0	0	Fair	
Charleston, S. C	.....	.....	30.19	766.8	68	20.0	65	NE	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Cheyenne, Wyoming	24.06	611.1	30.00	762 0	49	9.4	93	S	4	1.8	.....	.....	Fog	.....	.....	0.03	0.8	Foggy	
Chicago, Ill	.....	.....	30.14	765.5	61	16.1	56	SW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	30.10	764.5	64	17.8	73	NE	2	0.9	.....	.....	10ks	.....	.....	0	0	Cloudy	
Cleveland, Ohio	.....	.....	30.18	765.8	55.8	13.2	72	S	4	1.8	.....	8c	Sm'e	SW	S	0	0	Fair	
Colorado Springs, Col	24.13	612.9	30.00	762.0	49	9.4	100	S	2	0.9	.....	.....	10s	.....	.....	0.12	3.0	Cloudy	
Corsicana, Texas	.....	.....	30.04	763.0	66	18.9	94	N	5	2.2	.....	5c	5k	.....	NE	0.33	8.4	Cloudy	
Davenport, Iowa	.....	.....	30.20	767.1	61	16.1	66	Calm	0	0	.....	2cs	0	.....	.....	0	0	Clear	
Denison, Texas	.....	.....	30.06	763.5	67	19.4	90	N	4	1.8	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Denver, Col	24.82	630.4	30.04	763.0	52	11.1	86	N	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Detroit, Mich	.....	.....	30.13	765.3	57	13.9	57	SW	5	2.2	.....	2c	0	SW	.....	0	0	Clear	
Dodge City, Kan	27.56	700.0	29.81	757.2	61	16.1	82	E	8	3.6	.....	0	8ks	.....	E	0.02	0.5	Threatening	
Dubuque, Iowa	.....	.....	30.18	766.6	57	13.9	69	E	1	0.4	.....	Haze	Haze	.....	.....	0	0	Clear	
Duluth, Minn	.....	.....	30.17	766.3	53	11.7	66	Calm	0	0	.....	2ck	Haze	.....	.....	0	0	Hazy	
Eastport, Me	.....	.....	29.85	758.2	46	7.8	76	S	4	1.8	.....	.....	10s	.....	SW	0	0	Cloudy	
Erie, Pa	.....	.....	30.09	764.3	60	15.6	55	SW	10	4.5	.....	2c	0	.....	.....	0	0	Fair	
Escanaba, Mich	.....	.....	30.12	765.0	53	11.7	60	NE	3	1.3	.....	Haze	.....	.....	.....	0	0	Clear	
Fort Gibson, Indian Ter	.....	.....	30.06	763.5	68	20.0	64	Calm	0	0	.....	.....	10ks	.....	NE	Inap.	Inap.	Cloudy	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T	28.88	733.5	29.97	761.2	65	18.3	90	NE	8	3.6	.....	.....	10s	.....	NE	0	0	Cloudy	
Fort Sully, Dakota	28.41	721.6	30.05	763.3	58	14.4	70	E	10	4.5	.....	10k	0	SE	.....	0	0	Cloudy	
Galveston, Tex	.....	.....	30.05	763.3	77	25.0	77	SE	2	0.9	.....	2c	2s	NW	SE	0	0	Fair	
Grand Haven, Mich	.....	.....	30.12	765.0	61	16.1	55	SW	9	4.0	.....	0	Sm'e	.....	SW	6	0	Clear	
Indianapolis, Ind	.....	.....	30.13	765.3	59	15.0	70	NE	2	0.9	.....	8cs	0	SW	.....	0	0	Fair	
Indianola, Texas	.....	.....	30.04	763.5	78	25 6	78	SE	4	1.8	.....	5c,k	0	SW	.....	0	0	Fair	
Jacksonville, Fla	.....	.....	30.12	765 0	77	25.0	82	NE	8	3.6	.....	5k	0	NE	.....	0	0	Fair	
Keokuk, Iowa	.....	.....	30.13	765.3	61	16.1	77	Calm	0	0	.....	8c	0	S	.....	0	0	Fair	
Key West, Fla	.....	.....	30.03	762.7	80.0	26.7	74	E	12	5.4	.....	5cs	1ks	.....	E	0	0	Fair	
Kittyhawk, N. C	.....	.....	30.22	767.6	63	17.2	83	Calm	0	0	.....	2c	Haze	.....	.....	0	0	Fair	
Knoxville, Tenn	.....	.....	30.12	765.0	64	17.8	88	NE	6	2.7	.....	.....	10n	.....	NE	0.08	2.0	Light rain	
La Crosse, Wis	.....	.....	30.18	766.6	56	15.0	76	S	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan	.....	.....	30.16	766.1	58	14.4	81	NE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Lexington, Ky	29.07	738.4	30.16	766.1	58	14.4	87	E	1	0.4	.....	.....	10n	.....	.....	0.10	2.5	Light rain	
Long Branch, N. J	.....	.....	30.08	764.0	66	18.8	68	W	8	3.6	.....	5c	0	SW	.....	0	0	Fair	
Louisville, Ky	.....	.....	30.15	765.8	58	14.4	88	NE	4	1.8	.....	.....	10s	.....	NE	0.13	3.3	Threatening	
Lynchburg, Va	.....	.....	30.18	766.6	61	16.1	73	SE	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Malone, N. Y	.....	.....	30.04	763.0	46	7.8	81	NW	10	4.5	.....	.....	10s	.....	.....	0.05	1.3	Cloudy	
Manhattan, Kan	29.08	738.6	30.23	767.8	55	12.8	68	Calm	0	0	.....	2ck	0	.....	.....	0	0	Clear	
Marquette, Mich	...	.....	30.17	766.3	45	7.2	76	Calm	0	0	.....	5cs	0	.....	.....	0	0	Fair	
Memphis, Tenn	.....	.....	30.11	764.8	62	16.7	83	N	5	2.2	.....	5 ,k	5ks	SW	N	0.15	3.8	Fair	
Milwaukee, Wis	.....	.....	30.14	765.5	61	16.1	56	W	8	3.6	.....	0	Sm'e	.....	.....	0	0	Clear	
Mobile, Ala	.....	.....	30.09	764.3	76	24 4	81	S	2	0.9	.....	2ck	0	W	.....	0	0	Fair	
Montgomery, Ala	.....	.....	30.12	765.0	71	21.7	85	SE	4	1.8	.....	.....	10s	.....	S	0.08	2.0	Cloudy	
Morgantown, W. Va	.....	.....	30.14	765.5	58	14.4	69	Calm	0	0	.....	10c	Haze	NW	.....	0	0	Cloudy	
Mt. Washington, N. H	23.70	602.0	30.06	763.5	33	0.6	100	NW	24	10.7	.....	.....	10n	.....	.....	Inap.	Inap.	Light rain	
Nashville, Tenn	.....	.....	30.08	764.0	66	18.9	90	NW	3	1.3	.....	.....	10ks	.....	NW	0.05	1.3	Cloudy	
New Haven, Conn	.....	.....	30.02	762.7	71	21.7	37	W	8	3.6	.....	Haze	0	.....	.....	0	0	Clear	
New London, Conn	.....	.....	30.03	762.7	65	18.3	58	SW	3	1.3	.....	2ck	0	W	.....	0	0	Clear	
New Orleans, La	.....	.....	30.06	763.5	75	23.9	81	S	2	0.9	.....	8c	0	.....	.....	0.18	4.6	Fair	
Newport, R. I	.....	.....	30.01	762.0	62	16.7	61	SW	4	1.8	.....	2ck	0	SW	.....	0	0	Fair	
New York, N. Y	.....	.....	30.07	763.8	58	14.4	69	W	4	1.8	.....	2cs	Sm'e	.....	.....	0	0	Clear	
Norfolk, Va	.....	.....	30.21	767.3	67	19 4	59	SW	8	3.6	.....	5k	0	.....	.....	0	0	Fair	
North Platte, Neb	27.18	690.4	29.72	754.9	55	12.8	93	SE	6	2.7	.....	.....	10s	.....	.....	0.06	1.5	Cloudy	
Omaha, Neb	29.09	738.9	30.15	765.8	57	13.9	81	Calm	0	0	.....	8ck	Haze	W	.....	0	0	Fair	
Oswego, N. Y	.....	.....	30.10	764.5	46	7.8	85	NW	12	5.4	.....	.....	10s	.....	W	Inap.	Inap.	Cloudy	
Pembina, Dakota	.....	.....	30.06	763.5	60	15 6	54	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Penn	.....	.....	30.13	765.3	59	15.0	70	W	3	1.3	.....	8ck	Sm'e	W	.....	0	0	Fair	
Pike's Peak, Colorado	17.96	484.6	30.11	764.8	27	— 2.8	44	NW	18	8.0	.....	10c	2k	.....	.....	0.01	0.3	Cloudy	
Pittsburgh, Penn	.....	.....	30.16	766.1	51	10.6	93	NW	1	0.4	.....	0	Fog	.....	.....	0	0	Foggy	
Port Huron, Mich	.....	.....	30.1	764.5	60	15.6	49	W	8	3.6	.....	0	1s	.....	.....	0	0	Clear	
Portland, Me	.....	.....	29.92	760.0	60	15.6	55	SW	8	3.6	.....	8k	Haze	W	.....	0	0	Cloudy	
Portland, Oregon	.....	.....	30.16	766.1	51	10.6	78	S	12	5.4	.....	.....	10s	.....	S	0.10	2.5	Cloudy	
Punta Rassa, Fla	.....	.....	30.08	764.0	75.0	23.9	81	E	8	3.6	.....	8cs	Sm'e	N	E	0	0	Cloudy	
Rochester, N. Y	.....	.....	30.06	763.5	60	15.6	49	NW	10	4.5	.....	2ck	2s	W	.....	0	0	Fair	
Salt Lake City, Utah	25.66	651.8	29.91	761.7	55	12.8	62	E	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J	.....	.....	30.05	763.3	62	16.7	70	W	15	6.7	.....	2c	Haze	SW	.....	0	0	Fair	
San Diego, Cal	.....	.....	29.93	760.2	53	11.7	93	E	4	1.8	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal	.....	.....	30.11	764.8	50	10.	71	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M	23.33	592.6	29.87	758.7	59	15.0	54	SE	11	4.9	.....	2c	5k	.....	.....	0	0	Fair	
Savannah, Ga	.....	.....	30.08	764.0	73	22.8	67	E	5	2.2	.....	Haze	0	.....	.....	0	0	Clear	
Shreveport, La	.....	.....	30.10	764.5	68	20.0	100	Calm	0	0	.....	.....	Fog	.....	.....	0.36	9.1	Foggy	
Smithville, N. C	.....	.....	30.20	767.1	68	20.0	52	NE	10	4.5	.....	1c	0	.....	.....	0	0	Clear	
Springfield, Mass	.....	.....	30.11	764.8	66	18.9	58	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
St. Louis, Mo	.....	.....	30.17	766 3	62	16.7	67	Calm	0	0	.....	0	5s	.....	.....	Inap.	Inap.	Fair	
St. Marks, Fla	.....	.....	30.13	765.3	72	22.2	81	SE	7	3.1	.....	0	2s	.....	SE	0	0	Fair	
St. Paul, Minn	.....	.....	30.15	765.3	61	16.1	66	S	3	1.3	.....	0	Haze	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	30.01	762.2	29	— 1.7	77	NW	13	5.8	.....	0	10s	.....	.....	Inap.	Inap.	.....	
Thatcher's Island, Mass	.....	.....	29.93	760.2	59	15.0	54	SW	11	4.9	.....	2c	0	NW	.....	0	0	Hazy	
Toledo, Ohio	.....	.....	30.12	765.0	59	15.	70	W	3	1.3	.....	5cs	0	SW	.....	0	0	Fair	
Tucson, Arizona	27.50	698.5	30.00	764.3	61	16.1	.....	S	.....	.....	.....	2c	Haze	.....	.....	0	0	Clear	
Tybee Island, Ga	.....	.....	30.17	766.3	72	22.2	75	E	12	5.4	.....	1k	0	E	.....	0	0	Clear	
Vicksburg, Miss	.....	.....	30.08	764.0	79	26.1	69	Calm	0	0	.....	10c	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.	24.20	614.7	29.68	753.9	53	11.7	36	SW	6	2.7	.....	2c	0	W	.....	0	0	Fair	
Washington, D. C.	.....	.....	30.16	766 1	62	16.7	61	SW	4	1.8	.....	8cs	2s	W	W	0	0	Smoky	
Wilmington, N. C	.....	.....	30.21	767.3	66	18.9	68	E	4	1.8	.....	Haze	Haze	.....	.....	0	0	Hazy	
Wood's Holl, Mass.	.....	.....	30.01	762.2	62	16 7	66	SW	6	2.7	.....	2k	0	NW	.....	0	0	Clear	
Wytheville, Va.	27.85	707.4	30.00	762.0	55	12.8	93	Calm	0	0	.....	.....	10n	.....	W	0.08	2.0	Light rain	
Yankton, Dakota.	28.89	733.8	30.16	766.1	63	17.2	67	E	1	0.4	.....	5c	0	W	.....	0	0	Fair	
Yuma, Arizona	.....	.....	29.84	757.9	70	21.1	.....	NE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	29.96	761.0	81	27.2	82	SE	6	2.7	.....	.....	10ks	.....	.....	0	0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.92	760.0	79	26.1	86	E	.....	.....	.....	10ks	0	.....	.....	0.04	1.0	Cloudy	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.14	765.5	79	26.1	95	Calm	0	0	.....	0	0	.....	.....	0.35	8.9	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.78	756.4	80	26.7	74	N	8.4	3.8	.....	8cs	0	N	.....	0.59	15.0	Fair	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.00	762.0	79	26.1	78	E	6.0	2.7	.....	10ck	0	SE	.....	0	0	Cloudy	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.10	764.5	70.0	21.1	90	NW	12.0	5.4	.....	.....	10k	.....	.....	0.11	2.8	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica, W. I.	27.16	689.8	29.94	760.5	68	20.0	84	NW	1.0	0.4	.....	8c	8k	NW	.....	0.79	20.1	Dull	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	29.98	761.5	82	27.8	82	E	.....	.....	2	5k	6k	E	.....	0	0	Dry	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.03	762.7	.....	.....	86.0	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.17	639.3	.....	.....	65.5	18.6	87	SW	1	0.4	.....	3c	2ks	.....	.....	0.47	11.9	Fair	Thomas Herran.
St. John's, Newfoundland.	.....	.....	30.10	764.5	48.5	9.2	71	NW	.....	.....	.....	0	0	.....	.....	0.03	0.8	Clear	John Delaney.
York Factory, B. A.	.....	.....	29.74	755.4	52	11.1	76	S	3	1.3	.....	8k	0	N	.....	0	0	.....	J. Fortescue.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Makawao, Maui, H. I.	27.87	707.9	30.04	763.0	60	15.6	76	Calm	0	0	.....	0	2ks	.....	.....	0	0	Clear	F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	Weather.	Observer.
Steamer Hibernian, N. 47° 3′, W. 52° 39′.	At St. Johns.	.....	Smooth	.....	*D. clouds.	Lieut. F. Archer, R N.R
Nova Scotian, N. 37° 27′, W. 74° 08′.	ENE	10½	Smooth	.....	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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) 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.

Collated at the Office of the Chief Signal Officer of the Army, Washington, D. C.

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 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	.....	.....	30.01	762.2	68.4	20.2	65	N	.....	.....	2	.....	7	.....	.....	0	0	Cloudy	Charnot.
Algiers	.....	.....	30.01	762.3	71.6	22.0	63	NW	.....	.....	3	.....	7	.....	.....	0	0	Cloudy	Peter.
La Calle	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Kunts.
Tunis	.....	.....	29.91	759.7	83.5	28.6	35	NNE	.....	.....	3	.....	5	.....	.....	0	0	Fair	Jacques.
Sfax	.....	.....	29.95	760.7	82.0	27.8	58	SE	.....	.....	3	.....	3	.....	.....	0	0	Fair	Chauvey.
Saida	.....	.....	30.03	762.7	68.0	20.0	47	NNW	.....	.....	2	.....	3	.....	.....	0	0	Fair	Millot.
Tebessa	.....	.....	29.93	760.1	90.1	32.3	.....	S	.....	.....	5	.....	7	.....	.....	0	0	Cloudy	Colin.
Geriville	.....	.....	30.03	762.8	64.5	20.3	34	NNW	.....	.....	1	.....	2	.....	.....	0	0	Clear	Buard.
Laghouat	.....	.....	29.98	761.4	93.2	34.0	2?	SW	.....	.....	3	.....	1	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	29.95	760.8	87.3	30.7	19	NW	.....	.....	4	.....	8	.....	.....	0	0	Cloudy	Laromer.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

AUSTRIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram	.....	.....	29.74	755.3	52.7	11.5	87	SW	.....	.....	3	.....	10	.....	.....	0.150	3.8	Raining	Prof. Ivan Stosir.
Cracow, I. R. Observatory	.....	.....	29.58	751.4	55.0	12.8	91	W	.....	.....	2	.....	10	.....	.....	0.374	9.5	.....	Dr. Wierzbicki.
Eperies	.....	.....	29.54	750.4	57.6	14.2	96	S	.....	.....	2	.....	10	.....	N	0.307	7.80	Foggy	Julius Mikolik.
Gratz	28.51	724.2	29.69	754.2	57.9	14.4	62	SW	.....	.....	4	.....	2	.....	.....	0.300	9.9	.....	Andreas Rospini.
Hermannstadt	28.26	717.8	29.61	752.0	74.7	23.7	45	SE	.....	.....	3	.....	5	.....	.....	0.083	2.10	.....	Prof. Reissenberger.
Kremsmünster	28.37	720.6	29.70	754.4	51.8	11.0	63	NW	.....	.....	5	.....	10	.....	.....	0.236	6.0	.....	Prof. C. Wagner.
Lemberg	.....	.....	29.50	749.3	61.9	16.6	68	SW	.....	.....	4	.....	9	.....	.....	0.303	7.7	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Pola	.....	.....	29.69	754.2	65.5	18.6	78	WSW	.....	.....	1	.....	10ks	.....	.....	0.031	0.81	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	29.61	752.0	59.0	15.0	100	S	.....	.....	2	.....	10	.....	.....	0.311	7.90	.....	Karl Stancel.
Trieste	.....	.....	29.70	754.4	69.3	20.7	67	Calm	.....	.....	0	.....	6	.....	.....	0.055	1.4	Threatening	Prof. V. Farolfi.
Vienna	.....	.....	29.65	753.1	57.6	14.2	61	WNW	.....	.....	3	.....	7	.....	.....	0.374	9.5	.....	I. R. Central Met. Obs'y.
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NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Brussels	.....	.....	29.74	755.4	52.5	11.4	61	WNW	.....	.....	3	.....	10	.....	.....	0.114	2.90	.....	Royal Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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	.....	.....	29.08	753.9	54.6	12.6	.....	WNW	23	10.3	.....	.....	9	.....	.....	0.076	1.78	*D. clouds.....	William Boswell.
Ardrossan	.....	.....	29.73	755.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	William McNeil.
Armagh, Observatory	.....	.....	29.42	747.3	55.9	13.3	.....	NW	11	4.9	.....	.....	10	.....	.....	.....	.....	Gloomy.....	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs'y	.....	.....	29.78	756.4	52.5	11.4	.....	WNW	33	14.8	.....	.....	10	.....	.....	.....	.....	Overcast.....	John Hartnup.
Birr Castle, (Parsonstown)	.....	.....	30.01	762.0	56.5	13.6	.....	NW	.....	.....	1–3	.....	10	.....	.....	.....	.....	Gloomy.....	J. Dreyer.
Bradford	.....	.....	29.74	755.4	57.6	14.2	.....	W	.....	.....	1	.....	10	.....	.....	0.15	3.8	Overcast.....	J. McLandsborough.
Bridgetown, (Barbadoes)	.....	.....	29.97	761.2	79.0	26.1	.....	NE	.....	.....	1	.....	10	.....	.....	.....	.....	Raining.....	Sergt. J. F. Halanen, A. [H. C.
Cambridge, Observatory	.....	.....	29.75	755.6	51.0	10.6	.....	W	.....	.....	1	.....	10	.....	.....	.....	.....	Raining.....	H. Todd.
Cardington	.....	.....	29.78	756.4	52.0	11.1	.....	W	.....	.....	1	.....	9	.....	.....	.....	.....	Overcast.....	John McLaren.
Carlisle	.....	.....	29.72	754.9	60.4	15.8	.....	W	.....	.....	0	.....	9	.....	.....	0.10	2.5	*D. clouds.....	T. Bell, for J. Carmell.
Chatham, School M. E	.....	.....	29.77	756.1	50.2	10.1	.....	W	.....	.....	2	.....	.....	.....	.....	.....	.....	Raining.....	Capt. J. Fellowes, R.E.
Dartmoor	28.59	726.2	30.11	764.8	46.6	8.1	.....	NW	.....	.....	5	.....	10	.....	.....	.....	.....	Rain and fog	R. E. Power.
Donaghadee	.....	.....	29.85	758.2	55	12.8	.....	NNW	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast.....	J. Mac Gowan.
Dover	.....	.....	29.77	756.1	51	10.6	.....	W	.....	.....	1	.....	10	.....	.....	.....	.....	Raining.....	J. Costello.
Eccles, (near Manchester.)	.....	.....	29.76	755.9	55.7	13.2	.....	NW	2.8	1.3	.....	.....	10	.....	.....	.....	.....	Gloomy.....	Thomas Mackereth.
Falmouth, Observatory	.....	.....	29.98	761.5	52.0	11.1	.....	WNW	25	11.2	.....	.....	10	.....	.....	.....	.....	Gloomy.....	The Staff.
Fort Napier, (Natal)	27.98	710.7	30.12	765.0	61.3	16.3	.....	S	.....	.....	2	.....	0	.....	.....	.....	.....	Blue sky.....	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.93	760.2	87.0	30.6	.....	N	.....	.....	3	.....	5	.....	.....	.....	.....	*D. clouds.....	
Galway, Queen's College	.....	.....	29.97	761.2	60	15.6	.....	NW	.....	.....	1	.....	3	.....	.....	.....	.....	*D. clouds.....	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.03	762.7	70.3	21.6	.....	NW	.....	.....	5	.....	1	.....	.....	.....	.....	*D. clouds.....	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	29.72	754.9	60.1	15.6	.....	W	.....	.....	2	.....	9	.....	.....	.....	.....	*D. clouds.....	Lewis Stuart.
Great Yarmouth	.....	.....	29.74	755.4	51	10.6	.....	WNW	.....	.....	2	.....	8	.....	.....	.....	.....	Raining.....	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	29.80	756.9	51.2	10.7	.....	W	.....	.....	1	.....	10	.....	.....	.....	.....	Raining.....	The Staff, for G. B. Airy
Guernsey	.....	.....	29.93	760.2	54.5	12.5	.....	WNW	.....	.....	2	.....	8	.....	.....	.....	.....	Showery.....	Dr. S. L. Hoskins.
Halifax, Moorside Obs'y	.....	.....	29.76	755.9	57.0	13.9	.....	NW	.....	.....	1	.....	10	.....	.....	Blank	Blank	*D. clouds.....	L. J. Crossley.
Helston	.....	.....	29.91	760.5	55	12.8	.....	NW	.....	.....	6	.....	6k	.....	.....	0	0	Fair.....	M. P. Moyle.
Holyhead	.....	.....	29.84	757.9	52	11.1	.....	NW	.....	.....	5	.....	10	.....	.....	.....	.....	Misty.....	John Tilston.
Kew, Observatory	.....	.....	29.79	756.7	52.0	11.1	.....	W	12	5.4	.....	.....	10	.....	.....	.....	.....	Raining.....	The Staff.
Kingstown	.....	.....	29.91	759.7	57	13.9	.....	NW	.....	.....	6	.....	9	.....	.....	.....	.....	Overcast.....	George Mitchell.
Leicester Museum	.....	.....	29.76	755.9	55.0	12.8	.....	NW	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast.....	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)	.....	.....	29.84	757.9	78.6	25.9	.....	SE	.....	.....	4	.....	8ck	.....	.....	.....	.....	.....	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	29.69	754.1	54	12.2	.....	NW	.....	.....	2	.....	5	.....	.....	.....	.....	½ clouded...	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.08	764.0	81 0	27.2	.....	NE	.....	.....	6	.....	8	.....	.....	.....	.....	*D. clouds.....	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	29.76	755.9	59.7	15.4	.....	NW	.....	.....	3	.....	10k. d	.....	SW	0.098	2.49	Overcast.....	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	29.79	756.7	50.8	10.4	.....	NW	.....	.....	3	.....	10	.....	.....	.....	.....	Wet.....	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	29.78	756.4	54	12.2	.....	W	.....	.....	1	.....	10	.....	.....	.....	.....	Misty.....	J. Lucas.
Plymouth	.....	.....	29.93	760.2	57.4	14.1	.....	NW	.....	.....	3	.....	10	.....	.....	.....	.....	Gloomy.....	John Merrifield.
Roche's Point	.....	.....	30.00	762.0	58	14.4	.....	NNW	.....	.....	6	.....	5	.....	.....	.....	.....	Cloudy.....	W. Kennedy.
Saint Ann's Head	.....	.....	29.91	759.7	51	10.6	.....	WNW	.....	.....	3	.....	10	.....	.....	.....	.....	Misty.....	John C. Walker.
Saint Helier, Jersey)	.....	.....	29.93	760.2	55.8	13.2	.....	NW	.....	.....	3	.....	10	.....	.....	.....	.....	Raining.....	A. P. Amy.
Sandwick Manse, Orkneys)	.....	.....	29.69	754.1	50	10 0	.....	NW	16	7.2	.....	.....	10	.....	.....	.....	.....	Misty.....	Rev. C. Clouston, LL.D.
Scarborough	.....	.....	29.72	754.9	51.1	12.3	.....	NNW	.....	.....	2	.....	10	.....	.....	.....	.....	Overcast.....	F. Shaw.
Scutari Cemetery Turkey	.....	.....	29.92	760.0	77.6	25.3	.....	SW	.....	.....	1	.....	7	.....	.....	.....	.....	*D. clouds.....	Sergt. W. H. Lyne.
Sheffield	.....	.....	29.72	754.9	58.0	14.4	.....	NW	.....	.....	2	.....	10	.....	.....	0.188	4.77	Gloomy.....	W. F. Cooper.
Silloth Rectory	.....	.....	29.74	755.4	60.8	16.0	72	E	.....	.....	1	.....	7	.....	.....	0.015	0.38	*D. clouds.....	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	29.74	755.4	56.6	13.7	.....	W	.....	.....	2	.....	10	.....	.....	.....	.....	Gloomy.....	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.	.....	.....	29.78	756.4	53	11.7	.....	WNW	.....	.....	6	.....	10	.....	.....	.....	.....	Gloomy.....	John Smith.
Stratfield Turgiss	.....	.....	29.82	757.4	50.3	10.2	.....	NW	.....	.....	0–1	.....	10	.....	.....	.....	.....	Raining.....	Rev. Charles H. Griffith.
Streatley Vicarage	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Rev. John Slatter.
Thurso	.....	.....	29.68	753.9	52	11.1	.....	WNW	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast.....	John Trotter.
Truro, Royal Institution	.....	.....	29.96	761.0	56	13.3	.....	NW	.....	.....	6	.....	10	.....	.....	.....	.....	Raining.....	W. Newcombe.
Valencia, Observatory	.....	.....	30.12	765.0	54.2	12.3	.....	NW	24	10.7	.....	.....	10	.....	.....	.....	.....	Misty.....	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	49	9.4	.....	NW	.....	.....	4	.....	10	.....	.....	.....	.....	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.31	769.9	59.3	15.2	59	NW	8	3.6	.....	1	2	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Leith, Restalrig Park	.....	.....	29.73	755.1	61.1	16.2	.....	NW	.....	.....	2	.....	10ks	.....	.....	0.45	1.3	Cloudy.....	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.15	765.8	.....	.....	.....	ESE	14.3	6.4	.....	.....	.....	.....	.....	0	0	.....	C. Meldrum.
Melbourne, Observatory	.....	.....	30.10	772.1	48.3	9.1	89	NE	8	3 6	.....	.....	0	.....	.....	0	0	Very fine.....	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	29.82	757.4	53	11.7	.....	NW	.....	.....	4	.....	10	.....	.....	0.2	5.1	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	29.58	751.3	46	7.8	.....	NW	.....	.....	4	.....	10	.....	.....	Blank	Blank	.....	Robert Burnet.

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 6. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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	.....	.....	29.44	747.8	51.4	10.8	63	SE	.....	.....	2	.....	10	.....	.....	.....	.....	.....	
Fanöe	.....	.....	29.52	749.8	54.2	11.8	72	NW	.....	.....	4	.....	6	.....	.....	.....	.....	.....	
Godthaab, (Greenland)	.....	.....	29.87	758.6	32.0	0.0	85	SSW	.....	.....	6	.....	10	.....	.....	.....	.....	Snowing.....	
Stykkisholm, (Iceland)	.....	.....	29.63	752.6	47.3	8.5	89	W	.....	.....	4	.....	8	.....	.....	.....	.....	.....	
Thorshavn, (Faröe)	.....	.....	29.64	752.8	54.0	12.2	73	NW	.....	.....	4	.....	10	.....	.....	.....	.....	.....	
Vestervig	.....	.....	29.52	749.9	52.9	11.6	67	NNW	.....	.....	4	.....	2	.....	.....	.....	.....	.....	

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

FRENCH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	29.91	759.6	57.2	14	81	W	.....	.....	3	.....	8cn	.....	SW	0.031	0.8	Very cloudy	Normal School.
Amiens	.....	.....	29.80	756.8	55.4	13.0	77	NW	.....	.....	6	.....	10	.....	.....	0.346	8.8	Covered	Normal School.
Avignon	.....	.....	29.80	757.0	68.7	20.4	39	N	.....	.....	2	.....	2	.....	WNW	0	0	.....	Normal School.
Bar-sur-Seine	.....	.....	29.85	758.2	52.9	11.6	59	N	.....	.....	3	.....	10	.....	NW	0.020	0.5	Covered	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.91	759.8	55.4	13.0	67	N	3.1	1.4	.....	.....	10	.....	N	0.008	0.2	Covered	Beaumette Observatory.
Beauvais	.....	.....	29.85	758.3	54.1	12.3	61	NW	.....	.....	2	.....	10	.....	NW	0.128	3.25	Covered	Normal School.
Besançon	.....	.....	29.84	758.0	57.2	14	57	N	.....	.....	3	.....	5	.....	W	0	0	Cloudy.....	Normal School.
Bourg en Bresse	.....	.....	29.92	759.9	59.2	15.1	60	NW	.....	.....	2	.....	10cn	.....	SE	0.150	3.8	Covered	Normal School.
Bourges	.....	.....	29.88	759.0	56.6	13.6	73	NW	.....	.....	2	.....	2	.....	SW	0.094	2.4	Slightly cl'dy	Normal School.
Brest	.....	.....	29.94	760.4	59.5	15.3	58	NW	.....	.....	3	.....	10	.....	NW	0	0	Covered	Naval Observatory.
Caen	.....	.....	30.037	778.17	57.2	14	84	N	.....	.....	2	.....	5	.....	E	0	0	Cloudy.....	Normal School.
Carcassonne	.....	.....	29.91	759.6	59.7	15.4	65	NW	.....	.....	5	.....	5	.....	SE	0	0	Cloudy.....	Normal School.
Chartres	.....	.....	29.86	758.4	53.2	11.8	.....	N	.....	.....	2	.....	10	.....	N	0	0	Covered	Normal School.
Clermont	.....	.....	29.87	758.7	53.2	11.8	77	S	.....	.....	2	.....	10	.....	W	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	29.85	758.2	48.2	9	76	W	.....	.....	2	.....	8n	.....	W	0.098	2.5	Very cloudy	Normal School.
Commune de Greasque*	.....	.....	29.84	757.9	62.4	16.9	58	NW	.....	.....	4	.....	5	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	29.96	761.0	56.1	13.4	89	WNW	.....	.....	2	.....	5k	.....	SW	0	0	Cloudy.....	Normal School.
Le Mans	.....	.....	29.91	759.8	55.4	13	59	N	.....	.....	3	.....	8	.....	NW	0.067	1.7	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	29.87	758.8	53.8	12.1	83	S	.....	.....	2	.....	5	.....	S	0.12	3.	Cloudy.....	Normal School.
Mâcon	.....	.....	29.99	761.8	54.5	12.5	90	Calm	.....	.....	0	.....	10	.....	.....	0.031	0.8	Covered	Normal School.
Mirecourt	.....	.....	29.78	756.4	53.8	12.1	61	W	.....	.....	6	.....	10	.....	E	0	0	Covered	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	29.97	761.3	66.2	19	45	W	.....	.....	2	.....	0	.....	.....	0.08	2.	Clear.....	Normal School.
Orleans	.....	.....	29.91	759.7	56.1	13.4	73	NW	.....	.....	3	.....	10	.....	NW	0	0	Covered	Normal School.
Paris, Observatory	.....	.....	29.86	758.5	50.5	10.3	75	W	.....	.....	2	.....	10	.....	NW	0.029	0.73	Raining.....	National Observatory.
Parthenay	.....	.....	29.90	759.4	53.6	12	87	NW	.....	.....	2	.....	5	.....	NW	0	0	Cloudy.....	Normal School.
Privas	.....	.....	29.82	757.3	64.0	17.8	.....	NNW	.....	.....	2	.....	5	.....	NNW	0.020	0.5	Cloudy	Normal School.
La Roche-sur-Yon	.....	.....	29.79	756.6	60.1	15.6	55	N	.....	.....	1	.....	8	.....	SE	0.118	3.0	Very cloudy	Normal School.
Rochefort, Observatory	.....	.....	29.97	761.1	67.5	19.7	64	NW	.....	.....	3	.....	8	.....	SE	0.079	2.0	¾ Covered...	Naval Observatory.
Rouen	.....	.....	29.85	758.3	53.2	11.8	74	WSW	.....	.....	2	.....	10	.....	SW	0.071	1.8	Covered	Normal School.
Saint Lo	.....	.....	29.95	760.6	57.2	14	.....	W	.....	.....	2	.....	5	.....	W	0	0	.....	Normal School.
Tarbes	.....	.....	29.65	753.1	57.7	14.3	80	NW	.....	.....	3	.....	9	.....	E	0.16	4.	Cloudy.....	Normal School.
Villefranche	28.88	733.4	29.95	760.6	57.2	14	.....	W	.....	.....	2	.....	5	.....	.....	0.055	1.40	Cloudy.....	Normal School.
Sub-Series.	.....	.....	29.92	759.0	59.4	15.2	75	NE	.....	.....	1	.....	5	.....	.....	.....	.....	.....	.....
Fort de France, Martinique	.....	.....	29.84	758.0	79.5	26.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.78	756.5	64.4	18.0	56	W	.....	.....	2-3	.....	2	.....	.....	0.047	1.20	Clear.....	Marseilles Observatory.
Mont-Louis	24.68	627.0	30.00	762.1	37.9	3.3	86	ESE	3.74	1.67	.....	.....	10	.....	W	0.287	7.3	.....	—. Falguère.
Montsouris, Paris	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montsouris Observ'tory.
Perpignan	.....	.....	29.90	759.4	57.4	14.1	67	NW	11.2	5.00	.....	.....	8	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.86	758.5	55.5	10.3	78	WNW	.....	.....	2	.....	10	.....	.....	0.098	2.5	.....	E. Renou.
Toulouse	.....	.....	29.97	761.1	59.5	15.3	65	WSW	.....	.....	2	.....	6	.....	.....	0.051	1.3	.....	Toulouse Observatory.
Tours	.....	.....	29.90	759.5	62.2	16.8	46	NW	.....	.....	1	.....	7	.....	NNW	0.154	3.9	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.86	758.4	51.8	11.0	80	NW	.....	.....	2	.....	10	.....	.....	0.030	0.76	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai	.....	.....	29.80	759.2	69.8	16.0	77	ESE	6.9	3.1	.....	0	0	.....	.....	{ 0	0	} Clear.....	H. Le Lec, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	{ 0	0	}	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Grèasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Clermont, 388 m., or 1,272.9 ft; Commune de Grèasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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	.....	.....	29.64	752.9	49.1	9.5	94	WNW	.....	.....	7	.....	8	W	.....	0.236	6.0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.57	751.1	58.5	14.7	52	NW	.....	.....	1	.....	5	.....	.....	0.012	0.3	.....	Prof. Arndt.
Breslau	.....	.....	29.60	751.9	59.0	15.0	58	SW	.....	.....	6	.....	10	.....	.....	0.488	12.4	.....	Dr. P. Naugebauer.
Carlsruhe	.....	.....	29.74	755.5	51.1	10.6	63	SW	.....	.....	3	.....	10	.....	.....	0.102	2.6	.....	A. Senz.
Cassel	.....	.....	29.67	753.5	56.1	13.4	64	NW	.....	.....	3	.....	9	WNW	.....	0	0	.....	Dr. H. Möhl.
Linden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.78	756.3	57.4	14.1	52	W	.....	.....	1	.....	8	.....	.....	0.010	0.4	.....	Physical Society
Friedrichshafen	.....	.....	29.80	756.9	54.2	11.8	66	W	.....	.....	4	.....	8	.....	.....	0.157	4.0	Raining.....	M. Wilhelm.
Hamburg	.....	.....	29.58	751.2	52.7	11.5	58	WNW	.....	.....	4	.....	9kn	.....	.....	0.409	10.4	Squally.....	Captain F. Hegemann.
Kiel	.....	.....	29.52	749.8	50.2	10.1	82	WSW	.....	.....	3	.....	10	.....	.....	0.047	1.2	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.40	746.8	55.6	13.1	72	W	.....	.....	5	.....	5	.....	.....	0.228	5.8	.....	Prof. E. Luther.
Köslin	.....	.....	29.50	749.3	49.3	9.6	.....	W	.....	.....	6	.....	4	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	29.64	752.9	47.7	8.7	96	NW	.....	.....	2	.....	9	NW	.....	0.228	5.6	.....	Prof. Bruhns.
Memel	.....	.....	29.48	748.9	53.6	12.0	89	NW	.....	.....	2	.....	7	.....	.....	0.185	4.7	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.67	753.7	53.4	11.9	69	SW	.....	.....	6	.....	7	.....	.....	0.043	1.1	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.38	746.2	57.0	11.2	67	Calm	.....	.....	0	.....	8	W	.....	0.228	5.6	.....	A. Lothes.
Posen	.....	.....	29.56	750.7	54.8	12.1	84	NW	.....	.....	5	.....	9	.....	.....	0.280	7.1	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.78	756.5	57.6	14.2	44	W	.....	.....	3	.....	10	W	.....	0.031	0.8	.....	Dr. Schur.
Stuttgart	.....	.....	29.75	755.6	53.1	11.7	56	NW	.....	.....	2	.....	8	.....	.....	Inap.?	Inap.?	Light rain ...	Prof. Schoder.
Thorn	.....	.....	29.47	748.6	60.1	15.6	54	NW	.....	.....	3	.....	8	.....	.....	0.091	2.3	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.67	753.6	55.4	13.0	42	W	.....	.....	8	.....	10	.....	.....	0.063	1.6	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	29.45	747.9	52.5	11.4	64	WSW	.....	.....	5	.....	4	.....	.....	0.252	6.4	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			29.66	753.4	64.6	18.1	52	SW	1.8	0.8			2			0.256	6.5		
Padua			29.64	752.8	67.6	19.8	50	WSW	16.1	7.2			4	WSW		0	0		
Vicenza			29.63	752.7	67.6	19.8	56	SW	7.4	3.3			2	W		0	0		
Verona			29.65	753.1	60.8	16.0	57	W			1		5			0.051	1.3		
Bergamo	28.43	722.0	29.64	752 8	65.8	18.8	47	SW			4		1			0	0		
Domodossola	28.64	727.5	29.64	752.9	69.8	21.0	34	NNE			2		5			0	0		
Milan			29.65	753.1	71.3	21.9	62	NNE			2		5	W		0	0		
Pavia			29.65	753.1	68.4	20.2	27	NW			1		0			0	0		
Moncalieri			29.65	753.2	66.9	19.4	37	SSW	3.8	1.7			9			0	0		
Mondovi	27.77	705.3	29.64	752.8	66.6	19.2	43	SE			4		2			0	0		
Porto Maurizio			29.73	755.2	68.0	20.0	65	SSW			2		1			0	0		
Genoa			29.72	755.0	65.8	18.8	60	SE	11.2	5.0			0			0	0		
Piacenza			29.65	753.1	69.3	20.7	47	W	4.9	2.2			5	W		0	0		
Parma			29.68	753.8	66.6	19.2	45	SW			4		5			0	0		
Bologna			29.67	753.6	72.7	22.6	46	W			6		3	N		0	0		
Florence			29.79	756.7	69.8	21.0	38	W			4		10	W		0	0		
Leghorn			29.77	756.1	65.5	18.6	60	W	6.3	2.8			7			0	0		
Siena	28.58	725.9	29.77	756.1	60.8	16.0	74	W	4.9	2.2			10	W		0	0		
Urbino																			
Pesaro																			
Ancona			29.74	755.3	66.9	19.4	73	NNW			4		10			0	0		
Grosseto			29.79	756.7	65.8	18.8	61	N			2		8	NW		0	0		
Rome			29.82	757.3	68.9	20.5	74	SW	4.9	2.2			10	SW		0	0		
Naples, O. U.			29.80	757.0	78.1	25.6	55	SSE			1		9	WSW		0.079	2.0		
Lecce			29.89	759.1	73.6	23.1	63	S	37.4	16.7			10	N		0	0		
Cosenza			29.84	757.9	100.4	38.0	74	ESE	14.3	6.4			3			0	0		
Riposto, (Sicily)			29.87	758.8	91.0	32.8	21	SW			4		2	N		0	0		
Palermo			29.69	754.1	93.0	33.9	49	SSW	33.6	15.0			6			0	0		
Caltanissetta	27.98	710.8	29.90?	759.5?	74.5	23.6	26	SSW			6		1	NNW		0	0		
Sub-Series.																			
Naples, S. R.			29.82	757.3	73 2	22.9	61	SE	1.3	0.6			..k,e	NE		0.134	3.4	Foggy	Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known: Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Tokio																			

NETHERLANDS' SERIES.

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

Flushing			29.80	756.9	50.7	10.4		NW			4								
Groningen			29.60	751.9	51.3	10.7		NW			4								
Helder			29.69	754 1	49.2	9.6		W			4								
Utrecht			29.67	753.7	55.4	13.0	72	WNW			4		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.

Bergen			29.50	749.3	49.3	9.6	49	W	9.6	4.3			0			0	0		
Bröno			29.57	751.0	44.6	7.0	44	N	18	8			2			0	0		
Christiania			29.48	748.7	54.0	12.2	43	SW	6.3	2.8			6			0	0		
Tromsö			29.60	751.9	37.9	3.3	49	NE	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 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,)	.....	.....	30.37	771.4	63.7	17.6	72	ESE	9.8	4.39	.....	.....	4	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.02	762.5	64.4	18.0	35	WNW	5.2	2.33	.....	.....	7	WNW	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.18	766.6	66.7	19.3	40	NE	13.4	6.0	.....	.....	6	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.11	764.9	61.2	16.2	52	NNW	17.4	7.8	.....	.....	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 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	.....	.....	29.87	758.6	54.9	12.7	91	W	16	7	.....	.....	10	.....	.....	.....	.....	Raining	Astronomical Obs.
Wilna	.....	.....	29.43	747.4	61.3	16.3	66	E	13	6	.....	.....	10	.....	.....	.....	.....	Raining	Astronomical Obs.
Dorpat	.....	.....	29.51	749.6	61.3	16.3	52	S	4	2	.....	.....	10	.....	.....	.....	.....	..	Physical Cabinet.
St. Petersburg	.....	.....	29.54	750.2	57.4	14.1	57	WNW	2	1	.....	.....	8	.....	.....	.....	.....	.	Central Physical Obs
Kuopio	.....	.....	29.52	749.8	44.4	6.9	83	NE	13	6	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.63	752.6	71.4	21.9	44	SSE	18	8	.....	.....	5	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.88	759.0	66.6	19.2	63	SSE	25	11	.....	.....	5	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.03	762.8	64.4	18.0	64	S	18	8	.....	.....	7	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.71	754.4	61.3	16.3	72	SSW	4	2	.....	.....	6	.....	.....	.....	.....	.	Meteorological Obs.
Lugan	.....	.....	29.86	758.4	70.0	21.1	44	SW	20	13	.....	.....	7	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	29.52	749.7	46.4	8.1	64	NW	29	13	.....	.....	9	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.72	729.5	30.07	763.8	72.9	22.7	34	SE	11	5	.....	.....	2	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.21	767.2	66.4	19.1	35	SSE	13	6	.....	.....	1	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.82	757.3	55.6	13.1	68	SW	7	3	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.91	734.1	29.91	759.7	49.3	9.6	73	W	4	2	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.08	764.0	71.1	21.7	30	NW	4	2	.....	.....	10	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.52	724.5	30.18	766.5	64.4	18.0	89	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.68	753.9	68.5	20.3	71	W	29	13	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.80	756.8	55.0	12.8	33	ENE	9	4	.....	.....	5	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.48	748.7	78.1	25.6	38	Calm	0	0	.....	.....	6	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	31.8	— 0.1	94	N	7	3	.....	.....	10	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,111.8 feet; Ekaterinburg, 303.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, or 1,621.3? ft.; Irkutsk, 392 m. or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.6 m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	29.96	760.9	61.0	16.1	98	NE	12.0	5.34	.....	1	7	NE	.....	0.016	0.4	Cloudy	Royal Observatory.
San Fernando	.....	.....	30.10	764.4	63.5	17.5	57	WNW	13.0	5.8	.....	0	4	.....	W	0	0	.....	The Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

SWEDISH SERIES.

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

Haparanda	.....	.....	29.62	752.4	45.0	7.2	42	S	.....	.....	1	.....	5	.....	.....	0	0	.....	
Umea	.....	.....	29.59	751.6	43.9	6.6	38	E	.....	.....	1	.....	4	.....	.....	0.071	1.8	.....	
Hernosand	.....	.....	29.56	750.7	44.1	6.7	53	ENE	.....	.....	3	.....	2	.....	.....	0	0	.....	
Stockholm	.....	.....	29.15	747.9	40.3	4.6	90	NNE	.....	.....	2	.....	10	.....	.....	0.315	8.0	Raining	
Wisby	.....	.....	29.49	749.1	41.4	5.2	97	NNE	.....	.....	1	.....	10	.....	.....	0.181	4.6	.....	
Sub-Series.																			
Upsala	.....	.....	29.50	749.2	40.1	4.5	79	NNE	11.9	5.3	.....	.....	10	.....	NNE	0.022	0.55	.....	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 meaured 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	28.41	721.6	29.83	757.7	56.1	13.4	56	SSE			1		9			0.024	0.6	Raining	The Observatory.
Zurich	28.18	715.8	29.82	757.5	52.7	11.5	74	W			1		10			0.512	13.0	Raining	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, −3.9 mm; Thermometer, −4.7 cent.; Relative Humidity, 0 per cent.

Note.—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. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople			29.92	760.0	93.2	34.0		NW			4		0						
Fao, (Persian Gulf)			30.02	762.5	62.4	16.9		NW			1		5						
Salonica			29.85	758.1	85.5	29.7		S			3		10						
Varna			30.00	762.0	78.8	26.0		S			2		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			30.09	764.2	76.3	24.6	54	N			3		0			0	0	Fair	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B.			29.92	760.0	47.8	8.8	89	NW	7	3.1		0	0			0.75	19.1	Fine, clear	Hon. J. Ferguson.
Brockville, Ontario			30.19	766.8	58	14.4		N	1	0.4		0	0			0	0	Clear	W. R. Bigg.
*Chatham, N. B.			29.98	761.5	47	8.3	62	NW	7	3.1		0	0			0.19	4.8	Clear	G. A. Blair.
Charlottetown, P. E. Island.			29.91	759.7	42	5.6	81	NW	13	5.8			10s			0.16	4.1	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.13	765.3	56.3	13.5	55	SE			1	2c	0			0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			29.97	761.2	45.4	7.4	72	W			1	0	0			0.25	6.3		H. A. Johnson.
Esquimault, B. C.			30.05	763.3	49.3	9.6	93	SE	3	1.3		8cs	0			0.05	1.3	Cloudy	W. H. Revis.
Fredericton, N. B.			30.05	763.3	45.1	7.3	40	NW	13	5.8		1c	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.94	760.5	56	13.3	87	SW	6	2.7		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.10	764.5	58.3	14.6	78	Calm			0	0	0			0	0	Fine	H. J. Strang, M. A.
Granton, Ontario	28.99	736.3	30.07	763.8	59	15.0		E			1	0	0			0	0	Clear	James Grant.
*Halifax, N. S.			29.93	760.2	50	10.0	52	NW	12	5.4		0	0			0.01	0.3	Clear	F. Allison, M. A.
*Kingston, Ontario			30.19	766.8	51	10.6	63	SW	2	0.9		Haze	0	SW		0	0	Clear	S. Woods, M. A.
*Montreal, Quebec			30.13	765.3	51	10.6	59	SW	5	2.2		0	Haze			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.13	765.3	44	6.7	52	Calm	0	0		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.09	764.3	53	11.7	54	S	5	2.2		0	0			0	0	Clear	Rev. R. Mosley.
*Port Dover, Ontario			30.13	765.3	50	10.0	79	NE	6	2.7		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.			29.93	760.2	35.0	1.7		NW	18	8.0						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.11	764.8	57	13.9	70	SE	5	2.2		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			30.11	764.8	45	7.2	39	SW	5	2.2		5k	8n	W	W	0	0	Cloudy	Capt. Ashe, R. N.
St. John, N. B.			30.04	763.0	43	6.1	51	W	9	4.0		0	0			0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario			30.06	763.5	57	13.9	80	Calm	0	0		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.06	763.5	54	12.2	55	Calm	0	0		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario	28.82	732.0	30.09	764.3	51.2	10.7	76	SE	4	1.8		0	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.75	755.6	45	7.2	72	W	17	7.6		5k	5ks	NW	NW	0.12	3.0	Fair	T. C. Hill.
*Toronto, Ontario			30.13	765.3	52	11.1	63	NE	2	0.9		0	0			0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.11	764.8	53.5	11.9	74	SE	5	2.2		0	0			0	0	Fine	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 m.

UNITED STATES SERIES.

Furnished by the cooperation 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	53	11.7	60	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Alpena, Mich	.....	.....	30.03	762.7	59	10.0	38	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Atlantic City, N. J	.....	.....	30.12	765.0	57	13.9	63	E	27	12.1	.....	1cs	Haze	SW	.....	0	0	Clear.	
Augusta, Ga.	.....	.....	30.10	764.5	69	20.6	75	E	2	0.9	.....	.....	10n	.....	E	Inap.	Inap.	Light rain.	
Baltimore, Md.	.....	.....	30.14	765.5	65	18.3	58	E	8	3.6	.....	2cs	0	.....	.....	0	0	Fair.	
Barnegat, N. J.	.....	.....	30.15	765.8	58	14.4	58	E	22	9.8	.....	2c	Haze	W	.....	0	0	Fair.	
Benton, Montana	27.32	693.9	30.12	765.0	52	11.1	27	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Bismarck, Dakota	28.28	718.3	29.89	759.2	60	15.6	55	SE	5	2.2	.....	Haze	Haze	SE	SE	0	0	Hazy.	
Boston, Mass.	.....	.....	30.18	766.6	54	12.2	41	E	5	2.2	.....	1cs	Haze	.....	.....	0	0	Hazy.	
Breckenridge, Minn	.....	.....	30.03	762.7	55	12.8	74	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Buffalo, N. Y.	.....	.....	30.08	764.0	55	12.8	68	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Clear.	
Burlington, Vt.	.....	.....	30.16	766.1	49	9.4	64	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Cairo, Ill.	.....	.....	30.11	764.8	65	18.3	78	Calm	0	0	.....	5c	0	.....	.....	0	0	Fair.	
Cape Hatteras, N. C.	.....	.....	30.07	763.8	70	21.1	66	S	4	1.8	.....	10cs	0	SW	.....	0	0	Cloudy.	
Cape Henry, Va.	.....	.....	30.11	764.8	67	19.4	69	SW	12	5.4	.....	5c	Haze	W	.....	0	0	Fair.	
Cape Lookout, N. C.	.....	.....	30.14	765.5	68	20.0	74	E	4	1.8	.....	10c	0	SW	.....	0	0	Cloudy.	
Cape May, N. J.	.....	.....	30.10	764.5	61	16.1	70	NE	20	8.9	.....	2ck	0	W	.....	0	0	Fair.	
Charleston, S. C.	.....	.....	30.10	764.5	71	21.7	85	NE	6	2.7	.....	5cs	Haze	.....	.....	0	0	Fair.	
Cheyenne, Wyoming	24.10	612.1	30.04	763.0	51	10.6	59	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Chicago, Ill.	.....	.....	30.06	763.5	66	18.9	45	W	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Cincinnati, Ohio	.....	.....	30.05	763.3	62	16.7	66	Calm	0	0	.....	Haze	Haze	.....	.....	0	0	Hazy.	
Cleveland, Ohio	.....	.....	30.08	764.0	59.2	15.1	67	SE	4	1.8	.....	0	Sm'e	.....	SE	0	0	Smoky.	
Colorado Springs, Col.	24.17	613.9	30.04	763.0	57	13.9	87	SW	1	0.4	.....	0	0	.....	.....	0.01	0.3	Clear.	
Corsicana, Texas	.....	.....	30.00	762.0	66	18.9	97	N	4	1.8	.....	2ck	0	.....	.....	0.07	1.8	Fair.	
Davenport, Iowa	.....	.....	30.13	765.3	63	17.2	57	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Denison, Texas	.....	.....	30.05	763.3	69	20.6	95	SW	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy.	
Denver, Col.	24.87	631.7	30.09	764.3	52	11.1	86	S	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy.	
Detroit, Mich	.....	.....	30.07	763.3	55	12.8	56	NE	3	1.3	.....	.....	Sm'e	.....	.....	0	0	Clear.	
Dodge City, Kan.	27.49	698.2	29.71	754.6	64	17.8	78	E	4	1.8	.....	.....	10n	.....	.....	0.06	1.5	Light rain.	
Dubuque, Iowa	.....	.....	30.11	764.8	60	15.6	70	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Duluth, Minn.	.....	.....	30.04	763.0	53	11.7	73	Calm	0	0	.....	Haze	Haze	.....	.....	0	0	Hazy.	
Eastport, Me.	.....	.....	30.04	763.0	45	7.2	53	NW	8	3.6	.....	0	0	.....	.....	0.09	2.3	Clear.	
Erie, Pa.	.....	.....	30.07	763.8	56	13.3	68	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Clear.	
Escanaba, Mich	.....	.....	30.09	762.0	54	12.2	61	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Fort Gibson, Indian Ter.	.....	.....	30.01	762.2	68	20.0	84	Calm	0	0	.....	.....	10ks	.....	.....	0	0	Cloudy.	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.80	731.5	29.88	758.9	66	18.9	84	SE	16	7.2	.....	2k	0	E	.....	0	0	Clear.	
Fort Sully, Dakota	28.35	720.1	29.98	761.5	58	14.4	81	SE	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
Galveston, Texas	.....	.....	30.04	763.0	72	22.2	90	SW	3	1.3	.....	.....	10n	.....	SW	0.20	5.1	Light rain.	
Grand Haven, Mich.	.....	.....	30.05	763.3	63	17.2	62	S	3	1.3	.....	3ck	Hz,s'ke	.....	.....	0	0	Fair.	
Indianapolis, Ind.	.....	.....	30.09	764.3	62	16.7	66	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Indianola, Texas	.....	.....	30.02	762.5	74	23.3	90	NE	11	4.9	.....	2k	0	.....	.....	0	0	Fair.	
Jacksonville, Fla.	.....	.....	30.09	764.3	74	23.3	81	Calm	0	0	.....	8k	0	.....	.....	0	0	Cloudy.	
Keokuk, Iowa	.....	.....	30.09	764.3	68	20.0	50	NE	3	1.3	.....	0	0	.....	.....	0	0	Clear.	
Key West, Fla.	.....	.....	30.00	762.0	81.0	27.2	74	E	13	5.8	.....	5cs	0	W	.....	0	0	Cloudy.	
Kittyhawk, N. C.	.....	.....	30.14	765.5	69	20.6	64	SW	8	3.6	.....	5k	2s	NW	.....	0	0	Fair.	
Knoxville, Tenn.	.....	.....	30.09	764.3	63	17.2	83	SW	2	0.9	.....	.....	10ks	.....	SW	0.63	16.0	Cloudy.	
La Crosse, Wis.	.....	.....	30.10	764.5	62	16.7	77	S	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
Leavenworth, Kan.	.....	.....	30.08	764.0	61	16.1	76	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Lexington, Ky.	29.01	736.8	30.10	764.5	60	15.6	88	NE	4	1.8	.....	8c	0	.....	.....	0.05	1.3	Cloudy.	
Long Branch, N. J.	.....	.....	30.18	766.6	55	12.8	62	NE	17	7.6	.....	..k	0	SW	.....	0	0	Clear.	
Louisville, Ky.	.....	.....	30.08	764.0	64	17.8	78	Calm	0	0	.....	5cs	Haze	.....	.....	0	0	Fair.	
Lynchburg, Va.	.....	.....	30.11	764.8	64	17.8	88	Calm	0	0	.....	.....	10s	.....	.....	0.15	3.8	Cloudy.	
Malone, N. Y.	.....	.....	30.09	764.3	52	11.1	40	SW	7	3.1	.....	0	0	.....	.....	0	0	Clear.	
Manhattan, Kan.	28.94	735.1	30.07	763.8	59	15.0	87	N	2	0.9	.....	0	0	.....	.....	0	0	Clear.	
Marquette, Mich.	.....	.....	29.96	761.0	59	15.0	54	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Memphis, Tenn.	.....	.....	30.08	764.0	65	18.3	83	NE	4	1.8	.....	8k	0	W	.....	0	0	Fair.	
Milwaukee, Wis.	.....	.....	30.09	764.3	64	17.8	48	W	10	4.5	.....	0	Fog	.....	.....	0	0	Clear.	
Mobile, Ala.	.....	.....	30.04	763.0	77	25.0	77	S	2	0.9	.....	10cs	0	.....	.....	0	0	Cloudy.	
Montgomery, Ala.	.....	.....	30.07	763.8	67.5	19.7	90	NE	6	2.7	.....	.....	10s	.....	E	Inap.	Inap.	Cloudy.	
Morgantown, W. Va.	.....	.....	30.08	764.0	63	17.2	66	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Mt. Washington, N. H.	23.81	604.8	30.17	766.3	30	— 1.1	59	N	5	2.2	.....	0	0	.....	.....	0.33	8.4	Clear.	
Nashville, Tenn.	.....	.....	30.06	763.5	63	17.2	88	Calm	0	0	.....	0	10s	.....	.....	0	0	Cloudy.	
New Haven, Conn	.....	.....	30.19	766.8	57	13.9	48	NE	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
New London, Conn	.....	.....	30.20	767.1	59	15.0	32	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
New Orleans, La	.....	.....	30.03	762.7	77	25.0	75	SW	2	0.9	.....	5ck	0	W	.....	1.68	42.7	Fair.	
Newport, R. I.	.....	.....	30.19	766.8	54	12.2	43	NE	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
New York, N. Y.	.....	.....	30.19	766.8	57	13.9	62	NE	12	5.4	.....	0	Haze	.....	.....	0	0	Clear.	
Norfolk, Va.	.....	.....	30.12	765.0	69	20.6	65	SW	9	4.0	.....	2k	5s	.....	.....	0	0	Fair.	
North Platte, Neb.	27.16	689.8	29.99	761.5	56	13.3	87	SE	4	1.8	.....	.....	10s	.....	.....	0.01	0.3	Cloudy.	
Omaha, Neb.	29.04	737.4	30.08	764.0	60	15.6	70	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear.	
Oswego, N. Y.	.....	.....	30.16	766.1	51	10.6	59	SE	5	2.2	.....	0	Haze	.....	.....	0	0	Hazy.	
Pembina, Dakota	.....	.....	29.93	760.2	60	15.6	70	S	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Philadelphia, Penn	.....	.....	30.16	766.1	58	14.4	53	E	11	4.9	.....	1k	0	W	.....	0	0	Clear.	
Pike's Peak, Colorado	17.96	456.2	30.17	766.3	31	— 0.6	49	NW	6	2.7	.....	0	5k	.....	.....	0.02	0.5	Fair.	
Pittsburgh, Penn	.....	.....	30.09	764.3	52	11.1	93	Calm	0	0	.....	0	Fog	.....	.....	0	0	Foggy.	
Port Huron, Mich	.....	.....	30.08	764.0	51	10.6	59	Calm	0	0	.....	1c	Haze	.....	.....	0	0	Fair.	
Portland, Me.	.....	.....	30.17	766.3	53	11.7	48	SE	4	1.8	.....	1c	Haze	.....	.....	Inap.	Inap.	Fair.	
Portland, Oregon	.....	.....	30.20	767.1	55	12.8	87	S	4	1.8	.....	.....	10s	.....	SW	0.04	1.0	Cloudy.	
Punta Rassa, Fla.	.....	.....	30.01	762.2	73.3	22.9	90	E	10	4.5	.....	8cs	Sm'e	SW	E	0.14	3.6	Cloudy.	
Rochester, N. Y.	.....	.....	30.10	764.5	55	12.8	38	S	3	1.3	.....	Haze	Haze	.....	.....	0	0	Hazy.	
Salt Lake City, Utah	25.72	653.3	30.06	763.5	50	10.0	58	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Sandy Hook, N. J.	.....	.....	30.16	766.1	56	13.3	53	NE	20	8.9	.....	0	0	.....	.....	0	0	Clear.	
San Diego, Cal.	.....	.....	29.87	758.7	56	13.3	93	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
San Francisco, Cal.	.....	.....	30.00	762.0	54	12.2	79	SW	2	0.9	.....	0	0	.....	.....	0	0	Clear.	
Santa Fé, N. M.	23.35	593.1	29.89	759.2	54	12.2	49	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Savannah, Ga.	.....	.....	30.10	764.5	72	22.2	75	NE	2	0.9	.....	5ck	5s	W	.....	0	0	Hazy.	
Shreveport, La.	.....	.....	30.08	764.0	70	21.1	90	SE	2	0.9	.....	10ck	0	NW	.....	0.02	0.5	Cloudy.	
Smithville, N. C.	.....	.....	30.12	765.0	71	21.7	67	E	8	3.6	.....	10ck	0	W	.....	0	0	Cloudy.	
Springfield, Mass.	.....	.....	30.19	766.8	50.5	13.6	39	NE	4	1.8	.....	0	Haze	.....	.....	0	0	Clear.	
St. Louis, Mo.	.....	.....	30.11	764.8	65	18.3	73	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
St. Marks, Fla	.....	.....	30.06	763.5	74	23.3	81	SE	8	3.6	.....	5c	2ks	W	SE	0	0	Fair.	
St. Paul, Minn.	.....	.....	30.06	763.5	62	16.7	66	Calm	0	0	.....	2c	Haze	N	.....	0	0	Fair.	
St. Paul's Island, Alaska	.....	.....	30.10	764.5	29	— 1.7	88	NW	12	5.4	.....	.....	10s	.....	.....	0.01	0.3	.....	
Thatcher's Island, Mass.	.....	.....	30.19	766.8	48	8.9	56	N	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Toledo, Ohio	.....	.....	30.06	763.5	58	14.4	69	Calm	0	0	.....	5ck	Haze	N	.....	0	0	Fair.	
Tucson, Arizona	27.44	697.0	30.03	762.7	74	23.3	.....	NE	.....	.....	.....	2c	0	E	.....	0	0	Fair.	
Tybee Island, Ga.	.....	.....	30.07	763.8	70	21.1	90	NE	8	3.6	.....	10cs	0	.....	.....	0	0	Clear.	
Vicksburg, Miss.	.....	.....	30.06	763.5	73	22.8	81	Calm	0	0	.....	8ck	2s	SW	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.	24.39	619.5	29.87	758.7	46	7.8	47	Calm	0	0	...	1c	0	W		0	0	Clear	
Washington, D. C.			30.10	764.5	65	18.3	73	NE	12	5.4		Haze	Haze			0	0	Hazy	
Wilmington, N. C.			30.12	765.0	68	20.0	74	E	3	1.3			10s		W	0	0	Cloudy	
Wood's Holl, Mass.			30.18	766.6	58	14.4	35	N	4	1.8		0	0			0	0	Clear	
Wytheville, Va.	27.77	705.4	29.90	759.4	58	14.4	93	Calm	0	0			10s		SE	0.13	3.3	Threatening	
Yankton, Dakota	28.85	732.8	30.11	764.8	60	15.6	71	Calm	0	0		0	0			0	0	Clear	
Yuma, Arizona			29.82	757.4	70	21.1		NE				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			29.95	760.7	83	28.3	67	E	3	1.3		5ck	5ks	NE		0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.92	760.0	78	25.6	86	E				Haze	Haze					Rainy	L. V. Bigard.
Kingston, Jamaica, W. I.			30.12	765.0	84	28.9	96	Calm	0	0		8c	0	SE		0.15	3.8		James Gall.
Santiago de Cuba, W. I.			29.73	755.1	79	26.1	82	Calm	0	0		8ck	8s			0.07	1.8	Cloudy	Robert Mason.
Havana, Cuba, W. I.			29.96	761.0	78	25.6	78	E	3.6	1.6		10c	2n	SE		0	0	Cloudy	Charles Hasselbrink.
St. Georges, Bermudas			30.17	766.3	73.5	23.1	82	E	4	1.8		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.	27.17	690.1	29.95	760.7	69	20.6	90	SW	2.0	0.9		5c	0	SW		0.26	6.6	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.			29.97	761.2	83	28.3	79	E			2	4k	5k	E		1.00	25.40	Dry	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.02	762.6			86.0	30										0.315	8.00		Dr. H. Groot.
Medellin, Colombia, S. A.	25.16	639.0			66.0	18.3	85	W	1	0.4		0	3ks			0.07	1.8	Fair	Thomas Herran.
St. John's, Newfoundland.			29.88	758.9	46.0	7.8	77	E								0	0	Cloudy	John Delaney.
York Factory, B. A.			29.84	757.9	46	7.8	96	N	13	5.8			10s			0	0		J. Fortescue.
Honolulu, Oahu, H. I.																			Daniel Smith.
Makawao, Maui, H. I.	27.87	707.9	30.04	763.0	60	15.6	88	Calm	0	0		0	2ks			0	0	Fine	F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Hibernian, N. 45° 25′, W. 56° 38′.	W by N	10½	29.76	755.9	39	3.9		WSW			5		Fog			Moderate		Foggy	Lieut F. Archer, R N.R
Nova Scotian, N. 39° 29′, W. 69° 14′.	NE ½ E	11½	30.09	764.3	55	12.8		S			2		k			Smooth		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.; 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.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) 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.; 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.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 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			30.12	765.1	72.5	22.5	50	Calm			0		2			0	0	Clear	Charnot.
Algiers			30.15	765.9	69.8	21.0	62	N			2		0			0	0	Clear	Peter.
La Calle																			Kunts.
Tunis			30.07	763.8	75.2	24.0	43	NW			3		5			0	0	Fair	Jacques.
Sfax			30.10	764.4	76.3	24.6	49	NNE			4		5			0	0	Fair	Chauvey.
Saida			30.13	765.2	71.6	22.0	32	NNW			1		1			0	0	Clear	Millot.
Tebessa			30.13	765.4	69.0	21.0		S			1		10			0	0	Hidden	Colin.
Geriville			30.12	765.0	63.3	17.4	10	N			1		1			0	0	Clear	Buard.
Laghouat			30.10	764.4	78.8	26.0	48	N			2		1			0	0	Clear	Guyot.
Biskra			30.10	764.5	85.6	29.8	21	NW			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.

Agram			29.82	757.4	62.5	11.4	87	SW			2		10			0.150	3.8		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.69	754.0	61.8	11.0	70	W			2		8			0.079	2.0		Dr. Wierzbiski.
Eperies			29.61	752.1	62.4	16.9	58	Calm			0		9			0	0		Julius Mikolik.
Gratz	28.58	726.0	29.76	756.0	66.8	13.8	63	SSW			3		10			0.169	4.3		Andreas Rospini.
Hermannstadt	28.33	719.5	29.74	755.3	54.0	12.2	56	SE			1		10			0.817	20 75	Raining	Prof. Reissenberger.
Kremsmünster	28.49	723.7	29.81	757.8	50.0	10.0	74	WSW			3		10			0.346	8.8		Prof. C. Wagner.
Lemberg			29.58	751.4	55.4	13.0	72	NW			2		7			0.165	4.2		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			29.78	756.4	63.9	17.7	68	W			2		2ks			0	0		I.R.Hydrographic Office.
Szegedin			29.77	756.2	61.3	16.3	66	Calm			0		10			0.006	2.45		Karl Stancel.
Trieste			29.78	756.5	66.0	18.9	56	ENE			1		8			0	0	Covered	Prof. V. Farolfi.
Vienna			29.73	755.1	58.1	14.5	48	W			5		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 Professor E. Quetelet, Director of the Royal Observatory at Brussels.

Brussels			29.80	756.8	53.2	11.8	93	W			2		10			0.193	4.90		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	.....	.....	29.89	759.2	53.5	11.9	.....	NW	13	6.7	.....	.....	9	.....	.....	0.020	0.51	*D. clouds	William Boswell.
Ardrossan	.....	.....	29.97	761.2	56	13.3	.....	NW	.....	.....	4	.....	5	.....	.....	.....	.....	*D. clouds	William McNeil.
Armagh, Observatory	.....	.....	30.08	764.0	57.0	13.9	.....	NNW	11	4.9	.....	.....	10	.....	.....	.....	.....	Gloomy	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs'y	.....	.....	29.96	761.0	51.8	11.0	.....	W	29	13.0	.....	.....	10	.....	.....	.....	.....	Overcast	John Hartnup.
Birr Castle, (Parsonstown)	.....	.....	30.14	765.5	61.0	16.1	.....	NW	.....	.....	3	.....	8	.....	.....	.....	.....	*D. clouds	J. Dreyer.
Bradford	.....	.....	29.89	759.2	58.7	14.8	.....	W	.....	.....	2	.....	10	.....	.....	0.01	0.3	Overcast	J. Mellandsborough.
Bridgetown, (Barbados)	.....	.....	30.01	762.2	79.5	26.4	.....	NE	.....	.....	2	.....	10	.....	.....	.....	.....	Overcast	Sergt. J. F. Halanen, R. A.
Cambridge, Observatory	.....	.....	29.89	759.2	57.9	14.4	.....	N	.....	.....	1	.....	10	.....	.....	Blank	Blank	Overcast	H. Todd.
Cardington	.....	.....	29.91	759.7	61.0	16.1	.....	N	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast	John McLaren.
Carlisle	.....	.....	29.93	760.2	66.1	18.9	.....	W	.....	.....	1	.....	7	.....	.....	0	0	*D. clouds	T. Bell, for J. Car mell.
Chatham, School M. E	.....	.....	29.89	759.2	58.0	14.4	.....	NW	.....	.....	1	.....	8	.....	.....	.....	.....	Overcast	Capt. J. Fellowes, R.E.
Dartmoor	28.63	727.2	30.14	765.5	50.0	10.0	.....	NW	.....	.....	4	.....	10	.....	.....	.....	.....	Foggy	R. E. Power.
Donaghadee	.....	.....	30.00	762.0	56	13.3	.....	N	.....	.....	6	.....	5	.....	.....	.....	.....	*D. clouds	J. Mac Gowan.
Dover	.....	.....	29.88	758.9	55	12.8	.....	NW	.....	.....	2	.....	10	.....	.....	.....	.....	Drizzling	J. Costello.
Eccles (near Manchester.)	.....	.....	29.92	760.0	55.2	12.9	.....	NW	7.6	3.4	.....	.....	10	.....	.....	.....	.....	Gloomy	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.10	764.5	57.4	14.1	.....	NW	28	12.5	.....	.....	10	.....	.....	.....	.....	Gloomy	The Staff.
Fort Napier, (Natal)	27.85	704.4	30.08	764.0	73.0	22.8	.....	E	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.95	760.7	86.0	30.0	.....	N	.....	.....	5	.....	8	.....	.....	.....	.....	Overcast	
Galway, Queen's College	.....	.....	30.16	766.1	60	15.6	.....	NW	.....	.....	3	.....	5	.....	.....	.....	.....	*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.12	765.0	72.7	22.6	.....	E	.....	.....	2	.....	1	.....	.....	.....	.....	*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	29.92	760.0	59.8	15.4	.....	W	.....	.....	4	.....	4	.....	.....	.....	.....	Fine	Lewis Stuart.
Great Yarmouth	.....	.....	29.86	758.4	54	12.2	.....	N	.....	.....	4	.....	7	.....	.....	.....	.....	*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	29.90	759.4	59.3	15.2	.....	NNE	.....	.....	1	.....	10	.....	.....	Blank	Blank	Overcast	The Staff, for G. B. Airy
Guernsey	.....	.....	30.00	762.0	56.5	13.5	.....	WNW	.....	.....	2	.....	8	.....	.....	.....	.....	*D clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	29.92	760.0	56.6	13.7	.....	WNW	.....	.....	2	.....	10	.....	.....	.....	.....	*D. clouds	L. J. Crossley.
Helston	.....	.....	30.04	763.5	59	15.0	.....	NW	.....	.....	4	.....	2k	.....	.....	0	0	Fair	M. P. Moyle.
Holyhead	.....	.....	30.04	763.0	52	11.1	.....	WNW	.....	.....	6	.....	4	.....	.....	.....	.....	Hazy	John Tilston.
Kew, Observatory	.....	.....	29.90	759.4	60.8	16.0	.....	NW	12	5.4	.....	.....	10	.....	.....	.....	.....	Gloomy	The Staff.
Kingstown	.....	.....	30.04	763.0	58	14.4	.....	NW	.....	.....	6	.....	8	.....	.....	.....	.....	Overcast	George Mitchell.
Leicester Museum	.....	.....	29.93	760.2	57.0	13.9	.....	NW	.....	.....	3	.....	10	.....	.....	.....	.....	Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)	.....	.....	29.85	758.2	77.4	25.2	.....	NW	.....	.....	1	.....	4k	.....	.....	.....	.....	.....	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	29.85	758.2	59	15.0	.....	NW	.....	.....	2	.....	5	.....	.....	.....	.....	½ clouded	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.05	763.3	81.2	27.3	.....	NE	.....	.....	4	.....	8	.....	.....	.....	.....	*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	29.91	759.7	57.7	14.3	.....	NW	.....	.....	4	.....	10d	.....	NW	0	0	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	29.95	760.7	54.9	12.7	.....	NW	.....	.....	5	.....	10	.....	.....	.....	.....	Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	29.92	760.0	58	14.4	.....	NW	.....	.....	2	.....	10	.....	.....	.....	.....	Gloomy	J. Lucas.
Plymouth	.....	.....	30.04	763.0	59.7	15.4	.....	NW	.....	.....	4	.....	10	.....	.....	.....	.....	Gloomy	John Merrifield.
Roche's Point	.....	.....	30.16	766.1	57	13.9	.....	NNW	.....	.....	5	.....	5	.....	.....	.....	.....	Cloudy	W. Kennedy.
Saint Ann's Head	.....	.....	30.06	763.5	54	12.2	.....	NW	.....	.....	3	.....	7	.....	.....	.....	.....	*D. clouds	John C. Walker.
Saint Helier, Jersey	.....	.....	30.09	762.0	60.0	15.6	.....	NNW	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast	A. P. Amy.
Sandwick Manse, Orkneys)	.....	.....	29.88	758.9	50.4	10.2	.....	W	18	8.0	.....	.....	5	.....	.....	.....	.....	*D. clouds	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	29.88	758.9	55.2	12.9	.....	N	.....	.....	2	.....	5	.....	.....	.....	.....	*D. clouds	F. Shaw.
Scutari Cemetery, Turkey	.....	.....	29.88	758.9	74.0	23.3	.....	SW	.....	.....	2	.....	10	.....	.....	Blank	Blank	Hazy	Sergt. W. H. Lyne.
Sheffield	.....	.....	29.92	760.0	58.8	14.9	.....	W	.....	.....	1	.....	10	.....	.....	0.073	1.85	*D. clouds	W. F. Cooper.
Silloth Rectory	.....	.....	29.91	759.7	69.9	21.1	49	NE	.....	.....	1	.....	2	.....	.....	0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	29.90	759.4	57.1	13.9	.....	W	.....	.....	3	.....	6	.....	.....	.....	.....	.....	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.	.....	.....	29.89	759.2	55	12.8	.....	NW	.....	.....	4	.....	5	.....	.....	.....	.....	*D. clouds	John Smith.
Stratfield Turgiss	.....	.....	29.92	760.0	58.3	14.6	.....	N	.....	.....	2	.....	9	.....	.....	.....	.....	*D. clouds	Rev. Charles H. Griffith.
Streatley Vicarage	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Rev. John Slatter.
Thurso	.....	.....	29.87	758.7	52	11.1	.....	NW	.....	.....	4	.....	9	.....	.....	.....	.....	Overcast	John Trotter.
Truro, Royal Institution	.....	.....	30.11	764.8	59	15.0	.....	NW	.....	.....	6	.....	8	.....	.....	.....	.....	Gloomy	W. Newcombe.
Valencia, Observatory	.....	.....	30.31	769.9	54.7	12.6	.....	NW	22	9.8	.....	.....	10	.....	.....	.....	.....	*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	50	10.0	.....	N	.....	.....	6	.....	0	.....	.....	.....	.....	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.28	769.1	66.0	18.9	73	S	5	2.2	.....	2	4	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Leith, Restalrig Park	.....	.....	29.92	760.0	64.0	17.8	.....	NW	.....	.....	2	.....	7k	.....	.....	0	0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.16	766.1	.....	.....	.....	ESE	15.1	6.8	.....	.....	.....	.....	.....	0	0	.....	C. Meldrum.
Melbourne, Observatory	.....	.....	30.28	769.1	50.9	10.5	88	NE	7	3.1	.....	.....	4	.....	.....	0	0	Fine, h'y dew	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	30.00	762.0	50	10.0	.....	NW	.....	.....	1	.....	10	.....	.....	0	0	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	29.77	756.1	48	8.9	.....	W	.....	.....	3	.....	10	.....	.....	.....	.....	.....	Robert Burnet.

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 0 p. m., local time; at 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	.....	.....	29.58	751.3	52.7	11.5	80	N	.....	.....	4	.....	6	.....	.....	.....	.....	.....	.....
Fanöe	.....	.....	29.70	754.3	55.2	12 9	65	NW	.....	.....	4	.....	5	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	29.59	751.6	34.9	1.6	73	NE	.....	.....	2	.....	2	.....	.....	.....	.....	Aurora	.....
Stykkisholm, (Iceland)	.....	.....	29.43	747.5	48.0	8.9	76	W	.....	.....	7	.....	8	.....	.....	.....	.....	.....	.....
Thorshavn, (Faröe)	.....	.....	29.67	753.7	49.6	9.8	92	W	.....	.....	4	.....	10	.....	.....	.....	.....	Rain and fog	.....
Vestervig	.....	.....	29.66	753.4	54.0	12.2	79	NW	.....	.....	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	.....	.....	29.95	760.6	57.2	14	66	NW	.....	.....	1	.....	8cn	.....	NW	0	0	Very cloudy	Normal School.
Amiens	.....	.....	29.85	758.1	57.2	14.0	89	W	.....	.....	3	.....	10	.....	.....	0.110	2.8	Covered	Normal School.
Avignon	.....	.....	30.01	762.2	64.8	18.2	51	NNW	.....	.....	2	.....	2	.....	NNW	0.240	6.1	Slightly cl'dy	Normal School.
Bar-sur-Seine	.....	.....	29.93	760.2	57.0	13.9	75	SSW	.....	.....	2	.....	10	.....	NW	0.083	2.1	Covered	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.99	761.7	58.3	14.6	76	N	10.7	4.8	.....	.....	10	.....	N	0.012	0.3	Raining	Beaumette Observatory.
Beauvais	.....	.....	29.91	759.7	55.6	13.1	78	NW	.....	.....	3	.....	10	.....	NW	0.020	0.50	Covered	Normal School.
Besançon	.....	.....	29.98	761.6	53.2	11.8	84	S	.....	.....	3	.....	8	.....	SW	0	0	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	30.09	764.2	52.0	11.1	83	S	.....	.....	3	.....	10n	.....	E	0.165	4.2	Covered	Normal School.
Bourges	.....	.....	29.98	761.4	66.2	19	81	SSW	.....	.....	2	.....	10	.....	NNW	0.091	2.3	Covered	Normal School.
Brest	.....	.....	30.05	763.3	58.8	14.9	76	N	.....	.....	4	.....	10k	.....	N	0.118	3.00	Foggy	Naval Observatory.
Caen	.....	.....	30.63?	778.1?	59.0	15	85	NW	.....	.....	2	.....	5	.....	SE	0.051	1.3	Cloudy	Normal School.
Carcassonne	.....	.....	30.17	766.2	59.0	15	53	W	.....	.....	4	.....	5	.....	E	0.134	3.4	.....	Normal School.
Chartres	.....	.....	29.85	758.3	58.3	14.6	.....	W	.....	.....	2	.....	10	.....	W	0.106	2.7	Covered	Normal School.
Clermont	.....	.....	29.96	761.0	59.4	15.2	65	N	.....	.....	2	.....	10	.....	W	0.213	5.4	.....	Puy de Dome Obs'y.
Commercy	.....	.....	29.91	759.7	54.1	12.3	76	W	.....	.....	2	.....	10kn	.....	W	0.04	1.	Covered	Normal School.
Commune de Greasque*	.....	.....	30.00	762.1	60.3	15.7	48	NW	.....	.....	8	.....	8	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.07	763.6	55.9	13.3	69	NNW	.....	.....	4	.....	8kn	.....	SE	0	0	Very cloudy	Normal School.
Le Mans	.....	.....	29.97	761.2	59.0	15	76	NW	.....	.....	3	.....	8	.....	NW	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.00	762.0	54.9	12.7	75	S	.....	.....	4	.....	10	.....	S	0	0	Covered	Normal School.
Mâcon	.....	.....	30.07	763.8	54.7	12.6	85	SW	.....	.....	2	.....	10	.....	.....	0.063	1.6	Covered	Normal School.
Mirecourt	.....	.....	29.92	759.9	55.2	12.9	95	W	.....	.....	2	.....	10	.....	E	0	0	Covered	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	29.98	761.4	66.2	19	57	W	.....	.....	4	.....	2	.....	W	0	0	Slightly cl'dy	Normal School.
Orleans	.....	.....	29.95	760.6	57.2	14	78	W	.....	.....	3	.....	10	.....	W	0.056	1.4	Covered	Normal School.
Paris, Observatory	.....	.....	29.91	759.6	57.4	14.1	80	W	.....	.....	3	.....	10	.....	W	0.044	1.12	Raining	National Observatory.
Parthenay	.....	.....	30.02	762.4	59.4	15.2	86	W	.....	.....	2	.....	5	.....	NW	0	0	Cloudy	Normal School.
Privas	.....	.....	30.03	762.8	59.4	15.2	.....	NNW	.....	.....	2	.....	10	.....	NNW	0	0	Covered	Normal School.
La Roche-sur-Yon	.....	.....	29.80	758.4	58.6	14.8	86	NW	.....	.....	2	.....	10	.....	SE	0.051	1.30	Covered	Normal School.
Rochefort, Observatory	.....	.....	30.07	763.8	63.9	17.7	74	WNW	.....	.....	3	.....	10	.....	SE	0	0	Covered	Naval Observatory.
Rouen	.....	.....	29.93	760.1	57.4	14.1	76	W	.....	.....	2	.....	10	.....	SW	0	0	Covered	Normal School.
Saint Lo	.....	.....	29.72	755.0	60.8	16	83	NW	.....	.....	1	.....	9	.....	W	0	0	.....	Normal School.
Tarbes	29.09	738.9	30.17	766.3	57.2	14	.....	W	.....	.....	6	.....	5	.....	E	0.04	1.	Cloudy	Normal School.
Villefranche	.....	.....	30.11	764.8	55.4	13	84	SE	.....	.....	1	.....	8	.....	NW	0.031	0.80	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.91	759.8	81.0	27.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.95	760.7	66.0	18.9	37	NW	.....	.....	3-4	.....	8	.....	.....	0	0	Cloudy	Marseilles Observatory.
Mont-Louis	24.87	631.8	30.19	766.8	46.0	7.8	65	S	3.7	1.67	.....	.....	7	.....	W	0.185	4.7	.....	—. Falguère.
Montsouris, Paris	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montsouris Obsery'tory.
Perpignan	.....	.....	29.88	763.4	65.5	18.6	32	NW	24.2	10.83	.....	.....	8	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.90	759.4	58.6	14.8	80	W	.....	.....	1	.....	10	.....	.....	0.075	1.9	Covered	E. Renou.
Toulouse	.....	.....	30.17	766.4	55.9	13.3	72	W	.....	.....	3	.....	10	.....	.....	0.047	1.2	.....	Toulouse Observatory.
Tours	.....	.....	29.97	761.2	60.3	15.7	75	NNW	.....	.....	1	.....	10	.....	WNW	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.91	759.7	55.4	13.0	93	NW	.....	.....	3	.....	10	.....	.....	0.050	1.26	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai	.....	.....	29.67	753.6	72.1	22.3	65	S	9.6	4.3	.....	0	0	.....	.....	{ 0 / 0	0 / 0 }	.....	H. Le Lec, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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	.....	.....	29.67	753.6	53.6	12.0	76	SW	.....	.....	6	.....	7	W	.....	0.039	1.0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.62	752.3	51.8	11.0	69	SW	.....	.....	1	.....	10	.....	.....	0.091	2.3	.....	Prof. Arndt.
Breslau	.....	.....	29.69	754.0	54.3	12.4	56	W	.....	.....	7	.....	9	.....	.....	0.169	4.3	Showery	Dr. P. Nasgebau f.
Carlsruhe	.....	.....	29.82	757.5	54.7	12.6	79	SW	.....	.....	5	.....	10	.....	.....	0.051	1.3	.....	A. Senz.
Cassel	.....	.....	29.71	754.6	59.7	15.4	66	WNW	.....	.....	4	.....	9	NW	.....	0.020	0.5	.....	Dr. H. Möhl.
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.82	757.5	61.7	16.5	53	W	.....	.....	2	.....	8	.....	.....	0.012	0.3	.....	Physical Society.
Friedrichshafen	.....	.....	29.95	760.7	50.0	10.0	84	W	.....	.....	4	.....	9	.....	.....	0.067	1.7	.....	M. Wilhelm.
Hamburg	.....	.....	29.65	753.1	47.8	8.8	87	NNE	.....	.....	1	.....	8n	.....	.....	0.276	7.0	Raining	Captain F. Hegemann.
Kiel	.....	.....	29.64	752.9	53.2	11.8	80	NNE	.....	.....	2	.....	2	.....	.....	0.224	5.7	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.47	748.4	54.3	12.4	66	W	.....	.....	2	.....	6	.....	.....	0.008	0.2	.....	Prof. E. Luther.
Köslin	.....	.....	29.52	749.7	50.2	10.1	.....	NW	.....	.....	4	.....	3	.....	.....	0.236	6.0	.....	H. Müller.
Leipsic	.....	.....	29.67	753.7	52.3	11.3	78	SW	.....	.....	3	.....	10	WSW	.....	0.177	4.5	.....	Prof. Bruhns.
Memel	.....	.....	29.50	749.4	41.4	6.9	80	WNW	.....	.....	2	.....	10	.....	.....	0.003	1.6	Showery	Reinbrecht & Skalweit.
Münster	.....	.....	29.73	755.1	55.4	13.0	83	SW	.....	.....	4	.....	7	.....	.....	0.030	1.0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.45	748.1	48.9	9.4	78	N	.....	.....	2	.....	8	W	.....	0.157	4.0	.....	A. Lothes.
Posen	.....	.....	29.58	751.4	54.5	12.4	64	NNW	.....	.....	2	.....	10	.....	.....	0.197	5.0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.88	758.9	57.7	14.3	64	SW	.....	.....	3	.....	10	WNW	.....	0.020	0.5	.....	Dr. Schur.
Stuttgart	.....	.....	29.83	757.6	58.1	14.5	53	W	.....	.....	4	.....	8	.....	.....	0.024	0.6	Light rain	Prof. Schoder.
Thorn	.....	.....	29.55	750.5	49.1	9.5	77	NW	.....	.....	3	.....	9	.....	.....	0.594	15.1	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.76	756.0	59.2	15.1	72	WNW	.....	.....	5	.....	10	.....	.....	0.028	0.7	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	29.52	749.8	53.8	12.1	72	NW	.....	.....	3	.....	3	.....	.....	0.039	1.0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			29.76	755.9	62.6	17.0	64	S	1.3	0.6			6			0	0		
Padua			29.74	755.4	66.2	19.0	42	NW	4.9	2.2			6	W		0	0		
Vicenza			29.75	755.7	67.1	19.5	44	W	3.1	1.4			4	W		0	0		
Verona			29.74	755.5	69.8	21.0	72	E			4		10			0.039	1.0		
Bergamo	28.40	721.4	29.69	754.2	66.2	19.0	30	WSW			4		2			0	0		
Domodossola	28.74	730.0	29.74	755.4	69.8	21.0	45	NNE			6		7			0	0		
Milan			29.76	755.0	73.2	22.9	36	WNW			2		2	W		0	0		
Pavia			29.78	756.3	69.4	20.8	30	W			4		0			0.028	0.7		
Moncalieri			29.78	756.4	68.9	20.5	34	S	3.8	1.7			1			0	0		
Mondovi	27.91	708.9	29.78	756.4	64.0	17.8	19	NW			4		1			0	0		
Porto Maurizio			29.85	758.2	66.9	19.4	68	SW			2		0			0	0		
Genoa			29.84	757.9	65.3	18.5	60	SE	4.2	1.9			6			0	0		
Piacenza			29.78	756.3	68.7	20.4	31	NW	11.9	5.3			1			0	0		
Parma			29.73	755.2	69.4	20.8	48	NW			6		1			0	0		
Bologna			29.82	757.5	67.5	19.7	41	W			1		3	W		0	0		
Florence			29.86	758.5	68.0	20.0	47	SW			4		5	SW		0.039	1.0		
Leghorn			29.85	758.1	64.9	18.3	54	W	32.9	14.7			6			0	0		
Siena	28.63	727.3	29.82	757.5	63.7	17.6	42	W	2.5	1.1			4	W		0	0		
Urbino																			
Pesaro																			
Ancona			29.32	757.4	67.6	19.8	49	SW			4		4			0	0		
Grosseto			29.87	758.7	71.2	21.8	44	SSW			4		4	SE		0	0		
Rome			29.91	759.8	68.6	20.3	57	SW	10.5	4.7			3	WSW		0	0		
Naples, O. U			29.95	760.6	71.4	21.9	44	W			4		6	NW		0	0		
Lecce			29.86	758.4	76.5	24.7	47	WNW	9.4	4.2			10	SW		0	0		
Cosenza			29.91	759.8	80.6	27.0	77	NW	4.9	2.2			5			0	0		
Riposto, (Sicily)			29.89	759.1	72.7	22.6	68	SSE			2		3			0	0		
Palermo			29.90	759.5	70.2	21.2	67	E	8.7	3.9			10			0	0		
Caltanissetta	27.93	709.5	29.84	757.8	74.5	23.6	29	WNW			4		10	ESE		0	0		
Sub-Series.																			
Naples, S. R			29.95	760.7	68.2	20.1	53	W	6.9	3.1			..e	NW		0	0		Prof. F. Briosch i

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.5 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.

Flushing			29.85	758.3	53.4	11.9		N			4								
Groningen			29.66	753.4	53.1	11.7		NW			5								
Helder			29.77	756.2	51.3	10.7		NW			4								
Utrecht			29.72	755.0	53.6	12.0	92	WNW			3		10					Lull	

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.

Bergen			29.61	752.1	52.5	11.4	52	W	14.3	6.4			0			0.413	10.5		
Bröno			29.67	753.6	44.6	7.0	52	NNE	11	5			1			0	0		
Christiania			29.64	752.8	52.0	11.1	33	SW	4.0	1.8			9			0.175	4.4		
Tromsö			29.58	751.2	42.6	5.9	46	SW	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,)	.....	.....	30.44	773.1	61.9	16.6	80	ENE	7.8	3.47	.....	.....	6	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.13	765.3	72.5	22.5	27	NE	5.8	2.58	.....	.....	3	ESE	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.25	768.3	64.0	17.8	63	ESE	2.5	1.11	.....	.....	10	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.20	767.1	67.8	19.9	34	ENE	11.2	5.0	.....	.....	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.

Warsaw	.....	.....	29.58	751.3	50.9	10.5	75	WSW	27	12	.....	.....	8	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.45	748.1	52.3	11.3	67	W	13	6	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.27	743.4	46.2	7.9	86	WSW	13	6	.....	.....	10	.....	.....	.....	.....	Raining	Physical Cabinet.
St. Petersburg	.....	.....	29.12	739.7	51.4	10.8	81	WSW	13	6	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.19	741.4	36.3	2.4	100	NE	22	10	.....	.....	10	.....	.....	.....	.....	Raining	Ch. Forsten.
Kieff	.....	.....	29.59	751.5	64.8	18.2	49	W	9	4	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.75	755.6	74.1	23.4	56	S	18	8	.....	.....	8	.....	.....	.....	.....	.....	Kurdukof.
Kertch	.....	.....	29.91	759.6	65.7	18.7	71	S	25	11	.....	.....	7	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.53	750.1	59.5	15.3	79	SSW	9	4	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.80	756.9	66.4	19.1	46	SSW	13	6	.....	.....	8	.....	.....	.....	.....	Raining	Meteorological Obs.
Archangel	.....	.....	29.60	751.7	49.5	9.7	54	ENE	22	10	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.70	728.9	30.03	762.8	79.5	26.4	34	S	4	2	.....	.....	4	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.21	767.4	67.1	19.5	31	S	18	8	.....	.....	1	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.86	758.4	68.0	20.0	52	SSW	4	2	.....	.....	1	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.09	736.5	29.97	761.4	62.6	17.0	61	W	13	6	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Minkuss	.....	.....	30.14	765.5	64.6	18.1	41	NW	9	4	.....	.....	8	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.52	724.5	30.19	766.7	60.4	15.8	86	NW	13	6	.....	.....	10	.....	.....	Blank	Blank	.....	Michelson.
Barnaul	.....	.....	29.95	760.8	65.8	18.8	39	W	2	1	.....	.....	4	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.78	756.3	43.7	6.5	77	ENE	2	1	.....	.....	7	.....	.....	Blank	Blank	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Orga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.59	751.6	71.6	22.0	35	SSW	9	4	.....	.....	5	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	35.8	2.1	91	Calm	0	0	.....	.....	5	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind velocity in meters per second; 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, 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	.....	.....	30.15	765.8	61.9	17.6	66	SW	3.7	1.67	.....	0	1	.....	.....	0	0	.....	Royal Observatory.
San Fernando	.....	.....	30.14	765.6	67.8	19.9	56	W	8.0	3.6	.....	0	1	.....	W	0	0	.....	The Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

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

SWEDISH SERIES.

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

Haparanda	.....	.....	29.60	751.7	47.1	8.4	27	NE	.....	.....	3	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	29.54	750.2	47.8	8.8	46	NE	.....	.....	5	.....	0	.....	.....	0	0	.....	
Hernosand	.....	.....	29.52	749.9	47.1	8.4	41	ENE	.....	.....	3	.....	1	.....	.....	0	0	.....	
Stockholm	.....	.....	29.47	748.4	46.8	8.2	94	N	.....	.....	3	.....	7	.....	.....	0.004	0.1	.....	
Wisby	.....	.....	29.54	750.2	41.4	5.2	84	NNW	.....	.....	3	.....	7	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.51	749.6	47.1	8.4	84	N	26.0	11.6	.....	.....	6	.....	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 meaured 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	28.58	726.0	30.00	762.1	56.1	13.4	61	WSW	.....	.....	4	.....	10	.....	.....	0.189	4.8	Covered	The Observatory.
Zurich	28.32	719.3	29.97	761.2	50.7	10.4	76	W	.....	.....	1	.....	10	.....	.....	0.409	10.4	Raining	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note—For Geneva the corresponding departures from the normal values are: Barometer, +0.4 mm; Thermometer, −4.8 cent.; Relative Humidity, +5 per cent.

Note.—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. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fao, (Persian Gulf)	.....	.....	30.06	763.5	91.9	33.3	.....	NW	.....	.....	3	.....	0	.....	.....	.....	.....	.....	.....
Salonica	.....	.....	29.91	759.8	81.1	27.3	.....	SE	.....	.....	2	.....	10	.....	.....	.....	.....	.....	.....
Valona	.....	.....	29.85	758.3	79.7	26.5	.....	S	.....	.....	3	.....	10	.....	.....	.....	.....	.....	.....
Varna	.....	.....	29.69	754 0	78.8	26.0	.....	W	.....	.....	3	.....	5	.....	.....	.....	.....	.....	.....
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.	.....	.....	30.07	763.8	78.8	26.0	71	NE	.....	.....	2	.....	0	.....	.....	0	0	Fair	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	29.53	750.0	51.7	10.9	82	SW	17	7.6	.....	0	.....	.....	.....	0	0	Threatening	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.96	761.0	63	17.2	.....	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	W. R. Bigg.
*Chatham, N. B	.....	.....	29.63	752.6	53	11.7	65	SW	16	7.2	.....	2k	8ks	SW	SW	0.06	1.5	Cloudy	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.75	755.6	53	11.7	61	SW	15	6.7	.....	5cs	0	.....	.....	0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.81	757.2	67.0	19.4	74	S	.....	.....	2	0	0	.....	.....	0	0	Hazy	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.56	750.8	42.0	5.6	96	W	.....	.....	1	0	10p	.....	.....	0.11	2.8	.....	H. A. Johnson.
Esquimault, B. C	.....	.....	30.09	764.3	41.3	5.2	91	Calm	0	0	.....	6cs	0	.....	.....	0	0	Cloudy	W. H. Bevis.
Fredericton, N. B	.....	.....	29.74	755.4	61.0	16.1	42	SW	12	5.4	.....	8ck	0	.....	.....	0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.80	756.9	57	13.9	69	W	7	3.1	.....	0	0	.....	.....	0	0	Smoky	James Stewart.
Goderich, Ontario	.....	.....	29.91	760.5	65.2	18.4	60	W	.....	.....	1	0	0	.....	.....	0	0	Fine	H. J. Strang, M. A.
Granton, Ontario	28.88	733.5	29.96	761.0	64	17.8	.....	SW	.....	.....	1	0	0	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S.	.....	.....	29.89	759.2	52	11.1	66	SW	12	5.4	.....	5cs	0	.....	.....	0	0	Fair	F. Allison, M. A.
*Kingston, Ontario	.....	.....	29.97	761.2	54	12.2	69	SW	5	2.2	.....	0	0	.....	.....	0	0	Clear	S. Woods, M. A.
*Montreal, Quebec	.....	.....	29.79	756.7	63	17.2	57	SW	20	8.9	.....	2cs	0	W	.....	0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.82	757.4	64	17.8	58	SW	15	6.7	.....	0	Sm'e	.....	SW	0	0	Clear	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.87	758.7	59	15.0	70	S	5	2.2	.....	2ck	0	SW	.....	0	0	Fair	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	29.98	761.5	58	14.4	82	SW	3	1.3	.....	2k	0	W	.....	0	0	Fair	H. Morgan.
Port Hastings, N. S.	.....	.....	29.75	755.6	40.2	4 6	.....	SW	3	1.3	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
*Port Stanley, Ontario	.....	.....	29.99	761.7	61	16.1	79	W	4	1.8	.....	5ck	0	W	.....	0	0	Fair	M. Payne.
*Quebec, Quebec	.....	.....	29.70	754.4	61	16.1	55	SW	24	10.7	.....	.....	8n	.....	SW	0	0	Cloudy	Capt. Ashe, R. N.
St. John, N. B.	.....	.....	29.85	758.2	46	7.8	84	S	16	7.2	.....	1ck	0	.....	.....	0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.87	758.7	64	17.8	53	SW	7	3.1	.....	2cs	0	.....	.....	0	0	Clear	K. Stewart.
Stayner, Ontario	.....	.....	29.83	757.7	72	22.2	54	NW	5	2.2	.....	5ck	0	NW	.....	0	0	Fair	R. J. Cole.
Stratford, Ontario	28.69	728.7	29.94	760.5	61.2	16.2	74	W	10	4.5	.....	3cs	0	W	.....	0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.82	757.4	57	13.9	52	SW	13	5.8	.....	2c	0	W	.....	0	0	Clear	T. C. Hill.
*Toronto, Ontario	.....	.....	29.91	760.5	57	13.9	78	SW	2	0.9	.....	Haze	0	.....	.....	0	0	Hazy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.94	760.5	62.9	17.2	71	W	10	4 5	.....	3k	0	.....	.....	0	0	Fine	J. Montgomery.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 m.

UNITED STATES SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the air. Fahrenheit.	Temperature of the air. Centigrade.	Relative humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er. 0—10	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y			29.98	761.5	65	18.3	68	Calm	0	0		0	Haze			0	0	Hazy	
Alpena, Mich			29.82	757.4	65	18.3	44	W	8	3.6		5ck	0	W		0	0	Fair	
Atlantic City, N. J			30.09	764.3	60	15.6	88	S	4	1.8		1cs	Haze	SW		0	0	Clear	
Augusta, Ga.			30.08	764.0	69	20.6	80	SE	2	0.9			10s		SW	Inap.	Inap.	Cloudy	
Baltimore, Md			30.10	764.5	66	18.9	78	SE	2	0.9		Haze	0			0	0	Clear	
Barnegat, N. J.			30.09	764.3	69	20.6	75	SW	6	2.7		0	Haze			0	0	Clear	
Benton, Montana	27.22	691.4	30.02	762.5	47	8.3	48	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.15	715.0	29.73	755.1	63	17.2	57	SW	7	3.1		Haze	Haze	SW	SW	0	0	Hazy	
Boston, Mass			30.01	762.2	65	18.3	48	SW	6	2.7		Haze	Haze			0	0	Hazy	
Breckenridge, Minn			29.82	757.4	61	16.1	66	N	8	3.6		5ck	0			0	0	Fair	
Buffalo, N. Y			29.94	760.2	61	16.1	61	SW	7	3.1		0	0			0	0	Clear	
Burlington, Vt			29.90	759.2	64	17.8	67	S	7	3.1		2c	0			0	0	Fair	
Cairo, Ill			30.03	762.7	68	20.0	79	Calm	0	0		0	0			0	0	Clear	
Cape Hatteras, N. C			30.01	762.2	68	20.0	84	NE	11	4.9		2ck	5ks	W	SE	0	0	Cloudy	
Cape Henry, Va			30.11	764.8	67	19.4	84	S	3	1.3		8c	Haze	W		Inap.	Inap.	Fair	
Cape Lookout, N. C			30.06	763.5	73	22.8	67	NE	5	2.2		5ck	0	NE		Inap.	Inap.	Fair	
Cape May, N. J			30.09	764.3	62	16.7	88	SE	6	2.7		5c	0	SW		0	0	Fair	
Charleston, S. C			30.08	764.0	69	20.6	84	NE	5	2.2		2cs	8s			0.04	1.0	Cloudy	
Cheyenne, Wyoming	24.08	611.6	30.02	762.5	54	12.2	100	SW	4	1.8		0	Fog		SW	0	0	Foggy	
Chicago, Ill			29.99	761.7	70	21.1	44	SW	3	1.3		0	0			0	0	Clear	
Cincinnati, Ohio			29.98	761.5	67	19.4	53	E	3	1.3		5ck	Sm'e			0	0	Fair	
Cleveland, Ohio			30.01	762.2	67.2	19.6	54	S	3	1.3		0	Sm'e		S	0	0	Smoky	
Colorado Springs, Col	24.18	614.2	30.05	763.3	50	10.0	100	Calm	0	0		1k	Fog			0	0	Fair	
Corsicana, Tex			29.97	761.2	69	20.6	95	E	1	0.4			Fog			0	0	Foggy	
Davenport, Iowa			30.03	762.7	64	17.8	78	NW	1	0.4		0	Haze			0	0	Clear	
Denison, Tex			30.00	762.0	66	18.9	94	E	4	1.8			10s			0.01	0.3	Cloudy	
Denver, Col.	24.85	631.2	30.07	763.8	57	13.9	93	NW	5	2.2			Fog		NW	Inap.	Inap.	Foggy	
Detroit, Mich			29.97	761.2	65	18.3	53	SW	3	1.3		Haze	Sm'e			0	0	Hazy	
Dodge City, Kan	27.44	697.0	29.64	752.8	67	19.4	83	E	6	2.7			10s			0.04	1.0	Cloudy	
Dubuque, Iowa			30.00	762.0	65	18.3	63	SW	2	0.9		0	0			0	0	Clear	
Duluth, Minn			29.81	757.2	68	20.0	51	W	12	5.4		5k	2s	W	W	0	0	Fair	
Eastport, Me			29.70	756.7	52	11.1	72	S	10	4.5		8c	Haze			0	0	Cloudy	
Erie, Pa			29.96	761.0	68	20.0	56	S	4	1.8		0	Sm'e			0	0	Clear	
Escanaba, Mich			29.82	757.4	61	16.1	66	SW	8	3.6		8k	0	SW		0	0	Fair	
Fort Gibson, Indian Ter			29.99	761.7	68	20.0	74	E	1	0.4		5c	0	W		0	0	Fair	
Ft. St. Michael, Alaska																			
Fort Sill, Indian T	28.80	731.5	29.86	758.4	66	18.9	90	S	1	0.4		5k	0	S		0	0	Fair	
Fort Sully, Dakota	28.21	716.5	29.82	757.4	58	14.4	84	N	3	1.3		1c	0			0	0	Clear	
Galveston, Tex			30.00	762.0	76	24.4	76	SE	2	0.9		0	5s		SE	0.55	14.0	Fair	
Grand Haven, Mich			29.97	761.2	65	18.3	53	W	8	3.6		0	Hz, sm'			0	0	Clear	
Indianapolis, Ind			30.01	762.2	66	18.9	68	Calm	0	0		0	0			0	0	Clear	
Indianola, Tex			29.99	761.7	81	27.2	74	Calm	0	0		5k	0			0	0	Fair	
Jacksonville, Fla			30.04	763.0	79	26.1	78	NE	4	1.8		0	0			0	0	Clear	
Keokuk, Iowa			30.00	762.0	66	18.9	68	Calm	0	0		0	Haze			0	0	Clear	
Key West, Fla			29.97	761.2	75.4	24.1	90	E	22	9.8			10n		E	0.07	1.8	Light rain	
Kittyhawk, N. C			30.11	764.8	65	18.3	90	E	5	2.2		5ck	5s			0	0	Cloudy	
Knoxville, Tenn			30.04	763.0	62	16.7	94	NE	8	3.6			10n		NE	1.77	45.0	Misting	
La Crosse, Wis			29.96	761.0	65	18.3	63	S	8	3.6		5ck	0			0	0	Fair	
Leavenworth, Kan			30.02	762.5	61	16.1	77	Calm	0	0		0	Fog			0	0	Clear	
Lexington, Ky	28.94	735.1	30.01	762.2	68	20.0	79	E	1	0.4		2k	0	E		0	0	Clear	
Long Branch, N. J			30.08	764.0	60	15.6	88	SW	4	1.8		8k	Fog	SW	E	0	0	Cloudy	
Louisville, Ky			29.99	761.7	66	18.9	73	NW	4	1.8		0	5ks		SW	0	0	Fair	
Lynchburg, Va			30.06	763.5	65	18.3	90	Calm	0	0			10s			0.06	1.5	Cloudy	
Malone, N. Y			29.89	759.2	67	19.4	45	SW	12	5.4		0	0			0	0	Clear	
Manhattan, Kan	28.91	734.3	30.03	762.7	65	18.3	78	Calm	0	0		0	0			0	0	Clear	
Marquette, Mich			29.76	755.9	73	22.8	42	W	16	7.2		0	0			0	0	Clear	
Memphis, Tenn			30.02	762.5	71	21.7	71	N	3	1.3		2ck	0	SW		0	0	Fair	
Milwaukee, Wis			29.99	761.7	65	18.3	48	W	9	4.0		0	Fog			0	0	Clear	
Mobile, Ala			30.02	762.5	75	23.9	76	NE	5	2.2		5ck	5s	E		0	0	Cloudy	
Montgomery, Ala			30.05	763.3	67.5	19.7	92	NE	2	0.9			10n			0.46	11.7	Light rain	
Morgantown, W. Va			30.02	762.5	66	18.9	68	S	2	0.9		0	Haze			0	0	Clear	
Mt. Washington, N. H	23.72	602.5	30.08	764.0	39	3.9	63	NW	40	17.9		5s	Haze	NW		0	0	Fair	
Nashville, Tenn			29.99	761.7	66	18.9	78	Calm	0	0		2ck	0	W		0	0	Clear	
New Haven, Conn			30.04	763.0	66	18.9	64	S	4	1.8		0	0			0	0	Clear	
New London, Conn			30.06	763.5	63	17.2	67	SW	6	2.7		0	Haze			0	0	Clear	
New Orleans, La			29.99	761.7	75.5	24.2	79	Calm	0	0		10k	Sm'e	W		Inap.	Inap.	Cloudy	
Newport, R. I			30.04	763.0	55	12.8	87	SW	12	5.4		0	Haze			0.02	0.5	Clear	
New York, N. Y			30.07	763.8	56	13.3	87	SW	12	5.4		0	Fog			0	0	Clear	
Norfolk, Va			30.11	764.8	71	21.7	71	S	5	2.2		0	8s			Inap.	Inap.	Fair	
North Platte, Neb	27.04	686.8	29.54	750.3	59	15.0	94	S	10	4.5			10s			0	0	Cloudy	
Omaha, Neb.	28.93	734.8	29.97	761.2	64	17.8	72	S	2	0.9		0	Haze			0	0	Clear	
Oswego, N. Y			29.94	760.5	65	18.3	65	S	8	3.6		Haze	Haze			0	0	Hazy	
Pembina, Dakota			29.78	756.4	62	16.7	66	W	6	2.7		0	0			0.02	0.5	Clear	
Philadelphia, Penn			30.09	764.3	58	14.4	93	SW	4	1.8		0	Fog			0	0	Clear	
Pike's Peak, Colorado	17.94	455.7	30.16	766.1	27	−2.8	67	W	8	3.6		2c	5s			0.03	0.8	Fair	
Pittsburgh, Penn			30.03	762.7	55	12.8	93	Calm	0	0			Fog			0	0	Foggy	
Port Huron, Mich			29.92	760.0	68	20.0	47	W	11	4.9		0	Sm'e			0	0	Clear	
Portland, Me			29.90	759.4	63	17.2	52	W	11	4.9		0	Haze			0	0	Clear	
Portland, Oregon			30.12	765.0	50	10.0	71	N	4	1.8			8s		SW	0	0	Cloudy	
Punta Rassa, Fla			30.01	762.2	74.8	23.8	85	NE	10	4.5			10s		NE	0	0	Cloudy	
Rochester, N. Y			29.92	760.0	64	17.8	52	SW	10	4.5		Haze	Haze			0	0	Hazy	
Salt Lake City, Utah	25.60	650.2	29.94	760.2	59	15.0	42	SE	2	0.9		0	0			0	0	Clear	
Sandy Hook, N. J			30.06	763.5	57	13.9	87	SW	1	0.4		Haze	Haze			0	0	Hazy	
San Diego, Cal.			29.86	758.4	58	14.4	93	Calm	0	0		0	0			0	0	Clear	
San Francisco, Cal			29.88	758.9	51	10.6	86	W	6	2.7		0	Fog		W	0	0	Fair	
Santa Fé, N. M	23.36	542.5	29.90	759.4	53	11.7	54	NE	3	1.3		0	0			0	0	Clear	
Savannah, Ga.			30.07	763.8	77	25.0	72	E	1	0.4		5ck	0	S		0.01	0.3	Fair	
Shreveport, La			30.06	763.5	70	21.1	90	Calm	0	0			10s			0	0	Threatening	
Smithville, N. C			30.07	763.8	71	21.7	70	NE	2	0.9		2ck	0	W		0	0	Fair	
Springfield, Mass.			30.00	762.0	63	17.2	64	S	4	1.8		Haze	Haze			0	0	Hazy	
St. Louis, Mo			30.03	762.7	66	18.9	68	E	2	0.9		Haze	Haze			0	0	Clear	
St. Marks, Fla			30.0[illegible]	762.5	74	23.3	81	SE	6	2.7		2k	0	SE		0	0	Fair	
St. Paul, Minn			29.87	758.7	66.5	19.2	59	SW	6	2.7		0	Haz			0	0	Hazy	
St. Paul's Island, Alaska			30.08	764.0	30	−1.1	78	NW	10	4.5			10s			0	0		
Thatcher's Island, Mass			29.96	761.0	53	11.7	73	SW	19	8.5		0	0			0	0	Hazy	
Toledo, Ohio			29.97	761.2	68	20.0	60	SW	6	2.7		0	Sm'e		SW	0	0	Smoky	
Tucson, Arizona	27.46	697.5	30.05	763.3	75	23.9		SE					10s			0	0	Cloudy	
Tybee Island, Ga			30.06	763.5	73	22.8	85	NE	4	1.8		5ck	0	SE		0.05	1.3	Fair	
Vicksburg, Miss			30.05	763.3	68.5	20.3	94	Calm	0	0		10s	Haze			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.	24.31	617.5	29.79	756.7	50	10.0	38	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Washington, D. C.	.....	.....	30.08	764.0	67	19.4	79	S	4	1.8	.....	5cs	Haze	W	.....	0	0	Hazy.	
Wilmington, N. C.	.....	.....	30.06	763.5	72	22.2	67	E	5	2.2	.....	2cs	0	W	.....	Inap.	Inap.	Fair.	
Wood's Holl, Mass.	.....	.....	30.06	763.5	58	14.4	81	SW	10	4.5	.....	0	0	.....	.....	0	0	Clear.	
Wytheville, Va.	27.74	704.6	29.86	758.4	58	14.4	96	Calm	0	0	.....	.....	10n	.....	W	0.09	2.3	Light rain.	
Yankton, Dakota.	28.70	729.0	29.94	760.5	66	18.9	73	S	1	0.4	.....	1cs	0	W	.....	0	0	Clear.	
Yuma, Arizona.	.....	.....	29.77	756.1	74	23.3	.....	E	.....	.....	.....	2ck	0	E	.....	0	0	Fair.	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
SUB-SERIES.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.02	762.5	82	27.8	74	E	2	0.9	.....	5k	5ks	NE	.....	0	0	Cloudy.	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.97	761.2	81	27.2	82	E	.....	.....	.....	0	8ks	.....	.....	0.46	11.7	Fair.	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.11	764.8	79	26.1	90	E	11	4.9	.....	5ck	5s	E	.....	0.61	15.5	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.72	754.9	79	26.1	82	W	1.2	0.5	.....	.....	8s	.....	.....	0.50	12.7	Cloudy.	Robert Mason.
Havana, Cuba, W. I.	.....	.....	29.92	760.0	74	23.3	90	Calm	0	0	.....	.....	10n	.....	SE	0.88	22.4	Light rain.	Charles Hasselbrink.
St. Georges, Bermudas.	.....	.....	30.22	767.6	76.0	24.4	77	SSE	13.0	5.8	.....	8c	2k	SW	.....	0	0	Cloudy.	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica, W. I.	27.14	689.3	29.91	759.7	68	20.0	90	S	8.0	3.6	.....	.....	10k	.....	.....	1.6	40.6	Dull.	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	29.99	761.7	81	27.2	87	E	.....	.....	2	6ks	6ks	E	.....	0.950	24.13	Cloudy.	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.03	762.8	.....	.....	86.0	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.217	5.5	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.17	639.3	.....	.....	65.5	18.6	87	N	2	0.9	.....	4ck	0	.....	.....	0.33	8.4	Fair.	Thomas Herran.
St. John's, Newfoundland.	.....	.....	29.96	761.0	53.0	11.7	79	W	.....	.....	.....	5c	5s	.....	.....	0	0	Fair.	John Delaney.
York Factory, B. A.	.....	.....	29.79	756.7	34	1.1	84	N	14	6.3	.....	0	8s	.....	.....	0	0	.....	J. Fortescue.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Makawao, Maui, H. I.	27.83	706.9	30.00	762.0	60	15.6	79	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	F. L. Clarke.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

MARINE SERIES.	True course towards.	Hourly rate in knots.									State of ocean.	Direction of swell from—		
Steamer Hibernian, N. 44° 30′, W. 61° 55′.	W by N	10	29.86	758.4	45	7.2	.....	WSW	.....	.....	5	.....	..k	.....	.....	Rough	.....	*D. clouds.	Lieut F. Archer, R. N. R.
Nova Scotian, N. 42° 26′, W. 65° 06′.	NE ½ E	11	30.10	764.5	49	9.4	.....	SSW	.....	.....	3	.....	.....	.....	.....	Smooth	.....	Overcast.	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.; 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.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) 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.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 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	.....	.....	30.10	764.6	71.2	21.8	61	NE	.....	.....	3	.....	0	.....	.....	0	0	Clear	Charnot.
Algiers	.....	.....	30.19	766.9	71.2	21.8	51	N	.....	.....	1	.....	0	.....	.....	0	0	Clear	Peter.
La Calle	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Kuntz.
Tunis	.....	.....	30.18	766.5	75.9	24.4	37	NW	.....	.....	4	.....	5	.....	.....	0	0	Fair	Jacques.
Sfax	.....	.....	30.24	768.1	77.0	25.0	40	NE	.....	.....	3	.....	2	.....	.....	0	0	Clear	Chauvey.
Saida	.....	.....	30.17	766.3	73.4	23.0	25	Calm	.....	.....	0	.....	0	.....	.....	0	0	Clear	Millot.
Tebessa	.....	.....	30.20	767.1	72.3	22.4	.....	W	.....	.....	1	.....	0	.....	.....	0	0	Clear	Colin.
Geriville	.....	.....	30.19	766.7	74.8	23.8	25	NNW	.....	.....	1	.....	2	.....	.....	0	0	Clear	Buard.
Laghouat	.....	.....	30.17	766.4	80.6	27.0	37	N	.....	.....	1	.....	0	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	30.22	767.5	86.5	30.3	21	SE	.....	.....	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.

Agram	.....	.....	30.01	762.3	57.7	14.3	73	NE	.....	.....	1	.....	9	.....	.....	0	0	.....	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	29.98	761.4	48.9	9.4	61	W	.....	.....	3	.....	10	.....	.....	0.043	1.1	.....	Dr. Wierzbiski.
Eperies	.....	.....	29.86	758.5	54.0	12.2	55	N	.....	.....	3	.....	8	.....	S	0.033	0.85	.....	Julius Mikolik.
Gratz	28.81	731.7	29.09	761.7	60.6	15.9	37	N	.....	.....	5	.....	2	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	28.41	721.7	29.80	757.0	60.4	15.8	46	NW	.....	.....	4	.....	1	.....	.....	0.012	0.30	.....	Prof. Reissenberger.
Kremsmünster	28.74	729.9	30.08	764.1	52.9	11.6	74	W	.....	.....	3	.....	8	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	.....	.....	29.76	756.0	50.7	10.4	70	N	.....	.....	3	.....	9	.....	.....	0.008	0.2	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Pola	.....	.....	29.91	760.4	67.3	19.6	67	SSW	.....	.....	1	.....	2cks	.....	.....	0	0	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	29.90	759.4	59.7	15.4	49	NW	.....	.....	3	.....	6	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	29.97	761.1	67.1	19.5	70	W	.....	.....	1	.....	2	.....	.....	0	0	Clear	Prof. V. Farolfi.
Vienna	.....	.....	30.00	762.1	56.7	13.7	47	NNE	.....	.....	3	.....	8	.....	.....	0.276	7.0	.....	I. R. Central Met. Obs'y.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.9 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Brussels	.....	.....	30.17	766.4	59.7	15.4	65	N	.....	.....	2	.....	9	.....	.....	0.102	2.60	Raining	Royal Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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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			29.99	761.7	64.0	17.8		W	23	10.3			3			0	0	Blue sky	William Boswell.
Ardrossan																			William McNeil.
Armagh, Observatory			30.26	768.6	57.3	14.1		W	8	3.6									S. Call, for Dr. Robinson.
Bidston, Liverpool Obs'y			30.23	767.8	53.0	11.7		W	28	12.5			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			30.31	769.9	56.5	13.6		WNW			1		10					Gloomy	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbadoes)			30.00	762.0	79.0	26.1		NE			1		9					Overcast	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			30.18	766.6	61.5	16.4		NW			1		10					Overcast	H. Todd.
Cardington			30.20	767.1	63.0	17.2		NW			1		8					Overcast	John McLaren.
Carlisle			30.14	765.5	58.0	14.4		W			6		9			0	0	*D. clouds	T. Bel, for J. Carmell.
Chatham, School M. E			30.22	767.6	57.0	13.9		NW			2							Overcast	Capt. J. Fellowes, R.E.
Dartmoor	28.86	733.0	30.36	771.1	57.0	13.9		NW			4		5					*D. clouds	R. E. Power.
Donaghadee			30.21	767.3	62	16.7		NW			3		10					Overcast	J. Mac Gowan.
Dover			30.20	767.1	58	14.4		W			1		7					¾ clouded	J. Costello.
Eccles (near Manchester.)			30.20	767.1	56.0	13.3		NW	9.2	4.1			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			30.32	770.1	58.0	14.4		NNW	21	9.4			5					*D. clouds	The Staff.
Fort Napier, (Natal)	27.98	710.7	30.22	767.6	64.6	18.1		E			2		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.95	760.7	88.0	31.1		E			6		6					*D clouds	
Galway, Queen's College			30.16	766.1	59	15.0		W			2		7					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.10	764.5	67.5	19.7		E			5		2					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			30.13	765.3	57.4	14.1		W			1		10					Overcast	Lewis Stuart.
Great Yarmouth			30.15	765.8	58	14.4		W			2		4					Hazy	G. T. Watson.
Greenwich, Royal Obs'y			30.22	767.6	57.1	13.9		NW			1		10					Overcast	The Staff, for G. B. Airy
Guernsey			30.28	769.1	60.5	15.8		NNW			1		3					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y			30.24	767.3	56.6	13.7		WNW			4		6					*D. clouds	L. J. Crossley.
Helston			30.31	769.6	66	18.9		N			2		2c			0	0	Fine	M. P. Moyle.
Holyhead			30.25	768.3	57	13.9		WSW			3		10					Gloomy	John Tilston.
Kew, Observatory			30.22	767.6	58.8	14.9		WNW	7	3.1			10					*D. clouds	The Staff.
Kingstown			30.29	769.4	56	13.3		WNW			4		8					Overcast	George Mitchell.
Leicester Museum			30.22	767.6	56.8	13.8		NW			2		7					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.95	760.7	72.8	22.7		NW			1		2k						Sergt. F. Travis, A. H. C.
Nairn			29.99	761.7	63	17.2		WSW			4		8					¾ clouded	W. D. Penny.
Nassau, (Bahamas)			30.00	762.0	74.4	23.6		NE			4		7					Raining	Surg. Maj. Henry.
Nottingham, Observatory			30.14	765.5	63.8	17.7		NW			4		1c,ck		S	0	0	* clouds	L. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.21	767.5	56.0	13.3		NNW			3		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.20	767.1	55	18.3		W			3		7					*D. clouds	J. Lucas.
Plymouth			30.28	769.1	66.8	19.3		NW			2		2					*D. clouds	John Merrifield.
Roche's Point			30.33	770.4	57	13.9		NNW			4		5					Fine	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, Jersey			30.27	768.8	68.0	20.0		W			3		0					Clear	A. P. Amy.
Sandwick Manse, Orkneys			29.90	759.4	49.5	9.7		W	40	17.9			10					Drizzling	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery (Turkey			29.82	757.4	77.8	25.4		SW			1		7					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.15	765.8	61.8	16.6		NW			2		4			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			30.17	766.3	59.2	15.1	74	NE			3		3			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.19	766.8	54.2	12.3		W			3		8						Rev. S. J. Perry.
Stornoway, Lews C. Hebr.			29.99	761.7	56	13.3		WSW			5		10					Overcast	John Smith.
Stratfield Turgiss			30.23	767.8	58.7	14.8		W			1		10					Overcast	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.89	759.2	57	13.9		WNW			6		5					*D. clouds	John Trotter.
Truro, Royal Institution			30.32	770.1	62	16.7		NW			6		7					*D. clouds	W. Newcombe.
Valencia, Observatory			30.38	771.6	55.8	13.2		NW	13	5.8			10					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					52	11.1		NNW			3		0						Thomas Dawson.
Cape Good Hope, Obs'y			30.02	762.5	62.0	16.7	85	NNW	6	2.7		3	4						The Staff, for E. J. Stone.
Leith, Restalrig Park			30.09	764.3	60.8	16.0		W			4		6k			0	0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.15	765.8	75.4	24.1		ESE	11.2	5.0			10		E	0	0	*D. clouds	C. Meldrum.
Melbourne, Observatory			30.03	762.7	55.7	13.2	77	NNE	6	2.7			4			0	0	Fine	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.05	763.3	53	11.7		WSW			4		10			0	0		J. Youngelause.
North Unst, (Shetland Is.)			29.76	755.9	48	8.9		W			4		10			Blank	Blank		Robert Burnet.

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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			29.72	755.0	54.7	12.6	80	WNW			7		10						
Fanöe			29.91	759.7	51.4	10.8	94	WSW			6		10						
Godthaab, (Greenland)			29.37	746.0	38.5	3.6	73	SSW			4		8						
Stykkisholm, (Iceland)			29.46	748.2	45.1	7.3	83	SE			6		8						
Thorshavn, (Faröe)			29.73	755.7	44.2	6.8	84	E			2		10					Raining	
Vestervig			29.76	755.8	50.7	10.4	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	.....	.....	30.04	763.0	59.0	15	74	N	.....	.....	1	.....	8nk	.....	N	0	0	Very cloudy	Normal School.
Amiens	.....	.....	30.15	765.8	69.4	20.8	65	W	.....	.....	3	.....	8	.....	.....	0	0	Very cloudy	Normal School.
Avignon	.....	.....	30.11	764.7	68.2	20.1	46	NNW	.....	.....	4	.....	0	.....	.....	9.024	0.6	Clear	Normal School.
Bar-sur-Seine	.....	.....	30.20	769.3	58.3	14.6	63	SSW	.....	.....	1	.....	8	.....	N	0.492	12.5	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.24	768.0	67.1	19.5	60	N	0	0	.....	.....	10	.....	E	0	0	Covered	Beaumette Observatory.
Beauvais	.....	.....	30.25	768.3	66.7	19.3	51	NW	.....	.....	2	.....	8	.....	NW	0	0	Very cloudy	Normal School.
Besançon	.....	.....	30.24	768.1	56.5	13.6	73	S	.....	.....	2	.....	8	.....	S	0.370	9.4	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	30.24	768.0	59.5	15.3	66	N	.....	.....	4	.....	10n	.....	N	0.20	5.	Covered	Normal School.
Bourges	.....	.....	30.26	768.5	57 2	14	100	NNW	.....	.....	2	.....	10	.....	NNE	0.098	2.5	Covered	Normal School.
Brest	.....	.....	30.26	768.6	60.3	15.7	64	NNE	.....	.....	3	.....	10	.....	NNE	0	0	Covered	Naval Observatory.
Caen	.....	.....	30.627	778.82	60.8	16	81	NW	.....	.....	1	.....	2	.....	SE	0.142	3.6	Slightly cl'dy	Normal School.
Carcassonne	.....	.....	30.26	768.7	61.5	16.4	70	W	.....	.....	3	.....	5	.....	E	0	0	Cloudy	Normal School.
Chartres	.....	.....	30.23	767.7	67.5	19.7	.....	N	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Clermont	.....	.....	30. 2	767.6	58.5	14.7	74	N	.....	.....	2	.....	10	.....	N	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	29.83	757.7	55.9	13.3	61	WNW	.....	.....	3	.....	8kn	.....	WNW	0.311	7.9	Very cloudy	Normal School.
Commune de Greasque*	.....	.....	30.18	764.0	69.3	20.7	41	NW	.....	.....	3	.....	2	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.12	765.0	58.3	14.6	70	NW	.....	.....	8	.....	5sn	.....	SE	0	0	Partly cloudy	Normal School.
Le Mans	.....	.....	29.95	760.6	65.5	18.6	63	N	.....	.....	3	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier	.....	.....	30.26	768.7	59.2	15.1	66	NE	.....	.....	3	.....	10	.....	S	0.2 5	5.2	Covered	Normal School.
Macon	.....	.....	29.91	759.7	57.7	14.3	80	N	.....	.....	2	.....	10	.....	.....	0.343	8.7	Covered	Normal School.
Mirecourt	.....	.....	30.23	767.8	55.4	13	72	W	.....	.....	1	.....	2	.....	NE	0.04	1.	Slightly cov.	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	30.10	764.5	68.7	20.4	46	N	.....	.....	6	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	30.23	767.7	63.7	17.6	57	NNE	.....	.....	3	.....	8	.....	N	0.031	0.8	Very cloudy	Normal School.
Paris, Observatory	.....	.....	30.25	768.3	62.6	17.0	59	WNW	.....	.....	2	.....	10	.....	WNW	0.004	0.09	Covered	National Observatory.
Parthenay	.....	.....	30.25	768.4	66.2	19	81	NW	.....	.....	2	.....	5	.....	NW	0	0	Cloudy	Normal School.
Privas	.....	.....	30.18	766.5	69.4	15.8	.....	N	.....	.....	6	.....	5	.....	NW	0	0	Cloudy	Normal School.
La Roche-sur-Yon	.....	.....	30.07	763.8	65.8	18.8	73	NW	.....	.....	1	.....	5	.....	SE	0	0	Cloudy	Normal School.
Rochefort, Observatory	.....	.....	30.30	769.6	67.3	19.0	71	NW	.....	.....	3	.....	10	.....	SE	0	0	Covered	Naval Observatory.
Rouen	.....	.....	30.25	768.3	63.3	17.4	72	WSW	.....	.....	2	.....	5	.....	NW	0	0	Cloudy	Normal School.
Saint Lo	.....	.....	29.97	761.3	65.3	18.5	80	N	.....	.....	1	.....	6	.....	NW	0	0	.....	Normal School.
Tarbes	29.20	741.7	30.28	769.0	59.0	15	.....	SW	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Villefranche	.....	.....	30.35	771.0	59.0	15	90	NW	.....	.....	1	.....	8	.....	N	0.008	0.20	Ve y cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.95	760.7	81.3	27.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.04	762.7	71.1	21.7	43	WNW	.....	.....	3-4	.....	0	.....	.....	0	0	.....	Marseilles Observatory.
Mont-Louis	25.00	635.1	30.32	770.1	49.6	9 8	75	NNW	18.6	8.33	.....	.....	5	.....	NW	0.031	0.8	.....	—. Faignère.
Montsouris, Paris	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montsouris Observ'tory.
Perpignan	.....	.....	30.15	765.9	69.4	20.8	41	NW	22.4	10.00	.....	.....	7	.....	W	0	0	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.24	768.2	63.0	17.7	63	NW	.....	.....	1	.....	10	.....	.....	0.004	0.1	Covered	E. Renou.
Toulouse	.....	.....	30.30	769.6	61.5	17.5	69	NW	.....	.....	3	.....	9	.....	.....	0.114	2.9	.....	Toulouse Observatory.
Tours	.....	.....	30.21	767.3	67.5	19.7	63	NNW	.....	.....	1	.....	1	.....	WNW	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.24	768.2	65.1	18.4	59	NW	.....	.....	1	.....	8	.....	.....	0.006	0.16	Almost cov'd	Dr. A. Berigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	29.69	754.1	73.4	23 0	73	SE	6.3	2.8	.....	0	0	.....	.....	{ 0	0 }	.....	H. Le Lec, S. J.
																{ 0	0 }		
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Greasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Clermont, 388 m., or 1,272.9 ft; Commune de Gréasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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.

Bamberg	.....	.....	30.00	761.9	57.2	14.0	58	W	.....	.....	4	.....	8	W	.....	0.787	20.0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.99	761.8	50.0	15.0	61	W	.....	.....	4	.....	8	.....	.....	0.220	5.6	.....	Prof. Arndt.
Breslau	.....	.....	30.02	762.6	55.6	13.1	41	NW	.....	.....	6	.....	10	.....	.....	0	0	.....	Dr. P. Naugebauer.
Carlsruhe	.....	.....	30.17	766.2	59.4	15.2	51	NE	.....	.....	1	.....	9	.....	.....	0.417	10.6	.....	A. Senz.
Cassel	.....	.....	30.08	763.9	65.3	18.5	43	WNW	.....	.....	5	.....	7	NNE	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.23	767.7	58.5	14.7	45	W	.....	.....	2	.....	8	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	30.18	766.6	56.3	13.5	70	N	.....	.....	.....	.....	7	.....	.....	Inap.	Inap.	.....	M. Wilhelm.
Hamburg	.....	.....	30.03	762.8	53.2	11.8	69	WNW	.....	.....	4	.....	10	.....	.....	0.004	0.1	Cloudy	Captain F. Hegemann.
Kiel	.....	.....	29.94	760.5	52.2	11.2	94	W	.....	.....	7	.....	10	.....	.....	0.012	0.3	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.78	756.3	55.0	12.8	29	NW	.....	.....	5	.....	2	.....	.....	0.028	0.7	.....	Prof. E. Luther.
Köslin	.....	.....	29.84	757.9	55.6	13.1	.....	W	.....	.....	6	.....	3	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.00	763.5	58.3	14.6	56	WNW	.....	.....	2	.....	9	WNW	.....	0.039	1.0	Rainy	Prof. Bruhns.
Memel	.....	.....	29.73	755.1	48.4	9.1	77	WSW	.....	.....	5	.....	0	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.13	765.2	59.0	15.5	63	S V	.....	.....	4	.....	2	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.94	755.3	60.1	15.6	85	W	.....	.....	5	.....	6	.....	.....	0	0	.....	A. Lothes.
Posen	.....	.....	29.96	761.0	61.3	16.3	58	W	.....	.....	8	.....	9	.....	.....	0.008	0.2	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.19	766.8	59.9	15.5	51	NNW	.....	.....	2	.....	10	W	.....	0.024	0.6	.....	Dr. Schür.
Stuttgart	.....	.....	30.13	765.3	55.4	13.0	51	W	.....	.....	1	.....	8	.....	.....	0.059	1.5	.....	Prof. Schoder.
Thorn	.....	.....	29.87	758.6	60 6	15.0	47	W	.....	.....	3	.....	6	.....	.....	0.063	1.6	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.13	765.4	60.4	15.8	48	NW	.....	.....	5	.....	5	.....	.....	0.028	0.7	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	29.83	757.7	52.0	11.1	83	W	.....	.....	5	.....	10	.....	.....	0.020	0.5	Raining	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			29.92	759.9	66.2	19.0	56	SW	0.7	0.3			6			0	0		
Padua			29.91	759.7	65.7	18.7	47	SW	4.9	2.2			3	N		0	0		
Vicenza			29.94	760.5	70.2	21.2	40	SW	7.4	3.3			0			0	0		
Verona			29.96	760.9	61.7	16.5	64	E			1		0			0	0		
Bergamo																			
Domodossola	28.90	734.0	29.90	759.4	75.2	24.0	45	NNE			6		1			0	0		
Milan			29.93	760.3	75.2	24.0	38	W			2		3	W		0	0		
Pavia			29.94	760.4	73.4	23.0	35	W			4		0			0	0		
Moncalieri			29.97	761.1	71.6	22.0	37	SE	4.2	1.9			1			0	0		
Mondovi	28.08	713.2	29.95	760.7	69.6	20.9	22	NE			4		1	NE		0	0		
Porto Maurizio			30.06	763.5	68.4	20.2	72	E			2		4	S		0	0		
Genoa			30.02	762.5	65.3	18.5	65	SW	2.5	1.1			0			0	0		
Piacenza			29.94	760.4	73 8	23.2	32	NW	13.6	6.1			3	NE		0	0		
Parma			29.94	760.5	72.9	22.7	50	NW			6		1			0	0		
Bologna			29.98	761.4	70.9	21.6	44	NW			6		4	NE		0	0		
Florence			30.01	762.3	73.4	23.0	42	NW			4		5	NW		0	0		
Leghorn			30.01	762.3	66.7	19.3	73	W	6.3	2.8			5			0	0		
Siena	28.78	731.1	29.97	761.3	65.5	18.6	49	NW	5.6	2.5			4	W		0	0		
Urbino																			
Pesaro																			
Ancona			29.97	761.1	68.7	20.4	47	SE			4		1			0	0		
Grosseto			30.01	762.2	69.1	20.6	56	ENE			4		2	NW		0	0		
Rome			29.98	761.6	70.9	21.6	50	W	9.4	4.2			2			0	0		
Naples, O. H.			29.99	761.7	72.1	22.3	50	SSW					1			0	0		
Lecce			29.96	760.9	68.2	20.1	40	E	18.6	8.3			2			0	0		
Cosenza			29.96	761.0	77.0	25.0	70	NW	0	0			4			0	0		
Riposto, (Sicily)			29.94	760.5	72.7	22.6	35	NE			6		2	SW		0	0		
Palermo			29.98	761.4	70.7	21.5	41	WNW	8.7	3.9			7			0	0		
Caltanissetta	28.02	711.7	29.92	760.0	64.9	18.3	43	WNW			6		1	SE		0	0		
Sub-Series.																			
Naples, S. R.			29.61	752.1	70.7	21.5	71	SW	0.7	0.3			..k,c	W		0	0		Prof. F. Briosc i.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Tokio																			

NETHERLANDS' SERIES.

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

Flushing			30.23	767.8	54.0	12.2		NW			3								
Groningen			30.06	763.4	55.2	12.9		WNW			4								
Helder			30.13	765 4	54.3	12.4		WSW			4								
Utrecht			30.13	765.4	59.4	15.2	62	W			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.

Bergen			29.66	753.3	49.6	9.8	82	NW	13.2	5.9			10			0.230	6.0		
Brönö			29.24	742.6	40.6	4.8	74	W	27	12			10			0	0		
Christiania			29.43	747.4	65.3	18.5	34	WNW	10.7	4.8			3			0.008	0.2		
Tromsö			28.94	35.1	44.4	6.9	52	SW	11	5			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.)	.....	.....	30.44	773.1	63.9	17.7	76	NE	11.4	5.11	.....	.....	6	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.10	764.5	79.2	26.2	21	ESE	8.1	3.61	.....	.....	0	.....	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.19	766.8	63.3	17.4	49	NE	4.0	1.78	.....	.....	10	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.15	765.9	74.3	23.5	27	NNE	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 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	.....	.....	29.88	759.0	53.8	12.1	43	W	7	3	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.67	753.6	55.6	13.1	34	WNW	13	6	.....	.....	9	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.44	747.7	43.9	6.6	85	WNW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.28	743.7	37.0	2.8	80	WNW	13	6	.....	.....	8	.....	.....	.....	.....	.....	Central Physical Obs.
Knopio	.....	.....	30.19	741.4	38.8	3.8	100	W	7	3	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.65	753.1	63.9	17.7	36	WSW	9	4	.....	.....	3	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.84	757.8	71.2	21.8	54	NNW	11	5	.....	.....	6	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.86	758.4	70.0	21.1	70	SSW	4	2	.....	.....	9	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.50	749.3	63.5	17.5	51	SW	4	2	.....	.....	7	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.07	738.6	61.3	16.3	88	SSW	20	13	.....	.....	9	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	29.22	742.3	54.5	12.5	57	SW	9	4	.....	.....	9	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.05	727.6	29.07	761.3	82.8	28.2	30	E	9	4	.....	.....	4	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.11	764.8	66.0	18.9	49	S	22	10	.....	.....	9	.....	.....	Blank	Blank	.....	Sebastianof.
Kasan	.....	.....	29.68	753.8	68.9	20.5	51	SSW	40	18	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.93	734.9	29.02	759.9	71.2	21.8	36	S	4	2	.....	.....	5	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.13	765.2	73.2	22.9	25	NW	9	4	.....	.....	8	.....	.....	.....	.....	.....	.....
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.52	724.4	30.15	765.7	71.4	21.9	51	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	Micholson.
Barnaul	.....	.....	29.82	757.5	67.5	19.7	40	Calm	0	0	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.72	755.0	48.9	9.4	70	NW	2	1	.....	.....	5	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.76	755.9	66.2	19.0	43	SW	9	4	.....	.....	1	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nikolaievsk, on the Amoor	.....	.....	.....	.....	30.3	2.4	94	SE	4	2	.....	.....	10	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds; 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, m. 404.2?, or 1,321.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.6 m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	30.11	764.9	75.0	23.9	53	SE	4.5	2.00	.....	0	2	.....	.....	0	0	.....	Royal Observatory.
San Fernando	.....	.....	30.09	764.3	77.0	25.0	21	ESE	10.6	7.4	.....	1	2	E	SE	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	.....	.....	29.13	739.8	49.6	9.8	36	SW	.....	.....	2	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	29.14	740.2	54.9	12.7	47	SW	.....	.....	3	.....	8	.....	.....	0	0	.....	
Hernosand	.....	.....	29.23	742.5	58.8	14.9	42	W	.....	.....	2	.....	8	.....	.....	0	0	.....	
Stockholm	.....	.....	29.34	745.2	61.9	16.1	44	W	.....	.....	2	.....	5	.....	.....	0	0	.....	
Wisby	.....	.....	29.56	750.9	58.3	14.6	50	W	.....	.....	3	.....	0	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.34	745.2	64.4	18.0	26	W	11.6	5.2	.....	.....	9	.....	WNW	0.003	0.07	.....	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 meaured 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	730.6	30.17	766.4	59.9	15.5	61	NNE	.....	.....	2	.....	5	.....	.....	0.039	1.0	Cloudy	The Observatory.
Zurich	28.55	725.1	30.17	766.2	58.3	14.6	72	W	.....	.....	3	.....	9	.....	.....	0.031	0.8	Covered	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note—For Geneva the corresponding departures from the normal values are: Barometer, +5.0 mm; Thermometer, −2.8 cent.; Relative Humidity, +5 per cent.

Note.—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. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople	.....	.....	30.00	762.0	92.5	33.6	.....	NW	.....	.....	3	.....	0	.....	.....	.....	.....	.....	.....
Fao, (Persian Gulf)	.....	.....	29.91	759.6	66.9	19.4	.....	W	.....	.....	1	.....	5	.....	.....	.....	.....	.....	.....
Salonica	.....	.....	29.89	759.1	67.3	19.6	.....	NW	.....	.....	2	.....	0	.....	.....	Blank	Blank	.....	.....
Valona	.....	.....	29.88	759.0	62.6	17.0	.....	NW	.....	.....	3	.....	10	.....	.....	.....	.....	.....	.....
Varna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.98	761.5	81.5	27.5	71	NE	.....	.....	2	.....	0	.....	.....	0	0	Fair	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. 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	.....	.....	29.91	759.7	63	17.2	.....	SW	10	4.5	.....	0	0	.....	.....	0	0	Clear	W. R. Bigg.
*Chatham, N. B	.....	.....	29.69	754.1	57	13.9	78	SW	5	2.2	.....	.....	Haze	.....	.....	0	0	Cloudy	G. A. Blair.
Charlottetown P. E. Island	.....	.....	29.78	756.4	60	15.6	71	N	13	5.8	.....	0	0	.....	.....	0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.78	756.4	70.0	21.1	48	S	.....	.....	5	9k	0	.....	.....	0.078	1.98	Blustering	James Smith, M. A.
Dalhousie, N. B.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.14	3.6	.....	H. A. Johnson.
Esquimault, B. C.	.....	.....	29.99	761.7	46.3	7.9	84	N	1	0.4	.....	0	0	.....	.....	0	0	Clear	W. H. Revis.
Fredericton, N. B.	.....	.....	29.77	756.1	61.3	16.3	65	SE	2	0.9	.....	.....	10n	.....	.....	0.050	1.27	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.83	758.7	53	11.7	83	E	2	0.9	.....	0	0	.....	.....	0	0	Smoky	James Stewart.
Goderich, Ontario	.....	.....	29.90	759.4	65.9	18.8	63	W	.....	.....	1	2c	1s	N	.....	0	0	Fine	H. J. Strang, M. A.
Granton, Ontario	28.82	732.0	29.88	758.9	67	19.4	.....	S	.....	.....	1	0	0	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S.	.....	.....	29.89	759.2	57	13.9	72	SW	9	4.0	.....	0	0	.....	.....	0	0	Clear	F. Allison, M. A.
*Kingston, Ontario	.....	.....	29.91	759.7	55	12.8	73	SW	11	4.5	.....	0	0	.....	.....	0	0	Clear	S. Woods, M. A.
*Montreal, Quebec	.....	.....	29.78	756.4	64	17.8	57	SW	20	8.9	.....	5k	Haze	W	.....	0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.77	756.1	67	19.4	39	SW	6	2.7	.....	2k	Sm'e	SW	SW	0	0	Smoky	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.85	758.2	54	12.2	70	W	5	2.2	.....	2ck	5ks	W	W	0	0	Fair	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	29.94	760.5	57	13.9	81	S	10	4.5	.....	0	0	.....	.....	0	0	Clear	H. Morgan.
Port Hastings, N. S.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Peter Grant.
*Port Stanley Ontario	.....	.....	29.94	760.5	59	15.0	80	E	5	2.2	.....	0	0	.....	.....	0	0	Clear	M. Payne.
*Quebec, Quebec	.....	.....	29.71	754.6	65	18.3	68	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.	.....	.....	29.88	758.9	47	8.3	85	S	9	4.0	.....	0	9ks	.....	.....	0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.82	757.4	60	15.6	60	SW	14	6.3	.....	5cs	0	.....	.....	0	0	Fair	K. Stewart.
Stayner, Ontario	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. J. Cole.
Stratford, Ontario	24.64	727.4	29.97	761.2	63.1	17.3	67	SW	17	7.6	.....	0	0	.....	.....	0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.	.....	.....	29.84	757.9	63	17.2	66	SW	12	5.4	.....	8k	0	NW	.....	0	0	Hazy	T. C. Hill.
*Toronto, Ontario	.....	.....	29.90	759.4	63	17.2	67	SW	3	1.3	.....	0	0	.....	.....	0	0	Clear	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.86	758.4	67.3	19.6	58	W	36	16.1	.....	0	0	.....	.....	Inap.	Inap.	Fine	J. Montgomery.
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Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 m.

UNITED STATES SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	29.93	760.2	71	21.7	71	S	3	1.3	.....	Haze	Haze	.....	.....	0	0	Hazy.	
Alpena, Mich.	.....	.....	29.82	757.4	67	19.4	50	NW	8	3.6	.....	5ck	Sm'e	W	.....	0	0	Fair.	
Atlantic City, N. J.	.....	.....	30.03	762.7	59	15.0	100	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy.	
Augusta, Ga.	.....	.....	30.04	763.0	70	21.1	90	SE	1	0.4	.....	.....	10s	.....	SW	0.89	22.6	Cloudy.	
Baltimore, Md.	.....	.....	30.07	763.8	67	19.4	79	S	2	0.9	.....	Haze	0	.....	.....	0	0	Clear.	
Barnegat, N. J.	.....	.....	30.04	763.0	61	16.1	88	S	5	2.2	.....	0	Fog	.....	.....	0	0	Clear.	
Benton, Montana	27.04	686.8	29.94	760.5	48	8.9	42	NE	1	0.4	.....	5c	0	.....	.....	0	0	Fair.	
Bismarck, Dakota	28.11	714.0	29.69	754.1	60	15.6	44	SE	3	1.3	.....	1k	Haze	SE	S	0	0	Fair.	
Boston, Mass.	.....	.....	29.93	760.2	70	21.1	61	SW	5	2.2	.....	Haze	Haze	.....	.....	0	0	Hazy.	
Breckenridge, Minn.	.....	.....	29.96	759.4	58	14.4	69	Calm	0	0	.....	2c	0	.....	.....	0	0	Clear.	
Buffalo, N. Y.	.....	.....	29.91	759.7	57	13.9	69	W	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
Burlington, Vt.	.....	.....	29.84	757.9	72	22.2	62	S	11	4.9	.....	0	0	.....	.....	0	0	Clear.	
Cairo, Ill.	.....	.....	30.02	762.5	68	20.0	65	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Cape Hatteras, N. C.	.....	.....	30.00	762.0	74	23.3	85	NE	4	1.8	.....	.....	8ks	.....	W	Inap.	Inap.	Cloudy.	
Cape Henry, Va.	.....	.....	30.03	762.7	68.5	20.3	97	Calm	0	0	.....	8ck	2s	W	.....	0	0	Cloudy.	
Cape Lookout, N. C.	.....	.....	30.07	763.8	71	21.7	95	N	1	0.4	.....	2ck	1k	.....	.....	0	0	Fair.	
Cape May, N. J.	.....	.....	30.03	762.7	61	16.1	100	E	5	2.2	.....	.....	Fog	.....	.....	0	0	Foggy.	
Charleston, S. C.	.....	.....	30.06	763.5	74	23.3	90	E	3	1.3	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy.	
Cheyenne, Wyoming	24.02	610.1	29.96	761.0	51	10.6	79	SW	4	1.8	.....	2c	0	.....	.....	0	0	Fair.	
Chicago, Ill.	.....	.....	29.91	759.7	70	21.1	49	Sc.	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
Cincinnati, Ohio	.....	.....	29.94	760.5	67	19.4	74	SE	2	0.9	.....	0	0	.....	.....	0	0	Clear.	
Cleveland, Ohio	.....	.....	29.94	760.5	65	18.3	64	SE	6	2.7	.....	2ck	Sm'e	W	SE	0	0	Clear.	
Colorado Springs, Col.	24.11	612.4	29.98	761.5	53	11.7	60	N	4	1.8	.....	1c	0	.....	.....	0	0	Clear.	
Corsicana, Tex.	.....	.....	29.96	761.0	70	21.1	95	E	1	0.4	.....	2c	2k	.....	.....	0.05	1.3	Fair.	
Davenport, Iowa	.....	.....	29.97	761.2	68	20.0	64	SW	8	3.6	.....	3cs	0	SW	.....	0	0	Clear.	
Denison, Tex.	.....	.....	30.00	762.0	75	23.9	85	SE	4	1.8	.....	1c	0	.....	.....	0	0	Clear.	
Denver, Col.	24.78	629.4	30.00	762.0	56	13.3	56	S	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Detroit, Mich.	.....	.....	29.90	759.4	63	17.2	62	SW	5	2.2	.....	1c	Sm'e	SW	.....	0	0	Fair.	
Dodge City, Kan.	27.33	694.2	29.50	749.3	68	20.0	60	S	5	2.2	.....	2c	0	.....	.....	0	0	Clear.	
Dubuque, Iowa	.....	.....	29.91	759.7	69	20.6	56	W	2	0.9	.....	2k	0	W	.....	0	0	Fair.	
Duluth, Minn.	.....	.....	29.78	756.4	56	13.3	74	Calm	0	0	.....	5k	0	.....	.....	Inap.	Inap.	Clear.	
Eastport, Me.	.....	.....	29.79	756.7	51	10.6	78	S	5	2.2	.....	Haze	Haze	W	W	0	0	Hazy.	
Erie, Pa.	.....	.....	29.91	759.7	69	20.6	60	S	10	4.5	.....	5ck	Haze	W	.....	0	0	Fair.	
Escanaba, Mich.	.....	.....	29.80	756.9	66	18.9	64	NW	3	1.3	.....	0	0	.....	.....	0	0	Clear.	
Fort Gibson, Indian Ter.	.....	.....	29.95	760.7	72	22.2	71	E	2	0.9	.....	0	0	.....	.....	0	0	Clear.	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.75	730.2	29.82	757.4	72	22.2	75	Calm	0	0	.....	2cs	0	.....	.....	0	0	Clear.	
Fort Sully, Dakota	28.15	715.0	29.73	755.1	68	20.0	60	SE	6	2.7	.....	10k	0	S	.....	0	0	Cloudy.	
Galveston, Tex.	.....	.....	29.97	761.2	77	25.0	81	SE	2	0.9	.....	.....	10s	.....	SE	2.24	56.9	Cloudy.	
Grand Haven, Mich.	.....	.....	29.92	760.0	57	13.9	77	W	9	4.0	.....	1k	2s	W	W	0	0	.....	
Indianapolis, Ind.	.....	.....	29.96	761.0	69	20.6	70	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Indianola, Tex.	.....	.....	29.93	761.0	73	22.8	85	S	4	1.8	.....	0	8s,ks	.....	S	0.35	8.9	Cloudy.	
Jacksonville, Fla.	.....	.....	30.01	762.2	81	27.2	70	E	4	1.8	.....	5k	0	.....	.....	0.04	1.0	Fair.	
Keokuk, Iowa	.....	.....	29.93	760.2	71	21.7	57	SW	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
Key West, Fla.	.....	.....	29.92	760.0	77.2	25.1	90	S	1	0.4	.....	.....	8s	.....	S	0.66	16.8	Cloudy.	
Kittyhawk, N. C.	.....	.....	30.06	763.5	65	18.3	94	N	2	0.9	.....	10ks	Haze	.....	.....	0	0	Cloudy.	
Knoxville, Tenn.	.....	.....	30.03	762.7	63	17.2	94	SW	2	0.9	.....	8k	Fog	SW	.....	0.01	0.3	Cloudy.	
La Crosse, Wis.	.....	.....	29.80	756.9	71	21.7	62	S	11	4.9	.....	0	0	.....	.....	0	0	Clear.	
Leavenworth, Kan.	.....	.....	29.94	760.5	66	18.9	68	S	1	0.4	.....	0	0	.....	.....	0	0	Clear.	
Lexington, Ky.	28.94	735.1	30.00	762.0	73	22.8	76	SE	8	3.6	.....	1k	0	SE	.....	0	0	Clear.	
Long Branch, N. J.	.....	.....	30.02	762.5	63	17.2	83	SW	2	0.9	.....	0	0	.....	.....	0	0	Clear.	
Louisville, Ky.	.....	.....	29.98	761.5	67	19.4	79	S	1	0.4	.....	0	Fog	.....	.....	0	0	Fair.	
Lynchburg, Va.	.....	.....	30.03	762.7	65	18.3	94	Calm	0	0	.....	.....	10n	.....	.....	0.21	5.3	Heavy rain.	
Malone, N. Y.	.....	.....	29.73	755.1	73	22.8	33	SW	12	5.4	.....	0	0	.....	.....	0	0	Clear.	
Manhattan, Kan.	28.80	731.5	29.90	759.4	67	19.4	84	SW	2	0.9	.....	2c	0	.....	.....	0	0	Clear.	
Marquette, Mich.	.....	.....	29.82	757.4	53	11.7	73	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Memphis, Tenn.	.....	.....	30.01	762.2	73	22.8	71	Calm	0	0	.....	2k	Haze	.....	.....	0	0	Fair.	
Milwaukee, Wis.	.....	.....	29.91	759.7	68	20.0	56	N	9	4.0	.....	0	5ks	.....	W	0	0	Fair.	
Mobile, Ala.	.....	.....	30.01	762.2	74	23.3	81	SE	6	2.7	.....	10k	0	.....	SW	0.18	4.6	Cloudy.	
Montgomery, Ala.	.....	.....	30.03	762.7	71	21.7	92	SE	3	1.3	.....	.....	10s	.....	SE	0.07	1.8	Cloudy.	
Morgantown, W. Va.	.....	.....	29.96	761.0	70	21.1	66	Calm	0	0	.....	5c	0	W	.....	0	0	Fair.	
Mt. Washington, N. H.	23.79	604.3	30.15	765.8	48	8.9	93	NW	36	16.1	.....	2s	Haze	NW	.....	0	0	Fair.	
Nashville, Tenn.	.....	.....	29.98	761.5	72	22.2	71	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
New Haven Conn.	.....	.....	29.98	761.5	70	21.1	65	Sc	5	2.2	.....	0	0	.....	.....	0	0	Clear.	
New London, Conn.	.....	.....	30.02	762.5	66	18.9	93	SW	11	4.9	.....	0	Haze	.....	.....	0	0	Clear.	
New Orleans, La.	.....	.....	29.98	761.5	77	25.0	77	E	2	0.9	.....	5k	0	W	.....	0.74	18.8	Fair.	
Newport, R. I.	.....	.....	30.00	762.0	56	13.3	93	SW	4	1.8	.....	.....	10s	.....	SW	0	0	Cloudy.	
New York, N. Y.	.....	.....	30.00	762.0	63	17.2	77	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Norfolk, Va.	.....	.....	30.05	763.3	70.5	21.4	82	Calm	0	0	.....	0	8ks	.....	.....	0	0	Fair.	
North Platte, Neb.	26.94	684.3	29.39	746.5	65	18.3	63	SE	6	2.7	.....	.....	10n	.....	.....	0.13	3.3	Light rain.	
Omaha, Neb.	28.85	732.8	29.87	758.7	69	20.6	75	S	4	1.8	.....	8c	0	NW	.....	0	0	Fair.	
Oswego, N. Y.	.....	.....	29.91	759.7	79	21.1	44	SW	7	3.1	.....	Haze	Haze	.....	.....	0	0	Hazy.	
Pembina, Dakota	.....	.....	29.77	756.1	54	12.2	73	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Philadelphia, Penn.	.....	.....	30.02	762.5	65	18.3	78	W	1	0.4	.....	0	0	.....	.....	0	0	Clear.	
Pike's Peak, Colorado	17.95	455.9	30.16	766.1	30	— 1.1	54	NW	8	3.6	.....	0	5s	.....	.....	0	0	Fair.	
Pittsburgh, Penn.	.....	.....	29.94	760.5	63	17.2	83	Calm	0	0	.....	Fog	0	.....	.....	0	0	Clear.	
Port Huron, Mich.	.....	.....	29.86	758.4	65	18.3	63	SW	8	3.6	.....	..c	0	.....	.....	0	0	Clear.	
Portland, Me.	.....	.....	29.88	758.9	70	21.1	66	SW	8	3.6	.....	Haze	Haze	.....	.....	0	0	Hazy.	
Portland, Oregon	.....	.....	30.11	764.8	47	8.3	85	Calm	0	0	.....	8k	0	.....	.....	Inap.	Inap.	Fair.	
Punta Rassa, Fla.	.....	.....	29.98	761.5	73.5	23.1	85	NE	12	5.4	.....	.....	10s	.....	NE	0.17	4.3	Cloudy.	
Rochester, N. Y.	.....	.....	29.88	758.9	66	18.9	54	SW	7	3.1	.....	Haze	Haze	.....	.....	0	0	Hazy.	
Salt Lake City, Utah	25.49	647.4	29.82	757.4	67	19.4	28	SE	4	1.8	.....	5k	0	SE	.....	0	0	Fair.	
Sandy Hook, N. J.	.....	.....	29.99	761.7	70	21.1	71	S	4	1.8	.....	0	Haze	.....	.....	0	0	Clear.	
San Diego, Cal.	.....	.....	29.98	761.5	61	16.1	88	SE	4	1.8	.....	.....	10s	.....	SE	0	0	Cloudy.	
San Francisco, Cal.	.....	.....	29.93	760.2	51	10.6	72	W	10	4.5	.....	0	0	.....	.....	0	0	Clear.	
Santa Fé, N. M.	23.34	592.8	29.88	758.9	53	11.7	73	NE	3	1.3	.....	0	0	.....	.....	Inap.	Inap.	Clear.	
Savannah, Ga.	.....	.....	30.04	763.0	78	25.6	82	Calm	0	0	.....	5ks	5ks	.....	.....	0.09	2.3	Cloudy.	
Shreveport, La.	.....	.....	30.03	762.7	74	23.3	76	SE	4	1.8	.....	2ck	0	.....	.....	0	0	Fair.	
Smithville, N. C.	.....	.....	30.06	763.5	73	22.8	85	NW	1	0.4	.....	.....	10ks	.....	.....	0	0	Cloudy.	
Springfield, Mass.	.....	.....	29.96	761.0	68	20.0	69	S	6	2.7	.....	Haze	Haze	.....	.....	0	0	Hazy.	
St. Louis, Mo.	.....	.....	30.00	762.0	69	20.6	51	W	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
St. Marks, Fla.	.....	.....	30.00	762.0	72	22.2	85	NE	6	2.7	.....	0	8s	.....	S	0	0	Cloudy.	
St. Paul, Minn.	.....	.....	29.76	755.9	70	21.1	71	S S	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
St. Paul's Island, Alaska	.....	.....	30.10	764.5	29	— 1.7	78	N	6	2.7	.....	.....	10k	.....	NE	0	0	Cloudy.	
Thatcher's Island, Mass.	.....	.....	29.93	760.2	54	12.2	79	SW	12	5.4	.....	0	0	.....	.....	0	0	Hazy.	
Toledo, Ohio	.....	.....	29.80	756.9	69	20.6	90	SW	6	2.7	.....	2c	Haze	SW	.....	0	0	Hazy.	
Tucson, Arizona	27.44	697.0	30.03	762.7	75	23.9	.....	S	.....	.....	.....	0	0	.....	.....	0	0	Clear.	
Tybee Island, Ga.	.....	.....	30.03	762.7	77	25.0	86	SE	4	1.8	.....	10cs	0	SW	.....	0.07	1.8	Cloudy.	
Vicksburg, Miss.	.....	.....	30.03	762.7	74.5	23.6	78	Calm	0	0	.....	2c	0	SW	.....	0	0	Fair.	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	BAROMETER. Corrected for instrumental errors. Inches.	BAROMETER. Corrected for instrumental errors. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per Cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10	CLOUDS. Amount. Up'er 0—10	CLOUDS. Amount. Low'r 0—10	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER
Virginia City, M. T.	24.10	612.1	29.58	751.3	54	12.2	49	Calm	0	0		1c	0	W		0	0	Clear	
Washington, D. C.			30.03	762.7	67	19.4	81	S	4	1.8		1ck	2s	W	W	0	0	Fair	
Wilmington, N. C			30.06	763.5	71	21.7	85	Calm	0	0			10s		W	0	0	Cloudy	
Wood's Holl, Mass.			30.03	762.7	58	14.4	87	SW	10	4.5			Fog		SW	0	0	Foggy	
Wytheville, Va.	27.71	703.8	29.81	757.2	60	15.6	97	E	1	0.4			10n		W	0.39	9.9	Light rain	
Yankton, Dakota.	28.60	726.4	29.82	757.4	68	20.0	79	W	1	0.4		5ck	5ks	W	W	0	0	Fair	
Yuma, Arizona			29.83	757.7	73	22.8		SE				0	0			0.50	12.7	Clear	
SUB-SERIES.																			
Bridgetown, B'b'dos, W. I.			30.08	764.0	83	28.3	75	E	4	1.8		5ck	5ks	E		0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.01	762.2	83	28.3	79	E				5k	5ks			0	0	Cloudy	L. V. Bigard.
Kingston, Jamaica, W. I.			30.14	765.5	81	27.2	87	E	11	4.9		2ck	2s	E		0.94	23.9		James Gall.
Santiago de Cuba, W. I.			29.75	755.6	81	27.2	78	SE	6.0	2.7		5ck	8n	SSE	SE	0.10	2.5	Cloudy	Robert Mason.
Havana, Cuba, W. I.			29.88	758.9	75	23.9	86	Calm	0	0		10c, ok	0	SE		1.12	28.4	Cloudy	Charles Hasselbrink.
St. Georges, Bermudas			30.27	768.8	78.5	25.8	78	S	10.0	4.5		0	5fk			0.05	1.3	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.17	690.1	29.94	760.5	69	20.6	90	S	8.0	3.6			10k			0.39	9.9	Light rain	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.04	763.0	79	26.1	99	E			1	8k	8ks	E		0.94	23.88	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S. A.	29.98	761.4			83.3	28.5										0.236	6.00		Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640.6			66.0	18.9	85	Calm	0	0		7k	2s			0.20	5.1	Cloudy	Thomas Herran.
St. John's, Newfoundland			30.03	762.7	62.0	16.7	56	W				5k	5s	W		0	0	Fair	John Delaney.
York Factory, B. A.			30.11	764.8	31	— 0.6	95	N	10	4.5		8cs	0	N		0	0		J. Fortescue.
Honolulu, Oahu, H. I.																			Daniel Smith.
Makawao, Maui, H. I.	27.85	707.4	30.02	762.5	58	14.4	70	NE	2.4	1.1		5c	0	S		0	0	Threatening	F. L. Clarke.
MARINE SERIES.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Hibernian, N. 44° 39', W. 63° 34'.	At Halifax.		29.92	760.0	70?	21.1?		SW			6		ak			Rough.		*D. clouds	Lieut F. Archer, R N.R.
Nova Scotian,	At Halifax.		29.96	761.0	60	15.6		WSW			6		0			Smooth		Clear, fine	Capt. Ritchie.
Steamer Leipzig, N. 37° 2', W. 75° 29'.	N 6¾ E		30.06	763.5	69.1	20.6		Calm			0		Fog			Tranq'l		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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,802.2 (?) 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 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.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 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.
1:40 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	70.9	21.6	67	Calm			0		8			0	0	Cloudy	Charnot.
Algiers			30.08	764.0	70.5	21.4	65	NE			4		1			0	0	Clear	Peter.
La Calle																			Kunts.
Tunis			30.21	767.3	79.3	26.3	38	NW			3		5			0	0	Fair	Jacques.
Sfax			30.29	769.3	75.2	24.0	39	E			3		1			0	0	Clear	Chauvey.
Saida			30.12	765.0	89.6	32.0		SW			4		3			0	0	Fair	Millot.
Tebessa			30.21	767.4	75.2	24.0		NW			2		0			0	0	Clear	Collin.
Geriville			30.17	766.3	77.7	25.4	16	S			4		2			0	0	Clear	Buard.
Laghouat			30.21	767.3	84.2	29.0	34	NE			2		0			0	0	Clear	Guyot.
Biskra			30.24	768.0	81.3	27.4	36	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.

Agram			30.17	766.3	65.3	18.5	51	SW			1		6			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.07	763.6	52.9	11.6	94	W			2		10			0.039	1.0		Dr. Wierzbiski.
Eperies			30.01	763.1	55.8	13.2	66	Calm			0		10			0	0		Julius Mikolik.
Gratz	28.96	735.6	30.15	765.7	62.6	17.0	57	S			2		7			0	0		Andreas Rospini.
Hermannstadt	28.64	727.2	30.03	762.8	58.6	14.8	44	NNW			3		3			0.008	0.20		Prof. Reissenberger.
Kremsmünster	28.86	733.0	30.19	766.8	59.5	15.3	67	Calm			0		7			0.488	12.4		Prof. C. Wagner.
Lemberg			29.96	761.0	51.5	12.5	68	NW			4		8			0.051	1.3		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.19	766.7	66.7	19.3	63	WNW			2		3cks			0	0		I.R.Hydrographic Office.
Szegedin			30.12	765.1	60.1	15.6	59	W			2		10			0	0		Karl Stancel.
Trieste			30.20	767.1	70.0	21.1	60	Calm			0		3			0	0	Clear	Prof. V. Farolfi.
Vienna			30.13	765.3	64.2	17.9	50	WNW			3		7			0.020	0.5		I. R. Central Met. Obs'y.

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

BELGIAN SERIES.

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

Brussels			30.18	766.0	64.2	17.9	57	W			1		9			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			29.91	759.7	65.2	18.4		WSW	18	8.0			5			0	0	Blue sky	William Boswell.
Ardrossan			30.08	764.0	52	11.1		SW			4		8					Raining	William McNeil.
Armagh, Observatory			30.15	765.8	55.6	13.1		SW	10	4.5			10					Gloomy	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs'y			30.17	766.3	58.3	14.6		W	24	10.7			1					Blue sky	John Hartnup.
Birr Castle, (Parsonstown)			30.21	767.3	57.4	14.1		WSW			1–2		10					*D. clouds	J. Dreyer.
Bradford			30.14	765.5	58.1	14.5		W			1		10			0	0	Overcast	J. McLandsborough.
Bridgetown, (Barbadoes)			30.01	762.2	80.5	26.9		NE			2		7					*D. clouds	Sergt. J. F. Halanen, A. [H. C.
Cambridge, Observatory			30.16	766.1	64.5	18.1		W			1		7					*D. clouds	H. Todd.
Cardington			30.20	767.1	66.0	18.9		W			1		6					*D. clouds	John McLaren.
Carlisle			30.11	764.8	61.2	16.2		W			6		7			0	0	*D. clouds	T. Bell, for J. Car mell.
Chatham, School M. E			30.19	766.8	67.0	19.4		SW			1		5					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	29.83	732.3	30.34	770.6	57.9	13.9		NW			4		5					*D. clouds	R. E. Power.
Donaghadee			30.11	764 8	62	16.7		W			4		10					Overcast	J. Mac Gowan.
Dover			30.21	767.3	60	15.6		WSW			3		4					½ clouded	J. Costello.
Eccles (near Manchester.)			30.16	766.1	59.5	15.3		WNW	6.2	2.8			10					Overcast	Thomas Mackereth.
Falmouth, Observatory			30.29	769.4	59.5	15.3		S	6	2.7			9					Overcast	The Staff.
Fort Napier, (Natal)	27.72	704.1	29.96	761.0	82.1	27.8		NW			2		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	82.0	27.8		W			6		7					*D. clouds	
Galway, Queen's College			30.15	765.8	58	14.4		W			5		5					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.08	764 0	71.8	22.1		E			6		1					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			30.04	763.0	52.0	11.1		SW			2		10					Wet	Lewis Stuart.
Great Yarmouth			30.16	766.1	59	15.0		E			2		2					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			30.21	767.3	69.3	20.6		W			1		3					*D. clouds	The Staff, for G. B. Airy
Guernsey			30.15	765.8	59.5	15.3		NW			2		0					Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y			30.17	766.3	57.6	14.2		WNW			3		8					D. clouds	L. J. Crossley.
Helston			30.26	768.6	64	17.8		NW			2		4k			0	0	Fine	M. P. Moyle.
Holyhead			30.19	766.8	56	13.3		SW			4		10					Gloomy	John Tilston.
Kew, Observatory			30.20	767.1	63.1	17.3		W	10	4.5			7					*D. clouds	The Staff.
Kingstown			30.20	767.1	60	15.0		W			3		8					Overcast	George Mitchell.
Leicester Museum			30.19	766.8	62.0	16.7		W			1		5					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)			30.10	764.5	71.6	22.0		NW			1		0						Sergt. F. Travis, A. H. C.
Nairn			29.85	758.2	63	17.2		WSW			2		8					¾ clouded	W. D. Penny.
Nassau, (Bahamas)			29.92	760.0	75.6	24.2		SE			5		10					Overcast	Surg. Maj. Henry.
Nottingham, Observatory			30.20	767.1	67.3	19.6		WNW			2		7c.k		W	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.20	767.1	63.0	17.2		SW			2–3		8					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.18	766.6	63	17.2		W			1		6					*D. clouds	J. Lucas.
Plymouth			30.25	768.3	66	18.9		SW			3		7					*D. clouds	John Merrifield.
Roche's Point			30.26	768.6	57	13.9		WSW			4		10					Dull	W. Kennedy.
Saint Ann's Head			30.28	769.1	54	12.2		WNW			1		5					*D. clouds	John C. Walker.
Saint Helier, Jersey			30.26	768.6	63.0	17.2		W			4		0					Clear	A. P. Amy.
Sandwick Manse, Orkneys)			29.82	757.4	52.3	11 3		WSW	22	9.8			10					Misty	Rev. C. Clouston, LL. D.
Scarborough			30.10	764.5	64.4	18 0		WSW			2		8					Overcast	F. Shaw.
Scutari Cemetery (Turkey			29.93	760.2	60.8	13.0		NNE			2		10			Blank	Blank	D. clouds	Sergt. W. H. Lyne.
Sheffield			30.14	765.5	63.5	17.5		NW			3		2			0	0	Bl e sky	W. F. Cooper.
Silloth Rectory			30.10	764.5	67.4	19.7	58	SW			4		1			0.048	1.22	Blue sky	Rev. Francis Redford.
Stonyhurst, Observatory			30.15	765.8	56.5	13.6		W			3		10						Rev. S. J. Perry.
Stornoway, Lews C. Hebr.			29.83	757.7	58	14.4		WSW			5		8					*D. clouds	John Smith.
Stratfield Turgiss			30.21	767.3	66.8	19.3		SW			0–1		3					Blue sky	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.82	757.4	55	12.8		WSW			3		10					Raining	John Trotter.
Truro, Royal Institution			30.29	769.4	63	17.2		N			6		4					*D. clouds	W. Newcombe.
Valencia, Observatory			30.26	768.6	56.5	13.6		SW	16	7.2			10					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					52	11.1		SW			6		0						Thomas Dawson.
Cape Good Hope, Obs'y			30.20	767.1	63.6	17.6	80	WNW	5	2.2		0	1						The Staff, for E. J. Stone.
Leith, Restalrig Park			30.14	765.0	60.0	15.0		W			6		9k			0	0	Cloudy	Andrew Gibb.
Mauritius, Observatory			30.15	765.8	74.5	23.6		ESE	8.7	3.9			10			0.43	10.9	Gloomy	C. Meldrum.
Melbourne, Observatory			29.78	756.4	55.2	12.9	93	N	3	1.3			10			0.06	1.5	Showery	R. L. J. Ellery.
Monach Lt-house, Hebrides			29.85	758.2	52	11.1		SW			4		10			0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.70	754.4	48	8.9		W			4		10			Blank	Blank		Robert Burnet.

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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			29.90	759.4	60.1	15.6	67	NW			6		9						
Fanöe			30.02	762.5	55.8	13.2	85	W			4		5						
Godthaab, (Greenland)			29.51	749.6	36.0	2.2	75	Calm			0		10						
Stykkisholm, (Iceland)			29.96	738.1	47.3	8.5	87	S			2		8						
Thorshavn, (Faröe)			29.57	751.0	50.2	10 1	75	WSW			5		10						
Vestervig			29.92	759.9	54.3	12.4	87	WNW			6		2						

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

FRENCH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	.....	.....	30.21	767.3	62.6	17	55	SW	.....	.....	1	2c	.....	SW	.....	0	0	Slightly cl'dy	Normal School.
Amiens	.....	.....	30.18	766.6	68.7	20.4	73	W	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	30.19	766.8	75.9	24.4	43	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Bar-sur-Seine	.....	.....	30.23	767.7	70.2	21.2	49	N	.....	.....	2	.....	5	.....	N	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.20	767.0	72.0	22.2	48	N	2.2	1.0	.....	.....	5	.....	NE	0	0	Cloudy	Beaumette Observatory.
Beauvais	.....	.....	30.23	767.8	68.2	20.1	46	W	.....	.....	2	.....	5	.....	NW	0	0	Cloudy	Normal School.
Besançon	.....	.....	30.24	768.0	67.3	19.6	58	E	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Bourg en Bresse	.....	.....	30.21	767.2	69.3	20.7	61	N	.....	.....	4	.....	.....	.....	S	0	0	.....	Normal School.
Bourges	.....	.....	30.25	768.3	60.8	16	72	NE	.....	.....	2	.....	2	.....	NNE	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	30.21	767.2	64.2	17.9	87	NNE	.....	.....	2	.....	2k	.....	NE	0	0	.....	Naval Observatory.
Caen	.....	.....	30.667	778.82	62.2	16.8	80	N	.....	.....	2	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Carcassonne	.....	.....	30.19	766.7	69.3	20.7	56	W	.....	.....	3	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Chartres	.....	.....	30.18	766.5	71.4	21.9	.....	WNW	.....	.....	1	.....	2	.....	WNW	0	0	.....	Normal School.
Clermont	.....	.....	30.17	766.4	68.4	20.2	58	NNE	.....	.....	2	.....	2	.....	SE	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.22	767.6	63.5	17.5	63	WNW	.....	.....	2	.....	5k	.....	WNW	0	0	Cloudy	Normal School.
Commune de Greasque*	.....	.....	30.22	767.5	75.4	24.1	32	SW	.....	.....	2	.....	2	.....	SW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.18	766.6	68.4	20.2	55	NW	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Le Mans	.....	.....	30.24	768.0	66.9	19.4	57	N	.....	.....	3	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier	.....	.....	30.23	767.9	64.6	18.1	53	NNE	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Mâcon	.....	.....	30.33	770.4	63.1	17.3	70	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Mirecourt	.....	.....	30.26	768.6	60.4	15.8	53	W	.....	.....	2	.....	2	.....	NE	0	0	Slightly cov.	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	30.23	767.7	79.5	26.4	28	SE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	30.19	766.8	70.5	21.4	48	NNE	.....	.....	2	.....	5	.....	N	0	0	Cloudy	Normal School.
Paris, Observatory	.....	.....	30.22	767.6	69.8	21.0	47	SW	.....	.....	2	.....	5	.....	W	0.016	0.4	Cloudy	National Observatory.
Parthenay	.....	.....	30.12	765.1	84.2	29	40	E	.....	.....	2	.....	5	.....	E	0	0	Cloudy	Normal School.
Privas	.....	.....	30.21	767.4	67.3	19.6	.....	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
La Roche-sur-Yon	.....	.....	30.04	763.0	74.6	23.6	55	NW	.....	.....	2	.....	5	.....	N	0	0	Partly cloudy	Normal School.
Rochefort, Observatory	.....	.....	30.23	767.8	74.1	23.4	52	ENE	.....	.....	3	.....	5	.....	SW	0	0	⅓ covered	Naval Observatory.
Rouen	.....	.....	30.23	767.7	71.4	21.9	48	W	.....	.....	2	.....	1	.....	W	0	0	Clear	Normal School.
Saint Lo	.....	.....	29.94	760.4	67.6	19.8	49	NW	.....	.....	1	.....	4	.....	NW	0	0	.....	Normal School.
Tarbes	29.06	738.2	30.13	765.4	60.8	16	.....	S	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School
Villefranche	.....	.....	30.33	770.4	69.1	20.6	48	NE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Sun-Series.																			
Fort de France, Martinique	.....	.....	29.95	760.8	80.6	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.10	766.0	72.0	22.2	47	W	.....	.....	1	.....	0	.....	.....	0	0	Clear	Marseilles Observatory.
Mont-Louis	25.01	635 3	30.33	770.3	57.6	14.2	73	SSE	11.2	5.00	.....	.....	5	.....	SSW	0	0	.....	—, Faiguère.
Montsouris, Paris	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montsouris Observ'tory.
Perpignan	.....	.....	30.18	766.6	68.9	20.5	47	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)	.....	.....	30.22	767.6	69.8	21.0	57	SW	.....	.....	1	.....	3	.....	.....	0	0	Slightly cl'dy	E. Renou.
Toulouse	.....	.....	30.23	767.7	69.4	20.8	45	NW	.....	.....	1	.....	0	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.21	767.2	72.7	22.6	54	NNW	.....	.....	1	.....	7	.....	N	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.23	767 7	70.2	21.2	58	W	.....	.....	1	.....	5	.....	.....	0	0	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	29.72	754.9	74.7	23.7	62	SE	10.5	4.7	.....	1ck	0	.....	.....	{ 0	0 }	.....	H. Le Lec, S. J.
																{ 0	0 }		
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals generally give the wind-force by the scale 0 to 7; the weather in general terms, as published; the wind-velocity for Beaumette, Mont-Louis, Perpignan, and Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. At Clermont, Commune de Grèasque and Fort de France, the originals give the cloudiness by the scale of 0 to 4. The rain-fall is generally measured at 7, 8, or 9 a. m., local time, and at Clermont, 9 a. m. of the following day. The records of the amount of rain and snow are frequently omitted. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Clermont, 388 m., or 1,272.9 ft; Commune de Grèasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 m., or 7,762.6 feet; Tarbes, 308 m., or 1,010 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. 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	.....	.....	30.13	765.3	60.8	16.0	64	W	.....	.....	3	.....	9	W	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.09	764.2	66.2	19.0	57	NW	.....	.....	4	.....	8	.....	.....	0.035	0.9	.....	Prof. Arndt.
Breslau	.....	.....	30.13	765.3	57.0	13.9	80	WNW	.....	.....	4	.....	10	.....	.....	0.043	1.1	Fog & rain	Dr. P. Naugebauer.
Carlsruhe	.....	.....	30.19	766.8	66.9	19.4	50	N	.....	.....	2	.....	3	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.15	765.7	70.5	21.4	44	WSW	.....	.....	3	.....	7	WSW	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.25	768.3	68.7	20.4	49	SW	.....	.....	1	.....	6	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	30.23	767.9	59.9	15.5	64	S	.....	.....	.....	.....	2	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.10	764.5	61.7	16.5	61	W	.....	.....	3	.....	5k	WSW	.....	0.039	1.0	Fair	Captain F. Hegemann.
Kiel	.....	.....	30.03	762.8	61.3	16.3	58	WSW	.....	.....	7	.....	5	.....	.....	0.016	0.4	.....	Prof. G. Karsten
Königsberg, (Prussia.)	.....	.....	29.78	756.4	54.0	12.2	74	W	.....	.....	5	.....	6	.....	.....	0.091	2.3	.....	Prof. E. Luther.
Köslin	.....	.....	29.96	761.0	54.7	12.6	.....	W	.....	.....	4	.....	4	.....	.....	0.181	4.6	.....	H. Müller.
Leipsic	.....	.....	30.15	765.8	64.4	18.0	55	SW	.....	.....	3	.....	9	SW	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	29.77	756 2	46.9	8.3	71	NW	.....	.....	3	.....	9	.....	.....	0.016	0.4	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.19	766.9	66.4	19.1	56	NW	.....	.....	4	.....	0	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.83	757.6	58.6	14.8	68	NW	.....	.....	5	.....	7	.....	.....	0	0	.....	A. Lothes.
Posen	.....	.....	30.07	763.6	59.4	15.2	74	W	.....	.....	7	.....	10	.....	.....	0.083	2.1	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.23	767.7	66.2	19.0	46	NE	.....	.....	1	.....	2	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	30.21	767.3	65.7	18.7	46	E	.....	.....	2	.....	5	.....	.....	0	0	Fair	Prof. Schoder.
Thorn	.....	.....	29.93	760 2	61.0	16.1	61	NW	.....	.....	5	.....	9	.....	.....	0.047	1.2	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.17	766.4	67.1	19.5	50	WNW	.....	.....	4	.....	3	.....	.....	0	0	.....	Prof. Fiesch.
Wustrow, Naval School	.....	.....	29.96	760.9	57.9	14.4	78	WSW	.....	.....	4	.....	10	.....	.....	0	0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			30.16	766.1	68.2	20.1	49	SW	1.8	0.8			2			0	0		
Padua			30.16	766.0	69.4	20.8	47	SSE	4.9	2.2			2	SW		0	0		
Vicenza			30.14	765.5	72.3	22.4	38	SW	4.9	2.2			1	W		0	0		
Verona			30.17	766.2	59.4	15.2	73	E			1		6			0	0		
Bergamo																			
Domodossola	29.10	739.1	30.10	764.4	74.3	23.5	54	SSW			4		1			0	0		
Milan			30.16	766 1	75.6	24.2	62	ENE			2		5	ESE		0	0		
Pavia			30.16	766.1	72.9	22.7	49	S			4		2	SW		0	0		
Moncalieri			30.16	766.0	71.1	21.7	54	ESE	2.5	1.1			7	NW		0	0		
Mondovi	28 28	718.3	30.15	765.8	64.9	18.3	45	NE			4		0			0	0		
Porto Maurizio			30.24	768.0	69.4	20.8	75	SSW			2		1			0	0		
Genoa			30.18	766.5	67.3	19.6	64	SW	1.3	0.6			0			0	0		
Piacenza			30.17	766.3	72.1	22.3	48	NE	3.8	1.7			3	E		0	0		
Parma			30.15	765.9	74.3	23.5	48	NE			4		1			0	0		
Bologna			30.17	766.3	72.7	22.6	42	W			1		2	E		0	0		
Florence			30.15	765.8	77.0	25.0	27	NW			2		2	NW		0	0		
Leghorn			30.16	766.1	68.5	20.3	63	W	4.9	2.2			3			0	0		
Siena	28.94	735.1	30.13	765.3	66.6	19.2	64	NW	0.7	0.3			8	N		0.055	1.4		
Urbino																			
Pesaro																0	0		
Ancona			30.22	767.6	68.7	20.4	49	N			4		0			0	0		
Grosseto			30.15	765.9	74.8	23.8	51	NNW			4		5	S		0	0		
Rome			30.13	765.4	75.6	24.2	48	W	8.7	3.9			2			0	0		
Naples, O. U			30.14	765.5	75.6	24.2	37	NNW			2		3	NE		0	0		
Lecce			30.08	764 0	64.9	18.3	44	NNE	15.4	6.9			3	W		0	0		
Cosenza			30.08	764.1	75.2	24.0	75	NW	6.3	2.8			6			0	0		
Riposto, (Sicily)			30.08	763.9	74.5	23.6	34	NE			6		3	SW		0	0		
Palermo			30.11	764.9	70.3	21.3	50	N	6.9	3.1			1			0	0		
Caltanissetta	28.16	715.3	30.07	763.6	66.4	19.1	29	NE			6		2	SW					
Sub-Series. Naples, S. R			30.16	766.0	72.3	22.4	37	N						NW		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known: Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Tokio																			

NETHERLANDS' SERIES.

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

Flushing			30.24	768.1	56.1	13.4		WNW			2								
Groningen			30.07	763.7	59.9	15.5		WNW			4								
Helder			30.15	765.9	55.8	13.2		W			2								
Utrecht			30.14	765.6	65.7	18.7	56	W			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.

Bergen			29.74	755.4	50.0	10.0	87	WSW	14.1	6.3			10			0.835	21.2		
Brönö			29.51	750.2	41.0	5.0	57	NW	25	11			9			0.27	7.0		
Christiania			29.62	752.3	63.5	17.5	43	SW	5.6	2.5			4			0	0		
Tromsö			29.09	738.8	38.1	3.4	82	SW	11	5			10			0.129	3.2	Misty	

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.)	.....	.....	30.34	770.7	65.5	18.6	72	NE	11.4	5.11	.....	.....	6	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.98	761.6	82.4	28.0	16	S	9.7	4.34	.....	.....	1	.....	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.08	764.0	64.0	17.8	60	SSE	6.0	2.69	.....	.....	2	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.09	762.0	77.9	25.5	25	SE	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 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	.....	.....	29.91	759.6	56.8	13.8	74	WNW	20	9	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.71	754.6	56.1	13.4	66	W	11	5	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.58	751.3	56.1	13.4	53	W	9	4	.....	.....	7	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.51	749.6	49.5	9.7	57	WNW	18	8	.....	.....	1	.....	.....	.....	.....	.....	Central Physical Obs
Kuopio	.....	.....	29.30	744.3	49.5	9.7	61	W	22	10	.....	.....	7	.....	.....	.....	.....	.....	Ch. Forsten.
Kief	.....	.....	29.91	759.6	63.0	17.2	39	W	11	5	.....	.....	6	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.97	761.1	64.4	18.0	75	W	11	5	.....	.....	6	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.91	759.7	65.8	18.8	76	NNE	4	2	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.77	756.2	60.1	15.6	47	SSW	9	4	.....	.....	7	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.82	757.3	66.7	19.3	61	W	22	10	.....	.....	7	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	29.21	742.0	46.9	8.3	60	SW	22	10	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.57	725.6	29.89	759.2	84.6	29.2	34	SE	9	4	.....	.....	5	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.00	762.0	71.6	22.0	53	S	13	6	.....	.....	6	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.74	755.5	65.3	18.5	39	W	22	10	.....	.....	4	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.92	734.5	29.87	758.6	72.0	22.2	28	SW	18	8	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.15	765.8	77.2	25.1	26	NE	16	7	.....	.....	2	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.48	723.4	30.14	765.6	68.9	20.5	64	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.70	754.3	49.8	9.9	82	NNW	13	6	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.51	750.3	44.8	7.1	87	N	2	1	.....	.....	10	.....	.....	Raining	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.97	761.2	70.3	21.3	26	Calm	0	0	.....	.....	5	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	38.5	3.6	92	E	7	3	.....	.....	10	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds; 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. 404.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 502.0? m., or 1,042.2? ft.; Oorga, 1,281.6 m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	30.03	762.7	77.5	25.3	53	SE	11.2	5.00	.....	0	0	.....	.....	0	0	Clear	Royal Observatory.
San Fernando	.....	.....	30.08	763.9	76.6	24.8	34	ESE	21.9	9.8	.....	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. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Raparanda	.....	.....	29.22	742.2	43.9	6.6	71	NW	.....	.....	2	.....	10	.....	.....	0.039	1.0	Snowing	
Umea	.....	.....	29.41	746.9	52.2	11.2	50	NW	.....	.....	8	.....	6	.....	.....	0	0	.....	
Hernosand	.....	.....	29.52	749.8	49.6	9.8	64	WNW	.....	.....	3	.....	8	.....	.....	0	0	.....	
Stockholm	.....	.....	29.65	753.1	55.6	13.1	38	WSW	.....	.....	2	.....	1	.....	.....	0	0	.....	
Wisby	.....	.....	29.76	755.9	50.4	10.2	60	NW	.....	.....	2	.....	7	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.63	752.7	60.1	15.6	23	WSW	11.0	4.9	.....	.....	2	.....	WNW	0	0	.....	Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is meaured 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	28.82	731.9	30.22	767.6	62.2	16.8	48	N			1		0			0	0	Clear	The Observatory.
Zurich	28.60	726.3	30.19	766.8	67.1	19.5	55	W			1		1			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +6.2 mm; Thermometer, −1.7 cent.; Relative Humidity, −8 per cent.

Note.—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. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople																			
Fao, (Persian Gulf)			30.04	763.0	93.2	34.0		NW			3		0						
Salonica			30.01	762.2	64.6	18.1		W			2		2						
Valona			29.98	761.4	67.6	19.8		NW			3		0						
Varna			29.96	761.0	59.0	15.0		N			2		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.84	757.9	84.4	29.1	61	NE			2		0			0	0	Fair	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B.			29.75	755.6	54.4	12.4	86	Calm	0	0		10				Inap.	Inap.	Raining	Hon. J. Ferguson.
Brockville, Ontario			29.92	760.0	63	17.2		NW	1	0.4			8Ks			0.29	7.4	Threatening	W. R. Bigg.
*Chatham, N. B.			29.77	756.1	60	15.6	72	NW	5	2.2		10ck	0	NW		0	0	Fair	G. A. Blair.
Charlottetown P. E. Island.			29.78	756.4	55	12.8	85	W	3	1.3			10s			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.82	757.4	64.0	17.8	60	E			1	6c	0			0	0	Fair	James Smith, M. A
Dalhousie, N. B.			29.80	756.9	49.0	9.4	64	W			1	9cs	0			0	0		H. A. Johnson.
Esquimault, B. C.			30.08	764.0	43.3	6.3	100	Calm	0	0		6cs	0			0	0	Cloudy	W. H. Bevis.
Fredericton, N. B.			29.79	756.7	53.6	12.0	89	SE	8	3.6			10s			0.010	0.25	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			30.02	762.5	49	9.4	83	E	8	3.6		2c	2ks	NW	NW	0	0	Smoky	James Stewart.
Goderich, Ontario			29.86	758.4	61.4	16.3	86	Calm			0		10n			Inap.	Inap.	Threatening	H. J. Strang, M. A.
Granton, Ontario	28.76	730.5	29.84	757.9	60	15.6		SW			1		10n			0.50	12.7	Cloudy	James Grant.
*Halifax, N. S.			29.77	756.1	52	11.1	93	SW	1	0.4			10n			0	0	Cloudy	F. Allison, M. A.
*Kingston, Ontario			29.91	759.7	61	16.1	77	NE	9	4.0		2cs	8m'e	W	NE	0	0	Fair	S. Woods, M. A.
*Montreal, Quebec			29.85	758.2	59	15.0	64	NE	7	3.1			10n		NE	0.03	0.8	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.89	759.2	59	15.0	59	N	5	2.2		2ck	8m'e	N		0.01	0.3	Fair	J. B. Haney.
*Parry Sound, Ontario			29.92	760.0	52	11.1	86	W	7	3.1		2k	8Ks	N	N	0.18	4.6	Cloudy	Rev. R. Mosley.
*Port Dover, Ontario			29.87	758.7	59	15.0	88	SW	3	1.3			10n		SW	0.03	0.8	Threatening	H. Morgan.
Port Hastings, N. S.			29.78	756.4	42.9	6.1		Calm	0	0						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			29.91	759.7	61	16.1	90	NW	12	5.4			10n		W	0.05	1.3	Light rain	M. Payne.
*Quebec, Quebec			29.76	755.9	52	11.1	45	Calm	0	0			10n			0.05	1.3	Light rain	Capt. Ashe, R. N.
St. John, N. B.			29.80	756.9	47	8.3	92	Calm	0	0			10s			0.240	6.10	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario			29.85	758.2	56	13.3	75	Calm	0	0			10ks			0	0	Cloudy	K. Stewart.
Stayner, Ontario			29.87	758.7	61	16.1	77	Calm	0	0			10n			Inap.	Inap.	Threatening	R. J. Cole.
Stratford, Ontario	28.60	726.4	29.83	757.7	63.7	17.6	85	SW	14	6.3			10s			0.038	0.97	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			29.77	756.1	57	13.9	84	SW	8	3.6		8k	Haze	W		0	0	Cloudy	T. C. Hill.
*Toronto, Ontario			29.87	758.7	67	19.4	58	N	6	2.7		8k	5ks	W	W	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			29.83	757.7	63.3	17.4	83	NW	21	9.4			10s			0.85	21.6	Gloomy	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 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	71	21.7	71	Calm	0	0	.....	10k	0	SW	.....	0	0	Cloudy	
Alpena, Mich	.....	.....	29.89	759.2	50	10.0	86	E	5	2.2	.....	5c	0	W	.....	0.16	4.1	Fair	
Atlantic City, N. J	.....	.....	29.92	760.0	62	16.7	94	S	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
Augusta, Ga.	.....	.....	30.00	762.0	72	22.2	90	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Baltimore, Md	.....	.....	29.94	760.5	71	21.7	66	W	8	3.6	.....	Haze	0	.....	.....	Inap.	Inap.	Clear	
Barnegat, N. J	.....	.....	29.93	760.2	72	22.2	75	W	10	4.5	.....	1ck	0	W	.....	0	0	Clear	
Benton, Montana	27.09	688.1	29.89	759.2	55	12.8	80	SW	8	3.6	.....	.....	10s	.....	SW	0	0	Cloudy	
Bismarck, Dakota	27.95	709.9	29.49	749.0	66	18.9	54	SE	7	3.1	.....	1k	Haze	SE	.....	0	0	Fair	
Boston, Mass	.....	.....	29.78	756.4	68	20.0	74	SW	6	2.7	.....	8ck	Haze	W	.....	0	0	Hazy	
Breckenridge, Minn	.....	.....	29.79	756.7	69	20.6	66	E	8	3.6	.....	2k	5s	.....	.....	0	0	Cloudy	
Buffalo, N. Y	.....	.....	29.84	757.9	55	12.8	74	SW	4	1.8	.....	2c	2ks	W	W	Inap.	Inap.	Fair	
Burlington, Vt.	.....	.....	29.82	757.4	60	15.6	71	N	7	3.1	.....	.....	10s	.....	.....	0.08	2.0	Cloudy	
Cairo, Ill	.....	.....	29.99	761.7	71	21.7	75	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Cape Hatteras, N. C.	.....	.....	29.92	760.0	73	22.8	81	NW	2	0.9	.....	.....	9ks	.....	W	0.01	0.3	Cloudy	
Cape Henry, Va	.....	.....	29.97	761.2	67	19.4	95	Calm	0	0	.....	8k	0	SW	.....	0.06	1.5	Fair	
Cape Lookout, N. C.	.....	.....	30.00	762.0	72	22.2	80	N	4	1.8	.....	5c	0	.....	.....	0.01	0.3	Fair	
Cape May, N. J.	.....	.....	29.94	760.5	64	17.8	94	SW	6	2.7	.....	0	0	.....	.....	0.05	1.3	Clear	
Charleston, S. C.	.....	.....	30.00	762.0	76	24.4	90	SW	4	1.8	.....	0	8ks	.....	SW	0.09	2.3	Fair	
Cheyenne, Wyoming	23.91	608.1	29.88	758.9	55	12.8	57	W	4	1.8	.....	5c	2s	SW	.....	0.02	0.5	Fair	
Chicago, Ill	.....	.....	29.85	758.2	73	22.8	50	SW	8	3.6	.....	1k	0	.....	.....	0	0	Fair	
Cincinnati, Ohio	.....	.....	29.91	759.7	67	19.4	64	SE	3	1.3	.....	Haze	Fg..sm'	.....	.....	0	0	Fair	
Cleveland, Ohio	.....	.....	29.89	759.2	70.2	21.2	51	SW	3	1.3	.....	1c	Sm'e	W	SW	0	0	Smoky	
Colorado Springs, Col.	24.01	609.8	29.88	758.9	60	15.6	55	N	3	1.3	.....	7k	0	NE	.....	0	0	Fair	
Corsicana, Tex	.....	.....	29.94	760.5	68	20.0	90	E	3	1.3	.....	.....	10s	.....	E	1.36	34.5	Cloudy	
Davenport, Iowa	.....	.....	29.88	758.9	70	21.1	66	SW	4	1.8	.....	7ck	0	SW	.....	0	0	Fair	
Denison, Tex	.....	.....	29.95	760.7	71	21.7	71	E	6	2.7	.....	1c	0	.....	.....	0	0	Clear	
Denver, Col.	24.69	627.1	29.91	759.7	59	15.0	54	S	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich	.....	.....	29.83	757.7	68	20.0	60	SW	8	3.6	.....	1c	Sm'e	W	.....	Inap.	Inap.	Fair	
Dodge City, Kan	27.27	692.6	29.41	747.8	69	20.6	70	S	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	29.82	757.4	72	22.2	67	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Duluth, Minn	.....	.....	30.02	762.5	43	6.1	67	NE	16	7.2	.....	.....	10s	.....	NE	0	0	Cloudy	
Eastport, Me	.....	.....	29.74	755.4	42	5.6	91	NE	8	3.6	.....	.....	Fog	.....	.....	0	0	Foggy	
Erie, Pa	.....	.....	29.86	758.4	67	19.4	74	SW	6	2.7	.....	.....	10ks	.....	W	Inap.	Inap.	Cloudy	
Escanaba, Mich	.....	.....	29.90	759.4	51	10.6	72	N	17	7.6	.....	5k	0	N	.....	5	0	Fair	
Fort Gibson, Indian Ter.	.....	.....	29.90	759.4	78	25.6	75	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.71	729.2	29.77	756.1	70	21.1	75	S	4	1.8	.....	2cs	0	S	.....	0	0	Clear	
Fort Sully, Dakota	28.03	711.9	29.57	751.1	72	22.2	67	E	11	4.9	.....	10c	0	NW	.....	0	0	Cloudy	
Galveston, Tex	.....	.....	29.97	761.2	71	21.7	100	NE	2	0.9	.....	.....	10m	.....	.....	2.82	70.6	Light rain	
Grand Haven, Mich	.....	.....	29.84	757.9	62	16.7	71	W	11	4.9	.....	5ck	0	W	.....	0	0	Fair	
Indianapolis, Ind	.....	.....	29.93	760.2	70	21.1	64	W	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Indianola, Tex	.....	.....	29.91	759.7	74	23.3	95	SE	5	2.2	.....	0	5ks	.....	.....	0.01	0.3	Fair	
Jacksonville, Fla	.....	.....	29.96	761.0	82	27.8	84	E	8	2.7	.....	0	0	.....	.....	0	0	Clear	
Keokuk, Iowa	.....	.....	29.87	758.7	76	24.4	60	W	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla	.....	.....	29.9	759.4	79.5	26.4	82	SW	4	1.8	.....	2cs	1s	S	S	0.05	1.3	Fair	
Kittyhawk, N. C.	.....	.....	29.96	761.0	71	21.7	80	NW	10	4.5	.....	2k	Haze	NW	.....	0.15	3.8	Fair	
Knoxville, Tenn	.....	.....	30.00	762.0	65	18.3	90	NE	5	2.2	.....	0	0	.....	.....	0	0	Clear	
La Crosse, Wis	.....	.....	29.80	755.9	69	20.6	70	S	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan	.....	.....	29.86	758.4	71	21.7	71	Calm	0	0	.....	.....	10s	.....	SW	0	0	Threatening	
Lexington, Ky	28.92	734.6	29.98	761.5	70	21.1	75	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Long Branch, N. J	.....	.....	29.89	759.2	69	20.6	79	SW	10	4.5	.....	8ck	0	SW	.....	0	0	Cloudy	
Louisville, Ky	.....	.....	29.96	761.0	68	20.0	69	SW	2	0.9	.....	0	Fog	.....	.....	0	0	Clear	
Lynchburg, Va	.....	.....	29.96	761.0	69	20.6	71	W	4	1.8	.....	0	0	.....	.....	0.53	13.5	Clear	
Malone, N. Y.	.....	.....	29.78	756.4	61	16.1	55	NE	4	1.8	.....	.....	10s	.....	.....	0.17	4.3	Cloudy	
Manhattan, Kan.	28.75	730.2	29.85	758.2	64	17.8	94	S	6	2.7	.....	.....	10n	.....	.....	Inap.	Inap.	Light rain	
Marquette, Mich	.....	.....	30.03	762.7	43	6.1	83	NW	12	5.4	.....	.....	8s	.....	NW	0	0	Cloudy	
Memphis, Tenn	.....	.....	29.98	761.5	72	22.2	80	Calm	0	0	.....	2k	0	SE	.....	0	0	Fair	
Milwaukee, Wis	.....	.....	29.84	757.9	71	21.7	62	W	12	5.4	.....	0	Haze	.....	.....	0	0	Clear	
Mobile, Ala	.....	.....	29.95	760.7	74	23.3	85	S	4	1.8	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Montgomery, Ala	.....	.....	29.98	761.5	74	23.3	78	NE	3	1.3	.....	5cs	0	.....	.....	Inap.	Inap.	Fair	
Morgantown, W. Va	.....	.....	29.92	760.0	72	22.2	67	S	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Mt. Washington, N. H.	23.67	601.2	30.03	762.7	42	5.6	100	NW	34	15.2	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn	.....	.....	29.96	761.0	72	22.2	71	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
New Haven Conn	.....	.....	29.83	757.7	69	20.6	75	SW	5	2.2	.....	10k	Haze	.....	.....	0	0	Cloudy	
New London, Conn	.....	.....	29.86	758.4	70	21.1	71	SW	8	3.6	.....	2ck	2ks	W	W	0	0	Fair	
New Orleans, La	.....	.....	29.91	760.5	76	24.4	81	NE	4	1.8	.....	.....	10s	.....	.....	0.14	3.6	Threatening	
Newport, R. I.	.....	.....	29.83	757.7	60	15.6	88	SW	3	1.3	.....	.....	8ks	.....	SW	0	0	Cloudy	
New York, N. Y.	.....	.....	29.87	758.7	64	17.8	78	SW	7	3.1	.....	5k	1s	W	W	0	0	Fair	
Norfolk, Va	.....	.....	29.98	761.5	70	21.1	79	S	3	1.3	.....	2k	Haze	S	.....	0.70	17.8	Fair	
North Platte, Neb.	26.98	682.7	29.31	744.5	64	17.8	100	E	5	2.2	.....	.....	Fog	.....	.....	Inap.	Inap.	Foggy	
Omaha, Neb.	28.79	731.2	29.80	756.9	71	21.7	75	SE	4	1.8	.....	8c	0	SW	.....	0	0	Fair	
Oswego, N. Y.	.....	.....	29.86	758.4	53	11.7	79	NW	4	1.8	.....	Haze	Haze	.....	.....	0	0	Hazy	
Pembina, Dakota	.....	.....	29.90	759.4	54	12.2	73	NE	4	1.8	.....	2ck	Haze	.....	.....	0	0	Fair	
Philadelphia, Penn	.....	.....	29.93	759.4	66	18.9	84	SW	8	3.6	.....	1k	0	SW	.....	0	0	Clear	
Pike's Peak, Colorado	17.31	453.1	30.05	763.3	27	— 2.8	77	W	30	13.4	.....	0	5s	.....	W	0	0	Fair	
Pittsburgh, Penn	.....	.....	29.89	759.2	67	19.4	69	NW	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Port Huron, Mich	.....	.....	29.83	757.7	65	18.3	78	S	8	3.6	.....	5k	2s	W	.....	0.11	2.8	Cloudy	
Portland, Me	.....	.....	29.75	755.6	66	18.9	74	Calm	0	0	.....	8k	Haze	W	.....	0	0	Cloudy	
Portland, Oregon	.....	.....	30.18	766.6	48	8.9	85	Calm	0	0	.....	.....	10s	.....	SW	0.09	2.3	Cloudy	
Punta Rassa, Fla	.....	.....	29.92	760.0	72.0	22.2	95	E	6	2.7	.....	.....	8s	.....	SE	0	0	Cloudy	
Rochester, N. Y	.....	.....	29.82	757.4	66	18.9	68	N	10	4.5	.....	Haze	Haze	.....	.....	0	0	Hazy	
Salt Lake City, Utah	25.58	649.7	29.91	759.7	59	15.0	48	Calm	0	0	.....	5c	0	SE	.....	0	0	Fair	
Sandy Hook, N. J.	.....	.....	29.85	758.2	67	19.4	84	SW	12	5.4	.....	0	8ks	.....	W	0	0	Cloudy	
San Diego, Cal.	.....	.....	29.98	761.5	59	15.0	87	S	8	3.6	.....	.....	10s	.....	S	0	0	Cloudy	
San Francisco, Cal.	.....	.....	30.03	762.7	50	10.0	78	SW	4	1.8	.....	5cs	0	.....	.....	0	0	Fair	
Santa Fé, N. M	23.28	591.3	29.82	757.4	56	13.3	56	Calm	0	0	.....	8k	0	S	.....	0	0	Fair	
Savannah, Ga.	.....	.....	29.99	761.7	74	23.3	95	Calm	0	0	.....	.....	Fog	.....	.....	0.28	7.1	Foggy	
Shreveport, La	.....	.....	29.98	761.5	74	23.3	81	E	2	0.9	.....	8ck	0	SW	.....	0	0	Fair	
Smithville, N. C.	.....	.....	30.01	762.2	70	21.1	84	N	4	1.8	.....	8c.cs	0	W	.....	0.46	11.7	Cloudy	
Springfield, Mass.	.....	.....	29.82	757.4	68	20.0	55	S	4	1.8	.....	5k	Haze	.....	.....	0.01	0.3	Fair	
St. Louis, Mo	.....	.....	29.97	761.2	70	21.1	61	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla	.....	.....	29.95	760.7	74	23.3	85	E	4	1.8	.....	2ck	2s	.....	SE	0.24	6.1	Fair	
St. Paul, Minn	.....	.....	29.80	756.9	63	17.2	64	N	5	2.2	.....	8c	0	NW	.....	0	0	Fair	
St. Paul's Island, Alaska	.....	.....	30.06	763.5	20	— 1.7	89	E	4	1.8	.....	.....	10k	.....	.....	Inap.	Inap.	Cloudy	
Thatcher's Island, Mass.	.....	.....	29.77	756.1	55	12.8	87	SW	10	4.5	.....	0	5k	.....	NW	0	0	Hazy	
Toledo, Ohio	.....	.....	29.84	757.7	73	22.8	54	SW	8	3.6	.....	5ck	Haze	SW	.....	0	0	Fair	
Tucson, Arizona	27.48	680.0	30.06	763.5	74	23.3	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	29.98	761.5	77	25.0	86	Calm	0	0	.....	5ck	5ks	.....	SW	0.05	1.3	Cloudy	
Vicksburg, Miss.	.....	.....	29.98	761.5	70.5	21.4	92	SE	4	1.8	.....	8s	2ks	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.	24.20	614.7	29.68	753.9	43	6.1	75	W	4	1.8	.....	.....	8ks	.....	W	0.16	4 1	Cloudy	
Washington, D. C.	.....	.....	29.94	760.5	69.5	20.8	75	W	4	1.8	.....	Haze	Haze	.....	.....	0.03	0 8	Hazy	
Wilmington, N. C	.....	.....	30.01	762.2	72	22.2	80	NE	1	0.4	.....	5c	2s	NW	.....	0.26	6.6	Cloudy	
Wood's Holl, Mass.	.....	.....	29.85	758.2	56	13.3	93	SW	12	5.4	.....	.....	Fog	.....	SW	0	0	Foggy	
Wytheville, Va.	27.71	703.8	29.82	757.4	60	15.6	88	Calm	0	0	.....	1cs	0	W	.....	0.01	0.3	Clear	
Yankton, Dakota.	28.56	725.4	29.78	756.4	68	20.0	79	SE	1	0.4	.....	5c	0	W	.....	0	0	Fair	
Yuma, Arizona	.....	.....	29.80	756.9	76	24.4	.....	NW	.....	.....	.....	0	0	.....	.....	0	0	Clear	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.06	763 5	83	28.3	74	E	4	1.8	.....	5ck	5s	N	.....	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	30.00	762.0	82	27.8	79	E	.....	.....	.....	.....	10k,ks	.....	.....	0	0	Cloudy	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.18	766.6	82	27.8	87	SE	9	4.0	.....	8k	5n	SE	.....	0.10	2.5	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.76	755.9	81	27.2	83	S	13.2	5.9	.....	.....	8n	.....	.....	0	0	Cloudy	Robert Mason.
Havana, Cuba, W. I.	.....	.....	29.87	758.7	76	24.4	86	NE	1.2	0.5	.....	5ck	2n,s	SE	.....	0	0	Cloudy	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.22	767.6	71.5	21.9	84	SSE	7.0	3.1	.....	8c	1fk	.....	.....	0	0	Fai	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica W. I.	27.14	689.3	29.92	760.0	74	23.3	90	S	4.0	1.8	.....	.....	10k	.....	.....	1.61	40.9	Dull	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.01	762.2	82	27.8	79	E	.....	.....	3	7ks	8ks	E	.....	0.580	14.7	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S.A.	29.99	761.8	.....	.....	84.2	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.417	36.00	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.24	641.1	.....	.....	65.5	18.6	84	Calm	0	0	.....	.....	10n	.....	.....	0 15	3.8	Light rain	Thomas Herran.
St. John's, Newfoundland.	.....	.....	30.06	763.5	67.0	19.4	64	W	.....	.....	.....	0	0	.....	.....	0	0	Clear	John Delaney.
York Factory, B. A.	.....	.....	30.12	765.0	40	4.4	78	W	11	4.9	.....	0	0	.....	.....	0	0	.....	J. Fortescue.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Makawao, Maui, H. I.	27.88	708.1	30.05	763.3	58	14.4	70	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	F. L. Clarke.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	Weather.	Observer
Steamer Hibernian, N. 44° 39′, W. 63° 34′.	At Halifax.	.....	Smooth	.....	Hazy	Lieut F. Archer, R N.R.
Nova Scotian,	At Halifax.	.....	Smooth	.....	Cloudy	Capt. Ritchie.
Steamer Leipzig, N. 38° 10′, W. 70° 29′.	N 6½ E	.....	Smooth	.....	Drizzling	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.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) 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.; 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.*

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

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

The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is *not* reported, the *kinds* or *types* of clouds, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, hazé, 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 MAY 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	.....	.....	30.02	762.5	66.4	19.1	66	Calm	.....	.....	0	.....	10	.....	.....	0	0	Hidden	Charnot.
Algiers	.....	.....	30.00	762.1	73.4	23.0	59	NNW	.....	.....	1	.....	10	.....	.....	Inap.	Inap.	Hidden	Peter.
La Calle	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Kunts.
Tunis	.....	.....	30.15	765.7	78.1	25.6	45	E	.....	.....	3	.....	0	.....	.....	0	0	Clear	Jacques.
Sfax	.....	.....	30.20	767.1	75.2	24.0	46	SE	.....	.....	2	.....	1	.....	.....	0	0	Clear	Chauvey.
Saida	.....	.....	30.08	764.0	73.4	23.0	25	SSW	.....	.....	5	.....	3	.....	.....	0.059	1.5	Fair	Millot.
Tebessa	.....	.....	30.15	765.7	81.3	27.4	.....	S	.....	.....	2	.....	0	.....	.....	0	0	Clear	Colin.
Geriville	.....	.....	30.11	764.7	69.1	20.6	25	SE	.....	.....	4	.....	6	.....	.....	0	0	Fair	Buard.
Laghouat	.....	.....	30.03	762.7	78.8	26.0	42	NE	.....	.....	2	.....	5	.....	.....	0	0	Fair	Guyot.
Biskra	.....	.....	30.21	767.2	85.1	29.5	29	S	.....	.....	1	.....	6	.....	.....	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.

Agram	.....	.....	30.17	766.2	73.8	23.2	48	SW	.....	.....	3	.....	3	.....	.....	0	0	.....	Prof. Ivan Stosir.
Cracow, I. R. Observatory	.....	.....	30.18	766.5	64.4	18.0	57	W	.....	.....	1	.....	10	.....	.....	0	0	.....	Dr. Wierzbiski.
Eperies	.....	.....	30.14	765.6	65.7	18.7	64	Calm	.....	.....	0	.....	10	.....	E	0	0	.....	Julius Mikolik.
Gratz	28.97	735.8	30.12	765.1	65.1	18.4	50	SW	.....	.....	3	.....	1	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	28.73	729.8	30.13	765.3	63.9	17.7	52	NW	.....	.....	2	.....	8	.....	.....	0	0	.....	Prof. Reissenberger.
Kremsmünster	28.82	732.1	30.14	765.5	65.5	18.6	60	ENE	.....	.....	2	.....	0	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	.....	.....	30.11	764.9	59.4	15.2	63	NW	.....	.....	2	.....	8	.....	.....	0.004	0.1	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Pola	.....	.....	30.19	766.7	70.1	21.1	55	W	.....	.....	2	.....	1k	.....	.....	0	0	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	30.21	767.2	68.9	20.5	47	W	.....	.....	2	.....	8	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	30.20	767.1	71.8	22.1	72	Calm	.....	.....	0	.....	0	.....	.....	0	0	Clear	Prof. V. Farolfi.
Vienna	.....	.....	30.14	765.6	68.7	20.4	53	E	.....	.....	1	.....	5	.....	.....	0	0	.....	I. R. Central Met. Obs'y.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 393.9 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Brussels	.....	.....	30.10	764.5	66.4	19.1	54	W	.....	.....	1	.....	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	.....	.....	29.77	756.1	58.5	14.7	.....	WSW	18	8.0	.....	.....	4	.....	.....	0	0	Blue sky	William Boswell.
Ardrossan	.....	.....	29.92	760.0	54	12.2	.....	W	.....	.....	4	.....	7	.....	.....	.....	.....	*Detached clouds	William McNeil.
Armagh, Observatory	.....	.....	29.98	761.5	55.4	13.0	.....	SW	11	4.9	.....	.....	10	.....	.....	.....	.....	Gloomy	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs'y	.....	.....	30.04	763.0	58.2	14.6	.....	W	32	14.3	.....	.....	10	.....	.....	.....	.....	Overcast	John Hartnup.
Birr Castle, (Parsonstown)	.....	.....	30.05	763.3	58.6	14.8	.....	SW	.....	.....	3-4	.....	10	.....	.....	.....	.....	*D. clouds	J. Dreyer.
Bradford	.....	.....	30.03	762.7	58.8	14.9	.....	W	.....	.....	1	.....	10	.....	.....	0	0	Overcast	J. McLandsborough.
Bridgetown, (Barbadoes)	.....	.....	30.01	762.2	82.0	27.8	.....	NE	.....	.....	3	.....	8	.....	.....	.....	.....	*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory	.....	.....	30.06	763.5	70.0	21.1	.....	W	.....	.....	2	.....	0	.....	.....	Blank	Blank	Blue sky	H. Todd. [H. C.
Cardington	.....	.....	30.10	764.5	71.0	21.7	.....	W	.....	.....	2	.....	1	.....	.....	.....	.....	Blue sky	John McLaren.
Carlisle	.....	.....	29.95	760.7	55.3	12.9	.....	SW	.....	.....	7	.....	10	.....	.....	0.06	1.5	Threatening	T. Bell, for J. Carmell.
Chatham, School M. E	.....	.....	30.09	764.3	69.2	20.7	.....	WSW	.....	.....	2	.....	1	.....	.....	.....	.....	Blue sky	Capt. J. Fellowes, R.E.
Dartmoor	28.76	730.5	30.26	768.6	58.0	14.4	.....	NW	.....	.....	3	.....	5	.....	.....	.....	.....	*D. clouds	R. E. Power.
Donaghadee	.....	.....	29.96	761.0	56	13.3	.....	WSW	.....	.....	3	.....	10	.....	.....	.....	.....	Overcast	J. Mac Gowan.
Dover	.....	.....	30.12	765.0	60	15.6	.....	WSW	.....	.....	3	.....	2	.....	.....	.....	.....	¼ clouded	J. Costello.
Eccles (near Manchester.)	.....	.....	30.01	763.0	59.2	15.1	.....	WNW	9.0	4.0	.....	.....	10	.....	.....	.....	.....	Gloomy	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.21	767.3	57.0	13.9	.....	WNW	10	4.5	.....	.....	10	.....	.....	.....	.....	Overcast	The Staff.
Fort Napier, (Natal)	27.86	707.6	30.10	764.5	77.1	25.1	.....	NE	.....	.....	2	.....	0	.....	.....	.....	.....	Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	30.04	763.9	87.0	30.6	.....	N	.....	.....	4	.....	7	.....	.....	.....	.....	*Detached clouds	
Galway, Queen's College	.....	.....	30.00	762.0	57	13.9	.....	SW	.....	.....	1	.....	4	.....	.....	.....	.....	*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.06	763.5	67.0	19.4	.....	E	.....	.....	5	.....	7	.....	.....	.....	.....	*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	29.88	758.9	53.4	11.9	.....	SW	.....	.....	3	.....	9	.....	.....	.....	.....	Gloomy	Lewis Stuart.
Great Yarmouth	.....	.....	30.07	763.8	67	19.4	.....	W	.....	.....	2	.....	1	.....	.....	.....	.....	Blue sky	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	30.12	765.0	71.3	21.8	.....	WSW	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky	The Staff, for G. B. Airy
Guernsey	.....	.....	30.20	767.1	57	13.9	.....	NNW	.....	.....	2	.....	3	.....	.....	.....	.....	Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	30.05	763.5	58.3	14.6	.....	WNW	.....	.....	2	.....	9	.....	.....	.....	.....	Threatening	L. J. Crossley.
Helston	.....	.....	30.18	766.6	58	14.4	.....	NW	.....	.....	2	.....	8k	.....	.....	0	0	Overcast	M. P. Moyle.
Holyhead	.....	.....	30.05	763.3	55	12.9	.....	SW	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast	John Tilston.
Kew, Observatory	.....	.....	30.11	764.8	64.0	17.8	.....	W	11	4.9	.....	.....	1	.....	.....	.....	.....	Blue sky	The Staff.
Kingstown	.....	.....	30.04	763.0	61	16.1	.....	W	.....	.....	4	.....	8	.....	.....	.....	.....	Overcast	George Mitchell.
Leicester Museum	.....	.....	30.08	764.0	63.7	17.6	.....	SW	.....	.....	1	.....	8	.....	.....	.....	.....	Hazy	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)	.....	.....	30.13	765.3	71.2	21.8	.....	NE	.....	.....	1	.....	2k	.....	.....	.....	.....	.....	J. P. Travis, A. H. C.
Nairn	.....	.....	29.73	755.1	59	15.0	.....	WSW	.....	.....	2	.....	8	.....	.....	.....	.....	¾ clouded	W. D. Penny.
Nassau, (Bahamas)	.....	.....	29.89	759.2	80.2	26.8	.....	W	.....	.....	3	.....	8	.....	.....	.....	.....	*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	30.06	763.5	67.3	19.6	.....	SW	.....	.....	4	.....	10k.d	.....	WSW.	0	0	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.06	763.5	63.0	17.2	.....	WSW	.....	.....	3	.....	9	.....	.....	.....	.....	Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	30.09	764.3	67	19.4	.....	SW	.....	.....	1	.....	1	.....	.....	.....	.....	Blue sky	J. Lucas.
Plymouth	.....	.....	30.19	766.8	62.7	17.1	.....	W	.....	.....	3	.....	10	.....	.....	.....	.....	Overcast	John Merrifield.
Roche's Point	.....	.....	30.14	765.5	59	15.0	.....	WSW	.....	.....	4	.....	8	.....	.....	.....	.....	Cloudy	W. Kennedy.
Saint Ann's Head	.....	.....	30.16	766.1	57	13.9	.....	W	.....	.....	1	.....	6	.....	.....	.....	.....	*D. clouds	John C. Walker.
Saint Helier, Jersey	.....	.....	30.18	766.6	63.8	17.7	.....	NNE	.....	.....	3	.....	0	.....	.....	.....	.....	Clear	A. P. Amy.
Sandwick Manse, Orkneys	.....	.....	29.67	753.6	51.1	10.6	.....	W	32	14.3	.....	.....	0	.....	.....	.....	.....	Blue sky	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	29.98	761.5	61.5	16.4	.....	WSW	.....	.....	5	.....	10	.....	.....	.....	.....	Overcast	F. Shaw.
Scutari Cemetery Turkey	.....	.....	29.97	761.2	59.0	15.0	.....	NE	.....	.....	3	.....	10	.....	.....	Blank	Blank	Misty	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.04	763.0	65.3	18.5	.....	W	.....	.....	3	.....	5	.....	.....	0	0	*Detached clouds	W. F. Cooper.
Silloth Rectory	.....	.....	29.95	760.7	59.1	15.1	79	SW	.....	.....	4	.....	8	.....	.....	0.050	1.27	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	30.02	762.0	56.3	13.5	.....	W	.....	.....	3	.....	10	.....	.....	.....	.....	Gloomy	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.	.....	.....	29.70	754.4	56	13.3	.....	W	.....	.....	6	.....	5	.....	.....	.....	.....	*D. clouds	John Smith.
Strathfield Turgiss	.....	.....	30.13	765.3	66.0	18.9	.....	NW	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky	Rev. Charles H. Griffith.
Streatley Vicarage	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Rev. John Slatter.
Thurso	.....	.....	29.67	753.6	55	12.8	.....	W	.....	.....	6	.....	3	.....	.....	.....	.....	Blue sky	John Trotter.
Truro, Royal Institution	.....	.....	30.22	767.6	62	16.7	.....	NW	.....	.....	6	.....	8	.....	.....	.....	.....	Gloomy	W. Newcombe.
Valencia, Observatory	.....	.....	30.12	765.0	56.0	13.3	.....	S	22	9 8	.....	.....	10	.....	.....	.....	.....	*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	52	11.1	.....	SSW	.....	.....	4	.....	10	.....	.....	.....	.....	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.20	767.1	64.8	18.2	73	WNW	4	1. 8	.....	1	2	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Leith, Restalrig Park	.....	.....	29.89	759.2	57.0	13.9	.....	W	.....	.....	6	.....	9k	.....	.....	0	0	Cloudy	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.12	765.0	.....	.....	.....	E	13.6	6.1	.....	.....	.....	.....	.....	0.67	1.8	.....	C. Meldrum.
Melbourne, Observatory	.....	.....	29.48	748.8	52.0	11.1	76	NNW	22	9.8	.....	.....	7	.....	.....	0.18	4.6	Showery	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	29.80	756.9	53	11.7	.....	WSW	.....	.....	6	5	5	W	.....	0.1	2.5	.....	J. Youngehause.
North Unst, (Shetland Is.)	.....	.....	29.47	748.5	48	8.9	.....	W	.....	.....	6	7	5	W	.....	Blank	Blank	.....	Robert Burnet.

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m., local time; at 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	.....	.....	.....	29.96	760.9	64.7	17.6	63	SSW	.....	.....	2	.....	10	.....	.....	.....	.....	.....
Fanöe	.....	.....	.....	29.97	761.2	56.8	14.8	82	SW	.....	.....	4	.....	1	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	.....	29.41	747.0	37.	2.8	91	S	.....	.....	4	.....	10	.....	.....	.....	Raining	.....
Stykkisholm, (Iceland)	.....	.....	.....	29.37	746.1	42.3	5.7	85	W	.....	.....	6	.....	5	.....	.....	.....	.....	.....
Thorshavn, (Faröe)	.....	.....	.....	29.38	746.2	51.4	10.8	70	W	.....	.....	5	.....	5	.....	.....	.....	.....	.....
Vestervig	.....	.....	.....	29.85	758.2	53.4	11.9	87	SW	.....	.....	6	.....	10	.....	.....	.....	.....	.....

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

FRENCH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	30.09	764.3	64.4	18	56	W	.....	.....	1	.....	8cu	.....	W	0	0	Very cloudy	Normal School.
Amiens	.....	.....	30.13	765.3	72.3	22.4	53	W	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	30.19	766.8	77.4	25.2	44	S	.....	.....	3	.....	0	.....	.....	0	0	Very clear	Normal School.
Bar-sur-Seine	.....	.....	30.11	764.9	74.5	23.6	39	E	.....	.....	2	.....	2	.....	.....	0	0	Slightly cl'dy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.10	764.5	74.8	23.8	44	N	4.0	1.8	.....	.....	1	.....	S	0	0	Clear	Beaumette Observatory.
Beauvais	.....	.....	30.13	765.4	70.3	21.3	45	NNW	.....	.....	2	.....	5	.....	SW	0	0	Cloudy	Normal School.
Besançon	.....	.....	30.13	765.4	75.6	24.2	47	E	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Bourg en Bresse	.....	.....	30.11	764.9	77.0	25	37	S	.....	.....	2	.....	.....	.....	N	0	0	.....	Normal School.
Bourges	.....	.....	30.07	763.8	73.4	23	65	SSE	.....	.....	2	.....	2	.....	S	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	30.15	765.7	60.6	15.9	61	N	.....	.....	3	2c	.....	N	.....	0	0	.....	Naval Observatory.
Caen	.....	.....	30.05?	778.0?	62.6	17	78	N	.....	.....	1	.....	1	.....	E	0	0	Clear	Normal School.
Carcassonne	.....	.....	30.13	765.3	65.7	18.7	50	E	.....	.....	2	.....	2	.....	W	0	0	Slightly cl'dy	Normal School.
Chartres	.....	.....	30.09	764.3	78.6	25.9	.....	WNW	.....	.....	1	.....	4	.....	.....	0	0	.....	Normal School.
Clermont	.....	.....	30.02	762.4	78.8	26.0	32	sE	.....	.....	2	.....	2	.....	.....	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.18	766.6	67.5	19.7	51	NW	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Commune de Greasque*	.....	.....	30.23	767.9	76.5	24.7	29	SW	.....	.....	3	.....	2	.....	SW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.13	765.2	77.2	25.1	81	NNW	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Le Mans	.....	.....	30.12	765.0	71.1	21.7	52	NE	.....	.....	3	.....	5	.....	SE	0	0	Cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.14	766.0	71.1	21.7	53	NW	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Mâcon	.....	.....	30.25	768.3	70.0	21.1	75	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Mirecourt	.....	.....	30.15	765.8	61.3	16.3	47	NW	.....	.....	2	.....	1	.....	S	0	0	Clear	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	30.26	768.5	78.8	26	38	SW	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	30.09	764.3	74.8	23.8	33	NE	.....	.....	1	.....	5	.....	NE	0	0	Cloudy	Normal School.
Paris, Observatory	.....	.....	30.12	765.1	73.8	23.2	42	W	.....	.....	1	.....	6	.....	S	0	0	Foggy	National Observatory.
Parthenay	.....	.....	30.11	764.9	69.8	21	57	E	.....	.....	2	.....	1	.....	E	0	0	Clear	Normal School.
Privas	.....	.....	30.13	765.4	76.6	24.8	.....	SE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
La Roche-sur-Yon	.....	.....	29.98	761.4	78.1	25.6	59	NE	.....	.....	2	.....	5	.....	N	0	0	Partly cloudy	Normal School.
Rochefort, Observatory	.....	.....	30.11	764.9	78.1	25.9	45	NE	.....	.....	3	.....	0	.....	.....	0	0	Blue sky	Naval Observatory.
Rouen	.....	.....	30.15	765.8	70.3	21.3	54	WSW	.....	.....	2	.....	1	.....	W	0	0	Clear	Normal School.
Saint Lo	.....	.....	29.88	759.0	69.4	20.8	58	NW	.....	.....	1	.....	1	.....	NW	0	0	.....	Normal School.
Tarbes	29.01	736.8	30.03	762.8	65.3	18.5	.....	E	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Villefranche	.....	.....	30.14	765.6	78.8	26	51	SSE	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.91	759.8	81.3	27.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.17	766.2	73.6	23.1	52	S	.....	.....	2	.....	0	.....	.....	0	0	Clear	Marseilles Observatory.
Mont-Louis	25.01	635.3	30.33	770.3	58.5	14.7	82	SE	14.9	6.66	.....	.....	2	.....	SSW	0	0	.....	—. Faiguère.
Montsouris, Paris	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montsouris Observ'tory.
Perpignan	.....	.....	30.17	766.2	64.4	18.0	77	SE	5.6	2.50	.....	.....	6	.....	SE	0	0	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.14	765.2	78.4	25.8	42	SSW	.....	.....	1	.....	5	.....	.....	0	0	.....	E. Renou.
Toulouse	.....	.....	30.14	765.5	75.7	24.3	46	SSE	.....	.....	3	.....	0	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.10	764.5	76.5	24.7	43	ENE	.....	.....	1	.....	1	.....	E	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.17	766.3	76.3	24.6	44	NE	.....	.....	1	.....	8	.....	.....	0	0	.....	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	29.81	757.2	70.0	21.1	81	SE	9.2	4.1	.....	8ks	.....	NW	.....	{ 0 0	{ 0 0	Almost cov'd	H. Le Lec, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

Baiersberg	.....	.....	30.11	764.7	64.4	18.0	57	WSW	.....	.....	3	.....	3	W	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.09	764.2	69.6	20.9	44	W	.....	.....	1	.....	2	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.20	767.1	67.8	19.9	40	W	.....	.....	3	.....	6	.....	.....	0	0	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	30.09	764.3	74.8	23.8	43	SW	.....	.....	3	.....	0	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.07	763.8	76.6	24.8	40	NW	.....	.....	2	.....	2	SW	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.13	765.3	73.9	23.3	35	SW	.....	.....	2	.....	0	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	30.15	765.9	64.8	18.2	50	SW	.....	.....	.....	.....	0	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.04	762.9	66.6	19.2	67	WSW	.....	.....	2	.....	7k	WSW	.....	0	0	.....	Captain F. Hegemann.
Kiel	.....	.....	30.00	762.0	64.6	18.1	56	W	.....	.....	5	.....	7	.....	.....	0	0	.....	Prof. G. Karsten
Königsberg, (Prussia.)	.....	.....	30.02	762.5	61.3	16.3	67	W	.....	.....	5	.....	2	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	30.07	763.6	62.8	17.1	.....	SW	.....	.....	2	.....	2	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.12	765.0	72.0	22.2	49	SW	.....	.....	1	.....	3	W	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	30.02	762.5	59.5	10.3	83	WSW	.....	.....	4	.....	10	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.14	765.6	68.9	20.5	57	S.W	.....	.....	6	.....	6	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.97	761.3	68.0	20.0	53	W	.....	.....	4	.....	4	.....	.....	Inap?	Inap?	.....	A. Lothes.
Posen	.....	.....	30.16	766.0	70.3	21.3	56	W	.....	.....	2	.....	9	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.12	765.1	73.4	23.0	44	Calm	.....	.....	0	.....	0	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	30.10	764.4	75.2	24.0	41	NE	.....	.....	1	.....	0	.....	.....	0	0	Clear	Prof. Schoder.
Thorn	.....	.....	30.09	764.2	70.7	21.5	41	W	.....	.....	2	.....	4	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.08	764.0	72.7	22.6	41	S	.....	.....	5	.....	1	.....	.....	0	0	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	30.00	761.9	58.3	14.6	73	WSW	.....	.....	3	.....	4	.....	.....	0	0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			30.16	766.1	72.5	22.5	47	SW	1.3	0.6			3			0	0		
Padua			30.17	766.2	71.4	21.9	41	S	4.9	2.2			2	NW		0	0		
Vicenza			30.16	766.0	72.3	22.4	44	E	3.1	1.4			1	E		0	0		
Verona			30.14	765 6	62.2	16.8	80	E			2		2			0	0		
Bergamo	28.82	732.0	30.11	764.8	72.0	22.2	43	SW			2		1			0	0		
Domodossola	29.10	739.0	30.10	764.4	75.6	24.2	63	SSW			2		1			0	0		
Milan			30.17	766.4	81.0	27.2	42	E			2		2	W		0	0		
Pavia			30.17	766.2	74.3	23.5	39	E			4		0			0	0		
Moncalieri			30.17	766.2	74.1	23.4	52	ESE	4.9	2.2			6	W		0	0		
Mondovi	28.28	718.4	30.15	765.9	71 8	22.1	45	NW			4		1			0	0		
Porto Maurizio			30.23	767.7	71.6	22.0	59	SE			2		1			0	0		
Genoa			30.20	767.0	68.9	20.5	63	Calm	0	0			0			0	0		
Piacenza			30.18	766.5	74.5	23.6	43	NE	4.2	1.9			0			0	0		
Parma			30.17	766.3	75.2	24.0	48	NE			4		1			0	0		
Bologna			30.21	767.3	74.5	23.6	39	ENE			6		0			0	0		
Florence			30.20	767.0	79.7	26.5	23	NW			2		4			0	0		
Leghorn			30.19	766.7	72.0	22.2	58	W	6.3	2.8			2			0	0		
Siena	28.96	735.7	30.15	765.9	73.4	23.0	33	SE	0	0			1	NW		0	0		
Urbino																			
Pesaro																			
Ancona			30.24	768.0	70.5	21.4	51	E			4		0			0	0		
Grosseto			30.19	766.8	73.4	23.0	50	WSW			4		2	SE		0	0		
Rome			30.17	766.3	75.2	24.0	43	S	4.9	2.2			0			0	0		
Naples, O. U			30.16	766.0	77.7	25.4	35	NE			4		0			0	0		
Lecce			30.12	765.1	67.6	19.8	38	N	21.7	9.7			0			0	0		
Cosenza			30.11	764.8	73.9	23.3	72	NW	9.8	4.4			3			0	0		
Riposto, (Sicily)			30.13	765.2	73.0	22.8	62	E			2		1			0	0		
Palermo			30.12	765.0	68.2	20.1	67	NE	4.9	2.2			1			0	0		
Caltanissetta	28.14	714.7	30.04	763.0	71.2	21.8	27	N			1		2	S		0	0		
Sub-Series.																			
Naples, S. R			30.17	766.4	73.8	23.3	26	NE								0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known: Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters., or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.6 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.

Flushing			30.15	765.8	58.3	14.6		NW			4								
Groningen			30.00	762.1	65.3	18.5		SW			4								
Helder			30.07	763 7	59.4	15.2		SW			4								
Utrecht			30.06	763.5	70.9	21.6	52	SW			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.

Bergen			29.61	752.1	48.6	9.2	89	SW	16.1	7.2			10			0.433	11.0	Raining	
Bröno			29.35	745.5	44.6	7.0	92	SW	22	10			10			0.268	6.8	Light rain	
Christiania			29.57	751.0	59.7	15.4	64	S	12.1	5.4			10			0	0		
Tromso			29.34	745.3	37.4	3.0	71	SW	9	4			10			0	0		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores,)	.....	.....	30.34	770.6	65.1	18.4	77	WSW	2.7	1.19	.....	.....	6	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.09	764.2	59.2	15.1	91	SSW	6.7	3.00	.....	.....	10	SSW	.....	0.185	4.7	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.11	764.7	64.6	18.1	70	SSE	4.0	1.78	.....	.....	3	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.07	763.6	64.4	18.0	59	SSE	7.4	3.3	.....	.....	10	.....	.....	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	.....	.....	30.10	764.5	64.8	18.2	57	W	13	6	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.01	762.3	60.6	15.9	57	W	11	5	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.84	757.9	60.4	15.8	55	WSW	9	4	.....	.....	5	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.78	756.4	57.2	14.0	43	WSW	11	5	.....	.....	8	.....	.....	.....	.....	.....	Central Physical Obs
Kuopio	.....	.....	29.58	751.2	53.1	11.7	56	WSW	18	8	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kief	.....	.....	29.98	761.6	64.2	17.9	47	NW	13	6	.....	.....	5	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.11	764.8	68.7	20.4	53	N	11	5	.....	.....	4	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.03	762.7	72.0	22.2	66	NNE	2	1	.....	.....	8	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.90	759.4	59.2	15.1	75	S	9	4	.....	.....	7	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.89	759.2	72.5	22.5	47	WSW	22	10	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.57	751.1	48.0	8.9	48	WNW	18	8	.....	.....	5	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.62	726.8	29.93	760.1	88.2	31.2	33	S	9	4	.....	.....	2	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.02	762.6	69.4	20.8	62	S	18	8	.....	.....	10	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.88	759.0	67.6	19.8	42	W	4	2	.....	.....	4	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.98	736.0	29.94	760.5	64.4	18.0	63	SSW	4	2	.....	.....	5	.....	.....	.....	.....	.....	Meteorological Obs.
Nuknas	.....	.....	30.18	766.6	81.9	27.7	20	NE	9	4	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.57	725.6	30.23	767.8	86.0	30.0	52	Calm	0	0	.....	.....	8	.....	.....	.....	.....	Light rain...	Michelson.
Barnaul	.....	.....	30.07	763.7	54.5	12.5	47	NW	13	6	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.61	752.1	43.5	6.4	90	N	4	2	.....	.....	10	.....	.....	.....	.....	Raining.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Gorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	30.04	762.9	89.1	31.7	25	SSW	11	5	.....	.....	5	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	40.3	4.6	84	Calm	0	0	.....	.....	6	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind velocity in meters per second; 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, 1,281.06 m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	29.96	760.9	80.6	27.0	98	SE	2.0	0.91	.....	1	0	SW	.....	0	0	.....	Royal Observatory.
San Fernando	.....	.....	30.08	763.9	68.9	20.5	73	ESE	11.2	5.0	.....	0	6	.....	ESE	0.315	8.0	.....	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	.....	.....	29.49	749.0	42.8	6.0	62	SW	.....	.....	2	.....	7	.....	.....	0	0	.....	
Umea	.....	.....	29.50	749.4	50.4	10.2	58	SW	.....	.....	2	.....	5	.....	.....	0	0	.....	
Hernosand	.....	.....	29.58	751.3	48.6	9.2	53	SSW	.....	.....	1	.....	10	.....	.....	0	0	.....	
Stockholm	.....	.....	29.63	752.6	66.2	19.0	68	WSW	.....	.....	3	.....	8	.....	.....	0	0	.....	
Wisby	.....	.....	29.85	758.1	59.4	15.2	72	WSW	.....	.....	3	.....	0	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.60	751.7	67.5	19.7	40	WSW	21.5	9.6	.....	.....	10	.....	W	0.051	1.30	.....	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	28.75	730.2	30.15	765.7	64.2	17.9	54	N			2		1			0.	0.	Clear	The Observatory.
Zurich	28.54	724.9	30.11	764.8	74.7	23.7	44	NW			1		0			0.	0.	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +4.5 mm; Thermometer, −0.7 cent.; Relative Humidity, +2 per cent.

Note.—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. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople																			
Fao, (Persian Gulf)			29.90	759.4	98.6	37.0		NW			1		0						
Salonica			30.02	762.4	63.9	17.7		NW			1		0						
Valona			30.00	762 0	69.4	20.8		NW			4		0						
Varna			30.06	763.5	64.4	18.0		N			2		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.72	754.8	90.0	32.2	50	NE			1		0c			0	0	Fair	Prof. C.V. A.Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong;) and Constantinople also velocity in meters per second; the weather in general terms 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B			29.97	761.2	44.8	7.1	75	N	15	6.7		0				0.18	4.6	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.25	768.3	45	7.2		NE	8	3.6		0	0			0.60	15.2	Clear	W. R. Bigg.
*Chatham, N. B			29.98	761.5	46	7.8	52	NW	15	6.7		0	0			0.11	2.8	Clear	G. A. Blair.
Charlottetown P. E. Island			29.84	757.9	40	4.4	81	N	15	6.7			10ks			0.15	3.8	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.17	766.3	45.0	7.2	46	E			3	0	0			0	0	Bright	James Smith, M. A
Dalhousie, N. B			30.01	762.2	42.0	5.6	65	W			3	5k	0			0	0		H. A. Johnson.
Esquimault, B. C			29.70	754.4	48.3	9.1	85	W	4	1.8		3cs	0			0	0	Cloudy	W. H. Revis.
Fredericton, N. B			29.98	761.5	47.5	8.6	33	NE	10	4.5		1k	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.42	747.3	56	13.3	90	S	17	7.6		5k	5ks	S	S	0 27	6.9	Cloudy	James Stewart.
Goderich, Ontario			30.11	764.8	52.7	11.5	51	NE			1	0	0			0	0	Fine	H. J. Strang, M. A.
Granton, Ontario	28.99	736.3	30.11	764.8	47	8.3		E			1	0	0			0	0	Clear	James Grant.
*Halifax, N. S			29.79	756.7	37	2.8	100	N	18	8.0			10c		N	0.90	22.9	Sleeting	F. Allison, M. A.
*Kingston, Ontario			30.24	768.1	44	6.7	51	NE	7	3.1		0	0			0 06	1.5	Clear	S. Woods, M. A.
*Montreal, Quebec			30.18	766.6	42	5.6	55	NE	11	4.9		0	0			0.28	7.1	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.21	767.3	44	6.7	71	N	12	5.4		0	0			Inap.	Inap.	Clear	J. B. Haney.
*Parry Sound, Ontario			30.14	765.5	45	7.2	39	E	18	8.0		0	0			0.22	5.6	Clear	Rev. R. Mosley.
*Port Dover, Ontario			30.13	765.3	46	7 8	69	NE	10	4 5		0	0			0.55	14.0	Clear	H. Morgan.
Port Hastings, N. S			29.78	756.4	34.7	1.5		N	18	8.0						0.20	5.1	Stormy	Peter Grant.
*Port Stanley Ontario			30.08	764.0	49	9.4	64	E	16	7.2		0	0			0.11	2.8	Clear	M. Payne.
*Quebec, Quebec			30.13	765.3	46	7.8	40	NE	1	0.4		0	0			0	0	Clear	Capt. Ashe, R. N.
St. John, N. B			29.96	761.0	48	6.1	83	N	6	2.7			10ks			0.210	6.10	Raining	G. Murdoch, C. E.
*Saugeen, Ontario			30.10	764.5	48	8.9	85	E	10	4.5		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.14	765.5	48	8.9	61	SE	3	1.3		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario	28.82	732.0	30.11	764.8	44 0	6.7	75	SE	14	6.3		0	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			29.74	755.4	36	2.2	96	N	6	2.7			10n		N	0.40	10.2	Light snow	T. C. Hill.
*Toronto, Ontario			30.20	767.1	46	7.8	55	E	14	6.3		0	0			0.26	6.6	Clear	Magnetic Observatory.
Woodstock, Ontario			30.13	765.3	46.5	8.1	70	E	19	8.5		0	0			0	0	Fine	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 m.

UNITED STATES SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.10	764.5	46	7.8	76	NW	10	4.5	.....	0	0	.....	.....	Inap.	Inap	Clear.	
Alpena, Mich.	.....	.....	30.10	764.5	44	6.7	59	SE	17	7.6	.....	0	0	.....	.....	0	0	Clear.	
Atlantic City, N. J.	.....	.....	29.99	761.7	61	16.1	82	NE	20	13.0	.....	0	Haze	.....	.....	0.35	8.9	Clear.	
Augusta, Ga.	.....	.....	29.94	760.5	74	23.3	83	Calm	0	0	.....	0	0	.....	.....	0.06	1.5	Clear.	
Baltimore, Md.	.....	.....	30.01	762.2	70	21.1	66	N	8	3.6	.....	0	Haze	.....	.....	0	0	Clear.	
Barnegat, N. J.	.....	.....	30.02	762.5	58	14.4	81	NE	15	6.7	.....	5k	0	NW	.....	0.09	2.3	Fair.	
Benton, Montana	26.73	678.9	29.53	750.0	50	10.0	43	N	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy.	
Bismarck, Dakota	27.74	704.6	29.30	744.2	56	13.3	52	SE	5	2.2	.....	Haze	Haze	.....	.....	1.88	47.8	Hazy.	
Boston, Mass	.....	.....	30.03	762.7	54	12.2	40	N	12	5.4	.....	1k	0	N	.....	0.16	4.1	Clear.	
Breckenridge, Minn	.....	.....	29.97	761.2	64	17.8	83	S	8	3.6	.....	2k	5ks	.....	S	0	0	Cloudy.	
Buffalo, N. Y.	.....	.....	30.11	764.8	40	7.8	61	E	12	5.4	.....	2k	0	E	.....	0.07	1.8	Clear.	
Burlington, Vt.	.....	.....	30.18	766.6	41	5.0	65	E	9	4.0	.....	2k	0	N	.....	0.07	1.8	Fair.	
Cairo, Ill.	.....	.....	29.87	758.7	73	22.8	58	SE	7	3.1	.....	8k	0	W	.....	0	0	Fair.	
Cape Hatteras, N. C.	.....	.....	29.87	758.7	75	23.9	76	N	8	3.6	.....	0	Haze	.....	.....	0	0	Clear.	
Cape Henry, Va.	.....	.....	29.89	759.2	75	23.9	64	W	6	2.7	.....	0	Haze	.....	.....	0	0	Clear.	
Cape Lookout, N. C.	.....	.....	29.93	760.2	74	23.3	81	N	12	5.4	.....	0	Haze	.....	.....	0	0	Fair.	
Cape May, N. J.	.....	.....	29.96	761.0	64	17.8	73	SE	24	10.7	.....	0	Haze	.....	.....	0	0	Clear.	
Charleston, S. C.	.....	.....	29.93	760.2	72	22.2	95	N	7	3.1	.....	1c	Fog	.....	N	Inap.	Inap	Fair.	
Cheyenne, Wyoming	23.70	602.0	29.04	752.8	55	12.8	57	SW	12	5.4	.....	1c	0	.....	.....	0.05	1.3	Clear.	
Chicago, Ill.	.....	.....	29.84	757 9	64	17.8	73	E	5	2.2	.....	0	0	.....	.....	0.02	0.5	Clear.	
Cincinnati, Ohio	.....	.....	29.87	758.7	67	19.4	68	Calm	0	0	.....	Haze	Fg.sm	.....	.....	0	0	Fair.	
Cleveland, Ohio	.....	.....	30.01	762.2	54.3	12.4	87	NE	5	2.2	.....	.....	10s	.....	.....	0.03	0.8	Cloudy.	
Colorado Springs, Col.	23.82	605.0	29.69	754.1	52	11.1	65	NW	4	1.8	.....	1cs	0	.....	.....	0.06	1.5	Clear.	
Corsicana, Texas	.....	.....	29.75	755.6	69	20.6	95	E	2	0.9	.....	.....	10s	.....	.....	0.53	13.5	Clear.	
Davenport, Iowa	.....	.....	29.79	756.7	70	21.1	75	E	2	0.9	.....	8k	5s	E	.....	0	0	Cloudy.	
Denison, Tex.	.....	.....	29.79	756.7	71	21.7	80	SW	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy.	
Denver, Col.	24.48	621.8	29.70	754.4	54	12.2	73	S	4	1.8	.....	8c	0	SW	.....	0	0	Fair.	
Detroit, Mich.	.....	.....	30.02	762.5	55	12.8	68	E	13	5.8	.....	5k	2ks	E	E	1.65	42.3	Fair.	
Dodge City, Kan.	27.14	689.3	29.20	744.0	67	19.4	79	SE	9	4.0	.....	8c	0	SW	.....	0	0	Fair.	
Dubuque, Iowa	.....	.....	29.78	756.4	69	20.6	71	SE	4	1.8	.....	0	0	.....	.....	2.00	50.8	Clear.	
Duluth, Minn.	.....	.....	29.78	756.4	41	5.0	74	Calm	0	0	.....	5k	5s	S	S	0	0	Cloudy.	
Eastport, Me.	.....	.....	29.95	760.7	44	6.7	75	N	10	4.5	.....	.....	10s	.....	N	0.30	7.6	Cloudy.	
Erie, Pa.	.....	.....	30.03	762.7	51	10.6	86	N	10	4.5	.....	.....	10ks	.....	NE	0	0	Cloudy.	
Escanaba, Mich.	.....	.....	29.97	761.2	52	11.1	59	SE	11	4.9	.....	0	0	.....	.....	0	0	Clear.	
Fort Gibson, Indian Ter.	.....	.....	29.72	754.9	71	21.7	71	E	6	2.7	.....	2c	0	.....	.....	0	0	Clear.	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.53	724.6	29.58	751.3	69	20.6	75	S	8	3.6	.....	0	8ks	.....	S	0	0	Cloudy.	
Fort Sully, Dakota	27.88	708.1	29.46	748.3	57	13.9	87	E	5	2.2	.....	2k	0	SE	.....	0.33	8.4	Fair.	
Galveston, Tex.	.....	.....	29.89	759.0	77	25.0	90	S	5	2.2	.....	.....	10n	.....	S	0.91	23.1	Light rain.	
Grand Haven, Mich.	.....	.....	29.92	760.0	56	13.3	65	E	23	10.3	.....	5c	Hz.sm	.....	.....	0	0	Fair.	
Indianapolis, Ind.	.....	.....	29.88	758.9	73	22 8	54	N	2	0.9	.....	Haze	0	.....	.....	0	0	Clear.	
Indianola, Tex.	.....	.....	29.79	756.7	75	23.9	95	S	10	4.5	.....	5k	0	.....	.....	0.71	18.0	Fair.	
Jacksonville, Fla.	.....	.....	29.91	759.7	82	27.8	70	NE	4	1.8	.....	5k	0	NE	.....	0	0	Fair.	
Keokuk, Iowa	.....	.....	29.76	755.9	71	21.7	75	E	4	1.8	.....	.....	10s	.....	E	0	0	Cloudy.	
Key West, Fla.	.....	.....	29.84	757.9	78.7	25.9	90	S	7	3.1	.....	.....	5s	.....	S	0.17	1.8	Threatening	
Kittyhawk, N. C.	.....	.....	29.92	760.0	75	23.9	72	NW	4	1.8	.....	0	Haze	.....	.....	0	0	Clear.	
Knoxville, Tenn.	.....	.....	29.94	760.5	65	18.3	83	NE	3	1.3	.....	2ck	0	SW	.....	0	0	Fair.	
La Crosse, Wis.	.....	.....	29.75	755.6	68	20.0	60	S	9	4.0	.....	8c	0	.....	.....	0	0	Fair.	
Leavenworth, Kan.	.....	.....	29.74	755.4	69	20.6	75	Calm	0	0	.....	0	0	.....	.....	0.01	0.3	Clear.	
Lexington, Ky.	28.87	733.3	29.92	760.0	70	21.1	70	SW	1	0.4	.....	0	0	.....	.....	0	0	Clear.	
Long Branch, N. J.	.....	.....	30.05	763.3	56	13.3	68	NE	22	9.8	.....	0	0	.....	.....	0.40	10.2	Clear.	
Louisville, Ky.	.....	.....	29.91	759 7	71	21 7	71	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Clear.	
Lynchburg, Va.	.....	.....	29.91	759.7	73	22.8	63	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Malone, N. Y.	.....	.....	30.16	766.1	39	3.9	55	NE	8	3.6	.....	0	0	.....	.....	0.20	5.1	Clear.	
Manhatan, Kan.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Marquette, Mich.	.....	.....	29.90	759.4	50	10.0	64	SE	12	5.4	.....	0	0	.....	.....	0	0	Clear.	
Memphis, Tenn.	.....	.....	29.85	758.2	75	23.9	76	S	1	0.4	.....	8k	2s	SE	.....	0	0	Cloudy.	
Milwaukee, Wis.	.....	.....	29.94	760.5	49	9.4	77	E	8	3.6	.....	5ks	Sm'e	SW	.....	0	0	Fair.	
Mobile, Ala.	.....	.....	29.86	758.4	82	27.8	63	NE	4	1.8	.....	2k	8s	.....	.....	0	0	Cloudy.	
Montgomery, Ala.	.....	.....	29.93	760.2	69	20.6	97	NE	3	1.3	.....	8ck	Fog	S	.....	0.44	11.2	Foggy.	
Morgantown, W. Va.	.....	.....	29.91	759.7	71	21.7	62	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Clear.	
Mt. Washington, N. H.	23.70	602 0	30.06	763.5	18	— 7.8	84	NE	16	7.2	.....	0	2s	.....	NE	0.34	8.6	Fair.	
Nashville, Tenn.	.....	.....	29.87	758.7	74	23.3	67	Calm	0	0	.....	5k	0	SE	.....	0	0	Fair.	
New Haven Conn	.....	.....	30.06	763.5	53	11.7	43	NE	20	8.9	.....	0	0	.....	.....	0.01	0.3	Clear.	
New London, Conn.	.....	.....	30.04	763.0	57	13.9	40	N	8	3.6	.....	0	0	.....	.....	Inap.	Inap.	Clear.	
New Orleans, La	.....	.....	29.85	758.2	70	24.4	84	E	4	1.8	.....	10k	0	.....	.....	0.02	0.5	Cloudy.	
Newport, R. I.	.....	.....	30. 4	763.0	54	12.2	55	N	15	6.7	.....	5ck	0	N	.....	0	0	Fair.	
New York, N. Y.	.....	.....	30.05	763.3	56	13.3	56	N	9	4.0	.....	0	Haze	.....	.....	0.29	7.4	Clear.	
Norfolk, Va.	.....	.....	29.91	759.7	76	24.4	61	N	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
North Platte, Neb.	26.71	678 4	29.10	739.4	67	19.4	64	Calm	0	0	.....	2c	2s	S	.....	0.43	10.9	Fair.	
Omaha, Neb.	28.60	726.4	29.59	751.6	74	24.3	68	S	12	5.4	.....	2c	2k	.....	.....	0	0	Fair.	
Oswego, N. Y.	.....	.....	30.18	766.6	40.5	4.7	69	N	12	5.4	.....	0	Haze	.....	.....	0.02	0.5	Clear.	
Pembina, Dakota	.....	.....	29.37	746.	59	15.0	81	S	8	3.6	.....	.....	10s	.....	SW	0.20	5.1	Cloudy.	
Philadelphia, Penn	.....	.....	30.01	762.2	64	17 8	62	NE	14	6.3	.....	1k	0	NE	.....	0.24	6.1	Clear.	
Pike's Peak, Colorado	17.08	440.1	29.89	759.2	25	— 3.9	77	SW	54	24.1	.....	5c	0	.....	.....	0.03	0.8	Fair.	
Pittsburgh, Penn.	.....	.....	29.92	760.0	65	18.3	78	NE	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
Port Huron, Mich.	.....	.....	30.06	763.5	49	9.4	57	E	10	4.5	.....	0	Haze	.....	.....	0	0	Clear.	
Portland, Me.	.....	.....	30.04	763.0	51	10.6	53	N	16	7.2	.....	0	0	.....	.....	1.21	30.8	Clear.	
Portland, Oregon	.....	.....	29.81	756.2	48	8.9	77	SW	3	1.3	.....	.....	10s	.....	.....	0.09	2.3	Cloudy.	
Punta Rassa, Fla.	.....	.....	29.86	758.4	76.5	24.7	86	E	12	5.4	.....	.....	8s	.....	E	0.10	2.5	Cloudy.	
Rochester, N. Y.	.....	.....	30.15	765.8	45	7.2	53	E	12	5.4	.....	0	Haze	.....	.....	0.11	2.8	Clear.	
Salt Lake City, Utah	25.21	640.8	29.56	750.8	59	15.0	48	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy.	
Sandy Hook, N. J.	.....	.....	30.02	762.5	57	13.9	68	NE	25	11.2	.....	Haze	Haze	.....	.....	0.04	1.0	Hazy.	
San Diego, Cal.	.....	.....	29.83	757.7	60	15.6	81	SE	12	5.4	.....	.....	10s	.....	SE	0	0	Cloudy.	
San Francisco, Cal.	.....	.....	29.97	761.2	52	11.1	86	Calm	0	0	.....	8cs	Haze	.....	.....	0	0	Fair.	
Santa Fe, N. M.	23.12	587.2	29.66	753.4	52	11.1	60	E	3	1.3	.....	0	0	.....	.....	Inap.	Inap.	Clear.	
Savannah, Ga.	.....	.....	29.93	760.2	75	23.9	81	Calm	0	0	.....	2ck	Fog	.....	N	0	0	Fair.	
Shreveport, La.	.....	.....	29.96	761.0	71	21.7	90	SW	4	1.8	.....	8ck	2s	.....	SE	0.18	4.6	Cloudy.	
Smithville, N. C.	.....	.....	29.93	760.2	73	22.8	81	N	4	1.8	.....	1k	0	.....	.....	0	0	Fair.	
Springfield, Mass.	.....	.....	30.06	763.5	54	12.2	20	NE	12	5.4	.....	0	0	.....	.....	0.06	1.5	Clear.	
St. Louis, Mo.	.....	.....	29.85	758.2	74	23.3	63	S	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
St. Marks, Fla	.....	.....	29.89	759.2	77	25.0	82	E	8	3.6	.....	2cs	2ks	.....	.....	0	0	Fair.	
St. Paul, Minn.	.....	.....	29.58	751.3	61.5	16.4	86	SE	14	6.3	.....	.....	10n	.....	SE	0.06	1.5	Light rain.	
St. Paul's Island, Alaska	.....	.....	29.91	759.7	31	— 0.6	89	E	12	5.4	.....	.....	10s	.....	E	0	0	Cloudy.	
Thatcher's Island, Mass.	.....	.....	30.03	762.7	50	10.0	64	N	24	10.7	.....	0	0	.....	.....	0 13	3.3	Clear.	
Toledo, Ohio	.....	.....	29.98	761.5	56	13.3	93	NE	14	6.3	.....	.....	10ks	.....	.....	0.52	13.2	Cloudy.	
Tucson, Arizona	27.31	693.7	29.90	759.4	75	23.9	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear.	
Tybee Island, Ga.	.....	.....	29.92	760.0	76	24.4	86	NE	4	1.8	.....	2c	2k	.....	.....	0	0	Fair.	
Vicksburg, Miss.	.....	.....	29.89	759.2	76.5	24.4	90	SE	7	3.1	.....	5ck	0	S	.....	0.96	24.4	Fair.	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer
Virginia City, M. T.	23.80	604.5	29.28	743.7	35	1.7	90	SW	12	5.4	.....	.....	10n	.....	SW	0.16	4.1	Light snow..	
Washington, D. C.	.....	.....	29.98	761.5	70	21.1	69	NE	12	5.4	.....	1cs	Haze	NW	.....	0	0	Dense haze..	
Wilmington, N. C	.....	.....	29.93	760 2	71	21.7	85	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear.....	
Wood's Holl, Mass.	.....	.....	30.02	762.5	56	13.3	56	N	11	4.9	.....	.....	10s	.....	NE	0	0	Cloudy.....	
Wytheville, Va.	27.68	703.1	29.76	755.9	64	17.8	78	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Yankton, Dakota	28.32	719.3	29.53	750.0	65	18.3	89	E	4	1.8	.....	8cs	2s	W	.....	0.25	6.3	Cloudy.....	
Yuma, Arizona	.....	.....	29.67	753.6	76	24.4	.....	SE	.....	.....	.....	2c	0	W	.....	0	0	Fair.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.04	763 0	83	28.3	67	E	6	2.7	.....	5k	10ks	NE	.....	0	0	Cloudy..	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.98	761.5	81	27.2	87	E	.....	.....	.....	.....	10ks	.....	.....	Blank	Blank	Cloudy.....	L. V. Bigurd.
Kingston, Jamaica, W. I.	.....	.....	30.11	764.8	82	27.8	83	SE	7	3.1	.....	2c	8n	SE	.....	0.03	0.8	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.71	754.6	82	27.8	79	S	8.4	3.8	.....	.....	8n	.....	S	0.13	3.3	Cloudy.....	Robert Mason.
Havana, Cuba, W. I.	.....	.....	29.84	757.9	81	27.2	87	SW	4.8	2.1	.....	5ck	..fn	SW	SW	0.12	3.0	Fai	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.03	762 7	77.0	25.0	86	S	16.5	7.4	.....	10pk	5fk	S	.....	0	0	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Clifton, Jamaica W. I.	27.15	689.6	29.93	760.2	70	21.1	95	S	3.0	1.3	.....	.....	10k	.....	.....	0.40	10.2	Dull	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.00	762.0	82	27.8	83	E	.....	.....	2	6k	6k	E	.....	1.410	35.8	Cloudy...	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.7	.....	.....	80.6	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.437	36.50	.....	Dr. H. Groot.
Medellin, Colombia, S. A ..	25.22	640.6	.....	.....	65.0	18.3	84	Calm	0	0	.....	6ck	3s	.....	.....	0.02	0.5	Cloudy..	Thomas Herran.
St. John's, Newfoundland.	.....	.....	29.79	756.7	48.5	7.5	100	NE	.....	.....	.....	Fog	Fog	.....	.....	0	0	Foggy	John Delaney.
York Factory, B. A.	.....	.....	29.67	753.6	36.5	2.5	85	NE	10	4.5	.....	6c	0	NE	.....	0	0	.....	J. Fortescue.
Honolulu, Oahu, H. I	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.30	7.6	.....	F. L. Clarke.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Marine Series.	True course towards.	Hourly rate in knots.									State of ocean.	Direction of swell from—		
Steamer Hibernian, N. 43° 19′, W. 65° 40′.	SW by W	10½	29.80	756.9	43	6.1	.....	N	.....	.....	5	.....	..n	.....	.....	Moderate.	.....	Overcast.....	Lieut F. Archer, R N.R.
Steamer Nova Scotian	At Halifax.	.....	29.73	755.1	38	3.3	.....	NE	.....	.....	5	.....	10	.....	.....	.....	.....	Raining.....	Capt. Ritchie.
Steamer Leipzig, N. 39° 20′, W. 65° 12′.	N 6½ E	.....	29.83	757.7	66.9	19.4	.....	WNW	.....	.....	4	.....	..k	.....	N	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, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft , or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,208.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,291.8 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, 6.51 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.

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

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

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON MAY 31, 1876.

7:35 A. M. WASHINGTON mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.99	761.7	70.2	21.2	68	NNE			1		6			0.157	4.0	Fair	Charnot.
Algiers			29.81	761.4	73.4	23.0	64	NW			4		0			0.039	1.0	Clear	Peter.
La Calle																			Kunts.
Tunis			30.02	762.6	78.8	26.0	49	E			3		7			0	0	Cloudy	Jacques.
Sfax			30.10	764.5	77.0	25.0	40	S			3		2			0	0	Clear	Chauvey.
Saïda			30.07	763.9	76.1	24.5	44	NNW			1		2			0	0	Clear	Millot.
Tebessa			30.06	763.4	78.4	25.8		SW			1		10			0	0	Hidden	Colin.
Geriville			30.01	762.3	75.0	24.4	20	SSE			2		3			0	0	Fair	Buard.
Laghouat			30.00	762.1	86.0	30 0	30	NE			2		1			0	0	Clear	Guyot.
Biskra			30.02	762.6	88.3	31.3	23	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			29.99	761.7	75.9	24.4	53	NE			3		2			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.02	762.4	73.4	23.0	44	NE			1		0			0	0		Dr. Wiersbiski.
Koperies			30.01	762.2	70.5	21.4	58	S			2		6			0	0		Julius Mikolik.
Gratz																			Andreas Rospini.
Hermannstadt	28.60	726.7	29.99	761.8	66.7	19.3	50	E			1		5			0	0		Prof. Reissenberger.
Kremsmünster	28.63	727.1	29.92	759.9	70.9	21.6	48	ENE			1		3			0	0		Prof. C. Wagner.
Lemberg			29.97	761.3	69.1	20.6	51	W			1		3			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.02	762.6	70.9	21.6	67	WNW			3		20k			0	0		I.R.Hydrographic Office.
Szegedin			30.02	762.4	73.2	22.9	44	E					6			0	0		Karl Stancel.
Trieste			30.04	763.1	73.0	22.8	67	Calm			0		0			0	0	Clear	Prof. V. Farolfi.
Vienna			29.96	761.0	73.8	23.2	46	ESE			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.; Kremsmunster, 388.9 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	763.0	59.9	15.5	68	NW			3		10			0	0		Royal Observatory.

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

BRITISH SERIES.

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, 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	55.8	13.2		WNW	22	9.8			5			0.020	0.51	Blue sky	William Boswell.
Ardrossan			30.13	765.3	56	13.3		WNW			4		4					*D. clouds	William McNeil.
Armagh, Observatory			30.22	767.6	58.7	14.8		NNW	5	2.2			7					*D. clouds	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs'y			30.16	766.1	55.2	12.9		WNW	3	1.3			1					Blue sky	John Hartnup.
Birr Castle, (Parsonstown)			30.25	768.3	57.7	14.3		NNW			1		10					*D. clouds	J. Dreyer.
Bradford			30.10	764.5	60.8	16.0		W			2		4			0.01	0.3	*D. clouds	J. McLandsborough.
Bridgetown, (Barbadoes)			30.01	762.2	83	28.3		NE			2		7					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.10	764.5	62.8	17.1		N			2		10			0.543†	13.80†	Overcast	H. Todd. [H. C.
Cardington			30.13	765.3	63.0	17.2		NW			2		10					Overcast	John McLaren.
Carlisle			30.11	764.8	58.2	14.6		NW			5		5			0.07	1.8	*D. clouds	T. Bell, for J. Carmell.
Chatham, School M. E			30.10	764.5	61.0	16.1		NE			1		3					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	23.74	730.0	30.23	767.8	58.6	14.8		N			2		7					*D. clouds	R. E. Power.
Donaghadee			30.18	766.6	58	14.4		NNW			3		2					Blue sky	J. Mac Gowan.
Dover			30.10	764.5	61	16.1		NW			3		5					½ clouded	J. Costello.
Eccles, (near Manchester.)			30.13	765.3	56.5	13.6		NW	4.4	2.0			4					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.21	767.3	59.4	15.2		N	21	9.4			2					*D. clouds	The Staff.
Fort Napier, (Natal)	27.82	706.6	30.74	763.0	79.3	26.3		E			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.95	760.7	88.0	31.1		N			3		6					*D. clouds	
Galway, Queen's College			30.20	767.1	58	14.4		SW			1		10					Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.99	761.7	72.0	22.2		SE			4		3					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			30.09	764.3	56.0	13.3		W			3		4					Fine	Lewis Stuart.
Great Yarmouth			30.08	764.0	51	10.6		N			4		3					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			30.13	765.2	63.0	17.2		NNW			1		10					Overcast	The Staff, for G. B. Airy
Guernsey			30.16	766.1	60	15.6		NW			2		3					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y			30.11	764.8	57.5	14.2		NW			2		8			Blank	Blank	*D. clouds	L. J. Crossley.
Helston			30.17	766.3	64	17.8		N			2		10			0	0	Fine	M. P. Moyle.
Holyhead			30.23	767.8	54	12.2		NW			2		0					Blue sky	John Tilston.
Kew, Observatory			30.23	767.8	60.1	15.6		NNW	14	6.3			0					Blue sky	The Staff.
Kingstown			30.23	767.8	56	13.3		NW			4		8					Overcast	George Mitchell.
Leicester Museum			30.15	765.8	59.6	15.3		NW			2		7					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			30.04	763.0	71.8	22.1		SW			1		8ck					Sergt. F. Travis, A. H. C.	
Nairn			29.98	761.5	57	13.9		WNW			3		5					½ clouded	W. D. Penny.
Nassau, (Bahamas)			29.76	755.9	79.2	26.2		N			4		6					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.12	765.0	61.7	16.5		NW			5		8ck		NW	0.027	0.69	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.14	765.5	56.1	13.4		NW			3-4		9					Sola halo	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.12	765.0	60	15.6		NNW			3		10					Overcast	J. Lucas.
Plymouth			30.17	766.3	65.9	18.8		N			2		6					*D. clouds	John Merrifield.
Roche's Point			30.23	767.8	62	16.7		NNW			3		5					Fine	W. Kennedy.
Saint Ann's Head			30.22	767.6	56	13.3		N			3		3						John C. Walker.
Saint Helier, Jersey			30.15	766.8	53.6	12.0		NE			3		5					½ clouded	A. P. Amy.
Sandwick Manse, Orkneys			29.97	761.2	50.3	10.2		WNW	27	12.1			2					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough			30.10	764.5	54.6	12.6		N			3		1					Blue sky	F. Shaw.
Scutari Cemetery Turkey			29.75	755.6	61.4	16.3		NE			2		10			Blank	Blank	Misty	Sergt. W. H. Lyne.
Sheffield			30.08	764.0	61.4	16.3		NW			4		6			0	0	Overcast	W. F. Cooper.
Silloth Rectory			30.11	764.8	55.8	18.8	51	NE			2		4			0	0	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			30.12	765.0	55.9	13.3		W			3		7						Rev. S. J. Perry.
Stornoway, Lews C. Hebr.			29.96	763.5	55	12.8		W			6		8					*D. clouds	John Smith.
Strathfield Turgiss			30.13	765.3	60.5	15.8		N			2		0					Blue sky	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.99	761.7	49	9.4		W			5		9					Raining	John Trotter.
Truro, Royal Institution			30.18	766.6	64	17.8		N			4		4					*D. clouds	W. Newcombe.
Valencia, Observatory			30.27	768.8	57.0	13.9		NW	14	6.3			7					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					50	10.0		NW			4		5						Thomas Dawson.
Cape Good Hope, Obs'y			30.21	767.3	67.0	19.7	67	SE	4	1.8		2	3						The Staff, for E. J. Stone.
Leith, Restalrig Park			30.09	764.3	59.4	15.2		W			3		6k			0.06	1.5	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.10	764.5				E	18.1	8.1						0.16	4.1		C. Meldrum.
Melbourne, Observatory			29.85	758.2	51.9	11.1	79	NNW	17	7.6			10			0.01	0.3	Showery	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.10	764.5	52	11		W			4	5	5	W		0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.82	757.4	48	8.9		W			6	3	1	N					Robert Burnet.

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the sub-series, they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m.; at Nottingham at 6 p. m.; local time; at 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. †Total amount of precipitation during the month.

DANISH SERIES.

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

Copenhagen			29.78	756.4	54.0	12.2	93	SW			2		10					Raining	
Fanöe			29.77	756.2	54.5	12.5	97	Calm			0		10						
Godthaab, (Greenland)			29.32	744.6	36.9	2.7	91	S			4		10					Raining	
Stykkisholm, (Iceland)			29.35	745.4	36.1	2.3	94	E			7		10					Raining	
Thorshavn, (Faröe)			29.84	758.0	50.4	10.2	67	WNW			4		3						
Vestervig			29.80	757.0	54.0	12.2	84	NNW			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	.....	.....	30.11	764.8	62.6	17	69	NE	.....	.....	1	.....	5sn	.....	NE	0	0	Cloudy	Normal School.
Amiens	.....	.....	30.13	765.3	68.4	20.2	59	W	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	30.10	764.5	76.5	24.7	33	SSW	.....	.....	2	.....	2	.....	.....	0	0	Slightly cl'dy	Normal School.
Bar-sur-Seine	.....	.....	30.02	762.4	76.6	24.8	51	NW	.....	.....	2	.....	2	.....	.....	0	0	Slightly cl'dy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.07	763.6	69.4	20.8	51	N	4.0	1.8	.....	.....	1	.....	N	0	0	Clear	Beaumette Observatory.
Beauvais	.....	.....	30.11	764.8	64.6	18.1	54	NW	.....	.....	3	.....	5	.....	NW	0	0	Very cloudy	Normal School.
Besançon	.....	.....	30.02	762.6	70.2	20.2	41	S	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Bourg en Bresse	.....	.....	30.06	763.5	78.8	26	37	S	.....	.....	4	.....	.....	.....	.....	0	0	.....	Normal School.
Bourges	.....	.....	30.02	762.6	75.6	24.2	69	N	.....	.....	2	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	30.12	765.1	60.6	15.9	64	NNE	.....	.....	3	.....	8k	.....	NE	0	0	.....	Naval Observatory.
Caen	.....	.....	30.657	778.62	61.2	16.2	77	N	.....	.....	2	.....	2	.....	SE	0	0	Slightly cl'dy	Normal School.
Carcassonne	.....	.....	30.08	763.9	64.4	18	59	E	.....	.....	2	.....	10	.....	W	0	0	Covered	Normal School.
Chartres	....	.....	30.06	763.5	67.5	19.7	.....	N	.....	.....	4	.....	1	.....	N	0	0	Clear	Normal School.
Clermont	.....	.....	29.97	761.1	80.1	26.7	35	SE	.....	.....	2	.....	2	.....	.....	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.02	762.6	70.3	21.3	43	WNW	.....	.....	2	.....	2k	.....	W	0	0	Slightly cl'dy	Normal School.
Commune de Greasque*	.....	.....	30.14	765.6	72.9	22.7	45	NW	.....	.....	2	.....	8	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.02	762.6	77.4	25.2	55	NW	.....	.....	2	.....	2ck	.....	N	0	0	Slightly cl'dy	Normal School.
Le Mans	.....	.....	30.10	764.6	64.9	18.3	59	NE	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Lons-Le-Saulnier	.....	.....	30.04	763.1	73.6	23 1	36	W	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Mâcon	.....	.....	30.00	762 0	72.7	22.6	74	Calm	.....	.....	0	.....	0	.....	.....	0	0	Clear	Normal School.
Mirecourt	.....	.....	30.04	763.0	71.4	21.9	36	W	.....	.....	4	.....	2	.....	E	0	0	Slightly cov.	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	30.18	766.5	83.8	28.8	29	SW	.....	.....	2	.....	2	.....	SW	0	0	Slightly cl'dy	Normal School.
Orleans	.....	.....	30.03	762.7	73.0	22.8	43	NE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Paris, Observatory	.....	.....	30.08	764.1	63.5	17.5	66	NW	.....	.....	3	.....	2	.....	NW	0	0	Clear	National Observatory.
Parthenay	.....	.....	30.04	763.1	83.3	28.5	42	NE	.....	.....	2	.....	5	.....	NE	0	0	Cloudy	Normal School.
Privas	.....	.....	30.06	763.4	75.6	24.2	.....	WNW	.....	.....	2	.....	2	.....	SW	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon	.....	.....	30.00	759.5	75.4	24.1	56	N	.....	.....	2	.....	1	.....	NE	0	0	.....	Normal School.
Rochefort, Observatory	.....	.....	30.07	763.7	80.6	27.0	53	NE	.....	.....	3	.....	0	.....	.....	0	0	Blue sky	Naval Observatory.
Rouen	.....	.....	30.13	765.2	62.8	17.1	65	W	.....	.....	2	.....	10	.....	W	0	0	Covered	Normal School.
Saint Lo	.....	.....	29.86	758.4	61.5	16.4	66	N	.....	.....	2	.....	10	.....	W	0	0	.....	Normal School.
Tarbes	29.05	737.8	30.07	763.8	64.4	18	.....	W	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Villefranche	.....	.....	30.14	765.5	81.5	27.5	61	SE	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.93	760.1	80.6	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchésl.
Marseilles	.....	.....	30.07	763.7	71.6	22.0	40	WNW	.....	.....	1	.....	10	.....	.....	0	0	Lightly cov'd	Marseilles Observatory.
Mont-Louis	24.95	633.7	30.26	768.7	57.7	14.3	75	SSW	7.4	3.33	.....	.....	8	.....	WNW	Inap.	Inap.	.....	—. Falguère.
Montsouris, Paris	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montsouris Observ'tory.
Perpignan	.....	.....	30.08	763.9	64.4	18.0	80	SE	5.6	2.50	.....	.....	10	.....	E	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	67.3	19.6	53	NW	.....	.....	2	.....	0	.....	.....	0	0	Clear	E. Renou.
Toulouse	.....	.....	30.10	764 6	71.6	22.0	66	SE	.....	.....	1	.....	5	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.06	763.4	77.4	25.2	42	NE	.....	.....	1	.....	0	.....	.....	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.09	764.3	66.2	19.0	56	N	.....	.....	3	.....	5	.....	.....	0	0	.....	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai)	.....	.....	29.89	759.3	71.1	21.7	95	ESE	13.0	5.8	.....	.....	10n	.....	.....	{ 0 / 0	{ 0 / 0	Covered	H. Le Lec, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

Baumberg	.....	.....	29.93	760.1	72.9	22.7	40	W	.....	.....	4	.....	3	SW	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.85	758.1	73.0	22.8	55	SW	.....	.....	1	.....	3	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	29.98	761.5	77.7	25.4	30	SW	.....	.....	5	.....	3	.....	.....	0.016	0.4	.....	Dr. P. Naugebaur.
Carlsruhe	.....	.....	29.91	759.7	77.4	25.2	59	SW	.....	.....	8	.....	1	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	29.84	757.9	77.2	25.1	37	SW	.....	.....	4	.....	7	SSW	.....	0.091	2.3	.....	Dr. H. Möhl.
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.96	760.9	80.6	27.0	34	W	.....	.....	2	.....	4	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	29.99	761.7	70.9	21.6	51	S	.....	.....	.....	.....	2	.....	.....	0.150	3.8	.....	M. Wilhelm.
Hamburg	.....	.....	29.84	758.0	61.6	16.1	76	SW	.....	.....	1	.....	10	.....	.....	0	0	Foggy	Captain F. Hegemann.
Kiel	.....	.....	29.82	757.4	59.0	15.0	91	SW	.....	.....	3	.....	10	.....	.....	0.469	11.9	.....	Prof. G. Karsten
Königsberg, (Prussia.)	.....	.....	29.91	759.8	69.8	21.0	37	W	.....	.....	2	.....	2	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	29.84	757.9	68.2	20.1	.....	SW	.....	.....	2	.....	1	.....	.....	0.012	0.3	.....	H. Müller.
Leipsic	.....	.....	29.88	758 9	78.1	25.6	36	SW	.....	.....	3	.....	4	WSW	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	29.97	761.2	55.6	13.1	75	Calm	.....	.....	0	.....	1	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.95	760.8	61.3	16.3	77	NW	.....	.....	6	.....	6	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.86	758.4	57.4	14.1	60	N	.....	.....	2	.....	4	.....	.....	0.114	2.9	.....	A. Lothes.
Posen	.....	.....	29.96	760.9	78.8	26.0	39	W	.....	.....	5	.....	3	.....	.....	0.193	4.9	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.96	761 0	78.8	26.0	32	SW	.....	.....	2	.....	3	SW	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.95	760.6	72.5	22.5	52	NW	.....	.....	1	.....	5	.....	.....	0.008	0.2	Raining	Prof. Schoder.
Thorn	.....	.....	29.91	759.6	76.6	24.8	36	SW	.....	.....	2	.....	3	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.91	759.7	76.1	24.5	32	W	.....	.....	6	.....	1	.....	.....	0	0	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	29.80	757.0	56.5	13.6	97	SE	.....	.....	2	.....	10	.....	.....	0.740	18.8	Thunder-storm	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

GREEK SERIES.

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

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

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

ITALIAN SERIES.

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

Udine			30.00	762.1	75.0	23.9	46	SW	1.3	0.6			1			0	0		
Padua			30.00	762.0	73 9	23.3	47	S	4.9	2.2			0			0	0		
Vicenza			29.98	761.6	76.8	24.9	43	W	1.8	0.8			0			0	0		
Verona			30.02	762.5	77.9	25.5	44	E			1		0			0	0		
Bergamo	28.48	723.3	29.96	761.0	76.6	24.8	44	SW			1		2			0	0		
Domodossola	28.95	735.3	29.95	760.7	78.3	25.7	53	SSW			4		3			0	0		
Milan			30.02	762.4	80.2	26.8	48	SSE			1		6	NW		0	0		
Pavia			30.02	762.4	76.3	24.6	46	NE			1		0			0	0		
Moncalieri			30.02	762.5	76.1	24.5	52	SE	4.9	2.2			3			0	0		
Mondovi	28.15	715.0	30.02	762.5	74.3	23.5	43	NNW			4		5	W		0	0		
Porto Maurizio			30.11	764.9	72.3	22.4	72	S			2		8			0	0		
Genoa			30.07	763.6	71 2	21.8	57	SW	0.7	0.3			2			0	0		
Piacenza			30.02	762.4	75.7	24.3	44	N	3.8	1.7			2	W		0	0		
Parma			30.02	762.4	77.9	25.5	43	NNW			4		1			0	0		
Bologna			30.09	764.2	75.7	24.2	39	E			1		2	N		0	0		
Florence			30.04	763.0	82.4	28.0	38	NW			2		4	NE		0	0		
Leghorn			30.09	764.2	74.3	23.5	50	W	3.8	1.7			6			0	0		
Siena	28.83	732.2	30.02	762.4	78.3	25.7	31	W	0.7	0.3			5	W		0	0		
Urbino																			
Pesaro																			
Ancona			30.04	763.0	71.6	22.0	55	SE			4		2			0	0		
Grosseto			30.06	763.4	75.2	24.0	50	SSE			4		6	S		0	0		
Rome			30.05	763.3	77.9	25.5	31	W	3.8	1.7			2			0	0		
Naples, O. U			30.05	763.2	78.8	26.0	41	W			6		3	E		0	0		
Lecce			30.02	762.6	70.7	21.5	29	NNW	22.4	10.0			1			0	0		
Cosenza			30.03	762.8	77.2	25.1	67	NW	7.4	3.3			0			0	0		
Riposto, (Sicily)			30.08	764 1	72.0	22.2	52	S			2		1			0	0		
Palermo			30.12	765.1	70.2	21.2	48	ENE	4.9	2.2			6			0	0		
Caltanissetta	28.24	717.4	30.13	765.4	71.1	21.7	36	S			6		4	N		0	0		
Sub-Series.																			
Naples, S. R			30.09	764.2	775.2	24.0	89	SW	1.8	0.8						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.

Flushing			30.10	764.6	56.1	13.4		NNW			4								
Groningen			29.82	757.3	56.3	13.5		W			4								
Helder			29.95	760.7	53.4	11.9		W			5								
Utrecht			29.97	761.1	59.4	15.2	68	WNW			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.

Bergen			29.75	755.7	51.8	11.0	75	W	11.6	5.2			10			0.012	0.3		
Brönö			29.52	749.7	45.7	7.6	91	W	20	9			10			0.236	6.0	Light mist	
Christiania			29.65	753.1	65.7	18.7	27	SW	10.3	4.6			4			0	0		
Tromsö			29.43	748.5	44.2	6.8	49	SSW	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'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.
Angra, (Azores,)	.....	.....	30.35	770.8	63.3	17.4	74	ENE	6.5	2.92	.....	.....	6	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.97	761.3	70.7	21.5	44	SSW	4.4	1.95	.....	.....	7	ESE	.....	0.165	4.2	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.13	765.2	66.9	19.4	61	SW	6.0	2.69	.....	.....	4	.....	.....	0	0	.....	Capt. D. A. da Cunha.
London	.....	.....	30.04	762.9	64.9	18.3	63	SW	16.1	7.2	.....	.....	6	.....	.....	0.039	1.0	.....	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	.....	.....	29.93	760.3	74.1	23.4	45	SW	11	5	.....	.....	3	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.97	761.1	68.9	20.5	44	SSW	11	5	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.82	757.5	62.1	16.7	50	WNW	13	6	.....	.....	6	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.74	755.3	55.4	13.0	80	WSW	18	8	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.40	746.8	54.9	12.7	77	WSW	22	10	.....	.....	10	.....	.....	.....	.....	Raining.....	Ch. Forsten.
Kleif	.....	.....	30.04	762.9	69.3	20.7	39	E	4	2	.....	.....	3	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.05	763.3	74.8	23.8	41	ENE	18	8	.....	.....	5	.....	.....	.....	.....	.....	Kurdukof.
Kertch	.....	.....	29.86	758.4	71.2	21.8	69	NNE	13	6	.....	.....	5	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.03	762.8	69.1	20.6	44	S	4	2	.....	.....	3	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.96	761.0	75.4	24.1	36	ENE	13	6	.....	.....	3	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.53	750.1	50.2	10.1	89	SSE	18	8	.....	.....	10	.....	.....	.....	.....	Raining.....	Ogorodnikof.
Tiflis	28.52	724.4	29.82	757.5	99.3	32.4	23	SSE	9	4	.....	.....	4	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.01	762.2	82.4	28.0	24	ESE	18	8	.....	.....	5	.....	.....	Blank	Blank	.....	Sebastianof.
Kasan	.....	.....	29.95	760.6	67.8	19.9	49	WNW	4	2	.....	.....	5	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.94	735.2	29.92	760.0	58.6	14.8	75	ESE	4	2	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.04	763.0	86.2	30.1	18	NE	9	4	.....	.....	5	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.37	720.5	30.00	761.9	77.2	25.1	31	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.93	760.2	64.6	18.1	50	SW	13	6	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.79	756.7	53.1	11.7	67	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.99	761.8	67.5	19.7	34	Calm	0	0	.....	.....	3	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	42.1	5.6	77	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals give the wind velocity in meters per second; the amount of cloudiness without distinguishing between upper and lower clouds; 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, 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, 1,281.06 m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	30.01	762.2	61.5	16.4	89	SE	3.7	1.67	.....	0	10	.....	.....	0.185	4.7	Covered	Royal Observatory.
San Fernando	.....	.....	30.04	763.1	67.6	19.8	64	WSW	7.2	3.2	.....	0	3	.....	WSW	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.

Saparanda	.....	.....	29.41	746.9	50.4	10.2	76	NW	.....	.....	1	.....	10	.....	.....	0	0	.....	
Umea	.....	.....	29.45	748.0	60.4	15.8	41	NW	.....	.....	1	.....	6	.....	.....	0.079	2.0	.....	
Hernosand	.....	.....	29.53	750.0	57.4	14.1	54	WSW	.....	.....	1	.....	7	.....	.....	0.094	2.4	.....	
Stockholm	.....	.....	29.65	753.1	61.0	16.1	42	W	.....	.....	2	.....	4	.....	.....	0.008	0.2	.....	
Wisby	.....	.....	29.83	757.6	57.2	14.0	67	W	.....	.....	3	.....	3	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.63	752.5	65.5	18.6	29	WSW	14.3	6.4	.....	.....	4	.....	W	0.005	0.13	.....	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 meaured 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	727.3	30.00	761.9	77.4	25.2	32	WSW	.....	.....	3	.....	1	.....	.....	0	0	Clear.....	The Observatory.
Zurich	28.41	721.7	29.98	761.5	76.8	24.9	57	W	.....	.....	1	.....	2	.....	.....	0	0	Clear.....	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +1.6 mm; Thermometer, +6.5 cent.; Relative Humidity, −24 per cent.

Note.—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. The rain-fall is measured at Zurich at 7 a. m., on the following day.

TURKISH SERIES.

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

Constantinople	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fao, (Persian Gulf)	.....	.....	29.84	758.0	99.5	37.5	.....	NW	.....	.....	3	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.97	761.2	79.0	26.1	.....	NW	.....	.....	1	.....	5	.....	.....	.....	.....	.....	
Valona	.....	.....	29.94	760.4	72.1	22.3	.....	NW	.....	.....	3	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	29.86	758.5	66.2	19.0	.....	NE	.....	.....	4	.....	10	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.87	758.8	76.6	24.8	64	NW	.....	.....	1	.....	1 cs	.....	.....	0	0	Fair.....	Prof. C.V. A.Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong,) and Constantinople also velocity in meters per second; the weather in general terms 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. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	30.14	765.5	52.0	11.1	72	SW	10	4.5	.....	0	.....	.....	.....	0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.15	765.8	64	17.8	.....	NE	1	0.4	.....	2c	0	W	.....	0	0	Fair	W. R. Bigg.
*Chatham, N. B	.....	.....	30.25	768.3	52	11.1	48	SW	13	5.8	.....	8c	0	SW	.....	0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.27	768.8	50	10.0	47	S	5	2.2	.....	5c	0	.....	.....	0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.12	765.0	63.0	17.2	52	SE	.....	.....	2	3c	0	.....	.....	0	0	Bright	James Smith, M. A
Dalhousie, N. B	.....	.....	30.15	765.8	46.8	8.2	69	W	.....	.....	2	0	0	.....	.....	0	0	.....	H. A. Johnson.
Esquimault, B. C	.....	.....	29.94	760.5	49.3	9.6	89	SW	4	1.8	.....	1cs	0	.....	.....	0	0	Clear	W. H. Bevis.
Fredericton, N. B	.....	.....	30.28	769.1	45.4	7.4	65	Calm	0	0	.....	1cs	0	.....	.....	0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.45	748.0	51	10.6	98	NE	14	6.3	.....	2k	8n	NE	NE	0.43	10.9	Heavy rain	James Stewart.
Granton, Ontario	28.94	735.1	30.01	762.2	62	16.7	.....	SE	.....	.....	1	1k	0	W	.....	0	0	Fine	H. J. Strang, M. A.
*Halifax, N. S	.....	.....	30.29	769.4	48	8.9	78	S	9	4.0	.....	0	0	.....	.....	0	0	Clear	James Grant.
*Kingston, Ontario	.....	.....	30.17	766.3	54	12.2	74	S	12	5.4	.....	0	0	.....	.....	0.09	2.3	Clear	F. Allison, M. A.
*Montreal, Quebec	.....	.....	30.15	765.8	54	12.2	62	S	10	4.5	.....	Haze	Sm'e	.....	.....	0	0	Clear	S. Woods, M. A.
*Ottawa, Ontario	.....	.....	30.13	765.3	52	11.1	54	Calm	0	0	.....	2c	0	.....	.....	0	0	Clear	C. H. McLeod, C. E.
*Parry Sound, Ontario	.....	.....	30.05	763.3	57	13.9	46	E	9	4.0	.....	0	0	.....	.....	0	0	Clear	J. B. Haney.
*Port Dover, Ontario	.....	.....	30.09	764.3	52	11.1	73	NE	5	2.2	.....	0	0	.....	.....	0	0	Clear	Rev. R. Mosley.
Port Hastings, N. S	.....	.....	30.31	769.9	48.6	9.2	.....	Calm	0	0	.....	.....	.....	.....	.....	0	0	Clear	H. Morgan.
*Port Stanley, Ontario	.....	.....	30.04	763.0	59	15.0	76	E	11	4.9	.....	0	0	.....	.....	0	0	Fine	Peter Grant.
*Quebec, Quebec	.....	.....	30.17	766.3	55	12.8	62	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	M. Payne.
St. John, N. B	.....	.....	30.31	769.9	50	10.0	72	SW	7	3.1	.....	0	0	.....	.....	0	0	Clear	Capt. Ashe, R. N.
*Saugeen, Ontario	.....	.....	29.91	760.5	64	17.8	54	SE	8	3.6	.....	0	0	.....	.....	0	0	Clear	G. Murdoch, C. E.
Stayner, Ontario	.....	.....	30.02	762.5	57	13.9	60	SE	10	4.5	.....	0	0	.....	.....	0	0	Clear	K. Stewart.
Stratford, Ontario	.....	.....	30.03	762.7	55.5	13.1	84	SE	6	2.7	.....	0	0	.....	.....	0	0	Clear	R. J. Cole.
*Sydney, C. B	28.76	730.5	30.30	769.6	52	11.1	50	NW	6	2.7	.....	0	0	.....	.....	0	0	Fine	C. J. MacGregor, M. A.
*Toronto, Ontario	.....	.....	30.11	764.8	50	10.0	66	E	3	1.3	.....	0	0	.....	.....	0.23	5.8	Clear	T. C. Hill.
Woodstock, Ontario	.....	.....	30.03	762.7	54.7	12.6	93	SE	6	2.7	.....	0	0	.....	.....	0	0	Clear	Magnetic Observatory.
												0	0			0	0	Fine	J. Montgomery.

Note.—The originals for Brockville, Charlottetown, Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The altitude of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 300.3 m.

UNITED STATES SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.24	768.1	60	15.6	70	S	4	1.8	.....	0	Haze	.....	.....	0	0	Clear.	
Alpena, Mich	.....	.....	29.91	759.7	54	12.2	79	SE	8	3.6	.....	5ek	Haze	SW	.....	0	0	Fair.	
Atlantic City, N. J.	.....	.....	30.28	769.1	55	12.8	74	E	20	8.9	.....	5es	0	E	.....	0	0	Fair.	
Augusta, Ga.	.....	.....	30.06	763.5	75	23.9	74	E	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
Baltimore, Md.	.....	.....	30.31	769.9	57	13.9	75	NE	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy.	
Barnegat, N. J.	.....	.....	30.30	769.6	57	13.9	69	E	14	6.3	.....	2k	0	E	.....	0	0	Fair.	
Benton, Montana	26.78	680.2	29.58	751.3	33	0.6	100	N	30	13.4	.....	.....	10n	.....	N	3.14	79.8	Heavy rain.	
Bismarck, Dakota	27.57	700.3	29.10	739.1	62	16.7	78	SE	6	2.7	.....	.....	10ks	.....	NE	0.30	7.6	Cloudy.	
Boston, Mass	.....	.....	30.31	769.9	52	11.1	72	E	6	2.7	.....	Haze	Fog	.....	.....	0	0	Foggy	
Breckenridge, Minn	.....	.....	29.34	745.2	65	18.3	89	S	20	8.9	.....	.....	1on	.....	.....	0.63	0.8	Light rain.	
Buffalo, N. Y.	.....	.....	30.04	763.0	64	17.8	72	S	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Burlington, Vt.	.....	.....	30.20	767.1	55	12.8	68	S	12	5.4	.....	2c	0	.....	.....	0	0	Fair.	
Cairo, Ill.	.....	.....	29.85	758.2	70	21.1	90	S	11	4.9	.....	.....	10n	.....	S	0.12	3.0	Light rain.	
Cape Hatteras, N. C.	.....	.....	30.07	763.8	66	18.9	78	NE	28	12.5	.....	0	58,hz.	.....	NE	0	0	Fair.	
Cape Henry, Va	.....	.....	30.21	767.3	59	15.0	82	NE	20	8.9	.....	.....	10s	.....	NE	0	0	Cloudy.	
Cape Lookout, N. C.	.....	.....	30.12	765.0	69	20.6	79	NE	28	12.5	.....	.....	10ks	.....	NE	0	0	Cloudy.	
Cape May, N. J.	.....	.....	30.27	768.8	55	12.8	80	NE	18	8.0	.....	0	0	.....	.....	0	0	Clear.	
Charleston, S. C.	.....	.....	30.06	763.5	77	25.0	82	E	8	3.6	.....	0	2ks	.....	E	0	0	Fair.	
Cheyenne, Wyoming	23.52	597.4	29.46	748.3	41	5.0	42	NW	8	3.6	.....	2cs	0	.....	.....	0	0	Fair.	
Chicago, Ill	.....	.....	29.76	755.9	72	22.2	67	SE	8	3.6	.....	2c	Haze	.....	.....	0	0	Fair.	
Cincinnati, Ohio	.....	.....	29.90	759.4	72	22.2	67	SE	3	1.3	.....	.....	10ks	.....	SE	0	0	Threatening	
Cleveland, Ohio	.....	.....	29.98	761.5	61.5	16.4	74	SE	14	6.3	.....	2ks	0	.....	.....	0	0	Smoky.	
Colorado Springs, Col.	23.58	598.9	29.45	748.0	49	9.4	57	NE	12	5.4	.....	1k	1cs	.....	SE	0	0	Fair.	
Corsicana, Texas	.....	.....	29.61	752.1	69	20.6	90	SE	2	0.9	.....	5k	2s	NW	.....	0.07	1.8	Cloudy.	
Davenport, Iowa	.....	.....	29.67	753.6	73	22.8	67	S	12	5.4	.....	.....	10ks	.....	S	Inap.	Inap.	Cloudy.	
Denison, Texas	.....	.....	29.61	752.1	73	22.8	80	SE	16	7.2	.....	10c	0	S	.....	0.04	1.0	Cloudy.	
Denver, Col.	24.31	617.5	29.53	750.0	48	8.9	42	SE	4	1.8	.....	0	5s	.....	SW	0	0	Fair.	
Detroit, Mich	.....	.....	29.94	760.5	60	15.6	70	E	6	2.7	.....	0	Sm'e	.....	.....	0	0	Clear.	
Dodge City, Kan.	26.81	681.0	28.90	734.0	68	20.0	79	SE	24	10.7	.....	0	8s	.....	SE	0	0	Fair.	
Dubuque, Iowa	.....	.....	29.65	753.1	72	22.2	67	SE	8	3.6	.....	8k	0	SE	.....	0	0	Cloudy.	
Duluth, Minn	.....	.....	29.59	751.6	43	6.1	91	NE	4	1.8	.....	.....	Fog	.....	.....	0.27	6.9	Foggy	
Eastport, Me.	.....	.....	30.27	768.8	51	10.6	52	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear.	
Erie, Pa.	.....	.....	29.99	761.7	67	19.4	74	S	22	9.8	.....	0	Sm'e	.....	.....	0	0	Clear.	
Escanaba, Mich	.....	.....	29.78	756.4	58	14.4	75	SE	6	2.7	.....	5k	0	SE	.....	0	0	Fair.	
Fort Gibson, Indian Ter.	.....	.....	29.54	750.3	73	22.8	81	SE	13	5.8	.....	.....	10ks	.....	S	0	0	Cloudy.	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.33	719.6	29.36	745.7	73	22.8	76	S	16	7.2	.....	2es	0	S	.....	0	0	Clear.	
Fort Sully, Dakota	27.62	701.5	29.16	740.7	61	16.1	88	S	6	2.7	.....	.....	10s	.....	.....	0.75	19.1	Cloudy.	
Galveston, Tex.	.....	.....	29.74	755.4	77	25.0	90	S	12	5.4	.....	.....	10s	.....	S	2.80	71.1	Cloudy.	
Grand Haven, Mich.	.....	.....	29.83	757.7	68	20.0	69	SE	9	4.0	.....	4ek	Hz.,sm'	SW	.....	0	0	Fair.	
Indianapolis, Ind.	.....	.....	29.85	758.2	78	25.6	57	SE	8	3.6	.....	10cs,ck	0	.....	.....	0	0	Fair.	
Indianola, Texas	.....	.....	29.71	754.6	80	26.7	82	S	26	11.6	.....	2es	0	.....	.....	0	0	Fair.	
Jacksonville, Fla.	.....	.....	29.97	761.2	82	27.8	67	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Keokuk, Iowa	.....	.....	29.62	752.3	71	21.7	80	SE	11	4.9	.....	.....	10s	.....	SE	0	0	Cloudy.	
Key West, Fla.	.....	.....	29.93	760.2	80.3	26.8	86	SW	9	4.0	.....	1k	2ks	SW	.....	0.02	0.5	Fair.	
Kittyhawk, N. C.	.....	.....	30.18	766.6	61	16.1	82	E	24	10.7	.....	5k	0	E	.....	0	0	Fair.	
Knoxville, Tenn	.....	.....	30.02	762.5	67	19.4	94	NE	6	2.7	.....	2ek	0	S	.....	0.02	0.5	Fair.	
La Crosse, Wis.	.....	.....	29.59	751.6	71	21.7	75	S	10	4.5	.....	5k	2ks	S	S	0.46	11.7	Clearing	
Leavenworth, Kan	.....	.....	29.50	749.3	69	20.6	79	S	12	5.4	.....	.....	10s	.....	NW	6	0	Threatening	
Lexington, Ky.	28.91	734.3	29.96	761.0	73	22.8	71	S	12	5.4	.....	2c	0	SE	.....	0	0	Clear.	
Long Branch, N. J.	.....	.....	30.32	770.1	54	12.2	79	NE	10	4.5	.....	0	2ks	.....	.....	0	0	Clear.	
Louisville, Ky.	.....	.....	29.89	759.2	78	25.6	61	S	8	3.6	.....	0	5ks	.....	SW	0	0	Fair.	
Lynchburg, Va.	.....	.....	30.22	767.6	66	18.9	64	E	6	2.7	.....	5k	0	E	.....	0	0	Fair.	
Malone, N. Y.	.....	.....	30.10	764.5	63	17.2	46	SW	10	4.5	.....	5c	0	W	.....	0	0	Fair.	
Manhattan, Kan.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Marquette, Mich.	.....	.....	29.70	754.4	66	18.9	68	S	16	7.2	.....	5c	0	SW	.....	0	0	Fair.	
Memphis, Tenn.	.....	.....	29.82	757.4	70	21.1	90	SE	5	2.2	.....	.....	10ks	SE	.....	2.67	67.8	Threatening	
Milwaukee, Wis.	.....	.....	29.81	757.2	54	12.2	86	SE	9	4.0	.....	5ek	Fog	S	.....	0	0	Fair.	
Mobile, Ala.	.....	.....	29.89	759.2	78	25.6	77	SE	7	3.1	.....	0	0	.....	.....	0.09	2.3	Clear.	
Montgomery, Ala.	.....	.....	29.93	760.2	74.5	23.6	78	SE	6	2.7	.....	10es	0	SW	.....	0.10	2.5	Cloudy.	
Morgantown, W. Va.	.....	.....	30.02	762.5	75	23.9	59	SE	3	1.3	.....	0	0	.....	.....	0	0	Clear.	
Mt. Washington, N. H.	24.01	609.8	30.37	771.4	40	4.4	18	NW	20	8.9	.....	0	0	.....	.....	0	0	Clear.	
Nashville, Tenn.	.....	.....	29.89	759.2	74	23.3	76	SE	8	3.6	.....	.....	10n	.....	S	0.03	0.8	Light rain.	
New Haven, Conn	.....	.....	30.31	769.9	57	13.9	68	NE	4	1.8	.....	Haze	0	.....	.....	0	0	Clear.	
New London, Conn.	.....	.....	30.33	770.4	57	13.9	62	N	3	1.3	.....	0	0	.....	.....	0	0	Clear.	
New Orleans, La.	.....	.....	29.85	758.2	78	25.6	80	S	8	3.6	.....	5k	0	S	.....	Inap.	Inap.	Fair.	
Newport, R. I.	.....	.....	30.34	770.6	53	11.7	66	NE	3	1.3	.....	0	0	.....	.....	0	0	Clear.	
New York, N. Y.	.....	.....	30.31	769.9	56	13.3	68	NE	8	3.6	.....	Haze	Haze	.....	.....	0	0	Hazy.	
Norfolk, Va.	.....	.....	30.22	767.6	60	15.6	76	E	13	5.8	.....	2k	5ks	E	E	0	0	Fair.	
North Platte, Neb.	26.47	671.1	28.80	731.5	58	14.4	58	NW	12	5.4	.....	.....	10s	.....	NW	0	0	Cloudy.	
Omaha, Neb.	28.39	721.1	29.38	746.2	70	21.1	79	S	18	8.0	.....	.....	10s	.....	S	0	0	Cloudy.	
Oswego, N. Y.	.....	.....	30.04	763.0	59	15.0	68	SE	10	4.5	.....	Haze	Haze	.....	.....	0	0	Fair.	
Pembina, Dakota	.....	.....	29.80	744.2	57	13.9	100	NE	10	4.5	.....	.....	10n	.....	.....	0.93	23.6	Light rain.	
Philadelphia, Penn.	.....	.....	30.29	769.4	56	13.3	68	E	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
Pike's Peak, Colorado	17.45	443.2	29.66	753.4	25	— 3.9	63	SW	26	11.6	.....	5ek	0	SW	.....	0	0	Fair.	
Pittsburgh, Penn.	.....	.....	30.03	762.7	69	20.6	69	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Port Huron, Mich.	.....	.....	29.97	761.2	60	15.6	65	S	8	3.6	.....	2c	0	SW	.....	0	0	Fair.	
Portland, Me.	.....	.....	30.30	769.6	56	13.3	54	SW	7	3.1	.....	1c	Haze	.....	.....	0	0	Fair.	
Portland, Oregon	.....	.....	30.11	764.8	48	8.9	85	S	6	2.7	.....	.....	10s	.....	W	0.11	2.8	Cloudy.	
Punta Rassa, Fla.	.....	.....	29.94	760.5	77.0	25.0	86	E	8	3.6	.....	.....	8s	.....	NE	0.74	18.8	Cloudy.	
Rochester, N. Y.	.....	.....	30.07	763.8	64	17.8	72	S	8	3.6	.....	Haze	Haze	.....	.....	0	0	Hazy.	
Salt Lake City, Utah	25.35	643.9	29.68	753.9	34	1.1	101	Calm	0	0	.....	.....	10n	.....	.....	0.10	2.5	Heavy snow.	
Sandy Hook, N. J.	.....	.....	30.29	769.4	56	13.3	68	E	13	5.8	.....	0	Haze	.....	.....	0	0	Clear.	
San Diego, Cal.	.....	.....	29.68	753.9	59	15.0	81	S	16	7.2	.....	.....	10s	.....	S	0	0	Threatening	
San Francisco, Cal.	.....	.....	29.83	757.7	50	10.0	78	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Santa Fé, N. M.	22.88	581.1	29.42	747.3	52	11.1	41	SE	6	2.7	.....	2c	0	SE	.....	0	0	Fair.	
Savannah, Ga.	.....	.....	30.05	763.3	78	25.6	78	Calm	0	0	.....	0	8ks	.....	E	0	0	Cloudy.	
Shreveport, La.	.....	.....	29.76	755.9	72.	22.5	90	SE	7	3.1	.....	Haze	0	.....	.....	0.06	1.5	Fair.	
Smithville, N. C.	.....	.....	30.11	764.8	72	22.2	81	NE	12	5.4	.....	2k	0	NE	.....	0	0	Clearing	
Springfield, Mass.	.....	.....	30.31	769.9	56	13.3	68	S	4	1.8	.....	2k	Haze	.....	.....	0	0	Fair.	
St. Louis, Mo.	.....	.....	29.76	755.9	71	21.7	84	S	12	5.4	.....	.....	10n	.....	.....	Inap.	Inap.	Light rain.	
St. Marks, Fla	.....	.....	29.95	760.7	77	25.	82	SE	10	4.5	.....	2es	2ks	NW	SE	0.05	1.3	Fair.	
St. Paul, Minn.	.....	.....	29.45	748.0	73	22.8	67	SE	19	8.5	.....	0	0	.....	.....	0.01	0.3	Clear.	
St. Paul's Island, Alaska.	.....	.....	29.54	750.3	33	0.4	89	N	8	3.6	.....	.....	10n	.....	.....	0.14	3.6	Heavy snow.	
Thatcher's Island, Mass.	.....	.....	30.32	770.1	52	11.1	79	S	7	3.1	.....	0	0	.....	.....	0	0	Clear.	
Toledo, Ohio	.....	.....	29.91	759.7	66	18.9	90	NE	8	3.6	.....	2ek	Haze	SW	.....	0	0	Fair.	
Tucson, Arizona	27.15	689.6	29.74	755.4	73	22.8	.....	E	.....	.....	.....	5c	0	W	.....	0	0	Fair.	
Tybee Island, Ga.	.....	.....	30.02	762.5	78	25.6	82	E	10	4.5	.....	5k	0	SE	.....	0	0	Fair.	
Vicksburg, Miss.	.....	.....	29.84	757.9	71	21.7	98	SE	8	3.6	.....	.....	10ks	.....	SE	0.70	17.8	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
Virginia City, M. T.	23.83	605.3	29.31	744.5	32	0.0	95	W	10	4.5	.....	.....	10n	.....	.....	0.59	15.0	Heavy snow	
Washington, D. C.	.....	.....	30.28	769.1	57	13.9	68	E	8	3.6	.....	Haze	8s	.....	NW	0	0	Clearing	
Wilmington, N. C	.....	.....	30.14	765 5	68	20.0	84	NE	8	3.6	.....	.....	10s	.....	NE	0	0	Cloudy	
Wood's Holl, Mass.	.....	.....	30.35	770.9	56	13.3	68	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Wytheville, Va.	27.82	706.6	29.92	760.0	64	17.8	83	SE	4	1.8	.....	.....	10s	.....	SE	0	0	Threatening	
Yankton, Dakota	28.15	715.0	29.53	745.0	68	20.0	79	SW	7	3.1	.....	.....	10s	.....	SW	0	0	Cloudy	
Yuma, Arizona	.....	.....	29.62	752.3	73	22.8	.....	S	.....	.....	.....	0	Haze	.....	.....	0	0	Clear	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.04	763 0	83	28.3	74	E	5	2.2	.....	2k	5ks	E	.....	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.97	761.2	82	27.8	79	E	.....	.....	.....	2k	5ks	.....	.....	0.37	9.4	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.12	765.0	82	27.8	87	SE	3	1.3	.....	5c	8n	SE	.....	0.03	0.8	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.75	755.6	83	28.3	79	SE	8.4	3.8	.....	.....	8n	.....	S	0.03	0.8	Cloudy	Robert Mason.
Havana, Cuba, W. I.	.....	.....	29.91	759.7	80	26.7	83	S	4	1.8	.....	2c	8n	S	S	0.83	21.1	Cloudy	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	29.70	754 4	73.0	22.8	86	SW	16.0	7.2	.....	8c	5fk	SW	.....	4.39	111.5	Clearing	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	71	21.7	90	SE	3.0	1.3	.....	5c	5k	SE	.....	0.12	3.0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.00	762.0	81	27.2	87	E	.....	.....	2	7ks	7ks	E	.....	0.350	8.89	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.11	764.7	.....	.....	86.0	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.108	2.75	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.24	641.1	.....	.....	65.0	18.3	90	Calm	0	0	.....	.....	.....	.....	.....	0.01	0.3	Cloudy	Thomas Herran.
St. John's, Newfoundland.	.....	.....	30.14	765.5	43.0	6.1	75	W	.....	.....	.....	0	0	.....	.....	2.00	50.8	Clear	John Delaney.
York Factory, B. A.	.....	.....	30.00	762.0	26.5	— 3.1	94	NE	13	5.8	.....	0	6s	.....	W	0	0	.....	J. Fortescue.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Makawao, Maui, H. I.	27.93	709.4	30.10	764.5	60	15.6	82	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	F. L. Clarke.
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Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	Weather.	Observer
Steamer Hibernian, N. 39° 8′, W. 69° 44′.	SW by W½ W	11.6	Smooth	.....	Cloudy	Lieut F. Archer, R N.R.
Steamer Nova Scotian	At Halifax.	.....	.....	.....	Fair	Capt. Ritchie.
Steamer Leipzig, N. 40° 30′, W. 60° 12′.	N 6¼ E	.....	Long swells	.....	*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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) 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.

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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 co-operating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level.

The "weather" is generally published as given.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JUNE 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	.....	.....	29.93	760.1	68.7	20.4	76	NNE	.....	.....	1	.....	10	.....	.....	0	0	Hidden	Charnot.
Algiers	.....	.....	29.93	760.3	71.6	22.0	75	N	.....	.....	1	.....	9	.....	.....	Inap.	Inap.	Hidden	Peter.
La Calle	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Kunts.
Tunis	.....	.....	29.93	760.2	84.2	29.0	38	E	.....	.....	3	.....	5	.....	.....	0	0	Fair	Jacques.
Sfax	.....	.....	30.12	765.1	77.0	25.0	68	E	.....	.....	3	.....	1	.....	.....	0	0	Clear	Chauvey.
Saida	.....	.....	29.96	760.9	68.0	20.0	55	E	.....	.....	2	.....	3	.....	.....	0.063	1.6	Fair	Millot.
Tebessa	.....	.....	29.96	760.9	80.8	27.1	.....	N	.....	.....	1	.....	8	.....	.....	0	0	Cloudy	Colin.
Geriville	.....	.....	29.93	760.2	78.1	25.6	26	SSE	.....	.....	2	.....	3	.....	.....	0	0	Fair	Buard.
Laghouat	.....	.....	29.96	760.9	78.8	26.0	55	S	.....	.....	5	.....	3	.....	.....	0	0	Fair	Guyot.
Biskra	.....	.....	29.89	759.2	90.1	32.3	.....	S	.....	.....	2	.....	4	.....	.....	0	0	Fair	Laromer.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

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

Agram	.....	.....	29.85	758.3	79.5	26.4	42	NE	.....	.....	2	.....	4	.....	.....	0.110	2.8	.....	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	29.95	760.8	61.2	16.2	81	NE	.....	.....	1	.....	9	.....	.....	0.053	1.35	.....	Dr. Wierzbiski.
Eperies	.....	.....	29.83	757.6	72.9	22.7	50	S	.....	.....	3	.....	3	.....	N	0	0	.....	Julius Mikolik.
Gratz	28.79	731.3	29.98	761.5	61.3	16.3	75	NW	.....	.....	2	.....	10	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	28.45	722.7	29.82	757.5	69.1	20.6	42	E	.....	.....	3	.....	8	.....	.....	0	0	.....	Prof. Reissenberger.
Kremsmünster	28.65	727.7	29.96	761.0	64.0	17.2	70	WNW	.....	.....	3	.....	8	.....	.....	0.409	10.4	.....	Prof. C. Wagner.
Lemberg	.....	.....	29.82	757.5	71.8	22.1	40	S	.....	.....	2	.....	0	.....	.....	0	0	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Pola	.....	.....	29.85	758.3	73.4	23.0	53	SW	.....	.....	1	.....	2Ks	.....	.....	0	0	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	29.84	758.1	74.1	23.4	40	S	.....	.....	2	.....	6	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	29.87	758.6	77.2	25.1	75	Calm	.....	.....	0	.....	3	.....	.....	0	0	.....	Prof. V. Farolfi.
Vienna	.....	.....	29.98	761.6	59.4	15.2	64	NNW	.....	.....	2	.....	9	.....	.....	0.028	0.7	.....	I. R. Central Met. Obs'y.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 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.

Brussels	.....	.....	30.12	765.1	59.9	15.5	50	NNE	.....	.....	1	1	7	.....	.....	0	0	.....	Royal Observatory.
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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	67.0	19.4	.....	SSE	16	7.2	.....	.....	2	.....	.....	0	0	Blue sky	William Boswell.
Ardrossan	.....	.....	30.18	766.6	57	13.9	.....	SSW	.....	.....	4	.....	4	.....	.....	.....	.....	*D. clouds	William McNeil.
Armagh, Observatory	.....	.....	30.20	767.1	62.0	16.7	.....	SW	8	3.6	.....	.....	4	.....	.....	.....	.....	D. clouds	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	30.20	767.1	66.8	19.3	.....	SSW	.....	.....	1	.....	1	.....	.....	.....	.....	*D. clouds	J. Dreyer.
Bradford	.....	.....	30.21	767.3	64.8	18.2	.....	NW	.....	.....	1	.....	3	.....	.....	.....	.....	D. clouds	J. McLandsborough.
Bridgetown, (Barbadoes)	.....	.....	30.00	762.0	84	28.9	.....	NE	.....	.....	3	.....	6	.....	.....	0	0	*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory	.....	.....	30.22	767.6	70.0	21.1	.....	SW	.....	.....	1	.....	1	.....	.....	.....	.....	*D. clouds	H. Todd. [H. C.
Cardington	.....	.....	30.24	768.1	68.0	20.0	.....	S	.....	.....	1	.....	3	.....	.....	.....	.....	*D. clouds	John McLaren.
Carlisle	.....	.....	30.20	767.1	63.5	17.5	.....	W	.....	.....	5	.....	1	.....	.....	0	0	Blue sky	T. Bell, for J. Cartmell.
Chatham, School M. E	.....	.....	30.24	768.1	62.7	17.1	.....	NE	.....	.....	1	.....	5	.....	.....	.....	.....	*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.75	730.2	30.22	767.6	64.2	17.9	.....	E	.....	.....	5	.....	5	.....	.....	.....	.....	Blue sky	R. E. Power.
Donaghadee	.....	.....	30.19	766.8	62	16.7	.....	SW	.....	.....	2	.....	5	.....	.....	.....	.....	* clouds	J. Mac Gowan.
Dover	.....	.....	30.26	768.6	59	13.3	.....	NE	.....	.....	2	.....	2	.....	.....	.....	.....	¼ clo ded	J. Costel o.
Eccles (near Manchester)	.....	.....	30.22	767.6	65.0	18.3	.....	NW	3.8	1.7	.....	.....	5	.....	.....	.....	.....	D. clouds	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.25	768.3	59.5	15.3	.....	SSE	10	4.5	.....	.....	0	.....	.....	.....	.....	Hazy	The Staff.
Fort Napier, (Natal)	27.73	704.3	29.97	761.2	76.1	24.5	.....	E	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.96	761.0	86.0	30.0	.....	N	.....	.....	3	.....	5	.....	.....	.....	.....	*D. clouds	
Galway, Queen's College	.....	.....	30.17	766.3	57	13.9	.....	W	.....	.....	1	.....	8	.....	.....	.....	.....	Cloudy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	29.93	760.2	71.8	22.1	.....	W	.....	.....	4	.....	4	.....	.....	.....	.....	D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	30.14	765.9	61.6	16.4	.....	SW	.....	.....	3	.....	3	.....	.....	.....	.....	Fine	Lewis Stuart.
Great Yarmouth	.....	.....	30.25	768.3	56	13.3	.....	SE	.....	.....	3	.....	0	.....	.....	.....	.....	Blue sky	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	30.25	768.3	70.1	21.2	.....	SW	.....	.....	1	.....	8	.....	.....	.....	.....	*D. clouds	The Staff, for G. B. Airy.
Guernsey	.....	.....	30.23	767.8	60.5	15.8	.....	ENE	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	30.22	767.6	63.6	17.6	.....	WNW	.....	.....	2	.....	2	.....	.....	.....	.....	D. clouds	L. J. Crossley.
Helston	.....	.....	30.20	767.1	65	18.3	.....	S	.....	.....	4	.....	10	.....	.....	0	0	Fine	M. P. Moyle.
Holyhead	.....	.....	30.24	768.1	61	16.1	.....	SSW	.....	.....	3	.....	0	.....	.....	.....	.....	Blue sky	John Tilston.
Kew, Observatory	.....	.....	30.24	768.1	65.2	18.4	.....	SSW	3	1.3	.....	.....	5	.....	.....	.....	.....	Blue sky	The Staff.
Kingstown	.....	.....	30.23	767.8	61	16.1	.....	SE	.....	.....	3	.....	1	.....	.....	.....	.....	Blue sky	George Mitchell.
Leicester Museum	.....	.....	30.23	767.8	64.2	17.9	.....	W	.....	.....	1	.....	1	.....	.....	.....	.....	Hazy	Wm. J. Harrison, F.G.S.
Malta, Mediterranean	.....	.....	29.92	760.0	74.2	23.4	.....	SE	.....	.....	1	.....	4k	.....	.....	.....	.....	D. clouds	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	30.06	763.5	58	14.4	.....	W	.....	.....	2	.....	10	.....	.....	.....	.....	Overcast	W. D. Lenny.
Nassau, (Bahamas)	.....	.....	30.06	763.5	79.4	26.3	.....	NE	.....	.....	6	.....	8	.....	.....	.....	.....	*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	30.23	767.8	70.2	21.2	.....	SW	.....	.....	3	.....	1c	.....	NW	0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.21	767.3	63.0	17.2	.....	WNW	.....	.....	0–1	.....	10	.....	.....	.....	.....	Hazy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	30.20	767.1	66	18.9	.....	Calm	.....	.....	0	.....	5	.....	.....	.....	.....	*D. clouds	J. Lucas.
Plymouth	.....	.....	30.24	768.1	63.3	17.4	.....	S	.....	.....	3	.....	0	.....	.....	.....	.....	Blue sky	John Merrifield.
Roche's Point	.....	.....	30.24	768.1	61	16.1	.....	SSW	.....	.....	3	.....	2	.....	.....	.....	.....	Fine	W. Kennedy.
Saint Ann's Head	.....	.....	30.27	768.8	60	15.6	.....	SE	.....	.....	1	.....	2	.....	.....	.....	.....	Hazy	John C. Walker.
Saint Helier, Jersey	.....	.....	30.21	767.3	66.4	19.1	.....	E	.....	.....	4	.....	0	.....	.....	.....	.....	Clear	A. P. Amy.
Sandwick Manse, (Orkneys)	.....	.....	30.00	762.0	53.5	11.9	.....	SW	16	7.2	.....	.....	10	.....	.....	.....	.....	Drizzling	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	30.21	767.3	56.7	13.7	.....	E	.....	.....	1	.....	1	.....	.....	.....	.....	Blue sky	F. Shaw.
Scutari Cemetery, Turkey	.....	.....	29.75	755.6	70.0	21.1	.....	NE	.....	.....	2	.....	6	.....	.....	.....	.....	*D. clouds	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.17	766.3	64.4	18.0	.....	NE	.....	.....	1	.....	4	.....	.....	0	0	Blue sky	W. F. Cooper.
Silloth Rectory	.....	.....	30.21	767.3	64.6	18 1	57	W	.....	.....	2	.....	0	.....	.....	0	0	Blue sky	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	30.22	767.6	61.1	16.2	.....	W	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	Rev. S. J. Perry.
Stornoway, Lewis, Hebr.	.....	.....	29.99	761.7	56	13.3	.....	SW	.....	.....	6	.....	10	.....	.....	.....	.....	Overcast	John Smith.
Stratfield Turgiss	.....	.....	30.19	766.8	67.1	19.5	.....	SW	.....	.....	1	.....	2	.....	.....	.....	.....	*D. clouds	Rev. Charles H. Griffith.
Thurso	.....	.....	30.00	762.0	59	15.0	.....	WSW	.....	.....	3	.....	9	.....	.....	.....	.....	Raining	John Trotter.
Truro, Royal Institution	.....	.....	30.23	767.8	68	20.0	.....	S	.....	.....	4	.....	0	.....	.....	.....	.....	Blue sky	W. Newcombe.
Valencia, Observatory	.....	.....	30.24	768.1	58.7	14.8	.....	SSW	15	6 7	.....	.....	7	.....	.....	.....	.....	*D. clouds	The Staff.
Supplementary.																			
Calf of Man, Isle of Man	.....	.....	.....	.....	49	9.4	.....	NW	.....	.....	4	.....	0	.....	.....	.....	.....	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.30	769.6	63.7	17.6	65	SE	15	6.7	.....	1	2	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	29.66	753.4	56.0	13.3	93	NW	.....	.....	5	.....	7k	.....	.....	.....	.....	Light rain	Francis Abbott, F.R.A.S.
Leith, Restaurig Para	.....	.....	30.14	765.5	65.1	18.4	.....	W	.....	.....	5	.....	.....	.....	.....	0	0	Fine	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.12	765.0	.....	.....	.....	E	19.1	8.5	.....	.....	.....	.....	.....	0	0	Rain-squalls	C. Meldrum.
Melbourne, Observatory	.....	.....	30.04	763.0	49.2	9.6	85	WNW	10	4.5	.....	.....	9	.....	.....	0.05	1.8	.....	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	30.05	763.3	52	11.1	.....	SSW	.....	.....	6	.....	10	.....	.....	0	0	.....	J. Youngclause.
North Unst, Shetland Is's	.....	.....	29.90	759.4	48	8.9	.....	SW	.....	.....	7	.....	10	.....	.....	Blank	Blank	.....	Robert Burnet.
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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 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	61.0	16.1	56	N	.....	.....	2	.....	7	.....	.....	.....	.....	.....	.....
Fanöe	.....	.....	30.11	764.9	53.2	11.8	72	NW	.....	.....	6	.....	3	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	29.06	738.1	37.0	2.8	84	SSW	.....	.....	4	.....	10	.....	.....	.....	.....	.....	.....
Stykkisholm, Iceland	.....	.....	29.16	740.7	41.5	5.3	91	W	.....	.....	4	.....	5	.....	.....	.....	.....	.....	.....
Thorshavn, Faröe	.....	.....	29.62	752.3	49.6	9.8	96	SW	.....	.....	6	.....	10	.....	.....	.....	.....	Raining	.....
Vestervig	.....	.....	30.08	763.9	55.0	12.8	80	NW	.....	.....	4	.....	0	.....	.....	.....	.....	.....	.....
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Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the 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	.....	.....	30.12	765.2	64.4	18	65	NE	.....	.....	1	.....	2s	.....	NE	0	0	Slightly cl'dy	Normal School.
Amiens	.....	.....	30.23	767.8	68.7	20.4	72	W	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	29.93	760.1	78.3	25.7	39	N	.....	.....	2	.....	.....	.....	.....	0	0	Lightly cov.	Normal School.
Bar-sur-Seine	.....	.....	30.12	765.1	62.8	17.1	38	NE	.....	.....	3	5c	.....	ENE	.....	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.07	763.8	66.2	19.0	31	E	17.9	8.0	.....	.....	5	.....	NE	0	0	Cloudy	Beaumette Observatory.
Beauvais	.....	.....	30.23	767.7	60.3	15.7	42	NE	.....	.....	3	.....	5	.....	NE	0	0	Cloudy	Normal School.
Besançon	.....	.....	30.07	763.8	67.3	19.6	51	E	.....	.....	4	...	0	.....	.....	0	0	Clear	Normal School.
Bourg en Bresse	.....	.....	29.98	761.6	67.5	19.7	50	N	.....	.....	2	2c	.....	S	.....	.....	.....	Slightly cl'dy	Normal School.
Bourges	.....	.....	30.07	763.8	63.0	17.2	49	NNE	.....	.....	4	.....	2	.....	SSW	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	30.10	764.6	67.5	19.7	39	ENE	.....	.....	3	1c	.....	.....	.....	Inap.	Inap.	.....	Naval Observatory.
Carcassonne	.....	.....	29.96	760.9	66.2	19	59	W	.....	.....	1	.....	2	.....	E	0	0	Slightly cl'dy	Normal School
Caen	.....	.....	30.66?	778.7?	60.8	16	64	NNE	.....	.....	4	.....	2	.....	ESE	0	0	Slightly cl'dy	Normal School.
Chartres	.....	.....	30.14	765.6	63.3	17.4	.....	N	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Clermont	.....	.....	29.99	761.7	69.4	20.8	61	N	.....	.....	2	.....	5	.....	.....	0	0	Cloudy	Puy de Dome Obs'y.
Commercy	.....	.....	30.21	767.3	57.6	14.2	47	ENE	.....	.....	2	.....	2ck	.....	NE	0	0	Slightly cl'd	Normal School.
Commune de Greasque*	.....	.....	29.97	761.2	73.6	23.1	41	SW	.....	.....	2	.....	8	.....	SW	0	0	.....	M. Kina.
Grenoble	.....	.....	29.91	759.8	71.8	22.1	54	NW	.....	.....	6	.....	0	.....	.....	0	0	Clear	Normal School.
Le Mans	.....	.....	30.01	762.2	70.9	21.6	18	NE	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Lons-Le-Saulnier	.....	.....	30.14	765.5	62.6	17	55	E	.....	.....	4	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Mâcon	.....	.....	30.02	762.6	65.3	18.5	49	NE	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Mirecourt	.....	.....	30.01	762.2	63.7	17.6	70	N	.....	.....	4	.....	5	.....	W	0	0	Cloudy	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Nismes	.....	.....	30.11	764.8	58.3	14.6	37	NNE	.....	.....	6	.....	2	.....	SW	0	0	Slightly cl'dy	Normal School.
Orleans	.....	.....	29.87	758.7	81.7	27.6	33	S	.....	.....	4	.....	2	.....	N	0	0	Slightly cl'dy	Normal School.
Paris, Observatory	.....	.....	30.11	764.7	62.2	16.8	38	NE	.....	.....	4	.....	2	.....	NE	0	0	Slightly cl'dy	National Observatory.
Parthenay	.....	.....	30.19	766.9	60.1	15.6	41	NE	.....	.....	3	.....	3	.....	N	0.012	0.3	Solar halo	Normal School.
Privas	.....	.....	30.10	764.4	77.7	25.4	80	NE	.....	.....	2	.....	5	.....	NE	.....	.....	Cloudy	Normal School.
La Roche-sur-Yon	.....	.....	29.89	759.3	74.8	23.8	.....	NE	.....	.....	2	.....	0	.....	.....	.....	.....	Clear	Normal School.
Rochefort, Observatory	.....	.....	30.05	763.2	72.3	22.4	41	NE	.....	.....	4	.....	0	.....	.....	0	0	Blue sky	Naval Observatory.
Rouen	.....	.....	30.19	766.9	67.8	19.9	39	N	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Saint Lo	.....	.....	30.12	765.1	62.6	17	52	NE	.....	.....	1	.....	1	.....	N	0	0	.....	Normal School.
Tarbes	28.98	736.0	30.04	763.1	62.6	17	.....	NW	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School
Villefranche	.....	.....	29.97	761.3	68.9	20.5	68	NE	.....	.....	6	.....	0	.....	.....	0	0	Clear	Normal School.
Sub-Series																			
Fort de France, Martinique	.....	.....	29.89	759.2	75.6	24.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	Blank	Blank	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.94	760.4	71.6	22.0	64	WNW	.....	.....	1	.....	7	.....	.....	0	0	Cloudy	Marseilles Observatory.
Mont-Louis	.....	.....	30.16	766.1	57.9	14.4	57	ENE	11.2	5.00	.....	.....	8	.....	NE	0	0	.....	—. Faiguère.
Montsouris, Paris	.....	.....	30.18	766.6	60.8	16.0	42	N	.....	.....	2	.....	2	.....	N	0	0	.....	Montsouris Observ'tory.
Perpignan	.....	.....	29.91	759.7	74.1	23.4	58	E	7.4	3.33	.....	.....	7	.....	NE	0	0	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.19	766.8	62.4	16.9	43	NNE	.....	.....	3	.....	0	.....	.....	0	0	Clear	E. Renou.
Toulouse	.....	.....	30.04	763.0	65.5	18.6	75	NW	.....	.....	2	.....	9	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.10	764.6	66.7	19.3	30	ENE	.....	.....	4	.....	2	.....	E	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.19	766.7	61.5	16.4	41	E	.....	.....	6	.....	2	.....	.....	0	0	Clear	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai	.....	.....	29.85	758.2	71.4	21.9	91	SE	14.8	6.6	.....	.....	10kn	.....	.....	{0.004 0.008	{0.1 0.2	.....	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 5,294.8 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.

Baaberg	.....	.....	30.07	763.7	57.9	14.4	56	NW	.....	.....	4	.....	8	NW	.....	0.079	2.0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.05	763.2	58.6	13.8	75	W	.....	.....	4	.....	10	.....	.....	0.181	4.6	.....	Prof. Arndt.
Breslau	.....	.....	30.07	763.7	58.3	14.6	58	NW	.....	.....	6	.....	8	.....	.....	0	0	.....	Dr. P. Naugebauer.
Carlsruhe	.....	.....	30.12	765.0	59.7	15.4	45	N	.....	.....	3	.....	2	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.15	765.8	61.5	16.4	51	NNW	.....	.....	4	.....	8	NW	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	30.25	768.3	52.7	11.5	58	N	.....	.....	6	.....	9	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.21	767.4	60.8	16.0	41	NNE	.....	.....	1	.....	5	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	30.11	764.9	57.2	14.0	67	N	.....	.....	4	.....	7	.....	.....	Black	Blank	.....	M. Wilhelm.
Hamburg	.....	.....	30.11	764.8	54.9	12.7	65	WNW	.....	.....	5	.....	5k	NNW	.....	0.280	7.1	Fair	Captain F. Hegemann.
Kiel	.....	.....	30.07	763.7	59.0	15.0	60	NW	.....	.....	4	.....	6	.....	.....	0.287	7.3	.....	Prof. G. Karsten
Königsberg, (Prussia.)	.....	.....	29.91	759.7	68.0	20.0	68	W	.....	.....	2	.....	5	.....	.....	0.484	12.3	.....	Prof. E. Luther
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	30.10	764.6	57.9	14.4	56	WNW	.....	.....	2	.....	10	WNW	.....	0.138	3.5	.....	Prof. Brühns.
Memel	.....	.....	29.93	760.1	65.7	18.7	72	NW	.....	.....	1	.....	78	.....	.....	0.201	5.1	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.22	767.5	58.1	14.5	53	.....	.....	.....	2	.....	3	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.92	760.0	66.6	19.2	62	WSW	.....	.....	2	.....	6	.....	.....	0.488	12.4	.....	A. Lothes.
Posen	.....	.....	30.04	763.0	61.3	16.3	64	W	.....	.....	5	.....	10	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.13	765.4	59.5	15.3	40	NE	.....	.....	2	.....	0	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	30.13	765.3	58.5	14.7	42	N	.....	.....	2	.....	5	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	29.95	760.7	61.5	16.4	61	W	.....	.....	3	.....	9	.....	.....	0.067	1.7	.....	Dr. Hasenbalg
Treves, (Trier)	.....	.....	30.12	765.1	61.7	16.5	41	E	.....	.....	5	.....	2	.....	.....	0	0	.....	Prof. Fiesch.
Wustrow, Naval School	.....	.....	29.90	759.5	54.7	12.6	83	NW	.....	.....	4	.....	10	.....	.....	0.842	21.4	.....	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			29.86	758.5	69.8	21.0		S										Half clear	

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

ITALIAN SERIES.

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

Udine			29.86	758.5	64.6	18.1	72	NE	1.8	0.8		10				0.075	1.9		
Padua			29.82	757.3	77.0	25.0	50	ESE	3.8	1.7		9				0	0		
Vicenza			29.82	757.5	72.9	22.7	43	N	0.7	0.3		9		S		0	0		
Verona			29.81	757.2	76.1	24.6	53	E			1	0				0	0		
Bergamo	28.50	723.8	29.76	755.8	78.1	25.6	38	W			1	2				0	0		
Domodossola	28.79	731.2	29.78	756.4	79.5	26.4	49	SSW			2	7				0	0		
Milan			29.77	756.2	81.3	27.4	47	WSW			2	4		WSW		0.087	2.2		
Pavia			29.82	757.3	78.8	26.0	41	NW			2	1				0	0		
Moncalieri			29.83	757.6	78.1	25.6	43	SSE	5.6	2.5		3		NW		0	0		
Mondovi	27.97	710.5	29.82	757.4	77.0	25.0	37	ESE			4	4		WSW		0	0		
Porto Maurizio			29.94	760.5	72.3	22.4	77	E			2	8				0	0		
Genoa			29.91	759.6	70.9	21.6	60	S	3.1	1.4		2				0	0		
Piacenza			29.82	757.4	80.1	26.7	36	SW	1.8	0.8		2				0	0		
Parma			29.82	757.3	81.0	27.2	48	NE			4	1				0	0		
Bologna			29.89	759.2	79.9	26.6	37	WNW			6	3		SE		0	0		
Florence			29.90	759.5	78.8	26.0	26	W			4	5		W		0	0		
Leghorn			29.92	759.9	72.9	22.7	53	WSW	4.1	2.2		4				0	0		
Siena	28.70	728.9	29.86	758.4	73.2	22.9	36	NW	1.3	0.6		5		E		0	0		
Urbino	28.38	720.7	29.98	759.0	74.3	23.5	44	NE			4	4				0	0		
Pesaro																			
Ancona			29.88	758.9	73.8	23.2	61	N			4	2				0	0		
Grosseto			29.90	759 5	79.2	26.2	36	NNW			4	6		S		0	0		
Rome			29.88	758.9	79.9	26.6	43	W	6.9	3.1		4				0	0		
Naples, O. U			29.95	760.6	75.2	24.0	60	S			4	5		NE		0	0		
Lecce			29.88	758.9	71.8	22.1	34	NNE	7.4	3.3		5				0	0		
Cosenza			29.90	759.4	80.6	27.0	68	NW	9.8	4.4		3				0	0		
Riposto, (Sicily)			29.93	760.2	71.6	22.0	70	E			2	4				0	0		
Palermo			29.90	759.4	70.2	21.2	58	NE	4.3	1.9		3				0	0		
Caltanissetta	27.96	710.1	29.86	758.4	73.2	22.9	26	SE			4	1		NW		0	0		
Sub-Series.																			
Naples, S. R			29.97	761.3	73.2	22.9	60	SSW	0.7	0.3		5		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, 309 m., or 1,003.9 feet; Mondovi, 550 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Tokio																			

NETHERLANDS' SERIES.

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

Flushing			30.28	769.2	59.4	15.2		NNE			2								
Groningen			30.16	766.1	54.1	12.3		NW			4								
Helder			30.24	768 2	52.5	11.4		NW			4								
Utrecht			30.20	767.1	58.1	14.5	49	N			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.

Bergen			30.07	763.8	56.1	13.4	58	SW	9.8	4.4		6				0	0		
Brönö			29.88	759.0	46.4	8.0	78	SW	18	8		10						Light rain	
Christiania			29.97	761.3	66.4	19.1	28	SSW	6.7	3.0		0				0	0		
Tromsö			29.76	755.9	43.3	6.3	55	S	13	6		0				0.559	14.2		

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,)	.....	.....	30.27	768.8	61.7	16.5	81	S	2.0	1.28	.....	.....	6	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.92	760.0	68.9	21.6	53	NE	2.2	1.00	.....	.....	5	ESE	.....	0.370	9.4	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.07	763.8	66.2	19.0	66	.....	4.2	1.88	.....	.....	9	.....	.....	0	0	.....	Capt D. A. da Cunha.
Lisbon	.....	.....	29.98	761.5	67.5	19.7	55	SSE	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 the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia at St. Petersburg.

Warsaw	.....	.....	29.91	759.6	66.6	19.2	65	W	16	7	.....	.....	5	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.91	759.6	76.1	24.5	36	SSW	11	5	.....	.....	6	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.94	760.5	57.7	14.3	75	N	.....	.....	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.99	761.7	55.6	13.1	82	SW	2	1	.....	.....	10	.....	.....	.....	.....	Raining.....	Central Physical Obs
Kuopio	.....	.....	29.86	758.5	59.9	15.5	54	WSW	13	6	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kiefl	.....	.....	29.88	758.9	73.8	23.2	42	ENE	11	5	.....	.....	8	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolatev	.....	.....	29.78	756.5	81.2	26.8	47	NE	18	8	.....	.....	5	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.70	754.4	79.0	25.6	64	NE	2	1	.....	.....	6	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.08	763.9	75.7	24.2	46	SSW	9	4	.....	.....	4	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.74	755.4	86.0	30.0	31	SE	40	18	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Arcnangel	.....	.....	29 87	758.7	49.1	9.5	71	NW	22	10	.....	.....	2	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.40	723.7	29.80	756.9	92.1	33.4	18	E	11	5	.....	.....	4	.....	.....	.....	.....	.....	Physical Observatory.
Derbent	.....	.....	30.01	762.2	80.1	26.7	40	ESE	18	8	.....	.....	5	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.10	764.5	75.4	24.1	39	W	9	4	.....	.....	1	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.09	738.9	30.04	763.1	71.2	21.8	30	W	4	2	.....	.....	1	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.94	760.4	88.0	31.1	21	N	13	6	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.28	718.2	29.88	758.9	82.2	27.9	36	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.83	757.7	65.7	18.7	70	SE	13	6	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.67	753.5	55.2	12.9	66	W	2	1	.....	.....	10	.....	.....	.....	.....	Raining.....	Marks.
Irkutsk	28.69	728.7	30.04	763.0	58.1	14.5	37	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Usoltef.
Uurga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	30.11	764.7	62.4	16.9	85	Calm	0	0	.....	.....	9	.....	.....	Blank	Blank	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.21	767.2	45.5	7.5	80	SE	18	8	.....	.....	10	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	45.5	7.5	73	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, 303.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, or 1,621.3? ft.; Irkutsk, 502 m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Uurga, 1,281.0 m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	29.93	760 1	68.2	20.1	82	NE	0.0	4.00	.....	0	9	.....	.....	W	0.403	1.1	Cloudy.....	Royal Observatory.
San Fernando	.....	.....	29.99	761.7	67.8	19.9	67	W	10.7	4.8	.....	0	8	.....	.....		.....	.....	.....	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	.....	.....	29.87	758.7	50.7	10.4	65	S	.....	.....	2	.....	2	.....	.....	.....	0	0	.....	
Umea	.....	.....	29.93	760.3	54.9	12.7	63	SW	.....	.....	2	.....	6	.....	.....	.....	0	0	.....	
Hernosand	.....	.....	29.96	761.0	63.0	17.2	28	WNW	.....	.....	2	.....	7	.....	.....	.....	0	0	.....	
Stockholm	.....	.....	29.95	760.8	63.1	17.3	48	ESE	.....	.....	4	.....	3	.....	.....	.....	0	0	.....	
Wisby	.....	.....	29.97	761.3	57.9	14.4	55	NNE	.....	.....	4	.....	0	.....	.....	.....	0	0	.....	
Sub-Series.																				
Upsala	.....	.....	29.96	761.0	67.3	19.6	37	SE	5.6	2.5	.....	.....	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 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 57	725.7	29.07	761.2	64.0	17.8	67	N	.....	.....	4	.....	3	.....	.....	0	0	C ouds	The Observatory.
Zurich	28.48	723.3	30.11	764.8	55.4	13.0	70	E	.....	.....	1	.....	7	.....	.....	0	0	Cloudy	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE—For Geneva the corresponding departures from the normal values are: Barometer, −0.1 mm; Thermometer, −1.2 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.

Constantinople	.....	.....	29.81	757.2	66.6	19.2	68	NNE	11	5.0	.....	.....	8	.....	NW	0	0	.....	.....
Fao, (Persian Gulf)	.....	.....	29.92	760 0	96.8	36.0	.....	SE	.....	.....	3	.....	5	.....	.....	.....	.....	.....	.....
Salonica	.....	.....	29.89	759.2	74.5	23.6	.....	SE	.....	.....	2	.....	5	.....	.....	Blank	Blank	.....	.....
Valona	.....	.....	29.86	758.4	76.6	24.8	.....	W	.....	.....	1	.....	0	.....	.....	.....	.....	.....	.....
Varna	.....	.....	29.80	757.0	60.8	16.0	.....	N	.....	.....	2	.....	5	.....	.....	.....	.....	Raining	.....
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.01	759.6	80.1	26.7	49	W	.....	.....	2	.....	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.

Bathurst, N. B	.....	.....	29.92	760.0	61.2	16.2	74	SW	6	2.7	.....	0	.....	.....	.....	0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.08	764.0	68	20.0	.....	S W	3	1.3	.....	2c	0	SW	.....	0	0	Fair	W. R. Bigg.
*Chatham, N. B	.....	.....	30.02	762.5	60	15.6	59	SW	6	2.7	.....	2c	0	SW	.....	0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.12	765.0	54	12.2	47	SW	13	5.8	.....	0	0	.....	.....	0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.01	762.2	73.0	22.8	79	Calm	.....	.....	0	4c	0	.....	.....	0	0	Bright	James Smith, M. A
Dalhousie, N. B	.....	.....	29.92	760.0	57.8	14.3	69	W	.....	.....	2	0	0	.....	.....	0	0	.....	H. A. Johnson.
Esquimault, B. C	.....	.....	29.90	759.4	43.8	6.6	100	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	W. H. Bevis.
Fredericton, N. B	.....	.....	30.14	765.5	50.0	10.0	60	SE	6	2.7	.....	.k	0	.....	.....	0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.54	750.3	37	2.8	95	NE	30	13.4	.....	2k	8n	NE	NE	0 79	20 1	Light rain	James Stewart.
Goderich, Ontario	.....	.....	29.91	759.7	70.5	21.4	81	SW	.....	.....	1	0	0	.....	.....	0.076	1.93	Fine	H. J. Strang, M. A.
Granton, Ontario	.....	.....	29.94	760.5	66	18.9	.....	S	.....	.....	1	2cs	0	SE	.....	0.01	0.3	Clear	James Grant.
*Halifax, N. S	28.88	733.5	30.20	767.1	54	12.2	49	SW	9	4.0	.....	2cs	0	.....	.....	0	0	Fair	F. Allison, M. A.
*Kingston, Ontario	.....	.....	30.08	764.0	59	15.0	74	S	6	2.7	.....	8c	8m'e	.....	.....	0	0	Fair	S. Woods, M. A.
Little Glace Bay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. H. Rigby
*Montreal, Quebec	.....	.....	30.04	763.0	63	17.2	67	S	8	3.6	.....	2cs	0	.....	.....	0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.02	762.5	62	16.7	60	S	8	3.6	.....	5ck	8m'e	S	S	0	0	Fair	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.92	760.0	65	18.3	80	S	14	6 3	.....	.....	10p	.....	S	0.01	1.0	Light rain	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	29.99	761.7	62	16.7	78	S	3	1.3	.....	2c	0	S	.....	0	0	Fair	H. Morgan.
Port Hastings, N. S	.....	.....	30.15	765.8	48.0	8.9	.....	SW	4	1.8	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
*Port Stanley, Ontario	.....	.....	29.96	761.0	65	18.3	73	E	12	5.4	.....	5ck	0	W	.....	0	0	Fair	M. Payne.
*Quebec, Quebec	.....	.....	30.05	763.3	66	18.9	59	W	2	0.9	.....	0	0	.....	.....	0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.	.....	.....	30.18	766.6	50	10.0	72	S	11	4.9	.....	0	0	.....	.....	0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.85	758.2	68	20.0	78	S	7	3.1	.....	.....	10n	.....	S	0	0	Cl udy	K. Stewart.
Stayner, Ontario	.....	.....	29.97	761.2	68	20.0	79	Calm	0	0	.....	.....	10n	.....	W	0	0	Threatening	R. J. Cole.
Stratford, Ontario	28.69	728.7	29.92	760.0	66.0	18.9	86	S	6	2.7	.....	.....	10s	.....	.....	0	0	Fair	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.16	766.1	58	14.4	48	SW	14	6.3	.....	2c	0	.....	.....	0	0	Clear	T. C. Hill.
*Toronto, Ontario	.....	.....	30.0	762.0	61	16.1	76	SE	5	2.2	.....	2c	2s	W	.....	0	0	Fair	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.96	761.0	69.5	20.8	75	S	12	5 4	.....	5ck	0	.....	.....	0	0	Fine	J. Montgomery.
Sub-Series.																			
St. John's, Newfoundland.	.....	.....	30.17	766.3	55.0	12.8	50	W	.....	.....	.....	2c	2s	.....	.....	0	0	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.	.....	.....	30.13	765.3	60	15.6	65	S	1	0.4	.....	Haze	Haze	.....	.....	0	0	Hazy.
Alpena, Mich	.....	.....	29.76	755.9	64	17.8	89	S	9	4.0	.....	8cs	Haze	SW	.....	0.03	0.8	Fair.
Atlantic City, N. J.	.....	.....	30.16	766.1	57	13.9	75	N	8	3.6	.....	1cs	0	N	.....	0	0	Clear.
Augusta, Ga.	.....	.....	30.11	764.8	74	23.3	81	SE	5	2.2	.....	5cs	2ks	SW	SE	Inap.	Inap	Cloudy..
Baltimore, Md.	.....	.....	30.18	766.6	60	15.6	70	SE	4	1.8	.....	0	Sm'e	.....	.....	0	0	Clear.
Barnegat, N. J.	.....	.....	30.17	766.3	58	14.4	75	N	6	2.7	.....	1k	0	NW	.....	0	0	Clear.
Benton, Montana	27.17	690.1	29.97	761.2	32	0.0	100	N	15	6.7	.....	.....	10n	.....	N	2.20	55.9	Light snow.
Bismarck, Dakota	27.68	703.1	29.29	744.0	39	3.9	91	NE	6	2.7	.....	.....	10n	.....	NE	0.73	18.5	Light rain.
Boston, Mass.	.....	.....	30.14	765.5	60	15.6	55	W	2	0.9	.....	Haze	Sm'e	.....	.....	0	0	Smoky.
Breckenridge, Minn	.....	.....	29.14	740.1	64	17.8	89	SE	14	6.3	.....	2c	2s	S	SE	0.78	19.8	Fair.
Buffalo, N. Y.	.....	.....	29.95	760.7	66	18.9	68	SW	2	0.9	.....	1c	0	..	.....	0	0	Clear.
Burlington, Vt.	.....	.....	30.11	764.8	62	16.7	66	S	9	4.0	.....	2c	0	.....	.....	0	0	Fair.
Cairo, Ill.	.....	.....	29.81	757.2	70	21.1	95	S	8	3.6	.....	.....	10s	.....	S	1.46	37.1	Cloudy.
Cape Hatteras, N. C.	.....	.....	30.04	763.0	62	16.7	66	NE	18	8.0	.....	0	2s	.....	.....	0	0	Fair.
Cape Henry, Va.	.....	.....	30.14	765.5	60	15.6	71	NE	13	5.8	.....	5k	0	NE	.....	0	0	Fair.
Cape Lookout, N. C.	.....	.....	30.12	765.0	63	17.2	67	NE	20	8.9	.....	2k	0	NE	.....	0	0	Fair.
Cape May, N. J.	.....	.....	30.16	766.1	56	13.3	80	NW	7	3.1	.....	0	0	.....	.....	0	0	Clear.
Charleston, S. C.	.....	.....	30.12	765.0	74	23.3	68	E	12	5.4	.....	0	2ks	.....	E	0	0	Fair.
Cheyenne, Wyoming	24.65	600.7	29.09	754.1	41	5.0	48	Calm	0	0	.....	1c	0	.....	.....	Inap.	Inap.	Clear.
Chicago, Ill.	.....	.....	29.70	754.4	73	22.8	64	S	10	4.5	.....	2cs	5s	.....	S	0.12	3.0	Fair.
Cincinnati, Ohio	.....	.....	29.86	758.4	75	24.0	64	S	6	2.7	.....	.....	10ks	.....	S	0.02	0.5	Threatening
Cleveland, Ohio	.....	.....	29.92	760.0	72	22.3	71	SE	12	5.4	.....	2k	2s	W	W	0	0	Fair.
Colorado Springs, Col.	23.86	606.0	29.73	755.1	47	8.3	34	NE	4	1.8	.....	0	0	.....	.....	Inap.	Inap.	Clear.
Corsicana, Texas	.....	.....	29.71	754.6	77	25.0	84	S	9	4.0	.....	.....	10s	.....	S	0	0	Cloudy.
Davenport, Iowa	.....	.....	29.65	753.1	70	21.1	79	S	16	7.2	.....	.....	10s	.....	S	0.23	5.8	Cloudy.
Denison, Texas	.....	.....	29.69	754.1	79	26.1	82	S	20	8.9	.....	0	0	.....	.....	0	0	Clear.
Denver, Col.	24.46	621.3	29.08	753.9	49	9.4	30	NW	4	1.8	.....	0	0	.....	.....	0.40	10.2	Clear.
Detroit, Mich	.....	.....	29.86	758.4	70	21.1	75	S	5	2.2	.....	8k	0	SW	.....	Inap.	Inap.	Fair.
Dodge City, Kan.	27.17	690.1	29.36	745.7	59	15.0	64	W	8	3.6	.....	8c,ck	0	.....	.....	0	0	Fair.
Dubuque, Iowa	.....	.....	29.59	751.6	72	22.2	75	SE	10	4.5	.....	.....	10s	.....	SE	0	0	Cloudy.
Duluth, Minn.	.....	.....	29.48	748.8	47	8.3	85	Calm	0	0	.....	.....	Fog	.....	.....	0.01	0.3	Foggy.
Eastport, Me.	.....	.....	30.14	765.5	52	11.1	66	S	7	3.1	.....	0	0	.....	.....	0	0	Clear.
Erie, Pa.	.....	.....	29.92	760.0	72	22.2	69	S	16	7.2	.....	1ck	Sm'e	.....	.....	0	0	Smoky.
Escanaba, Mich	.....	.....	29.66	753.4	57	13.9	87	SE	6	2.7	.....	.....	10s	.....	.....	0.08	2.0	Cloudy.
Fort Gibson, Indian Ter.	.....	.....	29.62	752.3	78	25.6	73	S	12	5.4	.....	.....	10ks	.....	W	0	0	Cloudy.
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fort Sill, Indian T.	28.48	723.4	29.52	749.8	79	21.1	52	S	8	3.6	.....	0	2s	.....	S	0	0	Clear.
Fort Sully, Dakota	27.78	705.6	29.39	746.5	46	7.8	92	W	12	5.4	.....	.....	10n	.....	.....	0.20	5.1	Light rain.
Galveston, Tex.	.....	.....	29.83	757.7	80	26.7	85	SE	8	3.6	.....	0	2s	.....	SE	0	0	Fair.
Grand Haven, Mich.	.....	.....	29.75	755.6	75	23.9	59	S	20	8.9	.....	2cs	3s	SW	SW	0.01	0.3	Fair.
Indianapolis, Ind.	.....	.....	29.81	757.2	73	22.8	76	S	8	3.6	.....	.....	10s	.....	S	0.08	2.0	Threatening
Indianola, Tex.	.....	.....	29.81	757.2	81	27.2	87	SE	18	8.0	.....	2k	0	S	.....	0	0	Fair.
Jacksonville, Fla.	.....	.....	30.06	763.5	82	27.8	64	E	5	2.2	.....	8ck	0	..	.....	0	0	Fair.
Keokuk, Iowa	.....	.....	29.57	751.1	71	21.7	85	SE	8	3.6	.....	8k	0	SE	.....	Inap.	Inap.	Hazy.
Key West, Fla.	.....	.....	30.00	762.0	82.4	28.0	83	SW	5	2.2	.....	2k	Haze	SW	SW	0	0	Fair.
Kittyhawk, N. C.	.....	.....	30.14	765.5	60	15.6	70	NE	16	7.2	.....	8k	0	NE	.....	0	0	Misty.
Knoxville, Tenn	.....	.....	30.01	762.2	69	20.6	79	E	2	0.9	.....	.....	10n	.....	S	Inap.	Inap.	Cloudy.
La Crosse, Wis.	.....	.....	29.49	749.0	73	22.8	81	S	16	7.2	.....	10k	0	S	.....	0	0	Cloudy.
Leavenworth, Kan.	.....	.....	29.47	748.5	74	23.3	72	SW	12	5.4	.....	.....	10s	.....	SW	0	0	Threatening
Lexington, Ky.	28.87	733.3	29.93	760.2	70	21.1	75	S	4	1.8	.....	.....	10s	.....	SE	0	0	Cloudy.
Long Branch, N. J.	.....	.....	30.17	766.3	56	13.3	80	NE	2	0.9	.....	2k	Haze	NE	.....	0	0	Fair.
Louisville, Ky.	.....	.....	29.86	758.4	72	22.2	80	SE	6	2.7	.....	.....	10n	.....	S	0.12	3.0	Light rain.
Lynchburg, Va.	.....	.....	30.14	765.5	69	20.6	56	E	2	0.9	.....	0	0	.....	.....	0	0	Clear.
Malone, N. Y.	.....	.....	29.90	761.7	69	20.6	47	S	8	3.6	.....	5c	0	W	.....	0	0	Fair.
Manhattan, Kan.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marquette, Mich	.....	.....	29.90	751.8	63	17.2	83	Calm	0	0	.....	.....	10s	.....	SW	0.05	1.3	Cloudy.
Memphis, Tenn	.....	.....	29.83	757.7	76	24.4	85	S	8	3.6	.....	0	5k	.....	S	0.20	6.6	Fair.
Milwaukee, Wis.	.....	.....	29.73	755.1	62	16.7	88	SE	10	4.5	.....	2c	5k	W	SW	0.69	17.5	Fair.
Mobile, Ala.	.....	.....	29.96	761.0	79	26.1	86	SE	8	3.6	.....	.....	10s	.....	SW	Inap.	Inap.	Cloudy.
Montgomery, Ala.	.....	.....	30.01	762.2	78.5	23.1	83	SE	6	2.7	.....	8cs	0	W	.....	1.48	37.6	Fair.
Morgantown, W. Va.	.....	.....	29.98	761.5	76	24.4	59	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.
Mt. Washington, N. H.	24.02	610.1	30.38	771.6	54	12.2	14	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.
Nashville, Tenn.	.....	.....	29.80	756.9	71	21.7	85	SE	6	2.7	.....	.....	10n	.....	S	0.34	8.6	Light rain.
New Haven, Conn.	.....	.....	30.15	765.8	57	13.9	69	NW	4	1.8	.....	Haze	0	.....	.....	0	0	Clear.
New London, Conn.	.....	.....	30.17	766.3	54	12.2	73	N	2	0.9	.....	0	Fog	N	.....	0	0	Clear.
New Orleans, La.	.....	.....	29.90	759.4	80	26.7	80	SE	8	3.6	.....	5ck	0	W	.....	0	0	Fair.
Newport, R. I.	.....	.....	30.16	766.1	55	12.8	68	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear.
New York, N. Y.	.....	.....	30.18	766.6	55	12.8	68	NW	4	1.8	.....	0	Haze	.....	.....	0	0	Clear.
Norfolk, Va.	.....	.....	30.15	765.8	61	16.1	66	E	12	5.4	.....	5k	0	SW	.....	0	0	Fair.
North Platte, Neb.	26.70	678.2	29.25	742.9	55	12.8	44	SW	12	5.4	.....	2c	0	SW	SW	0.04	1.0	Clear.
Omaha, Neb.	28.42	721.9	29.42	747.3	65	18.3	63	SW	9	4.0	.....	5c	2k	W	.....	0	0	Fair.
Oswego, N. Y.	.....	.....	30.03	762.7	64.5	18.1	70	SE	8	3.6	.....	8cs	Haze	.....	.....	2.12	53.8	Light rain.
Peninsula, Dakota	.....	.....	29.46	748.0	39	3.9	100	NE	20	8.9	.....	.....	10n	.....	.....	0	0	Clear.
Philadelphia, Penn.	.....	.....	30.18	766.6	56	13.3	74	E	4	1.8	.....	0	Sm'e	.....	.....	0.13	3.3	Clear.
Pike's Peak, Colorado	17.50	444.5	29.71	754.6	8.5	−13.1	67	W	44	19.7	.....	0	0	.....	.....	0	0	Clear.
Pittsburgh, Penn.	.....	.....	29.97	761.2	70	21.1	66	S	5	2.2	.....	0	0	.....	S	0.06	1.5	Cloudy.
Port Huron, Mich.	.....	.....	29.87	758.7	68	20.0	84	SE	4	1.8	.....	.....	10s	.....	.....	0	0	Clear.
Portland, Me.	.....	.....	30.16	766.1	55	12.8	68	S	3	1.3	.....	0	Haze	.....	.....	0	0	Cloudy.
Portland, Oregon	.....	.....	29.94	760.5	49	9.4	93	Calm	0	0	.....	.....	10s	.....	.....	0.03	0.8	Cloudy.
Punta Rassa, Fla.	.....	.....	30.01	762.2	78.5	25.8	80	E	12	5.4	.....	.....	8s	.....	.....	0	0	Fair.
Rochester, N. Y.	.....	.....	29.97	761.2	69	20.6	61	S	6	2.7	.....	5c	Haze	SW	.....	0.70	17.8	Clear.
Salt Lake City, Utah	25.47	646.9	29.80	756.9	48	8.9	61	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.
Sandy Hook, N. J.	.....	.....	30.16	766.1	57	13.9	76	N	2	0.9	.....	Haze	2ks	.....	W	0	0	Hazy.
San Diego, Cal.	.....	.....	29.88	758.9	60	15.6	81	S	8	3.6	.....	.....	10s	.....	S	0	0	Cloudy.
San Francisco, Cal.	.....	.....	29.85	758.2	52	11.1	70	W	4	1.8	.....	0	0	.....	.....	0	0	Clear.
Santa Fé, N. M.	23.24	590.3	29.78	756.4	45	7.2	70	N	11	4.9	.....	2k	0	SW	.....	Inap.	Inap.	Fair.
Savannah, Ga.	.....	.....	30.10	764.5	75	23.9	81	SE	15	6.7	.....	2cs	8ks	.....	SE	0.25	6.3	Cloudy.
Shreveport, La.	.....	.....	29.81	757.2	77.5	25.3	84	SW	8	3.6	.....	10k	0	SW	.....	0.03	0.8	Cloudy.
Smithville, N. C.	.....	.....	30.14	765.5	61	16.1	76	N	6	2.7	.....	0	0	.....	.....	0	0	Clear.
Springfield, Mass.	.....	.....	30.16	766.1	48.5	9.2	85	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Dense fog.
St. Louis, Mo.	.....	.....	29.75	755.6	70	21.1	90	S	16	7.2	.....	.....	10s	.....	.....	0.25	6.3	Cloudy.
St. Marks, Fla.	.....	.....	30.02	762.5	78	25.6	77	SE	12	5.4	.....	2ck	2ks	NW	S	0	0	Fair.
St. Paul, Minn.	.....	.....	29.33	745.0	69.5	20.8	70	E	2	0.9	.....	.....	10s	.....	.....	Inap	Inap.	Threatening
St. Paul's Island, Alaska	.....	.....	29.57	751.1	35	1.7	91	W	7	3.1	.....	.....	Fog	.....	.....	0.09	2.3	Foggy.
Thatcher's Island, Mass.	.....	.....	30.15	765.8	51	10.6	86	SW	7	3.1	.....	0	0	.....	.....	0	0	Clear.
Toledo, Ohio	.....	.....	29.83	757.7	73	22.8	76	S	8	3.6	.....	.....	10ks	.....	S	0.01	0.3	Cloudy.
Tucson, Arizona	27.41	697.0	30.02	762.5	72	22.2	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear.
Tybee Island, Ga.	.....	.....	30.09	764.3	74	23.3	81	E	16	7.2	.....	.....	0	.....	.....	0	0	Cloudy.
Vicksburg, Miss.	.....	.....	29.90	759.4	75.5	24.2	90	SE	4	1.8	.....	8k	2ks	S	SE	0.10	2.5	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.	24.13	612.9	29.61	752.1	29	— 1.7	89	Calm	0	0	.....	.....	10n	.....	NW	0.74	18.8	Light snow..	
Washington, D. C.	.....	.....	30.17	766.3	61	16.1	74	S	4	1.8	.....	1k	Haze	S	.....	0	0	Hazy.....	
Wilmington, N. C	.....	.....	30.14	765.5	60	15.6	76	N	6	2.7	.....	0	0	.....	.....	0	0	Clear.....	
Wood's Holl, Mass	.....	.....	30.16	766.1	57	13.9	69	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear.....	
Wytheville, Va	27.79	705.8	29.90	759.4	62	16.7	88	E	4	1.8	.....	.....	10ks	.....	W	0	0	Threatening	
Yankton, Dakota	28.17	715.5	29.38	746.2	59	15.0	65	SW	11	4.9	.....	0	0	.....	.....	0.75	19.1	Clear.....	
Yuma, Arizona	.....	.....	29.85	758.2	71	21.7	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear.....	
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Sub Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.03	762.7	81	27.2	74	E	6	2.7	.....	5ck	5ks	NE	NE	0	0	Cloudy.....	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.95	760.7	82	27.8	83	E	.....	.....	.....	2k	8ks	.....	.....	0	0	Fair.....	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.16	766.1	80	26.7	93	Calm	0	0	.....	5c	2s	.....	.....	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.80	756.9	82	27.8	83	Calm	0	0	.....	4ck	8k	.....	S	0.47	11.9	Cloudy.....	Robert Mason.
Havana, Cuba, W. I.	.....	.....	29.97	761.2	83	28.3	83	Calm	0	0	.....	2k	0	S	.....	2.06	52.3	Fair.....	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	29.82	757.4	.....	.....	.....	SW	10.0	4.5	.....	5s	5f k	SW	.....	0.05	1.3	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica, W. I	27.19	690.6	29.96	761.0	69	20.6	90	S	3.0	1.3	.....	8c	0	S	.....	0.85	21.6	Fine.....	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.01	762.2	83	28.3	83	E	.....	.....	2	7ks	7ks	E	.....	0	0	Cloudy.....	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.7	.....	.....	85.6	29.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.935	23.75	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.24	641.1	.....	.....	65.0	18.3	85	Calm	0	0	.....	3c	3s	.....	.....	0.11	2.8	Fair.....	Thomas Herran.
York Factory, B. A	.....	.....	30.14	765.5	30	— 1.1	95	W	8	3.6	.....	4c	0	W	.....	0	0	.....	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. L. Clarke.
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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.
Steamer Hibernian, N. 37° 08′, W. 74° 46′.	W by S ½ S	11	30.16	766.1	55	12.8	.....	NNW	.....	.....	4	.....	..k	.....	.....	Moderate.	.....	Blue sky.....	Lieut F. Archer, R N.R.
Steamer Leipzig, N. 41° 40′, W. 55° 12′.	N53¾ E	.....	30.33	770.4	56.8	13.8	.....	SE	.....	.....	3	.....	Haze	.....	.....	Tranq'l	.....	Overcast.....	Capt. Ritchie.
Steamer Nova Scotian off Cape Race—NE, N by W.	ENE	12	30.21	767.3	55	12.8	.....	WSW	.....	.....	5	.....	..ck	.....	.....	Moderate	.....	Clear, fine ...	Capt. R. Hoffmann.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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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 2.89? ft., or 881.5 m.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) 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 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, 1870.

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 JUNE 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.	Observers.
Nemours	....	.....	29.92	760.0	72.0	22.2	62	NNW	.....	.....	1	.....	2	.....	... .	0	0	Clear	Charnot.
Algiers	.. ....	.....	29.89	759.1	64.6	18.0	94	NNW	.....	.....	1	.....	10	.....	.....	0.327	8.3	Hidden	Peter.
La Calle	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Kunts.
Tunis	.....	.....	29.85	758.3	76.3	24.6	50	E	.....	.....	3	.....	7	.....	.....	0.043	1.1	Cloudy	Jacques.
Sfax	.....	.....	29.86	758.4	76.3	24.6	49	NE	.....	.....	4	.....	5	.....	.....	0	0	Fair	Chauvey.
Saida	.....	.....	29.97	761.2	68.9	20.5	48	NNW	.....	.....	2	.....	3	.....	.....	0	0	Fair	Millot.
Tebessa	.....	.....	29.86	758.4	77.9	25.5	.....	NW	.....	.....	1	.....	8	.....	.....	0	0	Cloudy	Colin.
Gerfville	.....	.....	29.93	760.1	79.7	26.5	13	NNW	.....	.....	2	.....	2	.....	.....	0.236	6.0	Clear	Ruard.
Laghouat	.....	.....	29.88	759.0	82.4	28.0	39	SW	.....	.....	5	.....	4	.....	.....	0.157	4.0	Fair	Guyot.
Biskra	.....	.....	29.78	756.3	89 2	31.8	25	NE	.....	.....	3	.....	4	.....	.....	0	0	Fair	Laromer.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

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

Agram	.....	.....	29.96	761.0	72.1	22.3	55	NE	.....	.....	1	.....	3	.....	.....	0	0	....	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	30.01	763.1	66.2	19.0	69	NE	.....	.....	1	.....	10	... .	... .	0.028	0.59	....	Dr. Wierzbiski.
Eperies	.....	.....	29.97	761.2	69.8	21.0	81	Calm	.....	.....	0	.....	10	.....	S	0.061	1.55	....	Julius Mikolik.
Gratz	28.81	731.8	29.95	760.8	61.0	17.8	81	SW	.....	.....	2	.....	7	.....	.....	1.551	39.4	....	Andreas Rospini.
Hermannstadt	28.44	722.3	29.82	757.3	63.7	17.6	69	NNE	.....	.....	1	.....	10	.....	.....	0.150	3.80	Raining	Prof. Reissenberger.
Kremsmünster	28.54	725.9	29.89	759.2	55 8	13.2	91	SW	.....	.....	2	.....	10	.....	.....	1.055	26.8	....	Prof. C. Wagner.
Lemberg	.....	.....	29.83	757.7	73.0	22.8	52	NE	.....	.....	2	.....	9	.....	.....	0.154	3.9	....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	Habzsuda Daniel.
Pola	.....	.....	29.94	760.4	73.4	23.0	55	WSW	.....	.....	1	.....	2ks	.....	.....	0	0	....	I.R.Hydrographic Office.
Szegedin	.....	.....	29.88	759.0	75.4	24.2	50	E	.....	.....	1	.....	4	.....	.....	0	0	....	Karl Stancel.
Trieste	.....	.....	29.95	760.7	72.9	22.7	56	ENE	.....	.....	2	.....	3	.....	.....	0	0	....	Prof. V. Farolfi.
Vienna	.....	.....	30.00	761.0	66.9	19.4	50	NNE	.....	.....	1	.....	1	.....	.....	0.028	0.7	....	I. R. Central Met. Obs'y.
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NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 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.

Brussels	.....	.....	30.01	762.2	57.6	14.2	50	ENE	.....	.....	1	.....	9	.....	.....	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	.....	.....	30.00	762.0	55.7	13.2	.....	E	6	2.7	.....	.....	7	.....	.....	0	0	*D. clouds	William Boswell.
Ardrossan	.....	.....	30.05	763.3	57.5	14.2	.....	W	.....	.....	2	.....	3	.....	.....	.....	.....	Blue sky	William McNeil.
Armagh, Observatory	.....	.....	30.07	763.8	57.2	14.0	.....	SW	5	2.2	.....	.....	10	.....	.....	.....	.....	Overcast	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	29.96	760.5	60.0	15.6	.....	NW	.....	.....	1	.....	10	.....	.....	.....	.....	*D. clouds	J. Dreyer.
Bradford	.....	.....	30.04	763.0	63.4	17.4	.....	S	.....	.....	0	.....	10	.....	.....	0	0	Overcast	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.01	762.2	83	28.3	.....	SE	.....	.....	2	.....	7	.....	.....	.....	.....	Overcast	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory	.....	.....	30.04	763.0	55.5	18.6	.....	E	.....	.....	1	.....	10	.....	.....	.....	.....	Raining	H. Todd.
Cardington	.....	.....	30.05	763.3	66.0	18.9	.....	E	.....	.....	1	.....	5	.....	.....	.....	.....	*D. clouds	John McLaren.
Carlisle	.....	.....	30.01	762.2	63.3	17.4	.....	W	.....	.....	1	.....	8	.....	.....	0	0	*D. clouds	T. Bell, for J. Car mell.
Chatham, School M. E	.....	.....	30.05	763.3	64.5	18.1	.....	NE	.....	.....	2	.....	4	.....	.....	.....	.....	Gloomy	Capt. J. Fellowes, R.E.
Dartmoor	24.05	727.7	30.12	765.0	63.6	17.6	.....	NW	.....	.....	1	.....	4	.....	.....	.....	.....	Blue sky	R. E. Power.
Donaghadee	.....	.....	30.05	763.3	62	16.7	.....	S	.....	.....	2	.....	8	.....	.....	.....	.....	D. clouds	J. Mac Gowan.
Dover	.....	.....	30.06	763.5	56	13.3	.....	E	.....	.....	2	.....	5	.....	.....	.....	.....	½ clouded	J. Costello.
Eccles, (near Manchester.)	.....	.....	30.02	762.5	65.0	18.3	.....	WNW	3.2	1.4	.....	.....	10	.....	.....	.....	.....	Over a t	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.08	764.0	65.2	18.4	.....	NNW	12	5.4	.....	.....	1	.....	.....	.....	.....	Hazy	The Staff.
Fort Napier, (Natal)	27.85	707.4	30.07	763.8	69.7	15.9	.....	Calm	.....	.....	0	.....	10	.....	.....	.....	.....	Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.93	760.2	88.0	31.1	.....	N	.....	.....	5	.....	6	.....	.....	.....	.....	*D. clouds	
Galway, Queen's College	.....	.....	30.01	762.2	60	15.6	.....	SW	.....	.....	1	.....	3	.....	.....	.....	.....	*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	29.88	758.9	72.0	22.2	.....	W	.....	.....	5	.....	4	.....	.....	.....	.....	*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	30.01	762.2	60.6	15.9	.....	WSW	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast	Lewis Stuart.
Great Yarmouth	.....	.....	30.09	764.3	52	11.1	.....	SSE	.....	.....	2	.....	6	.....	.....	.....	.....	Raining	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	30.04	763.0	68.5	20.3	.....	ENE	.....	.....	1	.....	10	.....	.....	.....	.....	Hazy	The Staff, for G. B. Airy.
Guernsey	.....	.....	30.05	763.3	61.5	16.4	.....	NNE	.....	.....	1	.....	3	.....	.....	.....	.....	*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	30.06	763.5	63.6	17.6	.....	ENE	.....	.....	1	.....	10	.....	.....	.....	.....	*D. clouds	L. J. Crossley.
Helston	.....	.....	30.06	763.5	71	21.7	.....	N	.....	.....	4	.....	2c	.....	.....	0	0	Fine	M. P. Moyle.
Holyhead	.....	.....	30.06	763.5	57	13.9	.....	NNW	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky	John Tilston.
Kew, Observatory	.....	.....	30.03	762.7	66.0	18.9	.....	NE	12	5.4	.....	.....	.....	.....	.....	.....	.....	Threatening	The Staff.
Kingstown	.....	.....	30.09	764.3	62	16.6	.....	SE	.....	.....	3	.....	5	.....	.....	.....	.....	*D. clouds	George Mitchell.
Leicester Museum	.....	.....	30.04	763.0	66.5	19.2	.....	W	.....	.....	1	.....	10	.....	.....	.....	.....	Hazy	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)	.....	.....	29.90	759.4	71.0	21.7	.....	SE	.....	.....	1	.....	8k	.....	.....	.....	.....	*D. clouds	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	29.95	760.7	68	20.0	.....	S'W	.....	.....	1	.....	8	.....	.....	.....	.....	¾ clouded	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.03	762.7	79.0	26.1	.....	NE	.....	.....	6	.....	5	.....	.....	.....	.....	*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	30.0	763.3	65.7	18.7	.....	SE	.....	.....	2	.....	10ck	.....	NW	0	0	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.0	762.0	67.7	19.8	.....	NNE	.....	.....	2	.....	10	.....	.....	.....	.....	Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	30.02	762.5	68	20.0	.....	E	.....	.....	1	.....	10	.....	.....	.....	.....	Gloomy	J. Lucas.
Plymouth	.....	.....	30.01	763.0	70.7	21.5	.....	N	.....	.....	1	.....	1	.....	.....	.....	.....	Blue sky	John Merrifield.
Roche's Point	.....	.....	30.09	764.3	61	16.1	.....	SW	.....	.....	3	.....	2	.....	.....	.....	.....	Fine	W. Kennedy.
Saint Ann's Head	.....	.....	30.10	764.5	56	13.3	.....	WNW	.....	.....	1	.....	3	.....	.....	.....	.....	Hazy	John C. Walker,
Saint Helier, Jersey	.....	.....	30.03	762.7	68.4	20.2	.....	NE	.....	.....	3	.....	8	.....	.....	.....	.....	¾ clouded	A. P. Amy.
Sandwick Manse, Orkneys	.....	.....	29.98	761.5	60.6	15.9	.....	SW	10	4.5	.....	.....	8	.....	.....	.....	.....	*D. clouds	Rev. C. Clouston, LL.D.
Scarborough	.....	.....	30.18	764.0	53.2	11.8	.....	ESE	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast	F. Shaw.
Scutari Cemetery Turkey	.....	.....	29.90	759.4	69.0	20.6	.....	SW	.....	.....	1	.....	1	.....	.....	.....	.....	Blue sky	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.03	762.7	67.7	19.8	.....	SE	.....	.....	1	.....	9	.....	.....	0	0	Overcast	W. F. Cooper.
Silloth Rectory	.....	.....	30.00	762.0	69.3	20.7	60	W	.....	.....	1	.....	1	.....	.....	0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	30.03	762.7	64.9	18.3	.....	SW	.....	.....	1	.....	7	.....	.....	.....	.....	Hazy	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.	.....	.....	29.91	759.7	58	14.4	.....	SW	.....	.....	6	.....	5	.....	.....	.....	.....	*D. clouds	John Smith.
Stratfield Turgiss	.....	.....	30.04	763.0	70.2	21.2	.....	SE	.....	.....	1	.....	10	.....	.....	.....	.....	Hazy	Rev. Charles H. Griffith.
Thurso	.....	.....	29.94	760.5	66	18.9	.....	SSW	.....	.....	1	.....	7	.....	.....	.....	.....	*D. clouds	John Trotter.
Truro, Royal Institution	.....	.....	30.09	764.3	68	20.0	.....	NW	.....	.....	4	.....	0	.....	.....	.....	.....	Bl e sky	W. Newcombe.
Valencia, Observatory	.....	.....	30.14	764.5	56.9	13 8	.....	SW	7	3.1	.....	.....	8	.....	.....	.....	.....	D. clouds	The Staff.
Sub-Stations.																			
Calf of Man, (Isle of Man	.....	.....	.....	.....	48	8.9	.....	N	.....	.....	1	.....	0	.....	.....	.....	.....	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.32	770.1	61.0	16.1	63	SE	25	11.2	.....	0	1	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	29.91	759.7	56.0	13.3	86	NW	.....	.....	2	.....	6k	.....	.....	0.03	0.8	Fine	Francis Abbott F.R.A.S.
Leith, Restaurig Park	.....	.....	30.00	762.0	69 0	20.3	.....	W	.....	.....	3	.....	.....	.....	.....	0	0	Fine	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.09	764.3	.....	.....	.....	ENE	12.1	5.4	.....	.....	.....	.....	.....	0.01	0.3	.....	C. Meldrum.
Melbourne, Observatory	.....	.....	30.17	766.3	50.8	10.4	66	NNW	15	6.7	.....	.....	10	.....	.....	0.01	0.3	Dull	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	29.85	758.2	52	11.1	.....	S	.....	.....	4	.....	10	.....	.....	0	0	.....	J. Youngemuse.
North Unst, (Shetland Is.)	.....	.....	30.97	761.2	53	11.7	.....	SW	.....	.....	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, 2,2 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.

Copenhagen	.....	.....	30.13	765.4	59.2	15.1	82	SE	.....	.....	2	.....	5	.....	.....	.....	.....	.....	.....
Faröe	.....	.....	30.07	763.8	61.5	16.4	64	SSE	.....	.....	4	.....	7	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	29.48	748.7	32.4	0.2	81	NW	.....	.....	4	.....	10	.....	.....	.....	.....	.....	.....
Stykkisholm, (Iceland)	.....	.....	29.11	739.5	41.9	5.5	97	SE	.....	.....	6	.....	5	.....	.....	.....	.....	Raining	.....
Thorshavn, (Faröe)	.....	.....	29.71	754.6	54.1	12.3	79	SW	.....	.....	5	.....	10	.....	.....	.....	.....	.....	.....
Vestervig	.....	.....	30.07	763.6	67.6	19 8	55	SE	.....	.....	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	.....	.....	29.96	761.0	62.6	17	53	NE	.....	.....	1	.....	8s,n	.....	NE	0	0	Very cloudy	Normal School.
Amiens	.....	.....	30.02	762.6	65.8	18.8	72	W	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	29.84	757.8	76.1	24.5	49	E	.....	.....	2	.....	5	.....	SE	0	0	Cloudy	Normal School.
Bar-sur-Seine	.....	.....	29.92	760.0	62.6	17.0	41	NE	.....	.....	3	.....	8	.....	.....	0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.91	759.8	63.7	17.6	49	NE	17.4	7.8	.....	.....	10	.....	NE	0	0	Covered	Beaumette Observatory.
Beauvais	.....	.....	30.03	762.7	59.5	15.3	39	NE	.....	.....	3	.....	5	.....	NNE	0	0	Very cloudy	Normal School.
Besançon	.....	.....	29.87	758.8	69.8	21	45	E	.....	.....	4	.....	2	.....	SW	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	29.84	758.0	66.4	19.1	51	SW	.....	.....	2	5c	.....	E	.....	.....	.....	Cloudy	Normal School.
Bourges	.....	.....	29.90	759.5	63.5	17.5	62	NNE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Brest	.....	.....	29.98	761.4	64.6	18.1	65	NE	.....	.....	3	3c	.....	NE	.....	0	0	.....	Naval Observatory.
Carcassonne	.....	.....	29.84	757.8	64.6	18.1	98	W	.....	.....	1	.....	2	.....	E	0	0	Slightly cl'dy	Normal School
Caen	.....	.....	30.04?	778.3?	61.3	16.4	79	NNE	.....	.....	4	..c	.....	ESE	.....	0	0	.....	Normal School.
Chartres	.....	.....	29.94	760.4	63.7	17.6	.....	NNE	.....	.....	4	.....	9	.....	NE	0	0	.....	Normal School.
Clermont	.....	.....	29.84	758.0	69.3	20.7	33	N	.....	.....	3	.....	0	.....	.....	0	0	Clear	Puy de Dome Obs'y.
Commercy	.....	.....	29.94	760.5	61.0	16.2	47	NE	.....	.....	2	.....	8n	.....	NE	0	0	Very cloudy	Normal School.
Commune de Greasque*	.....	.....	29.91	759.6	74.1	23.4	35	SW	.....	.....	4	.....	8	.....	SW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.18	766.4	67.3	19.6	61	NW	.....	.....	4	.....	5ck	.....	NE	0.650	16.5	Cloudy	Normal School.
La Roche-sur-Yon	.....	.....	29.95	760.6	68.7	20.4	48	NE	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Le Mans	.....	.....	29.99	761.8	61.9	16.6	61	NE	.....	.....	3	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier	.....	.....	30.08	764.0	63.9	18.7	58	NW	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Macon	.....	.....	29.89	759.1	64.6	18.1	72	N	.....	.....	2	.....	5	.....	W	0	0	Cloudy	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	29.89	759.1	63.3	17.4	49	NNE	.....	.....	6	.....	5	.....	SW	0	0	Partly cloudy	Normal School.
Nismes	.....	.....	29.87	758.8	96.1	25.6	50	N	.....	.....	4	.....	2	.....	S	0.059	1.5	Slightly cl'dy	Normal School.
Orleans	.....	.....	29.91	759.8	65.8	18.8	34	NE	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Paris, Observatory	.....	.....	29.99	761.7	59.4	15.2	47	NNE	.....	.....	3	..c	..k	.....	N	0	0	Covered	National Observatory.
Parthenay	.....	.....	29.86	758.4	71.6	22	79	N	.....	.....	6	.....	5	.....	E	0	0	Cloudy	Normal School.
Privas	.....	.....	29.80	757.0	73.4	23	.....	NE	.....	.....	2	.....	2	.....	N	.....	.....	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	29.90	759.4	72.0	22.2	36	ENE	.....	.....	4	.....	2	.....	SW	0	0	¼ covered	Naval Observatory.
Rouen	.....	.....	30.02	762.5	65.8	18.8	45	NNE	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Saint Lo	.....	.....	29.97	761.3	64.4	18	53	NE	.....	.....	2	.....	2	.....	NE	0	0	.....	Normal School.
Tarbes	.....	.....	29.88	759.0	64.4	18	.....	W	.....	.....	2	.....	5	.....	E	0	0	Cloudy	Normal School
Villefranche	28.83	732.2	29.80	758.5	69.3	20.7	62	ENE	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.88	758.9	77.0	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	Blank	Blank	.....	L'Abbé Marchesi.
Marseilles	.....	.....	29.84	757.8	74.8	23.8	59	SE	.....	.....	1	.....	6	.....	.....	0.035	0.90	Cloudy	Marseilles Observatory.
Mont-Louis	.....	.....	30.11	764.7	48.0	8.9	92	NNW	1.9	0.83	.....	.....	10	.....	NE	0.457	11.6	Raining	—. Faiguère.
Montsouris, Paris	.....	.....	29.99	761.8	60.8	16.0	48	NE	.....	.....	2	.....	10	.....	.....	0	0	.....	Montsouris Observ'tory.
Perpignan	.....	.....	29.85	758.2	66.9	19.4	58	S	5.6	2.50	.....	.....	7	.....	NW	0.039	1.0	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Bayhac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.98	761.6	60.4	15.8	49	NNE	.....	.....	2	.....	10	.....	.....	0	0	Cloudy	E. Renou.
Toulouse	.....	.....	29.89	759.2	70.7	21.5	63	WSW	.....	.....	1	.....	8	.....	.....	0.001	0.1	.....	Toulouse Observatory.
Tours	.....	.....	29.93	760.3	65.8	18.8	39	ENE	.....	.....	2	.....	0	.....	.....	0	0	Solar halo	C. Marquet.
Versailles, (near Paris)	.....	.....	30.00	761.9	61.2	16.2	59	N	.....	.....	3	.....	0	.....	.....	0	0	Clear	Dr. A. Bérigny.
Zi Ka Wei, (near Shanghai	.....	.....	29.77	756.1	73.6	23.1	92	SSE	5.4	2.4	.....	5c	0	W	.....	0.469 0.571	11.9 14.5	Vapory	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 5,264.8 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,) 2,368 m., or 7,767.6 feet; Tarbes, 398 m., or 1,010 ft. In correcting the Mont-Louis barometric observations for altitude, the constant 135. mm. has been added. *Bouches-du-Rhône.

ERRATA—In Bulletin of June 1, 1876. For report of La Roche-sur-Yon, read that opposite Le Mans; for Le Mans, that opposite Lons-Le-Saulnier; for Lons-Le-Saulnier, that opposite Macon; for Macon, that opposite Mirecourt; for Mirecourt, that opposite Nismes; for Nismes, that opposite Orleans; for Orleans, that opposite Paris; for Paris, that opposite Parthenay; for Parthenay, that opposite Privas; for Privas, that opposite La Roche-sur-Yon.

GERMAN SERIES.

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

Bamberg	.....	.....	29.98	761.6	63.5	17.5	52	E	.....	.....	4	.....	5	ESE	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.09	764.3	62.6	17.0	59	S	.....	.....	1	.....	7	.....	.....	0.047	1.2	.....	Prof. Arndt.
Breslau	.....	.....	30.11	764.9	66.4	19.1	53	E	.....	.....	3	.....	8	.....	.....	0	0	.....	Dr. P. Nangeroau r.
Carlsruhe	.....	.....	29.91	759.8	64.8	18.2	45	NE	.....	.....	1	.....	10	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.02	762.4	65.3	18.5	43	ESE	.....	.....	4	.....	8	SSW	.....	0	0	.....	Dr. H. Möd.
Emden	.....	.....	30.13	765.4	56.5	13.6	65	NNE	.....	.....	3	.....	8	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.04	763.0	64.9	18.3	43	NE	.....	.....	3	.....	6	.....	.....	0	0	.....	Physical Society
Friedrichshafen	.....	.....	29.89	759.1	63.9	17.7	44	W	.....	.....	1	.....	5	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.10	764.4	56.7	13.7	75	Calm	.....	.....	0	.....	10	.....	.....	0.102	2.6	Cloudy	Captain F. Hegemann.
Kiel	.....	.....	30.08	763.9	59.0	15.1	67	SE	.....	.....	2	.....	5	.....	.....	0	0	.....	Prof. G. Karsten
Königsberg, (Prussia.)	.....	.....	30.11	764.7	77.0	25.0	45	SE	.....	.....	2	.....	4	.....	.....	0	0	.....	Prof. E. Luth r.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	30.07	763.8	62.6	17.0	55	E	.....	.....	2	.....	8	.....	.....	0	0	.....	Prof. Brunns.
Memel	.....	.....	30.15	765.9	73.2	22.9	54	NW	.....	.....	2	.....	58	ESE	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.08	763.9	60.4	15.8	63	.....	.....	.....	3	.....	10	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.12	765.1	57.2	14.0	85	NNW	.....	.....	3	.....	0	.....	.....	0	0	.....	A. Lothes.
Posen	.....	.....	30.15	765.8	67.8	19.9	54	N	.....	.....	5	.....	1	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.91	759.7	65.5	18.6	35	NE	.....	.....	3	.....	9	NW	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.92	759.9	65.3	18.5	31	SE	.....	.....	2	.....	8	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	30.09	764.2	74.1	23.4	50	E	.....	.....	3	.....	2	.....	.....	0	0	.....	Dr. Hasenbalg
Treves, (Trier)	.....	.....	29.93	760.1	63.1	17.3	42	E	.....	.....	5	.....	8	.....	.....	0	0	.....	Prof. Fiesch.
Wustrow, Naval School	.....	.....	30.01	762.3	63.3	17.4	73	ESE	.....	.....	2	.....	10	.....	.....	0.260	6.6	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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	.....	.....	29.98	761.6	75.0	23.9	.....	SW	.....	.....	.....	.....	..k	.....	.....	.....	.....	Clear	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

ITALIAN SERIES.

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

Udine	.....	.....	29.93	760.3	67.1	19.5	57	E	6.3	2.8	.....	.....	1	.....	.....	0.366	9.3	.....	
Padua	.....	.....	29.93	760.1	68.0	20.0	52	ENE	8.1	3.6	.....	.....	2	.....	.....	0	0	.....	
Vicenza	.....	.....	29.90	759.5	68.0	20.0	55	NE	1.3	0.6	.....	.....	8	E	.....	0	0	.....	
Verona	.....	.....	29.91	759.6	72.9	22.7	47	E	.....	.....	1	.....	6	.....	.....	0.039	1.0	.....	
Bergamo	28.60	726.5	29.86	758.5	62.2	16.8	74	SW	.....	.....	1	.....	10	.....	.....	0	0	.....	
Domodossola	28.93	734.9	29.93	760.1	62.6	17.0	84	SSW	.....	.....	2	.....	10	.....	.....	Blank	Blank	.....	
Milan	.....	.....	29.93	760.3	68.9	20.5	63	ESE	.....	.....	2	.....	10	WNW	.....	0	0	.....	
Pavia	.....	.....	29.93	760.1	66.6	19.2	61	NE	.....	.....	4	.....	9	SW	.....	0.35	9.0	.....	
Moncalieri	.....	.....	29.94	760.4	60.6	15.9	80	NNE	3.8	1.7	.....	.....	9	E	.....	0.220	5.6	.....	
Mondovi	28.06	712.7	29.91	759.6	55.0	12.8	93	NNW	.....	.....	4	.....	10	.....	.....	0.61	15.6	.....	
Porto Maurizio	.....	.....	29.93	760.2	71.4	21.9	73	E	.....	.....	4	.....	3	.....	.....	0	0	.....	
Genoa	.....	.....	29.91	759.6	72.5	22.5	45	S	1.6	0.8	.....	.....	2	.....	.....	0	0	.....	
Piacenza	.....	.....	29.93	760.3	66.2	19.0	63	SE	11.9	5.3	.....	.....	10	SE	.....	0	0	.....	
Parma	.....	.....	29.92	759.9	70.3	21.3	59	E	.....	.....	4	.....	8	.....	.....	0	0	.....	
Bologna	.....	.....	29.95	760.6	74.5	23.6	44	WNW	.....	.....	1	.....	6	W	.....	0	0	.....	
Florence	.....	.....	29.91	759.8	77.0	25.5	44	S	.....	.....	4	.....	8	S	.....	0	0	.....	
Leghorn	.....	.....	29.88	758.9	75.9	24.4	41	WSW	5.6	2.5	.....	.....	7	.....	.....	0	0	.....	
Siena	28.70	729.0	29.86	758.5	74.5	23.6	35	SE	0	0	.....	.....	6	SW	.....	1.386	35.2	Rain and hail	
Urbino	28.41	721.6	29.92	759.9	65.1	18.4	63	NNE	.....	.....	4	.....	6	.....	.....	0	0	.....	
Pesaro	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ancona	.....	.....	29.95	760.6	73.0	22.8	72	Calm	.....	.....	0	.....	7	.....	.....	0	0	.....	
Grosseto	.....	.....	29.93	760.1	76.6	24.8	55	SSE	.....	.....	2	.....	6	S	.....	0	0	.....	
Rome	.....	.....	29.91	759.8	75.6	24.2	45	SW	4.3	1.9	.....	.....	4	.....	.....	0	0	.....	
Naples, O. U	.....	.....	29.93	760.3	76.5	24.7	51	SW	.....	.....	4	.....	9	SW	.....	0	0	.....	
Lecce	.....	.....	29.95	760.6	76.3	24.9	32	SSE	15.0	6.7	.....	.....	6	.....	.....	0	0	.....	
Cosenza	.....	.....	29.91	759.6	82.4	28.0	67	WSW	3.8	1.7	.....	.....	6	.....	.....	0	0	.....	
Riposto, (Sicily)	.....	.....	29.93	760.3	69.8	21.4	72	E	.....	.....	2	.....	8	.....	.....	0	0	.....	
Palermo	.....	.....	29.88	759.0	71.2	21.8	63	NNE	8.1	3.6	.....	.....	10	.....	.....	0	0	.....	
Caltanissetta	27.97	710.5	29.87	758.8	73.2	22.9	26	S	.....	.....	1	.....	10	N	.....	0	0	.....	
Sub-Series.																			
Naples, S. R	.....	.....	29.98	761.4	73.9	23.3	64	SW	0.7	0.3	.....	.....	6	W	.....	0	0	.....	Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Tokio	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NETHERLANDS' SERIES.

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

Flushing	.....	.....	30.09	764.2	58.6	14.8	.....	NE	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
Groningen	.....	.....	30.04	763.0	56.5	13.6	.....	N	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
Helder	.....	.....	30.08	764.0	55.4	13.0	.....	NE	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
Utrecht	.....	.....	30.03	762.7	58.6	14.8	55	ENE	.....	.....	3	.....	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.

Bergen	.....	.....	30.10	764.4	65.5	18.6	51	SSW	15.7	7.0	.....	.....	0	.....	.....	0	0	.....	.....
Brönö	.....	.....	30.22	767.5	48.2	9.0	97	SW	25	11	.....	.....	10	.....	.....	1.055	26.8	Raining	.....
Christiania	.....	.....	30.15	765.8	71.1	21.7	28	WSW	8.1	3.6	.....	.....	0	.....	.....	0	0	.....	.....
Tromsö	.....	.....	29.65	753.1	47.7	8.7	84	SW	20	9	.....	.....	10	.....	.....	0.031	0.8	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 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,)	.....	.....	30.22	767.6	65.3	18.5	77	N	3.2	1.45	.....	.....	5	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.85	758.3	74.3	23.5	48	SW	5.2	2.33	.....	.....	6	WNW	.....	0.035	0.9	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.06	763.4	67.8	19.9	65	SW	4.2	1.88	.....	.....	3	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	29.93	760.1	69.1	20.6	62	NW	9.8	4.4	.....	.....	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 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	.....	.....	30.01	762.2	70.8	24.0	40	ESE	18	8	.....	.....	6	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.10	764.5	79.2	26.2	31	E	9	4	.....	.....	4	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.27	768.9	68.5	20.3	32	ESE	4	2	.....	.....	1	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.29	769.3	62.2	16.8	37	WNW	7	3	.....	.....	2	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	30.11	764.9	66.6	19.2	51	WSW	31	15	.....	.....	2	.....	.....	.....	.....	.....	Ch. Forsten.
Kief	.....	.....	29.86	758.5	63.9	17.7	89	NE	9	4	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.88	759.0	73.0	22.8	65	SSE	18	8	.....	.....	10	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.95	761.0	70.9	21.6	69	S	13	6	.....	.....	5	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.18	766.6	75.2	24.0	50	N	4	2	.....	.....	3	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.84	757.8	80.4	26.8	40	E	22	10	.....	.....	8	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	30.06	763.4	55.9	13.3	53	NW	9	4	.....	.....	5	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.54	725.0	29.81	757.0	94.6	34.8	18	SW	4	2	.....	.....	3	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.02	762.5	81.1	27.3	44	E	22	10	.....	.....	2	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.99	761.9	72.5	22.5	46	N	2	1	.....	.....	8	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg																			Tchernitschef.
Ekaterinburg	28.08	730.0	29.92	760.0	75.6	24.2	28	WSW	18	8	.....	.....	6	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.06	763.5	85.8	29.9	21	NNE	13	6	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly																			Bobrof.
Tashkend	28.35	720.0	29.98	761.4	77.0	25.0	57	Calm	0	0	.....	.....	8	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.74	755.4	67.2	14.0	90	NNW	9	4	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.61	752.0	65.3	13.5	75	NNW	2	1	.....	.....	10	.....	.....	.....	Raining	.....	Marks.
Irkutsk	28.30	718.7	29.63	752.6	58.1	14.5	50	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Usolzef.
Gorga	.....	.....																	Mossin.
Peking, (China)	.....	.....	29.90	759.4	69.1	20.6	33	NNW	13	6	.....	.....	1	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Raining	.....	Meteorological Obs.
Vladivostock	.....	.....	29.87	758.6	46.4	8.0	88	SE	18	8	.....	.....	10	.....	.....	.....	Lunar corona	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	44.6	7.0	92	ESE	13	6	.....	.....	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, 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, 1,281.6 m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	29.76	755.9	75.9	24.4	71	SE	6.7	3.00	.....	0	5	.....	.....	0.031	0.8	Cloudy.....	Royal Observatory.
San Fernando	.....	.....	29.94	760.5	67.8	19.9	64	WSW	11.2	5.0	.....	0	4	.....	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.

Haparanda	.....	.....	29.93	760.1	43.5	6.4	79	SW	.....	.....	2	.....	7	.....	.....	0	0	.....	
Umea	.....	.....	30.06	763.5	65.8	18.8	51	SW	.....	.....	2	.....	8	.....	.....	0	0	.....	
Hernosand	.....	.....	30.07	763.6	68.7	20.4	36	SW	.....	.....	4	.....	5	.....	.....	0	0	.....	
Stockholm	.....	.....	30.21	767.3	67.8	19.9	49	SSE	.....	.....	2	.....	1	.....	.....	0	0	.....	
Wisby	.....	.....	30.23	767.8	67.6	19.8	54	SSE	.....	.....	4	.....	0	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.20	767.1	72.6	22.5	55	S	11.0	5.2	.....	.....	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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. 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	28.48	723.4	29.88	759.0	62.1	16.7	50	N	.....	.....	1	.....	6	.....	.....	0	0	Vapory	The Observatory.
Zurich	28.29	718.6	29.90	759.4	64.2	17.9	51	NE	.....	.....	1	.....	2	.....	.....	0	0	Clear	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note—For Geneva the corresponding departures from the normal values are: Barometer, −2.5 mm; Thermometer, −2.4 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.

Constantinople	.....	.....	29.97	761.1	71.6	22.0	61	S	7	3.0	.....	.....	2	.....	WNW	0	0	.....	.....
Fao, (Persian Gulf)	.....	.....	29.94	760.5	96.8	36.0	.....	SE	.....	.....	1	.....	0	.....	.....	.....	.....	.....	.....
Salonica	.....	.....	29.99	761.8	69.8	21.0	.....	SW	.....	.....	2	.....	2	.....	.....	.....	.....	.....	.....
Valona	.....	.....	29.92	760.0	76.1	24.5	.....	SW	.....	.....	2	.....	2	.....	.....	.....	.....	.....	.....
Varna	.....	.....	29.86	758.5	68.0	20.0	.....	N	.....	.....	2	.....	8	.....	.....	.....	.....	Stormy	.....
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.97	761.1	75.9	24.4	64	N	.....	.....	3	.....	2c	.....	.....	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.	.....	.....	29.74	755.4	66.1	18.9	72	NE	3	1.3	.....	0	.....	.....	.....	0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.83	757.7	77	25.0	.....	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	W. R. Bigg.
*Chatham, N. B.	.....	.....	29.81	757.2	63	17.2	53	SW	2	0.9	.....	0	0	.....	.....	0	0	Clear	G. A. Blair.
Charlottetown P. E. Island.	.....	.....	29.91	759.7	59	15.0	77	S	8	3.6	.....	5cs	0	.....	.....	0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.76	755.9	78.0	25.6	61	SE	.....	.....	1	0	0	.....	.....	0	0	Bright	James Smith, M. A.
Dalhousie, N. B.	.....	.....	29.77	756.1	69.0	20.6	61	W	.....	.....	2	0	0	.....	.....	0	0	.....	H. A. Johnson.
Esquimault, B. C.	.....	.....	30.00	762.0	52.3	11.3	93	Calm	0	0	.....	10cs	0	.....	.....	0.08	2.0	Cloudy	W. H. Bevis.
Fredericton, N. B.	.....	.....	29.90	759.4	54.1	12.3	57	N	1	0.4	.....	0	0	.....	.....	0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.78	756.4	41	5.0	95	NE	20	8.9	.....	5k	5n	NE	NE	1.12	28.4	Cloudy	James Stewart.
Goderich, Ontario	.....	.....	29.74	755.4	71.9	22.2	87	SW	.....	.....	1	3k	3n	SW	.....	0.216	5.48	Threatening	H. J. Strang, M. A.
Granton, Ontario	28.69	728.7	29.74	755.4	69	20.6	.....	SW	.....	.....	1	2cs	0	E	.....	0.05	1.3	Clear	James Grant.
*Halifax, N. S.	.....	.....	29.91	759.7	55	12.8	93	SE	1	0.4	.....	.....	For	.....	.....	0.04	1.0	Foggy	F. Allison, M. A.
*Kingston, Ontario	.....	.....	29.85	758.2	61	16.1	72	SW	6	2.7	.....	Haze	Sm'e	.....	.....	0	0	Clear	S. Woods, M. A.
Little Glace Bay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. H. Rigby.
*Montreal, Quebec	.....	.....	29.79	756.7	69	20.6	55	S	8	3.6	.....	0	Haze	.....	.....	0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.77	756.1	73	22.8	62	Calm	0	0	.....	2c	Sm'e	.....	.....	0	0	Fair	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.70	754.4	68	20.0	89	S	11	4.9	.....	2ck	5ks	S	S	0.01	0.3	Fair	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	29.80	756.9	65	18.3	89	S	7	3.1	.....	.....	10n	.....	S	Inap.	Inap.	Light rain	H. Morgan.
Port Hastings, N. S.	.....	.....	29.96	761.0	47.3	8.5	.....	SE	4	1.8	.....	.....	.....	.....	.....	0	0	Foggy	Peter Grant.
*Port Stanley Ontario	.....	.....	29.81	757.2	62	16.7	93	SE	4	1.8	.....	.....	10n	.....	W	0.01	0.3	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	29.80	756.9	74	23.3	55	Calm	0	0	.....	Haze	Haze	.....	.....	0	0	Hazy	Capt. Ashe, R. N.
St. John, N. B.	.....	.....	29.94	760.5	54	12.2	80	S	4	1.8	.....	4k	0	.....	.....	0	0	Fair	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.68	753.9	68	20.0	78	SW	6	2.7	.....	.....	10n	.....	.....	0.10	2.5	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	29.70	754.4	74	23.3	79	W	3	1.3	.....	.....	8n	.....	W	Inap.	Inap.	Cloudy	R. J. Cole.
Stratford, Ontario	28.41	721.6	29.63	752.6	65.8	18.8	99	SW	8	3.6	.....	.....	10n	.....	.....	0.293	7.45	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.	.....	.....	29.96	761.0	62	16.7	86	SW	4	1.8	.....	.....	10n	.....	S	0	0	Cloudy	T. C. Hill.
*Toronto, Ontario	.....	.....	29.79	756.7	63	17.2	88	SE	1	0.4	.....	5ck	5	W	W	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.75	755.6	67.8	19.9	94	S	14	6.3	.....	.....	10s	.....	.....	0.20	5.1	Fine	J. Montgomery
Sub-Series.																			
St. John's, Newfoundland.	.....	.....	30.07	763.8	72.0	22.2	71	SW	.....	.....	.....	5k	5s	.....	.....	0	0	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.	.....	.....	29.85	758.2	67	19.4	68	Calm	0	0	.....	Haze	Haze	.....	.....	0	0	Hazy	
Alpena, Mich	.....	.....	29.02	752.3	61	16.1	94	Calm	0	0	.....	.....	10s	.....	W	0.02	0.5	Cloudy	
Atlantic City, N. J	.....	.....	29.90	759.4	63	17.2	72	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.00	762.0	76	24.4	77	S	4	1.8	.....	10k	0	W	.....	0	0	Cloudy	
Baltimore, Md	.....	.....	29.90	759.4	66	18.9	68	SE	2	0.9	.....	8cs	Sm'e	.....	.....	0	0	Fair	
Barnegat, N. J	.....	.....	29.89	759.2	66	18.9	59	W	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Benton, Montana	27.33	694.2	30.13	765.3	37	2.8	51	SW	11	4.9	.....	5c	0	N	.....	0.17	4.3	Fair	
Bismarck, Dakota	28.00	711.2	29.67	754.6	37	2.8	62	NW	6	2.7	.....	8k	Haze	NW	.....	0.22	5.6	Cloudy	
Boston, Mass	.....	.....	29.91	759.7	55	12.8	68	N	2	0.9	.....	10cs	Haze	W	.....	0	0	Cloudy	
Breckenridge, Minn	.....	.....	29.69	754.1	40	4.4	73	SW	16	7.2	.....	0	2s	.....	SW	Inap.	Inap.	Clear	
Buffalo, N. Y	.....	.....	29.76	755.9	70	21.1	75	SW	4	1.8	.....	2ck	5ks	SW	SW	0	0	Fair	
Burlington, Vt	.....	.....	29.83	757.7	69	20.6	65	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Cairo, Ill	.....	.....	29.83	757.7	72	22.2	90	SW	2	0.9	.....	.....	10s	.....	.....	0.30	7.6	Cloudy	
Cape Hatteras, N. C	.....	.....	29.88	758.9	73	22.8	76	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Cape Henry, Va	.....	.....	29.90	759.4	73	22.8	67	W	3	1.3	.....	0	Haze	.....	.....	0	0	Clear	
Cape Lookout, N. C	.....	.....	29.95	760.7	72	22.2	85	W	15	6.7	.....	0	Haze	.....	.....	0	0	Clear	
Cape May, N. J	.....	.....	29.91	759.7	63	17.2	88	W	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Charleston, S. C	.....	.....	30.03	762.7	75	23.9	81	SW	4	1.8	.....	.....	10s	.....	W	0	0	Cloudy	
Cheyenne, Wyoming	23.98	609.1	29.02	760.0	35	1.7	69	SW	8	3.6	.....	1ck	10s	W	.....	0	0	Fair	
Chicago, Ill	.....	.....	29.76	755.9	68	20.0	84	SW	4	1.8	.....	.....	10s	.....	.....	0.91	23.1	Cloudy	
Cincinnati, Ohio	.....	.....	29.80	756.9	70	21.1	90	W	4	1.8	.....	.....	10n	.....	W	1.15	29.2	Heavy rain	
Cleveland, Ohio	.....	.....	29.80	756.9	70.8	21.6	78	SW	7	3.1	.....	8k	0	SW	.....	0	0	Fair	
Colorado Springs, Col	24.05	610.9	29.92	760.0	43	6.1	67	N	4	1.8	.....	1c	0	NE	.....	0	0	Clear	
Corsicana, Tex	.....	.....	29.80	756.9	77	25.0	90	SE	3	1.3	.....	.....	10s	.....	SE	0	0	Cloudy	
Davenport, Iowa	.....	.....	29.81	757.2	66	18.9	68	Calm	0	0	.....	7cs	Haze	NW	.....	1.85	47.0	Fair	
Denison, Tex	.....	.....	29.80	756.9	74	23.3	85	SE	12	5.4	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Denver, Col	24.78	629.4	30.00	762.0	41	5.0	74	N	1	0.4	.....	5k	0	NW	.....	0	0	Fair	
Detroit, Mich	.....	.....	29.74	755.6	69	20.6	84	SW	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Dodge City, Kan	27.24	691.9	29.44	747.8	59	15.0	64	N	14	6.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Dubuque, Iowa	.....	.....	29.89	759.2	62	16.7	77	S	2	0.9	.....	0	0	.....	.....	0.05	1.3	Clear	
Duluth, Minn	.....	.....	29.71	754.6	48	8.9	77	Calm	0	0	.....	8ck	0	SW	.....	0.35	8.9	Fair	
Eastport, Me	.....	.....	29.89	759.2	55	12.8	61	Calm	0	0	.....	0	8s	.....	.....	0	0	Fair	
Erie, Pa	.....	.....	29.76	755.9	73	22.8	76	S	10	4.5	.....	2k	8ks	SW	SW	0.08	2.0	Cloudy	
Escanaba, Mich	.....	.....	29.70	754.4	64	17.8	67	NW	12	5.4	.....	5k	0	NW	.....	0	0	Fair	
Fort Gibson, Indian Ter	.....	.....	29.73	755.1	73	22.8	76	SE	4	1.8	.....	8cs	0	W	.....	0.09	2.3	Fair	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T	28.54	724.6	29.58	751.3	75	23.9	85	SE	12	5.4	.....	.....	10s	.....	SE	0	0	Cloudy	
Fort Sully, Dakota	28.14	714.7	29.81	757.2	39	3.9	63	NW	24	10.7	.....	5ck	0	NW	.....	Inap.	Inap.	Fair	
Galveston, Tex	.....	.....	29.87	758.7	81	27.2	85	SE	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Grand Haven, Mich	.....	.....	29.78	756.4	58	14.4	87	W	5	2.2	.....	.....	Fog	.....	.....	0	0	Foggy	
Indianapolis, Ind	.....	.....	29.79	756.7	71	21.7	95	E	2	0.9	.....	.....	10s	.....	SE	0.78	19.8	Threatening	
Indianola, Tex	.....	.....	29.85	758.2	79	26.1	90	SE	4	1.8	.....	10k	0	S	.....	0	0	Cloudy	
Jacksonville, Fla	.....	.....	30.02	762.5	79	26.1	69	E	5	2.2	.....	9c	0	W	.....	0	0	Fair	
Keokuk, Iowa	.....	.....	29.76	755.9	67	19.4	64	E	2	0.9	.....	5k	0	E	.....	1.00	25.4	Fair	
Key West, Fla	.....	.....	30.06	761.0	81.2	27.3	82	S	6	2.7	.....	1k	2ks	SW	.....	0	0	Fair	
Kittyhawk, N. C	.....	.....	29.91	759.7	71	21.7	75	NW	7	3.1	.....	0	Haze	.....	.....	0	0	Clear	
Knoxville, Tenn	.....	.....	29.94	760.5	70	21.1	90	Calm	0	0	.....	5ck	0	SW	.....	0.24	6.1	Fair	
La Crosse, Wis	.....	.....	29.75	755.6	65	18.3	78	SE	6	2.7	.....	0	0	.....	.....	0.07	1.8	Clear	
Leavenworth, Kan	.....	.....	29.79	756.7	59	15.0	81	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Lexington, Ky	28.80	731.5	29.85	758.2	71	21.7	95	S	8	3.6	.....	.....	10s	.....	S	0.35	8.9	Cloudy	
Long Branch, N. J	.....	.....	29.90	759.4	62	16.7	77	W	1	0.4	.....	0	Haze	.....	.....	0	0	Clear	
Louisville, Ky	.....	.....	29.82	757.4	73	22.8	90	S	2	0.9	.....	.....	10ks	.....	SW	0.96	24.4	Threatening	
Lynchburg, Va	.....	.....	29.87	758.7	74	23.3	72	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y	.....	.....	29.73	755.1	75	23.9	56	S	8	3.6	.....	Haze	0	.....	.....	0	0	Fair	
Manhattan, Kan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Marquette, Mich	.....	.....	29.78	756.4	43	6.1	83	NW	8	3.6	.....	.....	8s	.....	NW	0	0	Cloudy	
Memphis, Tenn	.....	.....	29.89	759.2	73	22.8	90	W	6	2.7	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Milwaukee, Wis	.....	.....	29.79	756.7	64	17.8	78	W	4	1.8	.....	5c	Fog	SW	.....	0.02	0.5	Cloudy	
Mobile, Ala	.....	.....	29.92	760.0	78	25.6	86	S	4	1.8	.....	.....	10s	.....	S	0.63	16.0	Cloudy	
Montgomery, Ala	.....	.....	30.08	764.0	74	23.3	88	Calm	0	0	.....	.....	10s	.....	.....	0.20	5.1	Cloudy	
Morgantown, W. Va	.....	.....	29.91	759.7	79	26.1	61	SW	11	4.9	.....	8c	0	W	.....	0	0	Fair	
Mt. Washington, N. H	23.88	606.5	30.24	768.1	57	13.9	40	NE	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Nashville, Tenn	.....	.....	29.87	758.7	75	23.9	81	S	3	1.3	.....	.....	10s	.....	.....	0.04	1.0	Cloudy	
New Haven, Conn	.....	.....	29.89	759.2	67	19.4	53	NE	5	2.2	.....	0	0	.....	.....	0	0	Clear	
New London, Conn	.....	.....	29.91	759.7	51	10.6	72	N	5	2.2	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
New Orleans, La	.....	.....	29.88	758.9	73	22.8	88	SE	12	5.4	.....	.....	10n	.....	.....	1.48	37.6	Light rain	
Newport, R. I	.....	.....	29.91	759.4	55	12.8	80	N	8	3.6	.....	.....	10s	.....	N	0	0	Cloudy	
New York, N. Y	.....	.....	29.90	759.4	64	17.8	62	NE	5	2.2	.....	0	Haze	.....	.....	0	0	Hazy	
Norfolk, Va	.....	.....	29.92	760.0	73	22.8	63	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Clear	
North Platte, Neb	.....	.....	29.62	752.3	43	6.1	43	NW	10	4.5	.....	0	2s	.....	NW	0	0	Clear	
Omaha, Neb	27.01	686.8	29.82	757.4	54	12.2	61	N	18	8.0	.....	2ck	0	SW	.....	0	0	Clear	
Oswego, N. Y	28.81	731.8	29.86	758.4	54	12.2	61	N	18	8.0	.....	2ck	0	SW	.....	0	0	Cloudy	
Pembina, Dakota	.....	.....	29.80	756.9	70	21.1	68	SE	4	1.8	.....	8ck	2s	SW	SW	0	0	Cloudy	
Philadelphia, Penn	.....	.....	29.64	752.8	44	6.7	83	SE	8	3.6	.....	2c	2ks	.....	SE	0.86	21.8	Fair	
Pike's Peak, Colorado	17.71	449.8	29.91	759.7	66	18.9	68	W	2	0.9	.....	0	Sm'e	.....	.....	0	0	Clear	
Pittsburgh, Penn	.....	.....	29.92	760.0	15	− 9.4	67	W	28	12.5	.....	0	2s	.....	.....	0	0	Fair	
Port Huron, Mich	.....	.....	29.78	756.4	75	23.9	68	S	13	5.8	.....	2cs	0	NW	.....	0	0	Fair	
Portland, Me	.....	.....	29.73	755.1	70	21.1	84	SW	15	6.7	.....	.....	10s	.....	W	Inap.	Inap.	Cloudy	
Portland, Oregon	.....	.....	29.93	760.2	54	12.2	67	Calm	0	0	.....	2ck	Haze	W	.....	0	0	Fair	
Punta Rassa, Fla	.....	.....	30.12	765.0	54	12.2	80	S	4	1.8	.....	.....	1ns	.....	.....	0.04	1.0	Cloudy	
Rochester, N. Y	.....	.....	29.99	761.7	77.7	25.4	86	E	8	3.6	.....	Haze	5ks	.....	SE	0	0	Fair	
Salt Lake City, Utah	25.56	649.2	29.78	756.4	71	21.7	75	SW	4	1.8	.....	10cs	0	SW	.....	0.11	2.8	Cloudy	
Sandy Hook, N. J	.....	.....	29.89	759.2	50	10.0	51	Calm	0	0	.....	.....	10s	.....	NE	6	0	Cloudy	
San Diego, Cal	.....	.....	29.89	759.2	63	17.2	73	E	6	2.7	.....	Haze	Haze	.....	.....	0	0	Hazy	
San Francisco, Cal	.....	.....	29.98	761.5	57	13.9	93	Calm	0	0	.....	0	2s	.....	.....	0	0	Fair	
Santa Fe, N. M	.....	.....	29.94	760.5	51	10.6	80	S	4	1.8	.....	Haze	Haze	.....	.....	0	0	Hazy	
Savannah, Ga	23.24	590.3	29.78	756.4	55	12.8	68	SW	6	2.7	.....	5c	0	SW	.....	0	0	Fair	
Shreveport, La	.....	.....	30.01	762.2	81	27.2	70	SW	4	1.8	.....	2c	2ks	NE	SW	0	0	Hazy	
Smithville, N. C	.....	.....	29.89	759.2	74	23.3	90	SE	5	2.2	.....	2ck	0	NW	.....	0.21	5.3	Fair	
Springfield, Mass	.....	.....	29.97	761.2	73	22.8	76	SW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
St. Louis, Mo	.....	.....	30.00	762.0	65	18.3	58	N	4	1.8	.....	0	Haze	.....	.....	0	0	Clear	
St. Marks, Fla	.....	.....	29.82	757.4	70	21.1	84	S	8	3.6	.....	.....	10s	.....	.....	0.42	10.7	Cloudy	
St. Paul, Minn	.....	.....	29.96	761.0	70	21.1	82	SE	6	2.7	.....	2cs	8s	.....	SE	0	0	Cloudy	
St. Paul's Island, Alaska	.....	.....	29.71	754.6	57	13.9	75	SW	5	2.2	.....	.....	10ks	.....	SW	0.15	3.8	Cloudy	
Thatcher's Island, Mass	.....	.....	29.77	756.1	34	1.1	90	W	3	1.3	.....	10ck	0	W	.....	0	0	Cloudy	
Toledo, Ohio	.....	.....	29.93	760.2	50	10.0	93	NE	5	2.2	.....	.....	10s	.....	S	0	0	Cloudy	
Tucson, Arizona	.....	.....	29.75	755.6	72	22.2	85	S	2	0.9	.....	.....	10ks	.....	S	Inap.	Inap.	Cloudy	
Tybee Island, Ga	27.49	698.2	30.08	764.0	68	20.0	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Vicksburg, Miss	.....	.....	30.01	762.2	79	26.1	78	Calm	0	0	.....	0	8ks	.....	SW	0	0	Cloudy	
	.....	.....	29.91	759.7	71	21.7	90	Calm	0	0	.....	5ck	2s	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.	Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	28	— 2.2	77	E	4	1.8		1c	0c	NW		0.01	0.3	Clear.	
Washington, D. C.			29.90	759.4	66.5	19.2	68	Calm	0	0		0	Haze			0	0	Clear.	
Wilmington, N. C.			29.96	761.0	75	23.9	72	W	5	2.2		0	0			0	0	Clear.	
Wood's Holl, Mass.			29.90	759.4	62	16.7	71	N	4	1.8		0	5s		NE	0	0	Fair.	
Wytheville, Va	27.65	702.3	29.73	754.9	66	18.9	90	Calm	0	0			10k		W	0	0	Threatening	
Yankton, Dakota	28.64	727.4	29.93	760.2	40	7.8	54	NW	15	6.7		0	0			0	0	Clear.	
Yuma, Arizona			29.94	760.5	70	21.1		NE				0	0			0	0	Clear.	
Sub Series.																			
Bridgetown, B'b'dos, W. I.			30.02	762.5	81	27.2	78	E	7	3.1		5k	1n	E		0.20	5.1	Cloudy.	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.94	760.5	79	26.1	90	E				10k?	0?			0.63	16.0	Rainy.	L. V. Bigard.
Kingston, Jamaica, W. I.			30.12	765.0	80	26.7	82	Calm	0	0		2c	2s			0	0		James Gall.
Santiago de Cuba, W. I.			29.74	755.4	79	26.1	78	Calm	0	0		0	2ss			Inap.	Inap.	Fair.	Robert Mason.
Havana, Cuba, W. I.			29.95	760.7	83	28.3	79	SE	2.4	1.1		0	0			0	0	Clear.	Charles Hasselbrink.
St. Georges, Bermudas			30.00	762.0	77.5	25.3	78	SSW	4.0	1.8			8k			0	0	Fair.	C. F. Allen.
St. John's Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.18	690.4	29.96	761.0	69	20.6	90	S	3.0	1.3		5c	0	S		0.27	6.9	Fine.	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.01	762.2	81	27.2	91	E	3	1.3			10n		E	1.150	29.2	Heavy rain.	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.7			80.6	27.0										0.020	0.5		Dr. H. Groot.
Medellin, Colombia, S. A.	25.23	640.8			64.0	17.8	85	SW	2	0.9		5cs	2s			0.84	21.3	Fair.	Thomas Herran.
York Factory, B. A.			30.25	768.3	30	— 1.1	95	NE	4	1.8		0	7s		E	0	0		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.																			Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.

Maline Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—		
Steamer Hibernian,						Lieut F. Archer, R.N.R.
Steamer Leipzig, N. 43° 19′, W. 49° 41′.	N 5½ E		30.31	769.9	45.5	7.5	S		3	Fog	Tranq'l		Foggy	Capt. Ritchie.
Steamer Nova Scotian, N. 48° 31′, W. 47° 38′.	E by S	11¼	30.03	762.7	51	10.6	WSW		4	Fog	Moderate		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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,012 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,840 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,293.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,291 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, 0.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. 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 JUNE 3, 1876.

7:35 A. M. WASHINGTON mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours	.....	.....	30.02	762.4	73.8	23.2	63	NNW	.....	.....	1	.....	1	.....	.....	0	0	Clear	Charnot.
Algiers	.....	.....	29.93	760.1	68.4	20.2	80	NW	.....	.....	2	.....	9	.....	.....	0.29	7.5	Hidden	Peter.
La Calle	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Kunts.
Tunis	.....	.....	29.81	757.2	68.4	20.2	89	NE	.....	.....	4	.....	10	.....	.....	0.453	11.5	Hidden	Jacques.
Sfax	.....	.....	29.76	756.0	74.8	23.8	69	NE	.....	.....	3	.....	5	.....	.....	0.039	1.0	Fair	Chauvey.
Salda	.....	.....	30.07	763.6	62.6	17.0	70	NNW	.....	.....	3	.....	3	.....	.....	0	0	Fair	Millot.
Tebessa	.....	.....	29.87	758.7	54.3	12.4	.....	W	.....	.....	1	.....	10	.....	.....	0	0	Hidden	Colin.
Geriville	.....	.....	30.03	762.8	59.0	15.0	53	NNW	.....	.....	3	.....	6	.....	.....	0	0	Fair	Buard.
Laghouat	.....	.....	29.95	760.8	75.2	24.0	53	SW	.....	.....	4	.....	1	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	29.83	757.6	68.0	20.0	83	NW	.....	.....	5	.....	10	.....	.....	0.079	2.0	Hidden	Laromer.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

AUSTRIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram	.....	.....	29.87	758.6	78.0	25.9	43	SW	.....	.....	2	.....	3	.....	.....	0	0	.....	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	29.91	759.7	63.7	17.6	96	NE	.....	.....	1	.....	10	.....	.....	0.283	7.22	.....	Dr. Wierzbicki.
Eperies	.....	.....	29.82	757.4	68.9	20.5	74	NW	.....	.....	1	.....	5	.....	.....	0.274	6.95	.....	Julius Mikolik.
Gratz	.....	729.4	29.87	758.8	73.4	23.0	49	SW	.....	.....	2	.....	0	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	28.72	723.1	29.85	758.3	61.0	17.2	74	WNW	.....	.....	4	.....	10	.....	.....	0.539	13.70	.....	Prof. Reissenberger.
Kremsmünster	28.47	730.6	30.07	763.8	67.2	19.6	54	NW	.....	.....	2	.....	5	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	28.77	.....	29.81	757.2	67.6	19.8	69	NE	.....	.....	1	.....	8	.....	.....	0	0	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Pola	.....	.....	29.97	761.3	72.5	22.6	64	SE	.....	.....	1	.....	2ks	.....	.....	0	0	.....	I.R.Hydrographic Office.
Segegdin	.....	.....	29.80	756.4	74.7	23.7	61	W	.....	.....	3	.....	8	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	29.98	761.6	75.1	23.9	57	Calm	.....	.....	0	.....	0	.....	.....	0	0	Clear	Prof. V. Farolfi.
Vienna	.....	.....	29.83	757.6	73.8	23.2	40	NE	.....	.....	2	.....	1	.....	.....	0	0	.....	I. R. Central Met. Obs'y.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 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	.....	.....	29.87	758.9	64.4	18.0	53	W	.....	.....	4	.....	2	.....	.....	0	0	.....	Royal Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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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			29.48	748.8	53.9	12.2		SSE	26	11.6			9			0	0	Misty	William Boswell.
Ardrossan			29.46	748.3	52	11.1		SSW			5		9					Raining	William McNeil.
Armagh, Observatory			29.44	747.8	58.9	14.9		SSW	17	7.6			10					Raining	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.53	750.0	52.2	11.2		WSW			3-4		10					Raining	J. Dreyer.
Bradford			29.67	753.6	61.5	16.4		SW			1		10			0	0	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	84	28.9		NE			3		7					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			29.81	757.2	62.5	16.9		S			2		10			Blank	Blank	Overcast	H. Todd.
Cardington			29.81	757.2	67.6	19.8		W			1		7					*D. clouds	John McLaren.
Carlisle			29.54	750.3	63.4	11.9		SW			5		10			0.27	6.9	Showery	T. Bell, for J. Carmell.
Chatham, School M. E			29.85	758.2	63.7	17.6		SW			3		4					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.42	721.9	29.89	759.2	63.0	17.2		SW			4		5					Blue sky	R. E. Power.
Donaghadee			29.44	747.8	52	11.1		SSW			4		10					Raining	J. Mac Gowan.
Dover			29.88	758.9	58	14.4		WSW			2		3					¼ clouded	J. Costello.
Eccles (near Manchester.)			29.68	753.9	60.7	15.9		SSW	9.2	4.1			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			29.86	758.4	60.5	15.8		SW	31	13.9			9					Squally	The Staff.
Fort Napier, (Natal)	.795	709.9	30.20	767.1	63.2	17.3		E			1		8					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	84.0	28.9		N			2		6					*D. clouds	
Galway, Queen's College			29.48	748.8	57	13.9		SW			6		4					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.07	763.8	72.0	22.2		W			5		1						Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			29.45	748.0	52.0	11.1		S			2		10					Raining	Lewis Stuart.
Great Yarmouth			29.84	757.9	55	12.8		SSE			4		2					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			29.85	758.2	66.7	19.3		SW			2		2			Blank	Blank	Blue sky	The Staff, for G. B. Airy.
Guernsey			29.92	760.0	63	17.2		SSW			2		0					Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y			29.69	754.1	60.5	15.8		SW			2		10					Threatening	L. J. Crossley.
Helston			29.95	760.7	63	17.2		SW			6		2c			0.6	15.2	Fine	M. P. Moyle.
Holyhead			29.59	751.6	52	11.1		SSW			6		10					Raining	John Tilston.
Kew, Observatory			29.84	757.9	62.5	16.9		SSW	17	7.6			7					*D. clouds	The Staff.
Kingstown			29.55	750.6	55	12.8		S			3		10					Raining	George Mitchell.
Leicester Museum			29.77	756.1	64.4	18.0		SW			2		7					Hazy	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.74	755.4	71.6	22.0		SE			4		8k					*D. clouds	Sergt. F. Travis, A. H. C.
Nairn																			W. D. Penny.
Nassau, (Bahamas			30.03	762.7	79.6	26.4		NE			6		6					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.73	755.1	65.0	18.3		SSW			4		10k,d		SSW	0.72	1.82	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.74	755.4	62.8	17.1		SSW			4		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.79	756.7	65	18.3		SW			1		10					Overcast	J. Lucas.
Plymouth			29.88	758.9	63.4	17.4		S			3		7					*D. clouds	John Merrifield.
Roche's Point			29.66	753.4	55	12.8		SW			5		10					Rainy	W. Kennedy.
Saint Ann's Head			29.73	755.1	53	11.7		SW			5		9					Raining	John C. Walker.
Saint Helier, Jersey			29.94	760.5	66.0	18.9		W			2		0					Clear	A. P. Amy.
Sandwick Manse, Orkneys)			29.34	745.2	56.2	13.4		S	35	15.6			10					Hazy	Rev. C. Clouston, LL. D.
Scarborough			29.70	754.4	58.7	14.8		S			5		10					Overcast	F. Shaw.
Scutari Cemetery Turkey			29.98	761.5	75.8	24.3		SW			1		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.70	754.4	64.0	17.8		SW			5		10			Inap.	Inap.	Gloomy	W. F. Cooper.
Silloth Rectory			29.57	751.1	54.7	12.6	79	SW			6		10			0.480	12.19	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.65	753.1	59.1	15.1		S			4		10					Threatening	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.			29.27	743.4	50	10.0		SSW			6		10					Raining	John Smith.
Stratfield Turgiss			29.85	758.2	64.0	17.8		SW			1-2		5			Blank	Blank	*D. clouds	Rev. Charles H. Griffith.
Thurso			29.33	745.0	60	15.6		S			5		10					Overcast	John Trotter.
Truro, Royal Institution			29.90	759.4	64	17.8		SW			6		8					Gloomy	W. Newcombe.
Valencia, Observatory			29.66	753.4	51.4	10.8		W	24	10.7			10					Raining	The Staff.
Sub-Series.																			
Calf of Man, Isle of Man					48	8.9		S			7		3						Thomas Dawson.
Cape Good Hope, Obs'y			30.20	768.0	67.8	19.9	46	NW	7	3.1		0	0						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.83	757.7	60.0	15.6	76	NW			2		9k			0	0		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.51	749.5	56.6	13.7		SW			5		10k8			0	0	Cloudy	Andrew Gibb.
Mauritius, Observatory			30.07	763.8				ESE	8.2	3.7						0.18	4.6		C. Meldrum.
Melbourne, Observatory			30.13	765.3	51.6	10.9	81	NNW	9	4.0			10			0	0	Dull	R. L. J. Ellery.
Monach Lt-house, Hebrides			29.29	744.0	50	10.0		SW			6		10			0.5	12.7		J. Youngclause.
North Unst, (Shetland Is.)			29.48	748.8	49	9.4		SSE			8	0	8					Hazy	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 720.6 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	759.3	65.1	18.4	73	S			2		2						
Fanöe			29.86	758.5	63.7	17.6	74	WSW			2		5						
Godthaab, (Greenland)			29.71	754.5	30.7	— 0.7	68	ENE			2		10						
Stykkisholm, (Iceland)			29.11	739.4	42.6	5.9	91	SE			4		8						
Thorshavn, (Faröe)			29.21	741.9	48.2	9.0	95	SE			2		10					Raining	
Vestervig			29.85	758.3	60.8	16.0	63	SW			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	.....	.....	29.73	755.1	62.6	17	48	SW	.....	.....	1	2c	.....	SW	.....	0	0	Slightly cl'dy	Normal School.
Amiens	.....	.....	29.88	758.9	65.8	18.8	71	W	.....	.....	3	.....	2	.....	W	0	0	Slightly cl'dy	Normal School.
Avignon	.....	.....	29.98	761.4	71.6	22	58	SE	.....	.....	2	.....	8	.....	SE	0.059	1.5	Very cloudy	Normal School.
Bar-sur-Seine	.....	.....	29.95	760.6	69.3	20.7	40	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.90	759.4	73.2	22.9	33	W	4.5	2.0	.....	.....	2	.....	NE	0	0	Slightly cl'dy	Beaumette Observatory
Beauvais	.....	.....	29.94	760.5	66.0	18.9	46	W	.....	.....	2	.....	2	.....	W	0	0	Slightly cl'dy	Normal School.
Besançon	.....	.....	29.93	760.1	76.1	24.5	50	SSW	.....	.....	4	.....	2	.....	W	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	29.95	760.8	75.0	23.9	46	N	.....	.....	2	.....	5k	.....	N	.....	.....	Cloudy	Normal School.
Bourges	.....	.....	29.95	760.6	64.0	17.8	74	N	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Brest	.....	.....	29.91	759.8	70.0	21.1	54	SW	.....	.....	3	1c	.....	.....	.....	0	0	.....	Naval Observatory.
Carcassonne	.....	.....	29.99	761.8	64.2	17.9	60	W	.....	.....	1	.....	8	.....	E	0.016	0.4	Very cloudy	Normal School.
Caen	.....	.....	30.027	777.7?	65.3	18.5	64	NW	.....	.....	2	.....	5	.....	E	0	0	Cloudy	Normal School.
Chartres	.....	.....	29.87	758.8	72.3	22.4	.....	SW	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Clermont	.....	.....	29.93	760.1	66.7	19.3	64	S	.....	.....	2	.....	10	.....	SW	.....	.....	Raining	Puy de Dome Obs'y.
Commercy	.....	.....	29.95	760.6	64.9	18.3	46	W	.....	.....	4	.....	2k	.....	W	0	0	Slightly cl'dy	Normal School.
Commune de Greasque*	.....	.....	30.02	762.5	67.3	19.6	60	SE	.....	.....	4	.....	8	.....	SE	0.409	10.4	.....	M. Kina.
Grenoble	.....	.....	29.89	759.2	71.1	21.7	72	W	.....	.....	6	.....	0	.....	.....	0	0	Clear	Normal School.
La Roche-sur-Yon	.....	.....	29.99	761.8	75.2	24.0	41	NE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Le Mans	.....	.....	29.95	760.8	69.4	20.8	82	S	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Lons-Le-Saulnier	.....	.....	29.95	760.7	72.3	22.4	55	W	.....	.....	1	.....	2	.....	W	0	0	Slightly cl'dy	Normal School.
Mâcon	.....	.....	29.94	760.4	74.1	22.3	75	Calm	.....	.....	0	.....	0	.....	.....	0	0	Clear	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	29.90	759.4	69.8	21	49	NE	.....	.....	2	.....	2	.....	SW	0	0	Slightly cl'dy	Normal School.
Nismes	.....	.....	29.52?	749.9?	70.9	21.6	69	NW	.....	.....	2	.....	2	.....	SE	0	0	Slightly cl'dy	Normal School.
Orleans	.....	.....	29.91	759.6	72.3	22.4	81	E	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Paris, Observatory	.....	.....	29.94	760.5	68.7	20.4	42	W	.....	.....	1	1c	.....	W	.....	0	0	Clear	National Observa'ory.
Parthenay	.....	.....	29.94	760.4	75.2	24	86	NE	.....	.....	2	.....	1	.....	NE	0	0	Clear	Normal School.
Privas	.....	.....	29.80	756.1	75.9	24.4	.....	N	.....	.....	2	.....	5	.....	NNW	.....	.....	Cloudy	Normal School.
Rochefort, Observatory	.....	.....	30.00	762.1	75.7	24.3	40	W	.....	.....	3	.....	0	.....	.....	0	0	Blue sky	Naval Observatory.
Rouen	.....	.....	29.91	759.7	73.9	23.3	36	SSW	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Saint Lo	.....	.....	29.95	760.6	73.8	23.2	36	W	.....	.....	2	.....	2	.....	W	0	0	.....	Normal School.
Tarbes	28.90	734.0	29.96	761.0	63.5	17.5	.....	W	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Villefranche	.....	.....	29.91	759.8	79.7	26.5	56	E	.....	.....	1	.....	5	.....	.....	0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.88	759.0	82.4	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	Blank	Blank	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.95	760.6	65.1	18.4	71	E	.....	.....	1	.....	7	.....	.....	0.299	7.6	Cloudy	Marseilles Observatory.
Mont-Louis	.....	.....	30.21	767.4	46.6	8.1	92	NE	7.4	3.33	.....	.....	10	.....	NE	0.311	7.9	Raining	—. Faiguère.
Montsouris, Paris	.....	.....	29.94	760.5	72.7	22.6	30	SE	.....	.....	1	.....	3	.....	.....	0	0	.....	Montsouris Observ'tory.
Perpignan	.....	.....	29.97	761.2	64.4	18.2	62	E	7.4	3.33	.....	.....	9	.....	NW	0.346	8.8	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.95	760.7	70.5	21.4	41	SW	.....	.....	1	.....	0?	.....	.....	0	0	Slightly cl'dy	E. Renou.
Toulouse	.....	.....	30.04	763.0	68.9	20.5	53	NW	.....	.....	2	.....	3	.....	.....	0.370	9.4	.....	Toulouse Observatory.
Tours	.....	.....	29.95	760.7	72.7	22.6	36	SE	.....	.....	1	.....	0	.....	.....	0	0	Clear	C. Marquet.
Versailles, (near Paris)	.....	.....	29.96	761.0	69.1	20.6	69	SW	.....	.....	2	.....	8	.....	.....	0	0	Fair	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai	.....	.....	29.80	759.2	65.8	18.8	85	E	2.7	1.2	.....	3cs	0	.....	.....	C 0	0	Foggy	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 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.

Bamberg	.....	.....	29.85	758.3	68.9	20.5	48	W	.....	.....	5	.....	9	W	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.85	758.3	76.8	24.9	52	S	.....	.....	1	.....	2	.....	.....	0	0	.....	Prof. Arndt
Breslau	.....	.....	29.94	760.4	74.8	23.8	68	SE	.....	.....	6	.....	8	.....	.....	0	0	.....	Dr. P. Neumayer.
Carlsruhe	.....	.....	29.90	759.5	71.2	21.8	43	SW	.....	.....	5	.....	1	.....	.....	0	0	.....	A. Senf.
Cassel	.....	.....	29.89	759.2	68.0	20.0	40	S	.....	.....	3	.....	8	SSW	.....	0.039	1.0	.....	Dr. H. Möbl.
Emden	.....	.....	29.90	759.4	61.5	16.4	74	SSW	.....	.....	1	.....	9	.....	.....	0.020	0.5	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.99	761.8	67.6	19.8	47	S	.....	.....	2	.....	6	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	29.94	760.4	68.9	20.5	57	SW	.....	.....	1	.....	4	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	29.88	759.0	56.1	13.4	94	SW	.....	.....	3	.....	10s,k	.....	.....	0.291	7.4	Thunder-storm	Captain F. Hegemann.
Kiel	.....	.....	29.86	758.4	56.1	13.4	92	W	.....	.....	2	.....	10	.....	.....	0.201	5.1	Thunder, lightn'g	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.96	760.9	80.6	27.0	51	E	.....	.....	5	.....	4	.....	.....	0	0	.....	Prof. E. Luther.
Koslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Brahms.
Memel	.....	.....	29.84	758.0	77.7	25.4	41	S	.....	.....	2	.....	8	SW	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.02	762.6	77.4	27.2	40	ESE	.....	.....	5	.....	9ks	SE	.....	0.008	0.2	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.80	756.9	65.8	18.8	61	.....	.....	.....	2	.....	3	.....	.....	0	0	.....	A. Lothes.
Posen	.....	.....	29.98	761.4	62.8	17.1	79	NW	.....	.....	1	.....	6	.....	.....	0.420	10.9	.....	Dr. Mageuer.
Strassburg, (in Alsace)	.....	.....	29.97	761.3	77.9	25.5	51	SE	.....	.....	5	.....	9	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.91	759.6	75.0	23.9	35	SW	.....	.....	3	.....	4	SW	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	29.88	758 9	71.1	21.7	43	NE	.....	.....	1	.....	5	.....	.....	0	0	.....	Dr. Hasenbalg.
Trever, (Trier)	.....	.....	29.91	759.8	76.3	24.6	57	NW	.....	.....	1	.....	6	.....	.....	0.067	1.7	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	29.87	758.8	70.3	21.3	37	WSW	.....	.....	5	.....	6	.....	.....	0	0	.....	E. F. Schütz.
.....	.....	.....	29.82	757.5	70.5	21.4	64	ENE	.....	.....	2	.....	3	.....	.....	0.055	1.4	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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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. Upper. 0–10.	Clouds. Amount. Lower. 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.03	762.8	77.4	25.2		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. Upper. 0–10.	Clouds. Amount. Lower. 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Udine			29.94	760.4	73.9	23.3	54	SW	1.3	0.6			4			0	0		
Padua			29.93	760.3	73.0	22.8	55	S	4.3	1.9			2			0	0		
Vicenza			29.90	759.4	73.6	23.1	51	E	0.7	0.3			4	E		0	0		
Verona			29.93	760.1	76.1	24.6	53	E			1		10			0	0		
Bergamo	28.62	727.0	29.88	759.0	73.4	23.0	52	SW			2		5			0	0		
Domodossola	28.91	734.2	29.90	759.4	69.8	21.0	79	Calm			0		10			0	0		
Milan			29.96	760.9	77.9	25.5	50	WSW			2		7	ESE		0	0		
Pavia			29.96	761.0	73.4	23.0	49	N			2		3	S		0	0		
Moncalieri			29.99	761.7	68.4	20.2	68	SW	1.8	0.8			9	SE		0	0		
Mondovi	28.14	714.7	29.97	761.3	62.6	17.0	70	NW			4		8			0	0		
Porto Maurizio			29.99	761.7	73.0	22.8	72	E			2		8	W		0	0		
Genoa			29.95	760.7	75.2	24.0	46	NW	1.3	0.6			4			0	0		
Piacenza			29.97	761.1	72.9	22.7	50	N	2.5	1.1			4	E		0	0		
Parma			29.95	760.7	72.5	22.5	55	W			4		5			0	0		
Bologna			29.98	761.5	74.5	23.6	35	NW			1		4	E		0	0		
Florence			29.94	760.5	72.5	22.5	41	NW			2		10	NW		0	0		
Leghorn			29.92	759.9	72.5	22.5	58	W	3.8	1.7			7			0	0		
Siena	28.73	729.8	29.89	759.3	72.5	22.5	55	ENE	0	0			10	SE		0	0		
Urbino	28.45	722.7	29.96	761.0	66.7	19.3	68	NE			4		10			0	0		
Pesaro																			
Ancona			29.97	761.3	72.3	22.4	74	SE			4		8	S		0	0		
Grosseto			29.90	759.5	76.6	24.8	52	SSE			2		7	S		0	0		
Rome			29.91	759.7	80.1	26.7	45	SW	2.5	1.1			10	NE		0	0		
Naples, O. U.			29.93	760.1	78.8	26.0	37	SSW			2		9	S		0	0		
Lecce			30.00	761.9	77.7	25.4	28	ESE	9.4	4.2			2	N		0	0		
Cosenza			29.92	760.0	80.4	26.9	69	ESE	15.4	6.9			4			0	0		
Riposto, (Sicily)			29.95	760.8	69.1	20.6	78	E			2		10			0	0		
Palermo			29.82	757.3	72.3	22.4	55	NE	6.9	3.1			10			0	0		
Caltanissetta	27.91	708.8	29.81	757.1	65.3	18.5	54	E			8		10	W		0	0		
Sub-Series.																			
Naples, S. R.			29.97	761.2	77.9	25.5	39	SW	3.1	1.4			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.

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

NETHERLANDS' SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Upper. 0–10.	Clouds. Amount. Lower. 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Flushing			29.94	760.4	54.5	12.5		WNW			3								
Groningen			29.80	756.9	61.7	16.5		S			2								
Helder			29.85	758.2	60.1	15.6		NE			1								
Utrecht			29.81	757.2	68.2	20.1	49	SW			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. Upper. 0–10.	Clouds. Amount. Lower. 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Bergen			29.81	757.1	56.1	13.4	82	SSW	12.5	5.6			10			0.295	7.5	Raining.	
Brönö			29.93	760.3	71.6	22.0	43	SSE	18	8			5			0	0		
Christiania			30.01	762.3	61.5	16.4	81	NE	0.2	0.1			10			0	0		
Tromsö			30.04	762.9	60.1	15.6	60	SSW	13	6			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,)	.....	.....	30.35	770.8	66.4	19.1	81	Calm	0	0	.....	.....	6	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.98	761.5	71.6	22.0	52	SW	9.5	4.25	.....	.....	3	.....	.....	00.31	0.8	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.21	767.4	64.8	18.2	76	.....	2.4	1.07	.....	.....	10	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.07	763.6	69.1	20.6	55	N	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 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	.....	.....	29.86	758.5	80.2	26.8	48	ESE	11	5	.....	.....	6	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.00	762.0	80.1	26.7	43	SE	11	5	.....	.....	5	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.21	767.4	62.2	16.8	40	SSE	9	4	.....	.....	0	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.28	769.1	75.6	24.2	28	ESE	4	2	.....	.....	0	.....	.....	.....	.....	.....	Central Physical Obs
Kuopio	.....	.....	30.22	767.6	69.8	21.0	62	E	7	3	.....	.....	0	.....	.....	.....	.....	.....	Ch. Forsten.
Kief	.....	.....	29.94	760.5	74.3	23.5	52	SE	9	4	.....	.....	3	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.08	764.0	77.4	25.2	49	SW	20	9	.....	.....	0	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.08	764.1	73.6	23.1	73	S	2	1	.....	.....	2	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.31	769.8	71.4	21.9	30	S	4	2	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.97	761.1	81.2	32.9	31	SW	13	6	.....	.....	5	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.18	766.5	54.9	12.7	68	NW	18	8	.....	.....	2	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.61	726.7	29.92	760.0	90.0	32.2	28	N	9	4	.....	.....	7	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.03	762.7	83.8	28.8	48	NE	4	2	.....	.....	9	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.93	760.3	72.1	22.3	35	W	18	8	.....	.....	2	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tchernischef.
Ekaterinburg	28.88	733.6	29.85	758.3	64.0	17.8	50	N	18	8	.....	.....	7	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.05	763.3	84.7	29.3	22	NNW	7	3	.....	.....	0	.....	.....	.....	.....	.....	.....
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.43	722.1	30.04	763.0	81.7	27.6	44	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.71	754.6	71.4	21.9	43	S	9	4	.....	.....	4	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.40	746.7	60.6	15.9	56	WNW	2	1	.....	.....	4	.....	.....	Blank	Blank	.....	Marks.
Irkutsk	28.24	717.3	29.58	751.2	54.9	12.7	88	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Usoltef.
Gorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.74	755.4	72.7	22.6	43	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	29.61	752.0	48.4	9.1	93	SE	2	1	.....	.....	10	.....	.....	.....	.....	.....	.....
Nikolaievsk, on the Amoor	.....	.....	.....	.....	46.4	8.0	86	SE	13	6	.....	.....	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, 303.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; 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.

Madrid	.....	.....	29.87	758.6	77.4	25.2	74	SE	2.2	1.00	.....	0	6	.....	.....	0.307	7.8	Cloudy.....	Royal Observatory.
San Fernando	.....	.....	30.11	764.8	67.6	19.8	65	W	10.3	4.6	.....	0	10	.....	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.

Haparanda	.....	.....	30.24	768.1	53.2	11.8	65	S	.....	.....	2	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	30.23	767.9	61.2	16.2	51	SSW	.....	.....	2	.....	0	.....	.....	0	0	.....	
Hernosand	.....	.....	30.18	766.6	56.8	13.8	47	S	.....	.....	4	.....	2	.....	.....	0	0	.....	
Stockholm	.....	.....	30.09	764.3	66.2	19.0	52	ESE	.....	.....	4	.....	5	.....	.....	0	0	.....	
Wisby	.....	.....	30.07	763.6	74.5	23.6	48	SSE	.....	.....	4	.....	3	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.08	764.1	75.2	24.0	40	ESE	14.8	6.6	.....	.....	7	SSW	.....	0.038	0.97	.....	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 55	725.1	29.92	759.9	73.4	23.0	48	SW			1		3			0.008	0.2	C ouds	The Observatory.
Zurich	28.35	720.1	29.92	760.0	72.1	22.3	52	NW			2		2			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, −0.8 mm; Thermometer, +3.8 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 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			30.03	762.7	74.8	23.8	55	SSE	4	2.0			3		S	0	0		
Fao, (Persian Gulf)			29.92	760 0	96.8	36.0		SE			3		0						
Salonica			30.06	763.4	76.1	24.5		NW			2		0						
Valona			29.96	761.0	77.4	25.2		SW			1		2						
Varna			29.96	761.0	75.2	24.0		NW			2		2						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.98	761.4	77.4	25.2	71	N			2		1 cs			0	0	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. Mill meters.	Weather.	Observer
Bathurst, N. B			29.20	741.7	64.9	18.3	83	Calm	0	0		5				0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			29.89	759.2	60	15.6		N	4	1.8			10s		N	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B			29.73	755.1	68	20.0	74	SW	16	7.2		2k	2ks	SW	SW	0	0	Fair	G. A. Blair.
Charlottetown P. E. Island			29.83	757.7	63	17.2	86	S	8	3.6		5c	0			0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			29.78	756.4	68.4	20.2	68	N			2	10k	0			0	0	Fair	James Smith, M. A.
Dalhousie, N. B			29.70	754.4	66.0	18.9	84	W			2	0	0			0	0		H. A. Johnson.
Esquimault, B. C			30.01	762.2	52.3	11.3	100	Calm	0	0			10s			0	0	Hazy	W. H. Bevis.
Fredericton, N. B			29.80	756.9	66.1	18.9	73	S	8	3.6		0	5ks			0	0	Smoky	Prof. Harrison.
*Fort Garry, Manitoba			30.08	764.0	37	2.8	90	N	7	3.1		0	2s			0	0	Fair	James Stewart.
Goderich, Ontario			29.79	756.7	62.9	17.2	75	SE			2		10n			0.140	3.56	Unsettled	H. J. Strang, M. A.
Granton, Ontario	25.71	729.2	29.78	756.4	58	14.4		E			1		10n			0	0	Cloudy	James Grant.
*Halifax, N. S.			29.87	758.7	52	11.1	100	S	3	1.3			Fog			0.01	0.3	Foggy	F. Allison, M. A.
*Kingston, Ontario			29.90	759.4	61	16.1	77	NE	8	3.6		10cs	0			0	0	Cloudy	S. Woods, M. A.
Little Glace Bay																			C. H. Rigby.
*Montreal, Quebec			29.78	756.4	69	20.6	79	NW	4	1.8		5c	5k-	W	W	0	0	Cl udy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.88	758.9	56	13.3	63	NW	5	2.2		10ck	0	NW		Inap.	Inap.	Cloudy	J. B. Haney.
*Parry Sound, Ontario			29.87	758.7	56	13.3	71	N	15	6.7		2cs	2ks	SW	SW	0.07	1.8	Fair	Rev. R. Mosley.
*Port Dover, Ontario			29.80	756.9	67	19.4	69	E	5	2.2		8k	0	S		0	0	Fair	H. Morgan.
Port Hastings, N. S.			29.93	760.2	57.2	14.0		S	5	2.2						0	0	Fine	Peter Grant.
*Port Stanley Ontario			29.79	756.7	62	16.7	88	E	5	2.2			10ks		S	0	0	Cloudy	M. Payne.
*Quebec, Quebec			29.78	756.4	54	12.2	80	NE	18	8.0			10c			0	0	Cloudy	Capt. Ashe, R. N.
St. John, N. B.			29.88	758.9	52	11.1	93	S	2	0.9			Fog			0	0	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario			29.79	756.7	58	14.4	82	E	6	2.7		10ck	0			0	0	Cloudy	K. Stewart.
Stayner, Ontario			29.84	757.9	57	13.9	81	Calm	0	0		5c	0			0	0	Fa r	R. J. Cole.
Stratford, Ontario	28.53	724.6	29.76	755.9	60 5	15.8	78	E	8	3.6		7cs	0			0	0	Fair	C. J. MacGregor, M. A.
*Sydney, C. B			29.91	759.7	69	20.6	80	W	11	4.9		0	2ks		SW	0	0	Clear	T. C. Hill.
*Toronto, Ontario			29.84	757.9	61	16.1	73	N	4	1 8		2ck	5ks	W	W	0	0	Fair	Magnetic Observatory.
Woodstock, Ontario			29.76	755.9	61.8	16.6	87	E	16	7.2			10s			1.38	35.1	Fine	J. Montgomery
Sub-Series.																			
St. John's, Newfoundland			29.99	761.7	64.0	17.8	83	SW				5k	10s			0 14	3.6	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 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.	.....	.....	29.76	755.9	75	23.9	59	Calm	0	0	.....	2c	Haze	.....	.....	0	0	Fair.	
Alpena, Mich.	.....	.....	29.85	758.2	49	9.4	77	E	12	5.4	.....	.....	10s	.....	E	0	0	Cloudy.	
Atlantic City, N. J.	.....	.....	29.81	757.0	67	19.4	90	SW	4	1.8	.....	8cs	Haze	SW	.....	0	0	Cloudy.	
Augusta, Ga.	.....	.....	29.92	760.0	76	24.4	81	S	2	0.9	.....	2cs	0	S	.....	1.51	38.4	Fair.	
Baltimore, Md.	.....	.....	29.84	757.9	74	23.3	76	SW	3	1.3	.....	5ck	Sm'e	.....	.....	0.09	2.3	Fair.	
Barnegat, N. J.	.....	.....	29.84	757.9	68	20.0	84	W	6	2.7	.....	10k	0	W	.....	0	0	Cloudy.	
Benton, Montana	27.32	693.9	30.13	765.3	37	2.8	80	SW	1	0.4	.....	0	0	.....	.....	0	0	Clear.	
Bismarck, Dakota	28.36	720.3	30.04	763.0	40	4.4	56	NW	12	5.4	.....	5k	0	NW	.....	0	0	Fair.	
Boston, Mass.	.....	.....	29.78	756.4	64	17.8	73	E	2	0.9	.....	Haze	Fog	.....	.....	Inap.	Inap	Foggy.	
Breckenridge, Minn.	.....	.....	29.94	760.5	41	5.0	91	NW	16	7.2	.....	.....	10s	.....	N	0.07	1.8	Cloudy.	
Buffalo, N. Y.	.....	.....	29.77	756.1	65	18.3	63	NE	6	2.7	.....	.....	10ks	.....	.....	Inap.	Inap.	Cloudy.	
Burlington, Vt.	.....	.....	29.75	755.6	71	21.7	71	S	2	0.9	.....	.....	10s	.....	.....	0.05	1.3	Cloudy.	
Cairo, Ill.	.....	.....	29.86	758.4	68	20.0	90	W	2	0.9	.....	8k	0	W	.....	0.46	11.7	Clearing	
Cape Hatteras, N. C.	.....	.....	29.82	757.4	74	23.3	90	SW	14	6.3	.....	5ck	5ks	W	SW	0.22	5.6	Cloudy.	
Cape Henry, Va.	.....	.....	29.84	757.9	76	24.4	77	Calm	0	0	.....	5c	Haze	.....	.....	0	0	Fair.	
Cape Lookout, N. C.	.....	.....	29.92	760.0	76	24.4	86	SW	20	8.9	.....	5k	2ks	SW	SW	0	0	Fair.	
Cape May, N. J.	.....	.....	29.85	758.2	69	20.6	84	S	6	2.7	.....	.....	10ks	.....	W	0	0	Cloudy.	
Charleston, S. C.	.....	.....	29.94	760.5	79	26.1	82	SW	8	3.6	.....	0	8ks	.....	SW	0	0	Fair.	
Cheyenne, Wyoming	24.14	613.1	30.08	764.0	34	1.1	61	N	4	1.8	.....	0	1s	.....	.....	0.03	1.3	Clear.	
Chicago, Ill.	.....	.....	29.78	756.4	57	13.9	69	NW	10	4.5	.....	.....	10s	.....	N	0	0	Cloudy.	
Cincinnati, Ohio.	.....	.....	29.72	754.9	72	22.2	75	SW	6	2.7	.....	.....	10ks	.....	SW	0.54	13.7	Cloudy.	
Cleveland, Ohio.	.....	.....	29.75	755.6	65.2	18.4	86	SE	1	0.4	.....	.....	10ks	.....	SW	0.44	11.2	Cloudy.	
Colorado Springs, Col.	24.21	614.7	30.07	763.8	43	6.1	91	NW	12	5.4	.....	.....	10s	.....	SW	0.43	10.9	Cloudy.	
Columbia, Tex.	.....	.....	29.84	757.9	78	25.6	86	S	4	1.8	.....	10k	0	S	.....	0.01	0.3	Cloudy.	
Davenport, Iowa.	.....	.....	29.90	759.4	56	13.3	51	NW	12	5.4	.....	0	0	.....	.....	0	0	Clear.	
Denison, Tex.	.....	.....	29.95	760.7	68	20.0	84	NE	10	4.5	.....	.....	10s	.....	.....	0.02	0.5	Cloudy.	
Denver, Col.	24.91	633.5	30.16	766.1	39	3.9	72	NE	10	4.5	.....	.....	10s	.....	.....	0.07	1.8	Cloudy.	
Detroit, Mich.	.....	.....	29.72	754.9	63	17.2	88	NE	6	2.7	.....	.....	10n	.....	.....	0.05	1.3	Light rain.	
Dodge City, Kan.	27.55	699.8	29.86	758.4	47	8.3	62	N	16	7.2	.....	.....	10s	.....	.....	0	0	Cloudy.	
Dubuque, Iowa.	.....	.....	29.86	758.4	55	12.8	50	W	10	4.5	.....	0	0	.....	.....	0	0	Clear.	
Duluth, Minn.	.....	.....	29.86	758.4	38	3.3	90	NE	8	3.6	.....	.....	10s	.....	.....	0.03	0.8	Cloudy.	
Eastport, Me.	.....	.....	29.80	756.9	51	10.6	93	S	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy.	
Erie, Pa.	.....	.....	29.75	755.6	66	18.9	90	NE	1	0.4	.....	.....	10n	.....	.....	0.03	0.8	Heavy rain.	
Escanaba, Mich.	.....	.....	29.76	755.9	54	12.2	86	E	8	3.6	.....	.....	10n	.....	E	0.55	14.0	Light rain.	
Fort Gibson, Indian Ter.	.....	.....	29.90	759.4	64	17.8	84	N	5	2.2	.....	0	8ks	.....	NE	1.06	26.9	Fair.	
Ft. St. Michael, Alaska.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.81	731.8	29.91	759.7	56	13.3	93	N	28	12.5	.....	.....	10n	.....	N	0.12	3.0	Light rain.	
Fort Sully, Dakota.	28.10	721.3	30.10	764.5	39	3.9	68	W	10	4.5	.....	2k	0	NW	.....	0	0	Fair.	
Galveston, Tex.	.....	.....	29.92	760.0	80	26.7	82	S	2	0.9	.....	0	2s	.....	S	0	0	Fair.	
Grand Haven, Mich.	.....	.....	29.70	754.4	64	17.8	70	SE	4	1.8	.....	0	8s	.....	W	0	0	Cloudy.	
Indianapolis, Ind.	.....	.....	29.72	754.9	70	21.1	90	SW	2	0.9	.....	.....	10s	.....	SW	0.78	19.8	Threatening	
Indianola, Tex.	.....	.....	29.86	758.4	83	28.3	79	S	6	2.7	.....	5ck	0	S	.....	0	0	Fair.	
Jacksonville, Fla.	.....	.....	29.94	760.5	75	23.9	85	SE	4	1.8	.....	.....	10s	.....	.....	0.02	0.5	Cloudy.	
Keokuk, Iowa.	.....	.....	29.89	759.2	58	14.4	58	NW	12	5.4	.....	0	0	.....	.....	0	0	Clear.	
Key West, Fla.	.....	.....	29.96	761.0	80.9	27.2	78	SE	13	5.8	.....	5ck	Haze	NW	SE	0.53	13.5	Cloudy.	
Kittyhawk, N. C.	.....	.....	29.86	758.4	73	22.8	90	SW	8	3.6	.....	5cs	Haze	.....	.....	0	0	Fair.	
Knoxville, Tenn.	.....	.....	29.85	758.2	71	21.7	85	SW	1	0.4	.....	1c,ck	0	SW	.....	Inap.	Inap.	Clear.	
La Crosse, Wis.	.....	.....	29.83	757.7	50	10.0	71	W	12	5.4	.....	0	0	.....	.....	0	0	Clear.	
Leavenworth, Kan.	.....	.....	30.04	763.0	51	10.6	65	NW	8	3.6	.....	0	0	.....	.....	0.18	4.6	Clear.	
Lexington, Ky.	28.72	729.5	29.77	756.1	71	21.7	80	S	4	1.8	.....	8k	0	.....	.....	0.28	7.1	Cloudy.	
Long Branch, N. J.	.....	.....	29.82	757.4	70	21.1	75	W	2	0.9	.....	5c	Haze	W	.....	0.03	0.8	Fal	
Louisville, Ky.	.....	.....	29.76	755.9	69	20.6	90	S	1	0.4	.....	.....	10n	.....	S	1.25	31.7	Light r in.	
Lynchburg, Va.	.....	.....	29.80	756.9	79	26.1	65	SW	1	0.4	.....	2ck	0	.....	.....	0	0	Clear.	
Malone, N. Y.	.....	.....	29.79	756.7	62	16.7	82	N	6	2.7	.....	.....	10s	.....	NW	0	0	Threatening	
Manhattan, Kan.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
* Marquette, Mich.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.64	16.3	.....	
Memphis, Tenn.	.....	.....	29.87	758.7	71	21.7	85	NW	2	0.9	.....	5cs	5ks	SW	NW	0.15	3.8	Fair.	
Milwaukee, Wis.	.....	.....	29.79	756.7	54	12.2	73	NW	15	6.7	.....	.....	10ks	.....	S	0.02	0.5	Cloudy.	
Mobile, Ala.	.....	.....	29.86	758.4	74	23.3	90	N	8	3.6	.....	.....	10s	.....	N	0.21	5.3	Cloudy.	
Montgomery, Ala.	.....	.....	29.88	758.9	73	22.8	95	SE	3	1.3	.....	.....	10s	.....	SE	0.18	4.6	Threatening	
Morgantown, W. Va.	.....	.....	29.76	755.9	70	20.1	73	Calm	0	0	.....	5c	0	W	.....	0.04	1.0	Fair.	
Mt. Washington, N. H.	23.78	604.0	30.14	765.5	55	12.8	68	Calm	0	0	.....	8s	Haze	.....	.....	0	0	Fair.	
Nashville, Tenn.	.....	.....	29.80	756.9	71	21.7	85	SE	4	1.8	.....	.....	10s	.....	SW	0.43	10.9	Cloudy.	
New Haven, Conn.	.....	.....	29.82	757.4	71	21.7	71	S	4	1.8	.....	Haze	Fog	.....	.....	0	0	Fair.	
New London, Conn.	.....	.....	29.84	757.9	69	20.6	87	S	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
New Orleans, La.	.....	.....	29.89	759.2	77	25.0	82	N	4	1.8	.....	5cs	2k	W	N	0.07	1.8	Fair.	
Newport, R. I.	.....	.....	29.81	757.9	65	18.3	78	Calm	0	0	.....	0	Haze	.....	.....	0	0	Hazy.	
New York, N. Y.	.....	.....	29.82	757.4	64	17.8	78	SE	1	0.4	.....	2cs	Fog	.....	.....	0.32	8.1	Fair.	
Norfolk, Va.	.....	.....	29.85	758.2	79.5	26.4	74	S	3	1.3	.....	0	Sm'e	.....	.....	0	0	Clear.	
North Platte, Neb.	27.20	690.9	29.81	757.2	42	5.6	65	NW	8	3.6	.....	2c	0	NW	.....	0	0	Clear.	
Omaha, Neb.	28.95	735.3	30.03	762.7	47	8.3	62	NW	12	5.4	.....	0	0	.....	.....	0	0	Clear.	
Oswego, N. Y.	.....	.....	29.84	757.9	59	15.0	81	W	4	1.8	.....	5c	2s	W	.....	Inap.	Inap.	Fair.	
Pembina, Dakota.	.....	.....	30.01	762.2	37	2.8	90	N	12	5.4	.....	2k	2s	N	.....	0.07	1.8	Fair.	
Philadelphia, Penn.	.....	.....	29.82	757.4	73	22.8	76	SW	1	0.4	.....	2ck	0	W	.....	0.11	2.8	Fair.	
Pike's Peak, Colorado.	17.30	452.1	30.01	762.2	18	— 7.8	100	NW	1	0.4	.....	.....	Fog	.....	NW	0.54	13.7	Foggy	
Pittsburgh, Penn.	.....	.....	29.74	755.4	72	22.2	81	SW	6	2.7	.....	8ck	0	W	.....	0.15	3.8	Fair.	
Port Huron, Mich.	.....	.....	29.75	755.6	51	10.6	86	N	12	5.4	.....	.....	10n	.....	SE	0.01	0.3	Light rain.	
Portland, Me.	.....	.....	29.80	756.9	59	15.0	76	SE	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy.	
Portland, Oregon.	.....	.....	30.09	764.3	54	12.2	93	Calm	0	0	.....	.....	8s	.....	S	0	0	Cloudy.	
Punta Rassa, Fla.	.....	.....	29.98	761.5	77.7	25.4	82	SE	14	6.3	.....	.....	10s	.....	SE	0.08	2.0	Threatening	
Rochester, N. Y.	.....	.....	29.80	756.9	66	18.9	68	NW	3	1.3	.....	10c	0	NW	.....	0.05	1.3	Cloudy.	
Salt Lake City, Utah.	25.73	653.5	30.06	763.5	51	10.6	59	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Sandy Hook, N. J.	.....	.....	29.80	756.9	66	18.9	84	NW	2	0.9	.....	2c	Haze	.....	.....	0.14	3.6	Fair.	
San Diego, Cal.	.....	.....	29.99	761.7	61	16.1	88	N	4	1.8	.....	.....	10s	.....	N	0	0	Cloudy.	
San Francisco, Cal.	.....	.....	29.93	760.2	50	10.0	86	W	8	3.6	.....	Haze	Fog	.....	W	0	0	Fair.	
Santa Fé, N. M.	23.22	589.8	29.76	755.9	47	8.3	62	Calm	0	0	.....	0	2s	.....	.....	0.05	1.3	Fair.	
Savannah, Ga.	.....	.....	29.95	760.7	76	24.4	81	Calm	0	0	.....	2cs	8n	.....	NW	Inap.	Inap.	Light rain.	
Shreveport, La.	.....	.....	29.91	759.7	69	20.6	87	S	5	2.2	.....	5ck	0	SW	.....	1.25	31.7	Fair.	
Smithville, N. C.	.....	.....	29.93	760.2	76	24.4	86	SW	12	5.4	.....	.....	10ks	.....	SW	0	0	Cloudy.	
Springfield, Mass.	.....	.....	29.79	756.7	71	21.7	71	S	4	1.8	.....	0	Fog	.....	.....	0	0	Clear.	
St. Louis, Mo.	.....	.....	29.89	759.2	62	16.7	61	N	16	7.2	.....	0	0	.....	.....	0.09	2 3	Clear.	
St. Marks, Fla.	.....	.....	29.92	760.0	73	22.8	90	SE	8	3.6	.....	.....	10n	.....	SE	0.03	0.8	Light rain.	
St. Paul, Minn.	.....	.....	29.79	756.7	48	8.9	70	W	7	3.1	.....	.....	10ks	.....	SW	0	0	Cloudy.	
St. Paul's Island, Alaska.	.....	.....	29.53	750.0	33	0.6	89	E	17	7.6	.....	.....	10s	.....	.....	0	0	Cloudy.	
Thatcher's Island, Mass.	.....	.....	29.80	756.9	58	14.4	81	S	5	2.2	.....	0	0	.....	.....	0	0	Clear.	
Toledo, Ohio.	.....	.....	29.68	753.9	65	18.3	100	NE	3	1.3	.....	.....	10n	.....	.....	0.19	4.8	Light rain.	
Tucson, Arizona.	27.52	699.0	30.11	764.8	69	20.6	.....	N	.....	.....	.....	0	0	.....	.....	0	0	Clear.	
Tybee Island, Ga.	.....	.....	29.94	760.5	77	25.0	90	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy.	
Vicksburg, Miss.	.....	.....	29.83	757.7	69	20.6	94	SE	12	5.4	.....	2k	8s	W	.....	0.12	3.0	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.	24.39	619.5	29.87	758.7	36	2.2	70	Calm	0	0		1c	0	W		0	0	Clear	
Washington, D. C.			29.82	757.4	75.5	24.2	70	E	2	0.9		5ck	1ks	SW		0	0	Fine	
Wilmington, N. C			29.91	759.7	77	25.0	77	SW	10	4.5		5cs	2ks	NW	SW	0	0	Cloudy	
Wood's Holl, Mass			29.84	757.9	58	14.4	93	S	4	1.8			Fog			0	0	Dense fog	
Wytheville, Va	27.60	701.0	29.65	753.1	68	20.0	84	W	4	1.8		1ck	5ks	N	W	0.35	8.9	Fair	
Yankton, Dakota	28.78	731.0	30.09	764.3	40	4.4	79	NW	20	8.9		0	8s		NW	0	0	Cloudy	
Yuma, Arizona			29.93	760.2	73	22.8		E				0	0			0	0	Clear	
Sub Series.																			
Bridgetown, B'b'dos, W. I.			30.07	763.8	84	28.9	67	E	7	3.1		10k	0			0.08	2.0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.98	761.5	81	27.2	82	SE				5c	5ks			0.99	25.1	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.			30.14	765.5	79	26.1	82	SE	5	2.2		..c	8s			0.02	0.5		James Gall.
Santiago de Cuba, W. I.			29.76	755.9	79	26.1	82	SE	1.2	5.4		8ck	4n	SE	SW	0.16	4.1	Cloudy	Robert Mason.
Havana, Cuba, W. I.			29.94	760.5	77	25.0	82	SE	2.4	1.1		10c	0			0.87	22.1	Cloudy	Charles Hasselbrink.
St. Georges, Bermudas			30.10	764.5	79.0	26.1	72	SSW	5.0	2.2		2c	1k			0.08	2.0	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	69	20.6	90	S	2.5	1.1		5c	0	S		1.20	30.5	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.			30.03	762.7	82	27.8	83	E			2	5k	5ks	E		0.320	8.13	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.7			82.4	28										0.532	13.50		Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640.6			64.0	17.8	81	Calm	0	0		8k	2s			0.19	4.8	Cloudy	Thomas Herran.
York Factory, B. A.			30.07	763.8	44	6.7	80	SW	6	2.7		2c	0	S		0	0		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.																			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.	Fahrenheit.	Centigrade.	Per Cent.	Wind. From—	Miles per hour.	Meters per second.	Force. 0—10	Clouds. Up'er	Clouds. Low'r	Upper. From—	Lower. From—	State of ocean.	Direction of swell from—	Weather.	Observer
Steamer Leipzig, N. 45° 32', W. 44° 26'.	N 6¼ E		30.19	766.8	60.1	15.6		SW			5		Fog			Tranq'l		Foggy	Capt. Ritchie.
Steamer Nova Scotian, N. 49° 57', W. 41° 32'.	E by S ½ S	11½	29.98	761.5	49	9.4		SW			3		10			Heavy swells	N. W.	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, 6.032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft , or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City. 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) 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.; 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. *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. Assg'd.) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JUNE 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	.....	.....	30.12	765.1	72.1	22.3	64	NNW	.....	.....	1	.....	0	.....	.....	0	0	Clear	Charnot.
Algiers	.....	.....	30.11	764.7	68.7	20.4	81	N	.....	.....	1	.....	6	.....	.....	Inap.	Inap.	Fair	Peter.
La Calle	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Kunts.
Tunis	.....	.....	29.87	758.7	73.2	22.9	60	N	.....	.....	4	.....	5	.....	.....	0.256	6.5	Fair	Jacques.
Sfax	.....	.....	29.85	758.1	71.6	22.0	66	NW	.....	.....	3	.....	5	.....	.....	1.008	25.6	Fair	Chauvey.
Saïda	.....	.....	30.16	766.0	70.7	21.5	32	N	.....	.....	1	.....	2	.....	.....	0	0	Clear	Millot.
Tebessa	.....	.....	29.90	761.0	54.5	12.5	.....	NW	.....	.....	3	.....	10	.....	.....	3.464	88.0	Hidden	Colin.
Geriville	.....	.....	30.12	765.1	65.1	18.4	37	N	.....	.....	3	.....	2	.....	.....	0	0	Fair	Buard.
Laghouat	.....	.....	30.11	764.9	78.8	26.0	48	NW	.....	.....	3	.....	0	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	29.90	761.8	79.9	26.6	29	NNW	.....	.....	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	.....	.....	29.95	760.7	81.1	27.3	50	Calm	.....	.....	0	.....	5	.....	.....	0	0	.....	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	29.95	760.7	74.1	23.4	53	W	.....	.....	1	.....	5	.....	.....	0	0	.....	Dr. Wierzbicki.
Eperies	.....	.....	29.90	759.5	76.6	24.8	56	S	.....	.....	1	.....	10	.....	.....	0.427	10.85	.....	Julius Mikolik.
Gratz	28.78	731.0	29.94	760.4	74.5	23.6	55	NW	.....	.....	2	.....	5	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	28.58	726.0	29.94	760.5	74.8	23.8	44	WNW	.....	.....	3	.....	2	.....	.....	0	0	.....	Prof. Reissenberger.
Kremsmünster	28.72	729.6	30.02	762.4	71.6	22.0	58	NW	.....	.....	3	.....	8	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	.....	.....	29.87	758.6	71.2	21.8	67	NW	.....	.....	3	.....	5	.....	.....	0.039	0.1	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Pola	.....	.....	30.02	762.6	73.0	22.8	66	WNW	.....	.....	1	.....	3ck	.....	.....	0	0	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	29.93	760.3	79.0	26.1	40	SW	.....	.....	2	.....	5	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	30.06	763.5	70.6	24.8	55	WNW	.....	.....	1	.....	0	.....	.....	0	0	Clear	Prof. V. Farolfi.
Vienna	.....	.....	29.93	760.3	79.9	26.6	52	NW	.....	.....	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.; 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	.....	.....	30.00	762.1	62.6	17.0	57	W	.....	.....	2	10	3	WSW	.....	0.098	2.50	.....	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	.....	.....	29.59	751.6	56.5	13.6	.....	SSW	22	9.8	.....	.....	4	.....	.....	0.230	5.84	Blue sky.....	William Boswell.
Ardrossan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	William McNeil.
Armagh, Observatory	.....	.....	29.72	754.9	56.0	13.3	.....	SW	10	4.5	.....	.....	.....	.....	.....	.....	.....	.....	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	29.79	756.7	54.4	12.4	.....	W	... ...	.....	1–2	.....	9	.....	.....	.....	.....	*D. clouds.....	J. Dreyer.
Bradford	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.30	7.6	.....	Sergt. J. F. Halanen, A. H. C.
Bridgetown, (Barbados)	.....	.....	30.00	762.0	82.5	28.1	.....	SE	.....	.....	2	.....	6	.....	.....	.....	.....	*D. clouds.....	H. Todd.
Cambridge, Observatory	.....	.....	29.94	760.5	61.5	16.4	.....	SW	.....	.....	2	.....	7	.....	.....	.....	.....	*D. clouds.....	John McLaren.
Cardington	.....	.....	29.97	761.2	64.0	17.8	.....	SW	.....	.....	1	.....	7	.....	.....	.....	.....	Overcast.....	T. Bell, for J. Carmell.
Carlisle	.....	.....	29.75	755.6	56.1	13.4	.....	SW	.....	.....	6	.....	8	.....	.....	0.44	11.2	*D. clouds.....	Capt. J. Fellowes, R.E.
Chatham, School M. E	.....	.....	29.97	761.2	63.2	17.3	.....	SW	.....	.....	2	.....	6	.....	.....	.....	.....	*D. clouds.....	R. E. Power.
Dartmoor	28.52	724.4	30.01	762.2	54.7	12.6	.....	SW	.....	.....	4	.....	7	.....	.....	.....	.....	Blue sky.....	J. Mac Gowan.
Donaghadee	.....	.....	29.69	754.1	55	12.8	.....	SW	.....	.....	5	.....	10	.....	.....	.....	.....	Overcast.....	J. Costello.
Dover	.....	.....	29.99	761.7	57	13.9	.....	SW	.....	.....	3	.....	4	.....	.....	.....	.....	½ clouded...	Thomas Mackereth.
Eccles (near Manchester)	.....	.....	29.81	757.2	58.7	14.8	.....	SW	8.0	3.6	.....	.....	6	.....	.....	.....	.....	*D. clouds.....	The Staff.
Falmouth, Observatory	.....	.....	30.03	762.7	60.9	16.1	.....	SW	24	10.7	.....	.....	8	.....	.....	.....	.....	Overcast.....	Pvt. G. Salmon, A. H. C.
Fort Napier, (Natal)	27.84	707.1	30.08	764.0	72.8	22.7	.....	E	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	*D. clouds.....
Free Town, (Sierra Leone)	.....	.....	30.04	763.0	86.0	30.0	.....	N	.....	.....	6	.....	0	.....	.....	.....	.....	*D. clouds.....	Raining.....
Galway, Queen's College	.....	.....	29.49	749.0	56	13.3	.....	W	.....	.....	5	.....	10	.....	.....	.....	.....	Raining.....	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.09	764.3	72.0	22.2	.....	W	.....	.....	5	.....	0	.....	.....	.....	.....	Blue sky.....	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	29.64	75 .8	54.6	12.6	.....	SW	.....	.....	5	.....	10	.....	.....	.....	.....	Threatening	Lewis Stuart.
Great Yarmouth	.....	.....	29.94	760.5	62	16.7	.....	W	.....	.....	4	.....	2	.....	.....	.....	.....	Blue sky.....	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	29.98	761.5	64.8	18.2	.....	WSW	.....	.....	1	.....	0	.....	.....	Blank	Blank	*D. clouds.....	The Staff, for G. B. Airy.
Guernsey	.....	.....	30.05	763.3	60.5	15.8	.....	SW	.....	.....	1	.....	0	.....	.....	.....	.....	*D. clouds.....	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	29.84	757.9	56.2	13.4	.....	WSW	.....	.....	2	.....	10	.....	.....	Blank	Blank	Threatening	L. J. Crossley.
Helston	.....	.....	29.99	761.7	62	16.7	.....	SW	.....	.....	6	.....	2c	.....	.....	0	0	Fine.....	M. P. Moyle.
Holyhead	.....	.....	29.84	757.9	54	12.2	.....	SW	.....	.....	4	.....	0	.....	.....	.....	.....	*D. clouds.....	John Tilston.
Kew, Observatory	.....	.....	29.98	761.5	60.2	15.7	.....	SW	16	7.2	.....	.....	0	.....	.....	.....	.....	*D. clouds.....	The Staff.
Kingstown	.....	.....	29.81	757.2	55	12 8	.....	SE	.....	.....	3	.....	0	.....	.....	.....	.....	Overcast.....	George Mitchell.
Leicester Museum	.....	.....	29.94	760.5	59.0	15.0	.....	SW	.....	.....	2	.....	7	.....	.....	.....	.....	*D. clouds.....	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)	.....	.....	29.66	753 4	72.6	22.6	.....	SE	.....	.....	3	.....	68	.....	.....	.....	.....	*D. clouds.....	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	29.52	749.8	56	13.3	.....	SW	.....	.....	2	.....	0	.....	.....	.....	.....	½ clouded....	W. D. Penny.
Nassau, (Bahamas	.....	.....	30.08	764.0	79.2	25.2	.....	NE	.....	.....	4	.....	7	.....	.....	.....	.....	*D. clouds.....	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	29.89	759.2	64.9	18.3	.....	SSW	.....	.....	6	.....	8ck,8s	.....	W	0.100	2.54	*D. clouds.....	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	29.92	760.0	57.6	14.2	.....	SW	.....	.....	3–4	.....	9	.....	.....	.....	.....	Overcast.....	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	29.94	760.5	60	15.6	.....	WSW	.....	.....	1	.....	8	.....	.....	.....	.....	Overcast.....	J. Lucas.
Plymouth	.....	.....	30.01	762.2	61.5	16.4	.....	SW	.....	.....	4	.....	0	.....	.....	.....	.....	*D. clouds.....	John Merrifield.
Roche's Point	.....	.....	29.86	758.4	56	13 3	.....	SW	.....	.....	5	.....	10	.....	.....	.....	.....	Dull.....	W. Kennedy.
Saint Ann's Head	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John C. Walker.
Saint Helier, Jersey	.....	.....	30.06	763.5	59.5	15.3	.....	W	.....	.....	3	.....	0	.....	.....	.....	.....	½ clouded...	A. P. Amy.
Sandwick Manse, Orkneys)	.....	.....	29.40	748.3	50.2	10.1	.....	WSW	27	12.1	.....	.....	3	.....	.....	.....	.....	*D. clouds.....	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. Shaw.
Scutari Cemetery Turkey	.....	.....	29.96	761.0	83.0	28.3	.....	NE	.....	.....	2	.....	1	.....	.....	.....	.....	Blue sky.....	Sergt. W. H. Lyne.
Sheffield	.....	.....	29.80	758.4	61.0	16.1	.....	WNW	.....	.....	2	.....	0	.....	.....	0.221	5.62	*D. clouds.....	W. F. Cooper.
Silloth Rectory	.....	.....	29.76	755.9	62.3	16.8	67	SW	.....	.....	4	.....	2	.....	.....	0.600	16.76	*D. clouds.....	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	29.82	757.4	56.9	13.8	.....	SW	.....	.....	4	.....	0	.....	.....	Blank	Blank	.....	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.	.....	.....	29.41	747.0	52	11.1	.....	W	.....	.....	6	.....	10	.....	.....	.....	.....	Raining.....	John Smith.
Stratfield Turgiss	.....	.....	29.99	761.7	60.3	15.7	.....	W	.....	.....	1	.....	0	.....	.....	.....	.....	*D. clouds.....	Rev. Charles H. Griffith.
Thurso	.....	.....	29.46	748.3	55	12.8	.....	W	.....	.....	6	.....	6	.....	.....	.....	.....	*D. clouds.....	John Trotter.
Truro, Royal Institution	.....	.....	30.01	762.2	60	15.6	.....	SW	.....	.....	6	.....	7	.....	.....	.....	.....	*D. clouds.....	W. Newcombe.
Valencia, Observatory	.....	.....	29.84	757.7	56.7	13.7	.....	SSW	35	15.6	.....	.....	10	.....	.....	.....	.....	*D. clouds.....	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man	.....	.....	.....	.....	47	8.3	.....	S	.....	.....	7	.....	2	.....	.....	.....	.....	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.01	762.2	77.0	25.0	43	NW	6	2.7	.....	2	4	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	30.05	763.3	58.0	14.4	81	SW	.....	.....	1	.....	4k	.....	.....	0	0	.....	Francis Abbott F.R.A.S.
Leith, Restalrig Park	.....	.....	29.59	751.3	57.1	13.9	.....	W	.....	.....	4	.....	8s	.....	.....	0.13	3.3	Cloudy.....	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.04	763.0	.....	.....	.....	SE	5.4	2.4	.....	.....	.....	.....	.....	0.35	8.9	.....	C. Meldrum.
Melbourne, Observatory	.....	.....	30.20	767.1	52.3	11.3	85	WSW	4	1.8	.....	0	0	.....	.....	0	0	Fine.....	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	29.40	746.7	50	10.0	.....	WSW	.....	.....	1	5	2	W	.....	0.4	10.2	.....	J. Youngemuse.
North Unst, (Shetland Is.)	.....	.....	29.36	745.7	48	8.9	.....	SW	.....	.....	4	2	.....	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 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.

Copenhagen	.....	.....	29.81	757.2	56.7	13.7	61	W	.....	.....	4	.....	5	.....	.....	.....	.....	.....	.....
Fanöe	.....	.....	29.88	759.0	54.3	12.4	70	WSW	.....	.....	4	.....	5	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	29.77	756.1	32.0	0.0	90	NW	.....	.....	4	.....	10	.....	.....	.....	.....	.....	.....
Stykkisholm, (Iceland)	.....	.....	28.85	732.7	38.3	3.5	97	SE	.....	.....	4	.....	8	.....	.....	.....	.....	.....	.....
Thorshavn, (Faröe)	.....	.....	29.15	740.7	45.0	7.2	79	WSW	.....	.....	5	.....	6	.....	.....	.....	.....	Rain, hail...	.....
Vestervig	.....	.....	29.73	755.2	54.7	12.6	89	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	.....	.....	30.07	763.8	62.6	17	93	E	.....	.....	1	.....	5s, kn	.....	E	0.028	0.7	Cloudy	Normal School.
Amiens	.....	.....	30.04	763.0	65.5	18.6	67	WNW	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Avignon	.....	.....	30.02	762.6	81.0	27.2	43	N	.....	.....	2	.....	0	.....	.....	0.295	7.5	Very clear	Normal School.
Bar-sur-Seine	.....	.....	30.10	764.4	65.5	18.6	34	W	.....	.....	2	.....	8ck	.....	NW	0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.08	764.0	64.6	18.1	69	W	3.6	1.6	.....	.....	10	.....	SW	0	0	Covered	Beaumette Observatory.
Beauvais	.....	.....	30.08	764.0	67.5	19.7	43	W	.....	.....	2	.....	6	.....	W	0.004	0.10	Very cloudy	Normal School.
Besançon	.....	.....	30.09	764.2	75.2	24	40	SSW	.....	.....	4	.....	2	.....	SW	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	30.10	766.9	78.8	26	76	NW	.....	.....	2	2c	.....	S	.....	.....	.....	Slightly cl'dy	Normal School.
Bourges	.....	.....	30.09	764.2	67.6	19.8	81	SW	.....	.....	2	.....	5	.....	E	0	0	Cloudy	Normal School.
Brest	.....	.....	30.02	762.5	65.3	18.5	62	SW	.....	.....	4	.....	5k	.....	W	0.010	0.25	.....	Naval Observatory.
Carcassonne	.....	.....	30.13	765.3	66.6	19.2	37	W	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Caen	.....	.....	30.63?	778.1?	64.8	18.2	84	WSW	.....	.....	1	.....	5	.....	NNE	0	0	Cloudy	Normal School.
Chartres	.....	.....	30.08	764.1	60.4	15.8	.....	W	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Clermont	.....	.....	30.05	763.3	74.8	23.8	41	W	.....	.....	2	.....	5	.....	W	0.185	4.7	Cloudy	Puy de Dome Obs'y.
Commercy	.....	.....	30.10	764.4	61.5	16.4	59	W	.....	.....	2	.....	1 kn	.....	W	0	0	Covered	Normal School.
Commune de Greasque*	.....	.....	30.08	763.9	77.7	25.4	45	N	.....	.....	1	.....	2	.....	SW	0.126	3.2	.....	M. Kina.
Grenoble	.....	.....	30.05	763.3	74.8	23.8	52	NW	.....	.....	4	.....	2cs	.....	SE	0.059	1.5	Slightly cl'dy	Normal School.
La Roche-sur-Yon	.....	.....	29.97	761.3	62.2	16.8	81	NE	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Le Mans	.....	.....	30.09	764.3	66.2	19	83	SE	.....	.....	4	.....	5	.....	W	0	0	Cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.06	763.5	75.4	24.1	56	NW	.....	.....	1	.....	8	.....	E	0	0	Very clouuy	Normal School.
Mâcon	.....	.....	30.13	765.4	72.9	22.7	58	W	.....	.....	2	.....	1	.....	W	0	0	Clear	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	30.07	763.8	66.4	19.1	39	W	.....	.....	6	.....	8	.....	.....	0	0	Very cloudy	Normal School.
Nismes	.....	.....	30.04	763.1	82.4	28	39	NE	.....	.....	1	.....	2	.....	SE	0	0	Slightly cl'dy	Normal School.
Orleans	.....	.....	29.98	761.5	67.3	19.6	58	W	.....	.....	2	.....	8	.....	W	0	0	Very cloudy	Normal School.
Paris, Observatory	.....	.....	30.10	764.4	60.1	15.6	73	WNW	.....	.....	2	.....	10k	.....	W	Inap.	Inap.	Covered	National Observatory.
Parthenay	.....	.....	30.07	763.8	66.2	19	76	W	.....	.....	2	.....	2	.....	SW	0	0	Slightly cl'dy	Normal School.
Privas	.....	.....	30.02	762.5	78.8	26	.....	N	.....	.....	2	.....	2	.....	N	.....	.....	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.10	766.7	71.1	21.7	50	W	.....	.....	3	.....	2	.....	.....	0	0	¼ covered	Naval Observatory.
Rouen	.....	.....	30.08	763 9	61.9	16.6	63	SSW	.....	.....	1	.....	10	.....	SW	0	0	Covered	Normal School.
Saint Lo	.....	.....	29.65	753.2	62.2	16.8	72	NW	.....	.....	2	.....	8	.....	NW	0.04	1.	.....	Normal School.
Tarbes	29.06	738.2	30.13	765.2	64.4	18	.....	NW	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Villefranche	.....	.....	30.04	762.9	81.5	27.5	60	N	.....	.....	1	.....	5	.....	.....	0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.90	759.4	81.0	27.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	Blank	Blank	.....	L'Abbé Marchésl.
Marseilles	.....	.....	30.00	762.0	78.1	25.6	64	WSW	.....	.....	1	.....	4	.....	.....	0	0	Partly cloudy	Marseilles Observatory.
Mont-Louis	.....	.....	30.29	769.4	60.6	15.9	66	NNE	13.0	5.83	.....	.....	5	.....	NE	0	0	.....	—. Faignère.
Montsouris, Paris	.....	.....	30.09	764.2	59.9	15.5	75	NW	.....	.....	2	.....	10	.....	W	Inap.	Inap.	.....	Montsouris Observ'tory.
Perpignan	.....	.....	29.97	763.6	76.6	24.8	36	NE	13.0	5.83	.....	.....	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)	.....	.....	30.09	764.3	62.2	16.8	72	SW	.....	.....	1	.....	10	.....	.....	Inap.	Inap.	Very cloudy	E. Renou.
Toulouse	.....	.....	30.22	767.5	70.2	21.2	40	NNW	.....	.....	3	.....	5	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.11	764.7	67.5	19.7	58	WSW	.....	.....	3	.....	9	.....	WSW	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.10	764 5	58.6	14.8	80	NW	.....	.....	1	.....	10	.....	.....	0	0	Covered	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai	.....	.....	29.84	757.9	71.1	21.7	45	SE	15.0	6.7	.....	1cs	0	.....	.....	0	0	.....	H. Le Leo, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and at Zi-Ka-Wei as recorded by two different gauges; the weather in general terms as published. The altitude of Mont-Louis is 1,886.40 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	760.0	73.4	23.0	37	W	.....	.....	4	.....	8	W	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.93	760.2	69.8	21.0	45	SW	.....	.....	3	.....	10	.....	.....	0.039	1.0	.....	Prof. Arndt.
Breslau	.....	.....	29.94	760.4	73.2	22.9	37	W	.....	.....	6	.....	2	.....	.....	0.043	1.1	.....	Dr. P. Nenguebauer.
Carlsruhe	.....	.....	30.00	761.9	74.3	23.5	42	SW	.....	.....	5	.....	10	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	29.98	761.6	61.7	16.5	83	NNW	.....	.....	3	.....	8	S	.....	0	0	.....	Dr. H. Möll.
Emden	.....	.....	29.97	761.1	60.1	15.6	45	NW	.....	.....	3	.....	1	.....	.....	0.087	2.2	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.07	763.8	69.4	20.8	50	SW	.....	.....	3	.....	10	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	30.02	762.4	73.4	23.0	39	SW	.....	.....	1	.....	5	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	29.93	760.2	59.7	15.4	59	WNW	.....	.....	5	.....	6k	.....	.....	0.028	0.7	Fair	Captain F. Hegemann.
Kiel	.....	.....	29.89	759.3	58.6	14.8	56	W	.....	.....	6	.....	5	.....	.....	0.134	3.4	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.88	758.9	60.8	16.0	71	NW	.....	.....	2	.....	4	.....	.....	0.177	4.5	.....	Prof. E. Luther.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	29.97	761.2	73.0	22.8	74	WSW	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	29.86	758.5	58.3	14.6	94	W	.....	.....	3	.....	10,fog	.....	.....	0.496	12.6	Heavy rain	Reimbrecht & Skalweit.
Münster	.....	.....	29.98	761.6	62.2	16.8	82	.....	.....	.....	2	.....	3	.....	.....	0.079	2.0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.89	759.3	62.6	17.0	76	ESE	.....	.....	2	.....	4	.....	.....	0.197	5.0	Rainy	A. Lothes.
Posen	.....	.....	30.00	762.0	70.1	24.5	40	W	.....	.....	5	.....	6	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.04	763.0	75.7	24.3	29	SW	.....	.....	1	.....	9	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	30.00	762.0	74.3	23.5	38	W	.....	.....	1	.....	8	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	29.91	759.8	74.3	23.5	31	W	.....	.....	2	.....	2	.....	.....	0.043	1.1	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.01	762.2	62.4	16.9	62	W	.....	.....	5	.....	10	.....	.....	0	0	.....	Prof. Fiesch.
Wustrow, Naval School	.....	.....	29.80	756.8	54.9	12.7	84	WSW	.....	.....	4	.....	10	.....	.....	0.354	9.0	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. Upper. 0–10.	Clouds. Amount. Lower. 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens	.....	.....	30.03	762.8	77.9	25.5	.....	S	.....	.....	.....	.....	.....	.....	.....	.....	.....	Covered	

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

ITALIAN SERIES.

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

Udine	.....	.....	29.98	761.5	76.3	24.6	50	SW	0.7	0.3	.....	.....	4	.....	.....	0	0	.....	
Padua	.....	.....	30.00	762.0	75.0	23.9	58	SE	7.4	3.3	.....	.....	4	.....	.....	0	0	.....	
Vicenza	.....	.....	30.00	761.9	77.0	25.0	50	E	1.3	0.6	.....	.....	2	W	.....	0	0	.....	
Verona	.....	.....	29.97	761.2	79.2	26.2	55	E	.....	.....	1	.....	0	.....	.....	0	0	.....	
Bergamo	28.67	728.2	29.93	760.2	77.0	25.0	54	NE	.....	.....	1	.....	5	.....	.....	0	0	.....	
Domodossola	28.98	736.2	29.98	761.4	77.0	25.0	62	SSW	.....	.....	4	.....	5	.....	.....	0	0	.....	
Milan	.....	.....	30.00	762.1	81.1	27.3	50	ENE	.....	.....	2	.....	8	E	.....	0	0	.....	
Pavia	.....	.....	30.01	762.2	77.0	25.0	44	NW	.....	.....	2	.....	0	.....	.....	0	0	.....	
Moncalieri	.....	.....	30.01	762.3	75.6	24.2	47	WSW	3.1	1.4	.....	.....	6	NE	.....	0	0	.....	
Mondovi	28.16	715.1	30.00	762.0	70.5	21.4	44	NNW	.....	.....	4	.....	1	NE	.....	0	0	.....	
Porto Maurizio	.....	.....	30.02	762.4	77.4	25.2	45	SW	.....	.....	2	.....	1	.....	.....	0	0	.....	
Genoa	.....	.....	29.97	761.1	78.6	25.9	46	N	3.8	1.7	.....	.....	0	.....	.....	0	0	.....	
Piacenza	.....	.....	30.01	762.2	77.4	25.2	50	ESE	1.8	0.8	.....	.....	7	E	.....	0	0	.....	
Parma	.....	.....	30.01	762.2	79.7	26.5	51	SSE	.....	.....	2	.....	3	.....	.....	0	0	.....	
Bologna	.....	.....	30.05	763.3	76.1	24.5	42	SE	.....	.....	1	.....	2	N	.....	0	0	.....	
Florence	.....	.....	29.98	761.6	81.5	27.5	33	NE	.....	.....	6	.....	0	.....	.....	0	0	.....	
Leghorn	.....	.....	29.96	760.9	75.4	24.1	49	NW	8.7	3.9	.....	.....	0	.....	.....	0	0	.....	
Siena	28.77	730.7	29.93	760.2	75.9	24.4	42	NE	6.3	2.8	.....	.....	3	E	.....	0	0	.....	
Urbino	28.48	723.3	29.98	761.6	66.9	19.4	74	NE	.....	.....	2	.....	4	.....	.....	0	0	.....	
Pesaro	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ancona	.....	.....	30.00	762.1	73.0	22.8	69	N	.....	.....	4	.....	0	.....	.....	0	0	.....	
Grosseto	.....	.....	29.96	761.0	82.4	28.0	32	NNE	.....	.....	2	.....	2	SE	.....	0	0	.....	
Rome	.....	.....	29.93	760.2	82.0	27.8	43	SW	4.9	2.2	.....	.....	2	.....	.....	0	0	.....	
Naples, O. U.	.....	.....	29.97	761.3	73.8	23.2	49	NNE	.....	.....	4	.....	10	SE	.....	0	0	.....	
Lecce	.....	.....	30.03	762.7	73.0	22.8	55	NNW	3.8	1.7	.....	.....	10	.....	.....	0	0	.....	
Cosenza	.....	.....	29.96	761.0	72.1	22.3	73	NW	6.3	2.8	.....	.....	10	.....	.....	0.698	2.5	.....	
Riposto, (Sicily)	.....	.....	29.79	756.6	67.6	19.8	82	E	.....	.....	6	.....	10	W	.....	0	0	.....	
Palermo	.....	.....	29.77	756.1	64.9	18.3	90	NE	15.0	6.7	.....	.....	10	NE	.....	0.201	5.1	.....	
Caltanissetta	27.85	707.4	29.75	755.7	61.2	16.2	66	E	.....	.....	8	.....	10	W	.....	0.165	4.2	.....	
Sub-Series.																			
Naples, S. R.	.....	.....	30.00	762.1	70.9	21.6	50	ENE	0	0	.....	.....	10	NE	.....	0	0	.....	Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or *the velocity in kilometers per hour*; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known: Domodossola, 309 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.

Flushing	.....	.....	30.06	763.4	57.6	14.2	.....	WNW	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	
Groningen	.....	.....	29.90	759.5	58.3	14.6	.....	W	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	
Helder	.....	.....	29.98	761.5	56.8	13.8	.....	SW	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	
Utrecht	.....	.....	29.96	761.0	64.4	18.0	44	WSW	.....	.....	3	.....	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.

Bergen	.....	.....	29.47	748.5	52.9	11.6	71	S	9.8	4.4	.....	.....	8	.....	.....	0.322	8.2	.....	
Brönö	.....	.....	29.43	747.4	69.4	20.8	.....	SSE	38	17	.....	.....	9	.....	.....	0	0	.....	
Christiania	.....	.....	29.51	749.6	55.8	13.2	78	S	12.8	5.7	.....	.....	10	.....	.....	0.563	14.3	.....	
Tromsö	.....	.....	29.78	756.3	65.8	18.8	26	SW	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	66.2	19.0	70	W	13.1	5.86	.....	.....	2	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.07	763.7	80.1	26.7	34	SSW	3.6	1.61	.....	.....	3	.....	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.26	768.7	67.5	19.7	63	SW	7.0	3.13	.....	.....	1	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.16	766.1	69.1	20.6	45	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. 0 m., p. m.

RUSSIAN SERIES.

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

Warsaw	.....	.....	29.88	758.9	70.9	21.6	62	W.	20	9	.....	.....	10	.....	.....	.....	.....	Solar corona.	Astronomical Obs.
Wilna	.....	.....	29.82	757.4	74.3	23.5	60	SSE	4	2	.....	.....	8	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.85	758.2	76.5	24.7	48	SSE	13	6	.....	.....	2	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.98	761.6	78.4	25.8	33	SSE	16	7	.....	.....	8	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.95	760.8	72.0	22.2	52	E	18	8	.....	.....	0	.....	.....	.....	.....	.....	Ch. Forsten.
Kief	.....	.....	29.90	759.4	77.0	25.0	59	S	18	8	.....	.....	9	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.06	763.5	80.6	27.0	41	SSW	20	9	.....	.....	0	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.98	761.5	78.3	25.7	56	NNW	4	2	.....	.....	8	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.10	764.4	79.0	26.1	37	SSE	9	4	.....	.....	2	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.91	759.7	90.5	32.5	30	SSE	18	8	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.23	767.8	64.1	17.9	52	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.53	724.6	29.82	757.3	97.9	36.6	24	E	4	2	.....	.....	7	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.10	764.6	80.1	26.7	38	SE	13	6	.....	.....	8	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.95	760.8	77.2	25.1	34	NNE	20	13	.....	.....	1	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tscharnischef.
Ekaterinburg	28.82	732.0	29.83	757.7	43.5	6.4	87	NNE	18	8	.....	10	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Nukus	.....	.....	29.85	758.3	93.4	34.1	23	NNW	4	2	.....	1	.....	.....	.....	.....	.....	.....	Rohrof.
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Tashkend	28.41	721.7	30.03	762.8	81.3	27.4	48	Calm	0	0	.....	0	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Barnaul	.....	.....	29.39	746.5	66.6	19.2	64	SW	13	6	.....	7	.....	.....	.....	.....	.....	Raining.....	Marks.
Yeniseisk	.....	.....	29.28	743.7	60.3	15.7	88	S	2	1	.....	10	.....	.....	.....	.....	.....	.....	Usolzef.
Irkutsk	28.21	716.4	29.54	750.2	64.2	17.9	78	Calm	0	0	.....	0	.....	.....	.....	.....	.....	.....	Mossin.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Physical Observatory.
Peking, (China)	.....	.....	29.02	752.4	78.8	26.0	31	ESE	18	8	.....	1	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Misty.....	
Vladivostock	.....	.....	29.04	752.8	48.0	8.9	96	SE	13	6	.....	10	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	39.9	4.4	71	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 403. meters, or 1,411.8 feet; Ekaterinburg, 300.4? m., or 1,005.2? ft.; Tashkend, m. 404.2?, or 1,021.3? 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.

Madrid	.....	.....	30.03	762.7	78.8	26.0	64	NE	4.5	2.09	.....	0	1	.....	WSW	0	0	Almost clear	Royal Observatory.
San Fernando	.....	.....	30.17	766.4	67.6	19.8	70	WSW	10.3	4.6	.....	0	4	.....	.....	.....	.....	.....	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	.....	.....	29.07	761.2	75.2	24.0	33	SE	.....	.....	2	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	29.76	755.9	75.7	24.3	65	SE	.....	.....	2	.....	6	.....	.....	0	0	.....	
Hernosand	.....	.....	29.67	753.6	60.8	16.0	61	S	.....	.....	6	.....	8	.....	.....	0	0	.....	
Stockholm	.....	.....	29.48	748.9	63.9	17.7	77	SSE	.....	.....	2	.....	10	.....	.....	0.008	0.2	.....	
Wisby	.....	.....	29.75	755.6	65.1	18.4	79	WSW	.....	.....	2	.....	7	.....	.....	0.012	0.3	.....	
Sub-Series.																			
Upsala	.....	.....	29.04	752.8	63.0	17.2	70	S	9.8	4.4	.....	.....	10.	.....	S	0.018	0.46	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	28.67	728.1	30.05	763.2	69.1	20.6	53	NNE	.....	.....	3	.....	7	.....	.....	0	0	Partial halo.	The Observatory.
Zurich	28.45	722.6	30.02	762.4	76.1	24.5	48	W	.....	.....	1	.....	7	.....	.....	0	0	Cloudy.....	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note—For Geneva the corresponding departures from the normal values are: Barometer, +2.1 mm; Thermometer, +1.3 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.

Constantinople	.....	.....	30.02	762.5	75.2	24.0	48	NNE	11	5.0	.....	.....	2	.....	WNW	0	0	.....	
Fao, (Persian Gulf)	.....	.....	29.92	759.9	100.4	38.0	.....	SE	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.07	763.8	73.4	23.0	.....	SE	.....	.....	2	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	30.00	762.0	74.3	23.5	.....	SW	.....	.....	1	.....	10	.....	.....	.....	.....	Stormy.....	
Varna	.....	.....	30.00	762.0	71.6	22.0	.....	SW	.....	.....	2	.....	5	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.96	760.9	78.6	25.9	69	N	.....	.....	2	.....	9c	.....	.....	0	0	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.

Bathurst, N. B	.....	.....	.....	.....	.....	.....	.....	NE	3	1.3	.....	.....	10s	.....	NE	0.13	3.3	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.87	758.7	57	13.9	.....	NE	3	1.3	.....	.....	10s	.....	NE	0	0	Cloudy.....	W. R. Bigg.
*Chatham, N. B	.....	.....	30.09	764.3	41	5.0	89	N	7	3.1	.....	.....	10ks	.....	N	0.52	13.2	Cloudy.....	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.03	762.7	41	5.0	97	N	9	4.0	.....	.....	10s	.....	.....	0	0	Cloudy.....	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.81	757.2	59.0	15.0	88	E	.....	.....	2	10k	0	.....	.....	0.240	6.33	Dull.....	James Smith, M. A.
Dalhousie, N. B	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.08	2.0	.....	H. A. Johnson.
Esquimault, B. C	.....	.....	29.94	760.5	54.7	12.6	90	SW	2	0.9	.....	10cs	0	.....	.....	0	0	Cloudy.....	W. H. Bevis.
Fredericton, N. B	.....	.....	30.06	763.5	41.5	5.3	90	NE	9	4.0	.....	.....	10n	.....	.....	0.18	4.57	Raining.....	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.95	760.7	40	4.4	91	SE	2	0.9	.....	0	2s	.....	.....	0	0	Fair.....	James Stewart.
Goderich, Ontario	.....	.....	29.82	757.4	58.1	14.5	82	SW	.....	.....	2	0	0	.....	.....	0.051	1.30	Fine.....	D. J. Strang, M. A.
Granton, Ontario	28.74	730.0	29.82	757.4	54	12.2	.....	W	.....	.....	1	.....	10n	.....	.....	1.22	31.0	Cloudy.....	James Grant.
*Halifax, N. S.	.....	.....	29.94	760.5	52	11.1	87	N	8	3.6	.....	.....	8n	.....	.....	0.01	0.3	Cloudy.....	F. Allison, M. A.
*Kingston, Ontario	.....	.....	29.83	757.7	59	15.0	88	NE	2	0.9	.....	.....	10s	.....	.....	0.07	1.8	Cloudy.....	S. Woods, M. A.
Little Glace Bay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. H. Rigby.
*Montreal, Quebec	.....	.....	29.84	757.9	61	10.6	78	NE	9	4.0	.....	Haze	8ks	.....	NE	0.03	0.8	Cloudy.....	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.81	757.2	60	15.6	71	E	12	5.4	.....	8ck	0	E	.....	Inap.	Inap.	Fair.....	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.75	755.6	56	13.3	93	S	8	3.6	.....	.....	10n	.....	S	0.01	0.3	Light rain...	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	29.83	757.7	57	13.9	87	W	10	4.5	.....	10k	0	W	.....	0.08	2.0	Fair.....	H. Morgan.
Port Hastings, N. S	.....	.....	29.97	761.2	45.6	7.6	.....	NW	12	5.4	.....	.....	.....	.....	.....	0	0	Foggy	Peter Grant.
*Port Stanley, Ontario	.....	.....	29.84	757.9	56	13.3	78	W	4	1.8	.....	.....	10ks	.....	W	1.11	28.2	Cloudy.....	M. Payne.
*Quebec, Quebec	.....	.....	29.95	760.7	47	8.3	85	NE	32	14.3	.....	.....	10n	.....	NE	0	0	Cloudy.....	Capt. Ashe, R. N.
*Saugeen, Ontario	.....	.....	30.04	763.0	44	6.7	92	NE	7	3.1	.....	...	10n	.....	.....	0.970	24 64	Foggy	G. Murdoch, C. E.
Stayner, Ontario	.....	.....	29.79	756.7	48	8.9	85	Calm	0	0	.....	.....	Fog	.....	.....	0.09	2.3	Foggy	K. Stewart.
Stratford, Ontario	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.14	3.6	.....	R. J. Cole.
*Sydney, C. B	28.56	725.4	29.82	757.4	53.9	12.2	93	W	8	3.6	.....	.....	10s	.....	.....	1.248	31.70	Cloudy.....	C. J. MacGregor, M. A.
*Toronto, Ontario	.....	.....	29.96	761.0	48	8.9	93	NW	5	2.2	.....	.....	Fog	.....	NW	0	0	Foggy	T. C. Hill.
Woodstock, Ontario	.....	.....	29.80	756.9	52	11.1	97	SE	6	2.7	.....	.....	Fog	.....	.....	0.55	14.0	Foggy	Magnetic Observatory.
Sub-Series.																			
St. John's, Newfoundland	.....	.....	30.15	765.8	43	6.1	92	NE	.....	.....	.....	.....	10n	.....	.....	0.10	2.5	Hazy, dull...	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.	.....	.....	29.77	756.1	71	21.7	93	Calm	0	0	.....	.....	10s	.....	.....	0.63	16.0	Cloudy.....	
Alpena, Mich	.....	.....	29.73	755.1	49	9.4	77	W	8	3.6	.....	2k	0	W	.....	0.65	16.5	Fair.....	
Atlantic City, N. J	.....	.....	29.84	757.9	70	21.1	84	SW	4	1.8	.....	5cs	2ks	SW	S	0	0	Cloudy.....	
Augusta, Ga.	.....	.....	29.93	760.2	74	23.3	95	SW	3	1.3	.....	.....	10n	.....	SW	0.25	6.3	Light rain...	
Baltimore, Md	.....	.....	29.86	758.4	71	21.7	90	W	2	0.9	.....	5k	2ks	W	SE	0.32	8.1	Clearing.....	
Barnegat, N. J	.....	.....	29.83	757.7	66	18.9	84	SW	6	2.7	.....	10k	0	W	.....	0	0	Cloudy.....	
Benton, Montana	27.21	691.9	30.04	763.0	44	6.7	40	SE	1	0.4	.....	0	0	.....	.....	0	0	Clear.....	
Bismarck, Dakota	28.16	715.3	29.80	756.9	45	7.2	46	SW	5	2.2	.....	Haze	Haze	SW	SW	0	0	Hazy.....	
Boston, Mass	.....	.....	29.81	757.2	70	21.1	79	SW	3	1.3	.....	8ok	Fog	SW	.....	0.18	4.6	Foggy	
Breckenridge, Minn	.....	.....	29.99	761.7	40	4.4	82	W	6	2.7	.....	2c	0	.....	.....	0	0	Clear.....	
Buffalo, N. Y	.....	.....	29.80	756.9	55	12.8	100	SW	6	2.7	.....	.....	Fog	.....	SW	0.37	9.4	Foggy	
Burlington, Vt	.....	.....	29.84	757.9	54	12.2	87	N	5	2.2	.....	.....	10s	.....	.....	0.30	7.6	Cloudy.....	
Cairo, Ill	.....	.....	30.06	763.5	62	16.7	61	N	12	5.4	.....	0	0	.....	.....	0	0	Clear.....	
Cape Hatteras, N. C	.....	.....	29.93	760.2	78	25.6	77	SW	18	8.0	.....	5ck	Haze	SW	.....	0	0	Fair.....	
Cape Henry, Va	.....	.....	29.88	758.9	75	23.9	90	S	15	6.7	.....	8c	Haze	W	.....	0.35	8.9	Fair.....	
Cape Lookout, N. C	.....	.....	29.97	761.2	78	25.6	77	S	20	8.9	.....	2c	0	SW	.....	0	0	Clear.....	
Cape May, N. J	.....	.....	29.87	758.7	68	20.0	90	S	14	6.3	.....	.....	8ks	.....	W	0	0	Fair.....	
Charleston, S. C	.....	.....	29.96	761.0	80	26.7	78	SW	14	6.3	.....	0	8ks	.....	SW	0	0	Fair.....	
Cheyenne, Wyoming	24.10	613.6	30.10	764.5	45	7.2	54	W	8	3.6	.....	0	0	.....	.....	0	0	Clear.....	
Chicago, Ill	.....	.....	29.88	758.9	55	12.8	62	W	8	3.6	.....	2k	0	W	.....	0	0	Clear.....	
Cincinnati, Ohio	.....	.....	29.91	759.7	64	17.8	52	NW	6	2.7	.....	0	0	.....	.....	0.01	0.3	Clear.....	
Cleveland, Ohio	.....	.....	29.86	758.4	59.7	15.4	64	SW	6	2.7	.....	.....	8ks	.....	SW	0.02	23.4	Fair.....	
Colorado Springs, Col	24.28	616.7	30.15	765.8	43	6.1	91	NE	8	3.6	.....	0	0	.....	.....	0.02	0.5	Clear.....	
Corsicana, Texas	.....	.....	30.11	764.8	61	16.1	94	N	9	4.0	.....	.....	10s	.....	N	1.33	33.8	Cloudy.....	
Davenport, Iowa	.....	.....	30.00	762.0	52	11.1	66	NW	12	5.4	.....	8k	0	NW	.....	0	0	Cloudy.....	
Denison, Texas	.....	.....	30.19	766.8	63	17.2	71	N	6	2.7	.....	0	0	.....	.....	2.16	54.9	Clear.....	
Denver, Col.	24.93	633.0	30.18	766.6	40	9.4	63	S	4	1.8	.....	0	0	.....	.....	0	0	Clear.....	
Detroit, Mich	.....	.....	29.82	757.4	57	13.9	62	W	6	2.7	.....	0	0	.....	.....	0.20	5.1	Clear.....	
Dodge City, Kan	27.57	700.3	29.85	758.2	53	11.7	73	SW	5	2.2	.....	0	0	.....	.....	0.01	0.3	Clear.....	
Dubuque, Iowa	.....	.....	29.93	760.7	51	10.6	65	NW	12	5.4	.....	5k	0	NW	.....	0	0	Fair.....	
Duluth, Minn	.....	.....	29.90	759.4	44	6.7	75	Calm	0	0	.....	.....	10s	.....	.....	0.22	5.6	Cloudy.....	
Eastport, Me	.....	.....	29.95	760.7	43	6.1	100	NE	20	8.9	.....	.....	10n	.....	.....	0.02	0.5	Light rain...	
Erie, Pa	.....	.....	29.82	757.4	61	16.1	66	SW	8	3.6	.....	7ck	0	SW	.....	0.70	17.8	Fair.....	
Escanaba, Mich	.....	.....	29.81	757.2	40	4.4	82	NW	8	3.6	.....	.....	10s	.....	.....	0.24	6.1	Cloudy.....	
Fort Gibson, Indian Ter	.....	.....	30.15	765.8	55	12.8	93	Calm	0	0	.....	.....	Fog	.....	.....	Inap.	Inap.	Foggy	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T	28.96	735.6	30.05	763.3	63	17.2	66	W	4	1.8	.....	0	0	.....	.....	Inap.	Inap.	Clear.....	
Fort Sully, Dakota	28.33	719.6	30.00	762.0	45	7.2	68	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Galveston, Tex	.....	.....	30.03	762.7	77	25.0	86	N	15	6.7	.....	0	0	.....	.....	0	0	Clear.....	
Grand Haven, Mich	.....	.....	29.83	757.7	51	10.6	78	W	18	8.0	.....	.....	10s	.....	W	Inap.	Inap.	Cloudy.....	
Indianapolis, Ind	.....	.....	29.95	760.7	60	15.6	59	W	4	1.8	.....	0	0	.....	.....	Inap.	Inap.	Clear.....	
Indianola, Texas	.....	.....	30.00	762.0	77	25.0	86	NE	14	6.3	.....	5cs	2ks	W	NE	0	0	Cloudy.....	
Jacksonville, Fla	.....	.....	29.97	761.2	77	25.0	82	SE	15	6.7	.....	.....	10s	.....	SW	0.47	11.9	Cloudy.....	
Keokuk, Iowa	.....	.....	29.98	761.5	56	13.3	68	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear.....	
Key West, Fla	.....	.....	30.01	762.2	81.5	27.5	78	S	8	3.6	.....	5ck	2ks	NW	.....	0	0	Cloudy.....	
Kittyhawk, N. C	.....	.....	29.94	760.5	77	25.0	72	W	16	7.2	.....	10k	0	W	.....	0.81	7.9	Cloudy.....	
Knoxville, Tenn	.....	.....	29.91	759.7	69	20.6	79	N	10	4.5	.....	5ck	1ks	W	W	Inap.	Inap.	Cloudy.....	
La Crosse, Wis	.....	.....	29.91	759.7	50	10.0	71	NW	10	4.5	.....	.....	10s	.....	NW	0	0	Cloudy.....	
Leavenworth, Kan	.....	.....	30.12	765.0	53	11.7	66	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Lexington, Ky	28.90	734.0	29.98	761.5	62	16.7	61	NW	8	3.6	.....	2c	0	SW	.....	0	0	Clear.....	
Long Branch, N. J	.....	.....	29.83	757.7	72	22.2	90	S	1	0.4	.....	5ck	5ks	W	SW	0.04	1.0	Cloudy.....	
Louisville, Ky	.....	.....	29.98	761.5	63	17.2	62	N	4	1.8	.....	0	0	.....	.....	0	0	Clear.....	
Lynchburg, Va	.....	.....	29.83	757.7	76	24.4	79	S	4	1.8	.....	10k	0	SW	.....	0.20	5.1	Cloudy.....	
Malone, N. Y	.....	.....	29.78	756.4	54	12.2	93	N	2	0.9	.....	.....	10s	.....	.....	0.10	2.5	Cloudy.....	
Manhattan, Kan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Marquette, Mich	.....	.....	29.78	756.4	45	7.2	68	W	12	5.4	.....	2k	0	W	.....	0.67	17.0	Fair.....	
Memphis, Tenn	.....	.....	30.08	764.0	65	18.3	68	NW	6	2.7	.....	5cs	2s	SW	.....	0	0	Fair.....	
Milwaukee, Wis	.....	.....	29.87	758.7	51	10.6	72	W	12	5.4	.....	.....	8ks	.....	W	0	0	Cloudy.....	
Mobile, Ala	.....	.....	29.99	761.0	76	24.4	81	N	6	2.7	.....	2c	0	SW	.....	0	0	Fair.....	
Montgomery, Ala	.....	.....	29.95	760.7	76	24.4	81	N	6	2.7	.....	2c	0	.....	.....	0	0	Clear.....	
Morgantown, W. Va	.....	.....	29.80	756.9	70	21.1	84	W	2	0.9	.....	.....	10s	.....	SW	0.06	1.5	Cloudy.....	
Mt. Washington, N. H	23.78	604.0	30.14	765.5	51	10.6	100	NW	20	8.9	.....	.....	Fog	.....	.....	0.10	2.5	Cloudy.....	
Nashville, Tenn	.....	.....	29.98	761.5	67	19.4	60	NW	3	1.3	.....	8k	0	SW	.....	0.84	21.3	Foggy	
New Haven, Conn	.....	.....	29.83	757.7	66	18.9	90	SE	4	1.8	.....	.....	10s	.....	.....	0	0	Fair.....	
New London, Conn	.....	.....	29.86	758.4	61	16.1	88	S	1	0.4	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy.....	
New Orleans, La	.....	.....	29.97	761.2	79	26.1	74	N	7	3.1	.....	5c	0	W	S	0	0	Cloudy.....	
Newport, R. I	.....	.....	29.86	758.4	60	15.6	94	SE	3	1.3	.....	.....	0	.....	.....	0.22	5.6	Fair.....	
New York, N. Y	.....	.....	29.83	757.7	69	20.6	84	NE	5	2.2	.....	10k	Fog	.....	.....	0	0	Foggy	
Norfolk, Va	.....	.....	29.91	759.7	78	25.6	77	SW	14	6.3	.....	.....	10ks	.....	SW	0.02	0.5	Foggy	
North Platte, Neb	27.21	691.1	29.81	757.2	45	7.2	68	Calm	0	0	.....	0	0	.....	.....	0.06	1.5	Cloudy ...	
Omaha, Neb	29.02	737.1	30.09	764.3	48	8.9	70	W	3	1.3	.....	0	0	.....	.....	0	0	Clear.....	
Oswego, N. Y	.....	.....	29.81	757.2	62	16.7	85	SW	3	1.3	.....	5c	2s	W	W	0	0	Clear.....	
Pembina, Dakota	.....	.....	29.93	760.2	44	6.7	83	S	4	1.8	.....	0	0	.....	.....	0.05	1.3	Fair.....	
Philadelphia, Penn	.....	.....	29.93	757.7	73	22.8	81	SW	9	4.0	.....	10k	0	SW	.....	0	0	Clear.....	
Pike's Peak, Colorado	17.94	455.7	30.15	765.8	21	— 6.1	69	N	8	3.6	.....	0	0	.....	.....	0.16	4.1	Clear.....	
Pittsburgh, Penn	.....	.....	29.83	757.7	65	18.3	63	NW	6	2.7	.....	2c	8s	W	NW	Inap.	Inap.	Cloudy.....	
Port Huron, Mich	.....	.....	29.80	756.9	55	12.8	68	W	7	3.1	.....	1c	0	SW	.....	1.42	36.1	Clear.....	
Portland, Me	.....	.....	29.86	758.4	55	12.8	93	E	6	2.7	.....	.....	Fog	.....	.....	0.49	12.4	Foggy.	
Portland, Oregon	.....	.....	30.03	762.7	56	13.3	93	NW	4	1.8	.....	.....	10n	.....	.....	Inap.	Inap.	Light rain...	
Punta Rassa, Fla	.....	.....	30.02	762.5	77.2	25.1	78	SE	8	3.6	.....	.....	10s	.....	SE	0	0	Cloudy.....	
Rochester, N. Y	.....	.....	29.79	756.7	63	17.2	88	W	4	1.8	.....	.....	10s	.....	W	0.28	7.1	Cloudy.....	
Salt Lake City, Utah	25.73	653.5	30.06	763.5	59	15.0	48	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Sandy Hook, N. J	.....	.....	29.81	757.2	70	21.1	90	W	2	0.9	.....	.....	8s	.....	W	0.07	1.8	Cloudy.....	
San Diego, Cal	.....	.....	29.97	761.2	62	16.7	88	Calm	0	0	.....	.....	10s	.....	SW	0	0	Cloudy.....	
San Francisco, Cal	.....	.....	29.91	759.7	51	10.6	93	SW	12	5.4	.....	.....	Fog	.....	SW	0	0	Foggy	
Santa Fé, N. M	23.22	589.8	29.76	755.9	47	8.3	62	Calm	0	0	.....	0	2s	.....	.....	0.05	1.3	Fair.....	
Savannah, Ga	.....	.....	29.96	761.0	86	30.0	69	SW	5	2.2	.....	2cs	2ks	S	SW	0.01	0.3	Fair.....	
Shreveport, La	.....	.....	30.14	765.5	63	17.2	91	N	8	3.6	.....	.....	10n	.....	W	0.31	7.9	Light rain...	
Smithville, N. C	.....	.....	29.97	761.2	78	25.6	78	S	7	3.1	.....	8ck	0	SW	.....	0	0	Cloudy.....	
Springfield, Mass	.....	.....	29.81	757.2	68.5	20.3	90	S	4	1.8	.....	.....	10s	.....	.....	0.45	11.4	Cloudy.....	
St. Louis, Mo	.....	.....	30.05	763.3	59	15.0	59	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear.....	
St. Marks, Fla	.....	.....	29.91	759.7	77	25.0	90	Calm	0	0	.....	5k	2s	SW	S	1.30	33.0	Fair.....	
St. Paul, Minn	.....	.....	29.91	759.7	45	7.2	84	NW	8	3.6	.....	.....	10s	.....	NW	0.02	0.5	Cloudy.....	
St. Paul's Island, Alaska	.....	.....	29.31	744.5	33	0.6	80	W	24	10.7	.....	.....	10s	.....	.....	0.53	13.5	Cloudy.....	
Thatcher's Island, Mass	.....	.....	29.84	757.9	58	14.4	93	SW	4	1.8	.....	.....	.....	.....	.....	0.07	1.8	Dense fog....	
Toledo, Ohio	.....	.....	29.83	757.7	62	16.7	71	SW	9	4.0	.....	2c	0	SW	.....	0.19	4.8	Clear.....	
Tucson, Arizona	27.48	698.0	30.07	763.8	71	21.7	.....	S	.....	.....	.....	0	0	.....	.....	0	0	Clear.....	
Tybee Island, Ga	.....	.....	29.95	760.7	81	27.2	78	S	8	3.6	.....	0	8ks	.....	SW	0	0	Cloudy.....	
Vicksburg, Miss	.....	.....	30.05	763.3	72.5	22.5	84	NE	7	3.1	.....	2ck	5k	SW	N	0	0	Fair.....	

UNITED STATES SERIES.—Continued.

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	Clouds direction: Upper. From—	Lower. From—	Rain-fall or melted snow in the past 24 hours: Inches.	Millimeters.	Weather.	Observer.
Virginia City, M. T.	24.36	618.7	29.84	757.9	45	7.2	68	Calm	0	0		1c	0	NW		0	0	Clear	
Washington, D. C.			29.85	758.2	73	22.8	83	S	4	1.8		2c	2s	"	W	0.46	11.7	Fair	
Wilmington, N. C.			29.95	760.7	77	25.0	82	SW	12	5.4		8cs	2ks	W	SW	0.15	3.8	Cloudy	
Wood's Holl, Mass.			29.86	758.4	60	15.6	94	S	10	4.5			10s			0	0	Cloudy	
Wytheville, Va.	27.59	700.8	29.66	753.4	66	18.9	94	Calm	0	0			10n		W	0.22	5.6	Heavy rain	
Yankton, Dakota	28.82	732.0	30.12	765.0	47	8.3	77	W	11	4.9		0	0			0	0	Clear	
Yuma, Arizona			29.89	759.2	73	22.8		E				0	0			0	0	Clear	
Sub Series.																			
Bridgetown, B'b'dos, W. I.			30.08	761.0	83	28.3	70	E	4	1.8		0	5s		E	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.98	761.5	82	27.8	78	SE				0	5ks			0	0	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.			30.16	76[illegible].1	78	25.6	86	Calm	0	0		5c	2s			0.61	15.5		James Gall.
Santiago de Cuba, W. I.			29.81	757.2	80	26.7	74	SE	1.2	0.5		8ck	4k	S		0.15	3.8	Fair	Robert Mason.
Havana, Cuba, W. I.			30.00	762.0	80	26.7	87	SE	1.2	0.5		8c	0	SE		0.88	22.4	Fair	Charles Hasselbrink.
St. Georges, Bermudas			30.22	767.6	77.0	25.0	78	N	2.0	0.9		1s	5k			0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.18	690.4	29.95	760.7	69	20.6	90	S	2.0	0.9		8k	0	S		0	0	Dull	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.08	764.0	76	24.4	95	NE			2		10n		NE	1.995	50.6	Raining	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.7			80.6	27										0.709	18.00		Dr. H. Groot.
Medellin, Colombia, S. A.	25.26	641.6			63.5	17.5	83	Calm	0	0		7ck	2s			0.65	16.5	Cloudy	Thomas Herran.
York Factory, B. A.			29.74	755.4	50	10.0	68	S	4	1.8		4ck	0	N		0	0		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.																			Daniel Smith.
Makawao, Maui, H. I.																			F. L. Clarke.

Marine Series.	True course towards	Hourly rate in knots	Barometer: Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	Wind from—	Miles per hour.	Meters per second.	Force.	Up'er	Low'r	Upper.	Lower.	State of ocean.	Direction of swell from—	Weather.	Observer.
Steamer Leipzig, N. 47° 13'. W. 38° 0[illegible]'.	N 6½ E		30.05	763.3	62.4	16.9		WSW			5		.d		W	Long swells	W	Raining	Capt. R. Hoffmann.
Steamer Nova Scotian N. 51° 6', W. 33° 38'.	ESE	11¾	29.89	759.2	48	8.9		NNW			4		..k			Swells	N. W.	Cloudy	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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) 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. *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. Ass'gd) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JUNE 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			30.15	765.7	71.6	22.0	72	NNE			2		4			0	0	Fair	Charnot.
Algiers			30.15	765.7	72.1	22.3	72	NW			2		2			0.050	1.5	Clear	Peter.
La Calle																			Kunts.
Tunis			29.96	760.9	71.6	22.0	63	N			4		10			0.428	10.8	Hidden	Jacques.
Sfax			29.93	760.2	69.8	21.0	70	N			4		4			0.063	1.6	Fair	Chauvey.
Saida			29.91	760.4	69.8	21.0	38	N			1		1			0	0	Clear	Millot.
Tebessa			30.00	761.9	55.4	13.0		NNW			3		10			0.268	6.8	Hidden	Colin.
Gerville			30.13	765.4	67.8	19.9	34	N			2		2			0	0	Clear	Buard.
Laghouat			30.15	765.7	80.6	27.0	37	N			2		1			0	0	Clear	Guyot.
Biskra			30.05	763.2	80.2	26.8	58	N			2		5			0	0	Fair	Laromer.

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

AUSTRIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram			30.03	762.8	84.0	29.4	41	Calm			0		3			0	0		Prof. Ivan Stosir.
Cracow, I. R. Observatory			30.12	765.1	73.8	23.2	52	NE			1		6			0	0		Dr. Wierzbiskl.
Eperies			30.05	763.3	73.9	23.3	65	Calm			0		10		S	0	0		Julius Mikolik.
Gratz	28.92	734.5	30.07	763.7	78.6	25.4	55	NW			3		2			0	0		Andreas Rospini.
Hermannstadt	28.64	727.5	30.00	762.1	76.3	24.6	49	NE			3		4			0	0		Prof. Reissenberger.
Kremsmünster	28.66	728.0	29.96	760.9	70.2	21.2	74	WSW			2		10			0.197	5.0		Prof. C. Wagner.
Lemberg			30.02	762.5	73.2	22.9	43	SE			1		2			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.03	762.7	82.8	28.2	40	ESE			1		6ck			0	0		I.R.Hydrographic Office.
Szegedin			30.00	762.0	83.5	28.6	38	SW			1		4			0.408	10.35		Karl Stancel.
Trieste			30.04	763.0	87.3	30.7	34	E			1		1			0	0		Prof. V. Farolfi.
Vienna			30.06	763.5	78.1	25.6	48	E			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.; 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			30.00	762.0	58.5	14.7	52	SW			6		10			0	0		Royal Observatory.

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

BRITISH SERIES.

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, 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			29.52	749.8	56.7	13.7		W	27	12.1			2			0.040	1.02	Blue sky	William Boswell.
Ardrossan			29.70	754.4	56	13.3		WNW			6		4					*D. clouds	William McNeil.
Armagh, Observatory			29.78	756.4	55.9	13.3		W	11	4.9			7					*D. clouds	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.84	757.9	55.2	12.9		W			1–3		8					*D. clouds	J. Dreyer.
Bradford																0.05	1.3		J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	83.0	28.3		NE			4		7					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.82	757.4	61.9	16.6		SW			3		10					Drizzling	H. Todd. [H. C.
Cardington			29.84	757.9	56.0	13.3		SW			3		10					Overcast	John McLaren.
Carlisle			29.73	755.1	58.3	14.6		SW			7		3			Blank	Blank	*D. clouds	T. Bel, for J. Carmell.
Chatham, School M. E			29.90	759.4	58.5	14.7		WSW			4					Blank	Blank	Overcast	Capt. J. Fellowes, R.E.
Dartmoor	28.51	724.1	30.01	762.2	52.0	11.1		W			2		10					Rain and fog	R. E. Power.
Donaghadee			29.76	755.9	56	13.3		W			5		5					*D. clouds	J. Mac Gowan.
Dover			29.95	760.7	56	13.3		SW			5		5					½ clo ded	J. Costello.
Eccles (near Manchester)			29.80	756.9	58.4	14.7		W	8.0	3.6			5					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			29.95	760.7	57.0	13.9		WNW	18	8.0			10					Overcast	The Staff.
Fort Napier, (Natal)	27.80	706.1	29.93	760.2	77.6	25.3		E			1		2					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.02	762.5	90.0	32.2		E			6		7					*D. clouds	
Galway, Queen's College			29.81	757.2	57	13.9		W			4		8					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.12	765.0	72.0	22.2		E			3		0					Blue sky	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			29.66	753.4	53.7	12.1		W			6		3					Squally	Lewis Stuart.
Great Yarmouth			29.83	757.7	61	16.1		SW			5		8					Squally	G. T. Watson.
Greenwich, Royal Obs'y			29.90	759.4	58.5	14.7		SW			2		10					Overcast	The Staff, for G. B. Airy.
Guernsey			29.99	761.7	58	14.4		SW			3		10					Drizzling	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y			29.78	756.4	57.5	14.2		WNW			2		7			Blank	Blank	*D. clouds	L. J. Crossley.
Helston			29.92	760.0	59	15.0		W			2		10			0	0	Gloomy	M. P. Moyle.
Holyhead			29.86	758.4	57	13.9		SW			3		2					Blue sky	John Tilston.
Kew, Observatory			29.89	759.2	58.7	14.8		SSW	21	9.4			10					Threatening	The Staff.
Kingstown			29.83	757.7	58	14.4		W			4		5					*D. clouds	George Mitchell.
Leicester Museum			29.85	758.2	53.0	11.7		NW			1		10					Drizzling	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.77	756.1	71.2	21.8		NE			3		8					Overcast	Sergt. F. Travis, A. H. C.
Nairn			29.48	748.8	56	13.3		SW			4		2					¼ clo ded	W. D. Penny.
Nassau, (Bahamas			30.02	762.5	82.4	28.0		SE			4		7					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.85	758.2	54.5	12.5		SSW			4		10d		SW	0.102	4.88	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.84	757.9	50.8	10.4		NW			2		10					Drizzling	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.83	757.7	62	16.7		SW			2		10					Overcast	J. Lucas.
Plymouth			29.92	760.0	58.8	14.9		SW			4		10					Drizzling	John Merrifield.
Roche's Point			29.91	759.7	57	13.9		NW			4		5					Cloudy	W. Kennedy.
Saint Ann's Head			29.88	758.9	53	11.7		WNW			1		5					*D. clouds	John C. Walker.
Saint Helier, Jersey			30.03	762.7	59.5	15.3		WSW			5		10					Overcast	A. P. Amy.
Sandwick Manse, Orkneys)			29.39	746.5	49	9.4		WSW	36	16.1			4					Showery	Rev. C. Clouston, LL. D.
Scarborough			29.73	755.1	59.7	15.4		WSW			2		7					*D. clouds	F. Shaw.
Scutari Cemetery Turkey			29.97	761.2	74.6	23.7		NNE			2		2					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.69	754.1	60.1	15.6		WNW			2		1			0.135	3.43	Overcast	W. F. Cooper.
Silloth Rectory			29.74	755.4	61.4	16.3	63	SW			3		1			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.78	756.4	55.0	12.8		W			4		5			Blank	Blank	*D. clouds	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			29.46	748.3	51	10.6		WSW			6		10					Hailing	John Smith.
Stratfield Turgiss			29.90	759.4	62.5	16.9		W			1		10					Raining	Rev. Charles H. Griffith.
Thurso			29.41	746.7	52	11.7		W			6		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.94	760.5	58	14.4		NW			4		8					Gloomy	W. Newcombe.
Valencia, Observatory			29.94	760.5	55.0	12.8		W	16	7.2			7					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man					47	8.3		SW			4		0						Thomas Dawson.
Cape Good Hope, Obs'y			29.84	757.9	68.0	14.4	89	NNW	18	8.0		5	5						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.05	763.3	59.0	15.0	81	SW			1		0			0	0	Clear	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.68	753.9	55.0	12.8		W			6		3k			0.16	4.1	Cloudy	Andrew Gibb.
Mauritius, Observatory			30.08	764.0				E	11.2	5.0						0	0		C. Meldrum.
Melbourne, Observatory			30.03	762.7	47.1	8.4	85	N	2	0.9			7			0	0	Fine, foggy	R. L. J. Ellery.
Monach Lt-house, Hebrides			29.50	749.3	50	10.0		WSW			6	5	5	W		0.4	10.2		J. Youngclause.
North Unst, (Shetland Is.)			29.13	739.9	44.5	6.9		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 Ibs. 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	61.0	16.1	63	S			2		10						
Fanöe			29.84	758.0	55.6	13.1	82	SW			6		10						
Godthaab, (Greenland)			29.76	756.0	37.2	2.9	76	Calm			0		10					Snowing	
Stykkisholm, (Iceland)			28.72	729.6	42.6	5.9	91	SE			4		8					Raining	
Thorshavn, (Faröe)			29.15	740.4	48.0	8.9	71	WSW			5		5					Raining	
Vestervig			29.74	755.4	51.1	10.6	93	SSW			6		10					Raining	

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

FRENCH SERIES.

Furnished by the 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	64.4	18	67	S	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Amiens	.....	.....	30.01	762.2	66.9	19.4	63	SSW	.....	.....	4	.....	5	.....	SSW	0	0	Cloudy.....	Normal School.
Avignon	.....	.....	30.10	764.4	81.3	27.4	42	N	.....	.....	2	.....	.....	.....	WSW	0	0	Light clouds	Normal School.
Bar-sur-Seine	.....	.....	30.09	764.3	74.1	23.4	42	SW	.....	.....	2	.....	2	.....	SW	0	0	Slightly cl'dy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.11	764.9	64.8	18.2	76	SW	3.8	1.7	.....	.....	10	.....	SW	0	0	Covered	Beaumette Observatory.
Beauvais	.....	.....	30.08	763.9	68.9	20.5	76	SW	.....	.....	3	.....	8	.....	SW	0	0	Very cloudy	Normal School.
Besançon	.....	.....	30.22	767.5	77.7	25.4	46	SW	.....	.....	3	.....	0	.....	.....	0	0	Clear.....	Normal School.
Bourg en Bresse	.....	.....	30.22	767.5	80.6	27	42	W	.....	.....	2	2c	.....	SE	.....	.....	.....	Slightly cl'dy	Normal School.
Bourges	.....	.....	30.11	764.9	67.1	19.5	89	W	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
Brest	.....	.....	29.98	761.5	59.2	15.1	91	SW	.....	.....	3	.....	10	.....	SW	.....	.....	Rain & fog...	Naval Observatory.
Carcassonne	.....	.....	30.13	765.3	69.3	20.7	38	W	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Normal School.
Caen	.....	.....	30.63?	778.0?	65.3	18.5	90	SSW	.....	.....	6	.....	10	.....	E	0	0	Covered.....	Normal School.
Chartres	.....	.....	30.09	764.3	63.3	17.4	.....	SW	.....	.....	4	.....	10	.....	.....	0	0	Covered	Normal School.
Clermont	.....	.....	30.02	762.6	70.2	26.2	44	NE	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.11	764.9	72.7	22.6	43	NW	.....	.....	4	.....	2k	.....	NW	0	0	Slightly cl'dy	Normal School.
Commune de Greasque*	.....	.....	30.15	765.9	81.3	27.4	35	SW	.....	.....	1	.....	5	.....	SW	0	0	Clear.....	M. Kina.
Grenoble	.....	.....	30.10	764.6	69.1	20.6	72	N	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Normal School.
La Roche-sur-Yon	.....	.....	30.01	762.2	64.0	17.8	71	SW	.....	.....	2	.....	5	.....	SW	0.020	0.5	Cloudy.....	Normal School.
Le Mans	.....	.....	30.13	765 2	63.7	17.6	92	WSW	.....	.....	4	.....	8	.....	WSW	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.10	764.5	75.6	24.2	40	SW	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Normal School.
Mâcon	.....	.....	30.17	766.4	74.5	23.6	68	NW	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	30.07	763.8	73.8	23.2	44	W	.....	.....	4	.....	1	.....	E	0	0	Clear.....	Normal School.
Nismes	.....	.....	30.10	764.6	82.4	28	33	NW	.....	.....	1	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Orleans	.....	.....	30.06	763.5	68.0	20	64	W	.....	.....	2	.....	8	.....	W	0	0	Very cloudy	Normal School.
Paris, Observatory	.....	.....	30.10	764.4	66.0	18.9	58	SW	.....	.....	3	.....	10k	.....	SW	0	0	Covered	National Observatory.
Parthenay	.....	.....	30.12	765.1	61.7	16.5	85	SW	.....	.....	2	.....	8	.....	SW	0	0	Very cloudy	Normal School.
Privas	.....	.....	30.07	763.6	77.7	25.4	.....	N	.....	.....	2	.....	2	.....	N	.....	.....	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.21	767.4	69.4	20.8	66	WSW	.....	.....	3	.....	8	.....	NE	0	0	¾ Covered ...	Naval Observatory.
Rouen	.....	.....	30.04	763.1	72.3	22.4	56	SSW	.....	.....	1	.....	10	.....	SW	0	0	Covered	Normal School.
Saint Lo	.....	.....	29.74	755.5	63.1	17.3	78	W	.....	.....	2	.....	7	.....	NW	Inap.	Inap.	.....	Normal School.
Tarbes	29.09	738.9	30.15	765.9	66.2	19	.....	NW	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Normal School.
Villefranche	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sub-Series.																Blank	Blank	.....	L'Abbé Marchési.
Fort de France, Martinique	.....	.....	29.90	759.4	77.0	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	Cloudy.....	Marseilles Observatory.
Marseilles	.....	.....	30.06	763.4	77.4	25.2	60	W	.....	.....	1	.....	9	.....	WNW	0	0	.....	—. Faïgnère.
Mont-Louis	.....	.....	30.37	771.3	62.6	17.0	66	SE	14.9	6.66	.....	.....	4	.....	SW	Inap.	Inap.	.....	Montsouris Observ'tory.
Montsouris, Paris	.....	.....	30.10	764.4	66.2	19.0	59	SW	.....	.....	3	.....	10	.....	.....	0	0	.....	Dr. Fines.
Perpignan	.....	.....	29.84	757.9	79.3	26.3	36	NE	7.4	3.33	.....	.....	0	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.004	0.1	Very cloudy	E. Renou.
Saint Maur, (near Paris)	.....	.....	30.10	764.4	66.6	19.2	60	SW	.....	.....	3	.....	10	.....	.....	0	0	.....	Toulouse Observatory.
Toulouse	.....	.....	30.22	767.5	75.9	24.4	44	NNW	.....	.....	1	.....	3	.....	.....	0	0	.....	C. Marquet.
Tours	.....	.....	30.13	765.4	67.6	19.8	55	WSW	.....	.....	1	.....	10	.....	W	0	0	Covered	Dr. A. Bérigny.
Versailles, (near Paris)	.....	.....	30.10	764.5	65.8	18.8	63	W	.....	.....	2	.....	10	.....	.....	0	0	.....	.....
Zi-Ka-Wei, (near Shanghai	.....	.....	29.65	753.2	71.6	22.0	100	ESE	5.4	2.4	.....	..ck	..k	W	SE	{0.583 0.681	{14.8 17.3	Lunar corona	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 1,272.9 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	.....	.....	30.07	763.7	72 1	22 3	45	SW	.....	.....	5	.....	3	S	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.05	763.3	72.0	22.2	36	S	.....	.....	1	.....	4	.....	.....	0	0	.....	Prof. Arndt
Breslau	.....	.....	30.10	766.8	70.9	21.6	54	SE	.....	.....	3	.....	3	.....	.....	0	0	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	30.05	763.2	77.0	25.0	37	SW	.....	.....	3	.....	0	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.03	762.7	82 4	28.0	51	S	.....	.....	6	.....	3	SSW	.....	0	0	.....	Dr. H. Möbl
Emden	.....	.....	29.91	759.6	71.4	21.9	53	WSW	.....	.....	6	.....	1	.....	.....	0	0	....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.13	765.2	75.6	24.2	43	SW	.....	.....	2	.....	3	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	30.09	764.3	70.7	21.5	57	SW	.....	.....	1	.....	2	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	29.97	761.2	68.5	20.3	55	SW	.....	.....	5	.....	4k	SW	.....	0.102	2.6	Fair.....	Captain F. Hegemann.
Kiel	.....	.....	29.91	759.7	68.0	20.5	54	SW	.....	.....	6	.....	5	.....	.....	0	0	.....	Prof. G. Karsten
Königsberg, (Prussia.)	.....	.....	30.17	766.3	63.0	17.2	39	SW	.....	.....	2	.....	0	.....	.....	0.008	0.1	.....	Prof. E. Luther.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	.....	Prof. Brutius.
Memel	.....	.....	30.10	764.0	75.6	24.2	41	SSW	.....	.....	2	.....	6	.....	.....	0.004	0.1	Clear.....	Reimbrecht & Skalweit.
Münster	.....	.....	30.20	767.1	56.3	13.5	76	WNW	.....	.....	3	.....	0	.....	.....	0.047	1.2	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.04	762.9	71.8	22.1	58	.....	.....	.....	2	.....	0	.....	.....	0.008	0.2	.....	A. Lothes.
Posen	.....	.....	30.17	766.2	59.4	15 2	68	ENE	.....	.....	2	.....	2	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.28	769.0	70.3	21.3	32	SSW	.....	.....	7	.....	1	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	30.08	764 0	77.7	25.4	38	SW	.....	.....	1	.....	1	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	30.04	762.9	79.2	26.2	32	SW	.....	.....	1	.....	0	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.10	766.1	71.6	22.0	36	SE	.....	.....	3	.....	3	.....	.....	0	0	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	30.03	762.7	72 1	22.3	47	W	.....	.....	6	.....	1	.....	.....	0	0	.....	E. F. Schütz.
.....	.....	.....	29.92	759.9	67.8	19.9	51	S	.....	.....	4	.....	4	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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. U'p'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens	.....	.....	30.02	762.6	80.6	27.0	.....	S	.....	.....	.....	.....	.....	.....	.....	.....	.....	Misty sky	

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

ITALIAN SERIES.

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

Udine	.....	.....	30.02	762.6	83.5	28.6	35	SW	0.7	0.3	.....	.....	5	.....	.....	0	0	.....	
Padua	.....	.....	30.03	762.8	82.2	27.9	42	E	8.7	3.9	.....	.....	0	.....	.....	0	0	.....	
Vicenza	.....	.....	30.03	762.8	82.4	28.0	37	NE	2.5	1.1	.....	.....	1	.....	.....	0	0	.....	
Verona	.....	.....	30.03	762.8	81.5	27.5	47	E	.....	.....	1	.....	0	.....	.....	0	0	.....	
Bergamo	28.73	729.7	29.99	761.7	80.6	27.0	43	SW	.....	.....	2	.....	1	.....	.....	0	0	.....	
Domodossola	29.02	737.1	30.01	762.3	81.0	27.2	52	SW	.....	.....	2	.....	1	.....	.....	0	0	.....	
Milan	.....	.....	30.07	763.6	85.8	29.9	46	ESE	.....	.....	2	.....	4	ESE	.....	0	0	.....	
Pavia	.....	.....	30.04	763.0	81.7	27.6	40	N	.....	.....	1	.....	1	.....	.....	0	0	.....	
Moncalieri	.....	.....	30.07	763.8	78.8	26.0	53	WSW	3.8	1.7	.....	.....	3	NE	.....	0	0	.....	
Mondovi	28.23	717.0	30.08	763.9	73.8	23.2	44	NNW	.....	.....	4	.....	1	NE	.....	0	0	.....	
Porto Maurizio	.....	.....	30.09	764.2	78.8	26.0	50	SE	.....	.....	2	.....	2	.....	.....	0	0	.....	
Genoa	.....	.....	30.04	762.9	82.4	28.0	44	NNW	2.5	1.1	.....	.....	0	.....	.....	0	0	.....	
Piacenza	.....	.....	30.08	763.9	79.7	26.5	43	SE	2.5	1.1	.....	.....	0	.....	.....	0	0	.....	
Parma	.....	.....	30.05	763.3	81.9	27.7	44	NW	.....	.....	2	.....	0	.....	.....	0	0	.....	
Bologna	.....	.....	30.11	764.7	77.0	25.3	37	E	.....	.....	6	.....	2	E	.....	0	0	.....	
Florence	.....	.....	30.03	762.7	86.0	30.0	29	NE	.....	.....	6	.....	1	.....	.....	0	0	.....	
Leghorn	.....	.....	30.03	762.8	75.4	24.1	57	NNW	8.7	3.9	.....	.....	4	.....	.....	0	0	.....	
Siena	28.83	732.2	29.99	761.7	79.7	26.5	33	ENE	4.9	2.2	.....	.....	7	W	.....	0	0	.....	
Urbino	28.57	725.7	30.08	764.0	72.7	22.6	47	NE	.....	.....	4	.....	3	.....	.....	0	0	.....	
Pesaro	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ancona	.....	.....	30.05	763.2	74.8	23.8	72	NW	.....	.....	2	.....	1	.....	.....	0	0	.....	
Grosseto	.....	.....	30.02	762.4	81.7	27.6	42	SSW	.....	.....	2	.....	8	S	.....	0	0	.....	
Rome	.....	.....	29.97	761.1	83.5	28.6	33	NNW	4.3	1.9	.....	.....	2	E	.....	0	0	.....	
Naples, O. U	.....	.....	29.97	761.3	82.0	27.8	37	NE	.....	.....	4	.....	5	NE	.....	0	0	.....	
Lecce	.....	.....	30.01	762.2	74.3	23.5	57	NW	12.5	5.6	.....	.....	7	.....	.....	0	0	.....	
Cosenza	.....	.....	29.93	760.2	78.8	26.0	69	NW	12.5	5.6	.....	.....	7	.....	.....	0	0	.....	
Riposto, (Sicily)	.....	.....	29.86	758.4	69.4	20.8	70	E	.....	.....	4	.....	10	W	.....	0	0	.....	
Palermo	.....	.....	29.84	757.9	70.2	21.2	74	NE	8.7	3.9	.....	.....	10	NE	.....	0	0	.....	
Caltanissetta	27.65	702.3	29.79	756.6	62.2	16.8	80	E	.....	.....	8	.....	10	W	.....	0	0	.....	
Sub-Series.																			
Naples, S. R	.....	.....	30.00	762.0	79.5	26.4	34	NE	1.3	0.6	.....	.....	7	E	.....	0	0	.....	Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather 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.

Flushing	.....	.....	30.00	762.0	66.7	19.3	.....	WSW	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	
Groningen	.....	.....	29.87	758.6	66.6	19.2	.....	S	.....	.....	7	.....	.....	.....	.....	.....	.....	.....	
Helder	.....	.....	29.88	758.9	61.0	16.1	.....	SSW	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	
Utrecht	.....	.....	29.91	759.8	70.3	21.3	57	SW	.....	.....	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.

Bergen	.....	.....	29.37	746.0	48.6	9.2	89	S	35.6	15.9	.....	.....	10	.....	.....	0.276	7.0	Raining.	
Brönö	.....	.....	29.56	750.9	47.8	8.8	81	Calm	0	0	.....	.....	10	.....	.....	0.394	10.0	.....	
Christiania	.....	.....	29.76	755.8	50.0	10.0	74	S	10.7	4.8	.....	.....	10	.....	.....	0.051	1.3	Raining	
Tromsö	.....	.....	29.36	745.7	68.9	20.5	42	SW	2	1	.....	.....	5	.....	.....	0.004	0.1	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

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 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,)	.....	.....	30.44	773.2	68.4	20.2	78	W	6.5	2.92	.....	.....	6	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.08	763.9	66.0	30.0	28	SSW	4 8	2.16	.....	.....	5	SSW	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.30	769.5	67.6	19.8	58	SW	3.8	1.70	.....	.....	5	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.19	766.8	71.4	21.9	56	NNW	6.3	2.8	.....	.....	10	.....	.....	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	.....	.....	30.12	765.1	69.3	20.7	42	WNW	9	4	.....	.....	8	.....	.....	.....	.....	Solar corona	Astronomical Obs.
Wilna	.....	.....	30.10	764.5	66.2	19.0	29	Calm	0	0	.....	.....	3	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.07	763.6	62.6	17.0	47	W	13	6	.....	.....	3	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.91	759.7	54.1	12.3	86	WNW	13	6	.....	.....	10	.....	.....	.....	.....	Raining	Central Physical Obs.
Kiuptio	.....	.....	29.76	755.8	58.1	14.5	95	W	22	10	.....	.....	10	.....	.....	.....	.....	Raining	Ch. Forsten.
Kief	.....	.....	29.97	761.1	74.1	23.4	36	N	11	5	.....	.....	5	.....	.....	.....	.....	.....	Physical Cabinet
Nikolaiev	.....	.....	30.04	763.0	84.2	29.0	48	WNW	11	5	.....	.....	5	.....	.....	.....	.....	Thunder-storm	Kurdakof.
Kertch	.....	.....	29.93	760.1	84.4	29.1	47	NNW	7	3	.....	.....	1	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.89	759.3	74.7	23.7	58	SE	4	2	.....	.....	5	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.87	758.8	66.4	19.1	89	E	13	6	.....	.....	10	.....	.....	Blank	Blank	. .....	Meteorological Obs.
Archangel	.....	.....	30.02	762.6	71.6	22.0	21	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.85	725.2	29.91	759.6	75.2	24.0	67	NE	9	4	.....	.....	10	.....	.....	.....	.....	Raining	Physical Observatory.
Astrakhan	.....	.....	29.98	761.6	79.0	26.1	38	S	4	2	.....	.....	9	.....	.....	Blank	Blank	.....	Sebastianof.
Kasan	.....	.....	30.04	762.9	66.0	18.9	27	S	9	4	.....	.....	1	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.01	737.4	30.02	762.6	51.1	12.3	40	N	13	6	.....	.....	7	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.87	758.8	84.7	28.7	24	NNE	9	4	.....	.....	8	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.30	718.8	29.90	759.5	83.5	28.6	54	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.45	748.0	61.3	16.3	59	S	13	6	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.21	742.0	60.3	15.7	68	SW	16	7	.....	.....	8	.....	.....	Blank	Blank	.....	Marks.
Irkutsk	28.11	714.0	29.44	747.7	61.0	16.1	60	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Usolzef.
Orga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.63	752.5	79.7	26.5	37	Calm	0	0	.....	.....	4	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	29.83	757.7	55.0	12.8	77	E	13	6	.....	.....	7	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	47.7	8.7	80	E	7	3	.....	.....	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 405. meters, or 1,411.8 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.; Orga, 1,281.6 m., or 4,202.6? ft.

SPANISH SERIES.

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

Stations.	Barometer corrected for instrumental errors. Inches.	Barometer corrected for instrumental errors. Millimeters.	Barometer reduced to sea-level. Inches.	Barometer reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Madrid	.....	.....	30.01	762.3	85.3	29.6	66	S	4.5	2 00	.....	1	0	SE	.....	0	0	Almost clear	Royal Observatory.
San Fernando	.....	.....	30.15	765.7	74.8	23.8	61	W	10.7	4.8	.....	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. Hildebrunsson, Chief of the Meteorological Division of the Upsala Observatory.

Stations.	Barometer corrected for instrumental errors. Inches.	Barometer corrected for instrumental errors. Millimeters.	Barometer reduced to sea-level. Inches.	Barometer reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Haparanda	.....	.....	29.70	754.3	48.6	9.2	98	SW	.....	.....	4	.....	5	.....	.....	0	0	.....	
Umea	.....	.....	29.68	753.9	49.3	9.6	74	S	.....	.....	4	.....	0	.....	.....	0.650	16.5	.....	
Hernosand	.....	.....	29.69	754.2	61.5	16.4	35	SW	.....	.....	6	.....	3	.....	.....	0.217	5.5	.....	
Stockholm	.....	.....	29.91	759.8	62.1	16.7	43	SW	.....	.....	6	.....	4	.....	.....	0	0	.....	
Wisby	.....	.....	30.07	763.7	61.2	16.2	56	S	.....	.....	4	.....	0	.....	.....	0.020	0.5	.....	
Upsala, Sub-Series.	.....	.....	29.88	758.9	64.2	17.9	31	SW	18.3	8.2	.....	.....	2	.....	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	28.71	729.3	30.09	764.2	72.0	22.2	43	NNE			2		0			0	0	Clear	The Observatory.
Zurich	28.50	724.0	30.07	763.6	78.4	25.8	45	NW			1		1			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +3.3 mm; Thermometer, +2.8 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 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			30.10	764.6	68.0	20.0	70	NNE	15	6.5			3		NW	0	0		
Fao, (Persian Gulf)			29.84	758.0	102.2	39.0		SW			1		0						
Salonica			30.07	763.6	77.5	25.3		W			1		0						
Valona			29.98	761.5	81.1	27.3		SE			1		10					Stormy	
Varna			30.04	763.0	68.0	20.0		N			1		10					Dense fog	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.92	759.9	79.7	26.5	71	NW			1		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			29.85	758.2	40.8	4.9	96	NE	1	0.4		10						Raining	Hon. J. Ferguson.
Brockville, Ontario			29.91	759.7	64	17.8		SW	3	1.3		0	2s		SW	0	0	Fair	W. R. Bigg.
*Chatham, N. B			29.87	758.7	44	6.7	97	N	2	0.9			10ks		N	0.14	3.6	Light rain	G. A. Blair.
Charlottetown, P. E. Island			29.88	758.9	55	12.8	92	SE	10	4.5			10s			0.10	2.5	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.82	757.4	66.0	18.9	84	W			1	1c	0			0	0	Bright	James Smith, M. A.
Dalhousie, N. B			29.86	758.4	39.5	4.2	100	E			2		10n					Raining	H. A. Johnson.
Esquimault, B. C			29.88	758.9	52.3	11.3	86	SW	2	0.9		10cs	0			0	0	Cloudy	W. H. Bevis.
Fredericton, N. B			29.84	757.9	42.4	5.8	94	NE	3	1.3			10n			0.875	22.23	Raining	Prof. Harrison.
*Fort Garry, Manitoba			29.88	758.9	53	11.7	91	NW	7	3.1		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			29.95	760.7	50.5	10.3	87	W			2		10n			0	0	Threatening	H. J. Strang, M. A.
Granton, Ontario	28.82	732.0	29.91	759.7	54	12.2		W			1	1c	0	E		0	0	Clear	James Grant.
*Halifax, N. S.			29.89	759.2	50	10.0	99	SE	9	4.0			Fog			0.19	4.8	Light rain	F. Allison, M. A.
*Kingston, Ontario			29.91	759.7	58	14.4	76	SW	2	0.9		0	0			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.			30.00	762.0	44.0	6.7	96	SE	3	1.3			10n			0.03	0.8	Overcast	C. H. Rigby.
*Montreal, Quebec			29.82	757.4	55	12.8	82	NW	8	3.6		5k	0	W		0.16	4.1	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.84	757.9	61	16.1	67	W	10	4.5		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			29.88	758.9	48	8.9	85	SW	16	7.2		2ck	5ks	W	W	0.01	0.3	Cloudy	Rev. R. Mosley.
*Port Dover, Ontario			29.95	760.7	53	11.7	67	NW	11	4.9		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S.			29.96	761.0	45.1	7.3		SE	20	8.9			Fog			0	0	Dull	Peter Grant.
*Port Stanley, Ontario			29.94	760.5	57	13.9	66	W	9	4.0		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			29.81	757.2	47	8.3	55	NE	9	4.0			1n		NE	0.17	4.3	Cloudy	Capt. Ashe, R. N.
St. John, N. B.			29.83	757.7	47	8.3	92	Calm	0	0			Fog			0.700	17.78	Rain and fog	G. Murdoch, C. E.
*Saugeen, Ontario			29.89	759.2	44	6.7	84	W	4	1.8			10n			0	0	Cloudy	K. Stewart.
Stayner, Ontario			29.86	758.4	52	11.1	79	NW	5	2.2			1n		NW	0	0	Threatening	R. J. Cole.
Stratford, Ontario	28.63	727.2	29.90	759.4	50.1	10.1	86	W	11	4.9		0	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			30.01	762.2	47	8.3	95	NE	2	0.9			10n		NE	0.03	0.8	Cloudy	T. C. Hill.
*Toronto, Ontario			29.93	760.2	54	12.2	72	W	10	4.5		2k	0	W		0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			29.93	760.2	54.2	12.3	79	NW	7	3.1		2k	0			0	0	Fine	J. Montgomery.
Sub-Series.																			
St. John's, Newfoundland			30.31	769.9	41	5.0	100	SE					10n			0.01	0.3	Foggy, hazy	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.	.....	.....	29.82	757.4	61	16.1	77	NW	12	5.4	.....	10k	0	W	.....	0.33	8.4	Cloudy	
Alpena, Mich	.....	.....	29.86	758.4	48	8.9	85	W	10	4.5	.....	.....	10s	.....	W	0.10	2.5	Cloudy	
Atlantic City, N. J	.....	.....	29.84	757.9	63	17.2	78	N	8	3.6	.....	2cs	8s	S	SW	1.03	26.2	Cloudy	
Augusta, Ga.	.....	.....	29.90	759.4	74	23.3	88	N	5	2.2	.....	.....	10s	.....	N	1.26	32.0	Cloudy	
Baltimore, Md	.....	.....	29.93	760.2	66	18.9	59	N	5	2.2	.....	5c	2ks	SW	.....	1.01	25.7	Fair	
Barnegat, N. J.	.....	.....	29.83	757.7	61	16.1	82	N	16	7.2	.....	.....	10s	.....	N	1.75	44.5	Cloudy	
Benton, Montana	27.06	687.3	29.86	758.4	53	11.7	27	SE	4	1.8	.....	2c	5s	.....	SE	0	0	Fair	
Bismarck, Dakota	28.22	716.8	29.84	757.9	55	12.8	68	SW	2	0.9	.....	1k	Haze	SW	.....	0	0	Fair	
Boston, Mass	.....	.....	29.82	757.4	50	10.0	100	N	7	3.1	.....	10n	Fog	N	.....	0.12	3.0	Light rain	
Breckenridge, Minn	.....	.....	29.89	759.2	53	11.7	80	W	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	29.89	759.2	54	12.2	73	SW	5	2.2	.....	0	1s	.....	.....	0	0	Clear	
Burlington, Vt.	.....	.....	29.82	757.4	61	16.1	66	N	2	0.9	.....	2k	5s	.....	.....	0.19	4.8	Cloudy	
Cairo, Ill.	.....	.....	30.11	764.8	66	18.9	59	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Cape Hatteras, N. C.	.....	.....	29.83	757.7	71	21.7	90	N	12	5.4	.....	.....	10n	.....	W	0.05	1.3	Light rain	
Cape Henry, Va.	.....	.....	29.88	758.9	68	20.0	90	NE	12	5.4	.....	.....	10s	.....	N	2.69	68.3	Cloudy	
Cape Lookout, N. C.	.....	.....	29.86	758.4	74	23.3	95	SW	14	6.3	.....	.....	10n	.....	SW	0.02	0.5	Light rain	
Cape May, N. J.	.....	.....	29.85	758.2	65	18.3	68	NW	24	10.7	.....	.....	10s	.....	NW	3.50	88.9	Cloudy	
Charleston, S. C.	.....	.....	29.86	758.4	77	25.0	86	N	6	2.7	.....	.....	10s	.....	NW	0.46	11.7	Cloudy	
Cheyenne, Wyoming	21.11	612.4	30.05	763.3	46	7.8	60	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill	.....	.....	29.97	761.2	59	15.0	59	SW	5	2.2	.....	1k	0	W	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	29.97	761.2	60	15.6	55	N	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Cleveland, Ohio	.....	.....	29.96	761.0	55	12.8	72	SW	7	3.1	.....	.....	8ks	.....	SW	0	0	Clearing	
Colorado Springs, Col.	24.19	614.4	30.06	763.5	50	10.0	58	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Constiana, Tex.	.....	.....	30.16	766.1	62	16.7	83	N	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Davenport, Iowa	.....	.....	30.04	763.0	59	15.0	70	W	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Denison, Tex.	.....	.....	30.18	766.6	71	21.7	71	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Denver, Col.	24.87	631.7	30.09	764.3	54	12.2	54	S	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich	.....	.....	29.92	760.0	55	12.8	68	W	6	2.7	.....	2k	0	.....	.....	0	0	Clear	
Dodge City, Kan	27.49	698.2	29.74	755.4	60	15.6	59	S	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	30.01	762.2	57	13.9	63	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Duluth, Minn	.....	.....	29.92	760.0	43	6.1	83	Calm	0	0	.....	Haze	Fog	.....	.....	0	0	Foggy	
Eastport, Me.	.....	.....	29.70	756.7	46	7.8	100	E	5	2.2	.....	.....	Fog	.....	.....	0.94	23.9	Foggy	
Erie, Pa	.....	.....	29.92	760.0	57	13.9	69	W	8	3.6	.....	7ck	0	W	.....	0	0	Fair	
Escanaba, Mich	.....	.....	29.93	760.2	52	11.1	66	NW	3	1.3	.....	5k	0	N	.....	0	0	Fair	
Fort Gibson, Indian Ter.	.....	.....	30.10	764.5	63	17.2	83	SE	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.92	734.6	30.00	762.0	70	21.1	75	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.27	718.0	29.90	759.4	56	13.3	75	W	1	0.4	.....	1c	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.14	765.5	74	23.3	68	NE	16	7.2	.....	0	0	.....	.....	0.02	0.5	Clear	
Grand Haven, Mich	.....	.....	29.96	761.0	53	11.7	79	W	11	4.9	.....	.....	10s	.....	NW	0	0	Cloudy	
Indianapolis, Ind.	.....	.....	30.02	762.5	58	14.4	76	W	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Indianola, Tex.	.....	.....	30.12	765.0	73	22.8	85	NE	18	8.0	.....	5c	0	W	.....	0.13	3.3	Fair	
Jacksonville, Fla.	.....	.....	29.90	759.4	78	25.6	76	W	6	2.7	.....	5k	0	W	.....	0.03	0.8	Fair	
Keokuk, Iowa	.....	.....	29.99	761.7	63	17.2	67	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla.	.....	.....	29.99	761.7	81.4	27.4	78	S	6	2.7	.....	2cs	1k	N	S	0	0	Fair	
Kittyhawk, N. C.	.....	.....	29.89	759.2	68	20.0	100	N	1	0.4	.....	.....	10n	.....	.....	1.00	25.4	Heavy rain	
Knoxville, Tenn	.....	.....	30.01	762.2	62	16.7	61	N	10	4.5	.....	0	0	.....	.....	0	0	Clear	
La Crosse, Wis.	.....	.....	29.98	761.5	53	11.7	73	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan	.....	.....	30.03	762.7	60	15.6	66	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Lexington, Ky.	28.94	735.1	30.04	763.0	58	14.4	75	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Long Branch, N. J.	.....	.....	29.84	757.9	60	15.6	82	NE	15	6.7	.....	.....	10s	.....	.....	1.07	27.2	Cloudy	
Louisville, Ky.	.....	.....	30.03	762.7	60	15.6	71	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Lynchburg, Va.	.....	.....	29.91	759.7	70	21.1	52	NW	2	0.9	.....	5k	0	N	.....	0.70	17.8	Fair	
Malone, N. Y.	.....	.....	29.79	756.7	58	14.4	64	SW	8	3.6	.....	2c	0	W	.....	0	0	Fair	
Manhattan, Kan.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Marquette, Mich.	.....	.....	29.90	759.4	52	11.1	72	W	4	1.8	.....	0	0	.....	.....	0.05	1.3	Clear	
Memphis, Tenn	.....	.....	30.12	765.0	67	19.4	60	NE	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Milwaukee, Wis.	.....	.....	30.01	762.0	55	12.8	73	...	10	4.5	.....	0	2ks	.....	W	0.01	0.3	Clear	
Mobile, Ala.	.....	.....	30.04	763.0	70	21.1	66	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Montgomery, Ala.	.....	.....	30.04	763.0	70	21.1	61	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Morgantown, W. Va.	.....	.....	29.93	760.2	60	15.6	76	Calm	0	0	.....	.....	10s	.....	SW	0	0	Cloudy	
Mt. Washington, N. H.	23.70	602.0	30.06	763.5	46	7.8	100	SW	10	4.5	.....	.....	Fog	.....	.....	0.46	11.7	Foggy	
Nashville, Tenn.	.....	.....	30.05	763.3	66	18.9	64	NW	3	1.3	.....	0	0	.....	.....	0	0	Clear	
New Haven, Conn	.....	.....	29.81	757.2	58	14.4	93	N	12	5.4	.....	.....	10n	.....	.....	1.35	34.3	Light rain	
New London, Conn.	.....	.....	29.82	757.4	57	13.9	93	N	4	1.8	.....	.....	10n	.....	N	0.44	11.2	Light rain	
New Orleans, La	.....	.....	30.05	763.3	75	23.9	56	N	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Newport, R. I.	.....	.....	29.82	757.4	55	12.8	100	N	6	2.7	.....	.....	10n	.....	N	0.53	13.5	Light rain	
New York, N. Y.	.....	.....	29.84	757.9	64	17.8	73	NW	13	5.8	.....	.....	10s	.....	W	0.55	14.0	Cloudy	
Norfolk, Va.	.....	.....	29.90	759.4	67	19.4	90	N	3	1.3	.....	.....	10n	.....	.....	2.85	72.4	Heavy rain	
North Platte, Neb.	27.11	688.6	29.92	760.2	57	13.9	69	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb.	28.91	734.8	29.97	761.2	62	16.7	61	S	2	0.9	.....	0	Haze	.....	W	0	0	Clear	
Oswego, N. Y.	.....	.....	29.90	759.4	53.1	11.7	76	W	12	5.4	.....	.....	10ks	.....	.....	0	0	Cloudy	
Pembina, Dakota	.....	.....	29.83	757.7	54	12.2	80	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Penn	.....	.....	29.86	758.4	64	17.8	52	N	20	8.9	.....	8ck	0	W	.....	0.52	13.2	Fair	
Pike's Peak, Colorado	17.98	456.7	30.19	766.8	28	— 2.2	67	W	42	18.8	.....	0	0	.....	.....	0	0	Clear	
Pittsburgh, Penn.	.....	.....	29.93	760.2	61	16.1	60	NW	6	2.7	.....	2c	2k	W	W	0	0	Fair	
Port Huron, Mich.	.....	.....	29.90	759.4	54	12.2	67	W	8	3.6	.....	2c	2s	W	.....	0	0	Fair	
Portland, Me.	.....	.....	29.84	757.9	52	11.1	86	N	6	2.7	.....	.....	10n	.....	N	0.07	17.0	Light rain	
Portland, Oregon	.....	.....	30.04	763.0	53	11.7	79	Calm	0	0	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Punta Rassa, Fla.	.....	.....	29.99	761.7	76.0	24.4	85	NE	10	4.5	.....	.....	10ks	.....	SW	0.23	5.8	Cloudy	
Rochester, N. Y.	.....	.....	29.89	759.2	57	13.9	62	W	10	4.5	.....	1c	0	W	.....	0	0	Clear	
Salt Lake City, Utah	25.56	649.2	29.89	759.2	59	15.0	47	S	3	1.3	.....	5k	0	SE	.....	0	0	Fair	
Sandy Hook, N. J.	.....	.....	29.83	757.7	63	17.2	78	NE	6	2.7	.....	.....	10s	.....	NE	2.06	52.3	Cloudy	
San Diego, Cal.	.....	.....	29.99	761.7	59	15.0	100	Calm	0	0	.....	.....	Fog	.....	S	0	0	Foggy	
San Francisco, Cal.	.....	.....	29.90	759.4	53	11.7	79	SW	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Santa Fé, N. M.	23.31	592.1	29.85	758.2	55	12.8	68	E	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	29.86	758.4	78	25.6	78	N	7	3.1	.....	2k	0	NW	.....	0.29	7.4	Clear	
Shreveport, La.	.....	.....	30.19	766.8	67	19.4	74	Calm	0	0	.....	0	0	.....	.....	0.08	2.0	Clear	
Smithville, N. C.	.....	.....	29.86	758.4	75	23.9	85	S	14	6.3	.....	.....	10n	.....	S	0.54	13.7	Light rain	
Springfield, Mass.	.....	.....	29.81	757.2	59	15.0	87	NE	4	1.8	.....	.....	10n	.....	.....	0.37	9.4	Light rain	
St. Louis, Mo.	.....	.....	30.08	764.0	61	16.1	56	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla	.....	.....	29.94	760.5	75	23.9	76	N	8	3.6	.....	2k	0	N	.....	1.19	30.2	Fair	
St. Paul, Minn.	.....	.....	29.99	761.7	56	13.3	68	SW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	29.90	759.4	56	13.3	68	SW	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	
Thatcher's Island, Mass.	.....	.....	29.51	749.5	35	1.7	90	E	7	3.1	.....	.....	10n	.....	NE	0.24	6.1	Light rain	
Toledo, Ohio	.....	.....	29.83	757.7	60	15.0	93	NE	7	3.1	.....	.....	.....	.....	.....	0	0	Clear	
Tucson, Arizona	.....	.....	29.93	760.2	59	15.0	70	SW	6	2.7	.....	2k	0	SW	.....	0	0	Clear	
Tybee Island, Ga.	27.50	698.5	30.08	764.0	81	27.2	.....	SE	.....	.....	.....	2k	0	SE	.....	0	0	Clear	
Vicksburg, Miss.	.....	.....	29.84	757.9	75	23.9	90	N	4	1.8	.....	5k	0	N	.....	Ina.	Inap.	Fair	
	.....	.....	30.12	765.0	70	21.1	68	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.
Virginia City, M. T.	24.23	615.4	29.71	754.6	53	11.7	54	Calm	0	0	.....	10k	0	W	.....	0	0	Cloudy	
Washington, D. C.	.....	.....	29.92	760.0	64.5	18.1	70	N	6	2.7	.....	.....	10ks,s	.....	W	0.44	11.2	Cloudy	
Wilmington, N. C	.....	.....	29.87	758.7	73	22.8	95	SW	4	1.8	.....	.....	10m	.....	SW	0.51	13.0	Light rain	
Wood's Holl, Mass.	.....	.....	29.82	757.4	59	15.0	100	S	14	6.3	.....	.....	10n	.....	.....	0.37	9.4	Light rain	
Wytheville, Va.	27.65	702.3	29.76	755.9	58	14.4	62	NW	4	1.8	.....	1k	0	NW	.....	0.30	7.6	Clear	
Yankton, Dakota	28.71	729.2	29.97	761.2	58	14.4	76	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	29.82	757.4	76	24.4	.....	NE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.08	764.0	80	26.7	82	SE	3	1.3	.....	.....	10n	.....	.....	0.08	2.0	Light rain	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.99	761.7	82	27.8	78	E	.....	.....	.....	5k	5n	.....	.....	0	0	Hazy	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.15	765.8	79	26.1	82	Calm	0	0	.....	2c	2s	SE	.....	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.78	756.4	81	27.2	84	Calm	0	0	.....	8cs	4k	ESE	S	0.50	12.7	Fair	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.00	762.0	84	28.9	75	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.17	766.3	76.0	24.4	88	SSW	16.0	6.7	.....	5pc	2fk	.....	.....	0.26	6.6	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	69	20.6	90	S	2.0	0.9	.....	2c	0	S	.....	0.33	8.4	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.04	763.0	82	27.8	83	E	.....	.....	1	0	7ks	.....	.....	0	0	Dry and fair.	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.6	.....	.....	85.6	29.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.345	8.76	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.27	641.8	.....	.....	62.0	16.7	84	Calm	0	0	.....	.....	10n	.....	.....	0.72	18.3	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	29.99	761.7	30	— 1.1	95	N	13	5.8	.....	4c	3s	N	.....	0.30	7.6	.....	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	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. 48° 32′. W. 31° 49′.	N 7¾ E	.....	30.11	764.8	51.1	10.6	.....	ENE	.....	.....	3	.....	..k	.....	NE	Tranq'l	.....	Clearing	Capt. R. Hoffmann.
Steamer Nova Scotian N. 51° 21′, W. 25° 59′.	ESE	12	30.01	762.2	51	10.6	.....	WSW	.....	.....	4	.....	..k	.....	W	Swells	N. W.	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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa 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, 5.18 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 commanded 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 JUNE 6, 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	... .	.....	30.09	764.3	72.0	22.2	67	NE	.....	.....	3	.....	3	.....	... .	0	0	Fair.....	Charnot.
Algiers	.. ....	.....	30.10	764.6	74.8	23.8	55	N	.....	.....	2	.....	2	.....	.....	0	0	Clear.....	Peter.
La Calle	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Kunts.
Tunis	.....	.....	30.04	762.9	78.1	25.6	57	NE	.....	.....	2	.....	3	.....	.....	0.087	2.2	Fair.....	Jacques.
Sfax	.....	.....	30.00	762.0	71.2	21.8	75	N	.....	.....	5	.....	4	.....	.....	0.717	18.2	Fair.....	Chauvey.
Saïda	.....	.....	30.13	765.2	77.0	25 0	28	NE	.....	.....	1	.....	1	.....	.....	0	0	Clear.....	Millot.
Tebessa	.....	.....	30.03	762.8	63.3	17.4	.....	N	.....	.....	1	.....	8	.....	.....	0.079	2 0	Cloudy.....	Colin.
Gerlville	.....	.....	30.11	764.8	70.9	21.6	31	ENE	.....	.....	2	.....	3	.....	.....	0	0	Fair.....	Buard.
Laghonat	.....	.....	30.10	764.5	77.0	25.0	28	NE	.....	.....	2	.....	2	.....	.....	0	0	Clear.....	Guyot.
Biskra	.....	.....	30.07	763.8	84.2	29.0	39	NW	.....	.....	1	.....	10	.....	.....	0	0	Hidden.....	Laromer.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

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

AUSTRIAN SERIES.

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

Agram	.....	.....	29.99	761.7	86.5	30.3	44	SE	.....	.....	3	.....	3	.....	.....	0	0	....	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	30.07	764.8	78.1	25.6	51	ESE	.....	.....	2	.....	0	.. ..	....	0	0	....	Dr. Wierzbiski.
Eperies	.....	.....	30.03	762.8	77.0	25.0	53	N	.....	.....	1	.....	1	.....	S	0	0	....	Julius Mikolik.
Gratz	.....	.....	30.05	763.3	78.6	25.9	55	SW	.....	.....	3	.....	3	.....	.....	0	0	....	Andreas Rospini.
Hermannstadt	28.91	734.2	29.98	761.6	74 1	23.4	62	WNW	.....	.....	1	.....	5	.....	.....	0.059	1.50	....	Prof. Reissenberger.
Kremsmünster	28.76	730.4	30.04	763.1	73.8	23.2	55	W	.....	.....	2	.....	3	.....	.....	0	0	....	Prof. C. Wagner.
Lemberg	.....	.....	30.02	762.6	72 7	22.6	59	NE	.....	.....	1	.....	3	.....	.....	0	0	....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	Habzsuda Daniel.
Pola	.....	.....	30.01	762.3	81 0	27.2	57	WSW	.....	.....	1	.....	6cks	.....	.....	0	0	....	I.R.Hydrographic Office.
Szegedin	.....	.....	30.00	761.9	83.1	28.4	45	S	.....	.....	1	.....	2	.....	.....	0	0	....	Karl Stancel.
Trieste	.....	.....	30.03	762.8	82.4	28.0	40	Calm	.....	.....	0	.....	0	.....	.....	0.016	0 4	....	Prof. V. Farolfi.
Vienna	.....	.....	30.01	762.0	82.0	27.8	46	E	.....	.....	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.; 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.

Brussels	.....	.....	30.03	762.7	63.1	17.3	90	WSW	.....	.....	0	.....	10	.....	.....	0	0	....	Royal Observatory.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

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

BRITISH SERIES.

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, 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	.....	.....	29.82	757.4	57.5	14.2	.....	SSE	22	9.8	.....	.....	3	.....	.....	0	0	Blue sky.....	William Boswell.
Ardrossan	.....	.....	29.88	758.9	56	13.3	.....	SSW	.....	.....	5	.....	4	.....	.....	.....	.....	*D. clouds....	*William McNeil.*
Armagh, Observatory	.....	.....	29.92	760.0	56.3	13.5	.....	SW	13	5.8	.....	.....	7	.....	.....	.....	.....	*D. clouds....	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown).	.....	.....	29.97	761.2	55.6	13.1	.....	WNW	...	...	1–2	.....	8	.....	.....	.....	.....	*D. clouds....	J. Dreyer.
Bradford	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	.....	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.05	763.3	84.0	28.9	.....	NE	.....	.....	3	.....	6	.....	.....	.....	.....	*D. clouds....	Sergt. J. F. Halanen, A. C.
Cambridge, Observatory	.....	.....	29.99	761.7	58.0	14.4	.....	NE	.....	.....	1	.....	10	.....	.....	.....	.....	Raining.....	H. Todd. [H. C.
Cardington	.....	.....	30.02	762.5	66.0	18.9	.....	NW	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast.....	John McLaren.
Carlisle	.....	.....	29.94	760.5	59.1	15.1	.....	SW	.....	.....	6	.....	7	.....	.....	0	0	*D. clouds....	T. Bell, for J. Carmell.
Chatham, School M. E	.....	.....	30.01	762.2	58.0	14.4	.....	WSW	.....	.....	2	.....	2	.....	.....	.....	.....	Raining.....	Capt. J. Fellowes, R.E.
Dartmoor	24.04	727.2	30.11	765.5	52.2	11.2	.....	SSW	.....	.....	2	.....	10	.....	.....	.....	.....	Overcast.....	R. E. Power.
Donaghadee	.....	.....	29.90	759.4	55	12.8	.....	S	.....	.....	5	.....	7	.....	.....	.....	.....	*D. clouds....	J. Mac Gowan.
Dover	.....	.....	30.04	763.0	56	13.3	.....	WSW	.....	.....	3	.....	5	.....	.....	.....	.....	½ clouded...	J. Costello.
Eccles (near Manchester.)	.....	.....	29.96	761.0	53.2	17.3	.....	W	4.0	1.8	.....	.....	7	.....	.....	.....	.....	*D. clouds....	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.08	764.0	55.0	12.8	.....	S	12	5.4	.....	.....	10	.....	.....	.....	.....	Rain and fog	The Staff.
Fort Napier, (Natal)	27.57	700.3	29.81	757.2	74.9	23.8	.....	E	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	30.02	762.5	89.0	31.7	.....	N	.....	.....	4	.....	5	.....	.....	.....	.....	*D. clouds....	
Galway, Queen's College	.....	.....	29.99	759.4	58	14.4	.....	SW	.....	.....	3	.....	4	.....	.....	.....	.....	*D. clouds....	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.07	763.8	72.5	22.5	.....	E	.....	.....	5	.....	2	.....	.....	.....	.....	*D. clouds....	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	29.85	758.2	56.1	13.4	.....	SW	.....	.....	4	.....	3	.....	.....	.....	.....	Fine.....	Lewis Stuart.
Great Yarmouth	.....	.....	30.02	762.5	53	11.7	.....	SE	.....	.....	1	.....	7	.....	.....	.....	.....	Raining.....	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	30.03	762.7	60.4	15.8	.....	WSW	.....	.....	1	.....	10	.....	.....	Blank	Blank	Overcast.....	The Staff, for G. B. Airy.
Guernsey	.....	.....	30.07	763.8	54	12.2	.....	NE	.....	.....	1	.....	10	.....	.....	.....	.....	Raining.....	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	29.98	761.5	59.4	15.2	.....	W	.....	.....	1	.....	8	.....	.....	.....	.....	*D. clouds....	L. J. Crossley.
Helston	.....	.....	30.03	762.7	59	15.0	.....	SW	.....	.....	4	.....	10k	.....	.....	0.4	10.2	Misty.....	M. P. Moyle.
Holyhead	.....	.....	29.99	761.7	58	14.4	.....	SW	.....	.....	3	.....	3	.....	.....	.....	.....	*D. clouds....	John Tilston.
Kew, Observatory	.....	.....	30.03	762.7	59.2	15.1	.....	SW	12	5.4	.....	.....	10	.....	.....	.....	.....	Overcast.....	The Staff.
Kingstown	.....	.....	29.89	759.2	58	14.4	.....	W	.....	.....	3	.....	6	.....	.....	.....	.....	*D. clouds....	George Mitchell.
Leicester Museum	.....	.....	30.01	762.2	61.0	16.1	.....	Calm	.....	.....	0	.....	9	.....	.....	.....	.....	Threatening	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)	.....	.....	29.89	759.2	68.6	20.3	.....	NE	.....	.....	2	.....	8k	.....	.....	.....	.....	*D. clouds....	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	29.75	755.6	61	16.1	.....	SW	.....	.....	3	.....	2	.....	.....	.....	.....	¼ clouded...	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.01	762.2	82.4	28.0	.....	NE	.....	.....	3	.....	8	.....	.....	.....	.....	*D. clouds....	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	30.00	762.0	63.7	17.6	.....	SSW	.....	.....	3	.....	7k	.....	SSW	0	0	*D. clouds....	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.00	762.0	60.6	15.9	.....	SSW	.....	.....	2	.....	8	.....	.....	.....	.....	Overcast.....	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	30.00	762.0	62	16.7	.....	Calm	.....	.....	0	.....	10	.....	.....	.....	.....	Overcast.....	J. Lucas.
Plymouth	.....	.....	30.07	763.8	56.5	13.6	.....	SSW	.....	.....	2	.....	10	.....	.....	.....	.....	Raining.....	John Merrifield.
Roche's Point	.....	.....	30.00	762.0	58	14.4	.....	WSW	.....	.....	4	.....	5	.....	.....	.....	.....	Gloomy.....	Cloudy	W. Kennedy.
Saint Ann's Head	.....	.....	30.03	762.7	58	14.4	.....	SW	.....	.....	2	.....	7	.....	.....	.....	.....	Showery.....	John C. Walker.
Saint Helier, Jersey	.....	.....	30.08	764.0	56.2	13.4	.....	NE	.....	.....	1	.....	10	.....	.....	.....	.....	Raining.....	A. P. Amy.
Sandwick Manse, Orkneys)	.....	.....	29.71	754.6	51.7	10.9	.....	SW	22	9.8	.....	.....	6	.....	.....	.....	.....	Showery.....	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	29.97	761.2	52.2	16.8	.....	SW	.....	.....	2	.....	5	.....	.....	.....	.....	*D. clouds....	F. Shaw.
Scutari Cemetery Turkey	.....	.....	29.92	760.0	78.6	25.9	.....	NE	.....	.....	2	.....	1	.....	.....	.....	.....	Blue sky.....	Sergt. W. H. Lyne.
Sheffield	.....	.....	29.97	761.2	61.2	17.9	.....	S	.....	.....	1	.....	4	.....	.....	.....	.....	Blue sky.....	W. F. Cooper.
Silloth Rectory	.....	.....	29.95	760.7	61.0	16.1	64	SW	.....	.....	3	.....	2	.....	.....	0	0	.....	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	29.98	761.0	59.6	15.3	.....	SW	.....	.....	2	.....	4	.....	.....	0.058	1.47	*D. clouds....	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.	.....	.....	29.64	752.8	53	11.7	.....	SW	.....	.....	6	.....	8	.....	.....	.....	.....	*D. clouds....	John Smith.
Stratfield Turgiss	.....	.....	30.05	763.3	60.4	15.8	.....	W	.....	.....	1	.....	6	.....	.....	.....	.....	*D. clouds....	Rev. Charles H. Griffith.
Thurso	.....	.....	29.98	753.9	57	13.9	.....	SW	.....	.....	5	.....	7	.....	.....	.....	.....	*D. clouds....	John Trotter.
Truro, Royal Institution	.....	.....	30.08	764.0	59	15.0	.....	S	.....	.....	4	.....	10	.....	.....	.....	.....	Gloomy.....	W. Newcombe.
Valencia, Observatory	.....	.....	30.02	762.5	54.7	12.6	.....	SW	21	9.4	.....	.....	10	.....	.....	.....	.....	Showery.....	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man	.....	.....	.....	.....	46	7.8	.....	SW	.....	.....	3	.....	2	.....	.....	.....	.....	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.08	764.0	59.7	15.4	83	W	10	4.5	.....	2	6	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	29.94	760.5	57.0	13.9	85	NW	.....	.....	1	.....	7k	.....	.....	0	0	.....	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	29.89	759.2	57.8	14.3	.....	SW	.....	.....	3	.....	6k	.....	.....	0	0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.07	763.8	.....	.....	.....	E	14.1	6.3	.....	...	...	.....	.....	0	0	.....	C. Meldrum.
Melbourne, Observatory	.....	.....	29.97	761.2	59.1	10.1	69	WNW	12	5.4	.....	.....	10	.....	.....	0	0	Fine, dull....	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	29.62	752.3	50	10.0	.....	SW	.....	.....	1	5	5	W	.....	0.1	2.5	.....	J. Youngusause.
North Unst, (Shetland Is.)	.....	.....	29.54	750.3	52	11.1	.....	S	.....	.....	7	4	3	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	.....	.....	30.08	763.9	57.4	14.1	93	NE	.....	.....	2	.....	10	.....	.....	.....	.....	.....	.....
Fanöe	.....	.....	30.03	762.8	62.1	16.7	50	Calm	.....	.....	0	.....	9	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	29.71	754.5	39.2	4.0	59	NE	.....	.....	4	.....	2	.....	.....	.....	.....	.....	.....
Stykkisholm, (Iceland)	.....	.....	29.21	742.1	47.7	8.7	84	S	.....	.....	4	.....	5	.....	.....	.....	.....	Raining.....	.....
Thorshavn, (Faröe)	.....	.....	29.29	746.5	49.3	9.6	80	SSW	.....	.....	4	.....	10	.....	.....	.....	.....	Raining.....	.....
Vestervig	.....	.....	30.06	763.4	54.7	12.6	70	SW	.....	.....	2	.....	5	.....	.....	.....	.....	.....	.....

Note.—*The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbol; 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	.....	.....	30.07	763.6	62.6	17	57	SW	.....	.....	1	.....	10s,n	.....	SW	0	0	Covered	Normal School.
Amiens	.....	.....	30.03	762.7	64.0	17.8	78	W	.....	.....	3	.....	0	.....	.....	0	0	Clear.....	Normal School.
Avignon	.....	.....	30.00	763.5	86.5	30.3	35	N	.....	.....	1	.....	0	.....	.....	0	0	Very clear....	Normal School.
Bar-sur-Seine	.....	.....	30.07	763.6	75.9	24.4	50	NNW	.....	.....	2	.....	8	.....	SW	0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.02	762.4	63.7	17.6	94	SW	3.8	1.7	.....	.....	10	.....	SW	0.047	1.2	Raining.....	Beaumette Observatory.
Beauvais	.....	.....	30.08	764.0	67.1	19.5	70	W	.....	.....	1	.....	10	.....	W	0.004	0.10	Covered	Normal School.
Besançon	.....	.....	30.07	763.7	79.9	26.6	40	S	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
Bourg en Bresse	.....	.....	30.21	767.4	80.6	27	48	NW	.....	.....	2	.....	0	.....	.....	.....	.....	Clear.....	Normal School.
Bourges	.....	.....	30.07	763.8	72.3	22.4	69	SW	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	30.01	762.2	59.9	15.5	87	NW	.....	.....	1	.....	10	.....	WNW	0.246	6.25	Rainy.....	Naval Observatory.
Carcassonne	.....	.....	30.06	763.5	72.1	22.3	96	W	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Normal School
Caen	.....	.....	30.03?	778.1?	64.4	18	98	NNW	.....	.....	1	.....	10	.....	SSE	0.087	2.2	Covered	Normal School.
Chartres	.....	.....	30.11	764.8	65.5	18.6	.....	SW	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Clermont	.....	.....	30.00	761.9	80.6	27.0	50	NE	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.08	763.9	67.6	19.8	67	WNW	.....	.....	2	.....	5k	.....	WNW	0	0	Cloudy.....	Normal School.
Commune de Greasque*	.....	.....	30.14	765.4	82.0	27.8	35	SW	.....	.....	4	.....	2	.....	SW	0	0	.....	M. Kina.
Grenoble	.....	.....	29.99	761.7	77.5	25.3	68	NW	.....	.....	2	2c	.....	E	.....	0	0	Slightly cl'd	Normal School.
La Roche-sur-Yon	.....	.....	30.01	762.2	62.2	16.8	92	SW	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Le Mans	.....	.....	30.10	764.6	63.0	17.2	96	SW	.....	.....	4	.....	8	.....	SW	0.031	0.80	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.07	763.8	75.4	24.1	53	W	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Normal School.
Mâcon	.....	.....	30.10	764.6	70.1	24.5	75	NE	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	30.03	762.8	74.3	23.5	53	SW	.....	.....	2	.....	5	.....	NE	0	0	Cloudy.....	Normal School.
Nismes	.....	.....	30.02	762.6	93.2	34	39	SW	.....	.....	1	.....	1	.....	NE	0	0	Clear	Normal School.
Orleans	.....	.....	30.04	763.1	70.2	21.2	67	WSW	.....	.....	4	.....	8	.....	SW	0	0	Very cloudy	Normal School.
Paris, Observatory	.....	.....	30.08	763.9	66.4	19.1	77	W	.....	.....	1	.....	10k	.....	W	0.005	0.12	Covered	National Observatory.
Parthenay	.....	.....	30.08	764.1	68.0	20	87	NW	.....	.....	2	.....	8	.....	SW	0	0	Very cloudy	Normal School.
Privas	.....	.....	30.03	762.7	82.4	27.8	.....	S	.....	.....	2	.....	2	.....	S	.....	.....	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.16	766.0	69.8	21.0	66	SW	.....	.....	3	.....	10	.....	NE	0.039	1.0	Covered	Naval Observatory.
Rouen	.....	.....	30.09	764.3	61.5	16.4	75	SSW	.....	.....	1	.....	10	.....	SW	0.039	1.0	Covered	Normal School.
Saint Lo	.....	.....	29.72	754.8	58.8	14.9	90	W	.....	.....	1	.....	10	.....	W	0.059	1.5	.....	Normal School.
Tarbes	29.08	738.5	30.14	765.5	68.0	20	.....	SW	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Normal School
Villefranche	.....	.....	30.13	765.2	82.4	28	70	E	.....	.....	1	.....	2	.....	.....	0.047	1.2	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.93	760.1	80.6	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	Blank	Blank	.....	L'Abbé Marchesi.
Marseilles	.....	.....	30.02	762.6	83.7	28.7	54	W	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Marseilles Observatory.
Mont-Louis	.....	.....	30.31	769.9	66.4	19.1	61	SE	16.8	7.50	.....	.....	5	.....	WNW	0	0	.....	—. Faignère.
Montsouris, Paris	.....	.....	30.08	763.9	68.5	20.3	74	SW	.....	.....	1	.....	10	.....	.....	0.004	0.1	.....	Montsouris Observ'tory.
Perpignan	.....	.....	30.07	763.7	82.4	28.0	42	S	7.4	3.33	.....	.....	0	.....	.....	0	0	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.08	764.0	69.1	20.6	75	SW	.....	.....	1	.....	10	.....	.....	0	0	Covered	E. Renou.
Toulouse	.....	.....	30.15	765.8	78.1	25.6	46	NW	.....	.....	2	.....	0	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.10	764.5	70.5	21.4	69	W	.....	.....	1	.....	10	.....	W	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.08	764.1	67.6	19.8	77	W	.....	.....	1	.....	10	.....	.....	0.003	0.08	Covered	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai	.....	.....	29.63	752.6	75.6	24.2	92	W	4.7	2.1	.....	.....	10kn	.....	W	{1.284 / 1.492}	{32.6 / 37.9}	.....	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,) 2,360 m., or 7,702.6 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.
Aberg	.....	.....	30.02	762.6	76.5	24.7	45	W	.....	.....	3	.....	3	SW	.....	0	0	.....	Prof. T. Hon.
Berlin	.....	.....	30.07	764.6	78.4	25.8	48	W	.....	.....	3	.....	3	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.14	765.5	79.0	26.1	40	NW	.....	.....	2	.....	0	.....	.....	0	0	.....	Dr. P. Naegebauer.
Carlsruhe	.....	.....	29.99	761.7	80.2	26.8	59	SW	.....	.....	1	.....	5	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.04	763.0	79.0	26.1	47	SE	.....	.....	2	.....	7	SSW	.....	0	0	.....	Dr. H. Möhl
Emden	.....	.....	30.05	763.3	61.3	16.3	97	WSW	.....	.....	1	.....	9	.....	.....	0.129	3.2	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.11	764.7	78.0	25.9	45	WSW	.....	.....	1	.....	7	.....	.....	0	0	.....	Physical Society
Friedrichshafen	.....	.....	30.04	763.0	73.8	23.2	60	SW	.....	.....	1	.....	1	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.07	763.7	65.1	18.4	83	SW	.....	.....	2	.....	10n	.....	.....	Inap.	Inap.	Cloudy.....	Captain F. Hegemann.
Kiel	.....	.....	30.05	763.3	58.5	14.7	94	NW	.....	.....	2	.....	10	.....	.....	0.043	1.1	.....	Prof. G. Karsten
Königsberg, (Prussia.)	.....	.....	30.12	765.1	76.5	24.7	34	SE	.....	.....	2	.....	2	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	30.06	763.4	81.0	27.2	40	W	.....	.....	1	.....	2	W	.....	0	0	.....	Prof. Brunns.
Memel	.....	.....	30.19	766.7	69.4	20.8	51	SW	.....	.....	3	.....	1c	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.05	763.3	69.1	20.6	93	.....	.....	.....	2	.....	10	.....	.....	0.209	5.5	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.12	765.0	75.2	24.0	48	E	.....	.....	3	.....	5	.....	.....	0	0	.....	A. Lothes.
Posen	.....	.....	30.12	765.1	79.7	26.5	68	SE	.....	.....	1	.....	4	.....	.....	0.031	0.8	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.03	762.7	80.1	26.7	43	Calm	.....	.....	0	.....	7	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.98	761.1	83.7	28.7	38	E	.....	.....	1	.....	4	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	30.10	764.5	78.8	26.0	44	SE	.....	.....	4	.....	4	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.10	764.5	74.8	23.8	59	W	.....	.....	5	.....	8	.....	.....	0	0	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	29.98	761.6	67.8	19.9	78	SW	.....	.....	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	.....	.....	29.94	760.4	84.6	29.2	.....	NE	.....	.....	.....	.....	..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.

Udine	.....	.....	29.99	761.8	85.3	29.6	33	SW	1.3	0.6	.....	.....	6	.....	.....	0	0	.....	
Padua	.....	.....	30.01	762.3	83.1	28.4	45	SE	4.3	1.9	.....	.....	3	.....	.....	0	0	.....	
Vicenza	.....	.....	30.00	762.0	81.9	27.7	43	ENE	1.8	0.8	.....	.....	1	W	.....	0	0	.....	
Verona	.....	.....	29.98	761.6	85.6	29.8	61	E	.....	.....	1	.....	0	.....	.....	0	0	.....	
Bergamo	28.71	729.1	29.97	761.1	84.2	29.0	40	S	.....	.....	2	.....	1	.....	.....	0	0	.....	
Domodossola	28.99	736.3	29.98	761.5	84.2	29.0	50	SSW	.....	.....	4	.....	1	.....	.....	0	0	.....	
Milan	.....	.....	30.02	762.6	90.5	32.5	42	S	.....	.....	2	.....	2	WSW	.....	0	0	.....	
Pavia	.....	.....	30.03	762.8	83.1	28.4	38	E	.....	.....	1	.....	0	.....	.....	0	0	.....	
Moncalieri	.....	.....	30.05	763.2	81.7	27.6	38	SSW	3.1	1.4	.....	.....	1	.....	.....	0	0	.....	
Mondovi	28.22	716.7	30.07	763.6	76.5	24.7	40	NNW	.....	.....	2	.....	0	.....	.....	0	0	.....	
Porto Maurizio	.....	.....	30.08	763.9	80.1	26.7	47	E	.....	.....	4	.....	1	.....	.....	0	0	.....	
Genoa	.....	.....	30.03	762.8	80 8	27.1	46	S	0.7	0.3	.....	.....	2	NE	.....	0.012	0.3	.....	
Piacenza	.....	.....	30.02	762.4	83.7	28.7	42	SSE	1.8	0.8	.....	.....	0	.....	.....	0	0	.....	
Parma	.....	.....	30.01	762.3	84.9	29.4	46	ENE	.....	.....	2	.....	1	.....	.....	0	0	.....	
Bologna	.....	.....	30.10	764.4	82.4	28.0	45	NW	.....	.....	6	.....	2	N	.....	0	0	.....	
Florence	.....	.....	30.04	762.9	88.7	31.5	29	NE	.....	.....	6	.....	0	.....	.....	0	0	.....	
Leghorn	.....	.....	30.03	762.7	81.9	27.7	41	NW	8.7	3.9	.....	.....	3	.....	.....	0	0	.....	
Siena	28.83	732.3	29.99	761.8	81.3	27.4	39	ENE	6.9	3.1	.....	.....	7	E	.....	0.075	1.9	Showery	
Urbino	28.56	725.4	30.07	763.7	75 9	24.4	50	ENE	.....	.....	2	.....	4	.....	.....	0	0	.....	
Pesaro	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ancona	.....	.....	30.06	763.5	73.6	23.1	78	NW	.....	.....	2	.....	1	.....	.....	0	0	.....	
Grosseto	.....	.....	30.02	762.5	82.0	27.8	41	NNW	.....	.....	4	.....	6	S	.....	0	0	.....	
Rome	.....	.....	29.97	761.2	82.2	27.9	43	WSW	8.1	3.6	.....	.....	5	SE	.....	0	0	.....	
Naples, O. U.	.....	.....	29.99	761.7	84.6	29.2	38	S	.....	.....	2	.....	8	SE	.....	0	0	.....	
Lecce	.....	.....	30.02	762.5	75.2	24.0	49	NW	15.0	6.7	.....	.....	0	.....	.....	0	0	.....	
Cosenza	.....	.....	29.93	760.2	82.0	27.8	69	WNW	6.3	2.8	.....	.....	9	.....	.....	0	0	.....	
Riposto, (Sicily)	.....	.....	29.96	760.0	74.7	23.7	65	SE	.....	.....	2	.....	10	NW	.....	0	0	.....	
Palermo	.....	.....	29.93	760.1	73.6	23.1	61	NE	5.6	2.5	.....	.....	2	.....	.....	0	0	.....	
Caltanissetta	28.03	712.0	29.93	760.3	66.7	19.3	55	E	.....	.....	6	.....	10	W	.....	0	0	.....	
Sub-Series.																			
Naples, S. R.	.....	.....	30.05	763.3	75.9	24.7	53	SE	4.9	2.2	.....	.....	10	NE	.....	0	0	.....	Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 550 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Tokio	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NETHERLANDS' SERIES.

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

Flushing	.....	.....	30.08	763.9	58.6	14.8	.....	WNW	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	
Groningen	.....	.....	29.97	761.2	60.8	16.0	.....	SSW	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	
Helder	.....	.....	30.02	762.6	57.2	14.0	.....	NNE	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	
Utrecht	.....	.....	30.00	762.0	63.9	17.7	80	SW	.....	.....	2	.....	10	.....	.....	.....	.....	Overcast	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

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.

Bergen	.....	.....	29.87	758.6	56.1	13.4	62	SSW	34.7	15.5	.....	.....	5	.....	.....	0	0	.....	
Brönö	.....	.....	29.83	757 6	48.6	9.2	84	SSE	31	14	.....	.....	9	.....	.....	0	0	.....	
Christiania	.....	.....	29.99	761.8	59.4	15.2	42	SSW	16.1	7.2	.....	.....	2	.....	.....	0.280	7.1	.....	
Tromsö	.....	.....	29.65	753.1	53.6	12.0	51	SSW	16	7	.....	.....	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 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.		Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Winds. Direction.	Winds. Velocity.		Winds. Force.	Clouds. Amount.		Clouds. Direction.		Rain-fall or melted snow in the past 24 hours.		Weather.	Observer.
	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'or 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.		
Angra, (Azores,)	.....	.....	30.53	775.4	70.0	21.1	67	WNW	12.8	5.70	.....	.....	6	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.02	762.4	67.6	30.9	23	SW	2.8	1.25	.....	.....	7	NNE	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.27	768.9	67.3	19.6	58	SW	5.8	2.59	.....	.....	1	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.14	765.5	75.6	24.2	48	N	15.0	6.7	.....	.....	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.

Warsaw	.....	.....	30.09	764.3	77.5	25.3	47	ESE	7	3	.....	.....	1	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.17	766.8	70 0	21.1	30	NW	4	2	.....	.....	1	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.18	766.5	69.3	20.7	34	Calm	0	0	.....	.....	6	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.16	766.0	60.8	16.0	32	NW	16	7	.....	.....	9	.....	.....	.....	.....	.....	Central Physical Obs
Kiopio	.....	.....	30.01	762.3	66.7	13.7	78	SW	27	12	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kief	.....	.....	30.04	763.1	65.3	18.5	32	NNW	11	5	.....	.....	4	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.07	763.8	82.8	28.2	35	NNE	18	8	.....	.....	4	.....	.....	.....	.....	.....	Kurdakof.
Kerrch	.....	.....	29.99	761.7	74.1	23.4	73	S	9	4	.....	.....	7	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.98	761.5	74.8	23.8	54	NE	2	1	.....	.....	7	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.84	757.9	77.0	25.0	57	E	9	4	.....	.....	4	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.98	761.6	79.5	26.4	25	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.51	724.2	29.84	757.8	87.1	30.6	32	N	9	4	.....	.....	2	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.91	759.8	79.9	26.6	36	SSE	4	2	.....	.....	7	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.03	762.7	70.3	21.3	31	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.00	736.5	29.98	761.5	57.2	14.0	26	N	4	2	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.85	758.1	82.4	29.1	26	NNE	11	5	.....	.....	5	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Rebrof.
Tashkend	28.31	719.1	29.91	759.8	84.9	29.4	44	Calm	0	0	.....	.....	3	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.67	753.5	63.6	12.0	76	WNW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.28	743.7	52.3	11.3	87	SSW	2	1	.....	.....	5	.....	.....	.....	.....	.....	Marks.
Irkutsk	28.09	713.4	29.41	747.0	61.3	16.3	55	SE	9	4	.....	.....	0	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.72	754.8	75.9	24.4	53	Calm	0	0	.....	.....	5	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	29.89	759.3	49.8	9.9	82	SE	7	3	.....	.....	10	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	51.3	10.7	72	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, 303.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.0? 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.

Madrid	.....	.....	29.98	761.5	88.2	31.2	24	NW	6.0	2.67	.....	1	3	SE	.....	0	0	Light clouds	Royal Observatory.
San Fernando	.....	.....	30.08	764.1	76.6	24.8	57	WSW	12.3	5.5	.....	1	3	NE	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.

Haparanda	.....	.....	29.90	761.0	42.8	6.0	94	S	.....	.....	4	.....	10	.....	.....	0.118	3.0	Foggy	
Umea	.....	.....	29.91	759.7	60.4	15.8	50	S	.....	.....	2	.....	1	.....	.....	0	0	.....	
Hernosand	.....	.....	29.91	759.7	59.2	15.1	46	SSW	.....	.....	4	.....	3	.....	.....	0	0	.....	
Stockholm	.....	.....	29.99	761.7	66.6	19.2	40	SSW	.....	.....	2	.....	1	.....	.....	0.012	0.3	.....	
Wisby	.....	.....	30.15	765.8	54.7	12.6	87	W	.....	.....	2	.....	7	.....	.....	0.201	5.1	.....	
Sub-Series.																			
Upsala	.....	.....	29.99	761.7	68.4	20.2	23	WSW	10.1	4.5	.....	.....	0	.....	.....	0.055	1.40	.....	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by 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	30.04	762.9	76.6	24.8	41	N	.....	.....	1	.....	1	.....	.....	0	0	Clear	The Observatory.
Zurich	28.46	722.8	30.00	762.1	82.4	28.0	46	W	.....	.....	1	.....	1	.....	.....	0	0	Clear	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE—For Geneva the corresponding departures from the normal values are: Barometer, +2.2 mm; Thermometer, +5.2 cent.; Relative Humidity, —15 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The 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	.....	.....	29.99	761.8	72.5	22.5	61	NNE	15	6.5	.....	.....	1	.....	WSW	0	0	.....	
Fao, (Persian Gulf)	.....	.....	29.84	758.0	100.4	38.0	.....	NW	.....	.....	4	.....	10	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.00	763.4	75.2	24.0	.....	SE	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	29.96	761.0	78.1	25.6	.....	S	.....	.....	1	.....	10	.....	.....	.....	.....	Stormy	
Varna	.....	.....	29.92	760.0	80.6	27.0	.....	S	.....	.....	3	.....	5	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.95	760.6	79.9	26.6	70	N	.....	.....	1	.....	8c	.....	.....	0	0	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. Mill meters.	Weather.	Observer.
Bathurst, N. B.	.....	.....	29.85	758.2	52.9	11.6	87	Calm	0	0	.....	5	.....	.....	.....	0.40	10.2	Fine	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.04	763 0	52	11.1	.....	SW	1	0.4	.....	.....	10s	.....	SW	0.03	0.8	Cloudy	W. R. Bigg.
*Chatham, N. B.	.....	.....	29.88	758.9	53	11.7	96	SW	1	0.4	.....	2k	8ks	SW	SW	0.30	7.6	Cloudy	G. A. Blair.
Charlottetown, P. E. Island.	.....	.....	29.89	759.2	56	13.3	91	Calm	0	0	.....	.....	10s	.....	.....	0.28	7.1	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.94	760.5	57.0	13.9	84	S	.....	.....	1	10k	0	.....	.....	0	0	Unsettled	James Smith, M. A.
Dalhousie, N. B.	.....	.....	29.90	759.4	50.3	10.2	89	W	.....	.....	2	.....	10n	.....	.....	Blank	Blank	Foggy	H. A. Johnson.
Esquimault, B. C.	.....	.....	29.91	759.7	52.3	11.3	86	W	5	2.2	.....	10cs	0	.....	.....	0.09	2.3	Cloudy	W. H. Bevis.
Fredericton, N. B.	.....	.....	29.91	759.7	54.0	12.2	87	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.10	764.5	44	6.7	88	E	12	5.4	.....	2cs	Haze	.....	.....	0	0	Fair	James Stewart.
Goderich, Ontario	.....	.....	30.03	762.7	59.6	15.3	81	SW	.....	.....	1	5ck	0	W	.....	0	0	Fine	H. J. Strang, M. A.
Granton, Ontario	28.92	734.6	30.01	762.2	56	13.3	.....	Calm	.....	.....	0	0	0	.....	.....	0	0	Clear	James Grant
*Halifax, N. S.	.....	.....	29.88	758.9	56	13.3	98	Calm	0	0	.....	.....	8n	.....	.....	0.22	5.6	Cloudy	F. Allison, M. A.
*Kingston, Ontario	.....	.....	30.01	762.2	57	13.9	73	W	2	0.9	.....	10ck	0	.....	.....	0	0	Cloudy	S. Woods, M. A.
Little Glace Bay, N. S.	.....	.....	29.91	759.7	63.5	17.5	89	SW	5	2.2	.....	.....	10n	.....	.....	0	0	Overcast	C. H. Rigby.
*Montreal, Quebec	.....	.....	29.92	760.0	55	12.8	84	W	8	3.6	.....	5k	2ks	W	.....	0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.96	761.0	57	13.9	68	S	5	2.2	.....	10k	0	W	.....	0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.02	762.5	52	11.1	76	W	6	2.7	.....	2ck	0	W	.....	0	0	Clear	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	30.07	763.8	52	11.1	79	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	H. Morgan.
Port Hastings, N. S.	.....	.....	29.90	759.4	60.2	15.7	.....	S	5	2.2	.....	.....	.....	.....	.....	0.110	2.79	Fine	Peter Grant.
*Port Stanley, Ontario	.....	.....	30.02	762.5	57	13.9	81	E	2	0.9	.....	2k	0	W	.....	0.01	0.3	Clear	M. Payne.
*Quebec, Quebec	.....	.....	29.92	760.0	59	15.0	65	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.	.....	.....	29.93	760.2	53	11.7	93	Calm	0	0	.....	.....	Fog	.....	.....	0.050	1.27	Cloudy	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.97	761.2	55	12.8	77	Calm	0	0	.....	.....	10ks	.....	.....	0	0	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	29.98	761.5	58	14.4	60	NW	3	1.3	.....	0	0	.....	.....	0	0	Clear	R. J. Cole.
Stratford, Ontario	28.76	730.5	30.03	762.7	49.9	9.9	92	NW	5	2.2	.....	0	0	.....	.....	0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.	.....	.....	29.93	760.2	64	17.8	86	SW	10	4.5	.....	5ck	8c	SW	SW	0.02	0.5	Clearing	T. C. Hill.
*Toronto, Ontario	.....	.....	30.05	763.3	52	11.1	78	W	6	2.7	.....	2ck	0	NW	.....	0	0	Fair	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.01	762.2	54.9	12.7	80	W	10	4.5	.....	0	0	.....	.....	Inap	Inap.	Fine	J. Montgomery.
Sub-Series.																			
St. John's, Newfoundland	.....	.....	30.18	766.6	69	20.6	80	W	.....	.....	.....	2c	8ks	.....	.....	0	0	Fine	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.	.....	.....	29.93	760.2	59	15.0	87	W	5	2.2	.....	5k	5ks	W	W	0	0	Cloudy	
Alpena, Mich.	.....	.....	29.90	761.0	53	11.7	79	Calm	0	0	.....	0	10s	.....	W	0.09	2.3	Cloudy	
Atlantic City, N. J.	.....	.....	29.97	761.2	64	17.8	62	N	4	1.8	.....	1cs	0	.....	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.08	764.0	72	22.2	58	NE	8	3.6	.....	2ck	0	NW	.....	0	0	Fair	
Baltimore, Md.	.....	.....	30.03	762.7	64	17.8	58	NW	8	3.6	.....	0	2s	.....	.....	0	0	Clear	
Barnegat, N. J.	.....	.....	29.97	761.2	64	17.8	58	N	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Benton, Montana	26.94	684.3	29.78	756.4	58	14.4	76	SW	5	2.2	.....	.....	10s	.....	SW	0	0	Cloudy	
Bismarck, Dakota	28.12	714.2	29.70	754.4	60	15.6	54	SE	3	1.3	.....	1k	Haze	SE	.....	0	0	Fair	
Boston, Mass	.....	.....	29.87	758.7	62	16.7	66	W	3	1.3	.....	5c	Fog	S	.....	0.15	3.8	Foggy	
Breckenridge, Minn	.....	.....	29.90	759.4	55	12.8	68	NE	10	4.5	.....	0	5ks	.....	NW	0	0	Fair	
Buffalo, N. Y.	.....	.....	30.02	762.5	52	11.1	66	NW	3	1.3	.....	0	0	.....	.....	0.02	0.5	Clear	
Burlington, Vt.	.....	.....	29.95	760.7	60	15.6	65	N	3	1.3	.....	5k	0	.....	.....	0	0	Fair	
Cairo, Ill.	.....	.....	30.12	765.0	65	18.3	73	SW	2	0.9	.....	.....	10n	.....	SW	Inap.	Inap.	Light rain	
Cape Hatteras, N. C.	.....	.....	29.94	760.5	66	18.9	73	NE	16	7.2	.....	1k	0	NE	.....	3.28	83.3	Clear	
Cape Henry, Va.	.....	.....	30.00	762.0	70	21.1	66	N	6	2.7	.....	0	0	.....	.....	0.07	1.8	Clear	
Cape Lookout, N. C.	.....	.....	30.01	762.2	68	20.0	74	NE	14	6.3	.....	2k	0	.....	.....	0.81	20.6	Clear	
Cape May, N. J.	.....	.....	29.99	761.7	64	17.8	62	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Charleston, S. C.	.....	.....	30.05	763.3	72	22.2	71	NE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Cheyenne, Wyoming	23.92	607.6	29.86	758.4	62	16.7	36	W	20	8.9	.....	5ck	0	.....	.....	0	0	Fair	
Chicago, Ill.	.....	.....	29.96	761.0	65	18.3	63	SW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	30.02	762.5	63	17.2	67	W	2	0.9	.....	0	Fog	.....	.....	0	0	Clear	
Cleveland, Ohio	.....	.....	30.04	763.0	60	15.0	72	SW	6	2.7	.....	1c	0	W	.....	0	0	Clear	
Colorado Springs, Col.	24.06	611.1	29.93	760.2	64	17.8	48	SE	4	1.8	.....	1ck	0	SE	.....	Inap.	Inap.	Clear	
Corsicana, Tex.	.....	.....	30.10	764.5	65	18.3	85	E	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Davenport, Iowa	.....	.....	29.98	760.7	65	18.3	63	SW	1	0.4	.....	3ck	Haze	W	.....	0	0	Fair	
Denison, Tex.	.....	.....	30.07	763.8	72	22.2	67	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Denver, Col.	24.70	627.4	29.92	760.0	64	17.8	43	S	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.01	762.2	55	12.8	73	SW	5	2.2	.....	5cs,k	0	W	.....	0	0	Fair	
Dodge City, Kan.	27.32	693.9	29.59	751.6	72	22.2	63	SE	18	8.0	.....	8cs	0	.....	.....	0	0	Fair	
Dubuque, Iowa	.....	.....	29.92	760.0	67	19.4	64	Calm	0	0	.....	2k	0	W	.....	0	0	Fair	
Duluth, Minn.	.....	.....	30.06	763.5	44	6.7	84	Calm	0	0	.....	8c	0	NW	.....	0.02	0.5	Fair	
Eastport, Me.	.....	.....	29.86	758.4	52	11.1	93	Calm	0	0	.....	.....	Fog	.....	.....	0.33	8.4	Foggy	
Erie, Pa.	.....	.....	30.03	762.7	56	13.3	80	Calm	0	0	.....	3k	2ks	NW	NW	0.01	0.3	Fair	
Escanaba, Mich.	.....	.....	30.01	762.2	52	11.1	66	N	12	5.4	.....	2c	0	NW	.....	0	0	Fair	
Fort Gibson, Indian Ter.	.....	.....	30.04	763.0	70	21.1	66	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.86	733.0	29.64	760.5	68	20.0	64	Calm	0	0	.....	2cs	0	S	.....	0	0	Clear	
Fort Sully, Dakota	28.07	713.0	29.66	753.4	60	15.6	65	SE	48	21.5	.....	5c	0	W	.....	0	0	Fair	
Galveston, Tex.	.....	.....	30.11	764.8	77	25.0	49	E	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Grand Haven, Mich.	.....	.....	29.97	761.2	61	16.1	68	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Indianapolis, Ind.	.....	.....	30.04	763.0	64	17.8	67	SW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Indianola, Tex.	.....	.....	30.11	764.8	79	26.1	69	NE	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Jacksonville, Fla.	.....	.....	29.98	761.5	81	27.2	67	NW	4	1.8	.....	2k	0	NE	.....	0	0	Fair	
Keokuk, Iowa	.....	.....	29.91	759.7	76	24.4	64	SW	6	2.7	.....	.....	10s	.....	SW	0	0	Cloudy	
Key West, Fla.	.....	.....	29.98	761.5	81.0	27.2	78	W	4	1.8	.....	1k	1ks	W	NW	0.05	1.3	Fair	
Kittyhawk, N. C.	.....	.....	30.02	762.5	63	17.2	88	NE	6	2.7	.....	0	0	.....	.....	1.35	34.3	Clear	
Knoxville, Tenn.	.....	.....	30.15	765.8	58	14.4	76	NE	3	1.3	.....	Haze	0	.....	.....	0	0	Clear	
La Crosse, Wis.	.....	.....	29.94	760.5	60	15.6	76	E	2	0.9	.....	5ck	0	.....	.....	0	0	Fair	
Leavenworth, Kan.	.....	.....	29.90	759.4	69	20.6	56	SW	8	3.6	.....	2c	0	.....	.....	0	0	Clear	
Lexington, Ky.	29.04	737.6	30.13	765.3	62	16.7	71	S	8	3.6	.....	2k	0	SW	.....	0	0	Clear	
Long Branch, N. J.	.....	.....	29.97	761.2	64	17.8	73	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Louisville, Ky.	.....	.....	30.07	763.8	66	18.9	59	S	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Lynchburg, Va.	.....	.....	30.07	763.8	67	19.4	47	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	29.92	760.0	53	11.7	86	SW	3	1.3	.....	.....	10n	.....	W	0.07	1.8	Light rain	
Manhattan, Kan.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Marquette, Mich.	.....	.....	30.09	764.3	47	8.3	69	N	8	3.6	.....	5c	5s	W	NE	0	0	Fair	
Memphis, Tenn.	.....	.....	30.13	765.3	71	21.7	57	Calm	0	0	.....	2k	0	N	.....	0	0	Fair	
Milwaukee, Wis.	.....	.....	29.98	761.5	66	18.9	59	N	2	0.9	.....	0	Sm'e	.....	.....	0	0	Clear	
Mobile, Ala.	.....	.....	30.09	764.3	66	18.9	73	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Montgomery, Ala.	.....	.....	30.11	764.8	67	19.4	62	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Morgantown, W. Va.	.....	.....	30.03	762.7	72	22.2	40	W	1	0.4	.....	1c	0	W	.....	0	0	Clear	
Mt. Washington, N. H.	23.73	602.7	30.09	764.3	39	3.9	100	SE	5	2.2	.....	.....	1m	.....	SE	0.10	4.8	Light rain	
Nashville, Tenn.	.....	.....	30.11	764.8	65	18.3	68	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
New Haven, Conn.	.....	.....	29.92	760.0	65	18.3	52	N	10	4.5	.....	Haze	0	.....	.....	Inap.	Inap.	Clear	
New London, Conn.	.....	.....	29.93	760.2	64	17.8	52	S	1	0.4	.....	2ck	2s	SW	S	0.15	3.8	Fair	
New Orleans, La.	.....	.....	30.09	764.3	73.5	23.1	51	NE	11	4.9	.....	0	0	.....	.....	0	0	Clear	
Newport, R. I.	.....	.....	29.90	759.4	62	16.7	77	Calm	0	0	.....	10cs	0	SW	.....	0.60	15.2	Cloudy	
New York, N. Y.	.....	.....	29.98	761.5	61	16.1	66	NW	6	2.7	.....	0	Sm'e	.....	.....	0	0	Clear	
Norfolk, Va.	.....	.....	30.02	762.5	69	20.6	65	N	8	3.6	.....	0	0	.....	.....	0.03	0.8	Clear	
North Platte, Neb.	26.81	681.7	29.24	742.7	68	20.0	55	SE	2	0.9	.....	5c	0	SW	.....	0	0	Fair	
Omaha, Neb.	28.84	732.5	29.86	758.4	67	19.4	70	N	6	2.7	.....	.....	10n	SW	.....	0.07	1.8	Light rain	
Oswego, N. Y.	.....	.....	30.02	762.5	48.3	9.1	81	W	8	3.6	.....	.....	10s	.....	N	Inap.	Inap.	Cloudy	
Pembina, Dakota	.....	.....	29.98	761.5	51	10.6	85	NE	4	1.8	.....	2c	Haze	.....	.....	0	0	Fair	
Philadelphia, Penn.	.....	.....	30.00	762.0	62	16.7	56	NW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Pike's Peak, Colorado	17.83	452.9	30.04	763.0	27	— 2.8	67	W	64	28.6	.....	0	5s	.....	W	0.01	0.3	Fair	
Pittsburgh, Penn.	.....	.....	30.03	762.7	61	16.1	70	NW	4	1.8	.....	5ck	0	W	.....	0	0	Fair	
Port Huron, Mich.	.....	.....	30.01	762.2	55	12.8	80	Calm	0	0	.....	8k	1s	NW	.....	Inap.	Inap.	Cloudy	
Portland, Me.	.....	.....	29.92	760.0	55	12.8	87	Calm	0	0	.....	.....	Fog	.....	.....	0.24	6.1	Foggy	
Portland, Oregon	.....	.....	30.10	764.5	52	11.1	86	S	8	3.6	.....	.....	10s	.....	W	0.06	1.3	Cloudy	
Punta Rassa, Fla.	.....	.....	29.99	761.7	82.5	28.1	78	S	5	2.2	.....	.....	10ks	.....	SE	0	0	Cloudy	
Rochester, N. Y.	.....	.....	30.01	762.2	56	13.3	62	W	8	3.6	.....	5ck	0	W	.....	Inap.	Inap.	Fair	
Salt Lake City, Utah	25.44	620.8	29.77	756.1	63	17.2	42	S	8	3.6	.....	5c	2s	SW	.....	Inap.	Inap.	Fair	
Sandy Hook, N. J.	.....	.....	29.95	760.7	61	17.2	61	N	10	4.5	.....	Haze	1s	.....	.....	0	0	Clear	
San Diego, Cal.	.....	.....	30.05	763.3	58	14.4	100	N	4	1.8	.....	.....	10s	.....	N	0.05	1.3	Cloudy	
San Francisco, Cal.	.....	.....	30.02	762.5	50	10.0	78	SW	16	7.2	.....	0	8s	.....	SW	0	0	Fair	
Santa Fé, N. M.	23.30	591.8	29.84	757.9	54	12.2	70	NE	9	4.0	.....	2k	0	.....	.....	0.25	6.3	Fair	
Savannah, Ga.	.....	.....	30.04	763.0	77	25.0	69	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Shreveport, La.	.....	.....	30.17	766.3	70	21.1	75	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Smithville, N. C.	.....	.....	30.03	762.7	67	19.4	68	N	8	3.6	.....	0	0	.....	.....	0.06	1.5	Clear	
Springfield, Mass.	.....	.....	29.90	759.4	54.5	18.1	52	NW	8	3.6	.....	0	0	.....	.....	0.06	1.5	Clear	
St. Louis, Mo.	.....	.....	30.02	762.5	72	22.2	49	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.03	762.7	70	21.1	61	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
St. Paul, Minn.	.....	.....	29.89	759.2	61.5	16.4	74	NE	2	0.9	.....	2ck	0	NW	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	29.56	750.6	37	2.8	81	E	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Thatcher's Island, Mass.	.....	.....	29.89	759.2	57	13.9	87	S	7	3.1	.....	2c	8s	SW	SW	0.21	5.3	Foggy	
Toledo, Ohio	.....	.....	29.98	761.5	61	16.1	71	SW	6	2.7	.....	2ck	0	SW	.....	0	0	Clear	
Tucson, Arizona	27.50	698.5	30.09	764.3	70	21.1	.....	S	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30.03	762.7	76	24.4	72	NE	16	7.2	.....	2k	0	E	.....	0	0	Fair	
Vicksburg, Miss.	.....	.....	30.15	765.8	70	21.1	54	E	5	2.2	.....	0	0	.....	.....	0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer
Virginia City, M. T.	24.05	610.9	29.53	750.0	50	10.0	64	E	4	1.8		8c	2ks	S	W	0.09	2.3	Cloudy..	
Washington, D. C.			30.05	763 3	62	16.7	66	NW	6	2.7		0	0			0	0	Clear.	
Wilmington, N. C			30.03	762.7	65	18.3	83	N	4	1.8		0	0			0.54	13.7	Clear.	
Wood's Holl, Mass.			29.91	759.7	57	13.9	93	SW	5	2.2			10s			0.59	15.0	Cloudy.	
Wytheville, Va.	27.76	705.1	29.90	759.4	56	13.3	68	Calm	0	0		0	0			0	0	Clear.	
Yankton, Dakota.	28.55	725.2	29.78	756.4	65	18.3	73	NE	3	1.3		5cs	8ks	W	W	0	0	Cloudy.	
Yuma, Arizona			29.94	760.5	69	20.6		W				0	0			0	0	Clear.	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.			30.08	764.0	83	28.3	79	NE	5	2.2		2ck	5s	E	NE	0.10	2.5	Fair.	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.00	762.0	83	28.3	79	E				0	8ks			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.
Santiago de Cuba, W. I.			29.80	756.9	78	25.6	86	Calm	0	0		8ck	8s	S		0.79	20.1	Cloudy.	Robert Mason.
Havana, Cuba, W. I.			29.98	761.5	83	28.3	75	Calm	0	0		10c	0			0	0	Fair.	Charles Hasselbrink.
St. Georges, Bermudas			30.16	766 1	77.5	25.3	76	S				8pk	2fk	S		0	0	Fair.	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.18	690.4	29.96	761.0	69	20.6	84	S	3.0	1.3		2c	0	S		0	0	Fine.	C. Partridge.
Paramaribo, D. Guiana, S.A.			30.06	763.5	81	27.2	87	E			2	6ks	8ks	E		0.325	8.26	Cloudy.	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.11	764.7			85.6	29.8										0	0		Dr. H. Groot.
Medellin, Colombia, S. A.	25.19	639 8			65.0	18.3	87	Calm	0	0		2c	5s			0	0	Fair.	Thomas Herran
York Factory, B. A.			30.15	765.8	36	2.2	95	NW	6	2.7		0	6s		NW	0.01	0.3		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.																			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
Steamer Leipzig, N. 49° 6′. W. 23° 18′.	N 81 E	30.25	768.3	57.9	14.4	WNW	4	k	W	Long swells	N	*D. clouds	Capt. R. Hoffmann.
Steamer Nova Scotian N. 51° 24′, W. 18° 52′.	SE by E ½ E	12	30.05	763.3	58	14.4	W	5	k	Rough		Cloudy	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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,208.8 ft., or 1,301.1 m.; Santa Fè, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,291 8 ft., or 699.4 m; Yankton, 1,278 ft., or 389.5 m. The following constants are 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. *Detatched 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. Ass't) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JUNE 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	.....	.....	30.02	762.5	73.2	22.9	71	N	.....	.....	1	.....	3	.....	.....	0	0	Fair	Charnot.
Algiers	.....	.....	30.01	762.3	73.9	23.2	71	N	.....	.....	1	.....	0	.....	.....	0	0	Clear	Peter.
La Calle	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Kunts.
Tunis	.....	.....	30.04	763.1	77.0	25.0	68	E	.....	.....	3	.....	2	.....	.....	0	0	Clear	Jacques.
Sfax	.....	.....	30.08	764.0	77.0	25.0	61	NE	.....	.....	4	.....	2	.....	.....	0	0	Clear	Chauvey.
Saida	.....	.....	30.08	763.9	66.2	19.0	59	WNW	.....	.....	2	.....	6	.....	.....	0	0	Fair	Millot.
Tebessa	.....	.....	30.05	763.3	73.2	22.9	.....	NNW	.....	.....	1	.....	4	.....	.....	0.354	9.0	Fair	Colin.
Gerfville	.....	.....	30.09	764.2	73.8	23.2	26	W	.....	.....	2	.....	3	.....	.....	0	0	Fair	Buard.
Laghouat	.....	.....	30.08	763.9	80.6	27.0	26	E	.....	.....	2	.....	2	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	30.08	764.1	81.7	27.6	48	NW	.....	.....	1	.....	3	.....	.....	0.110	2.8	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.

Agram	.....	.....	29.90	759.4	81.1	27.3	54	NW	.....	.....	3	.....	5	.....	.....	0	0	.....	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	29.98	761.5	74.8	23.8	57	E	.....	.....	3	.....	0	.....	.....	0	0	.....	Dr. Wierzbiski.
Eperies	.....	.....	29.94	760.5	75.9	24.4	46	N	.....	.....	3	.....	1	.....	.....	0	0	.....	Julius Mikolik.
Gratz	28.74	729.9	29.89	759.1	77.2	25.1	53	NE	.....	.....	3	.....	6	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	28.47	723.2	29.83	757.7	74.8	23.8	59	WNW	.....	.....	3	.....	7	.....	.....	0.077	1.95	.....	Prof. Reissenberger.
Kremsmünster	28.72	729.6	30.00	761.9	77.7	25.4	48	E	.....	.....	2	.....	1	.....	.....	0.087	2.2	.....	Prof. C. Wagner.
Lemberg	.....	.....	29.97	761.2	70.9	21.6	36	NE	.....	.....	2	.....	4	.....	.....	0	0	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Pola	.....	.....	29.95	760.6	81.1	27.3	55	WSW	.....	.....	1	.....	7ck	.....	.....	0	0	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	29.85	758.2	84.0	28.9	38	S	.....	.....	1	.....	3	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	29.95	760.6	84.9	29.4	56	Calm	.....	.....	0	.....	0	.....	.....	0.071	1.8	.....	Prof. V. Farolfi.
Vienna	.....	.....	29.87	758.8	83.3	28.5	44	ESE	.....	.....	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.; 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.

Brussels	.....	.....	30.02	762.5	57.9	14.4	82	W	.....	.....	2	.....	10	.....	.....	0	0	.....	Royal Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

BRITISH SERIES.

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, 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	.....	.....	29.70	754.4	55.3	12.9	.....	WSW	13	5.8	.....	.....	3	.....	.....	0	0	Blue sky	William Boswell.
Ardrossan	.....	.....	29.81	757.2	54	12.2	.....	WSW	.....	.....	5	.....	6	.....	.....	.....	.....	*D. clouds	William McNeil.
Armagh, Observatory	.....	.....	29.87	758.7	53.6	12.0	.....	SW	13	5.8	.....	.....	.....	.....	.....	.....	.....	.....	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	29.93	760.2	54.4	12.4	.....	WNW	.....	.....	1–3	.....	10	.....	.....	.....	.....	Threatening	J. Dreyer.
Bradford	.....	.....	29.90	759.4	56.7	13.7	.....	W	.....	.....	4	.....	6	.....	.....	0.04	1.0	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.04	763.0	82.5	28.1	.....	NE	.....	.....	2	.....	5	.....	.....	.....	.....	*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory	.....	.....	29.97	761.2	64.5	18.1	.....	W	.....	.....	2	.....	7	.....	.....	.....	.....	*D. clouds	H. Todd.
Cardington	.....	.....	29.93	761.5	67.0	19.4	.....	W	.....	.....	1	.....	6	.....	.....	.....	.....	*D. clouds	John McLaren.
Carlisle	.....	.....	29.86	758.4	57.9	14.4	.....	W	.....	.....	6	.....	3	.....	.....	0.08	2.0	*D. clouds	T. Bell, for J. Carmell.
Chatham, School M. E	.....	.....	30.00	762.0	63.2	17.3	.....	SW	.....	.....	2	.....	4	.....	.....	.....	.....	*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.62	726.9	30.14	765.5	51.0	10.6	.....	WSW	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast	R. E. Power.
Donaghadee	.....	.....	29.83	757.7	58	14.4	.....	WSW	.....	.....	3	.....	7	.....	.....	.....	.....	*D. clouds	J. Mac Gowan.
Dover	.....	.....	30.02	762.5	57	13.9	.....	WSW	.....	.....	4	.....	4	.....	.....	.....	.....	¼ clo ded	J. Costello.
Eccles, (near Manchester.)	.....	.....	29.91	759.7	57.6	14.2	.....	WSW	9.4	4.2	.....	.....	10	.....	.....	.....	.....	Gloomy	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.09	764.3	54.3	12.4	.....	WSW	14	6.3	.....	.....	10	.....	.....	.....	.....	Overcast	The Staff.
Fort Napier, (Natal)	27.69	703.3	29.92	760.0	66.5	19.2	.....	NE	.....	.....	1	.....	2	.....	.....	.....	.....	*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.95	760.7	88.0	31.1	.....	N	.....	.....	3	.....	6	.....	.....	.....	.....	*D. clouds	
Galway, Queen's College	.....	.....	29.87	758.7	54	12.2	.....	SW	.....	.....	2	.....	10	.....	.....	.....	.....	Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.02	762.5	71.4	21.9	.....	E	.....	.....	3	.....	0	.....	.....	.....	.....	Blue sky	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	29.77	756.1	52.3	11.3	.....	SW	.....	.....	2	.....	8	.....	.....	.....	.....	*D. clouds	Lewis Stuart.
Great Yarmouth	.....	.....	29.97	761.2	62	16.7	.....	W	.....	.....	2	.....	4	.....	.....	.....	.....	*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	30.02	762.5	67.0	19.4	.....	WSW	.....	.....	1	.....	8	.....	.....	.....	.....	*D. clouds	The Staff, for G. B. Airy.
Guernsey	.....	.....	30.09	764.3	57	13.9	.....	WNW	.....	.....	2	.....	7	.....	.....	.....	.....	*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	29.91	759.7	61.0	16.1	.....	WSW	.....	.....	2	.....	8	.....	.....	Blank	Blank	*D. clouds	L. J. Crossley.
Helston	.....	.....	30.06	763.5	60	15.6	.....	SW	.....	.....	2	.....	10k	.....	.....	0.3	7.6	Misty	M. P. Moyle.
Holyhead	.....	.....	29.93	760.2	55	12.8	.....	SW	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast	John Tilston.
Kew, Observatory	.....	.....	30.00	762.0	61.7	16.5	.....	WSW	12	5.4	.....	.....	9	.....	.....	.....	.....	Threatening	The Staff.
Kingstown	.....	.....	29.93	760.2	56	13.3	.....	W	.....	.....	4	.....	9	.....	.....	.....	.....	Overcast	George Mitchell.
Leicester Museum	.....	.....	29.98	761.5	54.5	12.5	.....	W	.....	.....	2	.....	10	.....	.....	.....	.....	Raining	Wm. J. Harrison, F.G.S.
Malta, Mediterranean	.....	.....	29.96	761.0	72.8	22.7	.....	NE	.....	.....	1	.....	8k	.....	.....	.....	.....	*D. clouds	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	29.65	753.1	60	15.6	.....	SW	.....	.....	2	.....	2	.....	.....	.....	.....	¼ clo ded	W. D. Penny.
Nassau, (Bahamas	.....	.....	30.07	763.8	80.2	26.8	.....	NE	.....	.....	4	.....	8	.....	.....	.....	.....	*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	29.95	760.7	63.3	17.4	.....	SW	.....	.....	3	.....	9ks.k.d	.....	WSW	0.06	0.05	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	29.95	760.7	60.7	15.9	.....	SW	.....	.....	4	.....	6	.....	.....	.....	.....	Solar halo	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	29.97	761.2	63	17.2	.....	WSW	.....	.....	2	.....	10	.....	.....	.....	.....	Overcast	J. Lucas.
Plymouth	.....	.....	30.05	763.5	57.9	14.4	.....	SW	.....	.....	4	.....	10	.....	.....	.....	.....	Gloomy	John Merrifield.
Roche's Point	.....	.....	29.97	761.2	56	13.3	.....	W	.....	.....	4	.....	5	.....	.....	.....	.....	Cloudy	W. Kennedy.
Saint Ann's Head	.....	.....	29.99	761.7	55	12.8	.....	W	.....	.....	2	.....	6	.....	.....	.....	.....	*D. clouds	John C. Walker.
Saint Helier, Jersey	.....	.....	30.11	764.8	62.0	16.7	.....	W	.....	.....	3	.....	5	.....	.....	.....	.....	¼ cl uded	A. P. Amy.
Sandwick Manse, Orkneys	.....	.....	29.65	753.1	49.1	9.5	.....	W	17	7.6	.....	.....	0	.....	.....	.....	.....	Blue sky	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	29.88	758.9	60.4	15.8	.....	SW	.....	.....	2	.....	8	.....	.....	.....	.....	Overcast	F. Shaw.
Scutari Cemetery Turkey	.....	.....	29.91	759.7	69.2	20.7	.....	SSW	.....	.....	1	.....	8	.....	.....	.....	.....	Hazy	Sergt. W. H. Lyne.
Sheffield	.....	.....	29.91	759.7	60.0	15.6	.....	W	.....	.....	4	.....	9	.....	.....	Inap.	Inap.	Overcast	W. F. Cooper.
Silloth Rectory	.....	.....	29.84	757.9	61.8	16.6	60	SW	.....	.....	5	.....	3	.....	.....	0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	29.90	759.4	56.0	13.3	.....	W	.....	.....	4	.....	8	.....	.....	Blank	Blank	.....	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.	.....	.....	29.61	752.1	53	11.7	.....	SW	.....	.....	5	.....	8	.....	.....	.....	.....	*D. clouds	John Smith.
Strathfield Turgiss	.....	.....	30.01	762.2	61.3	16.3	.....	NW	.....	.....	1	.....	10	.....	.....	.....	.....	Raining	Rev. Charles H. Griffith
Thurso	.....	.....	29.62	752.3	55	12.8	.....	W	.....	.....	2	.....	7	.....	.....	.....	.....	*D. clouds	John Trotter.
Truro, Royal Institution	.....	.....	30.09	764.3	61	16.1	.....	W	.....	.....	4	.....	8	.....	.....	.....	.....	Gloomy	W. Newcombe.
Valencia, Observatory	.....	.....	29.98	761.5	54.7	12.6	.....	SW	20	8.9	.....	.....	10	.....	.....	.....	.....	*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man	.....	.....	.....	.....	45	7.2	.....	S	.....	.....	3	.....	0	.....	.....	.....	.....	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.21	767.3	63.6	17.6	69	SE	5	2.2	.....	0	1	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	30.04	763.0	59.0	15.0	87	SW	.....	.....	2	.....	9k	.....	.....	0	0	Cloudy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	29.79	756.7	56.5	13.6	.....	W	.....	.....	3	.....	5k	.....	.....	0	0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.00	762.0	.....	.....	.....	NE	8.7	3.9	.....	.....	.....	.....	.....	0	0	.....	C. Meldrum.
Melbourne, Observatory	.....	.....	30.17	766.3	45.4	7.4	87	SW	9	4.0	.....	.....	8	.....	.....	0.02	0.5	Fine, foggy	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	29.63	752.6	51	10.6	.....	WSW	.....	.....	4	5	5	WSW	.....	0.3	7.6	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	29.60	751.8	48	8.9	.....	S	.....	.....	4	3	5	SW	.....	.....	.....	.....	Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, distinction between upper and lower cloud 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; lbs. per square foot for Greenwich and Hobart Town. 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	.....	.....	29.91	759.7	64.9	17.8	86	SSW	.....	.....	2	.....	10	.....	.....	.....	.....	.....	.....
Fanöe	.....	.....	29.95	760.6	64.1	12.3	93	SW	.....	.....	2	.....	10	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	29.63	752.5	39.2	4.0	80	S	.....	.....	1	.....	10	.....	.....	.....	.....	.....	.....
Stykkisholm, (Iceland)	.....	.....	29.40	746.7	44.1	6.7	88	Calm	.....	.....	0	.....	8	.....	.....	.....	.....	.....	.....
Thorshavn, (Faröe)	.....	.....	29.49	749.1	52.5	11.4	67	SW	.....	.....	2	.....	5	.....	.....	.....	.....	.....	.....
Vestervig	.....	.....	29.89	759.1	55.4	13.0	87	W	.....	.....	2	.....	6	.....	.....	.....	.....	.....	.....

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

FRENCH SERIES.

Furnished by the 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	764.0	62.6	17	78	NE	.....	.....	1	..c	..n	.....	NE	0	0	Cloudy	Normal School.
Amiens	.....	.....	29.98	761.6	66.9	19.4	63	W	.....	.....	3	.....	2	.....	NW	0.224	5.7	Slightly cl'dy	Normal School.
Avignon	.....	.....	29.97	761.3	88.2	31.2	41	E	.....	.....	1	.....	0	.....	.....	0	0	Very clear..	Normal School.
Bar-sur-Seine	.....	.....	30.05	763.3	69.6	20.9	68	WNW	.....	.....	2	.....	10	.....	W	0	0	Covered	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.02	762.4	68.9	20.5	67	N	2.7	1.2	.....	.....	10	.....	W	0.035	0.9	Covered	Beaumette Observatory.
Beauvais	.....	.....	30.11	764.7	58.8	14.9	70	NW	.....	.....	1	.....	10	.....	WNW	0.311	7.90	Covered	Normal School.
Besançon	.....	.....	30.02	762.5	79.2	26.2	54	W	.....	.....	2	.....	2	.....	W	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	30.15	765.9	80.6	27	48	N	.....	.....	2	5c	.....	S	.....	.....	.....	Cloudy	Normal School.
Bourges	.....	.....	30.08	764.1	66.2	19	92	SW	.....	.....	2	.....	8	.....	E	0	0	Very cloudy	Normal School.
Brest	.....	.....	30.08	763.9	63.1	17.3	63	NW	.....	.....	1	.....	8	.....	.....	0.276	7.00	Foggy	Naval Observatory.
Carcassonne	.....	.....	30.07	763.6	69.6	20.9	50	W	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School
Caen	.....	.....	30.057	778.4?	62.6	17	89	N	.....	.....	4	.....	5	.....	E	0.132	3.35	Cloudy	Normal School.
Chartres	.....	.....	30.06	763.4	65.5	18.6	.....	N	.....	.....	4	.....	9	.....	W	0.094	2.4	.....	Normal School.
Clermont	.....	.....	29.99	761.8	75.9	24.4	65	NE	.....	.....	2	.....	8	.....	W	0	0	Very cloudy	Puy de Dome Obs'y.
Commercy	.....	.....	30.04	762.9	68.5	20.3	71	W	.....	.....	6	.....	8n	.....	W	0	0	Very cloudy	Normal School.
Commune de Greasque*	.....	.....	30.07	763.6	86.0	30.0	30	W	.....	.....	2	.....	2	.....	W	0	0	.....	M. Kina.
Grenoble	.....	.....	29.97	761.1	79.3	26.3	41	NW	.....	.....	4	.....	5kn	.....	NE	0	0	Cloudy	Normal School.
La Roche-sur-Yon	.....	.....	30.04	763.0	70.9	21.6	64	SW	.....	.....	2	.....	8	.....	NW	0.039	1.0	Very cloudy	Normal School.
Le Mans	.....	.....	30.03	762.8	66.2	19	94	NW	.....	.....	2	.....	8	.....	W	0.16	4.	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.00	762.1	77.5	25 3	54	N	.....	.....	2	.....	5	.....	.....	0	0	Cloudy	Normal School.
Mâcon	.....	.....	30.04	762.9	74.7	23.7	66	NE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	30.00	762.1	76.5	24.7	50	W	.....	.....	6	.....	8	.....	E	0	0	Very cloudy	Normal School.
Nismes	.....	.....	29.98	761.4	95.7	35.4	37	SW	.....	.....	2	.....	2	.....	SE	0	0	Slightly cl'dy	Normal School.
Orleans	.....	.....	30.00	761.9	64.0	17.8	82	NW	.....	.....	2	.....	8	.....	NW	0	0	Very cloudy	Normal School.
Paris, Observatory	.....	.....	30.08	764.1	61.0	16.1	71	N	.....	.....	3	.....	10k	.....	N	0.104	2.63	Covered	National Observatory.
Parthenay	.....	.....	30.06	763.5	65.3	18.5	89	SW	.....	.....	2	.....	8	.....	SW	0.004	0.1	Very cloudy	Normal School.
Privas	.....	.....	29.93	760.3	77.0	25	.....	NW	.....	.....	2	.....	10	.....	NW	.....	.....	Covered	Normal School.
Rochefort, Observatory	.....	.....	30.14	765.5	61.7	16.5	85	WSW	.....	.....	3	.....	10	.....	NE	0.276	7.0	Rainy	Naval Observatory.
Rouen	.....	.....	30.08	764.0	61.2	16.2	67	WNW	.....	.....	1	.....	8	.....	SW	0.283	7.2	Very cloudy	Normal School.
Saint Lo	.....	.....	29.77	756.1	64.4	18	48	W	.....	.....	1	.....	1	.....	W	0.173	4.4	.....	Normal School.
Tarbes	29.05	737.8	30.11	764.7	67.1	19.5	.....	SW	.....	.....	1	.....	5	.....	E	0	0	Cloudy	Normal School
Villefranche	.....	.....	29.99	761.8	85.6	29.8	51	NE	.....	.....	2	.....	2	.....	SE	0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.93	760.1	81.1	27.3	.....	.....	.....	.....	.....	.....	.....	.....	.....	Blank	Blank	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.97	761.3	82.8	28.2	44	WSW	.....	.....	1	.....	2	.....	.....	0	0	Partly cloudy	Marseilles Observatory.
Mont-Louis	.....	.....	30.27	768 8	64.2	17.9	74	ESE	18.6	8.38	.....	.....	6	.....	W	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.08	764.0	61.0	16.1	71	NNW	.....	.....	3	.....	10	.....	NW	0.091	2.4	.....	Montsouris Observ'tory.
Perpignan	.....	.....	30.00	762.0	84.0	28.9	40	NE	7.4	3.33	.....	.....	0	.....	.....	0	0	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.08	764.1	62.8	17.1	70	NW	.....	.....	2	.....	10	.....	.....	0.098	2.5	Covered	E. Renou.
Toulouse	.....	.....	30.14	765.5	73.8	23.2	65	NW	.....	.....	1	.....	4	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.08	764.0	64.8	18.2	83	WNW	.....	.....	1	.....	1	.....	NNW	0.016	0.4	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.09	764 3	60.4	15.8	75	N	.....	.....	2	.....	10	.....	.....	0.150	3.81	Covered	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai)	.....	.....	29.74	755.4	68.0	20.0	91	ENE	10.5	4.7	.....	....	10k	.....	E	{ 0 0	{ 0 0	.....	H. Le Lec, S. J.
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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.

Ba nberg	.....	.....	29.94	760.5	80.1	26.7	47	W	.....	.....	3	.....	4	W	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.91	759.6	81.0	27.2	52	N	.....	.....	2	.....	2	.....	.....	0	0	.....	Prof. Arndt
Breslau	.....	.....	30.00	762.0	83.5	28.6	42	SE	.....	.....	3	.....	0	.....	.....	0	0	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	29.92	760.0	82.4	28.0	39	SW	.....	.....	3	.....	9	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	29.92	760.0	80.8	27.1	47	S	.....	.....	6	.....	6	SSW	.....	0	0	.....	Dr. H. Möhl
Emden	.....	.....	29.97	761.3	60.6	15.9	91	W	.....	.....	2	.....	10	.....	.....	0.283	7.2	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.98	761.6	81.5	27.5	46	WSW	.....	.....	4	.....	8	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	29.97	761.2	70.7	21.5	59	S	.....	.....	1	.....	4	.....	.....	0.024	0.6	.....	M. Wilhelm.
Hamburg	.....	.....	29.91	761.0	61.9	16.6	88	NW	.....	.....	1	.....	10n	.....	.....	0.472	12.0	Raining	Captain F. Hegemann.
Kiel	.....	.....	29.95	760.7	61.0	16.1	86	W	.....	.....	2	.....	10	.....	.....	0.563	14.3	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	30.07	763.6	78.4	25.8	38	SE	.....	.....	5	.....	2	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	29.94	760.4	80.2	26.8	54	WNW	.....	.....	2	.....	4	.....	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	30.11	764.7	74.7	23.7	50	WSW	.....	.....	3	.....	1ck	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.95	760.6	66.9	19.4	73	.....	.....	.....	2	.....	10	.....	.....	0.465	11.8	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.02	762.5	79.2	26.2	51	SSE	.....	.....	4	.....	2	.....	.....	0	0	.....	A. Lothes.
Posen	.....	.....	30.00	762 1	84.7	29.3	47	SE	.....	.....	5	.....	1	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.98	761.4	78.6	25.9	54	Calm	.....	.....	0	.....	10	NW	.....	0.036	0.9	Thunder, lightn'g	Dr. Schur.
Stuttgart	.....	.....	29.95	760.6	74.8	23.8	69	E	.....	.....	1	.....	8	.....	.....	1.020	25.9	Thunder-storm	Prof. Schoder.
Thorn	.....	.....	30.01	762.3	81.0	27.2	32	SE	.....	.....	5	.....	1	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.95	760.8	75.0	23.9	61	WNW	.....	.....	5	.....	7	.....	.....	0.071	1.8	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	29.88	759.0	66.9	19.4	79	NNW	.....	.....	2	.....	10	.....	.....	0	0	.....	E. F. Schütz.
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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. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens	.....	.....	29.94	760.5	80.6	27.1	.....	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.

Udine	.....	.....	29.90	759.5	84.9	29.4	40	SW	1 3	0.6	.....	.....	1	.....	.....	0	0	.....	
Padua	.....	.....	29.91	759.6	83.1	28.4	42	NW	3.1	1.4	.....	.....	3	.....	.....	0	0	.....	
Vicenza	.....	.....	29.91	759.6	82.8	28.2	49	N	1.8	0.8	.....	.....	1	N	.....	0	0	.....	
Verona	.....	.....	29.87	758.7	82 4	28.0	44	E	.....	.....	1	.....	0	.....	.....	0	0	.....	
Bergamo	28.60	726.5	29.86	758.5	86.0	30.0	41	SW	.....	.....	2	.....	1	.....	.....	0	0	.....	
Domodossola	28.87	733.4	29.87	758.6	85.6	29.8	56	WSW	.....	.....	4	.....	3	.....	.....	0	0	.....	
Milan	.....	.....	29.93	760.1	88.7	31.5	46	WSW	.....	.....	2	.....	4	WSW	.....	0	0	.....	
Pavia	.....	.....	29.93	760.3	86.0	30.0	41	SW	.....	.....	1	.....	0	.....	.....	0	0	.....	
Moncalieri	.....	.....	29.94	760.5	82.6	28.1	42	E	4.2	1.9	.....	.....	0	.....	.....	0	0	.....	
Mondovi	28.10	713.6	29.94	760.5	80.6	27.0	31	NE	.....	.....	2	.....	0	.....	.....	0	0	.....	
Porto Maurizio	.....	.....	30.00	762.1	81.9	27.7	46	SW	.....	.....	2	.....	1	.....	.....	0	0	.....	
Genoa	.....	.....	29.98	761.4	78.4	25.8	61	SW	4.2	1.9	.....	.....	1	NE	.....	0	0	.....	
Piacenza	.....	.....	29.94	760.5	84.0	28.9	40	N	3.1	1.4	.....	.....	1	.....	.....	0	0	.....	
Parma	.....	.....	29.93	760.3	86.5	30.3	38	NW	.....	.....	2	.....	1	.....	.....	0	0	.....	
Bologna	.....	.....	29.97	761.3	84.9	29.4	44	NW	.....	.....	1	.....	2	W	.....	0	0	.....	
Florence	.....	.....	29.95	760.7	88.7	31.5	31	W	.....	.....	2	.....	1	E	.....	0	0	.....	
Leghorn	.....	.....	29.99	761.8	79.7	26.5	53	W	5.6	2.5	.....	.....	1	.....	.....	0	0	.....	
Siena	28.77	730.8	29.93	760.3	83.5	28.6	40	NW	0.7	0.3	.....	.....	7	S	.....	0	0	.....	
Urbino	28.48	723.5	29.99	761.8	77.2	25.1	46	NE	.....	.....	2	.....	5	.....	.....	0	0	.....	
Pesaro	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ancona	.....	.....	29.94	760.5	77.0	25.0	60	NW	.....	.....	2	.....	1	.....	.....	0	0	.....	
Grosseto	.....	.....	29.97	761.2	82.0	27.8	57	ENE	.....	.....	4	.....	5	S	.....	0	0	.....	
Rome	.....	.....	29.96	760.9	81.0	27.2	61	SW	4.9	2.2	.....	.....	3	ENE	.....	0	0	.....	
Naples, O. U	.....	.....	29.93	760.1	83.7	28.7	40	SW	.....	.....	2	.....	3	.....	.....	0	0	.....	
Lecce	.....	.....	30.04	762.9	76.3	24.6	54	NNW	0.4	4.2	.....	.....	1	.....	.....	0	0	.....	
Cosenza	.....	.....	29.95	760.8	81.7	27.6	71	SE	3.8	1.7	.....	.....	7	.....	.....	0.020	0.5	.....	
Riposto, (Sicily)	.....	.....	29.94	760.3	73.9	23.3	73	E	.....	.....	2	.....	4	SE	.....	0	0	.....	
Palermo	.....	.....	29.95	760.7	74.7	23.7	54	N	19.2	8.6	.....	.....	1	.....	.....	0	0	.....	
Caltanissetta	28.04	712.3	29.95	760.6	63.0	17.2	73	NNW	.....	.....	4	.....	10	S	.....	0.028	0.7	.....	
Sub-Series.																			
Naples, S. R	.....	.....	29.99	761.7	80.2	26.8	51	WSW	3.1	1.4	.....	.....	7	E	.....	0	0	.....	Prof. F. Brioschi.

NOTE.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather 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.

Flushing	.....	.....	30.06	763.5	58.3	14.6	.....	WNW	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	
Groningen	.....	.....	29.91	759.7	60.6	15.9	.....	SW	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	
Helder	.....	.....	29.97	761.2	55.8	13.2	.....	W	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	
Utrecht	.....	.....	29.96	761.0	58.1	14.5	86	WNW	.....	.....	2	.....	10	.....	.....	.....	.....	Overcast	

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.

Bergen	.....	.....	29.80	757.0	51.8	11.0	80	S	16.6	7.4	.....	.....	10	.....	.....	0.087	2.2	.....	
Brönö	.....	.....	29.83	757.6	56.1	13.4	38	Calm	0	0	.....	.....	8	.....	.....	0	0	.....	
Christiania	.....	.....	29.83	757.6	61.5	16.4	43	SSW	5.4	2.4	.....	.....	10	.....	.....	0	0	.....	
Tromsö	.....	.....	29.92	759.9	59.5	15.3	30	SW	16	7	.....	.....	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 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	773.5	71.2	21.8	74	N	9.0	4.03	.....	.....	5	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.99	761.8	70.5	26.4	39	WSW	9.1	4.08	.....	.....	2	.....	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.23	767.7	68.7	20.4	68	SW	6.4	2.86	.....	.....	6	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.10	764.6	68.9	20.5	65	NNW	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 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	.....	.....	30.03	762.8	76.6	24.8	37	SE	13	6	.....	.....	0	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.13	765.4	75.7	24.3	30	S	4	2	.....	.....	0	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.10	766.1	80.6	27.0	29	S	4	2	.....	.....	2	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.19	766.8	75.7	24.3	40	SSE	4	2	.....	.....	3	.....	.....	.....	.....	.....	Central Physical Obs.
Knoplo	.....	.....	30.15	765.7	59.0	15.0	80	S	13	6	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.98	761.5	75.0	23.9	39	SE	4	2	.....	.....	3	.....	.....	.....	.....	.....	Physical Observat.
Nikolaiev	.....	.....	30.02	762.4	73.4	23.0	62	SW	18	8	.....	.....	7	.....	.....	.....	.....	Thunder-storm.	Kurdakof.
Kertch	.....	.....	29.93	760.3	77.0	25.0	64	NNE	7	3	.....	.....	6	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.19	766.8	70.5	24.7	53	S	2	1	.....	.....	5	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.95	760.7	69.6	20.9	75	NNE	40	18	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.18	766.5	58.5	14.7	70	NNW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.52	724.3	29.84	758.0	83.5	28.6	45	SE	4	2	.....	.....	8	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.03	762.8	82.6	28.1	36	S	4	2	.....	.....	7	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.16	766.0	70.8	24.9	29	NNW	4	2	.....	.....	0	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.06	738.1	30.03	762.8	64.9	18.3	28	NNW	4	2	.....	.....	5	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.87	758.8	79.7	26.5	33	NNE	13	6	.....	.....	7	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Rohrof.
Tashkend	28.33	719.6	29.90	761.0	77.7	25.4	30	NW	13	6	.....	.....	10	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.86	758.4	48.9	9.4	59	SW	13	6	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.56	750.7	51.1	12.3	74	WNW	2	1	.....	.....	4	.....	.....	Blank	Blank	.....	Marks.
Irkutsk	28.29	718.6	29.65	753.1	48.7	9.3	96	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Pekin, (China)	.....	.....	29.83	757.6	70.7	21.5	55	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	29.87	758.8	48.6	9.2	71	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	52.7	11.5	72	SE	4	2	.....	.....	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, 309.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, or 1,621.3? ft.; Irkutsk, 502 m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.05 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.

Madrid	.....	.....	30.01	762.2	86.5	30.3	32	S	9.7	4.34	.....	0	4	.....	.....	0	0	Cloudy.....	Royal Observatory.
San Fernando	.....	.....	30.03	762.8	80.4	26.9	45	W	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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	30.14	765.6	62.6	17.0	43	S	.....	.....	2	.....	0	.....	.....	0.118	3.0	.....	
Umea	.....	.....	30.09	764.3	51.1	10.6	85	S	.....	.....	2	.....	10	.....	.....	0	0	.....	
Hernosand	.....	.....	30.00	762.1	47.5	8.6	77	ESE	.....	.....	2	.....	10	.....	.....	0	0	.....	
Stockholm	.....	.....	29.90	759.5	55.4	13.0	91	E	.....	.....	4	.....	7	.....	.....	0.071	1.8	.....	
Wisby	.....	.....	29.99	761.7	74.1	23.4	60	S	.....	.....	7	.....	5	.....	.....	0.031	0.8	.....	
Sub-Series.																			
Upsala	.....	.....	29.92	759.9	54.0	12.2	96	ESE	6.0	2.7	.....	.....	10	.....	SSE	0.813	20.67	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 meaured 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 62	726.9	30.01	762.2	66.2	19.0	94	NNW			1		10			0.146	3.7	Thunder-storm	The Observatory.
Zurich	28.39	721.2	29.94	760.4	83.3	28.5	50	W			1		4			0	0	Cloudy	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, +0.8 mm; Thermometer, —0.7 cent.; Relative Humidity, +39 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.

Constantinople			30.00	762.0	70.2	21.2	68	ESE	4	2.0			7		NNE	0	0		
Fao, (Persian Gulf)			29.84	758 0	102.2	39.0		NW			3		0						
Salonica			29.99	761.8	62.8	17.1		NW			1		5					Stormy	
Valona			29.94	760.4	79.3	26.3		S			1		10					Stormy	
Varna			29.92	760.0	77.0	25.0		NW			1		8						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.93	760.3	82.9	28.3	63	N			1		8cs			0	0	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.

Bathurst, N. B			29.90	759.4	53.7	12.1	83	NE	3	1.3		0				0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.16	766.1	56	13.3		S	1	0.4		0	2s		Sc	0.02	0.5	Fair	W. R. Bigg.
*Chatham, N. B			29.92	760.0	54	12.2	83	NW	5	2.2		2k	8ks	NW	NW	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			29.87	758.7	54	12.2	93	N	5	2.2			10n			0.37	9.4	Light rain	H. J. Cundall, C. E.
Cornwall, Ontario			30.11	764.8	52.5	11.4	93	E			1	10k	0			0	0	Dull	James Smith, M. A.
Dalhousie, N. B			29.98	761.5	54.4	12.4	87	W			3	5cs	0			Blank	Blank		H. A. Johnson.
Esquimault, B. C			30.08	764.0	51.3	10.7	93	Calm	0	0			10n			0.17	4.3	Rainy	W. H. Revis.
Fredericton, N. B			29.93	760.2	58.2	14.6	75	N	4	1.8			10ks			0.030	0.76	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.74	755.4	53	11.7	90	E	16	7.2		5k	2ks	SE	SE	0	0	Cloudy	James Stewa rt.
Goderich, Ontario			30.08	764.0	62.5	16.9	69	Calm			0	0	0			0	0	Fine	G. J. Strang, M. A.
Granton, Ontario	28.97	735.8	30.05	763.3	59	15.0		E			1	0	0			0	0	Clear	James Grant.
*Halifax, N. S			29.80	756.9	57	13.9	94	N	6	2.7			10n			1.34	33.4	Light rain	F. Allison, M. A.
*Kingston, Ontario			30.14	765.5	56	13.3	80	E	1	0.4		5k	0	E		0.02	0.5	Fair	S. Woods, M. A.
Little Glace Bay, N. S			29.87	758.7	50.0	10.0	100	S	3	1.3			10n			1.80	45.7	Raining	C. H. Rigby.
*Montreal, Quebec			30.15	765.8	50	10.0	61	NE	10	4.5		8k	2ks	NW		0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.14	765.5	52	11.1	71	N	8	3 6		2k	5s	N W	NW	0 10	2.5	Cloudy	J. B. Haney.
*Parry Sound, Ontario			30.12	765.0	57	13.9	64	N	7	3.1		0	0			0	0	Clear	Rev. R. Mosley.
*Port Dover, Ontario			30.09	764.3	55	12.8	81	N	6	2.7		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S			29.81	757.2	53.8	12.1		S	2	0.9						2.100	53 34	Raining	Peter Grant.
*Port Stanley, Ontario			30.06	763.5	60	15.6	79	E	9	4.0		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			30.09	764.3	58	14.4	64	Calm	0	0			8n		S	0	0	Cloudy	Capt. Ashe, R. N.
St. John, N. B			29.92	760.0	57	13.9	87	Calm	0	0		5ck	0			0.070	1.78	Cl udy	G. Murdoch, C. E.
*Saugeen, Ontario			30.06	763.5	55	12.8	74	Calm	0	0		0	0			0 01	0.3	Clear	K. Stewart.
Stayner, Ontario			30.05	763.3	60	15.6	71	Calm	0	0		0	0			Inap.	Inap.	Clear	R. J. Cole.
Stratford, Ontario	28.80	731.5	30.07	763.8	55.9	13.3	86	SE	6	2.7		0	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			29.88	758.9	52	11.1	98	NW	2	0.9			10n			1.83	46.5	Light rain	T. C. Hill.
*Toronto, Ontario			30.09	764.3	59	15.0	69	N	4	1.8		0	0			0.08	2.0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.06	763.5	58.3	14.6	83	E	3	1.3		0	0			0	0	Fine	J. Montgomery.
Sub-Series.																			
St. John's, Newfoundland			30.25	768.3	73	22.8	90	S				0	8ks			0	0	Sultry	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.	.....	.....	30.06	763.5	62	16.7	61	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear.	
Alpena, Mich.	.....	.....	30.09	764.3	47	8.3	69	E	11	4.9	.....	.....	10s	.....	E	0	0	Cloudy.	
Atlantic City, N. J.	.....	.....	30.14	765.5	66	18.9	54	N	3	1.3	.....	0	0	.....	.....	0	0	Clear.	
Augusta, Ga.	.....	.....	30.19	766.8	70	21.1	63	Calm	0	0	.....	1cs	0	W	.....	0	0	Clear.	
Baltimore, Md.	.....	.....	30.16	766.1	65	18.3	68	NW	2	0.9	.....	0	Sm'e	.....	.....	0	0	Clear.	
Barnegat, N. J.	.....	.....	30.13	765.3	66	18.9	61	NW	9	4.0	.....	0	0	.....	.....	0	0	Clear.	
Benton, Montana	27.08	687.8	29.88	758.9	53	11.7	59	SW	16	7.2	.....	.....	10s	.....	SW	0	0	Cloudy.	
Bismarck, Dakota	27.89	708.4	29.46	748.3	58	14.4	81	NE	3	1.3	.....	.....	10ks	.....	.....	0.31	7.9	Cloudy.	
Boston, Mass.	.....	.....	30.01	762.2	63	17.2	62	NW	10	4.5	.....	1cs	Haze	N	.....	0	0	Hazy.	
Breckenridge, Minn.	.....	.....	29.52	749.8	61	16.1	88	SE	10	4.5	.....	.....	10n	.....	.....	0.34	8.6	Light rain.	
Buffalo, N. Y.	.....	.....	30.05	763.3	60	15.6	59	SW	3	1.3	.....	0	0	.....	.....	Inap.	Inap.	Clear.	
Burlington, Vt.	.....	.....	30.11	764.8	54	12.2	67	N	10	4.5	.....	2k	5s	.....	.....	0	0	Cloudy.	
Burlington, Ill.	.....	.....	30.06	763.5	71	21.7	71	S	8	3.6	.....	5c	0	.....	.....	Inap.	Inap.	Fair.	
Cairo, Ill.	.....	.....	30.10	764.5	72	22.2	58	NW	5	2.2	.....	0	Haze	.....	.....	0	0	Clear.	
Cape Hatteras, N. C.	.....	.....	30.15	765.8	69	20.6	65	W	7	3.1	.....	0	0	.....	.....	0	0	Clear.	
Cape Henry, Va.	.....	.....	30.18	766.6	75	23.9	59	Calm	0	0	.....	2c	0	N	.....	0	0	Clear.	
Cape Lookout, N. C.	.....	.....	30.14	765.5	64	17.8	78	SE	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
Cape May, N. J.	.....	.....	30.18	766.6	72	22.2	62	N	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Charleston, S. C.	.....	.....	30.18	766.6	72	22.2	62	N	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Cheyenne, Wyoming	23.87	606.3	29.81	757.2	47	8.3	48	W	16	7.2	.....	0	2s	.....	.....	0.03	0.8	Fair.	
Chicago, Ill.	.....	.....	29.97	761.2	63	17.2	72	SE	7	3.1	.....	Haze	Haze	W	.....	Inap.	Inap	Hazy.	
Cincinnati, Ohio.	.....	.....	30.02	762.5	69	20.6	70	SE	6	2.7	.....	2c	0	.....	.....	0	0	Clear.	
Cleveland, Ohio.	.....	.....	30.04	763.0	64.2	17.9	73	SE	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
Colorado Springs, Col.	23.93	607.8	29.80	756.9	59	15.0	33	SE	16	7.2	.....	0	0	.....	.....	Inap.	Inap.	Clear.	
Louisiana, Tex.	.....	.....	29.98	761.5	66.6	19.2	83	S	10	4.5	.....	0	0	.....	.....	0	0	Clear.	
Davenport, Iowa.	.....	.....	29.91	759.7	68	20.0	79	S	4	1.8	.....	7c	Haze	SW	.....	0.11	2.8	Fair.	
Denison, Tex.	.....	.....	29.96	761.0	68	20.0	69	S	10	4.5	.....	0	0	.....	.....	0	0	Clear.	
Denver, Col.	24.03	625.0	29.85	758.2	59	15.0	23	Calm	0	0	.....	0	0	.....	.....	0.03	0.8	Clear.	
Detroit, Mich.	.....	.....	30.05	763.3	55	12.8	68	NE	4	1.8	.....	2k	Haze	W	.....	0	0	Fair.	
Dodge City, Kan.	27.05	687.1	29.18	741.1	70	21.1	75	SE	12	5.4	.....	0	0	W	.....	0.01	0.3	Clear.	
Dubuque, Iowa.	.....	.....	29.89	759.2	64	17.8	62	SE	8	3.6	.....	10cs	0	SE	.....	0	0	Cloudy.	
Duluth, Minn.	.....	.....	29.90	759.4	40	4.4	72	NE	20	8.9	.....	.....	10s	.....	S	0	0	Cloudy.	
Eastport, Me.	.....	.....	29.86	758.4	56	13.3	73	NW	12	5.4	.....	0	8s	.....	NW	0	0	Fair.	
Erie, Pa.	.....	.....	30.03	762.7	66	18.9	59	S	8	3.6	.....	1k	Haze	.....	.....	0	0	Clear.	
Escanaba, Mich.	.....	.....	30.07	763.8	50	10.0	64	SE	4	1.8	.....	2c	0	SE	.....	0	0	Clear.	
Fort Gibson, Indian Ter.	.....	.....	29.80	758.4	72	22.2	58	SE	13	5.8	.....	2ck	0	W	.....	0	0	Fair.	
Ft. St. Michael, Alaska.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.63	727.2	29.69	754.1	69	20.6	71	S	20	8.9	.....	2k	5s	S	S	0	0	Cloudy.	
Fort Sully, Dakota.	27.83	706.9	29.39	746.5	62	16.7	88	N	1	0.4	.....	5ck	2s	.....	.....	1.10	27.9	Fair.	
Galveston, Tex.	.....	.....	30.03	762.7	78	25.6	57	SE	7	3.1	.....	1k	0	SW	.....	0	0	Clear.	
Grand Haven, Mich.	.....	.....	30.02	762.5	59	15.0	67	E	15	6.7	.....	.....	10s	W	0	0	Cloudy.		
Indianapolis, Ind.	.....	.....	30.03	762.7	69	20.6	79	SE	8	1.3	.....	5cs,k	0	SW	.....	0.01	0.3	Fair.	
Indianola, Tex.	.....	.....	30.01	762.2	80	26.7	55	SE	10	4.5	.....	5k	0	S	.....	6	0	Fair.	
Jacksonville, Fla.	.....	.....	30.14	765.5	80	26.7	52	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Keokuk, Iowa.	.....	.....	29.86	758.4	73	22.8	63	SW	14	6.3	.....	8c	0	SW	.....	0	0	Fair.	
Key West, Fla.	.....	.....	30.03	762.7	79.2	26.2	73	E	9	4.0	.....	8cs	1k	NW	NE	0	0	Cloudy.	
Kittyhawk, N. C.	.....	.....	30.16	766.1	70	21.1	71	NW	12	5.4	.....	0	0	.....	.....	0	0	Clear.	
Knoxville, Tenn.	.....	.....	30.18	766.6	61	16.1	77	NE	4	1.8	.....	1c,hz	0	.....	.....	0	0	Clear.	
La Crosse, Wis.	.....	.....	29.86	758.4	63	17.2	57	SE	8	3.6	.....	10k	0	S	.....	0	0	Cloudy.	
Leavenworth, Kan.	.....	.....	29.77	756.1	68	20.0	79	S	19	8.5	.....	.....	10n	.....	SW	0.04	1.0	Light rain.	
Lexington, Ky.	29.93	737.3	30.10	764.5	71	21.7	61	S	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
Long Branch, N. J.	.....	.....	30.14	765.5	68	20.0	56	NW	5	2.2	.....	0	0	.....	.....	0	0	Clear.	
Louisville, Ky.	.....	.....	30.07	763.8	71	21.7	71	S	2	0.9	.....	5k	0	SW	.....	0	0	Fair.	
Lynchburg, Va.	.....	.....	30.17	766.3	67	19.4	56	SW	1	0.4	.....	2c	0	W	.....	0	0	Clear.	
Malone, N. Y.	.....	.....	30.11	764.8	48	8.9	77	NE	7	3.1	.....	.....	1s	.....	NE	Inap.	Inap.	Cloudy.	
Manhattan, Kan.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Marquette, Mich.	.....	.....	30.09	764.3	44	6.7	59	NE	4	1.8	.....	5cs	0	W	.....	0	0	Fair.	
Memphis, Tenn.	.....	.....	30.07	763.8	74	23.3	71	SE	2	0.9	.....	1c	0	.....	.....	0	0	Clear.	
Milwaukee, Wis.	.....	.....	30.04	763.0	50	10.0	71	E	8	3.6	.....	5c	5ks	W	0.12	3.0	Cloudy.		
Mobile, Ala.	.....	.....	30.08	764.0	68	20.0	74	N	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
Montgomery, Ala.	.....	.....	30.13	765.3	72.5	22.5	54	E	7	3.1	.....	0	0	.....	.....	0	0	Clear.	
Morgantown, W. Va.	.....	.....	30.09	764.3	66	18.9	68	NE	5	2.2	.....	0	8s	.....	S	Inap.	Inap.	Fair.	
Mt. Washington, N. H.	23.77	603.8	30.13	765.3	33	0.6	100	N	12	5.4	.....	.....	Fog	.....	.....	0.06	1.5	Foggy.	
Nashville, Tenn.	.....	.....	30.07	763.8	71	21.7	56	E	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
New Haven, Conn.	.....	.....	30.08	764.0	67	19.4	56	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear.	
New London, Conn.	.....	.....	30.07	763.8	67	19.4	50	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
New Orleans, La.	.....	.....	30.06	763.5	75	23.9	68	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Clear.	
Newport, R. I.	.....	.....	30.05	763.3	64	17.8	62	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
New York, N. Y.	.....	.....	30.13	765.3	63	17.2	58	W	4	1.8	.....	0	Haze	.....	.....	0	0	Hazy.	
Norfolk, Va.	.....	.....	30.17	766.3	71	21.7	62	W	5	2.2	.....	0	0	.....	.....	0	0	Clear.	
North Platte, Neb.	26.71	678.7	29.10	739.1	65	18.3	54	NW	12	5.4	.....	5k	0	NW	.....	0.08	2.0	Fair.	
Omaha, Neb.	28.58	725.9	29.58	751.3	68	20.0	74	S	16	7.2	.....	0	8s	.....	SW	0.07	1.8	Clearing.	
Oswego, N. Y.	.....	.....	30.11	764.8	57.3	14.1	78	NE	1	0.4	.....	Haze	2ks	.....	NW	0	0	Fair.	
Pembina, Dakota.	.....	.....	29.68	753.9	53	11.7	10	SE	12	5.4	.....	.....	10n	.....	.....	0.23	5.8	Light rain.	
Philadelphia, Penn.	.....	.....	30.16	766.1	64	17.8	48	NW	5	2.2	.....	0	0	.....	.....	0	0	Clear.	
Pike's Peak, Colorado.	17.63	447.8	29.84	757.9	16	— 8.9	91	SW	52	23.2	.....	.....	10ks	.....	SW	0	0	Cloudy.	
Pittsburgh, Penn.	.....	.....	30.07	763.8	60	15.6	70	E	4	1.8	.....	2ck	0	.....	.....	0	0	Fair.	
Port Huron, Mich.	.....	.....	30.08	764.0	48	8.9	77	NE	10	4.5	.....	1c	0	.....	.....	0.27	6.9	Clear.	
Portland, Me.	.....	.....	30.01	762.2	62	16.7	67	NW	10	4.5	.....	1k	0	NW	.....	0.24	1.0	Clear.	
Portland, Oregon.	.....	.....	30.16	766.1	49	9.4	92	Calm	0	0	.....	8cs	0	S	.....	0	0	Cloudy.	
Punta Rassa, Fla.	.....	.....	30.07	763.8	79.0	26.1	82	E	12	5.4	.....	Haze	8s	NE	E	0	0	Cloudy.	
Rochester, N. Y.	.....	.....	30.07	763.8	61	16.1	66	W	4	1.8	.....	0	Sm'e	.....	.....	0	0	Clear.	
Salt Lake City, Utah	25.71	653.0	30.04	763.0	51	10.6	52	SE	1	0.4	.....	2c	0	NW	.....	Inap.	Inap.	Clear.	
Sandy Hook, N. J.	.....	.....	30.12	765.0	62	16.7	66	W	8	3.6	.....	0	Haze	.....	.....	0	0	Clear.	
San Diego, Cal.	.....	.....	30.09	764.3	61	15.6	88	N	4	1.8	.....	.....	10s	.....	N	0	0	Cloudy.	
San Francisco, Cal.	.....	.....	30.13	765.3	50	10.0	80	W	4	1.8	.....	Haze	5s	.....	.....	0	0	Fair.	
Santa Fé, N. M.	23.24	590.3	29.78	756.4	47	8.3	48	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Savannah, Ga.	.....	.....	30.18	766.6	74	23.3	67	Calm	0	0	.....	2k	0	.....	.....	0	0	Clear.	
Shreveport, La.	.....	.....	30.08	764.0	69	20.6	75	SE	3	1.3	.....	0	0	.....	.....	0	0	Clear.	
Smithville, N. C.	.....	.....	30.18	766.6	72	22.2	75	S	2	0.9	.....	2ck	0	NW	.....	0	0	Fair.	
Springfield, Mass.	.....	.....	30.08	764.0	64	17.8	58	NW	4	1.8	.....	8k	0	.....	.....	0	0	Cloudy.	
St. Louis, Mo.	.....	.....	29.98	761.5	73	22.8	63	S	8	3.6	.....	5c	0	.....	.....	0	0	Fair.	
St. Marks, Fla.	.....	.....	30.13	765.3	76	24.4	72	SE	8	3.6	.....	2k	0	SE	.....	0	0	Fair.	
St. Paul, Minn.	.....	.....	29.70	754.4	62	16.7	71	SE	20	8.9	.....	.....	10ks	.....	SW	0	0	Threatening	
St. Paul's Island, Alaska.	.....	.....	29.69	754.1	37	2.8	62	SW	4	1.8	.....	10ck	0	SW	.....	Inap.	Inap.	Cloudy.	
Thatcher's Island, Mass.	.....	.....	30.02	762.5	58	14.4	69	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear.	
Toledo, Ohio.	.....	.....	30.01	762.2	63	17.2	83	Calm	0	0	.....	5ck	Haze	SW	.....	0	0	Fair.	
Tucson, Arizona.	27.59	700.8	30.18	766.6	71	21.7	.....	S	.....	.....	.....	0	0	.....	.....	0	0	Clear.	
Tybee Island, Ga.	.....	.....	30.16	766.1	74	23.3	76	NE	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
Vicksburg, Miss.	.....	.....	30.08	764.0	69.5	20.8	63	SE	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
Virginia City, M. T.	24.27	616.4	29.75	755.6	38	3.3	80	Calm	0	0	.....	0	0	.....	.....	0.44	11.2	Clear	
Washington, D. C.	.....	.....	30.15	765.8	65.5	18.6	68	NW	2	0.9	.....	0	Haze	.....	.....	0	0	Clear	
Wilmington, N. C	.....	.....	30.18	766.6	70	21.1	84	Calm	0	0	.....	2cs	0	NE	.....	0	0	Clear	
Wood's Holl, Mass.	.....	.....	30.03	762.7	65	18.3	63	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Wytheville, Va.	27.86	707.6	30.00	762.0	57	13.9	81	Calm	0	0	.....	1k	0	NW	.....	0	0	Clear	
Yankton, Dakota	28.25	717.5	29.45	748.0	67	19.4	79	S	1	0.4	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Yuma, Arizona	.....	.....	29.92	760.0	69	20.6	.....	E	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.01	762.2	84	28.9	75	E	6	2.7	.....	5k	10ks	.....	NE	0	0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	30.00	762.0	83	28.3	79	E	.....	.....	.....	5k	5ks	.....	.....	0	0	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.14	765.5	82	27.8	79	Calm	0	0	.....	8c	8s	SE	.....	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.80	756.9	79	26.1	74	Calm	0	0	.....	8cs	0	.....	.....	0	0	Fair	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.01	762.2	81	27.2	78	NE	4.8	2.1	.....	10c	0	SE	.....	0	0	Cloudy	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.13	765.8	75.0	23.9	86	SSW	12.0	5.4	.....	.....	10n	.....	.....	Inap.	Inap.	Raining	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	69	20.6	90	S	5.0	2.2	.....	2c	2k	S	.....	0.29	7.4	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.06	763.5	82	27.8	83	E	.....	.....	2	5k	5k	E	.....	0.050	1.27	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.7	.....	.....	87.8	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.098	2.50	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.21	614.3	.....	.....	64.0	17.8	85	S	4	1.8	.....	5c	5s	.....	.....	0.34	8.6	Cloudy	Thomas Herran.
York Factory, B. A	.....	.....	29.81	757.2	52	11.1	76	SW	7	3.1	.....	2c	0	N	.....	0	0	.....	J. Fortescue, W. Wood. Daniel Smith.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. L. Clarke.
Makawao, Maui, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	Weather.	Observer
Steamer Leipzig, N. 49° 44′, W. 16° 34′	N 89 E	.....	Long swells	NW	Overcast	Capt. R. Hoffmann.
Steamer Nova Scotian N. 51° 23′, W. 11° 04′	ESE	12	Smooth	.....	Hazy	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.; 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 Still, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,078 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) 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.; 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. Asst'g) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JUNE 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.
1:18 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	75.6	24.2	62	NW			1		0			0	0	Clear	Charnot.
Algiers			29.91	759.7	82.4	28.0	40	N			1		3			0	0	Fair	Peter.
La Calle																			Kunts.
Tuhis			29.93	760.2	81.1	27.3	61	E			3		5			0	0	Fair	Jacques.
Sfax			30.00	762.1	76.5	24.7	71	S			2		1			0	0	Clear	Chauvey.
Saida			30.02	762.4	71.6	22 0	43	S			2		6			0.217	5.5	Fair	Millot.
Tebessa			29.97	761.2	74.1	23.4		SSW			1		9			0	0	Hidden	Colin.
Gerfville			29.97	761.3	71.1	21.7	35	SE			1		3			0.039	1.0	Fair	Buard.
Laghouat			30.04	763.0	82.4	28.0	39	SE			2		1			0	0	Clear	Guyot.
Biskra			29.98	760.9	85.6	29.8	45	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.

Agram			29.72	754.8	85.6	29.7	51	SE			2		4			0.150	3 8		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.82	757.5	73.8	23.2	52	E			2		0			0	0		Dr. Wiersbiski.
Eperies			29.78	756.4	76.6	24.8	50	NE			1		7		W	0	0		Julius Mikolik.
Gratz	28.54	725.0	29.71	754.5	72.1	22.3	64	NW			5		10			0	0		Andreas Rospini.
Hermannstadt	28.40	721.4	29.76	755.9	70.9	21.6	63	ESE			3		5			0.498	12.65		Prof. Reissenberger.
Kremsmünster	28.63	727.3	29.90	759.5	78 8	26 0	58	E			2		1			0	0		Prof. C. Wagner.
Lemberg			29.81	757.2	71.8	22.1	56	SE			2		5			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.82	757.5	81 1	27.3	54	SSE			2		6c8			0	0		I.R.Hydrographic Office.
Szegedin			29.72	755.0	78. 6	25.9	62	Calm			0		8			0.059	1.5		Karl Stancel.
Trieste			29.82	757.4	82 0	27.8	61	Calm			0		6			0.205	5.2		Prof. V. Farolfi.
Vienna			29.73	755.2	76.5	24.7	56	N			1		9			0.339	8.6		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.; 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.

Brussels			29.89	759.1	64.9	18.3	54	NNE			1	4	1	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			29.76	755.9	58.9	14.9		S	17	7.6			5			0.090	2.29	Blue sky	William Boswell.
Ardrossan			29.80	756.9	56	13.3		SSW			3		6					*D. clouds	William McNeil.
Armagh, Observatory			29.82	757.4	53.2	11.8		WSW	4	1.8			10					Overcast	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.81	757.2	58.5	14.7		SW			1		10					*D. clouds	J. Dreyer.
Bradford			29.84	757.9	57.0	13.9		SW			0		10			0	0	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.03	762.7	82.5	28.1		NE			4		6					*D clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.87	758.7	68.2	20.1		SW			1		10			Blank	Blank	Overcast	H. Todd. [H. C.
Cardington			29.89	759.2	64.0	17.8		SW			1		10					Overcast	John McLaren.
Carlisle			29.84	757.9	59	15.0		SW			1		10			0	0	Overcast	T. Bell, for J. Carmell.
Chatham, School M. E			29.99	758.9	58.2	14.6		SW			1		9			Blank	Blank	Gloomy	Capt. J. Fellowes, R.E.
Dartmoor	28.46	722.9	29.95	761.0	51.1	10.6		SSE			2		10					Gloomy	R. E. Power.
Donaghadee			29.80	756.9	52	11.1		WSW			3		10					Overcast	J. Mac Gowan.
Dover			29.90	759.4	60	15.6		SW			1		3					¼ clouded	J. Costello.
Eccles (near Manchester)			29.85	758.2	53.9	12.2		SW	4.6	2.1			10					Raining	Thomas Mackereth.
Falmouth, Observatory			29.86	758.4	54.0	12.2		S	13	5.8			10					Overcast	The Staff.
Fort Napier, (Natal)	27.99	710.9	30.22	767.6	53.3	11.8		S			2		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.03	762.7	89.0	31.7		W			2		6					*D. clouds	
Galway, Queen's College			29.77	756.1	60	15.6		SW			2		4					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.93	760.2	80.2	26.8		SW			6		1					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			29.78	756.4	52.9	11.6		WSW			1		10					Wet	Lewis Stuart.
Great Yarmouth			29.92	760.0	57	13.9		SSE			1		3					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			29.89	759.2	66.2	19.0		SSW			1		10					Overcast	The Staff, for G. B. Airy.
Guernsey			29.90	759.4	56.5	13.6		ESE			1		7					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y			29.95	760.7	57.1	13.9		SW			1		10					Threatening	L. J. Crossley.
Helston			29.82	757.4	68	20.0		SE			2		10					Raining	M. P. Moyle.
Holyhead			29.85	758.2	59	15.0		SW			2		4					*D. clouds	John Tilston.
Kew, Observatory			29.88	758.9	63.1	17.3		S	10	4.5			10					Threatening	The Staff.
Kingstown			29.83	757.7	57	13.9		SE			3		10			Blank	Blank	Overcast	George Mitchell.
Leicester Museum			29.88	758.9	59.8	15.4		W			1		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			29.97	761.2	74.8	23.8		NW			1		0					Blue sky	Sergt. F. Travis, A. H. C.
Nairn			29.72	754.9	59	15.0		NW			1		5					¼ clouded	W. D. Penny.
Nassau, (Bahamas			30.12	765.0	75.4	24.1		SE			3		10					Overcast	Surg. Maj. Henry.
Nottingham, Observatory			29.88	758.9	59.7	15.4		SW			1		10k		SW	0	0	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.87	758.7	55.3	12.9		SSW			3		10					Sprinkling	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.86	758.4	59	15.0		Calm			0		10					Overcast	J. Lucas.
Plymouth			29.87	758.7	57	13.9		S			2		10					Gloomy	John Merrifield.
Roche's Point			29.83	757.7	58	14.4		S			2		10					Dull	W. Kennedy.
Saint Ann's Head			29.86	758.4	55	12.8		SE			1		10					Overcast	John C. Walker.
Saint Heller, Jersey			29.88	758.9	61.5	16.4		S			1		8					¾ clouded	A. P Amy.
Sandwick Manse, Orkneys			29.74	755.4	50.9	10.5		W	14	6.3			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough			29.85	758.2	59.8	15.4		SSW			1		10					Overcast	F. Shaw.
Scutari Cemetery Turkey			29.90	759.9	80.4	26.9		NE			2		2					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.84	757.9	66.0	18.9		WSW			2		6			0.013	0.33	*D clouds	W. F. Cooper.
Silloth Rectory			29.83	757.7	63.2	17.3	60	SW			1		5			0.343	8.72	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.84	757.9	55.8	13.2		W			1		10					Threatening	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			29.70	754.4	54	12.2		W			3		8					*D. clouds	John Smith.
Stratfield Turgiss			29.90	759.4	60.6	15.9		NW			1		10					Thunder-storm	Rev. Charles H. Griffith.
Thurso																			John Trotter.
Truro, Royal Institution			29.86	758.4	59	15.0		SE			3		8					Gloomy	W. Newcombe.
Valencia, Observatory			29.86	758.4	54.8	12.7		NW	14	6.3			10					Drizzling	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man					46	7.8		S			3		10						Thomas Dawson.
Cape Good Hope, Obs'y			30.18	766.6	71.7	22.1	51	Calm ?	3?	1.3?		0	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.04	763.0	59.0	15.0	81	W			2		7ks			0.63	0.8	Cloudy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.82	757.4	55.2	12.9		W			3		10k			0	0	Cloudy	Andrew Gibb.
Mauritius, Observatory			29.94	760.5				NE	4.9	2.2						0	0		C. Meldrum.
Melbourne, Observatory			30.29	769.4	48.3	9.1	84	W	3	1.3			8			0.08	2.0	Fine	R. L. J. Ellery.
Monach Lt-house, Hebrides			29.72	754.9	51	10.6		SW			3		10			0.1	2.5		J. Youngclause.
North Unst, (Shetland Is.)			29.62	752.3	49	9.4		S			4	4	3	S					Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, distinction between upper and lower cloud and rain-fall; they give the wind direction to 32 points, weather by the Beaufort notation, the barometer for Aberdeen, Cardington, Galway, Oxford, St. Heller, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; 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.

Cópenhagen			29.92	760.0	57.2	14.0	90	E			2		10						
Fanöe			29.94	760.4	58.6	14.8	71	SW			2		1						
Godthaab, (Greenland)			29.88	758.9	36.1	2.3	80	Calm			0		10						
Stykkisholm, (Iceland)			29.77	756.2	44.8	7.1	77	Calm			0		0						
Thorshavn, (Faröe)			29.59	750.8	50.7	10.4	69	SW			2		5						
Vestervig			29.91	759.8	57.9	14.4	76	WSW			4		4						

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

FRENCH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	29.63	752.7	62.6	17	58	NE	.....	.....	1	.....	8&8,kn	.....	NE	0.157	4.0	Very cloudy	Normal School.
Amiens	.....	.....	29.97	761.1	70.5	21.4	66	NW	.....	.....	3	.....	0	.....	.....	0	0	Clear.....	Normal School.
Avignon	.....	.....	29.80	756.8	84.6	29.2	46	S	.....	.....	3	.....	2k	.....	S	0	0	Slightly cl'dy	Normal School.
Bar-sur-Seine	.....	.....	29.85	758.1	64.9	18.3	69	NE	.....	.....	2	.....	10	.....	NE	0.079	2.0	Covered	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.80	756.8	68.0	20.0	57	N	1.8	0.8	.....	.....	10	.....	S	0	0	Covered	Beaumette Observatory.
Beauvais	.....	.....	29.91	759.6	66.4	19.1	47	ESE	.....	.....	1	.....	8	.....	ESE	0	0	Very cloudy	Normal School.
Besançon	.....	.....	29.85	758.3	70.2	21.2	77	E	.....	.....	2	.....	8	.....	SW	0.035	0.9	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	29.93	760.2	68.0	20	89	NW	.....	.....	1	5c	.....	N	.....	.....	.....	Cloudy.....	Normal School.
Bourges	.....	.....	29.82	757.3	66.6	19.2	88	SW	.....	.....	2	.....	8	.....	W	0.067	1.7	Very cloudy	Normal School.
Brest	.....	.....	29.80	756.9	60.6	15.9	64	SSW	.....	.....	2	.....	10	.....	SSW	0.020	0.50	Misty.....	Naval Observatory.
Carcassonne	.....	.....	29.79	756.7	72.5	22.5	37	W	.....	.....	1	.....	2	.....	E	0	0	Slightly cl'd	Normal School
Caen	.....	.....	30.63?	778.0?	61.0	16.1	82	N	.....	.....	4	.....	10	.....	SSE	0	0	Covered	Normal School.
Chartres	.....	.....	29.83	757.7	63.7	17.6	.....	ESE	.....	.....	4	.....	7	.....	E	0.390	9.9	.....	Normal School.
Clermont	.....	.....	29.83	757.7	64.4	18.0	94	E	.....	.....	2	.....	10	.....	S	1.051	26.7	Raining.....	Puy de Dome Obs'y.
Commercy	.....	.....	29.89	759.2	63.3	17.4	70	NW	.....	.....	2	.....	10n	.....	NW	0	0	Covered	Normal School.
Commune de Greasque*	.....	.....	29.93	760.1	80.6	27.0	48	SW	.....	.....	4	.....	2	.....	SW	0	0	.....	M. Kina.
Grenoble	.....	.....	29.72	755.0	77.4	25.2	63	NW	.....	.....	6	.....	2ek	.....	NE	0.020	0.5	Slightly cl'dy	Normal School.
La Roche-sur-Yon	.....	.....	29.98	761.6	67.6	19.8	81	WSW	.....	.....	2	.....	8	.....	NW	0	0	Very cloudy	Normal School.
Le Mans	.....	.....	29.84	757.8	66.7	19.3	61	ESE	.....	.....	3	.....	8	.....	S	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	29.84	758.0	70.3	21.3	80	N	.....	.....	2	.....	8	.....	NE	0.04	1.	Raining.....	Normal School.
Mâcon	.....	.....	29.88	758.9	70.7	21.5	92	Calm	.....	.....	0	.....	10	.....	.....	0	0	Covered	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	29.83	757.7	66.6	19.2	68	NW	.....	.....	2	.....	10	.....	SE	0	0	Covered	Normal School.
Nismes	.....	.....	29.81	757.2	87.8	31	39	S	.....	.....	2	.....	2	.....	N	0	0	Slightly cl'dy	Normal School.
Orleans	.....	.....	29.82	757.4	64.8	18.2	69	E	.....	.....	2	.....	8	.....	S	0.08	2.	Very clo dy	Normal School.
Paris, Observatory	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	National Observatory.
Parthenay	.....	.....	29.82	757.3	64.4	18	78	SW	.....	.....	2	.....	8	.....	S	0	0	Very cloudy	Normal School.
Privas	.....	.....	29.79	756.6	77.0	25	.....	SE	.....	.....	2	.....	10	.....	SE	.....	.....	Covered	Normal School.
Rochefort, Observatory	.....	.....	29.90	759.4	62.1	16.7	79	WSW	.....	.....	3	.....	10	.....	NE	0.039	1.0	Covered	Naval Observatory.
Rouen	.....	.....	29.89	759.2	63.3	17.4	59	WNW	.....	.....	2	.....	8	.....	W	0	0	Very cloudy	Normal School.
Saint Lo	.....	.....	29.77	756.2	68.0	20	55	SW	.....	.....	1	.....	6	.....	SW	0	0	.....	Normal School.
Tarbes	28.87	733.2	29.91	759.8	68.4	20.2	.....	W	.....	.....	1	.....	10	.....	.....	0.59	15.	Raining.....	Normal School
Villefranche	.....	.....	29.91	759.7	65.8	18.8	82	SE	.....	.....	1	.....	8	.....	.....	0.488	12.4	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	30.05	763.3	78.8	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	Blank	Blank	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.83	757.6	76.8	24.8	47	S	.....	.....	1	.....	1	.....	.....	0	0	Slightly cl'dy	Marseilles Observatory.
Mont-Louis	.....	.....	30.06	763.4	64.9	18.3	54	S	22.4	10.00	.....	.....	5	.....	SSW	0.059	1.5	Raining.....	—. Falguère.
Montsouris, Paris	.....	.....	29.87	758.6	65.8	18.8	53	ENE	.....	.....	2	.....	10	.....	.....	0	0	.....	Montsouris Observ'tory.
Perpignan	.....	.....	29.81	757.1	77.0	25.0	57	S	18.6	8.33	.....	.....	4	.....	SW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.87	758.8	64.9	18.3	60	NE	.....	.....	1	.....	10	.....	.....	0	0	Very cloudy	L. Renou.
Toulouse	.....	.....	29.88	759.0	70.3	21.3	73	NW	.....	.....	1	.....	10	.....	.....	0.138	3.5	.....	Toulouse Observatory.
Tours	.....	.....	29.83	757.7	70.2	21.2	54	SSW	.....	.....	1	.....	10	.....	SE	0.071	1.8	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.87	758.7	65.8	18.8	66	SE	.....	.....	3	.....	10	.....	.....	0	0	Covered	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai	.....	.....	29.84	757.9	66.2	19.0	89	ENE	10.5	4.7	.....	10c	0	.....	.....	{ 0	0 }	.....	H. Le Lec, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	{ 0	0 }	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, 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 1,036.4 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.

Ila oberg	.....	.....	29.85	758.2	77.0	25.0	56	W	.....	.....	4	.....	5	W	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.89	759.2	63.5	17.5	96	E	.....	.....	1	.....	10	.....	.....	0.886	22.0	Thunder-storm..	Prof. Arndt.
Breslau	.....	.....	29.91	759.6	75.4	24.1	37	E	.....	.....	3	.....	0	.....	.....	0	0	.....	Dr. P. Naugebauer.
Carlsruhe	.....	.....	29.82	757.5	73.4	24.0	67	N	.....	.....	1	.....	9	.....	.....	0.217	5.5	.....	A. Senz.
Cassel	.....	.....	29.89	759.1	70.9	21.6	67	NNW	.....	.....	2	.....	6	SSW	.....	0.130	3.3	.....	Dr. H. Möhl
Emden	.....	.....	29.91	759.6	64.4	18.1	48	NE	.....	.....	2	.....	4	.....	.....	0.126	3.2	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.93	760.2	72.7	22.6	57	N	.....	.....	1	.....	8	.....	.....	0.098	2.5	.....	Physical Society.
Friedrichshafen	.....	.....	29.79	756.7	74.3	23.5	68	NW	.....	.....	4	.....	7	.....	.....	1.060	25.4	Foggy	M. Wilhelm.
Hamburg	.....	.....	29.94	760.5	63.1	17.3	66	Calm	.....	.....	0	.....	6k	SW	.....	0.165	4.2	Fair.....	Captain F. Hegemann.
Kiel	.....	.....	29.91	759.8	61.9	16.6	75	NW	.....	.....	1	.....	10	.....	.....	0.071	1.8	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.95	760.7	80.4	26.9	39	SE	.....	.....	2	.....	4	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	29.89	759.3	68.9	20.5	75	NE	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. Brunns.
Memel	.....	.....	30.01	762.2	77.7	25.4	51	WSW	.....	.....	3	.....	2ek	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Munster	.....	.....	29.87	758.8	67.3	19.6	69	.....	.....	.....	2	.....	3	.....	.....	0.154	3.9	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.94	760.4	78.1	25.6	45	SE	.....	.....	4	.....	2	.....	.....	0	0	.....	A. Lothes.
Posen	.....	.....	29.94	760.4	78.8	26.0	38	E	.....	.....	4	.....	1	.....	.....	0	0	.....	Dr. Mageuer.
Strassburg, (in Alsace)	.....	.....	29.84	757.9	72.1	22.3	65	NE	.....	.....	1	.....	9	S	.....	0.154	3.9	.....	Dr. Schur.
Stuttgart	.....	.....	29.88	757.7	73.8	23.2	61	N	.....	.....	2	.....	6	.....	.....	0.016	0.4	.....	Prof. Schoder.
Thorn	.....	.....	29.91	759.6	81.1	27.3	31	SE	.....	.....	4	.....	1	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.84	757.9	70.3	21.3	59	NNW	.....	.....	4	.....	10	.....	.....	0.394	10.0	.....	Prof. Fiesch.
Wustrow, Naval School	.....	.....	29.97	761.2	57.4	14.1	91	NE	.....	.....	2	.....	10	.....	.....	0.051	1.3	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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. Upper 0–10.	Clouds. Amount. Lower 0–10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens	.....	.....	29.87	758.7	79.7	26.5	.....	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.

Udine	.....	.....	29.76	755.8	83.5	28.6	59	S	4.2	1.9	.....	.....	7	.....	.....	0.213	5.4	.....	
Padua	.....	.....	29.74	755.5	83.5	28.6	50	NW	6.3	2.8	.....	.....	7	.....	.....	0	0	.....	
Vicenza	.....	.....	29.74	755.4	79.9	26.6	52	N	5.6	2.5	.....	.....	7	W	.....	0	0	.....	
Verona	.....	.....	29.75	755.7	92.1	33.4	72	E	.....	.....	1	.....	0	.....	.....	0	0	.....	
Bergamo	28.48	723.3	29.74	755.3	84.2	29.0	40	SW	.....	.....	1	.....	0	.....	.....	0	0	.....	
Domodossola	28.81	731.7	29.80	756.9	71.6	22.0	74	Calm	.....	.....	0	.....	9	.....	.....	0	0	.....	
Milan	.....	.....	29.78	756.5	86.5	30.3	44	ENE	.....	.....	2	.....	6	WNW	.....	0	0	.....	
Pavia	.....	.....	29.78	756.3	85.6	29.8	41	SE	.....	.....	1	.....	1	S	.....	0	0	.....	
Moncalieri	.....	.....	29.76	755.9	82.8	28.2	49	SSE	8.7	3.9	.....	.....	2	W	.....	0.654	16.6	.....	
Mondovi	27.92	709.2	29.77	756.1	79.2	26.2	51	NNE	.....	.....	4	.....	0	.....	.....	0	0	.....	
Porto Maurizio	.....	.....	29.78	759.6	76.6	24.8	72	SE	.....	.....	2	.....	1	.....	.....	0	0	.....	
Genoa	.....	.....	29.91	768.9	74.5	23.6	68	SE	7.4	3.3	.....	.....	6	SE	.....	0	0	.....	
Piacenza	.....	.....	29.78	756.3	84.0	28.9	42	NNE	4.9	2.2	.....	.....	4	SSW	.....	0	0	.....	
Parma	.....	.....	29.78	756.4	87.1	30.6	38	SW	.....	.....	6	.....	1	.....	.....	0	0	.....	
Bologna	.....	.....	29.84	758.0	86.0	30.0	37	WNW	.....	.....	1	.....	4	E	.....	0	0	.....	
Florence	.....	.....	29.89	759.1	82.9	28.3	40	SW	.....	.....	2	.....	2	.....	.....	0	0	.....	
Leghorn	.....	.....	29.90	759.4	76.6	24.8	58	WNW	3.1	1.4	.....	.....	0	.....	.....	0	0	.....	
Siena	28.70	728.9	29.86	758.4	78.6	25.9	51	WNW	1.3	0.6	.....	.....	4	W	.....	0	0	.....	
Urbino	28.36	720.4	29.87	758.7	81.5	27.5	53	SSW	.....	.....	2	.....	5	.....	.....	0	0	.....	
Pesaro	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ancona	.....	.....	29.83	757.7	81.0	27.2	53	SE	.....	.....	4	.....	2	.....	.....	0	0	.....	
Grosseto	.....	.....	29.94	760.4	80.2	26.8	53	N	.....	.....	2	.....	4	SE	.....	0	0	.....	
Rome	.....	.....	29.92	759.9	79.3	26.3	57	SSW	9.4	4.2	.....	.....	3	.....	.....	0	0	.....	
Naples, O. U	.....	.....	29.97	761.1	75.9	24.4	66	SW	.....	.....	4	.....	6	SW	.....	0	0	.....	
Lecce	.....	.....	29.89	759.2	80.6	27.0	44	SSE	3.8	1.7	.....	.....	4	NW	.....	0	0	.....	
Cosenza	.....	.....	29.94	760.5	82.9	28.3	68	SE	6.9	3.1	.....	.....	6	.....	.....	0	0	.....	
Riposto, (Sicily)	.....	.....	29.87	758.7	78.1	25.6	71	SE	.....	.....	2	.....	0	.....	.....	0	0	.....	
Palermo	.....	.....	29.94	760.4	74.1	23.4	56	NE	3.8	1.7	.....	.....	0	.....	.....	0	0	.....	
Caltanissetta	28.01	711.5	29.91	759.8	76.1	24.5	31	W	.....	.....	4	.....	1	E	.....	0	0	.....	
Sub-Series.																			
Naples, S. R	.....	.....	29.98	761.5	73.6	23.1	67	SW	3.1	1.4	.....	.....	4	SW	.....	0	0	.....	Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 550 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Tokio	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NETHERLANDS' SERIES.

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

Flushing	.....	.....	29.94	760.5	62.2	16.8	.....	WSW	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	
Groningen	.....	.....	29.86	758.4	63.5	17.5	.....	ESE	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	
Helder	.....	.....	29.91	759.8	58.8	14.9	.....	SW	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	
Utrecht	.....	.....	29.88	759.0	67.5	19.7	55	W	.....	.....	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.

Bergen	.....	.....	29.80	756.9	57.2	14.0	67	SSW	28.2	12.6	.....	.....	5	.....	.....	0	0	.....	
Brönö	.....	.....	29.82	757.3	57.6	14.2	45	Calm	0	0	.....	.....	6	.....	.....	0	0	.....	
Christiania	.....	.....	29.86	758.5	60.4	15.8	51	S	10.3	4.6	.....	.....	8	.....	.....	0	0	.....	
Tromsö	.....	.....	29.68	753.9	48.6	9.2	78	SW	0	0	.....	.....	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 1 h., 4 min.

PORTUGUESE SERIES.

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

Stations	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Angra, (Azores,)	.....	.....	30.43	772.8	71.1	21.7	72	NE	11.0	4.94	.....	.....	3	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.92	759.9	70.7	21.5	40	WSW	14.2	6.33	.....	.....	3	.....	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.20	767.0	68.0	20.0	61	Calm	0	0	.....	.....	10	.....	.....	0	0	.....	Capt D. A. da Cunha.
Lisbon	.....	.....	30.04	763.1	66.0	18.9	50	NNW	19.9	8.9	.....	.....	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.

Warsaw	.....	.....	29.88	759.0	79.3	26.3	45	ESE	16	7	.....	.....	8	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.99	761.8	80.1	26.7	39	S	9	4	.....	.....	9	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.00	762.1	81.5	27.5	40	S	7	3	.....	.....	5	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.00	762.1	82.9	28.3	44	SW	9	4	.....	.....	6	.....	.....	.....	.....	.....	Central Physical Obs.
Kiopio	.....	.....	29.87	758.7	73.8	23.2	58	S	22	10	.....	.....	5	.....	.....	.....	.....	.....	Ch. Forsten.
Kief	.....	.....	29.91	759.7	70.9	21.6	71	NE	2	1	.....	.....	7	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.88	759.0	76.3	24.6	56	SE	18	8	.....	.....	8	.....	.....	.....	.....	Thunder-storm.	Kurdakof.
Kertch	.....	.....	29.84	757.8	71.8	22.1	74	ENE	18	8	.....	.....	5	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.20	767.1	77.5	25.3	39	S	4	2	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.89	759.2	78.1	25.6	37	E	33	15	.....	.....	5	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.98	761.4	69.8	21.0	56	Calm	0	0	.....	.....	5	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.49	723.7	29.80	758.4	69.8	21.0	81	N	9	4	.....	.....	10	.....	.....	.....	.....	Raining	Physical Observatory.
Astrakhan	.....	.....	30.08	763.9	73.2	22.9	49	ESE	22	10	.....	.....	10	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.05	763.3	83.5	28.6	38	N	9	4	.....	.....	3	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.81	731.7	29.76	755.9	71.6	22.0	20	NNW	18	8	.....	.....	7	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.13	765.2	73.2	22.9	20	NE	16	7	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.52	724.3	30.19	766.7	68.7	20.4	17	N	13	6	.....	.....	0	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.69	754.1	57.4	14.1	43	SSE	2	1	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.52	749.8	49.8	9.9	62	SW	11	5	.....	.....	3	.....	.....	Blank	Blank	.....	Marks.
Irkutsk	28.22	716.8	29.55	750.6	56.7	13.7	60	NNE	9	4	.....	.....	4	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.04	752.8	77.9	25.5	50	SSE	9	4	.....	.....	2	.....	.....	Blank	Blank	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostook	.....	.....	29.89	759.2	46.6	8.1	89	SE	11	5	.....	.....	9	.....	.....	.....	.....	.....	.....
Nikolaievsk, on the Amoor	.....	.....	.....	.....	52.7	11.5	82	NE	7	3	.....	.....	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: 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.

Madrid	.....	.....	29.77	756.2	76.8	24.9	37	SW	20.1	9.00	.....	0	9	.....	.....	0	0	Almost cov'd	Royal Observatory.
San Fernando	.....	.....	30.01	762.2	71.8	22.1	75	W	8.1	3.6	.....	2	4	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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Raparanda	.....	.....	29.80	759.2	44.6	7.0	94	SW	.....	.....	4	.....	10	.....	.....	0	0	Foggy	
Umea	.....	.....	29.86	758.5	58.8	14.9	71	S	.....	.....	2	.....	8	.....	.....	0.413	10.5	.....	
Hernosand	.....	.....	29.83	757.7	61.5	16.4	49	S	.....	.....	4	.....	5	.....	.....	0.201	5.1	.....	
Stockholm	.....	.....	29.90	759.4	63.0	17.2	72	WSW	.....	.....	2	.....	5	.....	.....	0.220	5.6	.....	
Wisby	.....	.....	30.00	762.0	52.9	11.6	86	NE	.....	.....	4	.....	7	.....	.....	0.094	2.4	.....	
Sub-Series.																			
Upsala	.....	.....	29.89	759.2	65.1	18.4	50	SSE	6.9	3.1	.....	.....	8	SW	SW	0.048	1.21	.....	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	28.43	722.1	29.80	756.9	73.6	23.1	60	NNE			1		5			0.110	2.8	Clouds	The Observatory.
Zurich	28.24	717.3	29.80	757.0	77.5	25.3	59	E			1		4			0	0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, —4.1 mm; Thermometer, +3.3 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.

Constantinople			29.86	758 5	73.6	23.1	55	NNE	11	5.0			2		NW	0	0		
Fao, (Persian Gulf)			29.76	756.0	100.4	38.0		NW			3		0						
Salonica			29.91	759.6	88.5	31.4		S			1		5						
Valona			29.88	759.0	90.5	32.5		S			2		2						
Varna			29.86	758.5	62.6	17.0		SW			3		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.83	757.7	82.9	28.3	67	N			1		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.

Bathurst, N. B			30.16	766.1	51.9	11.1	79	NE	6	2.7		5				0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.11	764.8	58	14.4		Calm	0	0			10s		W	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B			30.21	767.3	55	12.8	55	NW	1	0.4		0	0			0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island			30.16	766.1	51	10.6	60	NW	11	4.9		0	0			Inap.	Inap.	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			30.06	763.5	57.0	13.9	78	SE			1	10k	0			0.072	1.83	Dull	James Smith, M. A.
Dalhousie, N. B			30.10	764.5	50.0	10.0													H. A. Johnson.
Esquimault, B. C			29.99	761.7	49.3	9.6	97	NW	1	0.4			10n			0.01	0.3	Cloudy	W. H. Bevis.
Fredericton, N. B			30.22	767.6	54.0	12.2	62	N	1	0.4		1c	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.64	752.8	54	12.2	93	E	10	4.5		2cs	5ks	E	E	0.36	9.1	Cloudy	James Stewa rt.
Goderich, Ontario			29.96	761.0	70.3	21.3	78	S			2	8ck	0	W		0.115	2.92	Clearing	H. J. Strang, M. A.
Granton, Ontario	28.89	733.8	29.95	760.7	66	18.9		S			2	4cs	0	NE		0	0	Clear	James Grant.
*Halifax, N. S			30.13	765.3	56	13.3	57	N	6	2.7		0	0			0.64	1.0	Clear	F. Allison, M. A.
*Kingston, Ontario			30.08	764.0	59	15.0	77	Calm	0	0			10ks		W	Inap.	Inap.	Cloudy	S. Woods, M. A.
Little Glace Bay, N. S			30.09	762.0	51.0	10.6	86	NW	6	2.7		3k	0	NW		1.28	32.5	Fair	C. H. Rigby.
*Montreal, Quebec			30.12	765.0	56	13.3	80	SE	6	2.7			10n			0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.08	764.0	55	12.8	71	Calm	0	0		5cs	5n	E	E	0	0	Threatening	J. B. Haney.
*Parry Sound, Ontario			29.96	761.0	56	13.3	94	SE	7	3.1			10n		SE	0.51	13.0	Heavy rain	Rev. R. Mosley.
*Port Dover, Ontario			30.01	762.2	64	17.8	83	S	4	1.8		10k	0	W		0	0	Fair	H. Morgan.
Port Hastings, N. S			30.09	764.3	49.6	9.8		NW	16	7.2						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.00	762.0	63	17.2	89	E	3	1.3			10ks		W	0	0	Cloudy	M. Payne.
*Quebec, Quebec			30.19	766.8	54	12.2	61	E	6	2.7		Haze	Ha e			0	0	Hazy	Capt. Ashe, R. N.
St. John, N. B			30.22	767.6	55	12.8	68	Calm	0	0		0	0			0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario			29.87	758.7	70	21.1	74	SW	6	2.7		10ks	0			0.02	0.5	Cloudy	K. Stewart.
Stayner, Ontario			29.92	760.0	65	18.3	89	SE	10	4.5			8n		NW	0.33	8.4	Clearing	R. J. Cole.
Stratford, Ontario	28.72	729.5	29.96	761.0	64.9	18.3	87	SW	11	4.9		5ck	5s	NW		0	0	Fair	C. J. MacGregor, M. A.
*Sydney, C. B			30.03	762.7	60	15.6	57	NW	6	2.7		2ck	0	SW		0.10	2.5	Clear	T. C. Hill.
*Toronto, Ontario			30.03	762.7	57	13.9	79	E	3	1.3			10ks		W	Inap.	Inap.	Light rain	Magnetic Observatory.
Woodstock, Ontario			29.96	761.0	66.6	19.2	82	S	15	6.7		10ck	0			0	0	Fine	J. Montgomery.
Sub-Series.																			
St. John's, Newfoundland			30.11	764.8	54	12.2	100	S					10n			0.20	5.1	Thick hazy	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.	.....	.....	30.11	764 8	61	16.1	77	Calm	0	0	.....	10k	0	W	.....	0	0	Cloudy.	
Alpena, Mich.	.....	.....	29.78	756.4	58	14.4	87	SE	7	3.1	.....	2ck	Haze	SW	.....	0	0	Fair.	
Atlantic City, N. J.	.....	.....	30.22	767.6	69	20.6	79	SW	8	3.6	.....	5k	0	SW	.....	0	0	Fair.	
Augusta, Ga.	.....	.....	30.26	768.6	72	22.2	71	SE	2	0.9	.....	0	0	.....	.....	0	0	Clear.	
Baltimore, Md.	.....	.....	30.19	766.8	69	20.6	70	SW	5	2.2	.....	5c,os	0	NW	.....	0	0	Fair.	
Barnegat, N. J.	.....	.....	30.22	767.6	72	22.2	71	SW	14	6.3	.....	2c	2k	.....	W	0	0	Fair.	
Benton, Montana	27.04	687.8	29.88	758.9	53	11.7	73	W	1	0.4	.....	0	0	.....	.....	0	0	Clear.	
Bismarck, Dakota	27.01	700.7	29.52	749.8	52	11.1	66	N	3	1.3	.....	.....	10ks	.....	.....	0	0	Cloudy.	
Boston, Mass.	.....	.....	30.10	766.8	63	17.2	57	E	7	3.1	.....	5k	Haze	W	.....	0	0	Fair.	
Breckenridge, Minn.	.....	.....	29.51	749.5	55	12.8	93	NW	14	6.3	.....	.....	10s	.....	N	0.03	0.8	Cloudy.	
Buffalo, N. Y.	.....	.....	29.99	761.7	67	19.4	64	SW	6	2.7	.....	.....	10ks	.....	W	0	0	Cloudy.	
Burlington, Vt.	.....	.....	30.15	765.8	59	15.0	65	S	2	0.9	.....	0	5s	.....	.....	0	0	Fair.	
Cairo, Ill.	.....	.....	29.99	761.7	72	22.2	71	S	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
Cape Hatteras, N. C.	.....	.....	30.24	768.1	76	24.4	60	E	3	1.3	.....	0	Haze	.....	.....	0	0	Clear.	
Cape Henry, Va.	.....	.....	30.27	768.8	72	22.2	62	SW	10	4.5	.....	0	0	.....	.....	0	0	Clear.	
Cape Lookout, N. C.	.....	.....	30.30	769.6	75	23.9	68	S	7	3.1	.....	2c	0	.....	.....	0	0	Clear.	
Cape May, N. J.	.....	.....	30.22	767.6	68	20.0	84	S	16	7.2	.....	2ck	0	W	.....	0	0	Fair.	
Charleston, S. C.	.....	.....	30.26	768.6	78	25.6	83	SE	6	2.7	.....	1k	0	SE	.....	0	0	Clear.	
Cheyenne, Wyoming	24.03	610.4	29.97	761.2	45	7.2	54	NW	8	3.6	.....	0	0	.....	.....	0.01	0.3	Clear.	
Chicago, Ill	.....	.....	29.75	755.6	73	22.8	93	S	14	6.3	.....	0	0	.....	.....	Inap.	Inap.	Clear.	
Cincinnati, Ohio	.....	.....	29.96	761.0	74	23.3	59	S	8	3.6	.....	Haze	0	.....	.....	0	0	Clear.	
Cleveland, Ohio	.....	.....	30.00	762.0	70.8	21.6	62	S	11	4.9	.....	2ck	5ks	SW	SW	0	0	Fair.	
Colorado Springs, Col.	24.12	612.6	29.99	761.7	50	10.0	51	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Columbus, Tex.	.....	.....	29.91	759.7	72	22.2	75	S	12	5.4	.....	2k	0	S	.....	0	0	Clear.	
Davenport, Iowa	.....	.....	29.68	753.9	71	21.7	62	S	12	5.4	.....	3c	0	S	.....	Inap.	Inap.	Clear.	
Denison, Tex.	.....	.....	29.88	758.9	74	23.3	75	S	23	10.3	.....	0	0	.....	.....	0	0	Clear.	
Denver, Col.	24.81	630.2	30.03	762.7	50	10.0	45	S	1	0.4	.....	0	0	.....	.....	0	0	Clear.	
Detroit, Mich.	.....	.....	29.92	760.0	69	20.6	75	SW	10	4.5	.....	5ck	0	SW	.....	0.14	3.6	Fair.	
Dodge City, Kan.	27.32	693.9	29.54	750.3	60	15.6	70	W	18	8.0	.....	0	0	.....	.....	Inap.	Inap.	Clear.	
Dubuque, Iowa	.....	.....	29.63	752.6	71	21.7	62	S	8	3.6	.....	10k	0	S	.....	0	0	Cloudy.	
Duluth, Minn.	.....	.....	29.60	751.8	41	5.0	91	NE	4	1.8	.....	.....	Fog	.....	.....	0.48	12.2	Foggy	
Eastport, Me.	.....	.....	30.18	766.6	51	10.6	93	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Erie, Pa.	.....	.....	29.98	761.5	73	22.8	63	S	12	5.4	.....	1c	5s	.....	.....	0	0	Fair.	
Escanaba, Mich.	.....	.....	29.68	753.9	57	13.9	81	S	10	4.5	.....	0	0	.....	.....	0.19	4.8	Clear.	
Fort Gibson, Indian Ter.	.....	.....	29.83	757.7	65	18.3	94	E	16	7.2	.....	.....	10s	.....	SW	0.21	5.3	Cloudy.	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.07	728.2	29.71	754.6	76	24.4	67	N	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
Fort Sully, Dakota	28.04	712.2	29.64	752.8	58	14.4	76	N	12	5.4	.....	2c	0	N	.....	0.50	12.7	Clear.	
Galveston, Tex.	.....	.....	30.02	762.5	79	26.1	82	S	5	2.2	.....	0	5s	.....	S	0	0	Fair.	
Grand Haven, Mich.	.....	.....	29.78	756.4	75	23.9	59	S	22	9.8	.....	2c	0	SW	.....	0	0	Clear.	
Indianapolis, Ind.	.....	.....	29.93	760 2	74	23.3	68	SE	8	3.6	.....	8k	0	S	.....	0	0	Fair.	
Indianola, Tex.	.....	.....	29.98	761.5	82	27.8	70	S	10	4.5	.....	1k	0	.....	.....	0	0	Clear.	
Jacksonville, Fla.	.....	.....	30.21	767.3	78	25.6	61	NE	3	1.3	.....	5k	0	NE	.....	0	0	Fair.	
Keokuk, Iowa	.....	.....	29.65	753.1	75	23.9	64	S	18	8.0	.....	8c	0	SW	.....	0	0	Fair.	
Key West, Fla.	.....	.....	30.09	764.3	74.2	23.4	90	E	12	5.4	.....	.....	10n	.....	E	2.94	74.7	Light rain.	
Kittyhawk, N. C.	.....	.....	30.32	770.1	72	22.2	63	SW	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
Knoxville, Tenn.	.....	.....	30.20	767.1	67	19.4	79	S	3	1.3	.....	1c	0	SW	.....	0	0	Clear.	
La Crosse, Wis.	.....	.....	29.67	753.1	71	21.7	66	S	14	6.3	.....	5k	0	.....	.....	0	0	Fair.	
Leavenworth, Kan.	.....	.....	29.67	753.6	65	18.3	78	S	15	6.7	.....	.....	10s	.....	SW	0.04	1.0	Cloudy.	
Lexington, Ky.	28.98	736.1	30.05	763.3	72	22.2	62	S	20	8.9	.....	0	0	.....	.....	0	0	Clear.	
Long Branch, N. J.	.....	.....	30.20	767.1	73	22.8	67	SW	10	4.5	.....	10c	0	SW	.....	0	0	Cloudy.	
Louisville, Ky.	.....	.....	30.00	762.0	77	25.0	60	S	18	8.0	.....	0	0	.....	.....	0	0	Clear.	
Lynchburg, Va.	.....	.....	30.28	767.8	73	22.8	56	Calm	0	0	.....	5c	0	.....	.....	0	0	Fair.	
Malone, N. Y.	.....	.....	29.94	760.5	60	15.6	80	S	12	5.4	.....	.....	10s	.....	S	0	0	Cloudy.	
Manhattan, Kan.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Marquette, Mich.	.....	.....	29.62	752.3	66	18.9	78	S	12	5.4	.....	2c	0	SW	.....	0.50	12.7	Fair.	
Memphis, Tenn.	.....	.....	30.00	762.0	73	22.8	63	S	12	5.4	.....	2c	2s	SW	S	0	0	Fair.	
Milwaukee, Wis.	.....	.....	29.74	755.4	69	20.6	70	S	14	6.3	.....	0	0	.....	.....	0	0	Clear.	
Mobile, Ala.	.....	.....	30.15	765.8	79	26.1	73	SE	6	2.7	.....	2k	0	S	.....	0	0	Fair.	
Montgomery, Ala.	.....	.....	30.20	767.1	74.5	24.6	66	SE	8	3.6	.....	8ck	Haze	SE	.....	0	0	Fair.	
Morgantown, W. Va.	.....	.....	30.10	764.5	75	23.9	59	Calm	0	0	.....	0	0	.....	.....	0.02	0.5	Clear.	
Mt. Washington, N. H.	28.06	608.6	30.32	770.1	37	2.8	80	N	20	8.9	.....	0	0	.....	.....	0	0	Clear.	
Nashville, Tenn.	.....	.....	30.05	763.3	70	20.1	54	SE	8	3.6	.....	2k	0	S	.....	0	0	Fair.	
New Haven, Conn.	.....	.....	30.18	766.6	70	21.1	70	S	5	2.2	.....	5k	Haze	S	.....	0	0	Fair.	
New London, Conn.	.....	.....	30.21	767.3	68	20.0	69	SW	6	2.7	.....	2k	Haze	.....	.....	0	0	Clear.	
New Orleans, La.	.....	.....	30.08	764.0	79	26.1	82	SE	5	2.2	.....	2k	0	.....	.....	0	0	Clear.	
Newport, R. I.	.....	.....	30.21	767.3	64	17.8	78	SW	4	1.8	.....	2ck	Haze	W	.....	0	0	Fair.	
New York, N. Y.	.....	.....	30.20	767.1	65	18.3	68	SW	11	4.9	.....	8c	Haze	.....	.....	0	0	Fair.	
Norfolk, Va.	.....	.....	30.29	769.4	76	24.4	56	SW	8	3.6	.....	5c	0	.....	.....	0	0	Fair.	
North Platte, Neb.	26.05	684.5	29.43	747.5	57	13.9	69	W	7	3.1	.....	2c	0	.....	.....	0.18	4.6	Clear.	
Omaha, Neb.	28.55	725.2	29.57	751.1	59	15.0	94	S	2	0.9	.....	0	5s	.....	SW	0.52	13.2	Clearing.	
Oswego, N. Y.	.....	.....	30.01	763.0	63.6	17.6	73	SE	10	4.5	.....	.....	10s	.....	NW	0	0	Cloudy.	
Pembina, Dakota	.....	.....	29.57	751.1	52	11.1	100	NE	8	3.6	.....	.....	10n	.....	.....	1.18	30.0	Light rain.	
Philadelphia, Penn.	.....	.....	30.20	767.1	69	20.6	75	SW	11	4.9	.....	2ck	Haze	W	.....	0	0	Fair.	
Pike's Peak, Colorado	17.85	553.4	30.00	763.5	22	— 5.6	48	NW	14	6.3	.....	0	0	.....	.....	Inap.	Inap.	Clear.	
Pittsburgh, Penn.	.....	.....	30.05	763.3	73	22.8	66	S	10	4.5	.....	2ck	0	.....	.....	0	0	Fair.	
Port Huron, Mich.	.....	.....	29.90	759.4	67	19.4	79	S	9	4.0	.....	8c	2s	W	.....	0.22	5.6	Cloudy.	
Portland, Me.	.....	.....	30.22	767.6	58	14.4	53	NE	7	3.1	.....	2c	Haze	N	.....	0	0	Fair.	
Portland, Oregon.	.....	.....	30.08	764.0	47	8.3	100	Calm	0	0	.....	.....	Fog	.....	.....	0.01	0.3	Foggy	
Punta Rassa, Fla.	.....	.....	30.12	765.0	76.0	24.4	76	NE	14	6.3	.....	5cs	2s	NE	NE	Inap.	Inap.	Cloudy.	
Rochester, N. Y.	.....	.....	30.01	762.2	65	18.3	63	SW	7	3.1	.....	.....	10s	.....	W	Inap.	Inap.	Cloudy.	
Salt Lake City, Utah	25.56	649.2	29.89	759.2	52	11.1	46	Calm	0	0	.....	10cs	Haze	NE	.....	0	0	Fair.	
Sandy Hook, N. J.	.....	.....	30.17	766.3	72.5	22.5	75	SW	12	5.4	.....	5c	Haze	SW	.....	0	0	Fair.	
San Diego, Cal.	.....	.....	29.97	761.2	62	16.7	88	NE	4	1.8	.....	.....	10s	.....	NE	0	0	Cloudy.	
San Francisco, Cal.	.....	.....	30.02	762.5	52	11.1	79	W	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy.	
Santa Fé, N. M.	23.31	592.1	29.85	758.2	44	6.7	59	NE	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
Savannah, Ga.	.....	.....	30.26	768.6	73	22.8	85	Calm	0	0	.....	.....	10n	.....	SE	Inap.	Inap.	Light rain.	
Shreveport, La.	.....	.....	30.03	762.7	71	21.7	80	S	6	2.7	.....	.....	10ks	.....	SW	0	0	Cloudy.	
Smithville, N. C.	.....	.....	30.30	769.6	74	23.3	67	SE	8	3.6	.....	1k	0	SE	.....	0	0	Fair.	
Springfield, Mass.	.....	.....	30.17	766.3	62	16.7	50	S	4	1.8	.....	8k	Fog	W	.....	0	0	Cloudy.	
St. Louis, Mo.	.....	.....	29.85	758.2	74	23.3	59	S	20	8.9	.....	.....	10s	.....	.....	0	0	Cloudy.	
St. Marks, Fla.	.....	.....	30.20	767.1	75	23.9	68	SE	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
St. Paul, Minn.	.....	.....	29.46	748.3	62.5	16.9	81	SE	15	6.7	.....	.....	10s	.....	SW	0.29	5.8	Cloudy.	
St. Paul's Island, Alaska	.....	.....	29.74	755.4	38	3.3	81	Calm	0	0	.....	10cs	0	.....	.....	0	0	Cloudy.	
Thatcher's Island, Mass.	.....	.....	30 20	767.1	57	13.9	75	NE	4	1.8	.....	2c	0	.....	.....	0	0	Clear.	
Toledo, Ohio	.....	.....	29.91	759.7	72	22.2	71	S	12	5.4	.....	2ck	0	SW	.....	0.35	8.9	Clear.	
Tucson, Arizona	27.50	698.5	30.09	764.3	64	17.8	.....	S	.....	.....	.....	8c	Haze	W	.....	0	0	Fair.	
Tybee Island, Ga.	.....	.....	30.24	768.1	72	22.2	85	E	6	2.7	.....	.....	10n	.....	SE	0.05	1.3	Light rain.	
Vicksburg, Miss.	.....	.....	30.08	764.0	72	22.2	75	S	4	1.8	.....	1cs	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.	24.18	614.2	29.66	753.4	44	6.7	67	Calm	0	0	.....	3k	0	W	.....	0	0	Fair	
Washington, D. C.	.....	.....	30.20	767.1	73	22.8	63	S	8	3.6	.....	5cs	0	W	.....	0	0	Fair	
Wilmington, N. C	.....	.....	30.30	769.6	72	22.2	71	E	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Wood's Holl, Mass.	.....	.....	30.23	767.8	66	18.9	73	SW	5	2.2	.....	2c	0	SW	.....	0	0	Clear	
Wytheville, Va.	27.91	708.9	30.04	763.0	61	16.1	82	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Yankton, Dakota	28.40	721.3	29.63	752.6	59	15.0	85	NW	16	7.2	.....	.....	10n	.....	.....	0.16	4.1	Light rain	
Yuma, Arizona	.....	.....	29.91	759.7	72	22.2	.....	NE	.....	.....	.....	2c	0	.....	.....	0	0	Fair	
Sub Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.01	762.2	83	28.3	70	E	9	4.0	.....	10ck	10s	E	.....	0	0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	30.03	762.7	82	27.8	83	E	.....	.....	.....	10k	2n	.....	.....	0.38	9.7	Rainy	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.17	766.3	81	27.2	78	Calm	0	0	.....	8c	2s	SE	.....	0	0	.....	James Gull.
Santiago de Cuba, W. I.	.....	.....	29.82	757.4	82	27.8	70	NW	1.2	0.5	.....	8c	0	.....	.....	0	0	Fair	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.02	762.5	80	26.7	78	NE	3.6	1.6	.....	10ck	S, hz.	.....	S	0.07	1.8	Cloudy	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.23	767.8	70.5	21.4	71	N	13.0	5.8	.....	0	8ks	.....	.....	1.33	33.8	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica, W. I.	27.20	690.9	29.98	761.5	69	20.6	84	SE	2.6	0.9	.....	2c	0	SE	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	29.99	761.7	83	28.3	83	E	.....	.....	2	.....	10n	.....	E	0.15	3.81	Rainy	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.09	764.2	.....	.....	74.8	23.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.394	10.06	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.21	640.3	.....	.....	63.0	17.2	83	Calm	0	0	.....	2cs	0	.....	.....	0.05	1.3	Fair	Thomas Herran
York Factory, B. A.	.....	.....	30.02	762.5	35	1.7	95	E	3	1.3	.....	.....	8s	.....	.....	0	0	.....	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	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° 47', W. 9° 12'.	N 81 E	.....	29.78	756.4	62.4	16.9	.....	NE	.....	.....	3	.....	.....	.....	.....	Smooth	.....	Overcast	Capt. R. Hoffmann.
Steamer Nova Scotian off South Stack, Wales	N E by E½ E	12	29.87	758.7	53	11.7	.....	SW	.....	.....	2	.....	..k	.....	SW	Smooth	.....	Hazy	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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) 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, 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 JUNE 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	.....	.....	29.91	759.8	76.8	24.9	57	NW	.....	.....	3	.....	0	.....	.....	0	0	Clear	Charnot.
Algiers	.....	.....	29.87	758.6	75.2	24.0	62	N	.....	.....	1	.....	7	.....	.....	0.063	1.6	Cloudy	Peter.
La Calle	.....	.....	.....	.....	.....	.....	.....	S	.....	.....	2	.....	3	.....	.....	0	0	Fair	Kunts.
Tunis	.....	.....	29.84	758.0	90.0	32.2	31	SE	.....	.....	3	.....	7	.....	.....	0	0	Cloudy	Jacques.
Sfax	.....	.....	29.91	759.8	79.2	26.2	67	SE	.....	.....	1	.....	2	.....	.....	0	0	Clear	Chauvey.
Saida	.....	.....	29.97	761.2	76.1	24.5	33	S	.....	.....	2	.....	3	.....	.....	0	0	Fair	Millot.
Tebessa	.....	.....	29.90	759.4	74.5	23.6	.....	SW	.....	.....	1	.....	7	.....	.....	0.118	3.0	Cloudy	Colin.
Geriville	.....	.....	29.98	761.6	71.8	22.1	32	W	.....	.....	4	.....	2	.....	.....	0	0	Clear	Buard.
Laghouat	.....	.....	29.96	761.0	84.2	29.0	28	S	.....	.....	3	.....	0	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	29.90	759.4	88.0	31.3	31	WSW	.....	.....	1	.....	5	.....	.....	0.079	2.0	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	.....	.....	29.69	754.0	77.5	25.3	59	SW	.....	.....	3	.....	5	.....	.....	0	0	.....	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	29.71	754.6	78.8	26.0	54	E	.....	.....	3	.....	1	.....	.....	0	0	.....	Dr. Wierzbiski.
Eperies	.....	.....	29.71	754.6	78.4	25.8	56	N	.....	.....	1	.....	5	.....	.....	0.089	2.25	.....	Julius Mikolik.
Gratz	28.46	722.8	29.62	752.3	73.0	22.8	68	SW	.....	.....	3	.....	7	.....	.....	0.709	18.0	.....	Andreas Rospini.
Hermannstadt	28.37	720.5	29.72	754.8	73.6	23.1	61	WSW	.....	.....	1	.....	3	.....	.....	0.028	0.70	.....	Prof. Reissenberger.
Kremsmünster	28.73	729.8	30.04	763.1	65.1	18.4	86	W	.....	.....	2	.....	10	.....	.....	0.457	11.6	.....	Prof. C. Wagner.
Lemberg	.....	.....	29.72	754.9	75.0	23.9	51	S	.....	.....	5	.....	8	.....	.....	0.322	8.2	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Pola	.....	.....	29.79	756.6	77.5	25.3	74	SSE	.....	.....	4	.....	10cs	.....	.....	0	0	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	29.67	753.5	76.8	24.9	59	W	.....	.....	2	.....	8	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	29.77	756.1	69.8	21.0	77	Calm	.....	.....	0	.....	10	.....	.....	.....	.....	Thunder-storm	Prof. V. Farolfi.
Vienna	.....	.....	29.64	752.0	77.0	25.5	66	E	.....	.....	2	.....	2	.....	.....	0	0	.....	I. R. Central Met. Obs'y.
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NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 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	.....	.....	29.65	753.1	56.1	13.4	78	WNW	.....	.....	3	.....	10	.....	.....	0.906	23.00	.....	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	.....	.....	29.93	760.2	49.0	9.4	.....	NNW	12	5.4	.....	.....	10	.....	.....	0.210	5.33	Raining.....	William Boswell.
Ardrossan	.....	.....	29.93	760.2	56.5	13.6	.....	NNE	.....	.....	2	.....	4	.....	.....	.....	.....	*D. clouds...	William McNeil.
Armagh, Observatory	.....	.....	29.98	761.5	55.9	13.3	.....	N	14	6.3	.....	.....	5	.....	.....	.....	.....	*D. clouds....	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	30.04	763.0	59.0	15.0	.....	NNW	.....	.....	2–3	.....	8	.....	.....	.....	.....	*D. clouds....	J. Dreyer.
Bradford	.....	.....	29.78	756.4	59.0	15.0	.....	NW	.....	.....	2	.....	10	.....	.....	0.01	0.3	Overcast.....	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.02	762.5	83.0	28.3	.....	NE	.....	.....	3	.....	7	.....	.....	.....	.....	*D. clouds....	Sergt. J. F. Halanen, A.
Cambridge, Observatory	.....	.....	29.74	755.4	58.8	14.9	.....	N	.....	.....	1	.....	10	.....	.....	.....	.....	Raining.....	H. Todd. [H. C.
Cardington	.....	.....	29.77	756.1	58.0	14.4	.....	NE	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast.....	John McLaren.
Carlisle	.....	.....	29.86	758.9	47.9	8.8	.....	N	.....	.....	6	.....	10	.....	.....	0.31	7.9	Threatening	T. Bell, for J. Carmell.
Chatham, School M. E	.....	.....	29.74	755.4	53.7	12.1	.....	NE	.....	.....	1	.....	8	.....	.....	Blank	Blank	Overcast.....	Capt. J. Fellowes, R.E.
Dartmoor	28.40	721.3	29.92	760.0	47.5	8.6	.....	NW	.....	.....	4	.....	10	.....	.....	.....	.....	Rain and fog	R. E. Power.
Donaghadee	.....	.....	29.93	760.2	54	12.2	.....	NNW	.....	.....	6	.....	6	.....	.....	.....	.....	Blue sky.....	J. Mac Gowan.
Dover	.....	.....	29.71	754.6	62	11.1	.....	NW	.....	.....	2	.....	8	.....	.....	.....	.....	Raining.....	J. Costello.
Eccles, (near Manchester.)	.....	.....	29.76	755.9	60.5	15.8	.....	N	2.8	1.3	.....	.....	10	.....	.....	.....	.....	Thunder.....	Thomas Mackereth.
Falmouth, Observatory	.....	.....	29.86	758.4	55.3	11.8	.....	NNW	36	16.1	.....	.....	10	.....	.....	.....	.....	Squally.....	The Staff.
Fort Napier, (Natal)	28.02	711.7	30.26	768.6	60.1	15.6	.....	NE	.....	.....	2	.....	1	.....	.....	.....	.....	*D. clouds....	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.96	761.0	84.0	28.9	.....	N	.....	.....	3	.....	5	.....	.....	.....	.....	*D. clouds....	
Galway, Queen's College	.....	.....	30.03	762.7	58	14.4	.....	NNW	.....	.....	3	.....	4	.....	.....	.....	.....	*D. clouds....	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	29.93	760.2	72.0	22.2	.....	W	.....	.....	6	.....	6	.....	.....	.....	.....	*D. clouds....	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	29.92	760.0	53.8	12.1	.....	NE	.....	.....	1	.....	6	.....	.....	.....	.....	Fine.....	Lewis Stuart.
Great Yarmouth	.....	.....	29.73	755.1	57	13.9	.....	N	.....	.....	2	.....	5	.....	.....	.....	.....	*D. clouds....	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	29.75	755.6	58.3	14.6	.....	E	.....	.....	1	.....	10	.....	.....	Blank	Blank	Overcast.....	The Staff, for G. B. Airy.
Guernsey	.....	.....	29.76	755.9	57	13.9	.....	WNW	.....	.....	2	.....	5	.....	.....	.....	.....	*D. clouds....	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	29.76	756.4	62.6	16.9	.....	ENE	.....	.....	1	.....	9	.....	.....	.....	.....	*D. clouds....	L. J. Crossley.
Helston	.....	.....	29.82	757.4	58	14.4	.....	NW	.....	.....	6	.....	8	.....	.....	0.20	5.1	Squally.....	M. P. Moyle.
Holyhead	.....	.....	29.89	759.2	52	11.1	.....	NNW	.....	.....	6	.....	2	.....	.....	.....	.....	Blue sky.....	John Tilston.
Kew, Observatory	.....	.....	29.75	755.6	59.2	15.1	.....	NNE	8	3.6	.....	.....	10	.....	.....	.....	.....	Threatening	The Staff.
Kingstown	.....	.....	29.95	760.7	55	12.8	.....	N	.....	.....	6	.....	1	.....	.....	.....	.....	Blue sky.....	George Mitchell.
Leicester Museum	.....	.....	29.80	756.9	58.0	14.7	.....	Calm	.....	.....	0	.....	10	.....	.....	.....	.....	Overcast.....	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)	.....	.....	29.85	758.2	73.8	23.2	.....	SE	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	29.97	761.2	54	12.2	.....	NW	.....	.....	1	.....	8	.....	.....	.....	.....	¾ clouded...	W. D. Penny.
Nassau, (Bahamas	.....	.....	30.09	764.5	72.4	22.4	.....	SE	.....	.....	3	.....	10	.....	.....	.....	.....	Raining.....	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	29.77	756.1	61.5	16.3	.....	NE	.....	.....	3	.....	7k	.....	NNE	0.011	0.28	*D. clouds....	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	29.77	756.1	59.0	15.0	.....	NNE	.....	.....	2	.....	10	.....	.....	.....	.....	Overcast.....	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	29.75	755.6	57	13.9	.....	N	.....	.....	1	.....	10	.....	.....	.....	.....	Glo my.....	J. Lucas.
Plymouth	.....	.....	29.80	756.9	54.7	12.6	.....	NNW	.....	.....	4	.....	10	.....	.....	.....	.....	Gloomy.....	John Merrifield.
Roche's Point	.....	.....	29.96	761.0	58	14.4	.....	N	.....	.....	6	.....	5	.....	.....	.....	.....	Cloudy.....	W. Kennedy.
Saint Ann's Head	.....	.....	29.98	761.5	55	12.8	.....	N	.....	.....	6	.....	5	.....	.....	.....	.....	.....	John C. Walker.
Saint Helier, (Jersey)	.....	.....	29.75	755.6	62.5	16.9	.....	N	.....	.....	2	.....	5	.....	.....	.....	.....	½ clouded...	A. P. Amy.
Sandwick Manse, Orkneys)	.....	.....	29.96	761.0	51.8	11.0	.....	NW	18	8.0	.....	.....	0	.....	.....	.....	.....	Blue sky.....	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	29.81	757.2	53.6	12.0	.....	NNE	.....	.....	1	.....	8	.....	.....	.....	.....	Overcast.....	F. Shaw.
Scutari Cemetery Turkey	.....	.....	29.76	755.9	73.0	23.1	.....	S	.....	.....	1	.....	4	.....	.....	.....	.....	*D. clouds....	Sergt. W. H. Lyne.
Sheffield	.....	.....	29.76	755.9	60.2	15.7	.....	NE	.....	.....	1	.....	10	.....	.....	0.100	2.54	Overcast.....	W. F. Cooper.
Silloth Rectory	.....	.....	29.90	759.4	47.3	8.5	84	S	.....	.....	2	.....	8	.....	.....	0.06	1.63	*D. clouds....	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	29.79	756.7	54.2	12.3	.....	W	.....	.....	3	.....	10	.....	.....	.....	.....	Threatening	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.	.....	.....	30.00	762.0	53	11.7	.....	N	.....	.....	4	.....	5	.....	.....	.....	.....	*D. clouds....	John Smith.
Stratfield Turgiss	.....	.....	29.75	755.6	58.2	14.6	.....	N	.....	.....	2	.....	10	.....	.....	.....	.....	Showery.....	Rev. Charles H. Griffith.
Thurso	.....	.....	29.94	760.5	54	12.2	.....	NW	.....	.....	2	.....	4	.....	.....	.....	.....	*D. clouds....	John Trotter.
Truro, Royal Institution	.....	.....	29.86	758.4	57	13.9	.....	N	.....	.....	8	.....	7	.....	.....	.....	.....	Gloomy.....	W. Newcombe.
Valencia, Observatory	.....	.....	30.11	764.8	56.6	13.7	.....	NW	30	13.4	.....	.....	10	.....	.....	.....	.....	*D. clouds....	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man	.....	.....	.....	.....	47	8.3	.....	N	.....	.....	7	.....	0	.....	.....	.....	.....	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.19	766.8	68.8	20.4	62	Calm ?	3.4?	1.8?	.....	0	1	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	30.08	764.0	60.0	15.6	87	S	.....	.....	1	.....	3k	.....	.....	0	0	.....	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	29.97	761.2	45.2	7.3	.....	NE	.....	.....	2	.....	10n	.....	.....	0.17	4.3	Raining.....	Andrew Gibb.
Mauritius, Observatory	.....	.....	29.97	761.2	76.4	24.7	70	WSW	13.1	5.9	.....	.....	8	.....	.....	0	0	*D. clouds....	C. Meldrum.
Melbourne, Observatory	.....	.....	30.34	770.6	49.0	9.4	93	SW	5	2.2	.....	.....	8	.....	.....	0.03	0.8	Misty.....	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	30.02	762.5	52	11.1	.....	N	.....	.....	4	3	0	N	.....	0	0	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	29.80	756.9	40	9.4	.....	S	.....	.....	1	3	8	N	.....	.....	.....	.....	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	.....	.....	29.68	753.8	61.9	16.6	87	SSW	.....	.....	2	.....	2	.....	.....	.....	.....	.....	
Fanöe	.....	.....	29.72	755.0	50.7	10.4	100	NE	.....	.....	4	.....	10	.....	.....	.....	.....	Raining.....	
Godthaab, (Greenland)	.....	.....	29.91	759.6	35.2	1.8	68	NE	.....	.....	1	.....	5	.....	.....	.....	.....	.....	
Stykkisholm, (Iceland)	.....	.....	29.98	761.5	47.3	8.5	76	NW	.....	.....	2	.....	8	.....	.....	.....	.....	.....	
Thorshavn, (Faröe)	.....	.....	30.05	763.2	48.7	9.3	53	NNW	.....	.....	4	.....	10	.....	.....	.....	.....	.....	
Vestervig	.....	.....	29.76	755.8	50.0	10.0	98	ENE	.....	.....	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	.....	.....	29.72	754.8	62.6	17	76	NW	.....	.....	2	.....	8ks	.....	NW	0	0	Very cloudy	Normal School.
Amiens	.....	.....	29.70	754.4	63.3	17.4	86	W	.....	.....	3	.....	10	.....	.....	0.598	15.2	Covered	Normal School.
Avignon	.....	.....	29.74	755.4	64.6	18.1	94	SW	.....	.....	1	.....	10	.....	S	0.760	19.3	Raining	Normal School.
Bar-sur-Seine	.....	.....	29.75	755.7	60.1	15.6	82	SW	.....	.....	2	.....	10	.....	SW	0.157	4.0	Covered	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.70	754.3	61.0	16.1	66	SW	0	0	.....	.....	10	.....	N	0.630	16.0	Covered	Beaumette Observatory.
Beauvais	.....	.....	29.71	754.7	64.5	12.5	87	NW	.....	.....	2	.....	10	.....	NW	0.335	8.50	Covered	Normal School.
Besançon	.....	.....	29.76	755.9	61.9	16.6	80	SSW	.....	.....	3	.....	8	.....	SW	0	0	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	29.86	758.5	55.4	13	88	N	.....	.....	2	5c	.....	N	.....	.....	.....	Cloudy	Normal School.
Bourges	.....	.....	29.74	755.4	59.4	15.2	99	SSW	.....	.....	4	.....	8	.....	E	0.24	6.	Very cloudy	Normal School.
Brest	.....	.....	29.75	755.7	55.9	13.3	61	N	.....	.....	5	.....	8n	.....	N	0.030	0.75	.....	Naval Observatory.
Carcassonne	.....	.....	29.79	756.7	65.3	18.5	69	W	.....	.....	2	.....	5	.....	E	0.169	4.3	Cloudy	Normal School
Caen	.....	.....	30.01?	777.5?	62.2	16.8	83	WNW	.....	.....	4	.....	5	.....	S	0.094	2.4	Cloudy	Normal School.
Chartres	.....	.....	29.72	754.8	57.2	14	.....	W	.....	.....	2	.....	9	.....	NW	0.476	12.1	.....	Normal School.
Clermont	.....	.....	29.74	755.4	61.2	16.2	69	SE	.....	.....	2	.....	10	.....	S	1.350	34.3	Raining	Puy de Dome Obs'y.
Commercy	.....	.....	29.72	755.0	62.2	16.8	72	W	.....	.....	4	.....	10n	.....	W	0.083	2.1	Covered	Normal School.
Commune de Greasque*	.....	.....	29.79	756.7	72.3	22.4	54	SW	.....	.....	6	.....	8	.....	SW	0	0	.....	M. Kina.
Grenoble	.....	.....	29.69	754.2	63.3	17.4	74	NW	.....	.....	8	.....	8n	.....	S	0.12	3.	Stormy	Normal School.
La Roche-sur-Yon	.....	.....	29.73	755.1	57.2	14.0	95	N	.....	.....	2	.....	1	.....	SW	0	0	Covered	Normal School.
Le Mans	.....	.....	29.73	755.1	61.7	16.5	98	N	.....	.....	3	.....	8	.....	NW	0.207	5.25	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	29.78	756.4	59.2	15.1	89	SW	.....	.....	2	.....	8	.....	N	0	0	Very cloudy	Normal School.
Mâcon	.....	.....	29.78	756.5	58.1	14.5	84	W	.....	.....	2	.....	5	.....	N	0.08	2.	Cloudy	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	29.60	751.8	63.0	17.2	70	SW	.....	.....	2	.....	10	.....	NE	0.205	5.2	Covered	Normal School.
Nismes	.....	.....	29.72	754.8	66.9	19.4	65	NW	.....	.....	2	.....	8	.....	S	0.295	7.5	Very cloudy	Normal School.
Orleans	.....	.....	29.67	753.7	63.7	17.6	72	NNW	.....	.....	4	.....	8	.....	NW	0.31	8.	Very cloudy	Normal School.
Paris, Observatory	.....	.....	29.72	754.8	56.1	13.4	78	NW	.....	.....	3	.....	10k	.....	.....	0	0	Covered	National Observatory.
Parthenay	.....	.....	29.63	760.2	57.2	14	89	SE	.....	.....	2	.....	8	.....	SW	0.110	2.8	Very cloudy	Normal School.
Privas	.....	.....	29.73	755.2	63.5	17.5	.....	S	.....	.....	2	.....	8	.....	S	.....	.....	Very cloudy	Normal School.
Rochefort, Observatory	.....	.....	29.75	755.6	63.9	17.7	70	SW	.....	.....	3	.....	10	.....	NE	0.079	2.0	Covered	Naval Observatory.
Rouen	.....	.....	29.72	754.8	55.8	13.2	82	W	.....	.....	2	.....	10	.....	NW	0.374	9.5	Covered	Normal School.
Saint Lo	.....	.....	29.60	751.8	57.9	14.3	89	N	.....	.....	1	.....	8	.....	N	0	0	.....	Normal School.
Tarbes	28.78	731.0	29.85	758.1	61.7	16.5	.....	W	.....	.....	6	.....	5	.....	E	0.217	5.5	Cloudy	Normal School.
Villefranche	.....	.....	29.78	756.4	59.4	15.2	88	ENE	.....	.....	1	.....	8	.....	SE	0.31	8.	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.89	759.3	79.5	26.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	Blank	Blank	.....	L'Abbé Marchésl.
Marseilles	.....	.....	29.71	754 6	73.6	23.1	58	SE	.....	.....	3	.....	5	.....	.....	0.618	15.70	Very cloudy	Marseilles Observatory.
Mont-Louis	.....	.....	29.99	761.7	47.7	8.7	96	NNE	1.9	0.83	.....	.....	10	.....	N	0.331	8.4	Raining	—. Fatiguère.
Montsouris, Paris	.....	.....	29.71	754.7	59.4	15.2	58	NW	.....	.....	3	.....	10	.....	WNW	0.469	11.9	.....	Montsouris Observ'tory.
Perpignan	.....	.....	29.78	756.4	66.2	19.0	73	E	1.9	0.83	.....	.....	10	.....	NW	0.276	7.0	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.72	754.8	55.8	13.2	82	W	.....	.....	2	.....	10	.....	.....	0.863	20.4	Covered	E. Renou.
Toulouse	.....	.....	29.84	757.8	64.2	17.9	80	W	.....	.....	1	.....	10	.....	.....	0.134	3.4	Showery	Toulouse Observatory.
Tours	.....	.....	29.76	755.8	57.9	14.4	86	SW	.....	.....	1	.....	10	.....	W	0.098	2.5	Rainy	C. Marquet.
Versailles, (near Paris)	.....	.....	29.71	754 7	57.2	14.0	78	NW	.....	.....	2	.....	10	.....	.....	0.375	9.53	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai	.....	.....	29.82	757.3	69.3	20.7	89	ESE	13.7	6.1	.....	7c	0	.....	.....	{ 0	0 }	.....	H. Le Lec, S. J.
																{ 0	0 }		

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, and 1 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.

Bamberg	.....	.....	29.62	752.4	78.8	26.0	52	SE	.....	.....	3	.....	4	SE	.....	0	0	Thunder, lightn'g	Prof. T. Hoh.
Berlin	.....	.....	29.63	752.7	70.7	26.5	52	SE	.....	.....	1	.....	5	.....	.....	0.020	0.5	.....	Prof. Arndt.
Breslau	.....	.....	29.74	755.5	82.2	27.9	41	SE	.....	.....	5	.....	4	.....	.....	0	0	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	29.50	750.8	78.8	26.0	52	SW	.....	.....	5	.....	9	.....	.....	0.028	0.7	.....	A. Senz.
Cassel	.....	.....	29.57	751.0	79.0	26.1	41	S	.....	.....	7	.....	2	S	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	29.62	752.3	60.8	16.0	96	NE	.....	.....	2	.....	10	.....	.....	0.035	0.9	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.91	759.7	77.5	25.3	52	SE	.....	.....	2	.....	6	.....	.....	0.012	0.3	Thunder-storm	Physical Society.
Friedrichshafen	.....	.....	29.57	751.1	75.2	24.0	64	W	.....	.....	1	.....	9	.....	.....	0.472	12.0	Thunder-storm	M. Wilhelm.
Hamburg	.....	.....	29.62	752.4	65.7	18.7	86	ESE	.....	.....	2	.....	8kn	ESE	.....	0.287	7.3	Showery	Captain F. Hegemann.
Kiel	.....	.....	29.63	752.5	56.8	13.8	97	NE	.....	.....	4	.....	10	.....	.....	0.587	14.9	Thunder, lightn'g	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.81	757.1	83.1	28.4	44	SE	.....	.....	5	.....	2	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	29.62	752.4	76.1	24.5	62	SSE	.....	.....	1	.....	3	.....	.....	0.197	5.0	.....	Prof. Bruhns.
Memel	.....	.....	29.88	758.9	80.6	27.0	50	S	.....	.....	3	.....	2k	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.52	749.7	70.7	21.5	93	.....	.....	.....	4	.....	3	.....	.....	0.024	0.6	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.78	756.4	81.7	27.6	46	SE	.....	.....	4	.....	4	SE	.....	0	0	.....	A. Lothes.
Posen	.....	.....	29.84	757.8	84.2	29.0	35	SE	.....	.....	7	.....	5	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.63	752 5	88.3	31.3	77	Calm	.....	.....	0	.....	8	W	.....	0.105	4.2	.....	Dr. Schur.
Stuttgart	.....	.....	29.58	751.4	73.4	23.0	63	W	.....	.....	1	.....	9	.....	.....	1.051	26.7	Thunder-storm	Prof. Schoder.
Thorn	.....	.....	29.75	755.6	83.3	28.5	32	S	.....	.....	4	.....	2	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.61	752.1	69.4	20.8	65	W	.....	.....	7	.....	4	.....	.....	0.031	0.8	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	29.60	751.8	73.2	22.9	67	ENE	.....	.....	2	.....	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. U'p'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.85	758.1	82.9	28.3		SW					c					Clear	

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

ITALIAN SERIES.

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

Udine			29.73	755.2	74.3	23.5	65	Calm	0	0			9			0.697	17.7	Showery	
Padua			29.70	754.3	79.5	26.4	57	E	7.4	3.3			6			0	0		
Vicenza			29.69	754.2	81.3	27.4	43	SE	5.6	2.5			5	S		0	0		
Verona			29.68	753.8	83.7	28.7	58	E			2		6			0	0		
Bergamo	28.39	721.2	29.65	753.2	79.2	26.2	37	WSW			1		5			0	0		
Domodossola	28.70	728.9	29.69	754.1	68.0	20.0	91	Calm			0		10			0	0		
Milan			29.67	753.5	88.7	31.5	41	ENE			2		8	WNW		0.724	18.4	Showery	
Pavia			29.71	754.5	81.5	27.5	43	SW			1		3	SW		0	0		
Moncalieri			29.69	754.1	72.0	22.2	71	WNW	3.8	1.7			8	E		0.130	3.3		
Mondovi	27.82	706.7	29.67	753.6	76.8	24.9	39	SSE			4		0			0	0		
Porto Maurizio			29.80	757.0	75.2	24.0	68	E			2		1			0	0		
Genoa			29.78	756.4	75.2	24.0	67	SE	8.1	3.6			8	SE		0	0		
Piacenza			29.71	754.7	80.1	26.7	44	S	4.2	1.9			9	S		0	0		
Parma			29.73	755.1	83.5	28.6	60	SE			4		9			0.23	5.9		
Bologna			29.80	757.0	83.8	28.8	48	E			6		4	SW		0	0		
Florence			29.79	756.7	79.7	26.5	48	NW			2		4	NW		0.059	1.5		
Leghorn			29.78	756.4	76.1	24.5	57	SSW	14.3	6.4			3			0	0		
Siena	28.60	726.3	29.76	755.9	80.2	26.8	41	SSW	2.5	1.1			3	SW		0	0		
Urbino	28.29	718.6	29.76	756.9	78.6	25.9	42	WSW			2		10			0	0		
Pesaro																			
Ancona			29.81	757.1	79.2	26.2	59	SE			4		8			0	0		
Grosseto			29.81	757.2	80.6	27.0	53	SSE			2		3	S		0	0		
Rome			29.82	757.4	79.5	26.4	48	S	14.3	6.4			2			0	0		
Naples, O. U			29.89	759.2	78.4	25.8	61	SW			2		4	SW		0	0		
Lecce			29.85	758.2	81.1	27.3	35	SSE	11.2	5.0			2			0	0		
Cosenza			29.87	758.7	85.3	29.6	62	NW	4.2	1.9			0			0	0		
Riposto, (Sicily)			29.80	757.0	72.3	22.4	74	SE			2		2			0	0		
Palermo			29.82	757.5	75.6	24.2	54	E	4.9	2.2			4			0	0		
Caltanissetta	27.95	710.0	29.85	758.3	75.0	23.9	33	SE			4		2	NW		0	0		
Sub-Series.																			
Naples, S. R			29.89	759.1	77.5	25.3	50	SW	2.5	1.1			0			0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known; Domodossola, 308 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.

Flushing			29.69	754.2	54.7	12.6		NNW			3								
Groningen			29.52	749.9	58.1	14.5		NE			4								
Helder			29.58	751.3	57.0	13.9		N			4								
Utrecht			29.49	749.0	61.7	16.5	98	N			2		10					Overcast	

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.

Bergen			29.84	758.0	55.2	12.9	64	W	12.1	5.4			5			0	0		
Drönö			29.91	759.7	53.6	12.0	76	NNE	7	3			4			0	0		
Christiania			29.83	757.6	65.1	18.4	40	SW	1.1	0.5			8			0	0		
Tromsö			29.83	757.6	50.4	10.2	62	NE	0	0			3			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 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,)	.....	.....	30.41	772.3	71.2	21.8	77	W	3.2	1.45	.....	.....	2	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.87	758.8	74.5	23.6	34	NW	7.6	3.41	.....	.....	3	NW	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.17	766.4	66.4	19.1	64	SW	3.4	1.52	.....	.....	10	.....	.....	0	0	.....	Capt D. A. da Cunha.
Lisbon	.....	.....	30.02	762.4	64.6	18.1	53	NNW	23.7	10.6	.....	.....	4	.....	.....	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.

Warsaw	.....	.....	29.75	755.7	81.3	27.4	44	SE	16	7	.....	.....	3	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.94	760.4	70.0	21.1	83	S	4	2	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.95	760.6	82.0	27.8	37	WSW	7	3	.....	.....	7	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.90	761.0	78.8	26.0	48	WSW	7	3	.....	.....	5	.....	.....	.....	.....	.....	Central Physical Obs
Kuopio	.....	.....	30.16	766.1	72.1	22.3	72	S	18	8	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kiefl	.....	.....	29.87	758.6	79.0	26.1	46	ESE	16	7	.....	.....	4	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.85	758.2	72.3	22.4	62	NE	20	9	.....	.....	7	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.82	757.3	70.7	21.5	80	SSE	18	8	.....	.....	4	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.15	765.9	81.5	27.5	35	Calm	0	0	.....	.....	3	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.85	758.1	74.1	23.4	50	E	40	18	.....	.....	6	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.87	758.8	69.8	21.0	59	N	22	10	.....	.....	2	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.40	723.6	29 84	757.9	74.8	23.8	33	N	11	5	.....	.....	9	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.03	762.8	69.6	20.9	55	E	18	8	.....	.....	10	.....	.....	Blank	Blank	.....	Sebastianof.
Kasan	.....	.....	30.04	763.0	84.7	29.3	33	W	9	4	.....	.....	1	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.04	737.7	30.01	762.3	66.6	19.2	31	WNW	11	5	.....	.....	7	.....	.....	.....	.....	.....	Meteorological Obs.
Nukhas	.....	.....	29.95	760.7	82.6	28.1	13	ENE	9	4	.....	.....	1	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	28.39	721.0	30.01	762.2	78.4	25.8	34	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.60	751.8	54.1	12.3	77	SW	13	6	.....	.....	10	.....	.....	.....	.....	.....	Marks.
Irgnisk	.....	.....	29.48	748.7	52.5	11.4	83	SSE	4	2	.....	.....	10	.....	.....	.....	Raining	.....	Usolzef.
Oorga	28.39	720.9	29.74	755.4	53.1	11.7	81	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Mossin.
Pekiug, (China)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	29.94	760.5	75.9	24.4	50	SSE	11	5	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	29.97	761.2	40.3	9.6	88	SE	13	6	.....	.....	10	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	51.8	11.0	90	E	4	2	.....	.....	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, 303.4? m., or 1,003.2? ft.; Pavnkand, m 494.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0 m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	29.74	755.5	75.6	24.2	40	W	9.7	4.34	.....	0	4	.....	.....	0.012	0.3	Cloudy	Royal Observatory.
San Fernando	.....	.....	29.99	761.7	68.2	20.1	59	W	15.0	6.7	.....	6	3	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. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.89	759.3	48.0	9.2	87	S	.....	.....	2	.....	8	.....	.....	0.433	11.0	.....	
Umea	.....	.....	29.87	758.6	57.6	14.2	78	S	.....	.....	2	.....	8	.....	.....	0	0	.....	
Hernosand	.....	.....	29.84	757.8	57.6	14.	50	SSW	.....	.....	2	.....	10	.....	.....	0	0	.....	
Stockholm	.....	.....	29.84	757.8	58.6	14.8	94	NNE	.....	.....	2	.....	5	.....	.....	0.374	9.5	.....	
Wisby	.....	.....	29.87	758.7	61.0	16.6	77	WNW	.....	.....	4	.....	3	.....	.....	0.051	1.3	.....	
Sub-Series.																			
Upsala	.....	.....	29.85	758.2	59.7	15.4	86	ESE	5.2	2.3	.....	.....	10	.....	SSW	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. Mill meters.	Weather.	Observer.
Geneva	28.30	718.7	29.68	753.9	68.0	20.0	58	SSW			5		10			0.051	1.3	Covered	The Observatory.
Zurich	28.06	712.6	29.62	752.4	76.1	24.5	63	NW			1		4			1.095	27.8	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, —7.5 mm; Thermometer, +0.1 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			29.82	757.3	77.0	25.0	58	SSE	7	3.0			4		WSW	0	0		
Fao, (Persian Gulf)			29.76	756.0	99.3	37.4		NW			4		0						
Salonica			29.87	758.8	86.0	30.0		S			3		5						
Valona			29.84	758.0	84.9	29.4		S			2		0						
Varna			29.92	760.0	71.6	22.0		E			2		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.87	758.6	86.2	30.1	61	W			2		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.			30.14	765.5	52.7	11.5	82	Calm	0	0		9				Inap.	Inap.	Cloudy	Hon. J. Ferguson.
Brockville, Ontario			29.98	761.5	77	25.0		S	11	4.9		0	2ks		W	0.05	1.3	Fair	W. R. Bigg.
*Chatham, N. B.			30.07	763.8	52	11.1	89	SW	1	0.4		2k	8ks	SW	SW	0.10	2.5	Cloudy	G. A. Blair.
Charlottetown, P. E. Island.			30.07	763.8	53	11.7	96	SE	8	3.6			10s			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.88	758.9	77.5	25.3	63	W			2	2c	0			0.227	5.77	Bright	James Smith, M. A.
Dalhousie, N. B.			30.09	764.3	49.0	9.4	78	E			2	10cs	0			Inap.	Inap.		H. A. Johnson.
Esquimault, B. C.			29.96	761.0	49.3	9.6	96	SW	4	1.8		8cs	0	W		0.05	1.3	Cloudy	W. H. Revis.
Fredericton, N. B.			30.06	763.5	51.0	10.6	88	E	4	1.8			10s			0.290	7.37	Showery	Prof. Harrison.
*Fort Garry, Manitoba			29.59	751.6	54	12.2	100	E	4	1.8		5k	5n	E	E	0.76	19.3	Light rain	James Stewart.
Goderich, Ontario			29.84	757.9	64.4	18.0	89	SW			3		10c			0.064	1.63	Light rain	H. J. Strang, M. A.
Granton, Ontario	28.78	731.0	29.82	757.4	72	22.2		S			2	4cs	0	NE		0	0	Clear	James Grant.
*Halifax, N. S.			30.03	762.7	51	10.6	100	SE	3	1.3			Fog			0.18	4.6	Foggy	F. Allison, M. A.
*Kingston, Ontario			29.98	761.5	65	18.3	75	SW	6	2.7		2k	Sm'e	W		0.04	1.0	Fair	S. Woods, M. A.
Little Glace Bay, N. S.			30.16	766.1	51.5	10.8	76	S	3	1.3			10n			0	0	Overcast	C. H. Rigby.
*Montreal, Quebec			29.93	760.2	61	16.1	87	SW	3	1.3		8k	2ks	W	NW	0.15	3.8	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.88	758.9	72	22.2	63	SW	7	3.1		2c	0			0.20	5.1	Clear	J. B. Haney.
*Parry Sound, Ontario			29.81	757.2	69	20.6	65	SW	16	7.2		2cs	5ks	SW	SW	0.02	0.5	Fair	Rev. R. Mosley.
*Port Dover, Ontario			29.91	759.7	64	17.8	78	SW	12	5.4		10k	0	SW		0	0	Fair	H. Morgan.
Port Hastings, N. S.			30.14	765.5	45.9	7.7		SE	9	4.0						0	0	Dull	Peter Grant.
*Port Stanley, Ontario			29.90	759.4	64	17.8	82	SW	10	4.5		8ck	0	SW		0	0	Cloudy	M. Payne.
*Quebec, Quebec			29.93	760.2	52	11.1	96	NE	13	5.8			10n		NE	0.44	11.2	Heavy rain	Capt. Ashe, R. N.
St. John, N. B.			30.06	763.5	52	11.1	89	S	1	0.4			10n			0.650	16.51	Raining	G. Murdoch, C. E.
*Saugeen, Ontario			29.76	755.9	67	19.4	76	SW	10	4.5			10n		W	0.01	0.3	Cloudy	K. Stewart.
Stayner, Ontario			29.80	756.9	70	21.1	79	Calm	0	0		2c	5n	W	S	0.03	0.8	Clearing	R. J. Cole.
Stratford, Ontario	28.58	725.9	29.81	757.2	68.2	20.1	84	SW	15	6.7		2cs	3ks	SW		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			30.18	766.6	52	11.1	74	S	4	1.8		10cs	0	W		0	0	Cloudy	T. C. Hill.
*Toronto, Ontario			29.91	759.4	66	18.9	74	SW	10	4.5		2ck	8ks	W	W	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			29.83	757.7	71.5	21.9	72	S	22	9.8		10ck	0	W		0	0	Fine	J. Montgomery.
Sub-Series.																			
St. John's, Newfoundland			30.28	769.1	45	7.2	92	NE				2c	6k			0.11	3.0	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.	.....	.....	30.02	762.5	75	23.9	68	S	7	3.1	.....	2k	Haze	S	.....	0	0	Fair.	
Alpena, Mich.	.....	.....	29.69	754.1	62	16.7	88	S	2	0.9	.....	8ck	0	SW	.....	0.05	1.3	Fair.	
Atlantic City, N. J.	.....	.....	30.21	767.3	66	18.9	84	SW	10	4.5	.....	1c	Haze	SW	.....	0	0	Clear.	
Augusta, Ga.	.....	.....	30.26	768.6	78	22.8	72	SE	2	0.9	.....	0	0	.....	.....	0	0	Clear.	
Baltimore, Md.	.....	.....	30.19	766.8	71	21.7	66	SW	5	2.2	.....	0	Sm'e	.....	.....	0	0	Clear.	
Barnegat, N. J.	.....	.....	30.21	767.3	69	20.6	75	SW	14	6.3	.....	1c	0	.....	.....	0	0	Clear.	
Benton, Montana	26.95	684.8	29.76	755.9	55	12.8	68	W	6	2.7	.....	.....	10s	.....	W	0	0	Cloudy.	
Bismarck, Dakota	27.97	710.4	29.56	750.8	52	11.1	70	N	2	0.9	.....	.....	10ks	.....	.....	0	0	Cloudy.	
Boston, Mass.	.....	.....	30.06	763.5	73	22.8	71	SW	13	5.8	.....	1cs	Haze	SW	.....	Inap.	Inap.	Hazy.	
Breckenridge, Minn.	.....	.....	29.68	753.9	54	12.2	87	W	8	3.6	.....	10k	.....	NW	.....	0	0	Cloudy.	
Buffalo, N. Y.	.....	.....	29.90	759.4	72	22.2	58	SW	14	6.3	.....	2c	5ks	SW	SW	0.02	0.5	Fair.	
Burlington, Vt.	.....	.....	29.98	761.5	73	22.8	67	S	12	5.4	.....	2k	5s	W	.....	0.13	3.3	Cloudy.	
Cairo, Ill.	.....	.....	30.03	762.7	71	21.7	90	S	6	2.7	.....	5k	5s	S	S	0.10	2.5	Cloudy.	
Cape Hatteras, N. C.	.....	.....	30.25	768.3	75	23.9	56	S	6	2.7	.....	0	2ks	.....	SW	0	0	Fair.	
Cape Henry, Va.	.....	.....	30.28	769.1	71	21.7	64	SW	10	4.5	.....	2c	0	.....	.....	0	0	Clear.	
Cape Lookout, N. C.	.....	.....	30.32	770.1	74	23.3	59	S	8	3.6	.....	5k	0	SW	.....	0	0	Fair.	
Cape May, N. J.	.....	.....	30.23	767.8	69	20.6	79	S	20	8.9	.....	0	0	.....	.....	0	0	Clear.	
Charleston, S. C.	.....	.....	30.26	768.6	78	25.6	65	E	7	3.1	.....	0	2ks	.....	S	0	0	Fair.	
Cheyenne, Wyoming	23.77	603.8	29.71	754.6	51	10.6	48	W	8	3.6	.....	1ck	0	.....	.....	0	0	Clear.	
Chicago, Ill.	.....	.....	29.80	756.9	69	20.6	75	SW	12	5.4	.....	2k	0	W	.....	1.02	25.9	Fair.	
Cincinnati, Ohio.	.....	.....	29.94	760.5	71	21.7	80	SW	6	2.7	.....	.....	10n	.....	.....	0.86	21.8	Heavy rain.	
Cleveland, Ohio.	.....	.....	29.90	759.4	73	22.8	63	S	18	8.0	.....	0	5ks	.....	SW	0	0	Fair.	
Colorado Springs, Col.	23.93	607.6	29.77	756.1	50	10.0	51	NW	4	1.8	.....	1cs	0	.....	.....	0	0	Clear.	
Corsicana, Tex.	.....	.....	29.99	761.7	75	23.9	76	S	6	2.7	.....	5k	0	S	.....	0	0	Fair.	
Davenport, Iowa.	.....	.....	29.83	757.7	67	19.4	74	SW	8	3.6	.....	1ck	0	.....	.....	0.02	0.5	Clear.	
Denison, Tex.	.....	.....	29.98	761.5	71	21.7	84	SE	16	7.2	.....	2c	0	.....	.....	0	0	Fair.	
Denver, Col.	24.53	623.0	29.75	755.6	56	13.3	23	S	9	4.0	.....	2c	0	SW	.....	0	0	Clear.	
Detroit, Mich.	.....	.....	29.82	757.4	68	20.0	79	SW	12	5.4	.....	5k	0	W	.....	0.04	1.0	Fair.	
Dodge City, Kan.	27.28	692.9	29.46	748.3	66	18.9	68	SE	20	8.9	.....	0	0	.....	.....	0	0	Clear.	
Dubuque, Iowa.	.....	.....	29.77	756.1	64	17.8	78	SW	4	1.8	.....	2c	0	.....	.....	0.10	2.5	Fair.	
Duluth, Minn.	.....	.....	29.65	753.1	48	8.9	85	Calm	0	0	.....	.....	Fog	.....	.....	0.18	4.6	Foggy.	
Eastport, Me.	.....	.....	30.01	762.2	50	10.0	93	N	5	2.2	.....	.....	Fog	.....	.....	0.28	7.1	Foggy.	
Erie, Pa.	.....	.....	29.89	759.2	75	23.9	56	S	22	9.8	.....	3c	2ks	SW	.....	Inap.	Inap.	Fair.	
Escanaba, Mich.	.....	.....	29.63	752.6	58	14.4	87	S	8	3.6	.....	.....	10s	.....	S	0	0	Cloudy.	
Fort Gibson, Indian Ter.	.....	.....	29.91	759.7	76	24.4	81	SE	7	3.1	.....	0	0	.....	.....	0	0	Clear.	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.71	729.2	29.76	755.9	78	25.6	65	Calm	0	0	.....	5k	0	S	.....	0	0	Fair.	
Fort Sully, Dakota	27.98	710.7	29.57	751.1	57	13.9	87	SE	4	1.8	.....	2c	5s	.....	.....	0	0	Cloudy.	
Galveston, Tex.	.....	.....	30.05	763.3	81	27.2	74	SE	8	3.6	.....	2k	0	S	.....	Inap.	Inap.	Fair.	
Grand Haven, Mich.	.....	.....	29.76	755.9	60	15.6	94	S	18	8.0	.....	.....	10s	.....	SW	0.70	17.8	Cloudy.	
Indianapolis, Ind.	.....	.....	29.92	760.0	73	22.8	76	W	5	2.2	.....	8k	0	W	.....	0.02	0.5	Fair.	
Indianola, Tex.	.....	.....	30.02	762.5	83	28.3	79	SE	11	4.9	.....	2k	0	.....	.....	0	0	Fair.	
Jacksonville, Fla.	.....	.....	30.20	767.1	81	27.2	61	NE	8	3.6	.....	8k	0	NE	.....	0	0	Fair.	
Keokuk, Iowa.	.....	.....	29.82	757.4	71	21.7	75	SW	9	4.0	.....	0	0	.....	.....	0.08	2.0	Clear.	
Key West, Fla.	.....	.....	30.08	764.0	77.0	25.0	90	E	9	4.0	.....	.....	8s	.....	E	0.69	17.5	Cloudy.	
Kittyhawk, N. C.	.....	.....	30.30	769.6	73	22.8	63	SW	8	3.6	.....	0	Haze	.....	.....	0	0	Clear.	
Knoxville, Tenn.	.....	.....	30.17	766.3	68	20.0	79	SW	1	0.4	.....	2ck	0	SW	.....	0	0	Fair.	
La Crosse, Wis.	.....	.....	29.73	7 5.1	64	17.8	78	SW	8	3.6	.....	0	0	.....	.....	0.20	5.1	Clear.	
Leavenworth, Kan.	.....	.....	29.83	757.7	67	19.4	74	S	4	1.8	.....	0	0	.....	.....	0.10	2.5	Clear.	
Lexington, Ky.	28.94	735.1	30.00	762.0	73	22.8	58	S	24	10.7	.....	5ck	0	.....	.....	0	0	Fair.	
Long Branch, N. J.	.....	.....	30.17	766.3	75	23.9	60	SW	16	7.2	.....	1c	0	SW	.....	0	0	Clear.	
Louisville, Ky.	.....	.....	30.00	762.0	71	21.7	85	S	8	3.6	.....	.....	10ks	.....	SW	0.57	14.5	Thr atening	
Lynchburg, Va.	.....	.....	30.23	767.8	73	22.8	63	SW	3	1.3	.....	0	0	.....	.....	0	0	Clear.	
Malone, N. Y.	.....	.....	29.87	758.7	73	22.8	63	SW	14	6.3	.....	2k	0	SW	.....	0.35	8.9	Fair.	
Manhattan, Kan.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Marquette, Mich.	.....	.....	29.61	752.1	61	16.1	94	Calm	0	0	.....	.....	8n	.....	.....	0.70	17.8	Light rain.	
Memphis, Tenn.	.....	.....	30.00	763.5	78	25.6	77	S	10	4.5	.....	0	5ks	.....	SW	0	0	Fair.	
Milwaukee, Wis.	.....	.....	29.76	755.9	67	19.4	73	W	18	8.0	.....	8k	0	W	.....	0	0	Fair.	
Mobile, Ala.	.....	.....	30.16	766.1	74	23.3	81	S	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Montgomery, Ala.	.....	.....	30.21	767.3	75.5	24.2	64	SE	3	1.3	.....	0	0	.....	.....	0	0	Clear.	
Morgantown, W. Va.	.....	.....	30.03	762.7	78	25.6	50	S	12	5.4	.....	1c	0	W	.....	0	0	Clear.	
Mt. Washington, N. H.	23.94	608.1	30.30	769.6	50	10.0	100	NW	40	17.9	.....	.....	Fog	.....	.....	0.19	4.8	Foggy.	
Nashville, Tenn.	.....	.....	30.04	763.0	77	25.0	65	S	6	2.7	.....	5k	5ks	SW	S	0	0	Cloudy.	
New Haven, Conn.	.....	.....	30.14	765.5	78	25.6	78	SW	10	4.5	.....	Haze	Sm'e	.....	.....	0	0	Fair.	
New London, Conn.	.....	.....	30.18	766.6	71	21.7	71	SW	11	4.9	.....	0	0	.....	.....	0	0	Clear.	
New Orleans, La.	.....	.....	30.11	764.8	78	25.6	73	SE	3	1.3	.....	0	0	.....	.....	0.45	11.4	Clear.	
Newport, R. I.	.....	.....	30.16	766.1	62	16.7	77	SW	20	8.9	.....	0	0	.....	.....	0	0	Clear.	
New York, N. Y.	.....	.....	30.17	766.3	71	21.7	67	SW	18	8.0	.....	0	0	.....	.....	0	0	Clear.	
Norfolk, Va.	.....	.....	30.29	769.4	76	24.4	60	SW	11	4.9	.....	Haze	0	.....	.....	0	0	Clear.	
North Platte, Neb.	26.76	679.7	29.18	741.1	64	17.8	49	SE	24	10.7	.....	8os	0	SW	.....	0	0	Fair.	
Omaha, Neb.	28.72	729.5	29.74	755.4	65	18.3	73	S	4	1.8	.....	2c	0	.....	.....	0	0	Clear.	
Oswego, N. Y.	.....	.....	29.96	761.0	75.5	24.2	57	S	16	7.2	.....	Haze	1k	.....	.....	0	0	Fair.	
Pembina, Dakota	.....	.....	29.56	75 0.8	54	12.2	86	NW	1	0.4	.....	.....	10s	.....	NW	0.16	4.1	Cloudy.	
Philadelphia, Penn.	.....	.....	30.20	767.1	71	21.7	62	W	16	7.2	.....	0	0	.....	.....	0	0	Clear.	
Pike's Peak, Colorado	17.71	449.8	29.92	760.0	26	— 3.3	77	SW	61	28.6	.....	0	2s	.....	.....	0	0	Fair.	
Pittsburgh, Penn.	.....	.....	30.00	762.0	74	23.3	51	S	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy.	
Port Huron, Mich.	.....	.....	29.79	756.7	65	18.3	83	S	7	3.1	.....	2c	5ks	.....	SW	0.26	6.6	Cloudy.	
Portland, Me.	.....	.....	30.04	763.0	65	18.3	73	SW	2	0.9	.....	5k	Haze	SW	.....	Inap.	Inap.	Fair.	
Portland, Oregon.	.....	.....	30.14	765.5	50	10.0	86	S	3	1.3	.....	0	5ks	.....	SW	0.11	2.8	Fair.	
Punta Rassa, Fla.	.....	.....	30.12	765.0	74.7	23.7	90	NE	10	4.5	.....	.....	10s	.....	NE	0.36	9.1	Cloudy.	
Rochester, N. Y.	.....	.....	29.92	760.0	76	24.4	52	SW	14	6.3	.....	5c	Sm'e	W	.....	Inap.	Inap.	Fair.	
Salt Lake City, Utah	25.53	648.4	29.86	758.4	53	11.7	60	NW	16	7.2	.....	.....	10s	.....	.....	0.09	2.3	Cloudy.	
Sandy Hook, N. J.	.....	.....	30.15	765.8	74	23.3	63	SW	25	11.2	.....	1c	Haze	SW	.....	0	0	Clear.	
San Diego, Cal.	.....	.....	29.92	760.0	58	14.4	93	NE	8	3.6	.....	.....	10s	.....	NE	0	0	Cloudy.	
San Francisco, Cal.	.....	.....	30.07	763.8	53	11.7	86	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Santa Fé, N. M.	23.22	589.8	29.76	755.9	55	12.8	33	E	7	3.1	.....	0	0	.....	.....	0	0	Clear.	
Savannah, Ga.	.....	.....	30.25	768.3	77	25.0	69	Calm	0	0	.....	2k	0	.....	.....	0.03	0.8	Clear.	
Shreveport, La.	.....	.....	30.09	764.3	78	25.6	84	SE	3	1.3	.....	5k	0	SW	.....	0	0	Fair.	
Smithville, N. C.	.....	.....	30.20	767.1	75	23.9	63	SE	6	2.7	.....	1k	0	SE	.....	0	0	Clear.	
Springfield, Mass.	.....	.....	30.09	764.3	74.5	23.6	68	S	8	3.6	.....	1ck	Haze	.....	.....	0	0	Clear.	
St. Louis, Mo.	.....	.....	29.98	761.0	72	22.2	71	SW	12	5.4	.....	0	0	.....	.....	0.08	2.0	Clear.	
St. Marks, Fla.	.....	.....	30.20	767.1	73	22.8	71	NE	7	3.1	.....	2c	0	W	.....	0	0	Fair.	
St. Paul, Minn.	.....	.....	29.68	753.9	64	17.8	73	S	6	2.7	.....	5cs	0	NW	.....	0.04	1.0	Fair.	
St. Paul's Island, Alaska	.....	.....	29.81	757.2	34	1.1	79	N	10	4.5	.....	10cs	0	NE	.....	0	0	Cloudy.	
Thatcher's Island, Mass.	.....	.....	30.06	763.5	63	17.2	83	SW	14	6.3	.....	0	0	.....	.....	0	0	Hazy.	
Toledo, Ohio.	.....	.....	29.83	757.7	72	22.2	75	SW	14	6.3	.....	8k	0	SW	.....	0	0	Fair.	
Tucson, Arizona.	27.44	697.0	30.03	762.7	75	23.9	.....	S	.....	.....	.....	0	0	.....	.....	0	0	Clear.	
Tybee Island, Ga.	.....	.....	30.24	768.1	79	26.1	61	E	4	1.8	.....	1c	0	.....	.....	0.04	1.0	Clear.	
Vicksburg, Miss.	.....	.....	30.14	765.5	75	23.9	85	S	5	2.2	.....	8ck	Haze	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.	24.04	610.6	29.52	749.8	41	5.0	83	SE	6	2.7	..	.....	10n	.....	NW	0.50	12.7	Light rain	
Washington, D. C.	.....	.....	30.20	767.1	72.5	22.5	65	SW	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Wilmington, N. C	.....	.....	30.30	769.6	76	24.4	64	E	3	1.3	.....	2k	0	SW	.....	0	0	Fair	
Wood's Holl, Mass	.....	.....	30.18	766.6	63	17.2	78	SW	15	6.7	.....	0	0	.....	.....	0	0	Clear	
Wytheville, Va	27.89	708.4	30.01	762.2	64	17.8	78	Calm	0	0	.....	0	1ks	.....	.....	0	0	Clear	
Yankton, Dakota	28.46	722.9	29.69	754.1	65	18.3	63	S	1	0.4	.....	0	0	.....	.....	0.05	1.3	Clear	
Yuma, Arizona	.....	.....	29.81	757.2	74	23.3	.....	NE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
SUB SERIES.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.06	763 5	84	28.9	64	E	5	2.2	.....	0	5ks	.....	E	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	30.01	762.2	84	28.3	70	E	.....	.....	.....	0	10ks	.....	.....	0.05	1.3	Cloudy	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.20	767.1	84	28.9	87	E	11	4.9	. .....	5c	0	SE	.....	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.85	758.2	83	28.3	67	WSW	1.2	0 5	.....	8c	0	.....	.....	0	0	Fair	Robert Mason.
Havana, Cuba, W. I	.....	.....	30.05	763.3	79	26.1	78	E	2.4	1.1	.....	2ck	0	.....	.....	1.41	35.8	Fair	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.35	770.9	74.0	23.3	72	NE	28.0	12.5	.....	0	2fk	.....	.....	0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica, W. I.	27.16	689.8	29.92	760.0	73	22.8	76	S	3.0	1.3	. .....	5c	0	S	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.01	762.2	81	27.2	91	E	.....	.....	3	8ks	7ks	E	... .	0.64	16.26	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.7	.....	.....	86.0	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.935	23.75	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.21	640.3	.....	.....	64.5	18.1	80	SE	1	0.4	.....	3c	2s	.....	.....	0	0	Fair	Thomas Herran
York Factory, B. A	.....	.....	29.87	758.7	52	11.1	83	S	4	1.8	.....	1c	0	E	.....	0	0	.....	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	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 Liverpool.		29.94	760.5	42	5.6	.....	Calm	.....	.....	0	.....	.....	.....	.....	.....	.....	Cloudy	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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,916.6 m.; North Platte, 2,840 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa 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, date I 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't.) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JUNE 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	....	.....	29.95	760.8	75.2	24.0	60	Calm	.....	.....	0	.....	0	.....	... .	0	0	Clear.....	Charnot.
Algiers	....	.....	29.93	760.1	69.8	21.0	71	N	.....	.....	3	.....	4	.....	.....	0	0	Fair.....	Peter.
La Calle	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Kunts.
Tunis	.....	.....	29.90	759.5	81.1	27.3	51	W	.....	.....	3	.....	5	.....	.....	0.929	23.6	Fair.....	Jacques.
Sfax	.....	.....	29.94	760.4	79.3	26.3	69	S	.....	.....	2	.....	1	.....	.....	0	0	Clear.....	Chauvey.
Saida	.....	.....	29.99	761.8	78 8	26 0	24	WNW	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Millot.
Tebessa	.....	.....	29.91	759.6	78.6	25.7	.....	N	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Colin.
Geriville	.....	.....	30.00	762.1	79.0	26.1	20	W	.....	.....	3	.....	1	.....	.....	0	0	Clear.....	Buard.
Laghouat	.....	.....	29.92	759.9	93.2	34.0	22	SW	.....	.....	4	.....	7	.....	.....	0	0	Cloudy.....	Guyot.
Biskra	.....	.....	29.88	759.0	83.8	28.8	21	NW	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Laromer.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

AUSTRIAN SERIES.

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

Agram	.....	.....	29.61	752.2	81.3	27.4	41	SW	.....	.....	2	.....	2	.....	.....	Inap.	Inap.	....	Prof. Ivan Stosir.
Cracow, I. R. Observatory	.....	.....	29.71	754.6	77.0	25.0	65	E	.....	.....	3	.....	1	.....	.....	0	0	....	Dr. Wierzbiski.
Eperies	.....	.....	29.70	754.4	73.9	23.3	66	Calm	.....	.....	0	.....	9	.....	.....	0.039	1.00	....	Julius Mikolik.
Gratz	28.44	722.3	29.59	751.6	76.3	24.6	61	SW	.....	.....	3	.....	4	.....	.....	0	0	....	Andreas Rospini.
Hermannstadt	28.32	719.2	29.66	753.3	75.3	24.6	59	S	.....	.....	2	.....	6	.....	.....	0	0	....	Prof. Reissenberger.
Kremsmünster	28.70	730.0	30.07	763.8	66.6	19 2	74	SW	.....	.....	1	.....	10	.....	.....	0.094	2.4	....	Prof. C. Wagner.
Lemberg	.....	.....	29.69	754.2	70.7	21.5	61	E	.....	.....	2	.....	4	.....	.....	Blank	Blank	....	Dr. T. Staneckt.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	Habsuda Daniel.
Pola	.....	.....	29.70	754.4	74.3	23.5	73	SE	.....	.....	2	.....	4ks	.....	.....	0	0	....	I.R.Hydrographic Office.
Szegedin	.....	.....	29.65	753.2	76.6	24.8	62	S	.....	.....	2	.....	6	.....	.....	0.341	8.65	....	Karl Stancel.
Trieste	.....	.....	29.72	754.8	72.3	22.4	79	NW	.....	.....	1	.....	9	.....	.....	1.008	25.6	Thunder-storm.	Prof. V. Farolfi.
Vienna	.....	.....	29.63	752.5	71.6	22.0	74	SE	.....	.....	1	.....	3	.....	.....	0.677	17 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.

Brussels	.....	.....	30.03	762.8	56.3	13.5	72	N	.....	....	2	.....	10	.....	.....	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	.....	.....	30.23	767.8	54.0	12.2	.....	NW	7	3.1	.....	.....	3	.....	.....	0.040	1.02	Blue sky.....	William Boswell.
Ardrossan	.....	.....	30.25	768.3	58	14.4	.....	WNW	.....	.....	3	.....	0	.....	.....	.....	.....	Blue sky.....	William McNeil.
Armagh, Observatory	.....	.....	30.30	769.6	58.7	14.8	.....	W	5	2.2	.....	.....	4	.....	.....	.....	.....	*D. clouds....	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	30.32	770.1	61.2	16.2	.....	WSW	.....	.....	1–2	.....	3	.....	.....	.....	.....	*D. clouds....	J. Dreyer.
Bradford	.....	.....	30.22	767.6	56.9	13.8	.....	NE	.....	.....	1	.....	4	.....	.....	0.17	4.3	*D. clouds....	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.00	762.0	84.0	28.9	.....	NE	.....	.....	2	.....	6	.....	.....	.....	.....	*D. clouds....	Sergt. J. F. Halanen, A.
Cambridge, Observatory	.....	.....	30.18	766.6	57.2	14.0	.....	N	.....	.....	3	.....	7	.....	.....	.....	.....	*D. clouds....	H. Todd. [H. C.
Cardington	.....	.....	30.09	766.8	58.4	14.7	.....	NE	.....	.....	2	.....	7	.....	.....	.....	.....	Overcast.....	John McLaren.
Carlisle	.....	.....	30.15	765.8	60.7	15.9	.....	NW	.....	.....	0	.....	3	.....	.....	0.10	2.5	*D. clouds....	T. Bell, for J. Carmell.
Chatham, School M. E	.....	.....	30.14	765.5	55.2	12.9	.....	NE	.....	.....	2	.....	8	.....	.....	.....	.....	*D. clouds....	Capt. J. Fellowes, R.E.
Dartmoor	24.79	731.3	30.29	769.4	56.0	13.3	.....	NW	.....	.....	4	.....	2	.....	.....	.....	.....	*D. clouds....	R. E. Power.
Donaghadee	.....	.....	30.29	769.4	56	13.3	.....	N	.....	.....	4	.....	3	.....	.....	.....	.....	*D. clouds....	J. Mac Gowan.
Dover	.....	.....	30.10	764.5	54	12.2	.....	NNE	.....	.....	4	.....	7	.....	.....	.....	.....	¾ clouded...	J. Costello.
Eccles (near Manchester.)	.....	.....	30.22	767.6	62.8	17.1	.....	NNE	2.4	1.1	.....	.....	6	.....	.....	.....	.....	*D. clouds....	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.28	769.1	58.0	14.4	.....	NNW	27	12.1	.....	.....	3	.....	.....	.....	.....	D. clouds....	The Staff.
Fort Napier, (Natal)	28.00	711.2	30.13	765.3	68.4	20.2	.....	E	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.95	760.7	87.0	30.6	.....	W	.....	.....	3	.....	6	.....	.....	.....	.....	*D. clouds....	
Galway, Queen's College	.....	.....	30.03	762.7	59	15.0	.....	W	.....	.....	4	.....	3	.....	.....	.....	.....	*D. clouds....	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	29.93	760.2	77.5	25.3	.....	W	.....	.....	5	.....	0	.....	.....	.....	.....	Blue sky....	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	30.21	767.3	58.2	14.6	.....	W	.....	.....	1	.....	1	.....	.....	.....	.....	Fine.....	Lewis Stuart.
Great Yarmouth	.....	.....	30.13	765.3	55	12.8	.....	NNW	.....	.....	5	.....	6	.....	.....	.....	.....	*D. clouds....	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	30.16	766.1	58.3	14.6	.....	NNE	.....	.....	3	.....	7	.....	.....	.....	.....	*D. clouds....	The Staff, for G. B. Airy.
Guernsey	.....	.....	30.19	766.8	55.5	13.1	.....	NNW	.....	.....	3	.....	7	.....	.....	.....	.....	*D. clouds....	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	30.24	768.1	55.7	13.2	.....	NE	.....	.....	1	.....	7	.....	.....	Blank	Blank	*D. clouds....	L. J. Crossley.
Helston	.....	.....	30.24	768.1	61	16.1	.....	N	.....	.....	6	.....	0	.....	.....	0	0	Fine.....	M. P. Moyle.
Holyhead	.....	.....	30.29	769.4	55	12.8	.....	NNW	.....	.....	3	.....	0	.....	.....	.....	.....	Blue sky.....	John Tilston.
Kew, Observatory	.....	.....	30.17	766.3	56.1	13.4	.....	NNE	23	10.3	.....	.....	5	.....	.....	.....	.....	*D. clouds....	The Staff.
Kingstown	.....	.....	30.32	770.1	55	12.8	.....	E	.....	.....	3	.....	1	.....	.....	.....	.....	Blue sky.....	George Mitchell.
Leicester Museum	.....	.....	30.24	767.8	58.0	14.4	.....	N	.....	.....	4	.....	4	.....	.....	.....	.....	*D. clouds....	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)	.....	.....	29.84	757.9	77.4	25.2	.....	NW	.....	.....	1	.....	2k	.....	.....	.....	.....	*D. clouds....	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	30.18	766.6	61	16.1	.....	W	.....	.....	1	.....	5	.....	.....	.....	.....	¼ clouded...	W. D. Penny.
Nassau, (Bahamas	.....	.....	30.12	765.0	82.5	28.1	.....	SE	.....	.....	6	.....	8	.....	.....	.....	.....	*D. clouds....	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	30.22	767.6	58.7	14.8	.....	N	.....	.....	5	.....	3.c	.....	NNE	0.220	5.59	Blue sky.....	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.20	767.1	56.2	13.4	.....	NNE	.....	.....	4	.....	7	.....	.....	.....	.....	*D. clouds....	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	30.18	766.6	58	14.4	.....	N	.....	.....	2	.....	5	.....	.....	.....	.....	*D. clouds....	J. Lucas.
Plymouth	.....	.....	30.22	767.6	63.3	17.4	.....	N	.....	.....	4	.....	1	.....	.....	.....	.....	Blue sky.....	John Merrifield.
Roche's Point	.....	.....	30.32	770.1	60	15.6	.....	N	.....	.....	3	.....	2	.....	.....	.....	.....	Fine.....	W. Kennedy.
Saint Ann's Head	.....	.....	30.29	769.4	54	12.2	.....	NW	.....	.....	2	.....	2	.....	.....	.....	.....	Blue sky.....	John C. Walker.
Saint Helier, Jersey	.....	.....	30.17	766.3	56.8	13.8	.....	NNE	.....	.....	4	.....	8	.....	.....	.....	.....	¾ clouded...	A. P. Amy.
Sandwick Manse, Orkneys	.....	.....	30.21	767.3	48.8	9.3	.....	W	13	5.8	.....	.....	0	.....	.....	.....	.....	Blue sky.....	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	30.21	767.3	52.7	11.5	.....	NNW	.....	.....	5	.....	3	.....	.....	.....	.....	Blue sky.....	F. Shaw.
Scutari Cemetery Turkey	.....	.....	29.77	756.1	80.0	26.7	.....	SW	.....	.....	1	.....	4	.....	.....	.....	.....	*D clouds....	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.23	767.8	56.0	13.3	.....	NE	.....	.....	2	.....	5	.....	.....	0.260	6.60	*D. clouds....	W. F. Cooper.
Silloth Rectory	.....	.....	30.24	768.1	61.6	16.4	47	S	.....	.....	2	.....	1	.....	.....	0	0	*D. clouds....	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	30.22	767.6	58.7	14.8	.....	W	.....	.....	2	.....	3	.....	.....	Blank	Blank	*D. clouds....	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.	.....	.....	30.16	766.1	58	14.4	.....	S	.....	.....	4	.....	8	.....	.....	.....	.....	*D. clouds....	John Smith.
Stratfield Turgiss	.....	.....	30.18	766.6	58.0	14.4	.....	N	.....	.....	3	.....	6	.....	.....	.....	.....	Squally.....	Rev. Charles H. Griffith.
Thurso	.....	.....	30.18	766.6	55	12.8	.....	NNW	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	John Trotter.
Truro, Royal Institution	.....	.....	30.26	768.6	61	16.1	.....	NW	.....	.....	6	.....	5	.....	.....	.....	.....	*D. clouds....	W. Newcombe.
Valencia, Observatory	.....	.....	30.38	771.6	56.8	13.8	.....	NW	11	4.9	.....	.....	2	.....	.....	.....	.....	*D. clouds....	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man	.....	.....	.....	.....	60	15.6	.....	NW	.....	.....	3	.....	10	.....	.....	.....	.....	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.26	768.6	65.0	18.3	68	SSE	15	6.7	.....	3	2	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	29.86	758.4	50 0	10.0	82	NW	.....	.....	2	.....	10kn	.....	.....	.....	0	Hazy, cloudy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	30.24	768.1	58.0	14.4	.....	NE	.....	.....	2	.....	.....	.....	.....	0.47	11.9	Fine.....	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.15	765.8	.....	.....	.....	SE	26.1	11.7	.....	.....	.....	.....	.....	0	0	.....	C. Meldrum.
Melbourne, Observatory	.....	.....	30.32	770.1	51.3	10.7	77	N	6	2.7	.....	.....	10	.....	.....	0	0	Dull.....	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	30.15	765.8	54	12.2	.....	SW	.....	.....	3	.....	10	.....	.....	0	0	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	30.17	766.3	49	9.4	.....	NW	.....	.....	2	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 1,409 feet, or 426.7 meters; Fort Napier, 2,220 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	.....	.....	29.75	755.7	65.7	18.7	83	NW	.....	.....	2	.....	10	.....	.....	.....	.....	Raining.....	
Fanöe	.....	.....	29.85	758.3	59.4	15.2	77	NNW	.....	.....	6	.....	5	.....	.....	.....	.....	.....	
Godthaab, (Greenland)	.....	.....	29.93	760.1	37.4	3.1	69	SSW	.....	.....	1	.....	8	.....	.....	.....	.....	.....	
Stykkisholm, (Iceland)	.....	.....	29.24	742.8	45.1	7.3	88	SE	.....	.....	6	.....	8	.....	.....	.....	.....	Raining.....	
Thorshavn, (Faröe)	.....	.....	29.97	761.3	49.1	9.5	78	SSW	.....	.....	6	.....	10	.....	.....	.....	.....	.....	
Vestervig	.....	.....	29.85	758.2	58.3	14.6	81	NNE	.....	.....	4	.....	2	.....	.....	.....	.....	.....	

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

FRENCH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	30.04	763.1	60.8	16	75	NE	.....	.....	4	.....	10	.....	.....	0	0	Covered	Normal School.
Amiens	.....	.....	30.00	762.1	61.5	16.4	67	NW	.....	.....	6	.....	10	.....	.....	0.591	15.0	Covered	Normal School.
Avignon	.....	.....	29.68	753.9	56.1	13.4	95	W	.....	.....	2	.....	10	.....	NNW	1.610	40.9	Raining.....	Normal School.
Bar-sur-Seine	.....	.....	29.84	757.9	53.6	12.0	86	N	.....	.....	4	.....	10	.....	NE	0.157	4.0	Raining.....	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.99	761.7	60.1	15.6	66	NE	13.2	5.9	.....	.....	10	.....	N	0.138	3.5	Covered	Beaumette Observatory.
Beauvais	.....	.....	30.02	762.6	56.7	13.7	67	N	.....	.....	4	.....	10	.....	N	0.413	10.50	Covered	Normal School.
Besançon	.....	.....	29.72	754.8	55.4	13	87	NE	.....	.....	4	.....	8	.....	NE	0.484	12.3	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	29.75	755.6	52.7	11.5	95	N	.....	.....	6	5c	.....	S	.....	.....	.....	Cloudy.....	Normal School.
Bourges	.....	.....	30.08	764.0	54.7	12.6	84	N	.....	.....	8	.....	8	.....	S	0.024	0.6	Very cloudy	Normal School.
Brest	.....	.....	30.17	766.2	55.6	13.1	63	NNE	.....	.....	5	.....	8k	.....	N	0.128	3.25	.....	Naval Observatory.
Carcassonne	.....	.....	29.84	757.9	63.5	17.5	90	W	.....	.....	6	.....	10	.....	E	0.205	5.2	Covered	Normal School
Caen	.....	.....	30.05?	778.5?	59.0	15.0	56	E	.....	.....	6	.....	5	.....	SSW	0.04	1.	Cloudy.....	Normal School.
Chartres	.....	.....	29.97	761.2	58.3	14.6	.....	N	.....	.....	6	.....	9	.....	W	0.071	1.8	.....	Normal School.
Clermont	.....	.....	29.82	757.4	51.3	10.7	97	N	.....	.....	2	.....	10	.....	NW	0.791	20.1	Raining.....	Puy de Dome Obs'y.
Commercy	.....	.....	29.85	758.1	54.0	12.2	80	N	.....	.....	4	.....	10n	.....	N	0.035	0.9	Covered	Normal School.
Commune de Greasque*	.....	.....	29.73	755.1	54.5	12.5	82	W	.....	.....	2	.....	10	.....	W	0.717	18.2	.....	M. Kins.
Grenoble	.....	.....	29.73	755.2	61.0	16.1	80	SW	.....	.....	1	.....	10	.....	E	1.26	32.	Foggy	Normal School.
La Roche-sur-Yon	.....	.....	30.07	763.6	63.3	17.4	63	N	.....	.....	4	.....	5	.....	S	1.457	37.0	Cloudy.....	Normal School.
Le Mans	.....	.....	29.30	769.5	60.1	15.6	85	NE	.....	.....	4	.....	8	.....	NE	0.020	0.50	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	29.67	753.6	54.1	12.3	93	NE	.....	.....	4	.....	8	.....	SW	1.41	35.85	Rain and fog	Normal School.
Mâcon	.....	.....	29.67	753.5	53.8	12.1	93	NW	.....	.....	6	.....	10	.....	.....	0.35	9.	Covered	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	29.70	756.0	54.7	12.6	79	N	.....	.....	4	.....	10	.....	.....	0.35	9.	Covered	Normal School.
Nismes	.....	.....	29.71	754.5	59.0	15	89	SW	.....	.....	2	.....	10	.....	W	0.51	13.	Covered	Normal School.
Orleans	.....	.....	29.91	759.7	56.8	13.8	71	NE	.....	.....	6	.....	8	.....	NE	0.031	0.8	Very cloudy	Normal School.
Paris, Observatory	.....	.....	29.97	761.1	57.7	14.3	59	NNE	.....	.....	4	.....	10	.....	.....	0.431	10.97	Covered	National Observatory.
Parthenay	.....	.....	30.08	764.0	58.6	14.8	84	NE	.....	.....	4	.....	8	.....	N	0.362	9.2	Very cloudy	Normal School.
Privas	.....	.....	29.67	753.7	60.4	15.8	.....	N	.....	.....	2	.....	10	.....	N	.....	.....	Covered	Normal School.
Rochefort, Observatory	.....	.....	30.04	763.0	63.0	17.2	68	NNE	.....	.....	4	.....	10	.....	S	0.039	1.0	Covered	Naval Observatory.
Rouen	.....	.....	30.06	763.4	57.9	14.4	70	N	.....	.....	3	.....	8	.....	N	0.039	1.0	Very cloudy	Normal School.
Saint Lo	.....	.....	29.45	747.9	54.5	12.5	82	N	.....	.....	1	.....	9	.....	N	0	0	.....	Normal School.
Tarbes	28.43	732.2	29.89	759.3	59.0	15	.....	W	.....	.....	4	.....	10	.....	.....	0.59	15.	Raining.....	Normal School
Villefranche	.....	.....	29.71	754.6	52.5	11.4	96	N	.....	.....	4	.....	8	.....	S	1.97	50.	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.86	758.4	81.0	27.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	Blank	Blank	.....	L'Abbé Marchésl.
Marseilles	.....	.....	29.67	753.7	58.5	14.7	88	WNW	.....	.....	3	.....	10	.....	.....	0.181	4.60	Covered	Marseilles Observatory.
Mont-Louis	.....	.....	29.99	761.7	46.0	7.8	63	WSW	16.8	7.50	.....	.....	8	.....	NW	0.378	9.6	.....	—. Faignière.
Montsouris, Paris	.....	.....	29.96	760.9	57.4	14.1	61	NNE	.....	.....	4	.....	10	.....	N	0.020	0.5	.....	Montsouris Observatory.
Perpignan	.....	.....	29.82	757.5	60.3	15.7	57	NW	24.2	10.83	.....	.....	8	.....	NW	0.071	1.8	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.96	760.9	57.6	14.2	70	N	.....	.....	4	.....	10	.....	.....	0.087	2.2	Covered	F. Renou.
Toulouse	.....	.....	29.93	760.3	52.3	11.3	100	W	.....	.....	3	.....	10	.....	.....	0.417	10.6	Raining.....	Toulouse Observatory.
Tours	.....	.....	29.98	761.4	58.6	14.8	65	NE	.....	.....	4	.....	10	.....	NNE	0.130	3.4	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.97	761.3	57.6	14.2	72	NE	.....	.....	3	.....	10	.....	.....	0.08	2.10	Covered	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai	.....	.....	29.92	760.0	69.8	21.0	91	E	10.3	4.6	.....	0	1k	.....	.....	{ 0	0 }	Dew	H. Le Lec, S. J.
																{ 0	0 }		

Note.—Generally the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time, at Clermont, 9 a. m. of the following day, 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,) 2,360 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	.....	.....	29.64	752.8	65.8	18.8	79	NW	.....	.....	5	.....	10	W	.....	0.787	20.0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.73	755.1	72.1	22.3	70	NW	.....	.....	1	.....	8	.....	.....	0.197	5.0	.....	Prof. Arndt.
Breslau	.....	.....	29.71	754.7	78.8	26.0	50	SE	.....	.....	8	.....	9	.....	.....	0	0	Lightning ...	Dr. P. Neugebauer.
Carlsruhe	.....	.....	29.70	754.4	65.1	18.4	69	NW	.....	.....	5	.....	10	.....	.....	0.298	7.6	.....	A. Senz.
Cassel	.....	.....	29.83	757.6	62.2	16.8	71	NW	.....	.....	4	.....	9	NW	.....	0.063	1.6	.....	Dr. H. Möhl.
Emden	.....	.....	29.93	760 1	58.6	14.8	73	NNW	.....	.....	7	.....	6	.....	.....	0.213	5.4	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.82	757.5	67.1	19.5	56	N	.....	.....	3	.....	9	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	29.58	751.4	68.4	20.2	66	NE	.....	.....	4	.....	2	.....	.....	1.193	30.3	Raining.....	M. Wilhelm.
Hamburg	.....	.....	29.83	757.6	57.2	14.0	91	NW	.....	.....	3	.....	10	.....	.....	0.004	0.1	Cloudy.....	Captain F. Hegemann.
Kiel	.....	.....	29.80	757.0	56.8	13.8	89	NNW	.....	.....	1	.....	10	.....	.....	0.067	1.7	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.81	757.1	84.2	29.0	38	SE	.....	.....	2	.....	2	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	29.78	756.3	61.0	16.6	77	NNW	.....	.....	4	.....	10	.....	.....	0.752	19.1	.....	Prof. Brullus.
Memel	.....	.....	29.88	759.0	82.0	27.8	47	S	.....	.....	3	.....	2ck	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.84	757.9	59.7	15.4	92	.....	.....	.....	2	.....	10	.....	.....	0.024	0.6	.....	Prof. E. Reis.
Neufahrwasser	.....	.....	29.79	756.6	82.0	27.8	62	SSE	.....	.....	5	.....	3	.....	.....	0	0	.....	A. Lothes.
Posen	.....	.....	29.72	755.0	85.1	29.5	36	S	.....	.....	5	.....	1	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.72	755.0	64.4	18.0	62	NE	.....	.....	2	.....	10	NE	.....	0.035	0.9	.....	Dr. Schur.
Stuttgart	.....	.....	29.69	754.1	62.2	16.8	74	NE	.....	.....	1	.....	10	.....	.....	0.059	1.5	Light rain...	Prof. Schoder.
Thorn	.....	.....	29.74	755.5	82.8	28.1	30	E	.....	.....	5	.....	2	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.80	756.8	58.1	14.5	66	NNE	.....	.....	7	.....	10	.....	.....	0	0	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	29.65	753.2	60.4	15.8	88	W	.....	.....	2	.....	10	.....	.....	0.122	3.1	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. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens	.....	.....	29.82	757.4	84.7	29.3	.....	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.

Udine	.....	.....	29.68	753.9	73.6	23.1	56	Calm	0	0	.....	.....	3	.....	.....	0.173	4.4	Showery	
Padua	.....	.....	29.64	752.9	70.0	21.1	80	NE	11.2	5.0	.....	.....	10	.....	.....	0.098	2.5	Showery	
Vicenza	.....	.....	29.67	753.5	68.2	20.1	64	E	6.3	2.8	.....	.....	9	E	.....	0.091	2.3	Showery	
Verona	.....	.....	29.67	753.5	76.6	24.8	48	E	.....	.....	2	.....	10	.....	.....	0.787	20.0	Showery	
Bergamo	28.34	719.7	29.60	751.7	59.4	15.2	81	N	.....	.....	2	.....	10	.....	.....	1.693	43.0	Showery	
Domodossola	28.70	729.0	29.69	754.2	56.7	13.7	91	Calm	.....	.....	0	.....	10	.....	.....	0.819	20.8	Showery	
Milan	.....	.....	29.63	752.7	65.8	18.8	82	WSW	.....	.....	2	.....	10	.....	.....	0.583	14.8	Showery	
Pavia	.....	.....	29.64	752.8	68.0	20.0	72	SW	.....	.....	4	.....	10	.....	.....	1.035	26.3	Showery	
Moncalieri	.....	.....	29.57	751.1	63.3	17.4	83	ESE	21.0	9.4	.....	.....	9	SE	.....	0	0	.....	
Mondovi	27.69	703.4	29.54	750.3	66.2	19.0	53	E	.....	.....	4	.....	10	ESE	.....	0	0	.....	
Porto Maurizio	.....	.....	29.66	753.4	71.2	21.8	60	WSW	.....	.....	4	.....	4	NE	.....	0	0	.....	
Genoa	.....	.....	29.65	753.2	66.2	19.0	77	SE	2.5	1.1	.....	.....	10	SE	.....	0.366	9.3	Showery	
Piacenza	.....	.....	29.64	752.9	64.6	18.1	80	SE	8.7	3.9	.....	.....	10	.....	.....	0.016	0.4	.....	
Parma	.....	.....	29.64	752.9	70.0	21.1	82	WNW	.....	.....	2	.....	10	.....	.....	0.051	1.3	.....	
Bologna	.....	.....	29.66	753.3	76.1	24.5	54	SE	.....	.....	2	.....	6	N	.....	0	0	.....	
Florence	.....	.....	29.70	754.4	74.7	23.7	67	SSE	.....	.....	4	.....	10	SW	.....	0.185	4.7	.....	
Leghorn	.....	.....	29.68	753.8	66.2	19.0	73	N	8.1	3.6	.....	.....	10	.....	.....	0.819	20.8	Showery	
Siena	28.51	724.1	29.67	753.6	70.2	21.2	71	SE	0.7	0.3	.....	.....	9	SW	.....	0.311	7.9	.....	
Urbino	28.20	716.3	29.71	754.6	75.6	24.2	39	SSW	.....	.....	2	.....	9	.....	.....	0	0	.....	
Pesaro	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ancona	.....	.....	29.69	754.0	76.5	24.7	71	SE	.....	.....	6	.....	7	.....	.....	0.315	8.0	.....	
Grosseto	.....	.....	29.71	754.7	73.4	23.0	65	SSE	.....	.....	4	.....	9	S	.....	0	0	.....	
Rome	.....	.....	29.74	755.3	76.6	24.8	52	SSE	18.1	8.1	.....	.....	10	.....	.....	0	0	.....	
Naples, O. U	.....	.....	29.77	756.2	78.1	25.6	60	SSW	.....	.....	2	.....	10	SW	.....	0	0	.....	
Lecce	.....	.....	29.79	756.6	80.6	27.0	35	SSE	19.2	8.6	.....	.....	3	.....	.....	0	0	.....	
Cosenza	.....	.....	29.82	757.3	83.8	28.8	63	NW	1.8	0.8	.....	.....	8	.....	.....	0	0	.....	
Riposto, (Sicily)	.....	.....	29.81	757.2	71.6	22.0	74	NE	.....	.....	2	.....	8	.....	.....	0	0	.....	
Palermo	.....	.....	29.74	755.4	75.0	23.9	59	ENE	3.1	1.4	.....	.....	6	.....	.....	0	0	.....	
Caltanissetta	28.86	707.6	29.76	755.9	73.6	23.1	45	SW	.....	.....	4	.....	10	NE	.....	0	0	.....	
Sub-Series.																			
Naples, S. R	.....	.....	29.80	756.8	73.8	23.2	71	SW	2.5	1.1	.....	.....	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.

Flushing	.....	.....	30.06	763.5	56.8	13.8	.....	NNE	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	
Groningen	.....	.....	29.89	759.3	55.8	13.2	.....	NW	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	
Helder	.....	.....	30.00	762.1	54.1	12.3	.....	NNW	.....	.....	4	.....	.....	.....	.....	.....	.....	Cloudy	
Utrecht	.....	.....	29.95	760.7	59.0	15.0	61	NNW	.....	.....	5	.....	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.

Bergen	.....	.....	29.92	760.0	52.9	11.6	69	NNW	22.2	9.9	.....	.....	6	.....	.....	0	0	.....	
Brönö	.....	.....	29.94	760 4	46.8	8.2	81	WNW	7	3	.....	.....	10	.....	.....	0.134	3.4	Raining	
Christiania	.....	.....	29.85	758.1	58.8	14.9	60	NNE	4.7	2.1	.....	.....	9	.....	.....	0.319	8.1	.....	
Tromsö	.....	.....	29.84	757.8	53.2	11.8	59	W	7	3	.....	.....	10	.....	.....	0.008	0.2	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

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,)	.....	.....	30.41	773.2	66.9	19.4	79	E	12.3	5.50	.....	.....	7	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.94	760.5	75.9	24.4	30	NNE	10.4	4.66	.....	.....	0	.....	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.13	765.2	67.1	19.5	61	SW	10.1	4.46	.....	.....	7	.....	.....	0	0	.....	Capt D. A. da Cunha.
Lisbon	.....	.....	30.02	762.5	70.5	21.4	28	NE	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.

Warsaw	.....	.....	29.74	755.4	80.1	26.7	45	ESE	18	8	.....	.....	6	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.93	760.2	81.1	27.3	35	SE	9	4	.....	.....	4	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.85	760.6	85.8	29.9	25	SSW	9	4	.....	.....	4	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.98	761.5	79.7	26.5	49	SSE	4	2	.....	.....	9	.....	.....	.....	.....	.....	Central Physical Obs.
Kiuplo	.....	.....	29.83	757.7	75.6	24.2	66	S	22	10	.....	.....	3	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.82	757.4	77.9	25.5	40	ESE	11	5	.....	.....	7	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.87	758.6	74.1	23.4	67	S	13	6	.....	.....	5	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.87	758.6	75.6	24.2	66	S	9	4	.....	.....	6	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.12	765.0	82.2	27.9	37	SE	2	1	.....	.....	5	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.87	758.8	70.5	21.4	57	SE	22	10	.....	.....	10	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	29.91	759.6	78.4	25.8	48	Calm	0	0	.....	.....	8	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.44	722.4	29.78	756.4	79.0	26.1	42	NW	11	5	.....	.....	7	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.00	762.1	80.8	27.1	27	ESE	22	10	.....	.....	6	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.02	762.4	85.5	29.7	31	W	11	5	.....	.....	0	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.95	735.3	29.91	759.7	68.7	20.4	71	WNW	9	4	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.97	761.3	81.9	27.7	15	ENE	13	6	.....	.....	10	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.39	721.1	30.01	762.3	78.4	25.8	34	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.83	757.6	51.8	11.0	60	NW	2	1	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.42	747.3	54.5	12.5	65	W	2	1	.....	.....	5	.....	.....	Blank	Blank	.....	Marks.
Irkutsk	28.16	715.3	29.51	749.6	50.5	10.3	79	Calm	0	0	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	.....	Mossin.
Pekling, (China)	.....	.....	30.00	762.1	78.6	25.9	25	SSW	13	6	.....	.....	1	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.05	763.3	51.1	10.6	95	SE	9	4	.....	.....	10	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	53.6	12.0	91	E	4	2	.....	.....	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 400. meters, or 1,311.8 feet; Ekaterinburg, 303.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0 m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	29.97	761.3	66.9	19.4	37	N	30.6	13.67	.....	0	1	.....	.....	0	0	Almost clear	Royal Observatory.
San Fernando	.....	.....	30.00	761.9	69.3	20.7	65	WSW	7.2	3.2	.....	0	7	.....	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.

Haparanda	.....	.....	29.82	757.5	54.0	12.2	98	NE	.....	.....	2	.....	10	.....	.....	.....	.....	Raining	
Umea	.....	.....	29.74	755.5	56.5	13.6	71	E	.....	.....	2	.....	10	.....	.....	0	0	.....	
Hernosand	.....	.....	29.73	755.2	52.2	11.2	92	SW	.....	.....	2	.....	10	.....	.....	0.063	1.6	Raining	
Stockholm	.....	.....	29.74	755.4	73.9	23.3	64	S	.....	.....	6	.....	1	.....	.....	0.039	1.0	.....	
Wisby	.....	.....	29.87	758.6	70.5	26.4	50	S	.....	.....	6	.....	0	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.71	754.6	78.4	25.8	49	S	24.8	11.1	.....	.....	1	.....	.....	0.102	2.60	.....	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	28.23	717.0	29.65	753.1	55.2	12.9	92	SW	.....	.....	3	.....	10	.....	.....	0.496	12.6	Raining.....	The Observatory.
Zurich	28.04	712.3	29.66	753.5	61.2	16.2	83	E	.....	.....	1	.....	10	.....	E	.....	.....	Light rain..	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE—For Geneva the corresponding departures from the normal values are: Barometer, —9.3 mm; Thermometer, —7.1 cent.; Relative Humidity, +36 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.

Constantinople	.....	.....	29.82	757 3	81.9	27.7	47	SSW	3	1.5	.....	.....	7	.....	WSW	0	0	.....	
Fao, (Persian Gulf)	.....	.....	29.92	760.0	100.4	38.0	.....	S	.....	.....	3	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.85	758.2	79.3	26.3	.....	S	.....	.....	4	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	29.78	756.5	84.2	29.0	.....	S	.....	.....	3	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	29.81	757.2	75.2	24.0	.....	NE	.....	.....	2	.....	10	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.	.....	.....	29.70	754.4	85.8	29.9	55	W	.....	.....	2	.....	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.

Bathurst, N. B.	.....	.....	30.10	764.5	47.9	8.8	99	NE	7	3.1	.....	10	.....	.....	.....	0.41	10.4	Cloudy.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.07	763.8	68	20.0	.....	SW	4	1.8	.....	0	8s	....	S	0.02	0.5	Fair.....	W. R Bigg.
*Chatham, N. B.	....	.....	30.09	764.3	52	11.1	96	N	1	0.4	.....	.....	10s	.....	N	0.25	6.3	Cloudy.....	G. A. Blair.
Charlottetown, P. E. Island.	.....	.....	30.09	764.3	55	12.8	95	S	3	1.3	.....	.....	10s	.....	.....	0.04	1.0	Cloudy.....	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.95	760.7	66.5	19.2	83	S	.....	.....	2	0	10n	.....	.....	0	0	Unsettled....	James Smith, M. A.
Dalhousie, N. B.	.....	.....	30.14	765 5	48.0	8.9	100	E	.....	.....	2	.....	10n	.....	.....	.....	.....	Raining.....	H. A. Johnson.
Esquimault, B. C.	.....	.....	30.03	762.7	49.3	9.6	100	S	3	1.3	.....	.....	10n	.....	.....	0.11	2.8	Cloudy.....	W. H. Bevis.
Fredericton, N. B.	.....	.....	30.08	764.0	55.0	12.8	90	SE	1	0.4	.....	.....	10n	.....	.....	0.446	11.68	Showery.....	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.57	751.1	58	14.4	94	E	8	3.6	.....	5k	5ks	E	E	0.16	4.1	Cloudy.....	James Stewart.
Goderich, Ontario	.....	.....	30.00	762.0	68.4	20.2	80	SW	.....	.....	2	3k	0	W	.....	0	0	Fine.....	H. J. Strang, M. A.
Granton, Ontario	28.94	735.1	29.99	761.7	70	21.1	.....	W	.....	.....	2	0	0	.....	.....	0	0	Clear.....	James Grant.
*Halifax, N. S.	.....	.....	30.07	763.8	61	16.1	76	SW	9	4.0	.....	5cs	0	.....	.....	0	0	Fair.....	F. Allison, M. A.
*Kingston, Ontario	.....	.....	30.04	763 0	62	16.7	95	Calm	0	0	.....	8ck	0	SW	.....	0.27	6.9	Fair.....	S. Woods, M. A.
Little Glace Bay, N. S.	.....	.....	30.15	765.8	45.5	7.5	96	S	3	1.3	.....	.....	10n	.....	.....	0.10	2.5	Overcast.....	C. H. Rigby.
*Montreal, Quebec	.....	.....	29.97	761.2	66	18.9	88	SW	11	4.9	.....	5k	2ks	W	W	0.17	4.3	Cloudy.....	C. H. McLeod, C. E.
*Ottawa, Ontario.	.....	.....	29.98	761.5	66	18.9	74	S	8	3.6	.....	5ck	5s	SW	SW	0.60	15.2	Cloudy.....	J. B. Haney.
*Parry Sound, Ontario.	.....	.....	30.03	762.7	60	15.6	90	S	4	1.8	.....	.....	10n	.....	W	0.06	1.5	Cloudy.....	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	30.05	763.3	63	17.2	89	SW	2	0.9	.....	8k	0	W	.....	0.07	1.8	Fair.....	H. Morgan.
Port Hastings, N. S.	.....	.....	30.13	765.3	44.3	6.8	.....	SE	10	4.5	.....	.....	.....	.....	.....	0.240	6.10	Foggy	Peter Grant.
*Port Stanley, Ontario	.....	.....	30.04	763.0	65	18.3	84	W	12	5.4	.....	2k	0	SW	.....	0.01	0.3	Clear.....	M. Payne.
*Quebec, Quebec	.....	.....	30.04	763.0	50	10.0	93	NE	20	8.9	.....	.....	10n	.....	NE	0.44	11.2	Cloudy.....	Capt. Asse, R. N.
St. John, N. B.	.....	.....	30.10	764.5	50	10.0	93	S	2	0.9	.....	.....	10s	.....	.....	0	0	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.97	761.2	71	21.7	70	Calm	0	0	.....	0	0	.....	.....	0.19	4.8	Clear.....	K. Stewart.
Stayner, Ontario	.....	.....	29.99	761.7	67	19.4	84	Calm	0	0	.....	8k	0	W	....	0.23	5.8	Cloudy.....	R. J. Cole.
Stratford, Ontario	28.75	730.2	29.99	761.7	66.1	18.9	89	SW	8	3.6	.....	0	0	.....	.....	0.051	1.30	Fine.....	C. J. Macgregor, M. A.
*Sydney, C. B.	.....	.....	30.18	766.6	49	9.4	95	NE	2	0.9	.....	.....	10n	.....	NE	0.18	4.6	Cloudy.....	T. C. Hill.
*Toronto, Ontario	.....	.....	30.01	762.7	66	18.9	84	S	4	1.8	.....	2ck	0	W	.....	0.35	8.9	Clear.....	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.97	761.2	69.5	20.8	80	W	10	4.5	.....	0	0	.....	.....	0	0	Fine.....	J. Montgomery
Sub-Series.																			
St. John's, Newfoundland	.....	.....	30.42	772.7	54	12.2	67	S	.....	.....	.....	0	5ks	....	.....	0	0	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.	.....	.....	30.03	762.7	75	23.9	76	S	3	1.3	.....	5k	Haze	S	.....	1.16	29.5	Fair.	
Alpena, Mich.	.....	.....	29.94	760.5	62	16.7	83	Calm	0	0	.....	0	0	.....	.....	0.21	5.3	Clear.	
Atlantic City, N. J.	.....	.....	30.16	766.1	67	19.4	84	SW	9	4.0	.....	2cs	Haze	S	.....	0	0	Clear.	
Augusta, Ga.	.....	.....	30.20	767.1	75	23.9	81	SE	2	0.9	.....	5cs	0	SW	.....	0	0	Fair.	
Baltimore, Md.	.....	.....	30.16	766.1	75	23.9	68	S	2	0.9	.....	2cs	Sm'e	.....	.....	0	0	Smoky.	
Barnegat, N. J.	.....	.....	30.16	766.1	73	22.8	75	SW	17	7.6	.....	5k	0	SW	.....	0	0	Fair.	
Benton, Montana	27.19	688.3	29.90	759.4	50	10.0	64	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
Bismarck, Dakota	27.72	704.1	29.36	771.1	61	16.1	71	NW	5	2.2	.....	.....	10ks	.....	NW	0	0	Cloudy.	
Boston, Mass.	.....	.....	30.07	763.8	68	20.0	70	SW	12	5.4	.....	5c	2s	W	SW	0.03	0.8	Fair.	
Breckenridge, Minn.	.....	.....	29.91	759.7	65	18.3	73	SE	12	5.4	.....	8cs	0	.....	.....	0	0	Cloudy.	
Buffalo, N. Y.	.....	.....	30.01	762.7	65	18.3	83	SW	4	1.8	.....	.....	10ks	.....	W	0.08	2.0	Cloudy.	
Burlington, Vt.	.....	.....	30.01	762.2	71	21.7	66	S	9	4.0	.....	5k	2s	.....	.....	0.22	5.6	Cloudy.	
Cairo, Ill.	.....	.....	30.08	764.0	72	22.2	75	S	8	3.6	.....	2c	0	.....	.....	0.03	0.8	Clear.	
Cape Hatteras, N. C.	.....	.....	30.20	767.1	76	24.4	60	S	11	4.9	.....	0	2ks	.....	.....	0	0	Fair.	
Cape Henry, Va.	.....	.....	30.23	767.8	74	23.3	68	SW	11	4.9	.....	2c	0	.....	.....	0	0	Clear.	
Cape Lookout, N. C.	.....	.....	30.26	768.6	75	23.9	59	SE	12	5.4	.....	2k	0	SW	.....	0	0	Fair.	
Cape May, N. J.	.....	.....	30.17	766.3	70	21.1	79	S	16	7.2	.....	0	0	.....	.....	0	0	Clear.	
Charleston, S. C.	.....	.....	30.21	767.3	76	24.4	70	NE	7	3.1	.....	0	8ks	.....	S	0	0	Fair.	
Cheyenne, Wyoming	23.98	609.1	29.92	760.0	46	7.8	54	W	12	5.4	.....	1ck	0	.....	.....	0	0	Clear.	
Chicago, Ill.	.....	.....	29.96	761.0	70	21.1	71	S	12	5.4	.....	.....	10s	.....	S	0	0	Cloudy.	
Cincinnati, Ohio.	.....	.....	30.05	763.3	74	23.3	76	SE	3	1.3	.....	0	Sm'e	.....	.....	0.42	10.7	Clear.	
Cleveland, Ohio.	.....	.....	30.06	763.5	72.2	22.3	76	SW	13	5.8	.....	5k	0	W	.....	0.45	11.4	Fair.	
Colorado Springs, Col.	24.03	610.4	29.90	759.4	51	10.6	52	SE	8	3.6	.....	1c	0	.....	.....	0	0	Clear.	
Corsicana, Tex.	.....	.....	29.92	760.0	76	24.4	86	SE	12	5.4	.....	8k	0	S	.....	Inap.	Inap.	Cloudy.	
Davenport, Iowa.	.....	.....	29.88	758.9	73	22.8	81	S	16	7.2	.....	3cs	Sm'e	SW	.....	0	0	Fair.	
Denison, Tex.	.....	.....	29.90	759.4	77	25.0	76	S	16	7.2	.....	.....	10s	.....	S	0	0	Cloudy.	
Denver, Col.	24.75	628.6	29.97	761.2	56	13.3	17	NW	15	6.7	.....	0	0	.....	.....	0	0	Clear.	
Detroit, Mich.	.....	.....	30.01	762.2	73	22.8	67	W	6	2.7	.....	1k	0	W	.....	0	0	Clear.	
Dodge City, Kan.	27.09	688.1	29.23	742.4	70	21.1	71	S	10	4.5	.....	0	0	.....	.....	Inap.	Inap.	Clear.	
Dubuque, Iowa.	.....	.....	29.82	757.4	75	23.9	68	SE	8	3.6	.....	5cs	0	NW	.....	0	0	Fair.	
Duluth, Minn.	.....	.....	29.72	754.9	44	6.7	92	NE	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy.	
Eastport, Me.	.....	.....	30.00	762.0	50	10.0	86	E	2	0.9	.....	.....	10s	.....	W	0	0	Cloudy.	
Erie, Pa.	.....	.....	30.01	763.0	68	20.0	84	S	10	4.5	.....	.....	10n	.....	.....	0.33	8.4	Light rain.	
Escanaba, Mich.	.....	.....	29.88	758.9	59	15.0	76	SE	5	2.2	.....	0	0	.....	.....	0.01	0.3	Clear.	
Fort Gibson, Indian Ter.	.....	.....	29.86	758.4	76	24.4	72	SE	11	4.9	.....	0	8ks	.....	S	0	0	Fair.	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.62	726.9	29.66	753.4	78	25.6	65	SW	16	7.2	.....	8k	0	S	.....	0	0	Cloudy.	
Fort Sully, Dakota	27.91	708.9	29.49	749.0	57	13.9	69	NW	16	7.2	.....	0	0	.....	.....	0	0	Clear.	
Galveston, Tex.	.....	.....	30.02	762.5	81	27.2	78	SE	8	3.6	.....	5k	0	S	.....	0.03	0.8	Fair.	
Grand Haven, Mich.	.....	.....	29.98	761.5	69	20.6	79	S	21	9.4	.....	2k	2s	SW	SW	0	0	Fair.	
Indianapolis, Ind.	.....	.....	30.05	763.3	73	22.8	81	SE	5	2.2	.....	5k	0	SW	.....	0	0	Fair.	
Indianola, Tex.	.....	.....	29.98	761.5	80	26.7	82	S	12	5.4	.....	5k	0	.....	.....	0.02	0.5	Fair.	
Jacksonville, Fla.	.....	.....	30.13	765.3	78	25.6	82	E	4	1.8	.....	.....	10s	.....	E	0.35	8.9	Cloudy.	
Keokuk, Iowa.	.....	.....	29.83	757.7	75	23.9	76	S	12	5.4	.....	0	0	.....	.....	0	0	Clear.	
Key West, Fla.	.....	.....	30.07	763.8	81.0	27.2	78	S	8	3.6	.....	5cs	Haze	.....	S	Inap.	Inap.	Cloudy.	
Kittyhawk, N. C.	.....	.....	30.26	768.6	75	23.9	69	SW	10	4.5	.....	0	Haze	.....	.....	0	0	Clear.	
Knoxville, Tenn.	.....	.....	30.18	766.6	70	21.1	84	N	4	1.8	.....	1c, hz	0	.....	.....	0	0	Clear.	
La Grosse, Wis.	.....	.....	29.76	755.9	74	23.3	68	S	14	6.3	.....	.....	10s	.....	S	0	0	Cloudy.	
Leavenworth, Kan.	.....	.....	29.72	754.9	73	22.8	76	S	16	7.2	.....	.....	10s	.....	SW	0	0	Cloudy.	
Lexington, Ky.	29.05	737.9	30.12	765.0	72	22.2	85	S	4	1.8	.....	.....	10s	.....	S	0.09	2.3	Cloudy.	
Long Branch, N. J.	.....	.....	30.13	765.3	76	24.4	72	SW	9	4.0	.....	5c	0	.....	.....	0	0	Fair.	
Louisville, Ky.	.....	.....	30.09	764.3	73	22.8	76	S	8	3.6	.....	.....	10ks,n	.....	SW	0.02	0.5	Light rain.	
Lynchburg, Va.	.....	.....	30.18	766.6	75	23.9	63	SW	3	1.3	.....	0	0	.....	.....	0	0	Clear.	
Malone, N. Y.	.....	.....	29.94	760.5	68	20.0	70	SW	10	4.5	.....	.....	10ks	.....	W	0.10	2.5	Cloudy.	
Manhattan, Kan.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Marquette, Mich.	.....	.....	29.81	757.2	68	20.0	70	SW	12	5.4	.....	0	0	.....	.....	0.01	0.3	Clear.	
Memphis, Tenn.	.....	.....	30.08	764.0	75	23.9	81	S	5	2.2	.....	0	0	.....	.....	1.35	34.3	Clear.	
Milwaukee, Wis.	.....	.....	29.94	760.5	62	16.7	83	SE	7	3.1	.....	2c	Sm'e	.....	.....	0	0	Clear.	
Mobile, Ala.	.....	.....	30.10	764.5	77	25.0	77	S	2	0.9	.....	5c	0	SW	.....	0	0	Fair.	
Montgomery, Ala.	.....	.....	30.14	765.5	77	25.0	65	E	7	3.1	.....	5cs	0	.....	.....	0	0	Fair.	
Morgantown, W. Va.	.....	.....	30.12	765.0	78	25.6	69	S	1	0.4	.....	1c	0	SW	.....	0.11	2.8	Clear.	
Mt. Washington, N. H.	23.96	608.6	30.32	770.1	47	8.3	100	NW	40	17.9	.....	.....	Fog	.....	.....	1.14	29.0	Foggy.	
Nashville, Tenn.	.....	.....	30.10	764.5	76	24.4	72	W	1	0.4	.....	0	0	.....	.....	1.11	28.2	Clear.	
New Haven, Conn.	.....	.....	30.10	764.5	73	22.8	67	S	5	2.2	.....	5cs	Fog	.....	.....	0	0	Fair.	
New Lebanon, Conn.	.....	.....	30.14	765.5	69	20.6	75	SW	13	5.8	.....	5k	Haze	SW	.....	Inap	Inap.	Fair.	
New Orleans, La.	.....	.....	30.05	763.3	78	25.6	73	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Newport, R. I.	.....	.....	30.13	765.3	63	17.2	78	SW	12	5.4	.....	2cs	0	W	.....	0	0	Fair.	
New York, N. Y.	.....	.....	30.12	765.0	70	21.1	75	W	12	5.4	.....	2k	Haze	.....	.....	0	0	Clear.	
Norfolk, Va.	.....	.....	30.25	768.3	79	26.1	61	SW	7	3.1	.....	0	Haze	.....	.....	0	0	Clear.	
North Platte, Neb.	26.90	683.2	29.35	745.5	61	16.1	45	NW	18	8.0	.....	2k	0	NW	.....	0	0	Cloudy.	
Omaha, Neb.	28.68	728.5	29.70	754.4	65	18.3	89	Calm	0	0	.....	.....	10n	.....	SW	0.34	8.6	Light rain.	
Oswego, N. Y.	.....	.....	30.06	763.5	69.2	20.7	70	W	10	4.5	.....	8cs	1s	NW	.....	1.61	40.9	Fair.	
Pembina, Dakota.	.....	.....	29.44	747.8	62	16.7	82	NE	6	2.7	.....	2c	2s	.....	.....	0	0	Fair.	
Philadelphia, Penn.	.....	.....	30.15	765.8	72	22.2	75	W	10	4.5	.....	1ck	0	W	.....	0	0	Clear.	
Pike's Peak, Colorado.	17.74	476.0	29.94	760.5	19	— 7.2	52	SW	34	15.2	.....	2cs	0	.....	.....	0	0	Clear.	
Pittsburgh, Penn.	.....	.....	30.08	764.0	73	22.8	76	SW	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
Port Huron, Mich.	.....	.....	30.00	762.0	70	21.1	70	W	10	4.5	.....	0	1s	.....	.....	0.06	1.5	Clear.	
Portland, Me.	.....	.....	30.04	763.0	70	21.1	80	SW	8	3.6	.....	5k	2s	SW	.....	0.03	0.8	Cloudy.	
Portland, Oregon.	.....	.....	30.11	764.8	55	12.8	89	S	6	2.7	.....	.....	10n	.....	SW	0.03	0.8	Light rain.	
Punta Rassa, Fla.	.....	.....	30.09	764.3	78.8	26.0	82	E	8	3.6	.....	5cs	2s	W	SE	0.03	0.8	Cloudy.	
Rochester, N. Y.	.....	.....	30.03	762.7	66	18.9	84	SW	4	1.8	.....	5cs	2s	W	SW	0.29	7.4	Fair.	
Salt Lake City, Utah	25.66	651.8	29.99	761.7	51	10.6	59	SE	1	0.4	.....	5c	0	.....	.....	0	0	Fair.	
Sandy Hook, N. J.	.....	.....	30.11	764.8	78	25.6	69	SW	10	4.5	.....	0c	Haze	SW	.....	0	0	Fair.	
San Diego, Cal.	.....	.....	29.91	759.7	60	15.6	94	E	4	1.8	.....	.....	10s	.....	E	0	0	Cloudy.	
San Francisco, Cal.	.....	.....	30.05	763.3	53	11.7	86	S	4	1.8	.....	Haze	Haze	.....	.....	0	0	Hazy.	
Santa Fe, N. M.	.....	.....	29.76	755.9	48	8.9	42	NW	4	1.8	.....	1c	0	NW	.....	0	0	Clear.	
Savannah, Ga.	23.22	589.8	30.18	766.6	79	26.1	74	E	8	3.6	.....	.....	10ks	.....	SE	0	0	Cloudy.	
Shreveport, La.	.....	.....	30.07	763.8	75.5	24.2	84	S	3	1.3	.....	0	0	.....	.....	0	0	Clear.	
Smithville, N. C.	.....	.....	30.24	768.1	76	24.4	72	E	6	2.7	.....	1k	0	E	.....	0	0	Fair.	
Springfield, Mass.	.....	.....	30.09	764.3	69.5	20.8	79	S	4	1.8	.....	0	8ks	.....	W	0.03	0.8	Cloudy.	
St. Louis, Mo.	.....	.....	29.99	761.7	74	23.3	71	S	12	5.4	.....	0	0	.....	.....	0	0	Clear.	
St. Marks, Fla.	.....	.....	30.13	765.3	75	23.9	85	E	9	4.0	.....	5ck	2s	SW	E	0.23	5.8	Fair.	
St. Paul, Minn.	.....	.....	29.60	751.8	72	22.2	73	SE	26	11.6	.....	10cs	0	S	.....	0	0	Cloudy.	
St. Paul's Island, Alaska.	.....	.....	29.47	748.5	33	0.6	89	SW	25	11.2	.....	.....	10n	.....	.....	0.31	7.9	Heavy snow.	
Thatcher's Island, Mass.	.....	.....	30.07	763.8	59	15.0	87	SW	13	5.8	.....	2c	5s	W	W	0	0	Fair.	
Toledo, Ohio.	.....	.....	30.02	762.5	76	24.4	69	SW	9	4.0	.....	2k	0	SW	.....	Inap.	Inap.	Clear.	
Tucson, Arizona.	27.50	698.5	30.09	764.3	74	23.3	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear.	
Tybee Island, Ga.	.....	.....	30.17	766.3	79	26.1	74	E	14	6.3	.....	2ck	5k	SW	E	0	0	Cloudy.	
Vicksburg, Miss.	.....	.....	30.09	764.3	76	24.4	76	SE	1	0.4	.....	5c	0	SW	.....	0	0	Fair.	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Virginia City, M. T.	24.26	616.2	29.74	755.4	36	2.2	70	Calm	0	0	.....	3c	0	W	.....	0.60	15.2	Fair	
Washington, D. C.	.....	.....	30.17	766.3	77.5	25.3	63	SW	4	1.8	.....	0	Haze	.....	.....	0	0	Clear	
Wilmington, N. C.	.....	.....	30.24	768.1	77	25.0	69	E	3	1.3	.....	1cs	0	.....	.....	0	0	Clear	
Wood's Holl, Mass.	.....	.....	30.14	765.5	62	16.7	83	SW	13	5.8	.....	5c	0	NW	.....	0	0	Fair	
Wytheville, Va.	27.89	708.4	29.99	761.7	68	20.0	79	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Yankton, Dakota.	28.43	722.1	29.66	753.4	62	16.7	88	SW	10	4.5	.....	.....	10s	.....	.....	1.60	40.6	Cloudy	
Yuma, Arizona.	.....	.....	29.82	757.4	74	23.3	.....	Calm	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.01	762.2	83	28.3	79	E	4	1.8	.....	0	5s	.....	NE	0.08	2.0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.94	760.5	84	28.9	75	E	.....	.....	.....	2k	5ks	.....	.....	0	0	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.81	757.2	83	28.3	70	N	1.2	0.5	.....	8c	0	N	.....	0	0	Fair	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.03	762.7	78	25.6	86	Calm	0	0	.....	10c, ck	0	.....	.....	1.29	32.8	Cloudy	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.33	770.4	74.5	23.6	62	E	22.0	9.8	.....	0	1fk	.....	.....	0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica, W. I.	27.15	689.6	29.96	761.0	69	20.6	84	S	2.5	1.1	.....	5c	5k	S	.....	0.68	17.3	Dull	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.02	762.5	82	27.8	87	E	.....	.....	1	6k	8ks	E	.....	0	0	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.04	762.9	.....	.....	85.1	29.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.035	26.30	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.18	639.6	.....	.....	65.0	18.3	83	Calm	0	0	.....	8c	2s	.....	.....	0	0	Cloudy	Thomas Herran
York Factory, B. A.	.....	.....	29.67	753.6	59	15.0	68	S	8	3.6	.....	4cs	0	S	.....	0	0	.....	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	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 Liverpool.	30.08	764.0	50	10.0	.....	NW	.....	.....	5	.....	.....	.....	.....	.....	.....	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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) 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 389.6 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 JUNE 11, 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	.....	.....	30.02	762.6	75.6	24.2	61	WNW	.....	.....	1	.....	1	.....	.....	0	0	Clear	Charnot.
Algiers	.....	.....	30.02	762.5	70.5	21.4	68	N	.....	.....	1	.....	6	.....	.....	0	0	Fair	Peter.
La Calle	.....	.....	.....	.....	67.1	19.5	.....	NW	.....	.....	2	.....	7	.....	.....	0.020	0.5	Cloudy	Kunta.
Tunis	.....	.....	30.02	762.4	75.2	24.0	65	NE	.....	.....	3	.....	6	.....	.....	0.169	4.3	Fair	Jacques.
Sfax	.....	.....	30.00	762.1	77.0	25.0	68	NE	.....	.....	4	.....	2	.....	.....	0	0	Clear	Chauvey.
Saida	.....	.....	30.03	763.3	71.6	22.0	50	N	.....	.....	1	.....	2	.....	.....	0	0	Clear	Millot.
Tebessa	.....	.....	29.96	760.9	70.2	20.2	.....	W	.....	.....	3	.....	8	.....	.....	0.039	1 0	Cloudy	Colin.
Gerlville	.....	.....	30.04	763.1	74.3	23.5	25	WNW	.....	.....	2	.....	2	.....	.....	0	0	Clear	Buard.
Laghouat	.....	.....	30.00	761.0	86.0	30.0	25	SW	.....	.....	5	.....	6	.....	.....	0.394	10.0	Fair	Guyot.
Biskra	.....	.....	29.93	760.2	84.0	28.9	37	NW	.....	.....	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.

Agram	.....	.....	29.70	754.3	74.3	23.5	41	SW	.....	.....	4	.....	4	.....	.....	0.075	1.9	.....	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	29.72	755.0	72.7	22.6	69	W	.....	.....	3	.....	7	.....	.....	0.231	5.87	.....	Dr. Wierzbiski.
Eperies	.....	.....	29.72	754.9	75.9	24.4	62	S	.....	.....	2	.....	5	.....	N	0.445	11.30	.....	Julius Mikolik.
Gratz	28.47	723.0	29.64	752.9	65.5	18.6	79	NE	.....	.....	3	.....	8	.....	.....	0.378	9.6	.....	Andreas Rospini.
Hermannstadt	28.38	720.9	29.72	755.0	76.2	24.6	53	SE	.....	.....	3	.....	3	.....	.....	0	0	.....	Prof. Reissenberger.
Kremsmünster	28.74	730.1	30.05	763.2	67.6	19.8	81	W	.....	.....	2	.....	8	.....	.....	0.250	6.5	.....	Prof. C. Wagner.
Lemberg	.....	.....	29.71	754.7	76.3	24.6	57	SE	.....	.....	2	.....	7	.....	.....	0	0	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Pola	.....	.....	29.78	756.4	69.4	20.8	72	SW	.....	.....	1	.....	9ks	.....	.....	0.730	18.54	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	29.68	753.8	81.6	27.0	56	S	.....	.....	2	.....	8	.....	.....	0.256	6.50	.....	Karl Stancel.
Trieste	.....	.....	29.78	756.5	69.6	20.9	68	Calm	.....	.....	0	.....	1	.....	.....	0.476	12.1	.....	Prof. V. Farolfi.
Vienna	.....	.....	29.61	752.2	66.6	19.2	50	SE	.....	.....	2	.....	7	.....	.....	0.106	2.7	.....	I. R. Central Met. Obs'y.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

Brussels	.....	.....	29.98	761.6	60.3	15.7	63	N	.....	.....	3	.....	7	.....	.....	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	69.0	20.6	.....	SW	18	8.0	.....	.....	5	.....	.....	0	0	Blue sky.....	William Boswell.
Ardrossan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	William McNeil.
Armagh, Observatory	.....	.....	30.13	765.2	58.9	14.9	.....	SW	12	5.4	.....	.....	.....	.....	.....	.....	.....	.....	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	30.17	766.3	59.8	15.4	.....	W	.....	.....	1	.....	10	.....	.....	.....	.....	Gloomy.....	J. Dreyer.
Bradford	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.01	762.2	78.0	25.6	.....	NE	.....	.....	1	.....	9	.....	.....	.....	.....	Overcast.....	Sergt. J. F. Halanen, A.
Cambridge, Observatory	.....	.....	30.18	766.6	68.1	20.1	.....	N	.....	.....	2	.....	1	.....	.....	.....	.....	*D. louds....	H. Todd. [H. C.
Cardington	.....	.....	30.14	765.5	70.0	21.1	.....	N	.....	.....	1	.....	1	.....	.....	.....	.....	Blue sky.....	John McLaren.
Carlisle	.....	.....	30.08	764.0	65	18.3	.....	NW	.....	.....	1	.....	1	.....	.....	0	0	Blue sky.....	T. Bel., for J. Carmell.
Chatham, School M. E	.....	.....	30.11	764.8	62.7	17.1	.....	NE	.....	.....	1	.....	2	.....	.....	.....	.....	*D. clouds....	Capt. J. Fellowes, R.E.
Dartmoor	28.74	730.0	30.23	767.8	57.8	14.3	.....	NW	.....	.....	1	.....	6	.....	.....	.....	.....	*D. clouds....	R. E. Power.
Donaghadee	.....	.....	30.10	764.5	66	18.9	.....	W	.....	.....	3	.....	3	.....	.....	.....	.....	Blue sky	J. Mac Gowan.
Dover	.....	.....	30.12	765.0	58	14.4	.....	NE	.....	.....	3	.....	3	.....	.....	.....	.....	¼ clouded...	J. Costello.
Eccles, (near Manchester.)	.....	.....	30.18	766.6	67.9	19.9	.....	NW	3.8	1.7	.....	.....	3	.....	.....	.....	.....	*D. clouds....	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.24	768.1	61.8	16.6	.....	NW	20	8.9	.....	.....	5	.....	.....	.....	.....	*D. clouds....	The Staff.
Fort Napier, (Natal)	27.94	709.2	30.15	765.8	71.0	21.7	.....	E	.....	.....	1	.....	1	.....	.....	.....	.....	*D. clouds....	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.95	760.7	87.0	30.6	.....	NE	.....	.....	1	.....	8	.....	.....	.....	.....	Overcast.....	
Galway, Queen's College	.....	.....	30.03	762.7	57	13.9	.....	W	.....	.....	5	.....	8	.....	.....	.....	.....	Hazy.....	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.01	762.2	76.5	24.7	.....	W	.....	.....	5	.....	1	.....	.....	.....	.....	Blue sky	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	30.05	763.3	63.3	17.4	.....	SW	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast.....	Lewis Stuart.
Great Yarmouth	.....	.....	30.14	765.5	57	13.9	.....	NNE	.....	.....	4	.....	2	.....	.....	.....	.....	Blue sky.....	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	30.14	765.5	68.0	20.0	.....	NNE	.....	.....	1	.....	2	.....	.....	.....	.....	Blue sky.....	The Staff, for G. B. Airy
Guernsey	.....	.....	30.19	766.8	60	15.6	.....	NNW	.....	.....	2	.....	3	.....	.....	.....	.....	*D. clouds....	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	.....	.....	.....	.....	.....	NW	.....	.....	2	.....	2	.....	.....	.....	.....	*D. clouds....	L. J. Crossley.
Helston	.....	.....	30.24	768.1	64	17.8	.....	NW	.....	.....	4	.....	3k	.....	.....	0	0	Fine.....	M. P. Moyle.
Holyhead	.....	.....	30.17	766.3	62	16.7	.....	SSW	.....	.....	3	.....	2	.....	.....	.....	.....	Blue sky.....	John Tilston.
Kew, Observatory	.....	.....	30.14	765.5	63.2	17.3	.....	NNE	14	6.3	.....	.....	2	.....	.....	.....	.....	*D. clouds....	The Staff.
Kingstown	.....	.....	30.16	766.1	62	16.7	.....	ESE	.....	.....	3	.....	6	.....	.....	.....	.....	*D. clouds....	George Mitchell.
Leicester Museum	.....	.....	30.15	765.8	66.0	18.9	.....	N	.....	.....	2	.....	1	.....	.....	.....	.....	*D. clouds....	Wm. J. Harrison, F.G.S.
Malta, Mediterranean	.....	.....	29.93	760.2	76.0	24.4	.....	NW	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	29.96	761.0	64	17.8	.....	WSW	.....	.....	4	.....	8	.....	.....	.....	.....	¾ clouded...	W. D. Penny.
Nassau, (Bahamas	.....	.....	30.11	764.8	81.4	27.4	.....	E	.....	.....	5	.....	10	.....	.....	.....	.....	Overcast.....	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	30.13	765.3	72.1	22.3	.....	SW	.....	.....	2	.....	8k	.....	N	0	0	*D. clouds....	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.13	765.3	65.0	18.3	.....	NW	.....	.....	3	.....	3	.....	.....	.....	.....	*D. clouds....	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	30.13	765.3	65	18.3	.....	NNW	.....	.....	3	.....	1	.....	.....	.....	.....	Blue sky.....	J. Lucas.
Plymouth	.....	.....	30.21	767.1	68	20.0	.....	WNW	.....	.....	3	.....	1	.....	.....	.....	.....	*D. clouds....	John Merrifield.
Roche's Point	.....	.....	30.23	767.8	62	16.7	.....	SW	.....	.....	3	.....	5	.....	.....	.....	.....	Fine.....	W. Kennedy.
Saint Ann's Head	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John C. Walker.
Saint Helier, (Jersey)	.....	.....	30.18	766.6	62.4	16.9	.....	NE	.....	.....	3	.....	0	.....	.....	.....	.....	Clear.....	A. P. Amy.
Sandwick Manse, Orkneys	.....	.....	29.91	759.7	57.8	14.3	.....	SW	11	4.9	.....	.....	10	.....	.....	.....	.....	Drizzling.....	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. Shaw.
Scutari Cemetery Turkey	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.12	765.0	60.3	15.7	.....	NW	.....	.....	1	.....	6	.....	.....	0	0	*D. clouds....	W. F. Cooper.
Silloth Rectory	.....	.....	30.13	765.3	68.6	20.3	65	SW	.....	.....	1	.....	0	.....	.....	0.080	2.03	Blue sky.....	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	30.13	765.3	64.0	17.8	.....	W	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.	.....	.....	29.88	758.9	58	14.4	.....	WSW	.....	.....	6	.....	10	.....	.....	.....	.....	Showery.....	John Smith.
Stratfield Turgiss	.....	.....	30.14	765.5	68.3	20.2	.....	NW	.....	.....	2	.....	0	.....	.....	.....	.....	Blue sky.....	Rev. Charles H. Griffith.
Thurso	.....	.....	29.89	759.2	63	17.2	.....	SSW	.....	.....	2	.....	8	.....	.....	.....	.....	Gloomy.....	John Trotter.
Truro, Royal Institution	.....	.....	30.23	767.8	64	17.8	.....	NW	.....	.....	6	.....	5	.....	.....	.....	.....	*D. clouds....	W. Newcombe.
Valencia, Observatory	.....	.....	30.21	767.3	57.5	14.2	.....	SW	17	7.6	.....	.....	10	.....	.....	.....	.....	Overcast.....	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man	.....	.....	.....	.....	63	17.2	.....	SW	.....	.....	3	.....	10	.....	.....	.....	.....	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.21	767.3	71.5	21.9	50	SSE	10	4.5	.....	2	4	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	29.72	754.9	62.5	16.9	82	W	.....	.....	5	.....	8k	.....	.....	0.02	0.5	.....	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	30.03	762.7	71.2	21.8	.....	W	.....	.....	3	.....	8k	.....	.....	0	0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.21	767.3	68.5	20.3	66	SE	15.1	6.8	.....	.....	8	.....	.....	0	0	*D. clouds....	C. Meldrum.
Melbourne, Observatory	.....	.....	30.21	767.3	48.2	9.0	77	N	12	5.4	.....	.....	0	.....	.....	0	0	Very fine.....	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	29.91	759.7	55	12.8	.....	W	.....	.....	3	.....	10	.....	.....	0.3	7.6	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	29.85	758.2	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, 2,210 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	.....	.....	29.80	757.0	69.1	20.6	76	NNE	.....	.....	2	.....	2	.....	.....	.....	.....	.....	.....
Fanöe	.....	.....	29.93	760.1	61.0	17.8	71	NNW	.....	.....	6	.....	5	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	29.99	761.7	37.0	2.8	89	SW	.....	.....	2	.....	10	.....	.....	.....	.....	.....	.....
Stykkisholm, (Iceland)	.....	.....	29.37	745.9	44.8	7.1	84	E	.....	.....	4	.....	10	.....	.....	.....	.....	Raining.	.....
Thorshavn, (Faröe)	.....	.....	29.65	753.1	52.9	11.6	91	SW	.....	.....	2	.....	10	.....	.....	.....	.....	Raining	.....
Vestervig	.....	.....	29.95	760.6	59.4	15.2	72	NNE	.....	.....	4	.....	2	.....	.....	.....	.....	.....	.....

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

FRENCH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	30.10	764.4	59.0	15	55	N	.....	.....	6	.....	5ks,n	.....	N	0	0	Cloudy	Normal School.
Amiens	.....	.....	30.08	763.9	63.7	17.6	66	NW	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	29.88	758.7	61.7	16.5	69	N	.....	.....	2	.....	8	.....	NNW	0.39	10.	Very cloudy	Normal School.
Bar-sur-Seine	.....	.....	29.94	760.5	59.2	10.1	91	N	.....	.....	3	.....	10	.....	N	0.945	24.0	Light rain	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.08	764.0	63.0	17.2	46	N	28.9	12.9	.....	.....	10	.....	N	0	0	Covered	Beaumette Observatory.
Beauvais	.....	.....	30.07	763.8	59.2	15.1	55	N	.....	.....	3	.....	8	.....	N	0	0	Very cloudy	Normal School.
Besançon	.....	.....	29.86	758.4	54.5	12.5	90	NW	.....	.....	2	.....	10	.....	NW	0.358	9.1	Covered	Normal School.
Bourg en Bresse	.....	.....	30.02	762.4	49.5	9.7	90	NNW	.....	.....	4	.....	..n	.....	S	.....	.....	.....	Normal School.
Bourges	.....	.....	30.06	763.4	48.6	9.2	98	NW	.....	.....	4	.....	8	.....	SE	0.850	21.6	Very cloudy	Normal School.
Brest	.....	.....	30.18	766.6	60.6	15.9	64	NNW	.....	.....	3	.....	6k	.....	NW	0	0	.....	Naval Observatory.
Carcassonne	.....	.....	30.08	763.9	58.1	14.5	84	W	.....	.....	3	.....	10	.....	E	0.114	2.9	Covered	Normal School.
Caen	.....	.....	30.057	778.67	59.9	15.5	87	ENE	.....	.....	4	..6	.....	S	.....	0	0	.....	Normal School.
Chartres	.....	.....	30.03	762.7	53.2	11.8	.....	N	.....	.....	4	.....	10	.....	.....	0	0	Covered	Normal School.
Clermont	.....	.....	29.98	761.4	48.6	9.2	84	NW	.....	.....	3	.....	10	.....	NW	1.671	39.9	Raining	Puy de Dome Obs'y.
Commercy	.....	.....	29.91	759.6	52.3	11.3	90	NW	.....	.....	4	.....	10n	.....	N	0.346	8.8	Covered	Normal School.
Commune de Greasque*	.....	.....	29.85	758.2	59.2	15.1	58	NW	.....	.....	6	.....	8	.....	NW	0.295	7.5	.....	M. Kina.
Grenoble	.....	.....	29.91	759.7	54.1	12.3	57	NW	.....	.....	6	.....	8sn	.....	SE	0.12	3.	Raining	Normal School.
La Roche-sur-Yon	.....	.....	30.11	764.9	64.0	17.8	51	NW	.....	.....	4	.....	5	.....	SW	0	0	Cloudy	Normal School.
Le Mans	.....	.....	30.10	764.5	59.4	15.2	83	NNE	.....	.....	4	.....	5	.....	NNE	0	0	Cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	29.89	759.3	50.2	10.1	95	NE	.....	.....	4	.....	8	.....	SE	0.331	8.40	Rain and fog	Normal School.
Mâcon	.....	.....	29.88	758.9	51.4	10.8	95	NW	.....	.....	4	.....	10	.....	.....	0.874	22.2	Covered	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	29.82	757.4	51.4	10.8	98	N	.....	.....	2	.....	8	.....	SW	0.51	13.	Very cloudy	Normal School.
Nismes	.....	.....	29.82	757.3	63.0	17.2	54	N	.....	.....	6	.....	5	.....	N	0	0	Cloudy	Normal School.
Orleans	.....	.....	30.02	762.4	52.5	11.4	62	N	.....	.....	2	.....	5	.....	N	0	0	Very cloudy	Normal School.
Paris, Observatory	.....	.....	30.01	762.0	56.8	13.8	58	NNE	.....	.....	4	.....	10k	.....	N	0	0	Covered	National Observatory.
Parthenay	.....	.....	30.02	762.6	61.7	16.5	83	W	.....	.....	2	.....	5	.....	NE	0.016	0.4	Cloudy	Normal School.
Privas	.....	.....	29.85	758.1	55.8	13.2	.....	NE	.....	.....	6	.....	5	.....	NE	.....	.....	Cloudy	Normal School.
Rochefort, Observatory	.....	.....	30.12	765.1	67.6	19.8	58	NW	.....	.....	3	.....	8	.....	SE	0	0	¾ Covered	Naval Observatory.
Rouen	.....	.....	30.11	764.7	58.8	14.9	71	WNW	.....	.....	3	.....	2	.....	N	0	0	Slightly cl'd	Normal School.
Saint Lo	.....	.....	29.82	757.3	59.0	15	78	N	.....	.....	1	.....	8	.....	N	0	0	.....	Normal School.
Tarbes	29.01	736.6	30.08	764.0	59.9	15.5	.....	W	.....	.....	2	.....	10	.....	.....	0.79	20.	Raining	Normal School.
Villefranche	.....	.....	29.94	760.5	52.0	11.1	90	NW	.....	.....	6	.....	10	.....	S	1.835	46.6	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.86	758.4	77.7	25.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	Blank	Blank	.....	L'Abbé Marchesi.
Marseilles	.....	.....	29.79	756.6	63.1	17.3	51	NW	.....	.....	2	.....	7	.....	.....	0	0	Cloudy	Marseilles Observatory.
Mont-Louis	.....	.....	30.18	766.6	44.8	7.1	72	NNW	14.9	6.66	.....	.....	8	.....	W	0.205	5.2	.....	—. Faigière.
Montsouris, Paris	.....	.....	30.03	762.7	58.1	14.5	60	NNW	.....	.....	3	.....	10	.....	.....	Inap.	Inap.	.....	Montsouris Observatory.
Perpignan	.....	.....	29.99	761.7	57.9	14.4	58	NW	29.8	13.33	.....	.....	7	.....	W	0	0	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.03	762.8	58.8	14.9	63	N	.....	.....	3	.....	10	.....	.....	0	0	Very cloudy	E. Renou.
Toulouse	.....	.....	30.16	766.0	50.4	10.2	80	W	.....	.....	4	.....	10	.....	.....	0.393	7.7	.....	Toulouse Observatory.
Tours	.....	.....	30.08	764 0	57.6	14.2	61	NNE	.....	.....	1	.....	10	.....	NNW	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.04	762.9	58.6	14.8	68	NE	.....	.....	4	.....	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 1,886.40 meters, or 5,204.8 feet; Clermont 388 m., or 1,272.9 ft; Commune de Greasque, 322 m., or 1,036.4 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.

Bamberg	.....	.....	29.66	753.3	64.8	18.2	86	NE	.....	.....	6	.....	8	NE	.....	0.591	15.0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.77	756.2	72.5	22.5	72	NW	.....	.....	2	.....	8	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	29.74	755.3	80.8	27.1	40	SE	.....	.....	3	.....	3	.....	.....	0	0	.....	Dr. P. Saugelmeier.
Carlsruhe	.....	.....	29.76	755.9	55.0	12.8	100	NW	.....	.....	3	.....	10	.....	.....	0.630	16.0	Raining	A. Senz.
Cassel	.....	.....	29.89	759.3	65.3	18.5	67	NNW	.....	.....	4	.....	10	NW	.....	Inap.	Inap.	.....	Dr. H. Möhl
Emden	.....	.....	30.01	762.2	58.8	14.9	73	NNW	.....	.....	6	.....	3	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.85	758.1	62.2	16.8	69	NE	.....	.....	5	.....	10	.....	.....	0.193	4.9	.....	Physical Society.
Friedrichshafen	.....	.....	29.07	753.5	57.2	14.0	94	W	.....	.....	4	.....	10	.....	.....	4.012	101.9	Raining	M. Wilhelm.
Hamburg	.....	.....	29.89	759.1	63.7	17.6	77	N	.....	.....	2	.....	9sk	.....	.....	0	0	.....	Captain F. Hegemann.
Kiel	.....	.....	29.88	758.9	60.6	15.9	83	NNW	.....	.....	3	.....	10	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.83	757.7	81.9	27.7	40	SE	.....	.....	5	.....	5	.....	.....	0	0	.....	Prof. E. Lohse.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	29.81	757.1	61.7	16.5	82	N	.....	.....	3	.....	10	NNE	.....	0.051	1.3	.....	Prof. Brulins.
Memel	.....	.....	29.91	759.8	82.6	28.1	34	SSE	.....	.....	2	.....	4k	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.91	759.8	64.0	17.8	76	.....	.....	.....	2	.....	3	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.84	757.9	71.6	22.0	76	ENE	.....	.....	4	.....	3	.....	.....	0	0	.....	A. Lothes.
Posen	.....	.....	29.78	756.3	82.0	27.8	46	E	.....	.....	4	.....	8	.....	.....	0.197	5.0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.78	756 5	55.2	12.9	90	NE	.....	.....	2	.....	10	NE	.....	0.051	1.3	.....	Dr. Schur.
Stuttgart	.....	.....	29.73	755.1	57.7	14.3	92	N	.....	.....	2	.....	10	.....	.....	0.335	8.5	Light rain	Prof. Schoder.
Thorn	.....	.....	29.75	755.7	76.1	24.5	65	SE	.....	.....	3	.....	9	.....	.....	0.340	8.8	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.84	757.9	56.8	13.8	77	NE	.....	.....	6	.....	10	.....	.....	0.189	4.8	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	29.72	755.0	64.2	17.9	86	N	.....	.....	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			29.90	759.5	81.1	27.3		SW										Clear	

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

ITALIAN SERIES.

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

Udine			29.76	755.8	64.9	18.3	75	SW	1.3	0.6			5			2.614	66.4		
Padua			29.75	755.6	62.1	16.7	77	N	9.8	4.4			8	S		1.917	48.7		
Vicenza			29.76	755.8	62.4	16.9	76	S	3.1	1.4			10	W		0.024	0.6		
Verona			29.75	755.6	67.3	19.6	75	E			1		10			0	0		
Bergamo	28.41	721.7	29.70	754.3	57.2	14.0	78	E			1		10			0	0		
Domodossola	28.71	729.2	29.70	754.4	59.4	15.2	93	Calm			0		10			0.264	6.7		
Milan			29.74	755.3	64.7	18.0	77	SW			1		10	SW		0.276	7.0		
Pavia			29.74	755.4	64.0	17.8	71	SE			1		9	SW		0.059	1.5		
Moncalieri			29.73	755.1	60.3	15.7	86	ESE	4.9	2.2			10	E		0.016	0.4		
Mondovi	27.85	707.3	29.71	754.6	56.7	13.7	85	NNW			2		10			0.236	6.0		
Porto Maurizio			29.75	755.6	71.8	22.1	57	SW			2		9	NE		0	0		
Genoa			29.72	755.0	65.5	18.6	71	Calm	0	0			10	N		0.193	4.9		
Piacenza			29.76	755.9	57.7	14.3	89	E	6.3	2.8			10			0.157	4.0		
Parma			29.74	755.3	62.4	16.9	83	ENE			2		10			0.071	1.8		
Bologna			29.72	755.0	60.4	15.8	48	ESE			6		8	E		0.512	13.0		
Florence			29.80	757.0	64.4	18.0	86	S			2		10	SW		0.433	11.0		
Leghorn			29.77	756.1	67.1	19.5	65	S	9.4	4.2			9			0.626	15.9		
Siena	28.57	725.7	29.75	755.7	64.4	18.0	74	S	4.2	1.9			9	S		0.945	24.0		
Urbino																			
Pesaro																			
Ancona			29.82	757.5	72.7	22.6	55	S			4		8			0.201	5.1		
Grosseto																			
Rome			29.88	759.0	71.1	21.7	55	SSW	21.7	9.7			6	SSW		0	0		
Naples, O. U			29.93	760.1	77.0	25.0	48	SW			4		3	SW		0	0		
Lecce			29.92	759.9	78.1	25.6	35	W	22.4	10.0			5			0	0		
Cosenza			29.98	761.4	80.6	27.0	68	NW	3.1	1.4			9			0	0		
Riposto, (Sicily)			29.89	759.3	74.5	23.6	61	SE					9			0	0		
Palermo			29.95	760.6	70.2	21.2	68	NE	2.5	1.1	2		2	W		0	0		
Caltanissetta	28.03	711.9	29.93	760.2	75.7	24.3	39	SW			4		10			0.012	0.3		
Sub-Series.														NE		0	0		
Naples, S. R			29.96	760.9	72.1	22.3	52	SW	3.1	1.4			3	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, 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.

Tokio																			

NETHERLANDS' SERIES.

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

Flushing			30.09	764.2	57.2	14.0		NE			5								
Groningen			29.94	760.5	56.3	13.5		N			4								
Helder			30.04	763.1	52.5	11.4		NNW			4								
Utrecht			29.99	761.7	56.5	13.6	72	N			4		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.

Bergen			30.01	762.2	56.5	13.6	67	WNW	7.4	3.3			0			0	0		
Brönö			29.99	761.7				W	11	5			10			0	0		
Christiania			29.99	761.8	66.6	19.2	37	ENE	3.8	1.7			1			0	0		
Tromsö			29.93	760.1	49.6	9.8	57	SW	2	1			10			0.083	2.1		

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 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,)	.....	.....	30.47	773.8	64.9	18.3	77	E	9.4	4.20	.....	.....	6	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.04	763.1	73.0	22.8	25	NNE	9.1	4.08	.....	.....	2	.....	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.19	766.8	66.7	19.3	59	Calm	0	0	.....	.....	9	.....	.....	0	0	.....	Capt D. A. da Cunha.
Lisbon	.....	.....	30.10	764.4	72.7	22.6	25	NNE	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 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	.....	.....	29.75	755.6	65.7	24.3	67	ESE	4	2	.....	.....	10	.....	.....	.....	.....	Thunder-storm..	Astronomical Obs.
Wilna	.....	.....	29.89	759.1	84.7	29.3	30	S	4	2	.....	.....	8	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.95	760.8	88.9	31.6	26	S	4	2	.....	.....	3	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.95	760.8	78.4	23.0	60	NW	7	3	.....	.....	7	.....	.....	.....	.....	Light rain...	Central Physical Obs.
Knopio	.....	.....	29.98	761.4	61.0	16.1	71	NW	7	3	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.83	757.7	79.0	26.1	49	S	9	4	.....	.....	5	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.95	760.6	80.2	26.8	48	W	11	5	.....	.....	5	.....	.....	.....	.....	.....	Kurdukof.
Kertch	.....	.....	29 89	759.2	82.2	27.9	58	NNE	4	2	.....	.....	2	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.03	762.7	84.7	29.3	39	S	2	1	.....	.....	4	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.85	758.3	90.3	32.4	23	SE	22	10	.....	.....	5	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.77	756.2	59.2	15.1	68	NW	40	18	.....	.....	9	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	.....	.....	29.77	756.2	59.2	15.1	68	NW	40	18	.....	.....	9	.....	.....	.....	.....	.....	Ogorodnikof.
Astrakhan	28.47	723.1	29.80	756.8	84.0	28.9	30	S	9	4	.....	.....	8	.....	.....	.....	.....	.....	Physical Observatory.
Kasan	.....	.....	30.01	762.2	78.6	25.9	47	E	4	2	.....	.....	10	.....	.....	.....	.....	.....	Sebastianof.
Orenburg	.....	.....	29.98	761.5	89.8	32.1	33	Calm	0	0	.....	.....	3	.....	.....	.....	.....	.....	Physical Cabinet.
Ekaterinburg	29.02	737.2	29.97	761.1	79.0	26.1	32	N	4	2	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Nukuss	.....	.....	29.97	761.1	79.0	26.1	32	N	4	2	.....	.....	5	.....	.....	.....	.....	.....	Meteorological Obs.
Kasaly	.....	.....	29.83	757.6	83.7	28.7	21	NE	13	6	.....	.....	0	.....	.....	.....	.....	.....	
Tashkend	28.20	716.4	29.81	757.1	80.2	26.8	56	Calm	0	0	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Barnaul	.....	.....	29.70	754.3	51.3	10.7	76	W	22	10	.....	.....	6	.....	.....	.....	.....	.....	Michelson.
Yeniseisk	.....	.....	29.58	751.3	50.5	10.3	74	W	2	1	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Irkutsk	28.30	718.9	29.64	752.9	55.9	13.3	83	Calm	0	0	.....	.....	9	.....	.....	Blank	Blank	.....	Marks.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	29.89	759.2	80.6	27.0	43	SSE	11	5	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	.....	.....	.....	.....	Physical Observatory.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Nikolaievsk, on the Amoor	.....	.....	30.17	766.3	49.8	9.9	89	SE	7	3	.....	.....	10	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	55.8	13.2	95	E	11	5	.....	.....	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, 300.4? m., or 1,605.2? 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	762.9	68.7	20.4	30	N	11.2	5.00	.....	0	9	.....	.....	0	0	Cloudy.....	Royal Observatory.
San Fernando	.....	.....	30.06	763.5	70.7	21.5	59	SW	9.2	4.1	.....	3	3	S	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.

Haparanda	.....	.....	30.09	764.2	57.6	14.2	59	N	.....	.....	2	.....	0	.....	.....	0.306	23.0	.....	
Umea	.....	.....	30.11	764.8	57.0	13.9	61	SW	.....	.....	4	.....	0	.....	.....	0	0	.....	
Hernosand	.....	.....	30.11	764.7	58.3	14.6	65	SE	.....	.....	2	.....	0	.....	.....	0.364	9.0	.....	
Stockholm	.....	.....	30.00	761.9	57.2	14.0	78	N	.....	.....	2	.....	2	.....	.....	0.051	1.3	.....	
Wisby	.....	.....	29.97	761.3	57.6	14.2	83	NE	.....	.....	4	.....	0	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.04	762.9	51.4	10.8	78	NNE	9.2	4.1	.....	.....	10	.....	SW	0.019	0.49	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	28.41	721.7	29.84	757.8	56.1	13.4	90	SW	.....	.....	2	.....	10	.....	.....	0.193	4.9	Raining.	The Observatory.
Zurich	28.13	714.5	29.77	756.2	53.1	11.7	95	W	.....	.....	1	.....	10	.....	.....	2.496	64.5	Heavy rain.	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note—For Geneva the corresponding departures from the normal values are: Barometer, —4.7 mm; Thermometer, —0.9 cent.; Relative Humidity, +34 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.

Constantinople	.....	.....	29.87	758 8	84.9	29.4	52	SSW	4	2.0	.....	.....	3	.....	SW	0	0	.....	
Fao, (Persian Gulf)	.....	.....	29.87	757.0	99.1	37.3	.....	N	.....	.....	3	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.92	760.0	83.3	28.5	.....	SW	.....	.....	2	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	29.95	760.8	90.7	32.6	.....	S	.....	.....	2	.....	5	.....	.....	.....	.....	.....	
Varna	.....	.....	29.88	759.0	78.8	26.0	.....	NW	.....	.....	3	.....	8	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.92	760.0	82.9	28.3	64	W	.....	.....	2	.....	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.

Bathurst, N. B.	.....	.....	.....	.....	.....	.....	.....	SW	5	2.2	.....	0	0	.....	.....	0	0	Clear	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.19	766.8	75	23.9	.....	SW	5	2.2	.....	0	0	.....	.....	0	0	Clear	W. R. Bigg.
*Chatham, N. B.	.....	.....	30.32	770.1	48	8.9	96	N	4	1.8	.....	.....	10s	.....	N	0.33	8.4	Cloudy	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.22	767.6	52	11.1	94	NE	8	3.6	.....	.....	10n	.....	.....	0.38	9.7	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.16	766.1	62.7	17.1	91	E	.....	.....	1	.....	10s	.....	.....	0	0	Dull	James Smith, M. A.
Dalhousie, N. B.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.61	15.5	.....	H. A. Johnson.
Esquimault, B. C.	.....	.....	30.26	768.6	50.3	10.2	96	SE	1	0.4	.....	.....	10n	.....	.....	0.10	2.5	Rainy	W. H. Bevis.
Fredericton, N. B.	.....	.....	30.26	768.6	52.0	11.1	.....	NE	9	4.0	.....	.....	10s	.....	.....	0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.54	750.3	58	14.4	98	W	13	5.8	.....	6k	8ks	W	W	0.31	7.9	Cloudy	James Stewart.
Goderich, Ontario	.....	.....	30.07	763.8	79.2	26.2	68	SW	.....	.....	1	5ck	0	N	.....	0	0	Very fine	H. J. Strang, M. A.
Granton, Ontario	29.02	737.1	30.07	763.8	75	23.9	.....	S	.....	.....	1	0	0	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S.	.....	.....	30.23	767.8	55	12.8	93	S	1	0.4	.....	.....	8n	.....	.....	0.19	4.8	Cloudy	F. Allison, M. A.
*Kingston, Ontario	.....	.....	30.15	765.8	68	20.0	83	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S.	.....	.....	30.26	768.6	45.0	7.2	100	NE	5	2.2	.....	.....	10n	.....	.....	0.33	8.4	Overcast	C. H. Rigby.
*Montreal, Quebec	.....	.....	30.18	766.6	57	13.9	98	NE	9	4.0	.....	.....	10n	.....	.....	0.03	0.8	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.15	765.8	64	17.8	78	NE	7	3.1	.....	.....	Fog	.....	NE	0	0	Foggy	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.08	764.0	75	23.9	62	S	6	2.7	.....	2cs	0	S	.....	0	0	Fair	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	30.13	765.3	64	17.8	89	Calm	0	0	.....	5c	0	SW	.....	0	0	Fair	H. Morgan.
Port Hastings, N. S.	.....	.....	30.26	768.6	45.9	7.7	.....	SE	20	8.9	.....	.....	.....	.....	.....	0	0	Dull	Peter Grant.
*Port Stanley, Ontario	.....	.....	30.11	764.8	68	20.0	81	E	5	2.2	.....	0	0	.....	.....	0	0	Clear	M. Payne.
*Quebec, Quebec	.....	.....	30.23	767.8	51	10.6	93	NE	20	8.9	.....	.....	10n	.....	.....	0.01	0.3	Cloudy	Capt. Ashe, R. N.
St. John, N. B.	.....	.....	30.25	768.3	53	11.7	93	N	4	1.8	.....	.....	10ks	.....	.....	0	0	Cloudy	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.03	762.7	77	25.0	65	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	K. Stewart.
Stayner, Ontario	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. J. Cole.
Stratford, Ontario	28.86	733.0	30.08	764.0	72.7	22.6	82	Calm	0	0	.....	0	0	.....	.....	0	0	Fine	C. J. Macgregor, M. A.
*Sydney, C. B.	.....	.....	30.31	769.9	46	7.8	98	NE	4	1.8	.....	.....	10n	.....	.....	0.41	10.4	Cloudy	T. C. Hill.
*Toronto, Ontario	.....	.....	30.15	765.8	64	17.8	80	S	2	0.9	.....	6cs	5ks	W	W	0	0	Fair	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.03	762.7	73.8	23.2	81	SE	1	0.4	.....	1c	2s	.....	.....	0	0	Fine	J. Montgomery.
Sub-Series.																			
St. John's, Newfoundland	.....	.....	30.37	771.4	45	7.2	92	SE	.....	.....	.....	.....	10n	.....	.....	0	0	Dense fog	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 7. 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	74	23.3	81	Calm	0	0	.....	Haze	Haze	.....	.....	0.79	20.1	Hazy	
Alpena, Mich	.....	.....	29.97	761.2	65	18.3	83	SE	1	0.4	.....	0	Haze	.....	.....	0	0	Clear	
Atlantic City, N. J	.....	.....	30.17	766.3	67	19.4	90	SW	6	2.7	.....	1cs	Haze	.....	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.11	764.8	76	24.4	77	NE	7	3.1	.....	10k	0	NE	.....	0	0	Cloudy	
Baltimore, Md	.....	.....	30.17	766.3	72	22.2	80	S	4	1.8	.....	5ck	0	.....	.....	Inap.	Inap.	Fair	
Barnegat, N. J	.....	.....	30.16	766.1	70	21.1	75	SW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Benton, Montana	27.29	693.2	30.00	764.3	53	11.7	68	SW	3	1.3	.....	0	0	.....	.....	0.08	2.0	Clear	
Bismarck, Dakota	28.13	714.5	29.74	755.4	52	11.1	60	W	7	3.1	.....	1c	5ks	W	W	Inap.	Inap.	Fair	
Boston, Mass	.....	.....	30.14	765.5	70	21.1	84	NW	4	1.8	.....	5cs	Fog	NW	.....	Inap.	Inap.	Foggy	
Breckenridge, Minn	.....	.....	29.73	755.1	55	12.8	87	W	10	4.5	.....	10cs	0	W	.....	0	0	Cloudy	
Buffalo, N. Y	.....	.....	30.10	764.5	66	18.9	74	W	3	1.3	.....	0	1ks	.....	.....	0	0	Clear	
Burlington, Vt	.....	.....	30.17	766.3	69	20.6	65	N	2	0.9	.....	2k	0	.....	.....	0	0	Fair	
Cairo, Ill	.....	.....	30.02	762.5	74	23.3	72	S	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Cape Hatteras, N. C	.....	.....	30.15	765.8	79	26.1	78	S	10	4.5	.....	5k	0	.....	.....	0	0	Fair	
Cape Henry, Va	.....	.....	30.22	767.6	73	22.8	85	SE	2	0.9	.....	5k	Haze	SW	.....	0	0	Fair	
Cape Lookout, N. C	.....	.....	30.10	766.8	70	20.1	77	S	2	0.9	.....	0	5ks	.....	S	0	0	Fair	
Cape May, N. J	.....	.....	30.17	766.3	71	21.7	85	S	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Charleston, S. C	.....	.....	30.12	765.0	78	22.8	90	E	4	1.8	.....	.....	10n	.....	E	0.56	14.2	Light rain	
Cheyenne, Wyoming	24.09	611.9	30.03	762.7	51	10.6	37	W	8	3.6	.....	1c	2s	W	.....	0	0	Fair	
Chicago, Ill	.....	.....	29.90	759.4	77	25.0	69	S	13	5.8	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	30.04	763.0	74	23.3	76	S	2	0.9	.....	0	Haze	.....	S	Inap.	Inap	Clear	
Cleveland, Ohio	.....	.....	30.12	765.0	70.7	21.5	72	SE	5	2.2	.....	0	Sm'e	.....	SE	0	0	Clear	
Colorado Springs, Col	24.18	614.2	30.05	763.3	46	7.8	61	N	4	1.8	.....	2c	1ks	SE	.....	Inap.	Inap.	Fair	
Corsicana, Tex	.....	.....	29.94	760.5	75	23.9	87	SE	6	2.7	.....	5k	0	S	.....	0	0	Fair	
Davenport, Iowa	.....	.....	29.81	757.2	70	21.1	72	S	16	7.2	.....	7cs	0	SW	.....	0	0	Fair	
Denison, Tex	.....	.....	30.05	763.3	67	19.4	78	NE	8	3.6	.....	.....	10s	.....	NE	0	0	Threatening	
Denver, Col	24.88	631.9	30.10	764.5	52	11.1	53	S	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Detroit, Mich	.....	.....	30.05	763.3	78	25.6	53	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Dodge City, Kan	27.42	696.5	29.65	753.1	60	15.6	82	SW	8	3.6	.....	0	2s	.....	.....	0	0	Fair	
Dubuque, Iowa	.....	.....	29.81	757.2	70	21.1	84	SE	4	1.8	.....	5cs	0	S	.....	2.52	64.0	Fair	
Duluth, Minn	.....	.....	29.72	754.9	53	11.7	86	Calm	0	0	.....	5k	0	SW	.....	0.04	1.0	Fair	
Eastport, Me	.....	.....	30.16	766.1	53	11.7	100	N	3	1.3	.....	.....	Fog	.....	.....	Inap.	Inap.	Foggy	
Erie, Pa	.....	.....	30.08	764.0	76	24.4	60	S	5	2.2	.....	0	Haze	.....	.....	0.04	1.0	Clear	
Escanaba, Mich	.....	.....	29.85	758.2	63	17.2	78	S	10	4.5	.....	5k	0	S	.....	0	0	Fair	
Fort Gibson, Indian Ter	.....	.....	29.98	761.5	64	17.8	94	SE	10	4.5	.....	.....	10n	.....	.....	0.92	23.4	Heavy rain	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T	28.74	729.7	29.80	756.9	69	20.6	75	NE	16	7.2	.....	.....	10s	.....	NE	6	0	Cloudy	
Fort Sully, Dakota	28.29	716.3	29.80	756.9	61	16.1	66	NW	4	1.8	.....	5c	0	.....	.....	0	0	Fair	
Galveston, Tex	.....	.....	29.98	761.5	81	27.2	74	SE	4	1.8	.....	2k	0	SW	.....	0.04	1.0	Fair	
Grand Haven, Mich	.....	.....	29.94	760.5	78	25.6	67	S	20	8.9	.....	1c	Haze	.....	.....	0	0	Clear	
Indianapolis, Ind	.....	.....	30.02	762.5	78	25.6	65	SE	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Indianola, Tex	.....	.....	29.95	760.7	83	28.3	66	SE	10	4.5	.....	8k	0	S	.....	0	0	Cloudy	
Jacksonville, Fla	.....	.....	30.02	762.5	79	26.1	82	NE	4	1.8	.....	.....	10s	.....	.....	0.24	6.1	Cloudy	
Keokuk, Iowa	.....	.....	29.77	756.1	79	26.1	69	W	8	3.6	.....	8c	0	W	.....	0	0	Fair	
Key West, Fla	.....	.....	30.02	762.5	81.2	27.3	78	SE	12	5.4	.....	10k	1ks	SE	.....	0	0	Cloudy	
Kittyhawk, N. C	.....	.....	30.23	767.8	74	22.2	90	SE	8	3.6	.....	5k	Haze	SW	.....	0	0	Fair	
Knoxville, Tenn	.....	.....	30.13	765.3	73	22.8	81	SW	4	1.8	.....	2ck,k	0	E	.....	0	0	Fair	
La Crosse, Wis	.....	.....	29.82	757.4	68	20.0	84	S	6	2.7	.....	.....	10s	.....	S	1.76	44.7	Cloudy	
Leavenworth, Kan	.....	.....	29.90	759.4	66	18.9	84	Calm	0	0	.....	.....	10s	.....	.....	1.55	39.4	Cloudy	
Lexington, Ky	29.01	737.0	30.10	764.5	73	22.8	80	S	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Long Branch, N. J	.....	.....	30.15	765.8	71	21.7	85	SW	3	1.3	.....	0	5ks	.....	W	0	0	Fair	
Louisville, Ky	.....	.....	30.06	763.5	74	23.3	81	Calm	0	0	.....	0	0	.....	.....	0.46	11.7	Clear	
Lynchburg, Va	.....	.....	30.17	766.3	70	24.4	67	S	3	1.3	.....	0	0	.....	.....	0.20	5.1	Clear	
Malone, N. Y	.....	.....	30.12	765.0	69	20.6	70	NE	4	1.8	.....	0	0	.....	.....	0.11	2.8	Clear	
Manhattan, Kan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Marquette, Mich	.....	.....	29.80	756.9	68	20.0	79	S	8	3.6	.....	5cs	0	S	.....	0	0	Fair	
Memphis, Tenn	.....	.....	30.03	762.7	75	23.9	76	SE	4	1.8	.....	5k	0	SW	.....	0	0	Fair	
Milwaukee, Wis	.....	.....	29.90	759.4	73	22.8	81	SW	14	6.3	.....	5k	Sm'e	SW	.....	0	0	Fair	
Mobile, Ala	.....	.....	30.04	763.0	73	22.8	85	E	3	1.3	.....	10ck	0	S	.....	0.53	13.5	Cloudy	
Montgomery, Ala	.....	.....	30.08	764.0	74	23.3	81	NE	6	2.7	.....	8ck	0	.....	.....	Inap.	Inap.	Cloudy	
Morgantown, W. Va	.....	.....	30.13	765.3	76	24.4	64	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Mt. Washington, N. H	24.08	611.6	30.44	773.2	48	8.9	100	NW	14	6.3	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn	.....	.....	30.06	763.5	78	25.6	61	SE	3	1.3	.....	2c	0	.....	.....	0	0	Clear	
New Haven, Conn	.....	.....	30.14	765.5	71	21.7	79	Calm	0	0	.....	5k	Fog	W	.....	Inap.	Inap.	Fair	
New York, Conn	.....	.....	30.16	766.1	71	21.7	80	W	3	1.3	.....	2ck	8s	W	W	Inap.	Inap.	Fair	
New Orleans, La	.....	.....	30.00	762.0	75.5	24.2	83	NE	10	4.5	.....	5k	5ks	NE	NE	Inap.	Inap.	Cloudy	
Newport, R. I	.....	.....	30.15	765.8	65	18.3	83	Calm	0	0	.....	8ck	0	W	.....	0.03	0.8	Cloudy	
New York, N. Y	.....	.....	30.15	765.8	70	21.1	84	SW	6	2.7	.....	10k	Fog	W	.....	0	0	Foggy	
Norfolk, Va	.....	.....	30.22	767.6	81	27.2	66	S	4	1.8	.....	5k	0	SW	.....	0	0	Fair	
North Platte, Neb	.....	.....	30.22	767.6	81	27.2	66	S	4	1.8	.....	5k	0	SW	.....	0	0	Clear	
Omaha, Neb	27.00	685.8	29.49	749.0	58	14.4	75	Calm	0	0	.....	2k	0	SW	.....	0	0	Clear	
Oswego, N. Y	28.83	732.3	29.56	758.4	63	17.2	100	Calm	0	0	.....	.....	Fog	.....	.....	0.70	17.8	Foggy	
Peninsula, Dakota	.....	.....	30.13	765.3	70	21.1	82	Sc	1	0.4	.....	0	Haze	.....	.....	0	0	Clear	
Philadelphia, Penn	.....	.....	29.55	750.6	60	15.6	82	W	8	3.6	.....	5k	0	NW	.....	0.12	3.0	Fair	
Pike's Peak, Colorado	.....	.....	30.17	766.3	71	21.7	85	SW	7	3.1	.....	5k	0	SW	.....	0	0	Fair	
Pittsburgh, Penn	17.87	453.9	30.08	764.0	21	— 6.1	60	NW	8	3.6	.....	8cs	0	W	.....	0.07	1.8	Fair	
Port Huron, Mich	.....	.....	30.12	765.0	71	21.7	75	SE	1	0.4	.....	0	Fog	.....	.....	0	0	Clear	
Portland, Me	.....	.....	30.07	763.8	73	22.8	71	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Portland, Oregon	.....	.....	30.22	767.6	58	14.4	88	SE	6	2.7	.....	.....	Fog	.....	.....	0.05	1.3	Foggy	
Punta Rassa, Fla	.....	.....	30.37	771.4	54	12.2	93	Calm	0	0	.....	.....	Fog	.....	.....	0.16	4.1	Foggy	
Rochester, N. Y	.....	.....	30.01	762.0	75.3	24.1	90	E	8	3.6	.....	.....	10s	.....	SE	0.31	7.9	Cloudy	
Salt Lake City, Utah	.....	.....	30.09	764.3	73	22.8	68	W	2	0.9	.....	0	Haze	.....	.....	0	0	Clear	
Sandy Hook, N. J	25.76	654.3	30.09	764.3	55	12.8	50	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
San Diego, Cal	.....	.....	30.13	765.3	72	22.2	85	W	5	2.2	.....	.....	8ks	.....	.....	0	0	Cloudy	
San Francisco, Cal	.....	.....	29.91	759.7	62	16.7	88	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Santa Fé, N. M	.....	.....	30.03	762.5	57	13.9	58	SW	2	0.9	.....	Haze	0	.....	.....	0	0	Clear	
Savannah, Ga	23.32	592.3	29.86	758.4	50	10.0	51	E	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Shreveport, La	.....	.....	30.07	763.8	77	25.0	80	SE	5	2.2	.....	.....	10s	.....	SE	0.03	0.8	Cloudy	
Smithville, N. C	.....	.....	30.04	763.0	77.5	25.3	77	SE	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Springfield, Mass	.....	.....	30.18	766.6	79	26.1	78	E	8	3.6	.....	8k	0	SE	.....	0	0	Cloudy	
St. Louis, Mo	.....	.....	30.14	765.5	69.5	20.8	84	NE	4	1.8	.....	.....	10ks	.....	.....	Inap.	Inap.	Cloudy	
St. Marks, Fla	.....	.....	29.98	761.0	75	23.9	68	S	12	5.4	.....	2c	0	.....	.....	0	0	Fair	
St. Paul, Minn	.....	.....	30.03	762.7	73	22.8	90	NE	4	1.8	.....	.....	10s	.....	.....	0.57	14.5	Cloudy	
St. Paul's Island, Alaska	.....	.....	29.74	755.4	68	20.0	69	SW	8	3.6	.....	10cs	0	SW	.....	0	0	Cloudy	
Thatcher's Island, Mass	.....	.....	29.60	751.8	34	1.1	90	SE	18	8.0	.....	.....	10s	.....	.....	0.14	3.6	Cloudy	
Toledo, Ohio	.....	.....	30.16	766.1	56	13.3	93	N	7	3.1	.....	.....	.....	.....	.....	0	0	Dense fog	
Tucson, Arizona	.....	.....	30.03	762.7	77	25.0	69	SW	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga	27.59	698.5	30.09	764.3	76	24.4	.....	S	.....	.....	.....	5c	Haze	E	.....	0	0	Fair	
Vicksburg, Miss	.....	.....	30.05	763.3	75	23.9	90	SE	4	1.8	.....	.....	10s	.....	.....	0.25	6.3	Threa ening	
	.....	.....	30.03	762.7	76	24.4	70	SE	1	0.4	.....	1c	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.	24.40	619.8	29.88	758.9	43	6.1	75	W	4	1.8	.....	10k	0	SW	.....	0.08	2.0	Cloudy	
Washington, D. C.	.....	.....	30.16	766.1	75	23.9	76	SW	4	1.8	.....	1ck	1ks	W	.....	2.03	51.6	Fair	
Wilmington, N. C.	.....	.....	30.18	766.6	78	25.6	82	E	4	1.8	.....	5c	1ks	W	E	0	0	Fair	
Wood's Holl, Mass.	.....	.....	30.17	766.3	63	17.2	83	SW	6	2.7	.....	5k	0	NW	.....	0	0	Fair	
Wytheville, Va.	27.88	708.1	30.01	762.2	61	16.1	94	Calm	0	0	.....	.....	Fog	.....	.....	0.14	3.6	Dense fog	
Yankton, Dakota	28.66	728.0	29.90	759.4	62	16.7	68	SW	1	0.4	.....	5c	0	W	.....	0	0	Fair	
Yuma, Arizona	.....	.....	29.84	757.9	73	22.8	.....	W	.....	.....	.....	0	0	.....	.....	0	0	Clear	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.04	763 0	79	26.1	82	Calm	0	0	.....	.....	10n	.....	.....	1.30	33.0	Light rain	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.92	760.0	82	27.8	83	E	.....	.....	.....	8cs,c	.....	.....	.....	0.66	16.8	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.14	765.5	80	26.7	74	Calm	0	0	.....	2c	2s	.....	.....	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.78	756.4	83	28.3	67	N	1.2	0 5	.....	4c	4s	NE	.....	0	0	Fair	Robert Mason.
Havana, Cuba, W. I.	.....	.....	29.99	761.7	80	26.7	82	SE	2.4	1.1	.....	10c	0	.....	.....	0	0	Cloudy	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.26	768.6	75.0	23.9	75	E	22.0	9.8	.....	1cs	5fk	.....	.....	0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica, W. I.	27.17	690.1	29.94	760.5	70	21.1	84	S	2.0	0.9	.....	0	5k	.....	.....	0.54	13.7	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.02	762.5	79	26.1	86	SE	.....	.....	3	.....	10n	.....	SE	0.48	12.19	Rainy	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.08	763.9	.....	.....	84.2	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.315	8.00	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.19	639.8	.....	.....	64.0	17.8	81	Calm	0	0	.....	6ck	2s	.....	.....	0	0	Fair	Thomas Herran
York Factory, B. A.	.....	.....	29.49	749.0	53.5	11.9	80	NW	6	2.7	.....	4c	0	W	.....	0	0	.....	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. L. Clarke.
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Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	Weather.	Observer.
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....
Steamer Nova Scotian	At Liverpool.	.....	.....	.....	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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,264.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) 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, 5.18 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, 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 JUNE 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	75.6	24.2	46	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.08	763.9	72.0	22.2	69	Calm			0		0			0	0	Clear	Peter.
La Calle					72.5	22.5		SSW			2		3			0.047	1.2	Fair	Kunts.
Tunis			30.05	763.3	72.3	22.4	63	E			3		5			0.087	2.2	Fair	Jacques.
Sfax			30.08	764.0	73.4	23.0	66	NE			4		1			0	0	Clear	Chauvey.
Saida			30.12	765.0	74.3	23.5	27	NNW			1		1			0	0	Clear	Millot.
Tebessa			30.02	762.5	65.8	18.8		N			3		6			0.039	1.0	Fair	Colin.
Geriville			30.12	765.1	72.1	22.3	31	NNW			2		2			0	0	Clear	Buard.
Laghouat			30.12	765.0	87.8	31 0	27	NE			2		2			0	0	Clear	Guyot.
Biskra			30.06	763.4	85.1	29.5	24	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.

Agram			29.75	755.6	70.9	21.6	53	SW			2	4			0.157	4.0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.76	756.0	75.9	24.4	59	NE			2	4			0.034	0.86		Dr. Wierzbiski.
Eperies			29.75	755.7	73 9	23.3	74	Calm			0	9		NE	0.114	2.90		Julius Mikolik.
Gratz	28.52	724.5	29.71	754.5	63.5	17.5	74	NW			4	7			0.039	1.0		Andreas Rospini.
Hermannstadt	28.36	720.3	29.69	754.0	81.9	27.7	41	SE			3	4			0.963	24.45		Prof. Reissenberger.
Kremsmünster	28.89	733.9	30.21	767.2	62.2	16.8	61	W			2	10			0	0		Prof. C. Wagner.
Lemberg			29.71	754.5	79.0	26.1	55	S			1	7			0	0		Dr. T. Stanecki.
Nyiregyhaza																		Habzsuda Daniel.
Pola			30.80	756.9	70.0	21.1	73	S			2	4ck			0.265	6.72		I.R.Hydrographic Office.
Szegedin			29.78	756.3	70.5	21.4	60	S			1	10			0.035	0.90		Karl Stancel.
Trieste			29.81	757.1	68.5	14.7	92	ESE			1	10			2.815	71.5	Thunder-storm	Prof. V. Farolfi.
Vienna			29.70	754.3	71.8	22.1	48	SE			3	3			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 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.

Brussels			29.98	761.5	63.0	17.2	53	NW			3	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	.....	.....	29.99	761.7	52.7	11.5	.....	E	11	4.9	.....	.....	4	.....	.....	0.010	0.25	Blue sky.....	William Boswell.
Ardrossan	.....	.....	30.03	762.7	59	15.0	.....	SW	.....	.....	2	.....	4	.....	.....	.....	.....	*D. clouds....	William McNeil.
Armagh, Observatory	.....	.....	30.05	763.3	56.0	13.3	.....	WNW	4	1.8	.....	.....	9	.....	.....	.....	.....	Overcast.....	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	30.08	764.0	63.3	17.4	.....	WSW	... ...	.....	1	.....	10	.....	.....	.....	.....	*D. clouds....	J. Dreyer.
Bradford	.....	.....	29.99	761.7	66.8	19.3	.....	W	.....	.....	1	.....	2	.....	.....	0	0	Blue sky.....	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.00	762.0	82.0	27.8	.....	NE	.....	.....	2	.....	7	.....	.....	.....	.....	*D. clouds....	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory	.....	.....	30.02	762.5	76.0	24.4	.....	WNW	.....	.....	1	.....	7	.....	.....	.....	.....	*D. clouds....	H. Todd.
Cardington	.....	.....	30.03	762.7	77.0	25.0	.....	W	.....	.....	1	.....	8	.....	.....	.....	.....	Overcast.....	John McLaren.
Carlisle	.....	.....	29.99	761.7	61.4	16.3	.....	W	.....	.....	0	.....	8	.....	.....	0.10	2.5	*D. clouds....	T. Bell, for J. Carmell.
Chatham, School M. E	.....	.....	30.02	762.5	72.7	22.6	.....	NE	.....	.....	1	.....	8	.....	.....	.....	.....	Blue sky.....	Capt. J. Fellowes, R.E.
Dartmoor	28.70	729.0	30.19	766.8	58.9	14.9	.....	NW	.....	.....	1	.....	6	.....	.....	.....	.....	*D. clouds....	R. E. Power.
Donaghadee	.....	.....	30.03	762.7	57	13.9	.....	NNE	.....	.....	2	.....	8	.....	.....	.....	.....	*D. clouds....	J. Mac Gowan.
Dover	.....	.....	30.04	763.0	62	16.7	.....	S	.....	.....	1	.....	2	.....	.....	.....	.....	¼ clouded...	J. Costello.
Eccles, (near Manchester.)	.....	.....	30.02	762.5	65.9	18.8	.....	NNW	4.6	2.1	.....	.....	10	.....	.....	.....	.....	Gloomy.....	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.14	765.5	65.1	18.4	.....	NW	16	7.2	.....	.....	5	.....	.....	.....	.....	*D. clouds....	The Staff.
Fort Napier, (Natal)	27.96	710.2	30.20	767.1	64.6	18.1	.....	E	.....	.....	1	.....	1	.....	.....	.....	.....	*D. clouds....	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.94	760.5	86.0	30.0	.....	W	.....	.....	2	.....	7	.....	.....	.....	.....	*D. clouds....	
Galway, Queen's College	.....	.....	30.03	762.7	59	15.0	.....	WSW	.....	.....	4	.....	4	.....	.....	.....	.....	*D. clouds....	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.04	763.0	72.3	22.4	.....	W	.....	.....	6	.....	1	.....	.....	.....	.....	*D. clouds....	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	29.98	761.5	57.3	14.1	.....	W	.....	.....	1	.....	7	.....	.....	.....	.....	Fine.....	Lewis Stuart.
Great Yarmouth	.....	.....	30.04	763.0	62	16.7	.....	SSE	.....	.....	1	.....	1	.....	.....	.....	.....	Blue sky.....	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	30.03	762.7	74.6	23.7	.....	N	.....	.....	1	.....	7	.....	.....	.....	.....	*D. clouds....	The Staff, for G. B. Airy
Guernsey	.....	.....	30.12	765.0	60	15.6	.....	WNW	.....	.....	2	.....	5	.....	.....	.....	.....	*D. clouds....	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	30.01	762.2	66.8	19.3	.....	NW	.....	.....	2	.....	9	.....	.....	.....	.....	*D. clouds....	L. J. Crossley.
Helston	.....	.....	30.10	764.5	66	18.9	.....	NW	.....	.....	2	.....	3	.....	.....	0	0	Fine.....	M. P. Moyle.
Holyhead	.....	.....	30.05	763.3	59	15.0	.....	WNW	.....	.....	3	.....	10	.....	.....	.....	.....	.....	John Tilston.
Kew, Observatory	.....	.....	30.03	762.7	72.4	22.4	.....	NNW	6	2.7	.....	.....	6	.....	.....	.....	.....	*D. clouds....	The Staff.
Kingstown	.....	.....	30.08	764.0	60	15.6	.....	WNW	.....	.....	4	.....	7	.....	.....	.....	.....	*D. clouds....	George Mitchell.
Leicester Museum	.....	.....	30.03	762.7	69.8	21.0	.....	SW	.....	.....	1	.....	8	.....	.....	.....	.....	*D. clouds....	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)	.....	.....	29.95	760.7	74.0	23.3	.....	NE	.....	.....	1	.....	4k	.....	.....	.....	.....	*D. clouds....	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	29.95	760.7	61	16.1	.....	SW	.....	.....	1	.....	8	.....	.....	.....	.....	¾ clouded...	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.07	763.8	82.4	28.0	.....	SE	.....	.....	6	.....	7	.....	.....	.....	.....	*D. clouds....	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	30.01	762.2	75.0	23.9	.....	WSW	.....	.....	3	.....	10kn,k	.....	WSW	0.070	1.78	Overcast.....	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.01	762.2	71.2	21.8	.....	SW	.....	.....	2	.....	9	.....	.....	Blank	Blank	*D. clouds....	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	30.03	762.7	74	23.3	.....	W	.....	.....	1	.....	7	.....	....	.....	.....	*D. clouds....	J. Lucas.
Plymouth	.....	.....	30.10	764.5	69	20.6	.....	W	.....	.....	3	.....	2	.....	.....	.....	.....	*D. clouds....	John Merrifield.
Roche's Point	.....	.....	30.11	764.8	58	14.4	.....	SW	.....	.....	2	.....	10	.....	.....	.....	.....	Light Mist..	W. Kennedy.
Saint Ann's Head	.....	.....	30.09	764.3	58	14.4	.....	WNW	.....	.....	1	.....	1	.....	.....	.....	.....	Blue sky.....	John C. Walker.
Saint Helier, (Jersey)	.....	.....	30.12	765.0	60.4	15.8	.....	W	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast.....	A. P. Amy.
Sandwick Manse, Orkneys	.....	.....	29.97	761.2	52.8	11.6	.....	WSW	6	2.7	.....	.....	4	.....	.....	.....	.....	*D. clouds....	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	30.01	762.2	58.7	14.8	.....	E	.....	.....	1	.....	7	.....	W	.....	.....	*D. clouds....	F. Shaw.
Scutari Cemetery, Turkey	.....	.....	29.82	757.4	81.6	27.6	.....	SW	.....	.....	1	.....	3	.....	.....	.....	.....	*D. clouds....	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.00	762.0	69.7	20.9	.....	W	.....	.....	2	.....	10	.....	.....	0.007	1.78	Overcast.....	W. F. Cooper.
Silloth Rectory	.....	.....	30.01	762.2	66.3	19.1	67	SW	.....	.....	1	.....	7	.....	.....	0	0	*D. clouds....	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	30.01	762.2	51.0	10.1	.....	W	.....	.....	1	.....	9	.....	.....	Blank	Blank	.....	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.	.....	.....	29.92	760.0	54	12.2	.....	SW	.....	.....	4	.....	10	.....	.....	.....	.....	Raining.....	John Smith.
Stratfield Turgiss	.....	.....	30.04	763.0	73.7	23.2	.....	NW	.....	.....	1	.....	4	.....	.....	.....	.....	*D. clouds....	Rev. Charles H. Griffith.
Thurso	.....	.....	29.95	760.7	55	12.8	.....	NE	.....	.....	1	.....	5	.....	.....	.....	.....	*D. clouds....	John Trotter.
Truro, Royal Institution	.....	.....	30.15	765.8	69	20.6	.....	NW	.....	.....	5	.....	6	.....	.....	.....	.....	*D. clouds....	W. Newcombe.
Valencia, Observatory	.....	.....	30.14	765.6	56.2	13.4	.....	NW	14	6.3	.....	.....	5	.....	.....	.....	.....	*D. clouds....	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man	.....	.....	.....	.....	47	8.3	.....	NE	.....	.....	3	.....	10	.....	.....	.....	.....	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.14	765.5	69.5	20.8	46	WNW	14	6.3	.....	0	2	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	29.44	747.8	64.0	17.8	67	SW	.....	.....	5	... ...	9kn	.....	.....	0.04	1.0	Squally.....	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	29.99	761.7	61.6	16.4	.....	W	.....	.....	2	.....	7k	.....	.....	0	0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.14	765.5	.....	.....	.....	SE	14.1	6.3	.....	...	.....	.....	.....	Blank	Blank	.....	C. Meldrum.
Melbourne, Observatory	.....	.....	29.98	761.5	46.8	8 2	75	N	39	17.4	.....	.....	0	.....	.....	0	0	Fine, clear...	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	29.90	759.4	52	11.1	.....	W	.....	.....	3	5	5	SW	.....	0	0	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	29.87	758.7	52	11.1	.....	SW	.....	.....	4	2	7	S	.....	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	.....	.....	29.76	756.0	68.2	21.0	78	N	.....	.....	2	.....	4	.....	.....	.....	.....	.....	.....
Fanöe	.....	.....	29.89	759.1	62.6	17.0	48	WNW	.....	.....	6	.....	1	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	29.79	756.6	38.1	3 4	82	NE	.....	.....	1	... ...	2	.....	.....	.....	.....	.....	.....
Stykkisholm, (Iceland)	.....	.....	29.54	750.2	40.5	4.7	86	NE	.....	.....	6	.. ...	8	.....	.....	.....	.....	.....	.....
Thorshavn, (Faröe)	.....	.....	29.81	757.2	52.9	11.6	65	WSW	.....	.....	4	.. ...	5	.....	.....	.....	.....	.....	.....
Vestervig	.....	.....	29.88	758.9	63.3	17.4	76	NNE	.....	.....	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	.....	.....	30.09	764.3	60.8	16	54	NE	.....	.....	1	.....	5nk	.....	NE	0	0	Cloudy	Normal School.
Amiens	.....	.....	30.03	762.7	70.9	21.6	48	NW	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	29.88	759.0	66.2	19	60	NNW	.....	.....	6	..c	.....	.....	.....	0	0	Light clouds	Normal School.
Bar-sur-Seine	.....	.....	29.99	761.8	60.6	15.9	62	N	.....	.....	3	.....	8	.....	N	0.244	6.2	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.00	763.5	70.2	21.2	41	N	4.0	1.8	.....	.....	5	.....	N	0	0	Cloudy	Beaumette Observatory.
Beauvais	.....	.....	30.05	763.3	65.3	18.5	20	N	.....	.....	3	.....	1	.....	N	0	0	Clear	Normal School.
Besançon	.....	.....	30.00	762.0	52.9	11.6	87	W	.....	.....	2	.....	10	.....	.....	1.032	26.2	Covered	Normal School.
Bourg en Bresse	.....	.....	30.08	763.9	53.1	11.7	88	NNW	.....	.....	2	.....	..n	.....	S	.....	.....	.....	Normal School.
Bourges	.....	.....	30.04	763.1	59.9	15.5	60	NNW	.....	.....	2	.....	0	.....	.....	0.303	7.7	Clear	Normal School.
Brest	.....	.....	30.10	764.6	62.8	17.1	80	NW	.....	.....	1	.....	10	.....	.....	.....	.....	Raining	Naval Observatory.
Carcassonne	.....	.....	30.11	764.9	58.8	14.9	68	W	.....	.....	4	.....	10	.....	E	0.047	1.2	Covered	Normal School.
Caen	.....	.....	30.03?	778.1?	64.4	18	55	N	.....	.....	4	..c	.....	E	.....	0	0	.....	Normal School.
Chartres	.....	.....	30.02	762.4	71.8	22.1	.....	N	.....	.....	4	.....	3	.....	N	0	0	.....	Normal School.
Clermont	.....	.....	30.01	762.3	61.7	16.5	52	NW	.....	.....	2	.....	10	.....	N	0.071	1.8	Covered	Puy de Dome Obs'y.
Commercy	.....	.....	29.95	760.6	62.2	16.8	59	NW	.....	.....	4	.....	2k	.....	NW	0.280	7.1	Slightly cl'dy	Normal School.
Commune de Greasque*	.....	.....	29.89	759.2	65.7	18.7	57	NW	.....	.....	2	.....	8	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	29.94	760.5	57.6	14.2	89	NW	.....	.....	6	.....	10n	.....	NE	0	0	Covered	Normal School.
La Roche-sur-Yon	.....	.....	30.10	764.4	72.0	22.2	55	NW	.....	.....	2	.....	5	.....	E	0	0	Cloudy	Normal School.
Le Mans	.....	.....	30.07	763.7	68.9	20.5	75	NE	.....	.....	3	.....	5	.....	N	0	0	Cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.01	762.2	52.7	11.5	90	N	.....	.....	2	.....	5	.....	.....	0.969	24.60	Raining	Normal School.
Mâcon	.....	.....	29.98	761.5	54.0	12.2	86	NW	.....	.....	4	.....	10	.....	.....	1.30	33.	Covered	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	29.88	758.9	61.7	16.5	61	NNW	.....	.....	4	.....	8	.....	SE	0.59	15.	Very cloudy	Normal School.
Nismes	.....	.....	29.91	759.7	71.2	21.8	85	N	.....	.....	6	.....	5	.....	N	0	0	Cloudy	Normal School.
Orleans	.....	.....	29.99	761.8	65.8	18.8	34	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Paris, Observatory	.....	.....	30.03	762.8	65.7	18.7	71	NE	.....	.....	2	.....	0	.....	.....	0	0	Clear	National Observatory.
Parthenay	.....	.....	29.98	761.5	73.4	23	83	N	.....	.....	1	.....	2	.....	N	0	0	Slightly cl'dy	Normal School.
Privas	.....	.....	29.95	760.6	59.7	15.4	.....	N	.....	.....	2	.....	10	.....	N	.....	.....	Covered	Normal School.
Rochefort, Observatory	.....	.....	30.15	765.9	72.5	22.5	56	W	.....	.....	3	.....	2	.....	E	0	0	¼ covered	Naval Observatory.
Rouen	.....	.....	30.04	763.1	68.7	20.4	61	W	.....	.....	2	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Saint Lo	.....	.....	30.00	761.9	68.0	20	77	NW	.....	.....	1	.....	8	.....	W	0	0	.....	Normal School.
Tarbes	29.09	738.8	30.16	766.1	59.0	15	.....	W	.....	.....	2	.....	10	.....	.....	0.12	3.	Covered	Normal School.
Villefranche	.....	.....	30.05	763.3	54.3	12.4	87	NW	.....	.....	3	.....	10	.....	.....	0.063	1.6	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.87	758.8	79.5	26.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	Blank	Blank	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.82	757.4	68.5	20.3	46	WNW	.....	.....	3	.....	7	.....	.....	0	0	Cloudy	Marseilles Observatory.
Mont-Louis	.....	.....	30.24	768.2	46.6	8.1	77	W	9.3	4.17	.....	.....	8	.....	N	0	0	.....	—. Faiguère.
Montsouris, Paris	.....	.....	30.03	762.7	67.3	19.6	10	NNW	.....	.....	2	.....	0	.....	.....	0	0	.....	Montsouris Observ'tory.
Perpignan	.....	.....	29.98	761.6	60.8	16.0	59	NW	33.6	15.00	.....	.....	9	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.03	762.8	68.7	20.4	23	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	E. Renou.
Toulouse	.....	.....	30.18	766.6	56.3	13.5	64	W	.....	.....	3	.....	10	.....	.....	0.16	4.2	.....	Toulouse Observatory.
Tours	.....	.....	30.06	763.4	71.1	21.7	41	NNE	.....	.....	1	.....	5	.....	N	0.020	0.5	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.04	763.1	69.4	20.8	22	N	.....	.....	3	.....	0	.....	.....	0	0	Very clear	Dr. A. Bériguy.
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 1,272.9 ft; Commune de Greasque, 322 m., or 1,050.4 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.

Bamberg	.....	.....	29.69	754.2	62.6	17.0	90	N	.....	.....	4	.....	10	N	.....	0.270	7.0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.70	754.4	69.4	20.8	87	N	.....	.....	2	.....	10	.....	.....	0.161	4.1	.....	Prof. Arndt.
Breslau	.....	.....	29.77	756.2	81.3	27.4	33	SSE	.....	.....	4	.....	6	.....	.....	0	0	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	29.85	758.1	54.7	12.6	97	WNW	.....	.....	1	.....	10	.....	.....	1.524	38.7	Raining	A. Senz.
Cassel	.....	.....	29.86	758.5	57.2	14.0	84	NNW	.....	.....	8	.....	10	SSW	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	29.98	761.6	61.9	16.6	34	NW	.....	.....	3	.....	0	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.88	758.9	59.5	15.3	83	N	.....	.....	1	.....	10	.....	.....	0.209	5.3	Raining	Physical Society.
Friedrichshafen	.....	.....	29.88	759.0	55.0	12.8	94	W	.....	.....	2	.....	10	.....	.....	1.563	39.7	Raining	M. Wilhelm.
Hamburg	.....	.....	29.83	757.7	63.3	17.4	78	NW	.....	.....	4	.....	6k	NNW	.....	0.012	0.3	Fair	Captain F. Hegemann.
Kiel	.....	.....	29.82	757.4	62.2	16.8	79	N	.....	.....	2	.....	1	.....	.....	0	0	.....	Prof. F. Karston.
Königsberg, (Prussia.)	.....	.....	29.76	755.8	75.0	23.9	78	SW	.....	.....	2	.....	5	.....	.....	0	0	Thunder, lightn'g	Prof. E. Luther.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	29.77	756.2	58.5	14.7	99	WNW	.....	.....	2	.....	10	NW	.....	0.091	2.3	Heavy rain	Prof. Bruhns.
Memel	.....	.....	29.82	757.3	83.5	28.6	44	SE	.....	.....	1	.....	4k	.....	.....	0.421	10.7	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.83	757.6	67.6	19.8	64	.....	.....	.....	2	.....	3	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.78	756.4	69.8	21.0	84	NW	.....	.....	1	.....	10	.....	.....	0.228	5.8	.....	A. Lothes.
Posen	.....	.....	29.74	755.5	82.6	28.1	41	S	.....	.....	5	.....	2	.....	.....	0	0	.....	Dr. Magener.
Strassburg, in (Alsace)	.....	.....	29.91	759.6	54.9	12.7	95	N	.....	.....	1	.....	10	.....	.....	0.039	1.0	.....	Dr. Shur.
Stuttgart	.....	.....	29.82	757.5	54.9	12.7	90	NW	.....	.....	1	.....	10	.....	.....	0.689	17.5	Heavy rain	Prof. Schoder.
Thorn	.....	.....	29.73	755.2	80.6	27.0	50	SE	.....	.....	4	.....	5	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.86	758.5	66.7	19.3	49	NE	.....	.....	7	.....	6	.....	.....	0	0	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	29.71	754.6	64.4	18.0	80	NNE	.....	.....	2	.....	3	.....	.....	0	0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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			29.89	759.1	85.6	29.8		W										Sprinkling	

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

ITALIAN SERIES.

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

Udine			29.76	756.0	65.7	18.7	70	SE	1.3	0.6			8			0.102	2.6		
Padua			29.76	755.0	66.7	19.3	68	SE	6.3	2.8			10	S		0.142	3.6		
Vicenza			29.74	755.5	70.0	21.1	60	S	1.8	0.8			4	S		0	0		
Verona			29.74	755.4	73.4	23.0	53	E			1		10			0.193	4.9		
Bergamo	28.42	721.9	29.71	754.5	68.4	20.2	57	SW			2		8			0	0		
Domodossola	28.73	729.8	29.72	755.0	65.3	18.5	94	Calm			0		9			0	0		
Milan			29.77	756.2	71.2	21.8	60	WNW			4		8	ENE		0	0		
Pavia			29.77	756.1	69.8	21.0	53	W			1		7	NW		0	0		
Moncalieri			29.77	756.2	67.5	19.7	65	SSE	0.7	0.3			8	W		0.197	5.0		
Mondovi	27.91	708.8	29.77	756.1	67.3	19.6	51	NW			2		5	N		0	0		
Porto Maurizio			29.85	758.1	68.9	20.5	63	ESE			2		10			0	0		
Genoa			29.79	756.7	68.2	20.1	65	SE	4.2	1.9			8	S		0.008	0.2		
Piacenza			29.80	756.8	68.4	20.2	59	SE	1.8	0.8			7	N		0	0		
Parma			29.78	756.5	67.1	19.5	81	Calm			0		9			0.063	1.6		
Bologna			29.80	756.8	68.4	20.2	44	NW			1		5	S		0	0		
Florence			29.85	758.1	66.2	19.0	81	W			2		10	SW		0.488	12.4		
Leghorn			29.82	757.5	62.4	16.9	76	NW	9.8	4.4			10			0	0		
Siena	28.61	726.6	29.79	756.6	58.6	14.8	82	NNW	4.9	2.2			10	NE		0.131	3.4		
Urbino																			
Pesaro																			
Ancona			29.81	757 1	68.4	20.2	63	SE			4		10			0.279	7.0		
Grosseto																			
Rome			29.88	758.9	65.8	18.8	69	SSW	9.4	4.2			10			0.031	0.8		
Naples, O. U			29.91	759.8	75.2	24.0	47	SW			4		7	SW		0.091	2.3		
Lecce			29.91	759.7	73.8	23.2	58	WSW	18.6	8.3			6			0	0		
Cosenza			29.95	760.6	73.4	23.0	74	NW	1.8	0.8			9			0.256	6.5		
Riposto, (Sicily)			29.93	760.1	73.0	22.8	66	SE			2		4	W		0	0		
Palermo			29.90	759.5	72.0	22.2	56	N	13.0	5.8			1			0	0		
Caltanissetta	27.76	710.1	29.86	758.4	74.1	23.4	41	W			4		4	E		0	0		
Sub-Series.																			
Naples, S. R			29.93	760.2	70.2	21.1	54	SSW	0	0			10	WSW		0.055	1.4		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters., or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Tokio																			

NETHERLANDS' SERIES.

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

Flushing			30.06	763.5	59.4	15.2		N			2								
Groningen			29.90	759.5	60.8	16.0		NW			4								
Helder			30.00	761.9	57.7	14.3		NW			2								
Utrecht			29.96	760.9	65.1	18.4	42	N			4		0					Clear	

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.

Bergen			29.94	760.4	56.1	13.4	66	WNW	9.0	4.0			8			0	0		
Brönö			29.96	761.0	53.6	12.0	76	WSW	11	5			9			0.035	0.9		
Christiania			29.89	759.1	64.8	18.2	75	E	3.1	1.4			3			0.098	2.5		
Tromsö			29.76	755.8	55.4	13.0	55	SSW	11	5			10			0.020	0.5		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 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	66.0	18.9	79	SE	3.7	1.64	.....	.....	5	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.07	763.7	75.2	21.0	19	NNW	13.4	5.97	.....	.....	1	.....	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.21	767.4	67.1	19.5	61	SW	4.4	1.97	.....	.....	1	.....	.....	0	0	.....	Capt D. A. da Cunha.
Lisbon	.....	.....	30.17	766.4	73.4	23.0	35	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.

Warsaw	.....	.....	29.74	755.3	79.9	26.6	60	S	18	8	.....	.....	6	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.85	758.1	77.9	25.5	59	SE	9	4	.....	.....	7	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.91	759.7	84.7	29.3	34	ESE	7	3	.....	.....	1	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.95	760.8	82.4	28.0	43	NE	9	4	.....	.....	8	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.97	761.1	71.6	42.2	66	E	7	3	.....	.....	0	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.84	757.8	83.7	28.7	38	SE	9	4	.....	.....	5	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.95	760.6	83.5	28.6	49	SW	13	6	.....	.....	2	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.91	759.8	85.5	29.7	50	NNE	2	1	.....	.....	3	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.01	762.3	86.0	30.0	36	SSW	2	1	.....	.....	2	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.85	758.1	88.3	31.3	27	N	9	4	.....	.....	8	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	30.11	764.9	61.3	16.3	49	NNW	9	4	.....	.....	0	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.52	724.4	29.80	758.4	79.9	26.6	43	SW	11	5	.....	.....	9	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.96	760.9	88.0	31.1	20	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.95	760.7	80.4	30.2	43	N	4	2	.....	.....	3	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.87	733.2	29.81	757.1	77.5	25.3	40	NW	13	6	.....	.....	9	.....	.....	.....	.....	Thunder-storm..	Meteorological Obs.
Nukuss	.....	.....	29.91	759.6	89.8	32.1	25	NNE	9	4	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.23	717.0	29.82	757.4	86.0	30.0	48	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.94	760.5	49.3	9.6	54	NW	2	1	.....	.....	4	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.64	752.8	47.8	8.8	78	WNW	7	3	.....	.....	9	.....	.....	Blank	Blank	.....	Marks.
Irkutsk	28.16	715.3	29.49	749.1	56.7	13.7	71	NE	2	1	.....	.....	10	.....	.....	.....	.....	Raining.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.95	760.7	69.8	21.0	87	NW	9	4	.....	.....	10	.....	.....	Blank	Blank	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.17	766.4	51.4	10.8	92	SE	9	4	.....	.....	10	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	54.9	12.7	89	E	13	6	.....	.....	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, 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	.....	.....	30.05	763.2	68.7	20.4	32	W	3.0	1.33	.....	0	0	.....	.....	0	0	.....	Royal Observatory.
San Fernando	.....	.....	30.12	765.0	70.7	21.5	68	WSW	13.2	5.9	.....	0	2	.....	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.

Haparanda	.....	.....	30.01	762.2	59.7	15.4	66	S	.....	.....	2	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	29.98	761.6	59.7	15.4	65	SSW	.....	.....	2	.....	10	.....	.....	0	0	.....	
Hernosand	.....	.....	29.95	760.7	65.5	18.6	54	ESE	.....	.....	2	.....	2	.....	.....	0	0	.....	
Stockholm	.....	.....	29.85	758.2	73.0	22.8	58	NE	.....	.....	2	.....	5	.....	.....	0	0	.....	
Wisby	.....	.....	29.87	758.7	82.4	28.0	39	NE	.....	.....	6	.....	0	.....	.....	0	0	.....	
Upsala, Sub-Series.	.....	.....	29.88	759.0	73.8	23.2	69	SSE	9.6	4.3	.....	.....	5	S	.....	0.001	0.03	.....	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by 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	28.56	725.3	29.98	761.6	53.6	12.0	87	SSE			1		10			0.409	10.4	Raining	The Observatory.
Zurich	28.27	718.0	29.91	759.6	53.8	12.1	95	W			1		10		SW	6.759	171.7	Heavy rain..	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, —1.1 mm; Thermometer, —8.4 cent.; Relative Humidity, +31 per cent.

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

Constantinople			29.89	759 2	83.5	28.6	37	SSE	2	1.0			5		WNW	0	0		
Fao, (Persian Gulf)			29.77	756.2	96.8	36.0		NW			4		0						
Salonica			29.92	760.0	83.8	28.8		SW			1		0						
Valona			29.91	759.6	84.6	29.2		SW			2		5						
Varna			29.88	759.0	77.0	25.0		NW			3		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y.			29.85	758.1	82.0	27.8	64	N			1		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.

Bathurst, N. B			30.28	769.1	55.9	13.3	87	Calm	0	0		9				0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.20	767.1	82	27.8		Calm	0	0		0	0			0	0	Clear	W. R Bigg.
*Chatham, N. B			30.35	770.9	56	13.3	84	Calm	0	0			10ks			0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			30.35	770.9	51	10.6	94	E	10	4.5			10n			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.14	765.5	66.5	19.2	87	E			2		Haze			0	0	Foggy	James Smith, M. A.
Dalhousie, N. B			30.32	770.1	54.0	12.2	74	W			2	10cs	0			0	0		H. A. Johnson.
Esquimault, B. C			30.20	767.1	51.3	10.7	96	Calm	0	0		1cs	0			0	0	Clear	W. H. Bevis.
Fredericton, N. B			30.35	770.9	59.0	15.0	81	NE	3	1.3			10ks			0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			30.15	765 8	51	10.6	82	NW	2	0.9		2ck	5ks	NW	NW	0.41	10.4	Fair	James Stewart.
Goderich, Ontario			30.07	763.8	78.6	25.9	72	Calm			0	0	0			0	0	Very fine	H. J. Strang, M. A.
Granton, Ontario	29.00	736.6	30.05	763.3	75	23.9		S			1	0	0			0	0	Clear	James Grant.
*Halifax, N. S			30.31	769.9	54	12.2	98	SE	1	0.4			Fog			0.02	0.5	Foggy	F. Allison, M. A.
*Kingston, Ontario			30.17	766.3	75	23.9	75	Calm	0	0		0	0			0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S			30.32	770.1	59.5	15.3	95	SW	4	1.8			10n			0.11	2.8	Overcast	C. H. Rigby.
*Montreal, Quebec			30.20	767.1	61	16.1	96	NE	6	2.7			10n			0	0	Hazy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.15	765.8	70	21.1	61	N	4	1.8		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.08	764.0	74	23.3	65	E	7	3.1		2cs	0			0	0	Fair	Rev. R. Mosley.
*Port Dover, Ontario			30.09	764.3	70	21.1	80	N	3	1.3		5c	0	NE		0	0	Fair	H. Morgan.
Port Hastings, N. S			30.36	771.1	48.9	9.4		SE	3	1.3						0	0	Foggy	Peter Grant.
*Port Stanley, Ontario			30.07	763.8	74	23.3	70	E	4	1.8		2ck	0	E		0	0	Clear	M. Payne.
*Quebec, Quebec			30.27	768.8	57	13.9	87	Calm	0	0			10n		W	0	0	Cloudy	Capt. Ashe, R. N.
St. John, N. B			30.35	770.9	55	12.8	87	Calm	0	0			10s			0	0	Cloudy	G. Murdoch, C. E.
*Saugeen, Ontario			30.06	763.5	63	17.2	82	Calm	0	0		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.05	763.3	80	26.7	66	Calm	0	0		2c	0			0	0	Fair	R. J. Cole.
Stratford, Ontario	28.83	732.3	30.06	763.5	70.0	21.1	86	SE	6	2.7		0	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			30.37	771.4	56	13.3	99	SW	3	1.3			10n		SW	3.01	0.3	Cloudy	T. C. Hill.
*Toronto, Ontario			30.14	765.3	68	20.0	79	NE	5	2.2		0	0			0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.06	763.5	71.2	21.8	87	SE	3	1.3		1c	0			0	0	Fine	J. Montgomery.
Sub-Series.																			
St. John's, Newfoundland			30.53	775.4	47	8.3	92	E					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.	.....	.....	30.18	766.6	69	20.6	79	Calm	0	0	.....	.....	10s	.....	S	0	0	Cloudy.....	
Alpena, Mich	.....	.....	30.02	762.5	71	21.7	79	NW	1	0.4	.....	0	0	.....	.....	0.30	7.6	Clear.....	
Atlantic City, N. J	.....	.....	30.18	766.6	65	18.3	94	SW	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Augusta, Ga.	.....	.....	30.02	762.5	72	22.2	95	NE	9	4.0	.....	.....	10n	.....	NE	1.05	41.9	Light rain...	
Baltimore, Md	.....	.....	30.19	766.8	74	23.3	85	S	4	1.8	.....	2ck	8s	.....	SW	0	0	Fair.....	
Barnegat, N. J	.....	.....	30.20	767.1	61	16.1	100	S	8	3.6	.....	.....	Fog	.....	.....	Inap.	Inap.	Foggy	
Benton, Montana	27.42	696.5	30.22	767.6	53	11.7	68	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Bismarck, Dakota	28.49	726.2	30.16	766.1	50	10.0	32	NW	4	1.8	.....	Haze	Haze	NW	NW	0	0	Hazy.....	
Boston, Mass	.....	.....	30.28	769.1	57	13.9	100	NE	6	2.7	.....	.....	Fog	.....	NE	0.01	0.3	Foggy	
Breckenridge, Minn	.....	.....	30.08	764.0	56	13.3	87	N	16	7.2	.....	0	10ks	.....	N	0	0	Cloudy.....	
Buffalo, N. Y	.....	.....	30.05	763.3	76	24.4	64	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Clear.....	
Burlington, Vt	.....	.....	30.21	767.3	71	21.7	66	S	4	1.8	.....	2k	0	.....	.....	0	0	Fair.....	
Cairo, Ill	.....	.....	30.21	767.3	75	23.9	76	SE	7	3.1	.....	0	0	.....	.....	0	0	Clear.....	
Cape Hatteras, N. C	.....	.....	30.16	766.1	77	25.0	72	SE	14	6.3	.....	8c	Haze	.....	.....	Inap.	Inap.	Fair.....	
Cape Henry, Va	.....	.....	30.21	767.3	73	22.8	81	SE	8	3.6	.....	5c	Haze	SW	.....	0	0	Fair.....	
Cape Lookout, N. C	.....	.....	30.21	767.3	75	23.9	81	SE	12	5.4	.....	0	8ks	.....	SE	0.32	8.1	Cloudy.....	
Cape May, N. J	.....	.....	30.19	766.8	69	20.6	90	S	10	4.5	.....	5ck	Haze	N	.....	0	0	Fair.....	
Charleston, S. C	.....	.....	30.07	763.8	78	22.8	97	SE	23	10.3	.....	.....	10n	.....	.....	2.72	69.1	Heavy rain..	
Cheyenne, Wyoming	24.36	618.7	30.30	769.6	39	3.9	80	NW	4	1.8	.....	0	0	.....	.....	Inap.	Inap.	Clear.....	
Chicago, Ill	.....	.....	30.04	763.0	67	19.4	84	NE	5	2.2	.....	.....	Fog	.....	.....	0.12	3.0	Foggy	
Cincinnati, Ohio	.....	.....	29.98	761.5	78	25.6	69	SE	2	0.9	.....	2c	0	.....	.....	Inap.	Inap.	Clear.....	
Cleveland, Ohio	.....	.....	30.06	763.5	75.3	24.1	69	SE	6	2.7	.....	2c	2ks	W	W	0	0	Fair.....	
Colorado Springs, Col	24.42	620.5	30.30	769.6	46	7.8	61	NE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Corsicana, Tex	.....	.....	29.94	760.5	67	19.4	94	N	10	4.5	.....	2k	8s	N	.....	1.12	28.4	Cloudy.....	
Davenport, Iowa	.....	.....	30.04	763.8	67	19.4	74	NW	12	5.4	.....	7cs	0	SW	.....	Inap.	Inap.	Fair.....	
Denison, Tex	.....	.....	30.01	762.2	65	18.3	94	NW	4	1.8	.....	.....	10n	.....	N	1.98	50.3	Light rain...	
Denver, Col	25.15	638.8	30.37	771.4	51	10.6	59	Calm	0	0	.....	.....	8s	.....	.....	0.30	7.6	Cloudy.....	
Detroit, Mich	.....	.....	30.03	762.7	73	22.8	76	S	2	0.9	.....	0	Sm'e	.....	.....	0	0	Clear	
Dodge City, Kan	27.66	702.6	29.97	761.2	54	12.2	86	NW	10	4.5	.....	.....	10s	.....	.....	0.17	4.3	Cloudy.....	
Dubuque, Iowa	.....	.....	30.02	762.5	68	20.0	74	W	1	0.4	.....	5cs	0	.....	.....	0.03	0.8	Fair.....	
Duluth, Minn	.....	.....	30.01	762.2	56	13.3	74	Calm	0	0	.....	8k	0	SW	.....	0	0	Fair.....	
Eastport, Me	.....	.....	30.31	769.9	55	12.8	87	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Erie, Pa	.....	.....	30.05	763.3	70	21.1	65	SE	6	2.7	.....	3c	Sm'e	.....	.....	0	0	Fair.....	
Escanaba, Mich	.....	.....	30.04	763.0	62	16.7	83	S	5	2.2	.....	.....	Fog	.....	.....	0.39	9.9	Dense fog...	
Fort Gibson, Indian Ter	.....	.....	29.97	761.2	67	19.4	90	NW	3	1.3	.....	10cs	0	SW	.....	0.62	15.7	Cloudy.....	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T	28.88	733.5	29.98	761.5	63	17.2	94	NW	8	3.6	.....	0	8s	.....	NW	0.70	17.8	Cloudy.....	
Fort Sully, Dakota	28.56	725.4	30.22	767.6	53	11.7	79	NW	6	2.7	.....	2c	0	NW	.....	0	0	Clear.....	
Galveston, Tex	.....	.....	29.98	761.5	77	25.0	86	NW	15	6.7	.....	0	5s	.....	NW	0	0	Fair.....	
Grand Haven, Mich	.....	.....	30.06	763.5	66	18.9	90	E	5	2.2	.....	2ck	5s	SW	E	0.42	10.7	Fair.....	
Indianapolis, Ind	.....	.....	30.01	762.2	78	25.6	61	Calm	0	0	.....	0	0	.....	.....	0	0	Clear...	
Indianola, Tex	.....	.....	29.98	761.5	72	22.2	81	N	22	9.8	.....	2c	0	.....	.....	0.12	3.0	Fair.....	
Jacksonville, Fla	.....	.....	30.00	762.0	75	23.9	85	SE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Keokuk, Iowa	.....	.....	29.98	761.5	68	20.0	90	N	4	1.8	.....	.....	10s	.....	N	0	0	Cloudy.....	
Key West, Fla	.....	.....	30.00	762.0	82	27.9	83	SE	8	3.6	.....	5cs	Haze	W	SE	0.04	1.0	Cloudy.....	
Kittyhawk, N. C	.....	.....	30.25	768.3	70	21.1	79	SE	14	6.3	.....	2k	Haze	SW	.....	0	0	Fair.....	
Knoxville, Tenn	.....	.....	30.04	763.0	71	21.7	75	NE	10	4.5	.....	.....	10ks	.....	E	Inap.	Inap.	Cloudy.....	
La Crosse, Wis	.....	.....	30.04	763.0	63	17.2	78	SW	6	2.7	.....	0	0	.....	.....	0	0	Clear.....	
Leavenworth, Kan	.....	.....	30.05	763.3	64	17.8	83	NW	6	2.7	.....	.....	10s	.....	NW	0.02	0.5	Cloudy.....	
Lexington, Ky	28.90	735.6	30.01	762.2	77	25.0	69	SE	4	1.8	.....	5ck	0	S	.....	0	0	Fair.....	
Long Branch, N. J	.....	.....	30.20	767.1	63	17.2	94	N	11	4.9	.....	.....	Fog	.....	.....	0.02	0.5	Foggy	
Louisville, Ky	.....	.....	30.02	762.5	76	24.4	77	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear.....	
Lynchburg, Va	.....	.....	30.16	766.1	81	27.2	61	S	3	1.3	.....	2k	0	SW	.....	0	0	Clear.....	
Malone, N. Y	.....	.....	30.13	765.3	75	23.9	68	NE	2	0.9	.....	0	0	.....	.....	0	0	Clear.....	
Manhattan, Kan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Marquette, Mich	.....	.....	30.01	762.2	67	19.4	79	W	12	5.4	.....	5cs	0	S	.....	0.62	15.7	Fair.....	
Memphis, Tenn	.....	.....	30.00	762.0	77	25.0	72	SE	6	2.7	.....	0	Haze	.....	.....	0.19	3.3	Clear.....	
Milwaukee, Wis	.....	.....	30.06	763.5	67	19.4	90	E	4	1.8	.....	8ks	Fog	S	.....	0.48	12.2	Cloudy.....	
Mobile, Ala	.....	.....	29.98	761.5	76	24.4	81	SE	6	2.7	.....	0	0	.....	.....	0	0	Clear.....	
Montgomery, Ala	.....	.....	30.00	762.0	74	23.3	85	NE	6	2.7	.....	.....	10s	.....	NE	Inap.	Inap.	Threatening	
Morgantown, W. Va	.....	.....	30.08	764.0	80	26.7	58	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Mt. Washington, N. H	24.15	613.4	30.51	774.9	56	13.3	74	E	5	2.2	.....	0	5s	.....	E	1.35	34.3	Fair.....	
Nashville, Tenn	.....	.....	30.02	762.5	72	22.2	80	NE	1	0.4	.....	10k	0	E	.....	0	0	Cloudy.....	
New Haven, Conn	.....	.....	30.25	768.3	62	16.7	94	NE	10	4.5	.....	.....	10n	.....	.....	0.05	1.3	Light rain...	
New Ironsides, Conn	.....	.....	30.25	768.3	61	16.1	88	N	6	2.7	.....	.....	10s,fog	.....	.....	0	0	Cloudy.....	
New Orleans, La	.....	.....	29.96	761.0	79	26.1	82	NE	2	0.9	.....	2k	0	.....	.....	0.13	3.3	Clear.....	
Newport, R. I	.....	.....	30.26	768.6	61	16.1	94	NE	4	1.8	.....	.....	10s	.....	N	0	0	Cloudy.....	
New York, N. Y	.....	.....	30.23	767.8	64	17.8	89	NE	15	6.7	.....	.....	Fog	.....	.....	Inap.	Inap.	Foggy	
Norfolk, Va	.....	.....	30.22	767.6	81	27.2	70	S	7	3.1	.....	5k	0	S	.....	0	0	Fair.....	
North Platte, Neb	27.35	694.7	29.94	760.5	53	11.7	67	NW	12	5.4	.....	1c	0	.....	.....	0.07	1.8	Clear.....	
Omaha, Neb	29.02	737.1	30.07	763.8	50	10.0	94	NW	6	2.7	.....	.....	10n	.....	SW	0.98	24.9	Light rain...	
Oswego, N. Y	.....	.....	30.12	765.0	74	23.3	76	SE	6	2.7	.....	0	Haze	.....	.....	0	0	Clear.....	
Pembina, Dakota	.....	.....	30.12	765.0	52	11.1	86	NW	4	1.8	.....	0	0	.....	.....	0.11	2.8	Clear.....	
Philadelphia, Penn	.....	.....	30.19	766.8	71	21.7	90	E	3	1.3	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy.....	
Pike's Peak, Colorado	17.98	456.7	30.19	766.8	21	— 6.1	100	N	9	4.0	.....	.....	Fog	.....	W	0.09	2.3	Foggy.....	
Pittsburgh, Penn	.....	.....	29.98	761.5	72	22.2	81	E	3	1.3	.....	0	Fog	.....	.....	0	0	Clear.....	
Port Huron, Mich	.....	.....	30.05	763.3	73	22.8	71	SW	7	3.1	.....	1c	0	.....	.....	0	0	Clear.....	
Portland, Me	.....	.....	30.33	770.4	57	13.9	87	E	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Portland, Oregon	.....	.....	30.22	767.6	56	13.3	87	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Punta Rassa, Fla	.....	.....	30.02	762.5	78.0	25.6	90	E	6	2.7	.....	.....	10s	.....	SE	0.65	16.5	Cloudy.....	
Rochester, N. Y	.....	.....	30.09	764.3	75	23.9	72	SW	2	0.9	.....	0	Sm'e	.....	.....	0	0	Clear.....	
Salt Lake City, Utah	25.85	656.6	30.18	766.6	57	13.9	46	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Sandy Hook, N. J	.....	.....	30.19	766.8	66	18.9	100	NE	7	3.1	.....	.....	Fog	.....	.....	0.45	11.4	Foggy	
San Diego, Cal	.....	.....	29.89	759.2	60	15.6	94	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
San Francisco, Cal	.....	.....	29.86	758.4	62	16.7	77	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Santa Fe, N. M	.....	.....	29.97	761.2	51	10.6	52	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Savannah, Ga	23.43	595.1	30.01	762.2	74	23.3	90	SE	2	0.9	.....	.....	10s	.....	SW	4.72	119.9	Cloudy.....	
Shreveport, La	.....	.....	29.98	761.5	77	25.0	82	SE	4	1.8	.....	2c	0	.....	.....	0	0	Fair.....	
Smithville, N. C	.....	.....	30.16	766.1	77	25.0	76	SE	20	8.9	.....	.....	10ks	.....	SE	0.03	0.8	Cloudy.....	
Springfield, Mass	.....	.....	30.26	768.6	63.5	17.5	84	N	4	1.8	.....	.....	10ks	.....	SE	0.41	10.4	Cloudy.....	
St. Louis, Mo	.....	.....	30.02	762.5	74	23.3	68	N	8	3.6	.....	0	0	.....	.....	Inap.	Inap.	Clear.....	
St. Marks, Fla	.....	.....	29.97	761.2	77	25.0	90	SE	3	1.3	.....	2ck	2s	W	SE	0.13	3.3	Fair.....	
St. Paul, Minn	.....	.....	30.01	762.2	62	16.7	72	Calm	0	0	.....	.....	10ks	.....	S	0	0	Cloudy.....	
St. Paul's Island Alaska	.....	.....	29.71	754.6	32	0.0	79	E	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy..	
Thatcher's Island, Mass	.....	.....	30.29	769.4	54	12.2	93	NE	4	1.8	.....	.....	.....	.....	.....	0	0	Dense fog....	
Toledo, Ohio	.....	.....	30.01	762.2	76	24.4	69	S	1	0.4	.....	8k	Haz	S	.....	0	0	Fair.....	
Tucson, Arizona	27.49	698.3	30.08	764.0	70	21.1	.....	S	.....	.....	.....	0	Haze	.....	.....	0	0	Clear.....	
Tybee Island, Ga	.....	.....	30.00	762.0	73	22.8	100	SE	4	1.8	.....	.....	10n	.....	.....	4.70	119.4	Light rain...	
Vicksburg, Miss	.....	.....	29.98	761.5	77.5	25.3	72	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.	24.55	623.3	30.03	762.7	42	5.6	74	Calm	0	0		0	0			0	0	Clear.	
Washington, D. C.			30.16	766.1	78.5	25.8	78	SW	7	3.1		1k	0	SW		0	0	Clear.	
Wilmington, N. C.			30.16	766.1	76	24.4	76	SE	10	4.5			10s		SE	0.18	4.6	Cloudy..	
Wood's Holl, Mass.			30.27	768.8	61	16.1	100	E	3	1.3			Fog			0	0	Dense fog	
Wytheville, Va.	27.85	707.4	29.94	760.5	70	21.1	79	SE	4	1.8			1cks		SE	0	0	Threatening	
Yankton, Dakota	28.90	734.0	30.19	766.8	52	11.1	86	NW	9	4.0		2c	6s	W	W	0.25	6.3	Fair	
Yuma, Arizona			29.79	756.7	76	24.4		E				0	0			0	0	Clear	
Sub Series.																			
Bridgetown, B'b'dos, W. I.			30.03	762.7	82	27.8	74	E	5	2.2		1ok	5ks	E	NE	0.18	4 6	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.97	761.2	82	27.8	83	E				8cs,c	0			1.40	35 6	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.			30.15	765.8	81	27.2	78	Calm	0	0		5ck	0	E		0	0		James Gall.
Santiago de Cuba, W. I.			29.79	756.7	82	27.8	70	Calm	0	0		8c	0			0	0	Fair	Robert Mason.
Havana, Cuba, W. I.			29.97	761.2	78	25.6	86	Calm	0	0		10c	0	S		1.37	34.8	Cloudy	Charles Hasselbrink.
St. Georges, Bermudas			30.19	766.8	74.5	23.6	77	NE	20.0	8.9		1c	5fk			0.01	0.3	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica, W. I.	27.16	689.8	29.94	760.5	69	20.6	90	S	3.0	1.3		0	5k			0.27	6.9	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.03	762.7	80	26.7	87	E			2	8ks	7ks	E		0.210	5.33	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.7			86.0	30										0.059	1.50		Dr. H. Groot.
Medellin, Colombia, S. A.	25.18	639.6			65.5	18.6	77	SW	1	0.4		4c	3s			0	0	Fair	Thomas Herran
York Factory, B. A.			29.85	758.2	48	8.9	92	W	10	4.5		0	6s		N	2.10	53.3		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.			30.08	764.0	76	24.4	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	At Liverpool.				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 second day. The altitude of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2 892 ft., or 881.5 m.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) 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't.) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JUNE 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	.....	.....	30.11	764.7	76.1	24.5	48	Calm	.....	.....	0	.....	0	.....	.....	0	0	Clear	Charnot.
Algiers	.....	.....	30.11	764.9	73.0	22.8	62	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	Peter.
La Calle	.....	.....	.....	.....	72.5	22.5	.....	NW	.....	.....	2	.....	2	.....	.....	0	0	Clear	Kunts.
Tunis	.....	.....	30.09	764.2	77.4	25.2	40	W	.....	.....	3	.....	5	.....	.....	0	0	Fair	Jacques.
Sfax	.....	.....	30.14	765.6	76.3	24.6	49	NE	.....	.....	4	.....	1	.....	.....	0	0	Clear	Chauvey.
Saida	.....	.....	30.17	766.2	77.0	25.0	16	W	.....	.....	1	.....	1	.....	.....	0	0	Clear	Millot.
Tebessa	.....	.....	30.10	764.4	77.7	25.4	.....	E	.....	.....	2	.....	3	.....	.....	0	0	Fair	Colin.
Gerlville	.....	.....	30.17	766.4	75.7	24.3	33	NW	.....	.....	3	.....	2	.....	.....	0	0	Clear	Buard.
Laghouat	.....	.....	30.16	766.0	82.4	28.0	22	SW	.....	.....	1	.....	3	.....	.....	0	0	Fair	Guyot.
Biskra	.....	.....	30.12	765.1	82.9	28.3	30	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. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram	.....	.....	29.80	757.0	70.2	21.2	60	Calm	.....	.....	0	.....	6	.....	.....	0	0	.....	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	29.80	757.0	72.3	22.4	69	W	.....	.....	2	.....	9	.....	.....	0.013	0.32	.....	Dr. Wiersbiski.
Eperies	.....	.....	29.78	756.5	72.9	22.7	69	Calm	.....	.....	0	.....	6	.....	N	0.165	4.20	.....	Julius Mikolik.
Gratz	28.57	725.7	29.75	755.6	66.2	19.0	62	SW	.....	.....	2	.....	7	.....	.....	0.142	3.6	.....	Andreas Rospini.
Hermannstadt	28.42	721.8	29.78	756.4	69.8	21.0	66	WNW	.....	.....	3	.....	5	.....	.....	0.008	0.20	.....	Prof. Reissenberger.
Kremsmünster	28.94	735.1	30.26	768.7	65.1	18.4	52	WNW	.....	.....	2	.....	2	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	.....	.....	29.75	755.7	68.4	20.2	83	W	.....	.....	2	.....	8	.....	.....	0.098	2.5	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Pola	.....	.....	29.85	758.3	70.0	21.6	69	W	.....	.....	1	.....	8ck	.....	.....	0	0	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	29.77	756.2	70.3	21.6	37	W	.....	.....	1	.....	2	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	29.84	758.0	71.6	22.0	74	SW	.....	.....	1	.....	6	.....	.....	0	0	.....	Prof. V. Farolfi.
Vienna	.....	.....	29.79	756.6	72.3	22.4	43	WNW	.....	.....	2	.....	2	.....	.....	0	0	.....	I. R. Central Met. Obs'y.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 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	.....	.....	29.96	761.0	70.7	21.5	58	W	.....	.....	2	.....	8	.....	.....	0	0	.....	Royal Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

BRITISH SERIES.

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, 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	58.7	14.8	.....	S	15	6.7	.....	.....	4	.....	.....	0	0	Blue sky.....	William Boswell.
Ardrossan	.....	.....	30.00	762.0	57	13.9	.....	WNW	.....	.....	3	.....	6	.....	.....	.....	.....	*D. clouds....	William McNeil.
Armagh, Observatory	.....	.....	30.01	762.2	57.3	14.1	.....	SW	5	2.2	.....	.....	9	.....	.....	.....	.....	Overcast.....	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	30.05	763.3	53.2	11.8	.....	W	.....	.....	1	.....	10	.....	.....	.....	.....	Drizzling.....	J. Dreyer.
Bradford	.....	.....	30.00	762.0	64.5	18.1	.....	W	.....	.....	2	.....	2	.....	.....	0	0	*D. clouds....	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.01	762.2	83.0	28.3	.....	NE	.....	.....	2	.....	8	.....	.....	.....	.....	*D. clouds....	Sergt. J. F. Halanen, A. [H. C.
Cambridge, Observatory	.....	.....	30.03	762.7	65.9	18.8	.....	W	.....	.....	1	.....	5	.....	.....	.....	.....	Showery.....	H. Todd.
Cardington	.....	.....	30.03	762.7	68.6	20.0	.....	N	.....	.....	1	.....	9	.....	.....	.....	.....	Overcast.....	John McLaren.
Carlisle	.....	.....	30.00	762.0	59.1	15.1	.....	W	.....	.....	4	.....	5	.....	.....	0	0	*D. clouds....	T. Bell, for J. Carmell.
Chatham, School M. E	.....	.....	30.03	762.7	61.5	16.4	.....	NE	.....	.....	1	.....	9	.....	.....	Blank	Blank	Gloomy.....	Capt. J. Fellowes, R.E.
Dartmoor	28.64	727.4	30.14	765.5	57.0	13.9	.....	NW	.....	.....	1	.....	9	.....	.....	.....	.....	Overcast.....	R. E. Power.
Donaghadee	.....	.....	30.01	762.2	60	15 6	.....	WSW	.....	.....	3	.....	8	.....	.....	.....	.....	*D. clouds....	J. Mac Gowan.
Dover	.....	.....	30.02	762.5	62	16.7	.....	SW	.....	.....	1	.....	7	.....	.....	.....	.....	¾ clouded...	J. Costello.
Eccles (near Manchester.)	.....	.....	30.01	762.2	64.8	18.2	.....	NNW	4.4	2.0	.....	.....	5	.....	.....	.....	.....	*D. clouds....	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.10	764.5	60.1	15.6	.....	NW	19	8.5	.....	.....	9	.....	.....	.....	.....	Overcast.....	The Staff.
Fort Napier, (Natal)	27.91	708.9	30.15	765.8	67.2	19.6	.....	NE	.....	.....	2	.....	0	.....	.....	.....	.....	Blue sky.....	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.96	761.0	86.0	30.0	.....	W	.....	.....	2	.....	6	.....	.....	.....	.....	*D. clouds....	
Galway, Queen's College	.....	.....	29.92	760.0	58	14.4	.....	SW	.....	.....	4	.....	5	.....	.....	.....	.....	*D. clouds....	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.08	764.0	71.0	21.7	.....	W	.....	.....	6	.....	0	.....	.....	.....	.....	Blue sky.....	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	29.96	761.0	54.5	12.5	.....	WSW	.....	.....	1	.....	6	.....	.....	.....	.....	Fine.....	Lewis Stuart.
Great Yarmouth	.....	.....	30.02	762.5	61	16.1	.....	NNE	.....	.....	2	.....	4	.....	.....	.....	.....	*D. clouds....	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	30.04	763.0	61.8	16.6	.....	E	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast.....	The Staff, for G. B. Airy
Guernsey	.....	.....	30.08	764.0	58	14.4	.....	WNW	.....	.....	1	.....	10	.....	.....	.....	.....	Gloomy.....	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	30.02	762.5	63.4	17.4	.....	WNW	.....	.....	2	.....	1	.....	.....	.....	.....	*D. clouds....	L. J. Crossley.
Helston	.....	.....	30.06	763.5	65	18.3	.....	NW	.....	.....	2	.....	3	.....	.....	0	0	Fine.....	M. P. Moyle.
Holyhead	.....	.....	30.04	763.0	59	15.0	.....	SW	.....	.....	2	.....	3	.....	.....	.....	.....	*D. clouds....	John Tilston.
Kew, Observatory	.....	.....	30.04	763.0	63.0	17.2	.....	NNE	1	0.4	.....	.....	10	.....	.....	.....	.....	Gloomy.....	The Staff.
Kingstown	.....	.....	30.04	763.0	56	13.3	.....	ESE	.....	.....	3	.....	10	.....	.....	.....	.....	Raining.....	George Mitchell.
Leicester Museum	.....	.....	30.02	762.5	66	18.9	.....	Calm	.....	.....	0	.....	4	.....	.....	.....	.....	Hazy.....	Wm. J. Harrison, F.G.S.
Malta, Mediterranean	.....	.....	29.99	761.7	74.6	23.7	.....	NW	.....	.....	1	.....	2k	.....	.....	.....	.....	*D. clouds....	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	29.89	759.2	61	16.1	.....	SW	.....	.....	1	.....	5	.....	.....	.....	.....	½ clouded...	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.04	763.0	79.2	26.2	.....	SE	.....	.....	3	.....	8	.....	.....	.....	.....	*D. clouds....	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	30.01	762.2	71.3	21.8	.....	E	.....	.....	3	.....	1ks,k	.....	W	0.011	0.28	*D. clouds....	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.00	762.0	69.2	15.7	.....	NW	.....	.....	1	.....	9	.....	.....	.....	.....	Overcast.....	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	30.01	762.2	67	19.4	.....	Calm	.....	.....	0	.....	10	.....	.....	.....	.....	Overcast.....	J. Lucas.
Plymouth	.....	.....	30.06	763.5	42.6	5.9	.....	NW	.....	.....	1	.....	10	.....	.....	.....	.....	Gloomy.....	John Merrifield.
Roche's Point	.....	.....	30.06	763.5	56	13.3	.....	WNW	.....	.....	4	.....	8	.....	.....	.....	.....	Cloudy.....	W. Kennedy.
Saint Ann's Head	.....	.....	30.06	763.5	58	14.4	.....	NW	.....	.....	1	.....	2	.....	.....	.....	.....	.....	John C. Walker.
Saint Helier, (Jersey)	.....	.....	30.08	764.0	62.0	16.7	.....	W	.....	.....	2	.....	10	.....	.....	.....	.....	Overcast.....	A. P. Amy.
Sandwick Manse, (Orkneys)	.....	.....	29.88	758.9	52.8	11.6	.....	W	20	8.9	.....	.....	0	.....	.....	.....	.....	Blue sky	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	30.01	762.0	58.1	14.5	.....	ESE	.....	.....	1	.....	5	.....	.....	.....	.....	*D. clouds....	F. Shaw.
Scutari Cemetery Turkey	.....	.....	29.83	757.7	80.6	27.0	.....	SW	.....	.....	1	.....	1	.....	W	.....	.....	Blue sky.....	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.0	762.0	67.0	19.4	.....	NNW	.....	.....	3	.....	4	.....	.....	0	0	Blue sky.....	W. F. Cooper.
Silloth Rectory	.....	.....	30.01	762.2	65 6	18.7	60	SW	.....	.....	1	.....	0	.....	.....	0	0	Blue sky.....	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	30.02	762.5	60.8	16.0	.....	W	.....	.....	1	.....	4	.....	.....	.....	.....	*D. clouds....	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.	.....	.....	29.84	757.9	56	13.3	.....	WSW	.....	.....	6	.....	5	.....	.....	.....	.....	*D. clouds....	John Smith.
Stratfield Turgiss	.....	.....	30.04	763.0	63.9	17.7	.....	N	.....	.....	1	.....	10	.....	.....	.....	.....	Hazy.....	Rev. Charles H. Griffith.
Thurso	.....	.....	29.83	757.7	60	15.6	.....	W	.....	.....	3	.....	5	.....	.....	.....	.....	*D. clouds....	John Trotter.
Truro, Royal Institution	.....	.....	30.10	764.5	64	17.8	.....	NW	.....	.....	6	.....	7	.....	.....	.....	.....	*D. clouds....	W. Newcombe.
Valencia, Observatory	.....	.....	30.09	764.3	54.3	12.4	.....	WNW	12	5.4	.....	.....	4	.....	.....	.....	.....	*D. clouds....	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man	.....	.....	.....	.....	46	7.8	.....	S	.....	.....	3	.....	10	.....	.....	.....	.....	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.16	766.1	62.6	17.0	81	NW	8	3.6	.....	4	4	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	28.94	735.1	62.5	16.9	67	SW	.....	.....	1	.....	10n	.....	.....	.....	.....	Raining.....	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	29.98	761.5	60.0	15.6	.....	W	.....	.....	4	.....	4k	.....	.....	.....	.....	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.13	765.3	.....	.....	.....	ESE	15.6	7.0	.....	.....	.....	.....	.....	0	0	.....	C. Meldrum.
Melbourne, Observatory	.....	.....	29.55	750.6	66.8	13.8	55	NNW	39	17.4	.....	.....	0	.....	.....	0	0	Fine, clear.	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	29.85	758.2	53	11.7	.....	SW	.....	.....	4	5	5	SW	.....	0	0	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	29.86	758.4	53	11.7	.....	S	.....	.....	4	5	3	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, 2,2·0 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.

Copenhagen	.....	.....	29.82	757.3	67.6	19.8	72	NNW	.....	.....	2	.....	6	.....	.....	.....	.....	.....	.....
Fanöe	.....	.....	29.93	760.3	61.2	16.2	65	NW	.....	.....	6	.....	2	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	29.70	754.3	43.9	6.6	54	Calm	.....	.....	0	.....	2	.....	.....	.....	.....	.....	.....
Stykkisholm, Iceland)	.....	.....	29.54	750.4	40.1	4.5	81	NE	.....	.....	6	.....	8	.....	.....	.....	.....	.....	.....
Thorshavn, (Faröe)	.....	.....	29.61	752.1	50.4	10.2	75	WSW	.....	.....	5	.....	6	.....	.....	.....	.....	Raining.....	
Vestervig	.....	.....	29.91	759.6	58.3	14.6	68	NW	.....	.....	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	.....	.....	30.04	763.0	60.8	16	64	NW	.....	.....	1	. .....	8ks,n	.....	NW	0	0	Very cloudy	Normal School.
Amiens	.....	.....	30.02	762.4	71.6	22.0	69	NW	.....	.....	3	.....	5	.....	W	0	0	Cloudy	Normal School.
Avignon	.....	.....	29.94	760.5	72.8	22.4	39	N	.....	.....	6	.....	0	.....	.....	0	0	Clear	Normal School.
Bar-sur-Seine	.....	.....	30.07	763.7	68.2	20.1	58	N	.....	.....	2	.....	8	.....	NE	0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.06	763.5	64.0	17.8	68	W	3.8	1.7	.....	.....	10	.....	N	0	0	Covered	Beaumette Observatory.
Beauvais	.....	.....	30.04	763.1	71.1	21.7	53	WNW	.....	.....	3	.....	8	.....	WNW	0	0	Very cloudy	Normal School.
Besançon	.....	.....	30.02	762.5	67.3	19.6	60	WSW	.....	.....	3	.....	8	.....	E	0.016	0.4	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	30.11	764.8	65.8	18.8	54	NNE	.....	.....	2	.....	..k	.....	S	.....	.....	.....	Normal School.
Bourges	.....	.....	30.02	762.5	65.7	18.7	81	SW	.....	.....	2	.....	2	.....	SSW	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	30.01	762.9	63.1	17.3	73	SW	.....	.....	2	.....	10	.....	SW	0.010	0.25	Misty	Naval Observatory.
Carcassonne	.....	.....	30.10	764.4	62.6	17	84	W	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School
Caen	.....	.....	30.03?	778.0?	64.4	18	83	W	.....	.....	2	.....	10	.....	ESE	0	0	Covered	Normal School.
Chartres	.....	.....	30.07	763.6	76.5	24.7	.....	SW	.....	.....	2	.....	6	.....	SW	0	0	.....	Normal School.
Clermont	.....	.....	30.02	762.5	68.4	20.2	50	NE	.....	.....	2	.....	5	.....	N	0	0	Cloudy	Puy de Dome Obs'y.
Commercy	.....	.....	29.99	761.7	67.8	19.9	58	NW	.....	.....	2	.....	5kn	.....	NW	0	0	Cloudy	Normal School.
Commune de Greasque*	.....	.....	29.95	760.6	70.5	21.4	44	NW	.....	.....	4	.....	2	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	29.97	761.3	64.0	17.8	65	NW	.....	.....	2	.....	10n	.....	NW	0	0	Covered	Normal School.
La Roche-sur-Yon	.....	.....	30.10	764.4	61.9	16.6	87	W	.....	.....	1	.....	5	.....	E	0	0	Cloudy	Normal School.
Le Mans	.....	.....	30.04	763.0	67.8	19 9	92	SE	.....	.....	3	.....	5	.....	SE	0	0	Cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.02	762.6	65.7	18.7	58	N	.....	.....	1	.....	5	.....	.....	.....	.....	Raining	Normal School.
Mâcon	.....	.....	29.98	761.6	66.6	19.2	72	N	.....	.....	4	.....	1	.....	N	0.12	3.	Clear	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	29.94	760.4	66.4	19.1	63	NNW	.....	.....	2	.....	5	.....	SE	0	0	Cloudy	Normal School.
Nismes	.....	.....	29.91	759.8	76.6	24.8	28	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	30.02	762.5	71.2	21.8	63	ESE	.....	.....	2	.....	5	.....	E	0	0	Cloudy	Normal School.
Paris, Observatory	.....	.....	30.03	762.8	69.6	20.9	56	W	.....	.....	2	.....	6k	.....	W	0	0	Cloudy	National Observatory.
Parthenay	.....	.....	30.06	763.5	65.8	18.8	81	W	.....	.....	2	.....	8	.....	NW	0	0	Very cloudy	Normal School.
Privas	.....	.....	29.96	761.0	68.7	20.4	.....	NW	.....	.....	4	.....	2	.....	NW	.....	.....	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.13	765.3	72.9	22.7	58	W	.....	.....	3	.....	10	.....	E	0.118	3.0	Covered	Naval Observatory.
Rouen	.....	.....	30.06	763.5	71.4	21.9	44	WSW	.....	.....	2	.....	5	.....	SW	0	0	Cloudy	Normal School.
Saint Lo	.....	.....	29.75	755.7	63.3	17.4	76	NW	.....	.....	1	.....	5	.....	W	0	0	.....	Normal School.
Tarbes	29.09	738.8	30.16	766.1	69.9	15.5	.....	W	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School
Villefranche	.....	.....	30.03	762.8	69.8	21	63	N	.....	.....	1	.....	5	.....	.....	0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.85	758.2	80.6	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	Blank	Blank	.....	L'Abbé Marchéal.
Marseilles	.....	.....	29.87	758.6	73.0	22.5	44	WNW	.....	.....	3	.....	1	.....	.....	0	0	Clear	Marseilles Observatory.
Mont-Louis	.....	.....	30.24	768.1	53.8	12.1	59	NNW	16.8	7.50	.....	.....	2	.....	SW	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.04	762.9	69.1	20.6	54	NW	.....	.....	3	.....	8	.....	NW	0	0	.....	Montsouris Observ'tory.
Perpignan	.....	.....	30.02	762.6	69.4	20.8	50	NW	24.2	10.83	.....	.....	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	68.0	20.0	65	WSW	.....	.....	1	.....	9	.....	.....	0	0	Very cloudy	E. Renou.
Toulouse	.....	.....	30.18	766.6	64.8	18.2	57	NW	.....	.....	3	.....	7	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.07	763.6	70.5	21.4	53	SSW	.....	.....	1	.....	6	.....	SSW	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.06	763 4	72.3	22.4	21	NW	.....	.....	2	.....	7	.....	.....	0	0	Fair	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Le Lec, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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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.

Ba nberg	.....	.....	29.80	757.0	65.8	18.8	78	N	.....	.....	3	.....	9	N E	.....	0.157	4.0	Thunder, lightn'g	Prof. T. Hoh.
Berlin	.....	.....	29.86	758.5	72.5	22.5	73	W	.....	.....	1	.....	8	.....	.....	0.697	17.7	.....	Prof. Arndt.
Breslau	.....	.....	29.87	758.7	74.5	23.6	50	NNW	.....	.....	1	.....	10	.....	.....	Inap.	Inap.	Sprinkling.	Dr. P. Neugebauer.
Carlsruhe	.....	.....	29.07	761.1	56.5	13.6	87	W	.....	.....	1	.....	10	.....	.....	1.465	37.2	Raining	A. Senz.
Cassel	.....	.....	29.95	760.8	61.5	16.4	83	NW	.....	.....	4	.....	10	SSW	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	29.96	760.9	66.0	19.2	67	N	.....	.....	1	.....	1	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.99	761.8	63.1	17.3	58	N	.....	.....	1	.....	10	.....	.....	1.146	29.1	.....	Physical Society.
Friedrichshafen	.....	.....	30.02	762.5	56.1	13.4	86	W	.....	.....	1	.....	10	.....	.....	0.665	16.9	Raining	M. Wilhelm.
Hamburg	.....	.....	29.91	759.8	66.6	19.2	66	NE	.....	.....	1	.....	10s,k	.....	.....	0.016	0.4	Cloudy	Captain F. Hegemann.
Kiel	.....	.....	29.89	759.3	66.7	19.3	60	N	.....	.....	2	.....	7	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.82	757.3	68.5	20.3	49	SE	.....	.....	2	.....	5	.....	.....	0.075	1.9	Thunder, lightn'g	Prof. E. Luther.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	29.90	759.5	63.1	17.3	84	NW	.....	.....	1	.....	10	NW	.....	0.858	21.8	Misty	Prof. Bruhns.
Memel	.....	.....	29.85	758.2	75.2	24.0	84	WNW	.....	.....	2	.....	4o,ck	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.85	758.2	67.1	19.5	69	.....	.....	.....	2	.....	3	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.85	758.2	78.8	26.0	57	E	.....	.....	1	.....	10	.....	.....	0.008	0.2	.....	A. Lothes.
Posen	.....	.....	29.87	758.8	75.7	24.3	61	E	.....	.....	2	.....	10	.....	.....	0.075	1.9	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.00	762.0	61.9	16.6	77	Calm	.....	.....	0	.....	10	.....	.....	0.043	1.1	.....	Dr. Schur.
Stuttgart	.....	.....	29.91	759.6	55.4	13.0	86	NW	.....	.....	1	.....	9	.....	.....	0.898	22.8	Raining	Prof. Schoder.
Thorn	.....	.....	29.82	757.5	72.5	22.5	81	SW	.....	.....	1	.....	9	.....	.....	0.106	2.7	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.92	759.9	72.1	22.3	51	NE	.....	.....	6	.....	6	.....	.....	0.106	2.7	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	29.74	755.3	61.9	16.6	82	WNW	.....	.....	2	.....	10	.....	.....	0.039	1.0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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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	84.2	29.0		S										Dusty	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Udine			29.82	757.5	69.4	20.8	64	SW	1.3	0.6			9			0.031	0.8		
Padua			29.84	758.0	66.7	19.3	69	SE	4.9	2.2			10	SW		0.020	0.5		
Vicenza			29.83	757.7	69.3	20.7	61	NW	0	0			3	S		0.075	1.9		
Verona			29.80	757.0	73.4	23.0	63	E			1		10			0	0		
Bergamo	28.51	724.1	29.79	756.7	66.9	19.4	68	SW			1		10			0	0		
Domodossola	28.78	731.1	29.78	756.3	73.0	22.8	63	SSE			2		9			0	0		
Milan			29.84	758.0	73.6	23.1	66	ESE			2		9	NNW		0	0		
Pavia			29.84	757.9	72.0	22.2	41	SW			1		8	SW		0	0		
Moncalieri			29.83	757.7	73.0	22.8	56	WSW	2.5	1.1			3	S		0.047	1.2		
Mondovi	27.96	710.2	29.82	757.5	70.0	21.1	60	NNE			2		4	N		0.087	2.2		
Porto Maurizio			29.91	759.8	72.3	22.4	67	S			2		2			0	0		
Genoa			29.87	758.7	70.7	21.5	64	S	1.8	0.8			2			0.008	0.2		
Piacenza			29.85	758.2	71.2	21.8	63	N	1.8	0.8			7	E		0	0		
Parma			29.85	758.2	72.3	22.4	65	SE			2		8			0.020	0.5		
Bologna			29.85	758.2	71.6	22.0	39	NW			1		5	N		0	0		
Florence			29.88	758.9	74.3	23.5	47	W			2		7	W		0	0		
Leghorn			29.87	758.5	68.7	20.4	71	W	4.9	2.2			6			0	0		
Siena	28.67	728.1	29.85	758.1	69.4	20.8	56	N	0.7	0.3			6	W		0.031	0.8		
Urbino																			
Pesaro																			
Ancona			29.87	758.7	69.8	21.0	65	NE			4		1			0	0		
Grosseto																			
Rome			29.88	759.0	71.6	22.0	63	W	11.9	5.3			2			0	0		
Naples, O. U			29.91	759.7	71.4	21.9	68	NW			2		9	NW		0.890	22.6		
Lecce			29.86	758.4	75.0	23.9	33	SW	8.7	3.9			6			0	0		
Cosenza			29.93	760.1	68.5	20.3	77	NW	0	0			10			0.008	0.2		
Riposto, (Sicily)			29.93	760.3	71.4	21.9	71	SE			2		2	NW		0.079	2.0		
Palermo			29.91	759.7	69 1	20.6	64	W	3.8	1.7			10			0	0		
Caltanissetta	27.99	710.9	29.89	759.2	65.3	18.5	57	W			4		8	E		0	0		
Sub-Series.																			
Naples, S. R			29.90	759.5	70.9	21.6	74	SSW	6.3	2.8			6	W		0.709	18.0		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			30.03	762.7	61.2	16.2		NW			3								
Groningen			29.92	760.0	63.5	17.5		NNW			2								
Helder			29.93	761.5	62.6	17.0		WNW			1								
Utrecht			29.94	760.4	73.2	22.9	60	NW			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			29.95	760.6	53.6	12.0	58	W	12.5	5.6			0			0	0		
Brönö			29.92	759.9	54.3	12.4	78	Calm	0	0			9			0.024	0.6		
Christiania			29.78	756.3	70.5	21.4	63	SSW	2 9	1.3			1			0.173	4.4		
Tromsö			29.88	758.9	50.7	10.4	70	NE	2	1			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 1 h., 4 min.

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores,)	.....	.....	30.43	772.9	66.2	19.0	79	ENE	3.2	1.45	.....	.....	5	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.07	763.8	61.3	27.4	24	NW	6.5	2.92	.....	.....	1	NNE	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.26	768.5	68.9	20.5	56	SW	8.2	3.6?	.....	.....	0	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.21	768.4	68.7	20.4	56	NNW	24.8	11.1	.....	.....	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 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	.....	.....	29.80	757.0	65.8	18.5	97	W	16	7	.....	.....	10	.....	.....	.....	.....	Raining.....	Astronomical Obs.
Wilna	.....	.....	29.85	758.1	85.8	29.9	39	ESE	9	4	.....	.....	3	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.93	760.3	81.5	27.5	47	SSE	9	4	.....	.....	4	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.94	760.4	84.2	29.0	43	S	13	6	.....	.....	3	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.91	759.7	80.6	27.0	59	SE	18	8	.....	.....	8	.....	.....	.....	.....	.....	Ch. Forsten.
Kiefl	.....	.....	29.87	758.7	83.7	28.7	38	SSE	9	4	.....	.....	6	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.92	759.9	83.1	28.4	45	N	9	4	.....	.....	8	.....	.....	.....	.....	Thunder-storm..	Kurdakof.
Kertch	.....	.....	29.88	759.0	80.2	26.8	66	S	7	3	.....	.....	1	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.06	763.4	85.5	29.7	37	S	2	1	.....	.....	2	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.79	756.7	84.4	29.1	41	ENE	34	15	.....	.....	5	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.07	763.8	78.4	25.8	37	ESE	18	8	.....	.....	0	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.50	723.9	29 84	757.9	78.3	25.7	45	S	11	5	.....	.....	10	.....	.....	.....	.....	Light rain...	Physical Observatory.
Astrakhan	.....	.....	29.83	757.7	88.5	31.4	43	E	4	2	.....	.....	3	.....	.....	.....	.....	Solar corona	Sebastianof.
Kasan	.....	.....	29.99	761.8	76.8	24.9	52	N	27	12	.....	.....	9	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tchernischef.
Ekaterinburg	28.99	736.3	29.95	760.8	68.5	20.3	16	NNW	25	11	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Nukus	.....	.....	29.88	758.9	87.8	31.0	25	NE	9	4	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.26	717.8	29.84	757.8	90.7	32.6	41	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.73	755.1	52.0	11.1	87	SSW	22	10	.....	.....	10	.....	.....	.....	.....	Raining.....	Meteorological Obs.
Yeniseisk	.....	.....	29.74	755.4	58.8	14.9	53	E	2	1	.....	.....	1	.....	.....	Blank	Blank	.....	Marks.
Irkutsk	28.22	716.9	29.57	751.2	52.0	11.1	80	NW	11	5	.....	.....	10	.....	.....	.....	.....	.....	Ussoief.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.99	761.7	76.6	24.8	50	SSW	11	5	.....	.....	2	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.11	764.7	51.4	10.8	98	Calm	0	0	.....	.....	10	.....	.....	.....	.....	Misty.....	
Nikolaievsk, on the Amoor.	.....	.....	.....	.....	54.9	12.7	98	E	7	3	.....	.....	2	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 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	.....	.....	30.02	762.6	76.6	24.8	29	E	2.2	1.00	.....	0	0	.....	.....	0	0	Clear.....	Royal Observatory.
San Fernando	.....	.....	30.15	765.7	75.0	23.9	40	W	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. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.91	759.8	75.6	24.2	54	S	.....	.....	2	.....	1	.....	.....	0	0	.....	
Umea	.....	.....	29.87	758.8	70.9	21.6	61	S	.....	.....	2	.....	6	.....	.....	0	0	.....	
Hernosand	.....	.....	29.80	756.8	66.6	19.2	64	E	.....	.....	2	.....	5	.....	.....	0	0	.....	
Stockholm	.....	.....	29.77	756.1	72.2	22.2	68	ESE	.....	.....	4	.....	5	.....	.....	0	0	.....	
Wisby	.....	.....	29.80	756.5	65.8	18.8	70	NW	.....	.....	4	.....	5	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.74	755.3	82.0	27.8	51	SSE	12.1	5.4	.....	.....	8	.....	S	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	28.61	726.7	30.02	762.5	59.4	15.2	65	N	.....	.....	2	.....	10	.....	.....	0.020	0.5	Covered.....	The Observatory.
Zurich	28.40	721.3	30.04	762.9	53.6	12.0	86	W	.....	.....	1	.....	10	.....	.....	2.110	53.6	Raining.....	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE—For Geneva the corresponding departures from the normal values are: Barometer, +0.3 mm; Thermometer, —5.3 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 Prof. C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	29.85	758.3	83.5	28.6	43	3E	3	1.5	.....	.....	0	.....	.....	0	0	.....	
Fao, (Persian Gulf)	.....	.....	29.88	758.9	84.9	29.4	.....	NW	.....	.....	3	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.84	757.8	55.8?	13.2?	.....	SE	.....	.....	8	.....	5	.....	.....	.....	.....	.....	
Valona	.....	.....	29.85	758.2	62.8?	17.1?	.....	SW	.....	.....	2	.....	10	.....	.....	Blank	Blank	.....	
Varna	.....	.....	29.84	758.0	78.8	26.0	.....	NE	.....	.....	3	.....	10	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.88	758.9	83.3	28.5	71	NW	.....	.....	1	.....	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.

Bathurst, N. B	.....	.....	30.16	766.1	63.6	17.6	84	SW	13	5.8	.....	10	.....	.....	.....	0	0	Squally.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.14	765.5	76	24.4	.....	S	1	0.4	.....	.....	8	.....	SE	0	0	Cloudy.....	W. R Bigg.
*Chatham, N. B	.....	.....	30.23	767.8	66	18.9	83	S	7	3.1	.....	8k	2ks	SW	SW	0	0	Cloudy.....	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.32	770.1	59	15.0	93	Calm	0	0	.....	.....	10n	.....	.....	Inap.	Inap.	Light rain...	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.11	764.8	76.2	24.6	71	S	.....	.....	1	1ck	0	.....	.....	0	0	Bright	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.21	767.3	62.6	17.0	72	W	.....	.....	2	0	0	.....	.....	0	0	.....	H. A. Johnson.
Esquimault, B. C	.....	.....	29.97	761.2	53.2	11.8	100	Calm	0	0	.....	4cs	0	.....	.....	0	0	Cloudy.....	W. H. Bevis.
Fredericton, N. B	.....	.....	30.29	769.4	62.0	16.7	83	S	4	1.8	.....	.....	10s	.....	.....	Inap.	Inap.	Showery.....	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.96	761.0	57	13.9	84	SW	16	7.2	.....	2cs	2s	W	W	0	0	Fair.....	James Stewart.
Goderich, Ontario	.....	.....	30.00	762.0	64.5	18.1	91	NW	.....	.....	1	0	0	.....	.....	0	0	Very fine	H. J. Strang, M. A.
Granton, Ontario	28.95	735.3	30.00	762.0	72	22.2	.....	E	.....	.....	1	0	0	.....	.....	0	0	Clear.....	James Grant.
*Halifax, N. S	.....	.....	30.33	770.4	60	15.6	98	S	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	F. Allison, M. A.
*Kingston, Ontario	.....	.....	30.14	765.5	72	22.2	83	SE	2	0.9	.....	.....	10ks	.....	SE	0	0	Cloudy.....	S. Woods, M. A.
Little Glace Bay, N. S	.....	.....	30.31	769.9	60.5	15.8	82	W	7	3.1	.....	4k	0	W	.....	0	0	Fair.....	C. H. Rigby.
*Montreal, Quebec	.....	.....	30.13	765.3	69	20.6	81	S	10	4.5	.....	5k	5ks	SW	.....	0	0	Cloudy.....	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.09	764.3	72	22.2	46	N	3	1.3	.....	5ck	2s	S	S	Inap.	Inap.	Fair.....	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.03	762.7	75	23.9	77	S	3	1.3	.....	0	0	.....	.....	0	0	Clear.....	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	30.03	762.7	71	21.7	80	S	4	1.8	.....	10ck	0	SW	.....	0	0	Fair.....	H. Morgan.
Port Hastings, N. S	.....	.....	30.34	770.6	58.0	14.4	.....	SW	5	2.2	.....	.....	.....	.....	.....	0	0	Fine.....	Peter Grant.
*Port Stanley, Ontario	.....	.....	30.02	762.5	70	21.1	92	E	1	0.4	.....	.....	10ks	.....	.....	0	0	Cloudy.....	M. Payne.
*Quebec, Quebec	.....	.....	30.17	766.3	74	23.3	72	Calm	0	0	.....	5k	2n	W	W	0	0	air.....	Capt. Ashe, R. N.
St. John, N. B	.....	.....	30.35	770.9	51	10.6	100	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.98	761.5	74	23.3	75	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	K. Stewart.
Stayner, Ontario	.....	.....	29.98	761.5	81	27.2	70	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	R. J. Cole.
Stratford, Ontario	28.76	730.5	29.99	761.7	70.0	21.1	90	SE	4	1.8	.....	1ck	0	.....	.....	0	0	Fine.....	C. J. Macgregor, M. A.
*Sydney, C. B	.....	.....	30.35	770.9	71	21.7	76	SW	9	4.0	.....	2k	2ks	W	W	0	0	Clear.....	T. C. Hill.
*Toronto, Ontario	.....	.....	30.00	763.5	61	16.1	96	NE	6	2.7	.....	.....	Fog	.....	.....	0	0	Foggy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.01	762.2	71.8	22.1	85	E	4	1.8	.....	9ck	0	.....	.....	0	0	Fine.....	J. Montgomery.
Sub-Series.																			
St. John's, Newfoundland	.....	.....	30.33	770.4	70	21.1	66	W	.....	.....	.....	0	3ks	.....	.....	0	0	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.	.....	.....	30.16	766.1	69	20.6	84	Calm	0	0	.....	.....	10s	.....	.....	0.03	0.8	Cloudy.....	
Alpena, Mich	.....	.....	30.04	763.0	62	16.7	94	N	5	2.2	.....	.....	10n	.....	N	0.31	7.9	Light rain...	
Atlantic City, N. J	.....	.....	30.10	760.8	68	20.0	90	S	8	3.6	.....	1cs	8s	NW	S	0.01	0.3	Cloudy.....	
Augusta, Ga.	.....	.....	29.97	761.2	70	21.1	92	E	9	4.0	.....	.....	10s	.....	E	0.49	12.4	Cloudy.....	
Baltimore, Md.	.....	.....	30.16	766.1	73	22.8	85	SE	4	1.8	.....	.....	10s	.....	.....	0.59	15.0	Cloudy.....	
Barnegat, N. J.	.....	.....	30.20	767.1	63	17.2	88	SE	10	4.5	.....	8k	0	.....	.....	0	0	Fair.....	
Benton, Montana	27.31	695.7	30.19	766.8	48	8.9	42	E	8	3.6	.....	0	0	.....	.....	0	0	Clear.....	
Bismarck, Dakota	28.33	719.6	29.96	761.0	55	12.8	68	S	7	3.1	.....	Haze	Haze	S	S	0	0	Hazy.....	
Boston, Mass	.....	.....	30.27	768.8	57.5	14.2	100	E	3	1.3	.....	.....	Fog	.....	.....	0.07	1.8	Dense fog...	
Breckenridge, Minn	.....	.....	30.10	764.5	64	12.2	73	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Buffalo, N. Y.	.....	.....	30.00	762.0	73	22.8	76	S	4	1.8	.....	5c	0	W	.....	0	0	Fair.....	
Burlington, Vt.	.....	.....	30.15	765.8	72	22.2	67	S	8	3.6	.....	5k	2s	S	.....	0	0	Cloudy.....	
Cairo, Ill.	.....	.....	29.84	757.9	70	21.1	90	SE	2	0.9	.....	.....	10ks	.....	S	0.26	6.6	Cloudy.....	
Cape Hatteras, N. C.	.....	.....	30.09	764.3	76	24.4	69	SE	15	6.7	.....	5c	0	SW	.....	0	0	Fair.....	
Cape Henry, Va	.....	.....	30.16	766.1	71	21.7	85	SE	12	5.4	.....	5c	Haze	.....	.....	0	0	Fair.....	
Cape Lookout, N. C.	.....	.....	30.12	765.0	75	23.9	76	SE	16	7.2	.....	5ck	2ks	.....	SE	0.01	0.3	Fair.....	
Cape May, N. J.	.....	.....	30.18	766.6	67	19.4	94	S	16	7.2	.....	.....	10n	.....	.....	0.70	17.8	Heavy rain..	
Charleston, S. C.	.....	.....	30.03	762.7	70	21.1	95	E	24	10.7	.....	.....	10n	.....	.....	6.73	170.9	Heavy rain..	
Cheyenne, Wyoming	24.22	615.3	30.16	766.1	45	7.2	75	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear.....	
Chicago, Ill	.....	.....	29.92	760.0	60	15.6	88	N	10	4.5	.....	.....	10s	.....	.....	0.43	10.9	Cloudy.....	
Cincinnati, Ohio	.....	.....	29.87	758.7	78	25.6	58	SE	6	2.7	.....	2k	0	.....	.....	0	0	Clear.....	
Cleveland, Ohio	.....	.....	30.00	762.0	71.4	21.9	75	SE	12	5.4	.....	0	5ks	.....	S	0	0	Fair.....	
Colorado Springs, Col.	24.31	617.5	30.18	766.6	47	8.3	62	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear.....	
Corsicana, Tex	.....	.....	30.05	763.3	60.4	15.8	85	NW	5	2.2	.....	0	0	.....	.....	0	0	Clear.....	
Davenport, Iowa	.....	.....	29.93	760.2	67	19.4	74	NE	8	3.6	.....	3ck	7s	.....	E	0.01	0.3	Cloudy.....	
Denison, Tex	.....	.....	30.02	762.5	65	18.3	73	NW	16	7.2	.....	0	0	.....	.....	0.13	3.3	Clear.....	
Denver, Col.	25.01	635.0	30.22	767.6	48	8.9	70	S	5	2.2	.....	0	0	.....	.....	0	0	Clear.....	
Detroit, Mich	.....	.....	29.96	761.0	69	20.6	79	N	5	2.2	.....	2k	Haze	.....	.....	0	0	Fair.....	
Dodge City, Kan	27.54	699.5	29.83	757.7	55	12.8	73	NW	17	7.6	.....	0	0	.....	.....	0	0	Clear.....	
Dubuque, Iowa	.....	.....	29.94	760.5	68	20.0	79	N	4	1.8	.....	5k	0	.....	.....	0	0	Fair.....	
Duluth, Minn	.....	.....	30.12	765.0	53	11.7	86	Calm	0	0	.....	0	0	.....	.....	0.03	0.8	Clear.....	
Eastport, Me	.....	.....	30.29	769.4	51	10.6	93	S	7	3.1	.....	.....	Fog	.....	.....	0	0	Foggy.....	
Erie, Pa	.....	.....	29.99	761.7	73	22.8	76	S	10	4.5	.....	.....	10ks	.....	.....	0	0	Cloudy.....	
Escanaba, Mich	.....	.....	30.06	763.5	61	16.1	82	NE	9	4.0	.....	.....	10s	.....	NE	0	0	Cloudy.....	
Fort Gibson, Indian Ter.	.....	.....	29.90	759.4	65	18.3	89	W	1	0.4	.....	2cs	0	W	.....	0.03	0.8	Clear.....	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.84	732.5	29.92	760.0	66	18.9	52	NW	12	5.4	.....	0	0	.....	.....	0	0	Clear.....	
Fort Sully, Dakota	28.15	722.6	30.08	764.0	62	16.7	36	SE	8	3.6	.....	0	0	.....	.....	0	0	Clear.....	
Galveston, Tex	.....	.....	29.99	761.7	74	23.3	90	N	24	10.7	.....	0	5s	.....	N	0.62	15.7	Fair.....	
Grand Haven, Mich	.....	.....	29.94	760.5	68	20.0	81	E	10	4.5	.....	.....	10s	.....	S	1.50	38.1	Cloudy.....	
Indianapolis, Ind	.....	.....	29.80	758.4	75	23.9	76	SE	4	1.8	.....	10cs,k	0	SW	.....	0.82	20.8	Fair.....	
Indianola, Tex	.....	.....	30.01	762.2	72	22.2	85	N	24	10.7	.....	8k	0	N	.....	0	0	Cloudy.....	
Jacksonville, Fla	.....	.....	29.94	760.5	79	26.1	82	S	8	3.6	.....	.....	10s	.....	.....	0.41	10.4	Cloudy.....	
Keokuk, Iowa	.....	.....	29.84	757.9	64	17.8	94	NE	14	6.3	.....	.....	10n	.....	NE	0.44	11.2	Light rain...	
Key West, Fla	.....	.....	29.97	761.2	84.3	27.9	78	SW	4	1.8	.....	5ck	Haze	W	.....	0	0	Fair.....	
Kittyhawk, N. C.	.....	.....	30.17	766.3	69	20.6	84	SE	10	4.5	.....	5cs	0	.....	.....	0	0	Fair.....	
Knoxville, Penn	.....	.....	29.93	760.2	70	21.1	75	NE	10	4.5	.....	.....	10ks	.....	E	0.01	0.3	Cloudy.....	
La Crosse, Wis.	.....	.....	30.01	762.2	64	17.8	78	N	12	5.4	.....	0	0	.....	.....	0	0	Clear.....	
Leavenworth, Kan	.....	.....	29.82	757.4	62	16.7	94	N	20	8.9	.....	.....	10n	.....	NE	0.83	21.8	Light rain...	
Lexington, Ky.	28.84	732.5	29.89	759.2	75	23.9	60	SE	8	3.6	.....	2c	0	SE	.....	0	0	Clear.....	
Long Branch, N. J.	.....	.....	30.20	767.1	63	17.2	94	SE	12	5.4	.....	10ck	0	SW	.....	2.50	63.5	Cloudy.....	
Louisville, Ky.	.....	.....	29.88	758.9	77	25.0	65	SE	8	3.6	.....	2k	0	SW	.....	0.08	2.0	Clear.....	
Lynchburg, Va	.....	.....	30.11	764.8	71	21.7	82	SE	4	1.8	.....	.....	10s	.....	SE	0	0	Cloudy.....	
Malone, N. Y.	.....	.....	30.07	763.8	75	23.9	70	S	4	1.8	.....	8k	0	S	.....	0	0	Cloudy.....	
Manhattan, Kan.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Marquette, Mich	.....	.....	30.10	764.5	56	13.3	87	Calm	0	0	.....	.....	8s	.....	S	0	0	Cloudy.....	
Memphis, Tenn	.....	.....	29.87	758.7	68	20.0	94	NW	7	3.1	.....	.....	10s	.....	.....	0.56	14.2	Cloudy.....	
Milwaukee, Wis	.....	.....	30.01	762.2	57	13.9	87	N	9	4.0	.....	10s	Fog	W	.....	0.10	2.5	Cloudy.....	
Mobile, Ala	.....	.....	29.92	760.0	77	25.0	86	SW	4	1.8	.....	2c	0	W	.....	0.23	5.8	Fair.....	
Montgomery, Ala	.....	.....	29.89	759.2	79	26.1	82	N	4	1.8	.....	5k	0	.....	.....	Inap.	Inap.	Fair.....	
Morgantown, W. Va	.....	.....	30.01	762.2	77	25.0	60	Calm	0	0	.....	2c	0	W	.....	0	0	Fair.....	
Mt. Washington, N. H.	24.11	612.4	30.47	773.9	52	11.1	100	SW	18	8.0	.....	.....	Fog	.....	.....	0	0	Foggy.....	
Nashville, Penn	.....	.....	29.86	758.4	72	22.2	90	E	6	2.7	.....	.....	10ks	.....	S	0.17	4.3	Cloudy.....	
New Haven, Conn	.....	.....	30.21	767.3	67	19.4	90	SE	4	1.8	.....	.....	10s	.....	.....	0.15	3.8	Cloudy.....	
New London, Conn	.....	.....	29.26	708.6	65	18.3	94	SE	6	2.7	.....	.....	10s,fog	.....	S	0.02	0.5	Cloudy.....	
New Orleans, La	.....	.....	29.90	759.4	78	25.6	82	SW	1	0.4	.....	0	0	.....	.....	0.80	20.3	Clear.....	
Newport, R. I.	.....	.....	30.26	768.6	63	17.2	94	SE	4	1.8	.....	.....	10s	.....	SE	0.05	1.3	Cloudy.....	
New York, N. Y.	.....	.....	30.21	767.3	66	18.9	94	SE	7	3.1	.....	.....	10ks,fg	.....	SE	1.51	38.4	Cloudy.....	
Norfolk, Va	.....	.....	30.16	766.1	79	26.1	60	S	11	4.9	.....	5c	5k	SW	SE	0	0	Cloudy.....	
North Platte, Neb	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Omaha, Neb.	27.28	692.9	29.85	758.2	52	11.1	72	NW	2	0.9	.....	0	Haze	.....	.....	0	0	Clear.....	
Oswego, N. Y.	28.91	735.0	30.01	762.2	61	15.6	82	N	12	5.4	.....	2c	2s	SE	.....	0.02	0.5	Fair.....	
Pembina, Dakota	.....	.....	30.08	764.0	74	23.3	76	SE	10	4.5	.....	Haze	2s	.....	S	0	0	Clear.....	
Philadelphia, Penn	.....	.....	29.95	760.7	69	15.6	76	SW	8	3.6	.....	8c	0	.....	.....	0	0	Cloudy.....	
Pike's Peak, Colorado	18.01	457.2	30.18	766.6	71	21.7	85	S	4	1.8	.....	5k	5s	S	S	0	0	Cloudy.....	
Pittsburgh, Penn	.....	.....	30.21	767.3	25.5	— 3.6	58	N	18	8.0	.....	0	0	.....	.....	0.01	0.3	Clear.....	
Port Huron, Mich	.....	.....	30.01	762.2	70	21.1	85	S	8	3.6	.....	80s	0	W	.....	0	0	Fair.....	
Portland, Me	.....	.....	30.00	762.0	61	16.1	88	N	12	5.4	.....	2c	Haze	.....	.....	0	0	Fair.....	
Portland, Oregon	.....	.....	30.30	769.6	57	13.9	87	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy.....	
Punta Rassa, Fla	.....	.....	29.93	760.7	83	17.2	72	N	6	2.7	.....	1cs	0	SW	.....	0	0	Clear.....	
Rochester, N. Y.	.....	.....	29.98	761.5	80.3	26.8	78	SW	10	4.5	.....	2ck	5ks	.....	SW	0.12	3.0	Threatening	
Salt Lake City, Utah	25.74	653.9	30.03	762.7	75	23.9	72	SW	8	3.6	.....	1c	Sm'e	SW	.....	0	0	Clear.....	
Sandy Hook, N. J	.....	.....	30.07	763.8	60	15.6	44	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
San Diego, Cal.	.....	.....	30.18	766.6	67	19.4	94	SE	12	5.4	.....	.....	8ks	.....	E	2.62	66.5	Cloudy.....	
San Francisco, Cal	.....	.....	29.85	758.2	61	16.1	94	N	4	1.8	.....	.....	10s	.....	N	0	0	Cloudy.....	
Santa Fé, N. M	.....	.....	29.78	756.4	60	18.9	68	Calm	0	0	.....	5c	0	.....	.....	0	0	Fair.....	
Savannah, Ga.	23.43	595.1	29.97	761.2	47	8.3	69	E	4	1.8	.....	0	0	.....	.....	0	0	Clear.....	
Shreveport, La	.....	.....	29.92	760.0	73	22.8	85	NE	9	4.0	.....	5k	5s	NE	NE	1.36	34.5	Cloudy.....	
Smithville, N. C.	.....	.....	30.02	762.5	68	20.0	74	NW	7	3.1	.....	0	0	.....	.....	0.01	0.3	Clear.....	
Springfield, Mass.	.....	.....	30.08	764.0	70	21.4	76	SE	24	10.7	.....	.....	10ks	.....	SE	0.13	3.3	Cloudy.....	
St. Louis, Mo.	.....	.....	30.23	767.8	66	18.9	92	E	1	0.4	.....	.....	10s,fog	.....	.....	0.01	0.3	Cloudy.....	
St. Marks, Fla	.....	.....	29.84	757.9	70	21.1	84	SE	8	3.6	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy.....	
St. Paul, Minn	.....	.....	29.91	759.7	79	26.1	80	W	8	3.6	.....	2k	0	W	.....	0.08	2.0	Fair.....	
St. Paul's Island, Alaska	.....	.....	30.04	763.0	53	11.7	72	N	4	1.8	.....	0	0	.....	.....	0	0	Clear.....	
Thatcher's Island, Mass.	.....	.....	29.78	756.4	33	0.6	80	NE	19	8.5	.....	0	0	.....	.....	0	0	Clear.....	
Toledo, Ohio	.....	.....	30.27	768.8	59	15.0	94	Calm	0	0	.....	.....	.....	.....	.....	0	0	Dense fog...	
Tucson, Arizona	.....	.....	29.92	760.0	80	26.7	66	SE	9	4.0	.....	2c	Haze	.....	.....	0	0	Clear.....	
Tybee Island, Ga.	27.47	697.7	30.06	763.5	83	28.3	.....	S	.....	.....	.....	0	Haze	.....	.....	0	0	Clear.....	
Vicksburg, Miss.	.....	.....	29.91	759.7	71	21.7	100	E	22	9.8	.....	.....	10ks	.....	SE	5.43	137.9	Threatening	
	.....	.....	29.92	760.0	72.5	22.5	90	NW	1	0.4	.....	.....	10s	.....	NW	1.76	44.7	Cloudy.....	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer
Virginia City, M. T.	24.53	623.0	30.01	762.2	52	11.1	59	SE	9	4.0	.....	0	0	.....	.....	0	0	Clear.	
Washington, D. C.	.....	.....	30.14	765.5	74	23.3	81	S	8	3.6	.....	.....	10ks	.....	SW	0.03	0.8	Cloudy.	
Wilmington, N. C.	.....	.....	30.09	764.3	76	24.4	72	SE	12	5.4	.....	.....	10s	.....	SE	0.46	11 7	Cloudy..	
Wood's Holl, Mass.	.....	.....	30.27	768.8	64	17.8	100	E	3	1.3	.....	.....	Fog	.....	.....	0.12	3.0	Dense fog.	
Wytheville, Va.	27.76	705.1	29.86	758.4	66	18.9	84	E	5	2.2	.....	.....	10ks	.....	SE	0	0	Threatening	
Yankton, Dakota	28.87	733.3	30.16	766.1	55	12.8	80	NW	5	2.2	.....	0	0	.....	.....	Inap.	Inap.	Clear.	
Yuma, Arizona	.....	.....	29.76	755.9	80	26.7	.....	N	.....	.....	.....	0	0	.....	.....	0	0	Clear.	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.05	763.3	84	28.9	70	E	2	0.9	.....	2ck	5s	E	NE	0	0	Fair.	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.96	761.0	80	26.7	86	E	.....	.....	.....	1oc	0	.....	.....	0	0	Fair.	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.15	765.8	81	27.2	82	Calm	0	0	.....	0	0	.....	.....	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.77	756.1	83	28.3	75	N	1.2	0.5	.....	0	2k	.....	.....	0	0	Fair.	Robert Mason.
Havana, Cuba, W. I.	.....	.....	29.96	761.0	80	26.7	87	Calm	0	0	.....	10c, ck	..fn	SW	.....	0	0	Cloudy.	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.15	765.8	77.0	25.0	73	ENE	8.0	3.6	.....	0	2fk	.....	.....	0	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	72	22.2	75	Calm	0	0	.....	0	0	.....	.....	0.18	4 6	Clear.	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.03	762.7	80	26.7	87	E	.....	.....	3	7ks	8ks	E	.....	0.690	2.20	Cloudy.	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.6	.....	.....	87.8	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.354	9.00	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.18	639.6	.....	.....	65.5	18.6	75	SE	1	0.4	.....	4c	4s	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	29.77	756.1	43	6.1	88	NW	7	3.1	.....	2c	0	N	.....	0	0	.....	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.09	764.3	76	24.4	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	At Liverpool.	.....	30.04	763.0	55	12.8	.....	WNW	.....	.....	3	.....	0	.....	.....	.....	.....	Clear.	Capt. Ritchie.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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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 2,832 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.; 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, 4,203.8 ft., or 1,301.1 m.; Santa Fè, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are 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.

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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, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JUNE 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	765.5	78.6	25.9	39	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.16	766.0	75.2	24.0	60	N			1		0			0	0	Clear	Peter.
La Calle					74.8	23.8		SW			2		1			0	0	Clear	Kunts.
Tunis			30.16	766.0	79.5	26.4	39	NW			4		3			0	0	Fair	Jacques.
Sfax			30.21	767.2	77.0	25.0	54	SE			2		2			0	0	Clear	Chauvey.
Saida			30.21	767.2	77.9	25.5	30	Calm			0		0			0	0	Clear	Millot.
Tebessa			30.15	765.9	76.6	24.8		NW			1		0			0	0	Clear	Colin.
Geriville			30.21	767.4	78.3	25.7	26	WNW			1		1			0	0	Clear	Buard.
Laghouat			30.20	767.0	80.6	27.0	10	SW			2		1			0	0	Clear	Guyot.
Biskra			30.19	766.7	86.2	30.1	36	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.

Agram			29.91	759.6	77.0	25.0	46	Calm			0		5			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.87	758.7	76.6	24.8	64	W			1		8			0.032	0.81		Dr. Wierzbicki.
Eperies			29.79	756.6	77.7	25.4	56	N			1		5		S	2.748	69.80		Julius Mikolik.
Gratz	28.71	729.1	29.89	759.1	64.6	18.1	65	SE			3		8			0	0		Andreas Rospini.
Hermannstadt	28.41	721.5	29.76	756.0	72.1	22.3	65	SW			1		9			0	0		Prof. Reissenberger.
Kremsmünster	28.95	735.3	30.26	768.6	68.7	20.4	59	W			2		3			0	0		Prof. C. Wagner.
Lemberg			29.79	756.6	72.9	22.7	69	NE			1		6			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			29.95	760.8	71.8	22.1	73	WNW			2		1k			0	0		I.R.Hydrographic Office.
Szegedin			29.35	758.1	74.1	23.4	58	SW			2		10			0	0		Karl Stancel.
Trieste			29.96	760.9	75.0	23.9	76	WSW			1		4			0	0	Partly clear.	Prof. V. Farolfi.
Vienna			29.91	759.7	72.3	22.4	50	WNW			3		3			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 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.

Brussels			30.02	762.6	66.9	19.4	63	WSW			2		10			1.069	27.15		Royal Observatory.

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

BRITISH SERIES.

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, 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	58.3	14.6		SSE	20	8.9			2			0	0	Blue sky	William Powell.
Ardrossan			29.88	758.9	58	14.4		SSW			5		4					*D. clouds	William McNeil.
Armagh, Observatory			29.83	757.7	57.6	14.2		S	20	8.9			9					Squally	S. Gall, for Dr. Robinson.
Birr Castle, (Parsonstown).			29.84	757.9	55.5	13.1		SW			3-4		10					Raining	J. Dreyer.
Bradford			29.96	761.0	62.5	16.9		W			1		1			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.00	762.0	82.5	28.1		SE			1		7					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			30.01	762.2	66.0	18.9		W			1		2			Blank	Blank	*D. clouds	H. Todd.
Cardington			30.04	763.0	68.0	20.0		W			1		4					*D. clouds	John McLaren.
Carlisle			29.92	760.0	63	17.2		SW			6		2			0	0	*D. clouds	T. Bell, for J. Carmell.
Chatham, School M. E.			30.04	763.0	62.7	17.1		SW			2		8					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.67	728.2	30.17	766.3	55.2	12.9		WSW			1		7					*D. clouds	R. E. Power.
Donaghadee			29.86	758.4	59	15.0		SSW			5		7					*D. clouds	J. Mac Gowan.
Dover			30.05	763.3	59	15.0		W			3		4					½ clouded	J. Costello.
Eccles (near Manchester.)			30.08	764.0	61.7	16.5		SW	3.2	1.4			8					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.11	764.8	60.0	15.6		SW	17	7.6			4					*D. clouds	The Staff.
Fort Napier, (Natal)	27.88	708.1	30.11	764.8	72.1	22.3		E			1		8					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	84.0	28.9		E			4		7					*D. clouds	
Galway, Queen's College			29.91	759.7	57	13.9		S			6		10					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean).			30.12	765.0	79.2	26.2		W			4		0					Blue sky	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			29.86	758.4	57.4	14.1		WSW			2		8					*D. clouds	Lewis Stuart.
Great Yarmouth			30.01	762.2	57	13.9		SE			2		7					Raining	G. T. Watson.
Greenwich, Royal Obs'y			30.05	763.3	67.0	19.4		WSW			3		8			Blank	Blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.14	765.5	58.5	14.7		WSW			2		5					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y			29.99	761.7	62.8	17.1		W			2		8					*D. clouds	L. J. Crossley.
Helston			30.09	764.3	63	17.2		SW			4		0			0	0	Fine	M. P. Moyle.
Holyhead			29.96	761.0	59	15.0		SSW			5		4					*D. clouds	John Tilston.
Kew, Observatory			30.05	763.3	61.5	16.4		W	14	6.3			8					*D. clouds	The Staff.
Kingstown			29.93	760.2	59	15.0		SSE			4		8					Overcast	George Mitchell.
Leicester Museum			30.03	762.7	60.8	16.0		W			1		5					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)			30.07	763.8	72.4	22.4		NW			1		6k					*D. clouds	Sergt. F. Travis, A. H. C.
Nairn			29.77	756.1	64	17.8		SW			3		5					½ clouded	W. D. Penny.
Nassau, (Bahamas			30.00	762.0	82.2	27.9		SE			4		6					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.01	762.2	68.3	20.2		SSW			4		k, ks		S	0.363	9.22	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.00	762.0	61.4	16.3		WSW			2		8					*D clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.03	762.7	60	15.6		W			1		6					*D. clouds	J. Lucas.
Plymouth			30.10	764.5	63.7	17.6		SW			5		2					*D. clouds	John Merrifield.
Roche's Point			29.92	760.0	59	15.0		SW			5		10					Overcast	W. Kennedy.
Saint Ann's Head			30.04	763.0	57	13.9		SW			3		5					*D clouds	John C. Walker.
Saint Helier, (Jersey)			30.15	765.8	63.0	17.2		W			4		0					Clear	A. P. Amy.
Sandwick Manse, (Orkneys)			29.79	756.7	57.1	13.9		SSE	32	14.3			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough			29.96	761.0	57.8	14.3		SSE			2		7					*D. clouds	F. Shaw.
Scutari Cemetery Turkey			29.72	754.9	76.2	24.6		SW			1		7			Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.98	761.5	65.7	18.7		SW			2		6			0.228	5.79	*D. clouds	W. F. Cooper.
Silloth Rectory			29.92	760.0	60.9	16.1	58	SW			6		3			0.080	2.03	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.97	761.2	60.1	15.6		SW			3		5					*D. clouds	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.			29.68	753.9	54	12.2		S			7		10					Overcast	John Smith.
Stratfield Turgiss			30.06	763.5	62.2	16.8		W			1		8					*D. clouds	Rev. Charles H. Griffith.
Thurso			29.77	756.1	62	16.7		S			4		6					*D. clouds	John Trotter.
Truro, Royal Institution			30.11	764.8	64	17.8		SW			4		6					*D. clouds	W. Newcombe.
Valencia, Observatory			29.82	757.4	56.2	13.4		SW	49	21.9			10					Threatening	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man					48	8.9		S			1		0						Thomas Dawson.
Cape Good Hope, Obs'y			30.10	764.5	72.4	22.4	48	Calm ?	2 ?	0.9 ?		1	8						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.42	747.3	57.0	13.9	81	N			1		10			1.73	43.9	Cloudy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.89	759.2	64.9	18.3		SW			3		4k			0	0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.19	766.8				SE	14.0	6.5						0	0		C. Meldrum
Melbourne, Observatory			29.42	747.3	49.8	9.9	88	NNE	12	5.4			10			0.36	9.1	Showery	R. L. J. Ellery.
Monach Lt-house, Hebrides			29.54	750.3	51	10.6		S			1		10			0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.69	754.1	50	10.0		SE			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 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.	Corr. Inches	Corr. Millimeters	Red. Inches	Red. Millimeters	Fahrenheit	Centigrade	Per cent	Wind From—	Miles per hour	Meters per second	Force	Clouds Up'er	Clouds Low'r	Upper From—	Lower From—	Rain Inches	Rain Millimeters	Weather	Observer
Copenhagen			29.94	760.4	66.9	19.4	48	NW			2		2						
Fanöe			30.00	761.9	60.4	15.8	68	W			4		3						
Godthaab, (Greenland)			29.74	755.5	36.7	2.6	94	S			6		10					Raining	
Stykkisholm, (Iceland)			29.60	751.9	44.8	7.1	80	Calm			0		8						
Thorshavn, (Faröe)			29.71	754.5	50.2	10.1	82	SE			4		10						
Vestervig			29.93	760.3	57.9	14.4	74	W			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	.....	.....	30.07	763.6	62.6	17	53	N	.....	.....	1	.....	5ks,n	.....	N	0	0	Cloudy	Normal School.
Amiens	.....	.....	30.08	764.1	69.8	21.0	50	NW	.....	.....	3	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Avignon	.....	.....	30.04	763.0	75.2	24	46	NNW	.....	.....	6	.....	0	.....	.....	0	0	Clear	Normal School.
Bar-sur-Seine	.....	.....	30.08	763.9	67.5	19.7	70	N	.....	.....	2	.....	8	.....	SW	0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.11	764.9	63.7	17.6	64	N	3.1	1.4	.....	.....	10	.....	SW	0.024	0.6	Covered	Beaumette Observatory.
Beauvais	.....	.....	30.11	764.7	66.0	18.9	46	WNW	.....	.....	2	.....	8	.....	WNW	0.04	1.	Very cloudy	Normal School.
Besançon	.....	.....	30.08	764.0	70.9	21.6	69	SSE	.....	.....	3	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	30.18	766.6	65.8	18.8	62	NE	.....	.....	2	.....	..k	.....	S	.....	.....	.....	Normal School.
Bourges	.....	.....	30.09	764.3	67.3	19.6	81	SW	.....	.....	2	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	30.11	764.9	64.6	18.1	57	SW	.....	.....	3	.....	2k	.....	SW	0.049	1.25	.....	Naval Observatory.
Carcassonne	.....	.....	30.18	766.5	64.4	18	74	W	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School
Caen	.....	.....	30.042	778.27	65.3	18.5	84	SW	.....	.....	1	.....	5	.....	E	0	0	Cloudy	Normal School.
Chartres	.....	.....	30.03	762.8	69.6	20.9	.....	N	.....	.....	2	.....	4	.....	W	0.340	8.8	.....	Normal School.
Clermont	.....	.....	30.09	764.3	64.8	18.2	84	N	.....	.....	2	.....	10	.....	E	.....	.....	Raining	Puy de Dome Obs'y.
Commercy	.....	.....	30.06	763.5	66.2	19	66	WNW	.....	.....	2	.....	5kn	.....	NW	0.689	17.5	Cloudy	Normal School.
Commune de Greasque*	.....	.....	30.08	764.1	74.8	23.8	40	NW	.....	.....	2	.....	5	.....	SW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.04	763.0	71.1	21.7	66	NNW	.....	.....	2	.....	5ks	.....	NE	0	0	Cloudy	Normal School.
La Roche-sur-Yon	.....	.....	30.17	766.2	65.8	18.8	64	W	.....	.....	4	.....	8	.....	E	0	0	Very cloudy	Normal School.
Le Mans	.....	.....	30.13	765.3	65.5	18.6	88	NW	.....	.....	3	.....	8	.....	NE	0	0	V.ry cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.07	763.7	66.7	19.3	88	N	.....	.....	4	.....	5	.....	S	0.126	3.20	Raining	Normal School.
Mâcon	.....	.....	30.06	763.4	68.9	20.5	74	WNW	.....	.....	2	.....	5	.....	E	0	0	Cloudy	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	30.03	762.8	61.9	16.6	83	NNW	.....	.....	2	.....	8	.....	SE	0	0	Ve y cloudy	Normal School.
Nismes	.....	.....	29.98	761.4	76.6	24.8	39	N	.....	.....	2	.....	2	.....	N	0	0	Slightly cl'dy	Normal School.
Orleans	.....	.....	30.07	763.7	66.2	19	61	N	.....	.....	2	.....	5	.....	N	0	0	Cloudy	Normal School.
Paris, Observatory	.....	.....	30.10	764.5	64.8	18.2	55	NW	.....	.....	2	.....	6k	.....	NW	0.189	4.79	Cloudy	National Observatory.
Parthenay	.....	.....	30.10	764.4	68.0	20	89	W	.....	.....	2	.....	5	.....	SW	0.008	0.2	Cloudy	Normal School.
Privas	.....	.....	30.04	763.0	70.5	21.4	.....	NW	.....	.....	2	.....	2	.....	NW	.....	.....	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.20	767.1	69.8	21.0	55	W	.....	.....	3	.....	5	.....	E	0	0	½ covered	Naval Observatory.
Rouen	.....	.....	30.11	764.8	70.2	21.2	48	WSW	.....	.....	2	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Saint Lo	.....	.....	29.72	754.8	64.0	17.8	72	NW	.....	.....	1	.....	8	.....	NW	0.12	3.	.....	Normal School.
Tarbes	29.10	739.0	30.17	766.2	62.6	17	.....	W	.....	.....	2	.....	5	.....	E	0	0	Cloudy	Normal School
Villefranche	.....	.....	30.08	764.0	73.4	23	52	N	.....	.....	3	.....	5	.....	.....	0.024	0.6	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.85	758.3	79.5	26.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	Inap.	Inap.	.....	L'Abbé Marchesi.
Marseilles	.....	.....	29.98	761.4	71.2	21.8	57	W	.....	.....	2	.....	3	.....	.....	0	0	Partly cloudy	Marseilles Observatory.
Mont-Louis	.....	.....	30.32	770.2	55.0	12.8	69	W	9.3	4.17	.....	.....	8	.....	NE	0	0	.....	—. Faiguère.
Montsouris, Paris	.....	.....	30.10	764.5	64.8	18.2	52	WNW	.....	.....	2	.....	9	.....	W	0.114	2.9	.....	Montsouris Observ'tory.
Perpignan	.....	.....	30.12	765.0	73.0	22.8	48	N	10.8	7.50	.....	.....	7	.....	W	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	764.6	67.5	19.7	59	WSW	.....	.....	1	.....	6	.....	.....	0.106	2.7	Cloudy	E. Renou.
Toulouse	.....	.....	30.23	767.7	70.7	21.5	66	NW	.....	.....	1	.....	6	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.11	764.9	68.0	20.0	60	NNW	.....	.....	2	.....	10	.....	W	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.12	765.0	67.6	19.8	54	NW	.....	.....	2	.....	7	.....	.....	0.193	4.90	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 Greasque, 322 m., or 1,056.4 ft; Pic du Midi, (Summit,) 2,877 m., or 9,439.1 feet; Pic du Midi, (Plantade,) 2,360 m., or 7,702.6 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.

Bamberg	.....	.....	29.93	760.2	66.0	19.2	81	N	.....	.....	3	.....	8	N	.....	1.18	30.	Thunder, lightn'g	Prof. T. Hoh.
Berlin	.....	.....	29.98	761.6	69.8	21.0	46	N	.....	.....	2	.....	9	.....	.....	0.056	1.4	.....	Prof. Arndt.
Breslau	.....	.....	30.00	762.1	73.6	23.1	52	NW	.....	.....	3	.....	2	.....	.....	0	0	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	30.00	762.0	70.0	21.1	69	SE	.....	.....	3	.....	9	.....	.....	0.076	1.9	.....	A. Senz.
Cassel	.....	.....	29.97	761.3	74.8	23.8	54	NW	.....	.....	2	.....	4	NW	.....	0.795	20.2	.....	Dr. H. Möhl.
Emden	.....	.....	30.04	762.9	63.7	17.6	91	S	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.04	762.9	73.0	22.8	57	W	.....	.....	2	.....	5	.....	.....	0.004	0.1	.....	Physical Society.
Friedrichshafen	.....	.....	30.07	763.8	63.5	17.5	78	S	.....	.....	1	.....	4	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.00	761.9	70.3	21.3	54	ESE	.....	.....	1	.....	0	.....	.....	0	0	Clear	Captain F. Hegemann.
Kiel	.....	.....	29.96	761.0	68.2	20.1	51	W	.....	.....	2	.....	0	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.88	759.0	75.9	24.4	67	S	.....	.....	2	.....	5	.....	.....	0.579	14.7	.....	Prof. E. Luther.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	30.00	762.1	68.0	20.0	66	N	.....	.....	2	.....	7	NE	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	29.91	759.7	70.8	24.9	80	SSE	.....	.....	3	.....	3ks	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.98	761.4	68.0	20.0	88	.....	.....	.....	1	.....	3	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.94	760.4	71.6	22.0	79	NW	.....	.....	2	.....	8	.....	.....	0.079	2.0	.....	A. Lothes.
Posen	.....	.....	29.99	761.8	70.1	24.5	56	W	.....	.....	7	.....	3	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.04	763.1	67.8	19.9	61	Calm	.....	.....	0	.....	9	.....	.....	0.043	1.1	.....	Dr. Schur.
Stuttgart	.....	.....	30.00	762.1	65.3	18.5	79	SW	.....	.....	1	.....	6	.....	.....	0.591	15.0	Raining	Prof. Schoder.
Thorn	.....	.....	29.92	760.0	70.2	26.2	47	W	.....	.....	4	.....	5	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.99	761.7	66.0	18.9	81	S	.....	.....	3	.....	8	.....	.....	0.071	1.8	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	29.78	756.5	62.4	16.9	68	WSW	.....	.....	2	.....	3	.....	.....	0	0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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	758.1	82.8	28.2		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			29.92	760.0	75.2	24.0	49	W	1.3	0.6		4				0	0		
Padua			29.93	760.3	73.0	22.8	54	SE	1.8	0.8		4				0	0		
Vicenza			29.93	760.2	75.2	24.0	53	W	0.7	30.3		3		S		0	0		
Verona			29.91	759.6	73.9	23.3	68	E			1	10				0	0		
Bergamo	28.63	727.1	29.91	759.7	70.5	21.4	57	NE			2	8				0	0		
Domodossola	28.91	734.2	29.90	759.4	75.6	24.2	52	SSW			4	1				0	0		
Milan			29.97	761.1	77.2	25.1	56	E			2	8		S		0.177	4.5		
Pavia			29.96	760.9	74.7	23.7	44	NW			1	3		W		0	0		
Moncalieri			29.97	761.1	74.7	23.7	58	SW	0.7	0.3		6		SE		0	0		
Mondovi	28.10	713.7	29.96	761.0	70.3	21.3	63	SE			2	7				0.642	16.3		
Porto Maurizio			30.05	763.2	72.7	22.6	68	S			2	6				0	0		
Genoa			30.09	762.1	72.3	22.4	61	SW	1.8	0.8		4		W		0	0		
Piacenza			29.97	761.3	73.8	23.2	63	NNE	1.3	0.6		3		SSW		0.20	5.2		
Parma			29.97	761.2	76.8	24.9	58	NE			1	3				0	0		
Bologna			29.96	761.0	76.1	24.5	38	NNW			1	3		S		0	0		
Florence			29.98	761.4	77.9	25.5	56	NW			2	5		NW		0	0		
Leghorn			30.00	761.9	72.7	22.6	63	W	3.8	1.7		3				0	0		
Siena	28.79	731.2	29.97	761.2	72.7	22.6	59	WSW	0.7	0.3		7		W		0	0		
Urbino																			
Pesaro																			
Ancona			29.98	761.6	72.0	22.2	64	N			4	2				0	0		
Grosseto																			
Rome			30.00	762.1	74.5	23.6	61	SW	6.3	2.8		4		SE		0	0		
Naples, O. U.			30.03	762.7	73.8	23.2	56	N			4	6		NW		0.024	0.6		
Lecce			29.97	761.3	72.5	22.5	54	NNE	8.1	3.6		7				0	0		
Cosenza			30.02	762.6	75.9	24.4	71	NW	4.9	2.2		7				0	0		
Riposto, (Sicily)			29.97	761.2	70.5	21.4	67	NE			2	6		W		0	0		
Palermo			30.01	762.2	70.9	21.6	61	W	5.6	2.5		10				0	0		
Caltanissetta	28.08	713.2	29.98	761.5	65.1	18.4	52	WNW			6	10		SE		0	0		
Sub-Series.																			
Naples, S. R.			30.04	763.1	70.5	21.4	65	SSW	11.2	5.0		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, 550 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

NETHERLANDS' SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.09	764.2	59.4	15.2		WNW			3								
Groningen			29.93	760.1	63.3	17.4		E			2								
Helder			30.00	762.0	59.7	15.4		SW			2								
Utrecht			29.99	761.7	68.7	20.4	51	WSW			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			29.91	759.6	59.7	15.4	55	N	12.8	5.7		0				0	0		
Brônø			30.04	762.9	53.6	12.0	72	NNW	11	5		2				0	0		
Christiania			29.80	757.0	68.2	20.1	63	E	5.2	2.3		9				0	0		
Tromsø			29.95	760.7	52.5	11.4	71	W	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,)	.....	.....	30.40	772.2	68.9	20.5	75	E	2.9	1.28	.....	.....	5	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.09	764.2	82.0	27.8	30	W	7.1	3.17	.....	.....	3	NW	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.28	769.2	68.2	20.1	73	SW	8.4	3.76	.....	.....	0	.....	.....	0	0	.....	Capt D. A. da Cunha.
Lisbon	.....	.....	30.23	767.9	67.6	19.8	59	NNW	24.8	11.1	.....	.....	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 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	.....	.....	29.89	759.1	76.3	24.6	66	Calm	0	0	.....	.....	6	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.90	759.4	87 6	30.9	38	S	4	2	.....	.....	8	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.95	760.8	93.0	33.9	36	SSE	2	1	.....	.....	3	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.98	761.5	81.9	27.7	54	NW	9	4	.....	.....	10	.....	.....	.....	.....	Light rain...	Central Physical Obs.
Kuopio	.....	.....	29.91	759.6	77.7	25.4	69	SSE	18	8	.....	.....	5	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.84	757.9	80.1	26.7	43	NE	9	4	.....	.....	7	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.88	759.0	89.6	32.0	37	WSW	11	5	.....	.....	5	.....	.....	.....	.....	Light rain...	Kurdakof.
Kertch	.....	.....	29.84	758.0	81.5	27.5	63	SSE	4	2	.....	.....	2	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.07	763.7	82.1	28.4	45	S	2	1	.....	.....	6	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.78	756.3	86.5	30.3	46	NE	13	6	.....	.....	2	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.02	762.5	71.6	22.0	67	NE	18	8	.....	.....	10	.....	.....	.....	.....	Thunder-storm...	Ogorodnikof.
Tiflis	28.42	721.9	29.73	755.2	88.5	31.4	30	SW	4	2	.....	.....	7	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.74	759.4	87.4	30.8	36	E	4	2	.....	.....	8	.....	.....	Blank	Blank	.....	Sebastianof.
Kasan	.....	.....	30.17	766.4	74.7	23.7	35	SE	9	4	.....	.....	2	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.10	739.1	30.08	763.9	62.2	16.8	37	NNW	18	8	.....	.....	1	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.89	759.1	88.5	31.4	26	N	9	4	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.21	716.5	29.82	757.3	81.0	27.2	65	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.69	754.7	53.1	11.9	66	W	22	10	.....	.....	7	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.52	749.9	66.3	18.5	47	E	2	1	.....	.....	7	.....	.....	.....	.....	.....	Marks.
Irkutsk	28.13	714.4	29.48	748.7	48.7	9.3	91	WNW	13	6	.....	.....	10	.....	.....	.....	.....	Raining.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.91	759.8	82.8	28.2	49	Calm	0	0	.....	.....	5	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	29.98	761.4	53.6	11.9	91	SE	4	2	.....	.....	10	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	60.3	15.7	92	E	4	2	.....	.....	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, 502.0? m., or 1,942.2? ft.; Oorga, 1,281.0 m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	30.04	763.0	82.9	28.3	27	SW	6.0	2.67	.....	1	4	NW	.....	0	0	Cloudy.....	Royal Observatory.
San Fernando	.....	.....	30.19	766.9	70.2	21.2	67	WNW	7.2	3.2	.....	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.

Haparanda	.....	.....	29.93	760.2	66.2	19.0	81	S	.....	.....	2	.....	0	.....	.....	0.070	2.0	.....	
Umea	.....	.....	29.91	759 6	64.6	18.1	73	S	.....	.....	2	.....	6	.....	.....	0	0	.....	
Hernosand	.....	.....	29.89	759.2	63.3	17.4	72	ESE	.....	.....	2	.....	8	.....	.....	0	0	.....	
Stockholm	.....	.....	29.82	757.4	78.4	25.8	47	ESE	.....	.....	4	.....	7	.....	.....	0	0	.....	
Wisby	.....	.....	29.86	758.5	77.4	25.2	63	SSE	.....	.....	4	.....	3	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.80	757.0	78.6	25.9	48	WSW	7.2	3 2	.....	.....	7	.....	S	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	30.04	763.0	68.5	20.3	48	NNE	.....	.....	2	.....	3	.....	.....	0	0	C ouds	The Observatory.
Zurich	28.45	722.6	30.04	763.1	67.3	19.6	93	S	.....	.....	1	.....	4	.....	.....	0.236	6.0	Cloudy	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note—For Geneva the corresponding departures from the normal values are: Barometer, +1.3 mm; Thermometer, —0.3 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 Prof. C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	29.72	755.0	91.8	33.2	35	WSW	2	1.0	.....	.....	8	.....	WSW	.....	.....	Light rain	
Fao, (Persian Gulf)	.....	.....	29.75	755 6	100.4	38.0	.....	NW	.....	.....	4	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.85	758.2	82.9	28.3	.....	SW	.....	.....	4	.....	2	.....	.....	.....	.....	.....	
Valona	.....	.....	29.05	760.8	72.5	22.5	.....	W	.....	.....	2	.....	2	.....	.....	.....	.....	.....	
Varna	.....	.....	29.84	758.0	71.6	22.0	.....	N	.....	.....	3	.....	10	.....	.....	.....	.....	Stormy	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.91	759.6	86.4	30.2	63	SW	.....	.....	2	.....	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.

Bathurst, N. B	.....	.....	30.02	762.5	69.9	21.1	79	SW	23	10.3	.....	5	.....	.....	.....	0.27	6.9	Fine	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.08	764.0	75	23.9	.....	S	3	1.3	.....	.....	10s	.....	S W	0	0	Cloudy	W. R Bigg.
*Chatham, N. B	.....	.....	30.12	765.0	65	18.3	83	S	15	6.7	.....	2k	8ks	SW	SW	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.23	767.8	63	17.2	85	S	5	2.2	.....	.....	10s	.....	.....	Inap.	Inap	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.00	762.0	72.7	22.6	83	SW	.....	.....	1	10k	0	.....	.....	0.020	0.60	Threatening	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.04	763.0	71.0	21.7	80	W	.....	.....	3	.....	10n	.....	.....	0	0	.....	H. A. Johnson.
Esquimault, B. C	.....	.....	30.04	763.0	51.3	10.7	93	NE	1	0.4	.....	..cs	0	.....	.....	0	0	Cl udy	W. H. Bevis.
Fredericton, N. B	.....	.....	30.20	767.1	64.0	17.8	83	SE	6	2.7	.....	.....	10ks	.....	.....	0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.03	762.7	59	15.0	79	E	11	4.9	.....	2k	2ks	W	W	0	0	Fair	James Stewart.
Goderich, Ontario	.....	.....	29.98	761.5	75.5	24.2	82	SW	.....	.....	2	7ck	0	W	.....	0	0	Very fine	H. J. Strang, M. A.
Granton, Ontario	28.91	734.3	29.90	761.0	75	23.9	.....	S	.....	.....	1	1c	0	E	.....	0	0	Clear	James Grant.
*Halifax, N. S	.....	.....	30.25	768.3	57	13.9	100	S	6	2.7	.....	.....	Fog	.....	.....	0.01	0.3	Light rain	F. Allison, M. A.
*Kingston, Ontario	.....	.....	30.07	763.8	66	18.9	93	SW	1	0.4	.....	10c	0	.....	.....	0	0	Cloudy	S. Woods, M. A.
Little Glace Bay, N. S	.....	.....	30.25	768.3	68.6	20.3	78	W	9	4.0	.....	4k	0	W	.....	0	0	Fair	C. H. Rigby.
*Montreal, Quebec	.....	.....	30.02	762.5	70	21.1	86	S	8	3.6	.....	8k	2ks	W	W	0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.00	762.0	73	22.8	46	S	10	4.5	.....	5ck	0	SW	.....	0	0	Fair	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.00	762.0	67	19.4	87	S	7	3.1	.....	5cs	5n	S	S	0	0	Threatening	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	30 02	762.5	70	21.1	90	S	6	2.7	.....	10c	0	NW	.....	0	0	Fair	H. Morgan.
Port Hastings, N. S	.....	.....	30.30	769.6	59.2	15.1	.....	Calm	0	0	.....	.....	...	.....	.....	0	0	Fine	Peter Grant.
*Port Stanley, Ontario	.....	.....	30.00	762.0	73	22.8	78	SE	4	1.8	.....	2ck	0	SW	.....	0	0	Clear	M. Payne.
*Quebec, Quebec	.....	.....	30.05	763.3	66	18.9	95	Calm	0	0	.....	.....	Fog	.....	.....	0.23	5.8	Foggy	Capt. Ashe, R. N.
St. John, N. B.	.....	.....	30.26	768.6	52	11.1	100	S	2	0.9	.....	.....	Fog	.....	.....	0.020	0.51	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.95	760.7	70	21.1	86	Calm	0	0	.....	10ks	0	.....	.....	0	0	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	29.96	761.0	74	23.3	76	Calm	0	0	.....	2c	Haz	.....	.....	0.03	0.8	Fair	R. J. Cole.
Stratford, Ontario	28.73	729.7	29.95	760.7	71.7	22.1	90	SW	6	2.7	.....	8cs	0	.....	.....	0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.29	769.4	67	19.4	83	SW	14	6.3	.....	0	8ks	.....	SW	0	0	Fair	T. C. Hill.
*Toronto, Ontario	.....	.....	30.01	762.2	69	20.6	87	SE	1	0.4	.....	8cs	Haze	W	.....	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.96	761.0	73.9	23.3	80	S	12	5.4	.....	7ck	0	.....	.....	0	0	Fine	J. Montgomery
Sub-Series.																			
St. John's, Newfoundland	.....	.....	30.43	772.9	70	21.1	61	W	.....	.....	.....	0	0	.....	.....	0	0	Very clear	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.	.....	.....	30.10	764.5	70	21.1	84	S	6	2.7	.....	.....	10s	.....	S	0	0	Cloudy.....	
Alpena, Mich.	.....	.....	29.97	761.2	63	17.2	88	Calm	0	0	.....	.....	10s	.....	SW	0.06	1.5	Cloudy.....	
Atlantic City, N. J.	.....	.....	30.17	766.3	70	21.1	90	Calm	0	0	.....	1c	0	NW	.....	Inap.	Inap.	Clear.....	
Augusta, Ga.	.....	.....	30.00	762.0	73	22.8	85	NE	9	4.0	.....	.....	10s	.....	NE	0.02	0.5	Cloudy.....	
Baltimore, Md.	.....	.....	30.17	766.3	72	22.2	85	SE	8	3.6	.....	2ck	8s	.....	S	0.07	1.8	Cloudy.....	
Barnegat, N. J.	.....	.....	30.18	766.6	67	19.4	90	S	1	0.4	.....	Fog	0	.....	.....	0	0	Fair.....	
Benton, Montana	27.16	689.8	29.96	761.0	62	16.7	100	SW	8	3.6	.....	.....	10s	.....	SW	0.23	5.8	Cloudy.....	
Bismarck, Dakota	28.19	716.0	29.79	756.7	60	15.6	49	E	5	2.2	.....	0	0	.....	.....	0	0	Clear.....	
Boston, Mass.	.....	.....	30.17	766.3	69	20.6	84	S	6	2.7	.....	5ks	Haze	S	.....	0.22	5.6	Hazy.....	
Breckenridge, Minn.	.....	.....	30.02	762.5	58	14.4	76	S	4	1.8	.....	0	0	.....	.....	0	0	Clear.....	
Buffalo, N. Y.	.....	.....	29.93	761.5	72	22.2	71	SW	3	1.3	.....	5c	2k	W	W	0.06	1.5	Fair.....	
Burlington, Vt.	.....	.....	30.07	763.8	75	23.9	68	S	13	5.8	.....	2k	5s	S	.....	0	0	Cloudy.....	
Cairo, Ill.	.....	.....	29.90	759.4	72	22.2	90	SE	4	1.8	.....	10ck	0	NW	.....	0.10	2.5	Cloudy.....	
Cape Hatteras, N. C.	.....	.....	30.04	763.0	78	25.6	73	SE	8	3.6	.....	5c	2ks	W	.....	0	0	Fair.....	
Cape Henry, Va.	.....	.....	30.13	765.3	73	22.8	85	SE	6	2.7	.....	0	Haze	.....	.....	0	0	Clear.....	
Cape Lookout, N. C.	.....	.....	30.08	764.0	76	24.4	72	SE	16	7.2	.....	2ck	2ks	SE	SE	0.01	0.3	Fair.....	
Cape May, N. J.	.....	.....	30.16	766.1	69	20.6	95	SE	6	2.7	.....	2ck	2s	.....	.....	0	0	Fair.....	
Charleston, S. C.	.....	.....	29.98	761.5	72	22.2	95	E	13	5.8	.....	.....	10n	.....	E	2.34	59.4	Light rain...	
Cheyenne, Wyoming	24.14	613.1	30.08	764.0	47	8.3	60	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear.....	
Chicago, Ill.	.....	.....	29.91	759.7	58	14.4	94	N	8	3.6	.....	.....	10s	.....	.....	0	0	Threatening	
Cincinnati, Ohio.	.....	.....	29.90	759.4	73	22.8	85	SE	6	2.7	.....	.....	10ks	.....	S	0.65	16.5	Cloudy.....	
Cleveland, Ohio.	.....	.....	29.98	761.5	72.4	22.4	65	SE	7	3.1	.....	5ck	0	SW	.....	0	0	Fair.....	
Colorado Springs, Col.	24.34	618.2	30.11	764.8	52	11.1	53	N	4	1.8	.....	0	0	.....	.....	0	0	Clear.....	
Corsicana, Tex.	.....	.....	29.88	758.9	65	18.3	83	NW	6	2.7	.....	5c	0	.....	.....	0	0	Fair.....	
Davenport, Iowa.	.....	.....	29.91	759.7	67	19.4	84	NE	4	1.8	.....	.....	10s	.....	.....	0.19	4.8	Cloudy.....	
Denison, Tex.	.....	.....	29.88	758.9	66	18.9	89	NW	12	5.4	.....	10c	0	N	.....	0	0	Cloudy.....	
Denver, Col.	24.02	633.0	30.14	765.6	53	11.7	60	S	4	1.8	.....	0	0	.....	.....	0	0	Clear.....	
Detroit, Mich.	.....	.....	29.92	760.0	74	23.3	76	SW	4	1.8	.....	2ck	5s	SW	.....	0	0	Fair.....	
Dodge City, Kan.	27.41	697.0	29.70	754.4	57	13.9	75	NW	12	5.4	.....	0	0	.....	.....	0	0	Clear.....	
Dubuque, Iowa.	.....	.....	29.99	759.4	69	20.6	70	N	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Duluth, Minn.	.....	.....	30.02	762.5	55	12.8	80	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Eastport, Me.	.....	.....	30.21	767.3	53	11.7	93	S	6	2.7	.....	.....	Fog	.....	.....	0	0	Foggy	
Erie, Pa.	.....	.....	29.97	761.2	77	25.0	60	S	14	6.3	.....	2c	0	.....	.....	0.06	1.5	Clear.....	
Escanaba, Mich.	.....	.....	30.02	762.5	63	17.2	67	N	6	2.7	.....	2k	0	N	.....	0	0	Clear.....	
Fort Gibson, Indian Ter.	.....	.....	29.80	756.9	63	17.2	83	E	6	2.7	.....	5cs	2s	E	NE	0.86	21.8	Fair.....	
Ft. St. Michael, Alaska.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.71	729.0	29.78	756.4	64	17.8	88	N	8	3.6	.....	.....	10n	.....	N	Inap.	Inap.	Light rain...	
Fort Sully, Dakota.	28.32	719.3	29.94	760.5	60	15.6	61	SE	8	3.6	.....	0	0	.....	.....	0	0	Clear.....	
Galveston, Tex.	.....	.....	29.94	760.5	75	23.9	68	N	4	1.8	.....	0	0	.....	.....	0	0	Clear.....	
Grand Haven, Mich.	.....	.....	29.92	760.0	69	20.6	84	E	11	4.9	.....	.....	10s	.....	E	Inap.	Inap.	Cloudy.....	
Indianapolis, Ind.	.....	.....	29.80	759.2	72	22.2	90	SE	5	2.2	.....	.....	10s	.....	S	0.02	0.5	Cloudy.....	
Indianola, Tex.	.....	.....	29.95	760.7	80	26.7	66	N	3	1.3	.....	0	0	.....	.....	0	0	Clear.....	
Jacksonville, Fla.	.....	.....	29.91	759.7	74	23.3	90	SW	4	1.8	.....	.....	10s	.....	.....	0.61	15.5	Cloudy.....	
Keokuk, Iowa.	.....	.....	29.84	757.9	67	19.4	90	NE	6	2.7	.....	.....	10s	.....	NE	0.68	17.3	Cloudy.....	
Key West, Fla.	.....	.....	29.96	761.0	83.6	28.7	71	N	3	1.3	.....	2k	Haze	NW	NW	0	0	Fair.....	
Kittyhawk, N. C.	.....	.....	30.14	765.5	71	21.7	85	SE	2	0.9	.....	5k	Haze	.....	.....	0	0	Fair.....	
Knoxville, Tenn.	.....	.....	29.98	761.5	69	20.6	75	NE	4	1.8	.....	.....	10ks	.....	SW	Inap.	Inap.	Cloudy.....	
La Crosse, Wis.	.....	.....	29.96	761.0	64	17.8	78	N	8	3.6	.....	0	0	.....	.....	0	0	Clear.....	
Leavenworth, Kan.	.....	.....	29.84	757.9	66	18.9	94	N	6	2.7	.....	.....	10n	.....	NE	0.53	13.5	Light rain...	
Lexington, Ky.	28.87	733.3	29.94	760.5	68	20.0	90	S	8	3.6	.....	0	5n	.....	S	0.11	2.8	Light rain...	
Long Branch, N. J.	.....	.....	30.18	766.6	64	17.8	94	SE	4	1.8	.....	.....	Fog	.....	.....	0.01	0.3	Foggy	
Louisville, Ky.	.....	.....	29.91	759.7	74	23.3	81	SE	6	2.7	.....	5k	0	.....	.....	0.29	7.4	Fair.....	
Lynchburg, Va.	.....	.....	30.09	764.3	77	25.0	65	SE	4	1.8	.....	10k	0	S	.....	0	0	Cloudy.....	
Malone, N. Y.	.....	.....	29.99	761.7	72	22.2	81	S	8	3.6	.....	.....	1on	.....	SW	0.35	8.9	Light rain...	
Manhattan, Kan.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Marquette, Mich.	.....	.....	30.03	762.7	54	12.2	86	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Memphis, Tenn.	.....	.....	29.89	759.2	73	22.8	67	SE	2	0.9	.....	5k	Sm'e	SE	.....	Inap	Inap.	Fair.....	
Milwaukee, Wis.	.....	.....	29.97	761.2	57	13.9	100	NE	14	6.3	.....	.....	Fog	.....	.....	0	0	Foggy	
Mobile, Ala.	.....	.....	29.90	759.4	77	25.0	86	SW	3	1.3	.....	.....	10s	.....	SW	0	0	Cloudy.....	
Montgomery, Ala.	.....	.....	29.92	760.0	76	24.4	86	SE	6	2.7	.....	.....	8s	.....	SE	1.10	27.9	Cloudy.....	
Morgantown, W. Va.	.....	.....	30.01	762.2	80	26.7	54	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Mt. Washington, N. H.	24.04	610.6	30.40	772.1	50	10.0	100	W	24	10.7	.....	.....	Fog	.....	.....	0.24	6.1	Foggy	
Nashville, Tenn.	.....	.....	29.91	759.7	71	21.7	84	E	4	1.8	.....	.....	10ks	.....	SW	1.04	26.4	Cloudy.....	
New Haven, Conn.	.....	.....	30.18	766.6	66	18.9	94	SE	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
New London, Conn.	.....	.....	30.21	767.3	63	17.2	94	S	3	1.3	.....	.....	Fog	.....	.....	0	0	Foggy	
New Orleans, La.	.....	.....	29.86	758.9	77	25.0	82	SE	2	0.9	.....	.....	10s	.....	SE	0.47	11.9	Cloudy.....	
Newport, R. I.	.....	.....	30.19	766.8	66	18.9	94	Calm	0	0	.....	5k	0	SW	.....	0	0	Fair.....	
New York, N. Y.	.....	.....	30.18	766.6	68	20.0	84	S	4	1.8	.....	5k	Fog	.....	.....	0.03	0.8	Fair.....	
Norfolk, Va.	.....	.....	30.14	765.5	70	20.6	69	SE	6	2.7	.....	5k	0	SE	.....	0	0	Fair.....	
North Platte, Neb.	.....	.....	29.70	754.4	56	13.3	74	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Omaha, Neb.	27.17	690.1	29.92	760.0	66	18.9	73	N	7	3.1	.....	2ck	0	NE	.....	0	0	Clear.....	
Oswego, N. Y.	28.90	734.0	30.03	762.7	76	24.4	72	S	10	4.5	.....	8ck	2s	SW	.....	0	0	Cloudy.....	
Pembina, Dakota.	.....	.....	29.93	760.2	64	17.8	78	SE	8	3.6	.....	2cs	0	.....	.....	0	0	Fair.....	
Philadelphia, Penn.	.....	.....	30.17	766.3	70	21.1	84	S	4	1.8	.....	5k	0	S	.....	0.55	14.0	Fair.....	
Pike's Peak, Colorado.	.....	.....	30.26	768.6	34	1.1	34	NE	10	4.5	.....	0	0	.....	.....	0	0	Clear.....	
Pittsburgh, Penn.	18.01	458.2	30.01	762.2	73	22.8	63	S	6	2.7	.....	2c	0	.....	.....	0	0	Clear.....	
Port Huron, Mich.	.....	.....	29.97	761.2	59	15.0	87	NE	4	1.8	.....	2c	1s	.....	.....	0	0	Fair.....	
Portland, Me.	.....	.....	30.19	766.8	63	17.2	94	SW	8	3.6	.....	.....	Fog	.....	.....	0	0	Foggy	
Portland, Oregon.	.....	.....	30.14	765.5	53	11.7	86	Calm	0	0	.....	2cs	0	SW	.....	0	0	Fair.....	
Punta Rassa, Fla.	.....	.....	29.96	761.0	82.5	28.1	78	S	2	0.9	.....	0	5ks	.....	E	0.20	5.1	Fair.....	
Rochester, N. Y.	.....	.....	29.99	761.7	74	23.3	76	SW	10	4.5	.....	5cs	Sm'e	SW	.....	Inap.	Inap.	Fair.....	
Salt Lake City, Utah.	25.07	654.3	30.01	762.0	63	17.2	46	Calm	0	0	.....	5c	2s	NW	.....	0	0	Fair.....	
Sandy Hook, N. J.	.....	.....	30.17	766.3	68	20.0	90	SE	8	3.6	.....	5ck	Fog	.....	.....	0	0	Fair.....	
San Diego, Cal.	.....	.....	29.93	760.2	62	16.7	94	N	2	3.6	.....	.....	10s	.....	N	0	0	Cloudy.....	
San Francisco, Cal.	.....	.....	29.91	759.7	54	12.2	90	SW	16	7.2	.....	Haze	Fog	.....	SW	0	0	Fair.....	
Santa Fé, N. M.	23.37	593.6	29.91	759.7	57	13.9	56	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Savannah, Ga.	.....	.....	29.92	760.0	74	23.3	90	NE	12	5.4	.....	.....	10s	.....	NE	0.14	3.6	Cloudy.....	
Shreveport, La.	.....	.....	29.92	760.0	67	19.4	84	W	2	0.9	.....	10k	0	SW	.....	0	0	Cloudy.....	
Smithville, N. C.	.....	.....	30.03	762.5	77	25.0	76	SE	18	8.0	.....	.....	10ks	.....	SE	0.03	0.8	Cloudy.....	
Springfield, Mass.	.....	.....	30.16	766.1	67	19.4	92	S	8	3.6	.....	.....	10s	.....	.....	0.46	11.7	Cloudy.....	
St. Louis, Mo.	.....	.....	29.88	758.9	67	19.4	100	SE	4	1.8	.....	.....	Fog	.....	.....	0.99	25.1	Foggy	
St. Marks, Fla.	.....	.....	29.94	760.5	77	25.0	86	N	4	1.8	.....	0	8s	.....	N	0	0	Cloudy.....	
St. Paul, Minn.	.....	.....	29.97	761.2	67.5	19.7	58	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear.....	
St. Paul's Island, Alaska.	.....	.....	29.90	759.4	34	1.1	79	N	4	1.8	.....	0	0	.....	.....	0	0	Clear.....	
Thatcher's Island, Mass.	.....	.....	30.18	766.6	62	16.7	88	S	7	3.1	.....	.....	.....	.....	.....	0	0	Dense fog....	
Toledo, Ohio.	.....	.....	29.92	760.0	75	23.9	76	Calm	0	0	.....	2c	8ks	.....	SE	0	0	Cloudy.....	
Tucson, Arizona.	27.42	696.5	30.01	762.2	84	28.9	.....	SE	.....	.....	.....	0	Haze	.....	.....	0	0	Clear.....	
Tybee Island, Ga.	.....	.....	29.94	759.4	76	24.4	90	E	12	5.4	.....	5c	5ks	.....	E	0.08	2.0	Cloudy.....	
Vicksburg, Miss.	.....	.....	29.90	759.4	70	21.1	84	SE	2	0.9	.....	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
Virginia City, M. T.	24.32	617.7	29.80	756.9	58	14.4	58	Calm	0	0	.. ....	1c	0	W	.....	0	0	Clear.....	
Washington, D. C.	.....	.....	30.14	765.5	72	22.2	85	S	7	3.1	.....	.....	8ks	.....	SW	0	0	Cloudy.....	
Wilmington, N. C.	.....	.....	30.05	763.3	76	24.4	76	SE	7	3.1	.....	5cs	5ks	SW	SE	0.26	6.6	Cloudy.....	
Wood's Holl, Mass.	.....	.....	30.22	767.6	64	17.8	94	SE	4	1.8	.....	.....	Fog	.....	.....	0	0	Dense fog....	
Wytheville, Va.	27.77	705.4	29.85	758.2	66	18.9	78	SE	6	2.7	.....	.....	10ks	.....	SE	0.01	0.3	Cloudy.....	
Yankton, Dakota	28.78	731.0	30.04	763.0	59	15.0	82	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Yuma, Arizona	.....	.....	29.89	759.2	84	28.9	.....	SW	.....	.....	.....	0	0	.....	.....	0	0	Clear.....	
SUB-SERIES.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.01	762 2	83	28.3	70	E	5	2.2	.....	5k	10ks	NE	.....	0	0	Cloudy.....	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.91	759.7	82	27.8	78	E	.....	.....	.....	0	8ks	.....	.....	0	0	Fair.....	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.14	765.5	80	26.7	78	Calm	0	0	.. ....	8c	0	.....	.....	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.74	755.4	83	28.3	67	SW	1.2	0 5	.....	8ck	0	.....	.....	0	0	Fair.....	Robert Mason.
Havana, Cuba, W. I.	.....	.....	29.96	761.0	82	27.8	79	Calm	0	0	.....	2c	0	.....	.....	0.45	11.4	Fair.....	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.14	765.5	77.5	25.3	76	SE	6.0	2.7	.....	0	2fk	.....	.....	0.05	1.3	Fair.....	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica, W. I.	27.17	690.1	29.95	760.7	69	20.6	90	S	2.0	0.9	.....	5c	0	S	.....	0.10	2.5	Fine, clear...	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	29.98	761.5	80	26.7	82	E	.....	.....	2	6k	7k	E	.....	0.130	3.30	Cloudy.....	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.03	762.8	.....	.....	86.0	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.345	8.75	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.17	639.3	.....	.....	65.5	18.6	78	Calm	0	0	.....	4ck	2s	.....	.....	0.34	8.6	Fair.....	Thomas Herran
York Factory, B. A.	.....	.....	30.16	766.1	39	3.9	86	W	1	0.4	.....	0	0	.....	.....	0	0	.....	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.10	764.5	76	24.4	90	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—															
Steamer Nova Scotian, At	Queenstown.	.....			29.93	760.2	53	11.7	.....	SW	.....	.....	5	.....	..k	.....	SW	.....	.....	Squally.....	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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,263.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) 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, 5.18 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'g) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JUNE 15, 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	.....	.....	30.15	765.7	81.5	27.5	43	Calm	.....	.....	0	.....	0	.....	.....	0	0	Clear	Charnot.
Algiers	.....	.....	30.10	764.6	75.6	24.2	66	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	Peter.
La Calle	.....	.....	.....	.....	.....	.....	.....	S	.....	.....	1	.....	0	.....	.....	0	0	Clear	Kunts.
Tunis	.....	.....	30.13	765.2	78.1	25.6	52	E	.....	.....	4	.....	2	.....	.....	0	0	Clear	Jacques.
Sfax	.....	.....	30.20	767.0	78.3	25.7	38	SE	.....	.....	3	.....	1	.....	.....	0	0	Clear	Chauvoy.
Saida	.....	.....	30.21	767.3	80.0	30.0	16	WNW	.....	.....	2	.....	0	.....	.....	0	0	Clear	Millot.
Tebessa	.....	.....	30.13	765.2	79.9	26.6	.....	NW	.....	.....	2	.....	2	.....	.....	0	0	Clear	Colin.
Geryville	.....	.....	30.22	767.6	82.9	28.3	18	SSW	.....	.....	2	.....	2	.....	.....	0	0	Clear	Buard.
Laghouat	.....	.....	30.15	766.5	91.4	33.0	.....	SW	.....	.....	1	.....	0	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	30.18	766.5	87.1	30.6	33	SE	.....	.....	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	.....	.....	29.90	759.4	78.5	28.5	50	Calm	.....	.....	0	.....	3	.....	.....	0	0	.....	Prof. Ivan Stosir.
Cracow, I. R. Observatory	.....	.....	29.89	759.2	65.5	18.6	83	W	.....	.....	3	.....	10	.....	.....	0.021	0.54	.....	Dr. Wierzbiski.
Eperies	.....	.....	29.81	757.2	70.7	21.5	71	NW	.....	.....	2	.....	10	.....	NE	0	0	.....	Julius Mikolik.
Gratz	28.09	7 8.7	29.85	758.2	71.8	22.1	57	SW	.....	.....	3	.....	5	.....	.....	0.252	6.4	.....	Andreas Rospini.
Hermannstadt	28.43	722.0	29.77	756.2	74.5	23.6	57	NW	.....	.....	1	.....	5	.....	.....	0.465	11.8	.....	Prof. Reissenberger.
Kremsmünster	28.91	734.5	30.26	768.6	72.0	22.2	56	NW	.....	.....	1	.....	3	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	.....	.....	29.74	755.5	70.5	21.4	65	N	.....	.....	1	.....	8	.....	.....	0.028	0.7	.....	Dr. T. Stanecki.
Nylregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Pola	.....	.....	29.94	760.4	75.2	24.0	66	WNW	.....	.....	2	.....	2k8	.....	.....	0	0	.....	I.R.Hydrographic Office.
Segedin	.....	.....	29.81	757.2	76.8	24.9	58	W	.....	.....	2	.....	5	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	29.95	760.6	76.1	24.5	64	Calm	.....	.....	0	.....	8	.....	.....	0	0	.....	Prof. V. Farolfi.
Vienna	.....	.....	29.91	759.8	66.9	19.4	74	W	.....	.....	3	.....	10	.....	.....	.....	.....	Raining	I. R. Central Met. Obs'y.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 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.

Brussels	.....	.....	29.95	760.6	69.4	20.8	55	SE	.....	.....	1	.....	10	.....	.....	0	0	.....	Royal Observatory.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

BRITISH SERIES.

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, 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	.....	.....	29.66	753.4	56.0	13.3	.....	SSE	21	9.4	.....	.....	7	.....	.....	0.00	0.13	*D. clouds.....	William Roswell.
Ardrossan	.....	.....	29.68	753.9	57	13.9	.....	SSW	.....	.....	4	.....	5	.....	.....	.....	.....	*D. clouds.....	William McNeil.
Armagh, Observatory	.....	.....	29.74	755.4	52.5	11.4	.....	WSW	3	1.3	.....	.....	10	.....	.....	.....	.....	Showery.....	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	29.78	756.4	55.8	13.2	.....	W	.....	.....	1–2	.....	8	.....	.....	.....	.....	Showery.....	J. Dreyer.
Bradford	.....	.....	29.74	755.4	58.0	14.4	.....	S	.....	.....	2	.....	10	.....	.....	0.02	0.5	Raining.....	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.02	762.5	81.0	27.2	.....	NE	.....	.....	2	.....	5	.....	.....	.....	.....	*D. clouds.....	Sergt. J. F. Halanen, A.
Cambridge, Observatory	.....	.....	29.84	757.9	68.0	20.0	.....	SSW	.....	.....	2	.....	10	.....	.....	Blank	Blank	Overcast.....	H. Todd. [H. C.
Cardington	.....	.....	29.86	758.4	66.4	19.1	.....	SW	.....	.....	2	.....	9	.....	.....	.....	.....	Overcast.....	John McLaren.
Carlisle	.....	.....	29.71	754.6	53.6	12.0	.....	SW	.....	.....	0	.....	10	.....	.....	.....	.....	Raining.....	T. Bell, for J. Cartmell.
Chatham, School M. E	.....	.....	29.89	759.2	65.2	18.4	.....	SW	.....	.....	2	.....	7	.....	.....	.....	.....	*D. clouds.....	Capt. J. Fellowes, R.E.
Dartmoor	28.39	721.1	29.9	759.4	47.9	8.8	.....	NW	.....	.....	2	.....	10	.....	.....	.....	.....	Squally.....	R. E. Power.
Donaghadee	.....	.....	29.89	754.1	59	15.0	.....	NW	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast.....	J. Mac Gowan.
Dover	.....	.....	29.91	759.7	62	16.7	.....	SW	.....	.....	3	.....	2	.....	.....	.....	.....	¼ clouded...	J. Costello.
Eccles, (near Manchester.)	.....	.....	29.72	754.9	56.5	13.6	.....	S	5.4	2.4	.....	.....	10	.....	.....	.....	.....	Raining.....	Thomas Mackereth.
Falmouth, Observatory	.....	.....	29.82	757.4	55.4	13.0	.....	NW	22	9.8	.....	.....	6	.....	.....	.....	.....	Overcast.....	The Staff.
Fort Napier, (Natal)	27.98	710.7	30.22	767.6	72.2	22.3	.....	E	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.96	761.0	82.0	27.8	.....	E	.....	.....	3	.....	8	.....	.....	Blank	Blank	Overcast.....	
Galway, Queen's College	.....	.....	29.84	757.9	58	14.4	.....	SW	.....	.....	5	.....	5	.....	.....	.....	.....	*D. clouds.....	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.08	764.0	74.2	23.4	.....	W	.....	.....	5	.....	0	.....	.....	.....	.....	Blue sky.....	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	29.66	753.4	56.1	13.4	.....	SW	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast.....	Lewis Stuart.
Great Yarmouth	.....	.....	29.91	759.7	59	15.0	.....	SSE	.....	.....	5	.....	3	.....	.....	.....	.....	Blue sky.....	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	29.88	758.9	64.4	18.0	.....	SSW	.....	.....	1	.....	9	.....	.....	.....	.....	*D. clouds.....	The Staff, for G. B. Airy.
Guernsey	.....	.....	29.84	757.9	56.5	13.6	.....	SSE	.....	.....	3	.....	10	.....	.....	.....	.....	Raining.....	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	29.76	755.9	56.1	13.4	.....	S	.....	.....	4	.....	10	.....	.....	.....	.....	Raining.....	L. J. Crossley.
Helston	.....	.....	29.79	756.7	61	16.1	.....	N	.....	.....	4	.....	6	.....	.....	0.49	12.4	Overcast.....	M. P. Moyle.
Holyhead	.....	.....	29.75	755.6	59	15.0	.....	SSW	.....	.....	2	.....	3	.....	.....	.....	.....	*D. clouds.....	John Tilston.
Kew, Observatory	.....	.....	29.88	758.9	63.1	17.3	.....	SSW	20	8.9	.....	.....	10	.....	.....	.....	.....	Threatening	The Staff.
Kingstown	.....	.....	29.75	755.6	55	12.8	.....	WNW	.....	.....	4	.....	8	.....	.....	Blank	Blank	Overcast.....	George Mitchell.
Leicester Museum	.....	.....	29.82	757.4	59.1	15.1	.....	S	.....	.....	3	.....	10	.....	.....	.....	.....	Threatening	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)	.....	.....	30.08	764.9	74.6	23.7	.....	NW	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky....	Sergt. F. Travis, A. H. C.
Nairn	.....	.....	29.60	751.8	63	17.2	.....	SW	.....	.....	2	.....	2	.....	.....	.....	.....	¼ clouded...	W. D. Penny.
Nassau, (Bahamas	.....	.....	30.02	762.5	82.6	28.1	.....	NE	.....	.....	4	.....	7	.....	.....	.....	.....	* clouds....	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	29.80	756.9	61.3	16.3	.....	SSW	.....	.....	6	.....	10k,d	.....	SSW	0.030	0.76	Overcast.....	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	29.79	756.7	55.2	12.9	.....	S	.....	.....	4–5	.....	1	.....	.....	.....	.....	Raining.....	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	29.81	757.2	61	16.1	.....	SSW	.....	.....	3	.....	10	.....	.....	.....	.....	Overcast.....	J. Lucas.
Plymouth	.....	.....	29.79	756.7	53	11.7	.....	NW	.....	.....	3	.....	10	.....	.....	.....	.....	Overcast.....	John Merrifield.
Roche's Point	.....	.....	29.81	757.2	56	13.3	.....	NW	.....	.....	5	.....	5	.....	.....	.....	.....	Cloudy.....	W. Kennedy.
Saint Ann's Head	.....	.....	29.79	756.7	54	12.2	.....	WNW	.....	.....	2	.....	3	.....	.....	.....	.....	.....	John C. Walker.
Saint Helier, Jersey	.....	.....	29.87	758.7	60.2	15.7	.....	SW	.....	.....	5	.....	10	.....	.....	.....	.....	Raining.....	A. P Amy.
Sandwick Manse, Orkneys	.....	.....	29.58	751.3	58	14.4	.....	S	29	13.0	.....	.....	4	.....	.....	.....	.....	*D. clouds.....	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	29.78	756.4	61.4	16.3	.....	SSW	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast.....	F. Shaw.
Scutari Cemetery Turkey	.....	.....	29.77	756.1	76.0	24.4	.....	S	.....	.....	1	.....	3	.....	.....	.....	.....	*D. clouds.....	Sergt. W. H. Lyne.
Sheffield	.....	.....	29.76	755.9	64.0	17.8	.....	SW	.....	.....	5	.....	0	.....	.....	0	0	Overcast.....	W. F. Cooper.
Silloth Rectory	.....	.....	29.70	754.4	61.7	18.2	62	SW	.....	.....	1	.....	3	.....	.....	0.010	0.25	*D. clouds.....	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	29.71	754.6	55.1	12.8	.....	S	.....	.....	4	.....	10	.....	.....	.....	.....	Raining.....	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.	.....	.....	29.52	749.8	56	13.3	.....	SW	.....	.....	5	.....	8	.....	.....	.....	.....	*D. clouds.....	John Smith.
Stratfield Turgiss	.....	.....	29.88	758.9	59.9	15.5	.....	SW	.....	.....	1–2	.....	10	.....	.....	.....	.....	Squally.....	Rev. Charles H. Griffith.
Thurso	.....	.....	29.53	750.0	63	17.2	.....	SSW	.....	.....	2	.....	6	.....	.....	.....	.....	*D. clouds.....	John Trotter.
Truro, Royal Institution	.....	.....	29.83	757.7	60	15.6	.....	NW	.....	.....	5	.....	6	.....	.....	.....	.....	*D. clouds.....	W. Newcombe.
Valencia, Observatory	.....	.....	29.89	759.2	54.4	12.4	.....	NW	20	8.9	.....	.....	5	.....	.....	.....	.....	*D. clouds.....	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man	.....	.....	.....	.....	47	8.3	.....	SW	.....	.....	4	.....	2	.....	.....	.....	.....	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.05	763.3	74.0	23.3	39	W	11	4.9	.....	0	0	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	29.24	742.7	58.0	14.4	80	W	.....	.....	3	.....	0	.....	.....	0.02	0.5	Lightning ...	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	29.68	753.9	59.0	15.0	.....	W	.....	.....	2	.....	10k	.....	.....	0	0	Overcast.....	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.25	768.3	70.0	21.1	62	ESE	22.1	9.9	.....	.....	4	.....	.....	0	0	Squally.....	C. Meldrum
Melbourne, Observatory	.....	.....	29.55	750.6	52.1	11.2	62	N	22	9.8	.....	.....	8	.....	.....	0.12	3.0	Boisterous...	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	29.53	750.0	53	11.7	.....	SSW	.....	.....	6	5	5	SSW	.....	0.05	12.7	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	29.70	754.4	50	10.0	.....	SSE	.....	.....	6	.....	10	.....	.....	Blank	Blank	.....	Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity. distinction between upper and lower cloud 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	.....	.....	29.99	761.8	68.0	20.0	64	NNW	.....	.....	2	.....	10	.....	.....	.....	.....	.....	
Fanöe	.....	.....	30.02	762.4	61.7	16.5	82	SW	.....	.....	4	.....	1	.....	.....	.....	.....	.....	
Godthaab, (Greenland)	.....	.....	29.78	756.4	36.0	2.2	94	S	.....	.....	5	.....	10	.....	.....	.....	.....	.....	
Stykkisholm, (Iceland)	.....	.....	29.61	752.1	42.8	6.0	93	NE	.....	.....	8	.....	10	.....	.....	.....	.....	Raining.....	
Thorshavn, (Faröe)	.....	.....	29.50	749.3	49.6	9.8	89	SE	.....	.....	6	.....	10	.....	.....	.....	.....	Raining.....	
Vestervig	.....	.....	29.98	761.4	60.4	15.8	77	SW	.....	.....	4	.....	0	.....	.....	.....	.....	.....	

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

FRENCH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.96	760.9	62.6	17	64	S			2		8nk		S	0	0	Very cloudy	Normal School.
Amiens			29.92	760.0	73.8	23.2	52	SW			3		5		NW	0	0	Cloudy	Normal School.
Avignon			30.00	762.1	78.6	25.9	42	WSW			2		2		WSW	0	0	Slightly cl'dy	Normal School.
Bar-sur-Seine			29.99	761.8	68.0	20.0	55	W			2		8		SW	0.024	0.6	Very cloudy	C. Saillard.
Beaumette, (near Angers)			29.94	760.5	64.8	18.2	56	SSW	10.7	4.8			10		S	0	0	Covered	Beaumette Observatory.
Beauvais			29.74	755.4	67.6	19.8	60	S			1		8		S	0	0	Very cloudy	Normal School.
Besançon			29.98	761.6	72.0	22.2	67	S			3		2		E	0.201	7.4	Slightly cl'd	Normal School.
Bourg en Bresse			30.11	764.7	73.4	23	59	SW			1		..k		N				Normal School.
Bourges			30.02	762.4	64.0	18.1	80	SW			2		5		NE	0	0	Partly cloudy	Normal School.
Brest			29.73	755.2	55.9	13.3	79	NW			4		10		NW	0	0		Naval Observatory.
Carcassonne			30.03	762,7	66.6	19.2	53	W			3		0			0	0	Clear	Normal School
Caen			30.60?	779.6?	65.8	18.8	77	SSW			6		5		ENE	0	0	Cloudy	Normal School.
Chartres			29.93	760.3	69.3	20.7		SSW			2		3		SW	0.445	11.3		Normal School.
Clermont			29.96	760.9	69.4	20.8	57	NE			2		5		SW	0.165	4.2	Cloudy	Puy de Dome Obs'y.
Commercy			29.99	761.7	65.7	18.7	64	E			2		5ku		WSW	0	0	Cloudy	Normal School.
Commune de Greasque*			30.09	764.3	74.5	23.6	43	W			4		2		W	0	0		M. Kina.
Grenoble			30.01	762.9	70.9	21.6	47	NW			2		2ck		SE	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			30.04	763.0	62.2	16.8	61	S			6		5		N	0	0	Cloudy	Normal School.
Le Mans			29.98	761.5	66.6	19.2	79	SW			4		5		SW	0	0	Cloudy	Normal School.
Lons-Le-Saulnier			30.00	761.9	69.6	20.9	69	NW			4		5		E	0.337	8.55	Raining	Normal School.
Mâcon			30.02	762.4	68.5	20.3	83	N			4		5		NE	0.08	2.	Cloudy	Normal School.
Metz																			M. Schuster.
Mirecourt			29.91	759.8	71.6	22	67	WNW			2		5		E	0.165	4.2	Cloudy	Normal School.
Nismes			29.99	761.8	77.0	25	39	SW			2		0			0	0	Clear	Normal School.
Orleans			29.94	760.5	66.9	19.4	61	SW			2		8		W	0	0	Very cloudy	Normal School.
Paris, Observatory			29.95	760.7	68.2	20.1	58	SSW			2		5			0.002	0.05	Cloudy	National Observatory.
Parthenay			29.98	761.4	68.4	20.2	85	SW			2		5		W	0	0	Cloudy	Normal School.
Privas			30.04	763.1	74.1	23.4		SE			1		5		SE			Cloudy	Normal School.
Rochefort, Observatory			30.04	763.0	69.3	20.7	60	SW			3		10		SE	0.118	3.0	Covered	Naval Observatory.
Rouen			29.96	761.0	69.1	20.6	49	SSW			2		5		S	0	0	Cloudy	Normal School.
Saint Lo			29.78	756.5	61.2	16.2	87	W			1		10		W	0	0		Normal School.
Tarbes	28.98	730.2	30.06	763.4	60.8	16		W			1		2		E	0	0	Slightly cl'dy	Normal School
Villefranche			30.09	764.3	72.5	22.5	67	SE			2		8			0.126	3.2	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.88	759.0	81.0	27.2										Blank	Blank		L'Abbé Marchési.
Marseilles			30.01	762.3	68.0	20.0	64	W			2		2			0	0	Slightly cl'dy	Marseilles Observatory.
Mont-Louis			30.24	768.2	61.0	16.1	56	NNW	22.4	10.00			6		SW	0.059	1.5		—. Falguère.
Montsouris, Paris			29.93	760.3	70.7	21.5	47	S			2		7		SSW	0	0		Montsouris Observ'tory.
Perpignan			30.04	763 1	70.7	21.5	64	S	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)			29.95	760.8	70.0	21.1	62	S			2		4			0	0	Cloudy	E. Renou.
Toulouse			30.08	764 1	70.5	21.4	63	SE			1		2			0	0		Toulouse Observatory.
Tours			29.98	761.6	67.6	19.8	41	SSW			3		6		SW	0	0		C. Marquet.
Versailles, (near Paris)			29.95	760.7	69.8	21.0	70	S			2		9			0.059	1.51	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 Inches.	Barometer. Corrected Millimeters.	Barometer. Reduced Inches.	Barometer. Reduced Millimeters.	Fahrenheit.	Centigrade.	Per cent.	Wind from—	Miles per hour.	Meters per second.	Force 0–10.	Clouds Up'er 0–10.	Clouds Low'r 0–10.	Clouds Upper from—	Clouds Lower from—	Rain Inches.	Rain Millimeters.	Weather.	Observer.
Bamberg			29.97	761.3	67.6	19.8	72	N			2		4	WNW		0.16	4.	Foggy	Prof. T. Hoh.
Berlin			29.99	761.7	73.0	22.8	46	NE			4		9			0	0		Prof. Arndt.
Breslau			30.01	762.2	57.6	14.2	90	WNW			8		10			0.744	18.9		Dr. P. Neugebauer.
Carlsruhe			29.95	760.6	72.3	22.4	59	ESE			2		9			0.063	1.6		A. Sens.
Cassel			30.00	762.1	70.9	21.6	65	NE			3		5	SSW		0	0		Dr. H. Möhl.
Emden			29.99	761.7	68.7	20.4	43	WSW			2		5			0.319	8.1		Prof. Prestel.
Frankfort on the Main			30.00	762.1	73.2	22.9	52	NE			1		5			0	0		Physical Society.
Friedrichshafen			29.98	761.5	64.0	17.8	84	NW			2		3			0.083	2.1	Light rain	M. Wilhelm.
Hamburg			30.02	762.4	66.4	19.1	59	SW			2		6c,k	SW		0.031	0.8	Fair	Captain F. Hegemann.
Kiel			30.00	762.1	67.6	19.8	52	W			2		6			0	0		Prof. G. Karston.
Königsberg, (Prussia.)			29.89	759.3	69.3	20.7	74	NW			5		4			0	0		Prof. E. Luther.
Köslin																			H. Müller.
Leipsic			30.01	762.3	69.3	20.7	66	NNE			2		10	N		0	0		Prof. Bruhns.
Memel			29.91	759.8	65.7	18.7	91	NW			4		9s		ESE	0.169	4.3		Reinbrecht & Skalweit.
Münster			29.93	760.1	70.7	21.5	74	Calm			0		0			0	0		Prof. E. Heis.
Neufahrwasser			29.95	760.8	63.7	17.6	78	NW			4		5			0.024	0.6	Rainy	A. Lothes.
Posen			30.00	762 0	55.8	13.2	100	N			5		10			1.331	33.8		Dr. Magener.
Strassburg, (in Alsace)			29.98	761.6	71.4	21.9	47	Calm			0		3	SW		0.083	2.1		Dr. Schur.
Stuttgart			29.96	761.0	70.5	21.4	56	E			1		2			0.228	5.8		Prof. Schoder.
Thorn			29.87	758.8	67.6	19.8	70	N			3		9			0.441	11.2		Dr. Hasenbalg.
Treves, (Trier)			29.94	760.4	70.5	21.4	53	ESE			4		3			0.201	5.1	Thunder, lightn'g	Prof. Flesch.
Wustrow, Naval School			29.89	759.3	64.2	17.9	79	WSW			1		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	.....	.....	29.87	758.6	83.8	28.8	.....	SW	.....	.....	.....	.....	..k	.....	.....	.....	.....	Clear	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

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

ITALIAN SERIES.

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

Udine	.....	.....	29.91	759.8	77.5	25.3	45	SW	1.3	0.6	.....	.....	3	.....	.....	0.016	0.4	.....	
Padua	.....	.....	29.93	760.1	75.2	24.0	58	ESE	6.3	2.8	.....	.....	9	W	.....	0	0	.....	
Vicenza	.....	.....	29.93	760.1	71.4	21.9	68	SW	4.3	1.9	.....	.....	8	.....	.....	0.028	0.7	.....	
Verona	.....	.....	29.94	760.4	73.8	23.2	77	E	.....	.....	4	.....	10	.....	.....	0	0	.....	
Bergamo	28.63	727.3	29.92	759.9	62.2	16.8	76	NW	.....	.....	2	.....	10	.....	.....	0	0	.....	
Domodossola	28.93	734.8	29.92	760.0	71.6	22.0	73	Calm	.....	.....	0	.....	10	.....	.....	0	0	.....	
Milan	.....	.....	29.98	761.5	65.8	18.8	88	N	.....	.....	4	.....	8	NW	.....	0	0	.....	
Pavia	.....	.....	29.99	761.7	66.2	19.0	88	N	.....	.....	1	.....	10	.....	.....	0.138	3.5	Showery	
Moncalieri	.....	.....	29.95	760.7	71.8	22.1	62	SE	7.4	3.3	.....	.....	8	NW	.....	0.165	4.2	.....	
Mondovi	28.12	714.1	29.98	761.4	69.8	21.0	54	SE	.....	.....	2	.....	8	.....	.....	0.213	5.4	.....	
Porto Maurizio	.....	.....	30.04	763.1	74.5	23.6	68	ESE	.....	.....	2	.....	4	.....	.....	0	0	.....	
Genoa	.....	.....	30.02	762.5	72.5	22.5	62	SW	3.8	1.7	.....	.....	8	SE	.....	0	0	.....	
Piacenza	.....	.....	29.97	761.1	73.4	23.0	64	W	3.1	1.4	.....	.....	9	W	.....	0.071	1.8	.....	
Parma	.....	.....	29.96	761.0	78.8	26.0	63	S	.....	.....	4	.....	9	.....	.....	0.075	1.9	.....	
Bologna	.....	.....	29.97	761.2	76.1	24.5	45	SW	.....	.....	1	.....	4	N	.....	0.866	22.0	Showery	
Florence	.....	.....	30.01	762.3	76.1	24.5	66	E	.....	.....	2	.....	9	W	.....	0.012	0.3	.....	
Leghorn	.....	.....	30.04	762.9	72.1	22.3	66	WSW	5.6	2.5	.....	.....	2	.....	.....	0	0	.....	
Siena	28.80	731.5	29.98	761.5	71.4	21.9	59	NNW	1.3	0.6	.....	.....	7	SW	.....	0	0	.....	
Urbino	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Pesaro	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ancona	.....	.....	29.96	761.0	76.6	24.8	55	NW	.....	.....	4	.....	2	.....	.....	0	0	.....	
Grosseto	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Rome	.....	.....	30.03	762.7	74.5	23.6	62	W	4.3	1.9	.....	.....	8	E	.....	0	0	.....	
Naples, O. U	.....	.....	30.06	763.5	75.2	24.0	56	SW	.....	.....	4	.....	7	SW	.....	0	0	.....	
Lecce	.....	.....	29.93	760.3	75.9	24.4	45	N	4.9	2.2	.....	.....	4	.....	.....	0	0	.....	
Cosenza	.....	.....	30.08	763.9	78.1	25.6	71	NW	7.4	3.3	.....	.....	6	.....	.....	0	0	.....	
Riposto, (Sicily)	.....	.....	29.93	760.1	70.7	21.5	68	SE	.....	.....	2	.....	8	NW	.....	0	0	.....	
Palermo	.....	.....	30.04	763.0	73.0	22.8	52	W	12.5	5.6	.....	.....	3	.....	.....	0	0	.....	
Caltanissetta	28.08	713.3	29.98	761.6	69.6	20.9	37	NW	.....	.....	4	.....	4	SE	.....	0	0	.....	
Sub-Series.																			
Naples, S. R	.....	.....	30.07	763.8	72.1	22.3	70	WNW	3.8	1.7	.....	.....	5	NW	.....	0	0	.....	Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known: Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Tokio	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NETHERLANDS' SERIES.

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

Flushing	.....	.....	29.93	761.6	68.7	20.4	.....	SSE	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	
Groningen	.....	.....	29.95	760.7	65.7	18.7	.....	S	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	
Helder	.....	.....	29.99	761.7	61.7	16.5	.....	SSW	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	
Utrecht	.....	.....	29.96	761.0	69.3	20.7	48	SSW	.....	.....	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.

Bergen	.....	.....	29.90	759.4	64.4	18.0	55	SSW	14.5	6.5	.....	.....	3	.....	.....	0	0	.....	
Bröno	.....	.....	29.76	755.9	59.0	15.0	74	NNE	11	5	.....	.....	7	.....	.....	0	0	.....	
Christiania	.....	.....	29.91	759.6	64.6	18.1	52	SSW	18.8	8.4	.....	.....	0	.....	.....	0	0	.....	
Tromsö	.....	.....	29.98	761.4	52.5	11.4	59	NE	18	8	.....	.....	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,)	.....	.....	30.45	773.3	70.0	21.6	80	W	11.4	5.11	.....	.....	4	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.15	765.9	72.3	22.4	55	WNW	16.2	7.25	.....	.....	4	.....	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.36	771.1	68.0	20.0	71	SW	7.2	3.22	.....	.....	0	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.31	769.9	66.4	19.1	62	WNW	15.0	6.7	.....	.....	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 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	.....	.....	29.83	757.7	68.5	20.3	70	E	18	8	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.84	758.0	78.6	25.9	67	S	9	4	.....	.....	10	.....	.....	.....	.....	Thunder-storm.	Astronomical Obs.
Dorpat	.....	.....	29.89	759.1	82.8	28.2	43	Calm	0	0	.....	.....	8	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.94	760.4	75.0	23.9	65	ENE	10	7	.....	.....	9	.....	.....	.....	.....	Thunder-storm.	Central Physical Obs.
Kuopio	.....	.....	29.85	758.1	84.9	29.4	63	S	22	10	.....	.....	7	.....	.....	.....	.....	Thunder-storm.	Ch. Forsten.
Kieff	.....	....	29.76	756.0	84.4	29.1	44	SE	7	3	.....	.....	6	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.86	758.5	72.0	22.2	75	SW	9	4	.....	.....	8	.....	.....	.....	.....	Thunder-storm.	Kurdakof.
Kertch	.....	.....	29.77	756.1	88.9	31.6	50	NNE	20	9	.....	.....	5	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.04	762.8	83.1	28.4	45	SSW	4	2	.....	.....	3	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.66	753.4	93.2	34.0	27	E	40	18	.....	.....	6	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.90	759.5	77.0	25.0	61	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.41	722.5	29.77	756.1	84.6	29.2	43	NE	9	4	.....	.....	7	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.94	760.4	83.8	28.8	59	ESE	13	6	.....	.....	7	.....	.....	Blank	Blank	.....	Sebastianof.
Kasan	.....	.....	30.11	764.8	77.9	25.5	36	S	4	2	.....	.....	9	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.13	739.9	30.08	764.0	76.8	24.7	24	W	18	8	.....	.....	1	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.93	760.3	80.4	26.9	18	NE	18	8	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobref.
Tashkend.	28.22	716.8	29.83	757.7	79.9	26.6	31	NW	11	5	.....	.....	0	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.63	752.5	55.2	12.9	69	S	13	6	.....	.....	10	.....	.....	.....	.....	Raining.	Meteorological Obs.
Yenlseisk	.....	.....	29.78	756.3	59.2	15.1	65	SW	2	1	.....	.....	2	.....	.....	.....	.....	.....	Marks.
Irkutsk	28.16	715.3	29.49	749.1	57.7	14.3	84	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.88	758.9	85.6	29.8	33	Calm	0	0	.....	.....	5	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	29.96	760.9	57.2	14.0	87	SE	7	3	.....	.....	0	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	62.6	17.0	95	ENE	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. 404.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0 m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	29.95	760.6	82.2	27.9	26	W	15.7	7.00	.....	2	2	SW	.....	0	0	Cloudy.	Royal Observatory.
San Fernando	.....	.....	30.24	768.2	70.2	21.2	57	WNW	15.2	6.8	.....	0	1	.....	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.

Haparanda	.....	.....	29.89	759.3	71.2	21.8	74	N	.....	.....	2	.....	2	.....	.....	0	0	.....	
Umea	.....	.....	29.83	757.6	59.2	15.1	89	SSE	.....	.....	2	.....	10	.....	.....	0	0	.....	
Hernosand	.....	.....	29.81	757.2	64.8	18.2	81	S	.....	.....	6	.....	5	.....	.....	0.157	4.0	Foggy	
Stockholm	.....	.....	29.89	759.2	75.7	24.3	32	W	.....	.....	4	.....	3	.....	.....	0	0	.....	
Wisby	.....	.....	30.01	762.3	63.7	17.6	61	NNW	.....	.....	4	.....	3	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.79	756.6	75.4	24.1	33	SSW	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 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	28.58	726.0	29.97	761.2	68.5	20.3	45	NNE			3		2			0	0	Clouds	The Observatory.
Zurich	28.36	720.4	29.95	760.6	70.9	21.6	60	NW			1		3			0.039	1.0	Clear	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, —0.5 mm; Thermometer, —0.4 cent.; Relative Humidity, —11 per cent.

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

Constantinople			29.82	757 4	77.5	25.3	60	SSW	7	3.0			4		SW	0	0		
Fao, (Persian Gulf)			29.74	755.3	99.5	37.5		NW			4		0						
Salonica			29.91	759.6	89.6	32.0		N			6		2						
Valona			29.94	760.4	75.9	24.4		W			2		5						
Varna			29.88	759.0	73.4	23.0		NE			2		5						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.87	758.6	85.1	29.5	63	W			3		5k		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.

Bathurst, N. B.			30.04	763.0	65.1	18.4	94	SW	2	0.9		8				0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario			30.16	766.1	73	22.8		Calm	0	0			8		NW	0	0	Cloudy	W. R Bigg.
*Chatham, N. B.			30.06	763.5	63	17.2	97	SW	8	3.6			10ks		SW	0.35	8.9	Light rain	G. A. Blair.
Charlottetown, P. E. Island.			30.11	764.8	64	17.8	85	S	15	6.7		0	5ks			0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			30.09	764.3	72.7	22.6	84	S			1	6c	0			0.552	14.02	Clearing	James Smith, M. A.
Dalhousie, N. B.			30.04	763.0	64.0	17.8	94	W			2	10k	0			0.60	15.2		H. A. Johnson.
Esquimault, B. C.			30.26	768.6	49.3	9.6	82	NE	2	0.9		0	0			0	0	Clear	W. H. Bevis.
Fredericton, N. B.			30.12	765.0	59.3	15.2	95	SE	4	1.8			10n			0.689	17.28	Raining	Prof. Harrison.
*Fort Garry, Manitoba			29.64	752.8	67	13.9	97	W	13	5.8		5k	5n	W	W	0.05	1.3	Clearing	James Stewart.
Goderich, Ontario			30.03	762.7	70.2	21.2	89	Calm			0	10ck	0	S		0.127	3 23	Clearing	H. J. Strang, M. A.
Granton, Ontario	28.97	735.8	30.04	763.0	67	19.4		SE			1		10n			0.47	11.9	Cloudy	James Grant.
*Halifax, N. S.			30.15	765.8	61	16.1	100	SE	5	2.2			Fog			Inap.	Inap.	Foggy	F. Allison, M. A.
*Kingston, Ontario			30.13	765.3	73	22.8	82	E	1	0.4		10cs	0	W		0	0	Fair	S. Woods, M. A.
Little Glace Bay, N. S.			30.16	766.1	68.6	20.3	88	W	10	4.5		6k	0	W		0	0	Fair	C. H. Rigby.
*Montreal, Quebec			30.10	764.5	69	20.6	89	NW	4	1.8		8k	2ks	E	E	0.64	16.3	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.10	764.5	71	21.7	51	N	3	1.3		5ck	2n	N	N	0.17	4.3	Clearing	J. B. Haney.
*Parry Sound, Ontario			30.06	763.5	68	20.0	89	E	7	3.1		2cs	5ks	E	E	0.02	0.5	Fair	Rev. R. Mosley.
*Port Dover, Ontario			30.05	763.3	69	20.6	90	SW	2	0.9		10k	0	W		0.02	0.5	air	H. Morgan.
Port Hastings, N. S.			30.20	767.1	62.0	16.7		S	4	1.8						0	0	Fine	Peter Grant.
*Port Stanley, Ontario			30.03	762.7	70	21.1	94	E	11	4.9		10k	0	SW		0.24	6.1	Cloudy	M. Payne.
*Quebec, Quebec			30.10	764.5	68	20.0	79	N	3	1.3		0	0			0.55	14.0	Clear	Capt. Ashe, R. N.
St. John, N. B.			30.16	766.1	52	11.1	100	S	6	2.7			Fog			0.900	22.86	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario			29.99	761.7	69	20.6	84	SE	4	1.8			10n			0.13	3.3	Cloudy	K. Stewart.
Stayner, Ontario			30.03	762.7	71	21.7	85	SE	3	1.3			8n		SE	0.18	4.6	Cloudy	R. J. Cole.
Stratford, Ontario	28.78	731.0	30.01	762.2	67.8	19.9	97	SE	6	2.7			10s			0.331	8.41	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B.			30.19	766.8	68	20.0	86	SW	12	5 4			10ks		SW	0	0	Cloudy	T. C. Hill.
*Toronto, Ontario			30.06	763.5	69	20.6	85	NE	4	1.8		2ck	8ks	W	W	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.00	762.0	71.0	21.7	89	S	5	2.2		2ck	8s			0.27	6.9	Fine	J. Montgomery.
Sub-Series.																			
St. John's, Newfoundland			30.06	763.5	70	21.1	75	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.	.....	.....	30.10	764.5	74	23.3	76	S	1	0.4	.....	5k	0	W	.....	0.12	3.0	Fair.....	
Alpena, Mich	.....	.....	29.97	761.2	61	16.1	88	Calm	0	0	.....	8ck	Haze	SE	.....	0	0	Fair.....	
Atlantic City, N. J	.....	.....	30.18	766.6	65	18.3	100	Calm	0	0	.....	0	Fog	.....	.....	0	0	Foggy	
Augusta, Ga	.....	.....	29.97	761.2	73	22.8	95	SE	6	2.7	.....	.....	10n	.....	SE	0.33	8.4	Light rain...	
Baltimore, Md	.....	.....	30.18	766.6	72	22.2	80	S	6	2.7	.....	.....	10s	.....	S	Inap.	Inap.	Cloudy.....	
Barnegat, N. J	.....	.....	30.18	766.6	64	17.8	100	SW	5	2.2	.....	.....	Fog	.....	.....	0.02	0.5	Foggy	
Benton, Montana	27.41	696.2	30.21	767.3	61	16.1	70	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Bismarck, Dakota	28.31	719.1	29.92	760.0	57	13.9	57	NW	12	5.4	.....	.....	10ks	.....	NW	0	0	Cloudy.....	
Boston, Mass	.....	.....	30.13	765.3	73	22.8	67	SW	9	4.0	.....	8cs	Haze	W	.....	0	0	Fair.....	
Breckenridge, Minn	.....	.....	29.85	758.2	63	17.2	78	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear.....	
Buffalo, N. Y	.....	.....	30.03	762.7	70	21.1	79	SW	6	2.7	.....	5ck	Haze	SW	.....	0	0	Fair.....	
Burlington, Vt	.....	.....	30.13	765.3	69	20.6	85	S	2	0.9	.....	.....	10s	.....	.....	0.18	4.6	Cloudy.....	
Cairo, Ill	.....	.....	29.86	758.4	70	21.1	95	E	14	6.3	.....	.....	10n	.....	E	0.45	11.4	Light rain...	
Cape Hatteras, N. C	.....	.....	30.08	764.0	80	26.7	58	E	4	1.8	.....	5c	0	.....	.....	0	0	Fair.....	
Cape Henry, Va	.....	.....	30.14	765.5	74	23.3	81	SE	6	2.7	.....	0	0	.....	.....	0	0	Clear.....	
Cape Lookout, N. C	.....	.....	30.13	765.3	77	25.0	72	SE	16	7.2	.....	5c	2k	SE	SE	0	0	Fair.....	
Cape May, N. J	.....	.....	30.18	766.6	66	18.9	94	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Charleston, S. C	.....	.....	30.04	763.0	77	25.0	86	SE	16	7.2	.....	2cs	8s	.....	.....	0.02	15.7	Cloudy.....	
Cheyenne, Wyoming	24.22	615.2	30.16	766.1	53	11.7	68	NE	20	8.9	.....	5ck	2s	NE	.....	0	0	Fair.....	
Chicago, Ill	.....	.....	29.92	760.0	63	17.2	88	Calm	0	0	.....	.....	Fog	.....	.....	0.31	7.9	Fogwy.....	
Cincinnati, Ohio	.....	.....	29.91	759.7	77	25.0	69	SE	2	0.9	.....	5ck	Sm'e	.....	.....	Inap.	Inap.	Fair.....	
Cleveland, Ohio	.....	.....	30.00	762.0	71.3	21.8	80	SE	10	4.5	.....	0	2ks	.....	SW	0.25	6.3	Clear.....	
Colorado Springs, Col	24.18	614.3	30.05	763.3	61	16.1	40	NW	8	3.6	.....	10ks	0	SE	.....	0	0	Cloudy.....	
Corsicana, Texas	.....	.....	29.86	758.4	64	17.8	86	NW	5	2.2	.....	0	0	.....	.....	0	0	Clear.....	
Davenport, Iowa	.....	.....	29.92	760.0	68	20.0	94	E	4	1.8	.....	.....	10s	.....	.....	0.01	0.3	Cloudy.....	
Denison, Texas	.....	.....	29.86	758.4	67	19.4	78	NW	6	2.7	.....	0	0	.....	.....	0.02	0.5	Clear.....	
Denver, Col	24.90	634.0	30.18	766.6	59	15.0	54	N	2	0.9	.....	8c	0	NW	.....	Inap.	Inap.	Fair.....	
Detroit, Mich	.....	.....	29.98	761.5	73	22.8	85	E	3	1.3	.....	8k	0	SW	.....	0.09	2.3	Fair.....	
Dodge City, Kan	27.38	695.4	29.60	751.8	61	16.1	100	W	3	1.3	.....	5c	2s	NW	W	Inap.	Inap.	Fair.....	
Dubuque, Iowa	.....	.....	29.93	760.2	68	20.0	84	Calm	0	0	.....	.....	10s	.....	.....	0.10	2.5	Cloudy.....	
Duluth, Minn	.....	.....	29.91	759.7	48	8.9	77	NE	4	1.8	.....	2k	0	SW	.....	0	0	Clear.....	
Eastport, Me	.....	.....	30.14	765.5	59	10.0	100	S	4	1.8	.....	.....	10n	.....	.....	0.07	1.8	Heavy rain..	
Erie, Pa	.....	.....	30.02	762.5	70	21.1	90	SE	6	2.7	.....	.....	10n	.....	.....	0.32	8.1	Light rain...	
Escanaba, Mich	.....	.....	29.99	761.7	61	16.1	70	N	6	2.7	.....	8c	0	S	.....	0	0	Fair.....	
Fort Gibson, Indian Ter	.....	.....	29.80	756.9	63	17.2	88	W	3	1.3	.....	.....	10s	.....	W	0.05	1.3	Cloudy.....	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T	28.69	728.7	29.75	755.6	70	21.1	75	N	8	3.6	.....	5k	0	N	.....	0.02	0.5	Fair.....	
Fort Sully, Dakota	28.33	720.3	29.98	761.5	60	15.6	61	NW	12	5.4	.....	.....	5s	.....	.....	0	0	Fair.....	
Galveston, Texas	.....	.....	29.85	758.2	77	25.0	72	NW	5	2.2	.....	5k	0	NW	.....	0	0	Fair.....	
Grand Haven, Mich	.....	.....	29.95	760.7	69	20.6	84	E	10	4.5	.....	.....	10s	.....	E	0	0	Cloudy.....	
Indianapolis, Ind	.....	.....	29.91	759.7	76	24.4	76	SE	4	1.8	.....	10cs	0	.....	.....	0.96	24.4	Fair.....	
Indianola, Texas	.....	.....	29.86	758.4	78	25.6	69	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear.....	
Jacksonville, Fla	.....	.....	29.95	760.7	81	27.2	74	E	6	2.7	.....	8c	0	W	.....	0.82	20.8	Fair	
Keokuk, Iowa	.....	.....	29.83	757.7	68	20.0	90	NE	7	3.1	.....	.....	10s	.....	NE	0.04	1.0	Lr atening	
Key West, Fla	.....	.....	29.96	761.0	83	28.5	74	S	3	1.3	.....	1cs	Haze	W	.....	0	0	Fair.....	
Kittyhawk, N. C	.....	.....	30.16	766.1	72	22.2	90	E	4	1.8	.....	2ks	Haze	.....	.....	0	0	Fair.....	
Knoxville, Tenn	.....	.....	29.97	761.2	68	20.0	84	NE	8	3.6	.....	.....	10ks	.....	S	0.03	0.8	Cloudy.....	
La Crosse, Wis	.....	.....	29.90	759.4	69	20.6	79	NE	2	0.9	.....	0	0	.....	.....	0	0	Clear.....	
Leavenworth, Kan	.....	.....	29.83	757.7	67	19.4	100	N	4	1.8	.....	.....	10s,fog	.....	.....	0	0	Cloudy.....	
Lexington, Ky	28.87	733.3	29.92	760.0	72	22.2	80	SE	8	3.6	.....	.....	10s	.....	.....	0.04	1.0	Cloudy.....	
Long Branch, N. J	.....	.....	30.18	766.6	62	16.7	100	Calm	0	0	.....	.....	Fog	.....	SW	0	0	Foggy	
Louisville, Ky	.....	.....	29.91	759.7	79	26.1	70	SE	1	0.4	.....	0	5ks	.....	SE	0.01	0.3	Fai.....	
Lynchburg, Va	.....	.....	30.11	764.8	77	25.0	69	SE	3	1.3	.....	10ck	0	S	.....	Inap.	Inap.	Cloudy.....	
Malone, N. Y	.....	.....	30.07	763.8	69	20.6	84	SW	6	2.7	.....	8ck	0	NW	.....	0.46	11.7	Cloudy.....	
Manhattan, Kan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Marquette, Mich	.....	.....	29.98	761.5	56	14.4	80	W	4	1.8	.....	5cs	0	W	SE	0	0	Fair.....	
Memphis, Tenn	.....	.....	29.82	757.4	70	21.1	95	NE	2	0.9	.....	5ck	5ks	SE	.....	0.04	1.0	Cloudy.....	
Milwaukee, Wis	.....	.....	29.98	761.5	57	13.9	100	NE	3	1.3	.....	.....	Fog	.....	S	0.06	1.5	Dense fog...	
Mobile, Ala	.....	.....	29.77	756.1	76	24.4	95	SE	14	6.3	.....	.....	10n	.....	SE	0.35	8.9	Light rain...	
Montgomery, Ala	.....	.....	29.88	758.9	75	23.9	95	SE	7	3.1	.....	.....	10s	.....	SE	0.71	18.0	Cloudy.....	
Morgantown, W. Va	.....	.....	30.02	762.5	78	25.6	65	Calm	0	0	.....	2c	0	SW	.....	0.02	0.5	Fair.	
Mt. Washington, N. H	24.01	609.8	30.37	771.4	48	8.9	100	NW	40	17.9	.....	.....	Fog	.....	.....	1.32	33.5	Foggy	
Nashville, Tenn	.....	.....	29.86	758.4	73	22.8	85	E	4	1.8	.....	.....	10ks	.....	SE	0.03	0.8	Cloudy.....	
New Haven, Conn	.....	.....	30.16	766.1	71	21.7	75	S	10	4.5	.....	5ks	Fog	.....	.....	0	0	Fair.....	
New London, Conn	.....	.....	30.18	766.6	66	18.9	90	SW	6	2.7	.....	.....	10s	.....	SW	0	0	Cloudy.....	
New Orleans, La	.....	.....	29.81	757.2	75.5	24.7	82	W	8	3.6	.....	5k	0	W	S	0.25	6.3	Fair.....	
Newport, R. I	.....	.....	30.17	766.3	64	17.8	94	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy.....	
New York, N. Y	.....	.....	30.18	766.6	65	18.3	80	SW	4	1.8	.....	8c	Haze	W	.....	0	0	Fair.	
Norfolk, Va	.....	.....	30.16	766.1	79	26.1	69	SE	2	0.9	.....	5k	0	.....	.....	0	0	Fair.....	
North Platte, Neb	27.15	689.6	29.95	760.7	61	16.1	77	N	4	1.8	.....	2c	0	NW	.....	0	0	Clear.....	
Omaha, Neb	28.85	732.8	29.87	758.7	67	19.4	94	N	4	1.8	.....	.....	10s	.....	NE	0	0	Cloudy.....	
Oswego, N. Y	.....	.....	30.07	763.8	75	23.9	76	SE	4	1.8	.....	5cs	2s	W	.....	Inap.	Inap.	Fair.....	
Peninsula, Dakota	.....	.....	29.70	754.4	56	13.3	87	NW	16	7.2	.....	.....	10s	.....	NW	0.04	0.8	Cloudy.....	
Philadelphia, Penn	.....	.....	30.18	766.6	68	21.0	84	NW	1	0.4	.....	.....	10s	.....	NW	0	0	Cloudy.....	
Pike's Peak, Colorado	18.92	157.7	30.23	767.8	33	0.6	50	N	30	13.4	.....	8k	0	W	.....	Inap.	Inap.	Fair.....	
Pittsburgh, Penn	.....	.....	30.02	762.5	73	22.8	71	S	6	2.7	.....	2c	0	.....	.....	0	0	Fair.....	
Port Huron, Mich	.....	.....	30.00	762.0	60	15.6	94	NE	5	2.2	.....	.....	Fog	.....	.....	0.05	1.3	Foggy	
Portland, Me	.....	.....	30.11	764.8	68	20.0	84	S	4	1.8	.....	8c	Haze	W	.....	0	0	Cloudy.....	
Portland, Oregon	.....	.....	30.27	768.8	53	11.7	79	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Punta Rassa, Fla	.....	.....	29.97	761.2	81.5	27.5	82	E	4	1.8	.....	0	2ks	.....	SE	0	0	Clear.....	
Rochester, N. Y	.....	.....	30.04	763.0	75	23.9	68	S	4	1.8	.....	5c	Haze	SW	SW	Inap.	Inap.	Fair.....	
Salt Lake City, Utah	25.76	654.3	30.09	764.3	64	17.8	52	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Sandy Hook, N. J	.....	.....	30.16	766.1	72	22.2	81	Calm	0	0	.....	5c	Fog	SW	.....	0	0	Fair.....	
San Diego, Cal	.....	.....	29.96	761.0	62	16.7	94	N	4	1.8	.....	.....	10s	.....	N	0	0	Cloudy.....	
San Francisco, Cal	.....	.....	29.94	760.5	54	12.2	86	Calm	0	0	.....	Haze	Haze	.....	.....	0	0	Hazy.....	
Santa Fé, N. M	24.31	592.1	29.85	758.2	58	14.4	64	Calm	0	0	.....	1c	2k	NE	.....	0	0	Fair.....	
Savannah, Ga	.....	.....	29.99	761.7	75	23.9	90	SE	9	4.0	.....	.....	10s	.....	SE	5.12	130.0	Threatening	
Shreveport, La	.....	.....	29.86	758.4	70	21.1	85	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Smithville, N. C	.....	.....	30.10	764.5	77	25.0	72	SE	18	8.0	.....	5c	0	W	.....	0	0	Fair.....	
Springfield, Mass	.....	.....	30.14	765.5	72	22.2	75	S	4	1.8	.....	5ck.k	0	.....	.....	0	0	Fair.....	
St. Louis, Mo	.....	.....	29.88	758.9	72	22.2	66	E	8	3.6	.....	0	5s	.....	NE	Inap.	Inap.	Fair.....	
St. Marks, Fla	.....	.....	29.92	760.0	77	25.0	86	E	4	1.8	.....	5ck	5s	SW	.....	0.42	10.7	Cloudy.....	
St. Paul, Minn	.....	.....	29.85	758.2	71	21.7	75	E	4	1.8	.....	8c	0	W	.....	0	0	Fair.....	
St. Paul's Island, Alaska	.....	.....	29.98	761.5	32	0.0	79	E	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
Thatcher's Island, Mass	.....	.....	30.13	765.3	63	17.2	88	SW	11	4.9	.....	8c	0	N	.....	0	0	Foggy	
Toledo, Ohio	.....	.....	29.94	760.5	75	23.9	85	Calm	0	0	.....	5ck	Sm'e	SW	.....	0.31	7.9	Fair.....	
Tucson, Arizona	27.44	697.0	30.03	762.7	82	27.8	.....	S	.....	.....	.....	0	Haze	.....	.....	0	0	Clear.....	
Tybee Island, Ga	.....	.....	29.98	761.5	74	23.3	100	SE	10	4.5	.....	.....	10n	.....	SE	1.32	33.5	Light rain...	
Vicksburg, Miss	.....	.....	29.82	757.4	76	24.4	81	Calm	0	0	.....	2k	0	SE	.....	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.	24.51	622.5	29.99	761.7	51	10.6	65	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear.	
Washington, D. C.	.....	.....	30.16	766.1	74	23.3	81	S	4	1.8	.....	.....	10ks	.....	SW	0	0	Cloudy.	
Wilmington, N. C	.....	.....	30.10	764.5	77	25.0	69	SE	12	5.4	.....	5c	1ks	NW	SE	0.54	13 7	Fair.	
Wood's Holl, Mass.	.....	.....	30.18	766.6	63	17.2	89	S	7	3.1	.....	0	Fog	.....	.....	0	0	Light fog.	
Wytheville, Va.	27.78	705.6	29.87	758.7	67	19.4	84	SE	5	2.2	.....	.....	10ks	.....	SE	0	0	Threatening	
Yankton, Dakota	28.69	728.7	29.94	760.5	65	18.3	84	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear.	
Yuma, Arizona	.....	.....	29.81	757.2	83	28.3	.....	SW	.....	.....	.....	2c	0	.....	.....	0	0	Fair.	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.03	762.7	84	28.9	67	E	9	4.0	.....	2k	5s	E	NE	0	0	Fair.	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.95	760.7	82	27.8	78	E	.....	.....	.....	0	8ks	.....	.....	0	0	Fair.	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.15	765.8	80	26.7	78	Calm	0	0	.....	8c	0	.....	.....	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.77	756.1	83	28.3	74	Calm	0	0	.....	4c	0	.....	.....	0	0	Fair.	Robert Mason.
Havana, Cuba, W. I.	.....	.....	29.96	761.0	87	30.6	83	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.21	767.3	78.0	25.6	78	ESE	15.0	6.7	.....	2c	2fk	.....	.....	0.28	7.1	Fair.	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	.....	.....	0.27	6.9	Fine.	
Clifton, Jamaica, W. I	27.17	690.1	29.94	760.5	69	20.6	90	S	2.0	0.9	.....	5c	0	S	.....	0.600	15.24	Dry and fair.	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.05	763.3	81	27.2	83	E	.....	.....	2	5k	5k	E	.....	1.634	41.50	.....	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.02	762.6	.....	.....	86.9	30.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.21	640.3	.....	.....	66.2	19.0	80	S	4	1.8	.....	.....	10n	.....	.....	0.32	8.1	Cloudy.	Thomas Herran.
York Factory, B. A.	.....	.....	30.07	763.8	43	6.1	71	E	8	3.6	.....	.....	9s	.....	.....	0	0	.....	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.10	764.5	76	24.4	90	NE	.....	.....	5	.....	.....	.....	.....	0	0	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. L. Clarke.
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Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—		
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....
Steamer Nova Scotian N. 51° 30′, W. 12° 27′.	NW by W	9¼	Heavy sea.	NW	Showery	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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft , or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,269.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,291.8 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, 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 JUNE 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	765.4	78.1	25.6	56	NNW			1		0			0	0	Clear	Charnot.
Algiers			30.12	765.0	78.1	25.6	54	NNW			3		0			0	0	Clear	Peter.
La Calle					79.0	26.1		S			1		2			0	0	Clear	Kunts.
Tunis			30.10	764.5	85.3	29.6	48	E			4		4			0	0	Fair	Jacques.
Sfax			30.12	765.0	78.8	26.0	69	SE			3		1			0	0	Clear	Chauvey.
Saida			30.20	767.1	79.7	26.5	17	NW			1		0			0	0	Clear	Millot.
Tebessa			30.11	764.9	79.2	26.2		NW			3		3			0	0	Fair	Colin.
Gertville			30.21	767.2	77.5	25.3	18	NNW			2		1			0	0	Clear	Buard.
Laghouat			30.12	765.0	86.0	30.0	36	SW			2		0			0	0	Clear	Guyot.
Biskra			30.11	764.7	91.8	33.2		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.

Agram			29.78	756.5	82.0	27.8	37	SW			2		2			0.185	4.7		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.87	758.7	68.0	20.0	69	W			1		6			0	0		Dr. Wierzbiski.
Eperies			29.80	757.0	71 2	21.8	73	N			3		4		S	0	0		Julius Mikolik.
Gratz	28.59	726.2	29.75	755.6	73.9	23.3	54	SW			3		6			0.001	0.1		Andreas Rospini.
Hermannstadt	28.38	720.7	29.72	755.0	74.1	23.4	58	SW			3		4			0.035	0.90		Prof. Reissenberger.
Kremsmünster	28.52	724.4	29.81	757.2	68.4	20.2	69	S			2		10			0	0		Prof. C. Wagner.
Lemberg			29.78	756.3	71.4	21.9	67	NW			1		6			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsauda Daniel.
Pola			29.90	759.4	74.1	23.4	70	W			2		4cks			0	0		I.R.Hydrographic Office.
Szegedin			29.77	756.2	80.2	26.8	45	NE			3		6			0	0		Karl Stancel.
Trieste			29.89	759.3	77.4	25 2	63	SW			1		8			0.071	1.8	Covered	Prof. V. Faroli.
Vienna			29.81	757.1	75.2	24.0	48	NE			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.; 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.

Brussels			29.82	757.5	57.9	14.4	73	SW			5		10			0.114	2.90	Sprinkling	Royal Observatory.

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

BRITISH SERIES.

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, 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	59.6	15.3		SSE	18	8.0			3			0	0	Blue sky	William Roswell.
Ardrossan			29.73	755.1	57	13.9		SSW			4		4					*D. clouds	William McNeil.
Armagh, Observatory			29.75	755.6	51.7	10.9		SSW	10	4.5			7					*D. clouds	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.80	756.9	56.0	13.3		WSW			1–2		8					*D. clouds	J. Dreyer.
Bradford			29.79	756.7	58.2	14.6		W			2		5			0.20	5.1	*D. clouds	J. McLandsborough.
Bridgetown, (Barbadoes)			30.01	762.2	83.5	28.6		SE			2		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.81	757.2	55.0	12.8		NW			1		10			Blank	Blank	Overcast	H. Todd. [H. C.
Cardington			29.84	757.9	61.0	16.1		NW			1		8			Blank	Blank	Overcast	John McLaren.
Carlisle			29.76	755.9	58.9	14.9		W			2		4			0.13	3.3	*D. clouds	T. Bel, for J. Carmell.
Chatham, School M. E			29.84	757.9	54.2	12.3		NW			2		8			Blank	Blank	Overcast	Capt. J. Fellowes, R.E.
Dartmoor	24.54	724.6	30.04	763.0	50.8	10.4		W			3		10					Overcast	R. E. Power.
Donaghadee			29.72	754.9	59	15.0		SW			4		8					*D. clouds	J. Mac Gowan.
Dover			29.84	757.9	54	12.2		W			4		7					¾ clouded	J. Costello.
Eccles, (near Manchester.)			29.80	756.9	60.0	15.6		W	9.2	4.1			5					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			29.98	761.5	57.5	14.2		WSW	21	9.4			10					Overcast	The Staff.
Fort Napier, (Natal)	28.00	711.2	30.23	767.8	72.2	22.3		E			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	80	26.7		W			3		6					*D. clouds	
Galway, Queen's College			29.75	755.6	56	13.3		SW			6		7					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.16	766.1	77.5	25.3		W			6		1						Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			29.71	754.8	56.0	13.3		WSW			1		6					Fine	Lewis Stuart.
Great Yarmouth			29.76	755.9	51	10.6		NW			4		8					Raining	G. T. Watson.
Greenwich, Royal Obs'y			29.86	758.4	58.7	14.8		WNW			2		9			Blank	Blank	Cloudy	The Staff, for G. B. Airy.
Guernsey			30.00	762.0	57.5	14.2		WSW			4		5					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y			29.81	757.2	58.7	14.8		WNW			2		5			Blank	Blank	*D. clouds	L. J. Crossley.
Helston			29.96	761.0	60	15.6		W			6		4			0.2	5.1	Fair	M. P. Moyle.
Holyhead			29.84	757.9	57	13.9		SSW			5		1					Blue sky	John Tilston.
Kew, Observatory			29.86	758.4	59.2	15.1		WNW	17	7.6			7					Overcast in	The Staff.
Kingstown			29.83	757.7	56	13.3		WSW			3		7					Raining	George Mitchell.
Leicester Museum			29.83	757.7	59.0	15.0		W			2		3					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean			30.05	763.3	77	25.0		NW			1		0					Blue sky	Corp'l F. Fraser, A.M.C.
Nairn			29.65	753.1	63	17.2		SW			1		2					¼ clouded	W. D. Penny.
Nassau, (Bahamas			30.07	763.8	83.4	28.6		NE			4		7					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.81	757.2	64.3	17.9		WNW			5		6	WNW		0.094	2.39	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.83	757.7	55.1	12.8		W			3		9					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.85	758.2	59	15.0		W			3		8					Overcast	J. Lucas.
Plymouth			29.95	760.7	59.3	15.2		NW			2		10					Gloomy	John Merrifield.
Roche's Point			29.89	759.2	54	12.2		W			4		8					Cloudy	W. Kennedy.
Saint Ann's Head			29.89	759.2	55	12.8		WSW			4		5						John C. Walker.
Saint Helier, Jersey			30.02	762.5	59.6	15.3		W			6		2					¼ clouded	A. P. Amy.
Sandwick Manse, Orkneys			29.68	753.9	57.4	14.1		SSE	28	12.5			6					Blue sky	Rev. C. Clouston, LL. D.
Scarborough			29.77	756.1	53.9	12.2		N			2		9					Overcast	F. Shaw.
Scutari Cemetery Turkey			29.69	754.1	80.4	26.9		SW			1		4			Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.80	756.9	61.0	16.1		WNW			4		4			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			29.77	756.1	62.1	16.7	62	SW			2		2			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.80	756.9	55.4	13.0		W			3		6			Blank	Blank		Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.			29.58	751.3	56	13.3		S			6		5					*D. clouds	John Smith.
Strathfield Turgiss			29.87	758.7	59.7	15.4		NW			2		5					Squally	Rev. Charles H. Griffith.
Thurso			29.63	752.6	61	16.1		S			3		3					Blue sky	John Trotter.
Truro, Royal Institution			29.98	761.5	61	16.1		W			6		8					Gloomy	W. Newcombe.
Valencia, Observatory			29.86	758.4	53.4	11.9		SW	19	8.5			10					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man					48	8.9		SW			3		10			0	0		Thomas Dawson.
Cape Good Hope, Obs'y			30.00	762.0	72.8	22.7	47	W	14	6.3		4	4						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.24	742.7	65.0	12.8	86	N			1		0			0.24	6.1		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.73	755.1	59.5	15.3		SW			3		8k			0	0	Cloudy	Andrew Gibb.
Mauritius, Observatory			30.26	768.6	69.1	24.6	67	ESE	15.1	6.8			7			0	0	Squally	C. Meldrum
Melbourne, Observatory			29.68	753.9	44.7	0.5	72	NW	11	4.9			7			0.19	4.8	Boisterous	R. L. J. Ellery.
Monach Lt-house, Hebrides			29.53	750.0	53	11.7		SSW			4	5	3	SSW		0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.72	754.9	50	10.0		SE			4		10			Blank	Blank		Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, distinction between upper and lower cloud 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			29.83	757.6	59.0	15.0	78	N			2		10						
Fanöe			29.76	755.9	60.1	20.6	61	E			6		5						
Godthaab, (Greenland)			29.90	759.4	33.8	1.0	94	NW			1		10					Snowing	
Stykkisholm, Iceland			29.56	750.9	44.6	7.0	92	E			2		8						
Thorshavn, (Faröe)			29.64	752.9	50.5	10.3	90	SE			2		10					Misty	
Vestervig			29.78	756.3	70.9	21.6	48	SE			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.
Alengon	.....	.....	30.02	762.4	60.8	16	73	W	.....	.....	1	.....	8kn	.....	W	0.220	5.6	Very cloudy	Normal School.
Amiens	.....	.....	29.90	759.5	63.0	17.2	70	SW	.....	.....	6	.....	5	.....	SW	0	0	Cloudy	Normal School.
Avignon	.....	.....	30.00	762.0	64.8	18.2	50	NW	.....	.....	2	.....	5	.....	.....	0.205	5.2	Cloudy	Normal School.
Bar-sur-Seine	.....	.....	29.98	761.6	61.2	16.2	58	WSW	.....	.....	3	.....	8	.....	W	0.020	0.5	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.00	764.3	61.7	16.5	33	W	6.7	3.0	.....	.....	10	.....	W	0.055	1.4	Raining	Beaumette Observatory.
Beauvais	.....	.....	29.95	760.7	62.1	16.7	52	W	.....	.....	4	.....	8	.....	W	0.079	2.0	Very cloudy	Normal School.
Besançon	.....	.....	30.04	762.9	57.2	14	82	S	.....	.....	2	.....	8	.....	SW	0.07	17.	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	30.17	766.2	54.3	12.4	83	N	.....	.....	2	.....	..n	.....	E	.....	.....	.....	Normal School.
Bourges	.....	.....	30.05	763.2	59.7	15.4	75	W	.....	.....	4	.....	2	.....	E	0.134	3.4	Slightly cl'dy	Normal School.
Brest	.....	.....	30.03	762.7	61.3	16.3	61	W	.....	.....	4	.....	9	.....	W	0.324	8.25	Squally	Naval Observatory.
Carcassonne	.....	.....	30.13	765.3	62.8	17.1	59	W	.....	.....	6	.....	5	.....	E	0.571	14.5	Cloudy	Normal School.
Caen	.....	.....	30.637	778.1?	63.5	17.5	89	W	.....	.....	2	.....	5	.....	E	0.08	2.	Cloudy	Normal School.
Chartres	.....	.....	29.98	761.6	63.5	17.5	.....	W	.....	.....	4	.....	8	.....	SW	0.063	1.6	.....	Normal School.
Clermont	.....	.....	30.06	763.5	63.0	17.2	38	W	.....	.....	2	.....	8	.....	W	0	0	Very cloudy	Puy de Dome Obs'y.
Commercy	.....	.....	29.96	760.9	58.8	14.9	68	W	.....	.....	4	.....	8kn	.....	W	0.091	2.3	Very cloudy	Normal School.
Commune de Greasque*	.....	.....	30.03	762.8	58.8	14.9	82	NW	.....	.....	6	.....	8	.....	NW	0.073	4.4	.....	M. Kina.
Grenoble	.....	.....	29.74	755.3	61.9	16.6	74	NW	.....	.....	8	.....	5n	.....	NE	0.12	3.	Cloudy	Normal School.
La Roche-sur-Yon	.....	.....	30.15	765.8	61.2	16.2	61	NW	.....	.....	6	.....	5	.....	S	0	0	Cloudy	Normal School.
Le Mans	.....	.....	30.05	763.3	57.9	14.4	83	W	.....	.....	6	.....	8	.....	W	0.055	1.4	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.05	763.3	56.1	13.4	88	SW	.....	.....	2	.....	5	.....	E	0.165	4.20	Cloudy	Normal School.
Mâcon	.....	.....	30.07	763.6	55.8	13.2	67	W	.....	.....	4	.....	5	.....	NE	0	0	Cloudy	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	29.93	760.1	60.6	15.9	66	W	.....	.....	2	.....	8	.....	ESE	0.343	8.7	Almost cov'd	Normal School.
Nimes	.....	.....	30.00	761.9	68.0	20	32	W	.....	.....	4	.....	0	.....	.....	0.217	5.5	Clear	Normal School.
Orleans	.....	.....	29.99	761.7	59.7	15.4	83	NNW	.....	.....	2	.....	8	.....	NNW	0	0	Very cloudy	Normal School.
Paris, Observatory	.....	.....	29.97	761.2	59.7	15.4	47	W	.....	.....	4	.....	6ck	.....	.....	0.036	0.92	Cloudy	National Observatory.
Parthenay	.....	.....	30.09	764.3	55.8	13.2	98	W	.....	.....	2	.....	2	.....	W	0.059	1.5	Slightly cl'dy	Normal School.
Privas	.....	.....	29.99	761.7	62.2	16.8	.....	SE	.....	.....	1	.....	10	.....	SE	.....	.....	Covered	Normal School.
Rochefort, Observatory	.....	.....	30.18	766.5	68.0	20.0	61	W	.....	.....	4	.....	8	.....	SE	0	0	¾ Covered	Naval Observatory.
Rouen	.....	.....	29.97	761.3	62.1	16.7	43	SW	.....	.....	2	.....	5	.....	E	0.169	4.2	Cloudy	Normal School.
Saint Lo	.....	.....	29.53	750.0	60.6	15.9	80	W	.....	.....	1	.....	7	.....	W	0.04	1.	.....	Normal School.
Tarbes	29.10	739.2	30.17	766.4	62.6	17	.....	W	.....	.....	4	.....	5	.....	E	0.20	5.	Cloudy	Normal School.
Villefranche	.....	.....	30.08	764.1	61.2	16.2	66	NW	.....	.....	2	.....	10	.....	SE	0	0	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.92	760.0	82.4	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	Inap.	Inap.	.....	L'Abbé Marchésl.
Marseilles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Marseilles Observatory.
Mont-Louis	.....	.....	30.24	768.2	50.4	10.2	73	SSW	14.9	6.66	.....	.....	5	.....	W	1.016	25.8	.....	—. Faignère.
Montsouris, Paris	.....	.....	29.97	761.2	59.9	15.5	45	W	.....	.....	4	.....	7	.....	WNW	0.047	1.2	.....	Montsouris Observ'tory.
Perpignan	.....	.....	30.00	763.5	64.2	17.9	51	NW	28.0	12.50	.....	.....	4	.....	NW	0.535	13.6	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.97	761.3	63.5	17.5	44	W	.....	.....	2	.....	9	.....	.....	0.043	1.1	Very cloudy	E. Renou.
Toulouse	.....	.....	30.21	767.3	58.6	14.8	80	WSW	.....	.....	2	.....	8	.....	.....	0.472	12.0	.....	Toulouse Observatory.
Tours	.....	.....	30.05	763.2	63.	17.2	47	NNW	.....	.....	4	.....	5	.....	WNW	0.079	2.0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.97	761.3	59.7	15.4	55	NW	.....	.....	3	.....	8	.....	.....	0.124	3.16	Very 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 1,580.40 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 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.

Bamberg	.....	.....	29.85	758.1	60.4	20.8	72	W	.....	.....	3	.....	6	SW	.....	0.157	4.0	Thunder, lightn'g	Prof. T. Hoh.
Berlin	.....	.....	29.81	757.2	75.2	24.0	55	S	.....	.....	3	.....	3	.....	.....	0.102	2.6	.....	Prof. Arndt.
Breslau	.....	.....	29.93	760.2	67.8	19.9	61	N	.....	.....	2	.....	8	.....	.....	0	0	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	29.86	758.5	60.8	16.0	89	SW	.....	.....	3	.....	10	.....	.....	0.268	6.8	Raining	A. Sens.
Cuxhaven	.....	.....	29.80	756.8	73.4	23.0	49	S	.....	.....	6	.....	4	8	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	29.74	755.4	66.4	19.1	81	S	.....	.....	2	.....	6	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.86	758.5	71.4	21.9	50	SW	.....	.....	3	.....	4	.....	.....	0.055	1.4	.....	Physical Society.
Friedrichshafen	.....	.....	29.90	759.4	64.4	18.0	82	NW	.....	.....	1	.....	10	.....	.....	0.665	16.9	Raining	M. Wilhelm.
Hamburg	.....	.....	29.78	756.5	65.8	18.8	78	SE	.....	.....	3	.....	9k,n	.....	.....	0.126	3.2	Threatening	Captain F. Hegemann.
Kiel	.....	.....	29.78	756.4	66.4	19.1	63	ENE	.....	.....	1	.....	10	.....	.....	0.016	0.4	Thunder, lightn'g	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.74	755.4	72.7	22.6	71	NW	.....	.....	5	.....	5	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	29.80	756.9	76.3	24.6	48	SE	.....	.....	2	.....	7	SSW	.....	0	0	Thunder, lightn'g	Prof. Bruhns.
Memel	.....	.....	29.79	756.6	68.7	20.4	89	SW	.....	.....	2	.....	9c,8	.....	.....	0.138	3.5	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.74	755.5	68.5	20.3	62	.....	.....	.....	1	.....	10	.....	.....	0.035	0.9	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.79	756.7	67.3	19.6	83	W	.....	.....	2	.....	8	W	.....	0.140	3.7	.....	A. Lothes.
Posen	.....	.....	29.90	759.5	66.2	19.0	71	NW	.....	.....	4	.....	10	.....	.....	0.465	11.8	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.89	759.1	68.9	20.5	69	Calm	.....	.....	0	.....	10	SW	.....	0.152	3.85	.....	Dr. Schur.
Stuttgart	.....	.....	29.85	758.2	67.6	19.8	67	E	.....	.....	1	.....	6	.....	.....	0.118	3.0	Raining	Prof. Schoder.
Thorn	.....	.....	29.80	757.0	64.4	18.0	85	NW	.....	.....	3	.....	9	.....	.....	0.087	2.2	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.85	758.1	61.3	16.3	71	W	.....	.....	7	.....	10	.....	.....	0	0	.....	Prof. Fleson.
Wustrow, Naval School	.....	.....	29.77	756.1	66.9	19.4	60	ENE	.....	.....	3	.....	4	.....	.....	0	0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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	77.0	25.0		SW										Partly clear.	

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

ITALIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Udine			29.84	758.0	76.3	24.6	59	S	4.9	2.2			6			0.429	10.9		
Padua			29.84	758.0	74.8	23.8	52	NW	9.8	4.4			7	SW		0.063	1.6		
Vicenza			29.83	757.7	76.3	24.6	48	SW	7.4	3.3			7	SW		0.504	12.8		
Verona			29.82	757.5	74.5	23.6	68	E			1		10			0	0		
Bergamo	28.53	724.7	29.82	757.3	64.8	18.2	71	NW			1		10			0	0		
Domodossola	28.85	732.7	29.80	756.9	68.0	20.0	85	SSW			2		10			0.228	5.8		
Milan			29.84	758.0	68.9	20.5	79	ENE			4		10	SSE		1.850	47.0	Rain and hail	
Pavia			29.83	757.7	72.3	22.4	59	SE			1		9	SW		0.374	9.5	Showery	
Moncalieri			29.82	757.4	64.9	18.3	80	SE	7.4	3.3			8	NW		0.165	4.2		
Mondovi	27.91	709.7	29.80	757.0	64.8	18.2	73	NW			4		10			0.122	3.1		
Porto Maurizio			29.93	760.1	64.2	17.9	91	WSW			2		10	NNE		0.307	7.8	Showery	
Genoa			29.91	759.7	68.5	20.3	77	SE	6.9	3.1			10	S		0.555	14.1		
Piacenza			29.84	757.9	73.0	22.8	60	SE	4.3	1.9			10	SW		0.126	3.2		
Parma			29.84	758.0	76.3	24.6	56	SW			6		9			0.075	1.9		
Bologna			29.90	759.4	77.9	25.5	41	SE			2		4	N		0	0		
Florence			29.95	760.8	77.0	25.0	54	W			2		10	SW		0	0		
Leghorn			29.93	760.1	73.6	23.1	62	WSW	5.6	2.5			10			0.055	1.4		
Siena	28.76	730.4	29.94	760.4	70.9	21.6	66	S	0.7	0.3			9	SW		0.087	2.2		
Urbino																			
Pesaro																			
Ancona			29.92	759.9	75.9	24.4	55	SE			4		2			0	0		
Grosseto																			
Rome			29.99	761.7	75.9	24.4	62	SW	9.8	4.4			2			0	0		
Naples, O. U.			30.03	762.8	77.0	25.0	61	SSW			6		3	SW		0	0		
Lecce			29.96	761.0	75.2	24.0	46	NNW	10.5	4.7			2			0	0		
Cosenza			30.03	762.7	77.7	25.4	73	NW	9.4	4.2			4			0	0		
Riposto, (Sicily)			30.02	762.4	73.8	23.2	64	SE			2		1			0	0		
Palermo			30.00	762.1	71.8	22.1	66	NE	8.1	3.6			0			0	0		
Caltanissetta	28.08	713.2	29.98	761.5	74.7	23.7	27	W			4		1	E		0	0		
Sub-Series.																			
Naples, S. R.			30.04	762.9	72.9	22.7	73	SW	1.8	0.8			3	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			29.82	757.5	57.2	14.0		WSW			5								
Groningen			29.69	754.2	62.6	17.0		SW											
Helder			29.74	755.4	62.8	17.1		SW			2								
Utrecht			29.73	755.1	66.6	19.2	61	SSW			4		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			29.78	756.4	61.9	16.6	69	WNW	8.7	3.9			2			0	0		
Brönö			29.91	759.6	56.1	13.4	77	N	7	3						0.150	3.8		
Christiania			29.81	757.2	66.4	19.1	59		0.9	0.4			10			0	0		
Tromsö			29.95	760.6	59.5	15.3	61	NE	0	0			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 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,)	.....	.....	30.41	772.5	71.6	22.0	79	W	9.8	4.39	.....	.....	2	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.13	765.3	74.1	23.4	26	NNW	7.1	3.17	.....	.....	0	.....	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.35	770.9	67.6	19.8	67	SW	4.6	2.05	.....	.....	1	.....	.....	0	0	.....	Capt D. A. da Cunha.
Lisbon	.....	.....	30.27	768.9	64.8	18.2	42	NNW	17.4	7.8	.....	.....	0	.....	.....	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 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	.....	.....	29.84	757.9	65.8	18.8	72	SSW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.76	755.9	81.9	27.7	46	SE	2	1	.....	.....	6	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.78	756.4	75.9	24.4	60	NNW	4	2	.....	.....	7	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.78	756.3	87.1	30.6	49	S	11	5	.....	.....	6	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.80	756.8	75.4	24.1	79	NE	18	8	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.69	754.1	84.0	28.9	48	NNE	9	4	.....	.....	4	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.68	753.9	76.6	24.8	69	E	13	6	.....	.....	9	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.71	754.6	82.8	28.2	57	SE	2	1	.....	.....	6	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.91	759.7	84.7	29.3	51	SSE	4	2	.....	.....	4	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.64	752.8	95.4	35.2	23	ESE	49	22	.....	.....	7	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.84	757.8	69.4	20.8	79	W	22	10	.....	.....	2	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.36	720.4	29.68	753.8	86.4	30.2	30	Calm	0	0	.....	.....	9	.....	.....	.....	.....	Smoke-haze	Physical Observatory.
Astrakhan	.....	.....	29.95	760.6	80.1	26.7	39	E	22	10	.....	.....	1	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.95	760.6	82.2	27.9	32	SSW	9	4	.....	.....	5	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.92	734.6	29.85	758.3	81.9	27.7	28	W	18	8	.....	.....	4	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.84	757.8	84.0	28.9	14	ENE	18	8	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.18	715.8	29.78	756.3	82.0	27.8	42	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.74	755.5	56.1	13.4	66	WSW	13	6	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.45	748.1	55.6	13.1	77	S	2	1	.....	.....	10	.....	.....	.....	.....	Raining	Marks.
Irkutsk	28.17	715.5	29.19	749.0	62.8	17.1	84	Calm	0	0	.....	.....	3	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.91	759.6	78.1	25.6	54	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	29.95	760.7	57.6	14.2	93	SE	11	5	.....	.....	1	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	46.8	8.2	98	ENE	9	4	.....	.....	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.

Madrid	.....	.....	30.02	762.6	77.0	25.0	29	SW	10.4	4.66	.....	0	1	.....	.....	0	0	Almost clear	Royal Observatory.
San Fernando	.....	.....	30.22	767.6	69.6	20.9	64	W	11.2	5.0	.....	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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.91	759.6	63.0	17.2	76	N	.....	.....	2	.....	10	.....	.....	0.004	1.0	.....	
Umea	.....	.....	29.85	758.3	69.4	20.8	72	E	.....	.....	2	.....	6	.....	.....	0	0	.....	
Hernosand	.....	.....	29.82	757.5	74.8	23.8	57	E	.....	.....	2	.....	2	.....	.....	0	0	.....	
Stockholm	.....	.....	29.75	755.6	72.3	22.4	57	NW	.....	.....	2	.....	5	.....	.....	0	0	.....	
Wisby	.....	.....	29.83	757.7	59.0	15.0	81	NE	.....	.....	4	.....	5	.....	.....	0.016	0.4	.....	
Sub-Series.																			
Upsala	.....	.....	29.78	756.4	69.1	20.6	58	WNW	3.4	1.5	.....	.....	10	.....	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 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 58	726.1	30.01	762.2	56.5	13.6	78	SW	.....	.....	2	.....	10	.....	.....	0.051	1.3	Raining.....	The Observatory.
Zurich	28.31	719.2	29.94	760.4	58.5	14.7	83	NW	.....	.....	.....	.....	10	.....	W	0.028	0.7	Raining.....	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note—For Geneva the corresponding departures from the normal values are: Barometer, —0.4 mm; Thermometer, —7.2 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 Prof. C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	29.76	755.8	77.9	25.5	62	NNE	8	3.5	.....	.....	6	.....	W	0.173	4.4	.....	
Fao, (Persian Gulf)	.....	.....	29.75	755 6	100.4	38.0	.....	NW	.....	.....	4	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.81	757.2	80.4	26.9	.....	SE	.....	.....	1	.....	5	.....	.....	.....	.....	Stormy.....	
Valona	.....	.....	29.93	760.1	76.3	24.6	.....	W	.....	.....	1	.....	2	.....	.....	.....	.....	.....	
Varna	.....	.....	29.76	756.0	77.0	25.0	.....	SE	.....	.....	3	.....	0	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.85	758.3	85.8	29.9	56	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.

Bathurst, N. B	.....	.....	30.22	767.6	59.9	15.5	94	E	1	0.4	.....	10	.....	.....	.....	0	0	Foggy.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.10	764.5	79	26.1	.....	W	5	2.2	.....	0	0	.....	.....	0.5	1.3	Clear.....	W. R. Bigg.
*Chatham, N. B	.....	.....	30.26	768.6	60	15.6	97	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy.....	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.27	768.8	62	16.7	91	E	3	1.3	.....	.....	10s	.....	.....	0.37	9.4	Cloudy.....	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.04	763.0	82.7	28.2	87	S	.....	.....	1	10c,hz	0	.....	.....	0	0	Bright.....	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.24	768.1	54.8	12.5	98	E	.....	.....	2	0	0	.....	.....	0	0	Foggy	H. A. Johnson.
Esquimault, B. C	.....	.....	30.27	768.8	52.3	11.3	93	NE	1	0.4	.....	0	0	.....	.....	0	0	Clear.....	W. H. Bevis.
Fredericton, N. B	.....	.....	30.26	768.6	60.2	15.7	88	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.14	765.5	48	8.9	81	NE	12	5.4	.....	5k	5ks	W	N	0	0	Cloudy.....	James Stewart.
Goderich, Ontario	.....	.....	29.88	758.9	73.1	22.8	80	SE	.....	.....	2	.....	10n	.....	.....	Inap.	Inap	Threatening	H. J. Strang, M. A.
Granton, Ontario	28.85	732.8	29.90	759.4	69	20.6	.....	SE	.....	.....	2	.....	10n	.....	.....	0	0	Cloudy.....	James Grant.
*Halifax, N. S	.....	.....	30.24	768.1	65	18.3	83	Calm	0	0	.....	.....	10n	.....	.....	0.37	9.4	Cloudy.....	F. Allison, M. A.
*Kingston, Ontario	.....	.....	30.08	764.0	73	22.8	77	S	6	2.7	.....	2ck	Sm'e	SE	.....	0	0	Clear.....	S. Woods, M. A.
Little Glace Bay, N. S	.....	.....	30.25	768.3	59.0	15.0	94	Calm	0	0	.....	.....	Fog	.....	.....	0.11	2.8	Misty.....	C. H. Rigby.
*Montreal, Quebec	.....	.....	30.06	763.5	77	25.0	77	S	11	4.9	.....	2c	Huz	.....	.....	0	0	Fair.....	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.02	762.5	77	25.0	47	S	11	4.9	.....	2ck	0	S	.....	0	0	Clear	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.92	760.0	75	23.9	72	S	11	4.9	.....	2ck	2ks	SW	S S	0.06	1.6	Fair.....	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	29.96	761.0	73	22.8	76	S	8	3.6	.....	10ck	0	S	.....	0	0	Fair.	H. Morgan.
Port Hastings, N. S	.....	.....	30.29	769.4	65.5	18.6	.....	Calm	0	0	.....	.....	.....	.....	.....	0	0	Fine.....	Peter Grant.
*Port Stanley, Ontario	.....	.....	29.94	760.5	72	22.2	81	E	16	7.2	.....	.....	10ks	.....	SW	0	0	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	30.11	764.8	62	16.7	77	N	7	3.1	.....	...	10n	.....	.....	0	0	Cloudy.....	Capt. Ashe, R. N.
St. John, N. B	.....	.....	30.30	769.6	53	11.7	93	Calm	0	0	.....	.....	Fog	.....	.....	0.020	0.51	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.86	758.4	71	21.7	84	S	4	1.8	.....	.....	10n	.....	.....	0	0	Clou y.....	K. Stewart.
Stayner, Ontario	.....	.....	29.92	760.0	69	20.6	95	SE	3	1.3	.....	.....	10n	.....	SW	1.89	48.0	Threate ing	R. J. Cole.
Stratford, Ontario	28.68	728.5	29.90	759.4	69.4	20.8	87	SE	10	4.5	.....	.....	10s	.....	.....	0	0	Cloudy.....	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.28	769.1	56	13.3	99	NW	3	1.3	.....	.....	Fog	.....	.....	0.30	7.6	Foggy	T. C. Hill.
*Toronto, Ontario	.....	.....	29.98	761.5	69	20.6	81	SE	6	2.7	.....	8k	2n	W	W	0	0	Cloudy.....	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.84	757.9	72.0	22.2	80	S	8	3.6	.....	.....	10ks	.....	.....	0	0	Fine.....	J. Montgomery.
Sub-Series.																			
St. John's, Newfoundland	.....	.....	30.43	772.9	47	8.3	100	S	.....	.....	.....	.....	10n	.....	.....	0.62	15.7	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.	.....	.....	30.14	765.5	75	23.9	64	S	1	0.4	.....	0	Haze	.....	.....	0	0	Clear	
Alpena, Mich	.....	.....	29.78	756.4	62	16.7	94	SE	1	0.4	.....	.....	10s	.....	SE	0.11	2.8	Cloudy	
Atlantic City, N. J.	.....	.....	30.22	767.6	65	18.3	94	S	4	1.8	.....	.....	10s	.....	S	0	0	Cloudy	
Augusta, Ga.	.....	.....	30.02	762.5	76	24.4	91	SE	7	3.1	.....	.....	10s	.....	S	1.90	48.3	Cloudy	
Baltimore, Md.	.....	.....	30.20	767.1	69	20.6	84	E	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy	
Barnegat, N. J.	.....	.....	30.23	767.8	63	17.2	100	SW	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	
Benton, Montana	27.38	695.4	30.19	766.8	64	17.8	52	W	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.37	720.6	30.01	762.2	48	8.9	42	NW	5	2.2	.....	Haze	Haze	NW	NW	0	0	Hazy	
Boston, Mass	.....	.....	30.20	767.1	76	24.4	60	SW	5	2.2	.....	Haze	Haze	.....	.....	0	0	Hazy	
Breckenridge, Minn	.....	.....	29.98	761.5	47	8.3	85	NW	20	8.9	.....	.....	10s	.....	N	0	0	Cloudy	
Buffalo, N. Y.	.....	.....	29.96	761.0	74	23.3	67	S	11	4.9	.....	5k	5ks	S	S	Inap.	Inap.	Cloudy	
Burlington, Vt.	.....	.....	30.12	765.0	76	24.4	68	S	12	5.4	.....	0	2s	.....	.....	0	0	Fair	
Cairo, Ill.	.....	.....	29.72	754.9	70	21.1	81	SW	10	4.5	.....	.....	10ks	.....	SW	0.07	1.8	Cloudy	
Cape Hatteras, N. C.	.....	.....	30.10	764.5	79	26.1	65	SE	9	4.0	.....	2c	2ks	.....	SE	0	0	Fair	
Cape Henry, Va.	.....	.....	30.16	766.1	74	23.3	88	SE	8	3.6	.....	2k,hz.	Haze	SE	.....	0	0	Hazy	
Cape Lookout, N. C.	.....	.....	30.14	765.5	77	25.0	72	SE	17	7.6	.....	0	8n	.....	SE	Inap.	Inap.	Light rain	
Cape May, N. J.	.....	.....	30.20	767.1	68	20.0	90	SE	6	2.7	.....	8es	2s	NW	SE	0	0	Fair	
Charleston, S. C.	.....	.....	30.08	764.0	78	25.6	82	SE	8	3.6	.....	2es	8s	.....	S	0	0	Cloudy	
Cheyenne, Wyoming	24.25	613.4	30.19	766.8	50	10.0	59	W	8	3.6	.....	1es	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	29.66	753.4	70	21.1	84	SE	6	2.7	.....	0	8ks	.....	S	0.70	17.8	Fair	
Cincinnati, Ohio	.....	.....	29.77	756.1	75	23.9	72	SW	10	4.5	.....	5k	0	SW	.....	0.09	2.3	Fair	
Cleveland, Ohio	.....	.....	29.89	759.2	72.2	22.3	68	S	14	6.3	.....	.....	10ks	.....	SE	Inap.	Inap.	Cloudy	
Colorado Springs, Col.	24.32	618.2	30.18	766.6	57	13.9	81	N	2	0.9	.....	8k	0	NW	.....	0.01	0.3	Fair	
Colstream, Tex.	.....	.....	29.92	760.0	65.6	18.7	84	NW	6	2.7	.....	0	2s	.....	.....	0	0	Clear	
Davenport, Iowa	.....	.....	29.62	752.3	70	21.1	84	S	8	3.6	.....	.....	10s	.....	S	Inap	Inap.	Cloudy	
Denison, Tex.	.....	.....	29.93	760.2	69	20.6	79	NW	12	5.4	.....	2ek	2s	N	.....	0.16	4.1	Fair	
Denver, Col.	25.04	636.0	30.26	768.6	58	14.4	81	Calm	0	0	.....	2k	0	NW	.....	0.20	5.1	Clear	
Detroit, Mich	.....	.....	29.82	757.4	70	21.1	84	S	12	5.4	.....	.....	10n	.....	S	0.11	2.8	Light rain	
Dodge City, Kan.	27.54	699.5	29.80	756.9	58	14.4	76	N	16	7.2	.....	2k	0	N	.....	0.03	0.8	Fair	
Dubuque, Iowa	.....	.....	29.61	752.1	69	20.6	90	SE	4	1.8	.....	.....	10n	.....	.....	0.65	16.5	Heavy rain	
Duluth, Minn.	.....	.....	29.80	756.9	55	12.8	87	NE	8	3.6	.....	.....	10s	.....	NE	0.38	9.7	Cloudy	
Eastport, Me.	.....	.....	30.27	768.8	49	9.4	93	Calm	0	0	.....	.....	Fog	.....	.....	0.20	5.1	Foggy	
Erie, Pa.	.....	.....	29.92	760.0	75	23.9	68	S	16	7.2	.....	10es	Haze	S	.....	Inap.	Inap.	Cloudy	
Escanaba, Mich	.....	.....	29.79	756.7	64	17.8	89	Calm	0	0	.....	.....	Fog	.....	.....	0.09	2.8	Dense fog	
Fort Gibson, Indian Ter.	.....	.....	29.78	756.4	66	18.9	94	W	12	5.4	.....	.....	10n	.....	.....	0.71	18.0	Light rain	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.77	73 .7	29.84	757.9	69	20.6	79	NW	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.14	722.4	30.11	764.8	50	10.0	79	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	29.92	760.0	79	26.1	73	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Grand Haven, Mich.	.....	.....	29.68	753.9	70	21.1	92	SE	12	5.4	.....	.....	10s	.....	S	0.20	5.1	Cloudy	
Indianapolis, Ind.	.....	.....	29.73	755.1	71	21.7	90	SE	8	3.6	.....	.....	10s	.....	SE	0.07	1.8	Threatening	
Indianola, Tex.	.....	.....	29.95	760.7	82	27.8	74	W	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Jacksonville, Fla.	.....	.....	30.02	762.5	78	25.6	80	SE	8	3.6	.....	8k	0	S	.....	0.22	5.6	Fair	
Keokuk, Iowa	.....	.....	29.64	751.8	65	18.3	89	N	12	5.4	.....	.....	10s	.....	N	0.76	19 3	Threatening	
Key West, Fla.	.....	.....	30.01	762.2	83.6	28.7	74	SW	3	1.3	.....	2c	2ks	W	.....	0	0	Fair	
Kittyhawk, N. C.	.....	.....	30.18	766.6	73	22.8	85	SE	8	3.6	.....	2c	2ks	.....	.....	0	0	Fair	
Knoxville, Tenn.	.....	.....	29.91	759.7	66	18.9	100	Calm	0	0	.....	.....	10n	.....	.....	0.66	16.8	Heavy rain	
La Crosse, Wis.	.....	.....	29.65	753.1	63	17.2	94	NW	12	5.4	.....	.....	10n	.....	NW	1.02	25.9	Light rain	
Leavenworth, Kan.	.....	.....	29.78	756.4	66	15.6	76	N	18	8.0	.....	0	8s	.....	NE	0.76	19.3	Clearing	
Lexington, Ky.	28.75	730.2	29.80	756.9	72	22.2	80	SE	12	5.4	.....	2k	0	E	.....	0.05	1.3	Clear	
Long Branch, N. J.	.....	.....	30.23	767.8	62	16.7	94	SW	3	1.3	.....	.....	Fog	.....	.....	Inap.	Inap.	Foggy	
Louisville, Ky.	.....	.....	29.75	755.6	74	23.3	81	SE	10	4.5	.....	.....	8ks	.....	SE	0.30	7.6	Threatening	
Lynchburg, Va.	.....	.....	30.11	764.8	75	23.9	72	S	6	2.7	.....	10k	0	S	.....	0	0	Cloudy	
Malone, N. Y.	.....	.....	30.02	762.5	77	25.0	65	SW	10	4.5	.....	5c	0	NW	.....	0	0	Fair	
Manhattan, Kan.	23.87	733.3	30.01	762.2	53	11.7	86	N	12	5.4	.....	2ek	0	.....	.....	0	0	Clear	
Marquette, Mich.	.....	.....	29.74	755.4	57	13.9	87	NW	4	1.8	.....	.....	10n	.....	NW	0.03	0.8	Light rain	
Memphis, Tenn.	.....	.....	29.76	755.9	73	22.8	81	S	8	3.6	.....	0	2ks	.....	S	0.17	4.3	Fair	
Milwaukee, Wis.	.....	.....	29.68	753.9	59	15.0	100	E	3	1.3	.....	10n	Fog	.....	.....	0.05	1.3	Heavy rain	
Mobile, Ala.	.....	.....	29.91	759.7	79	26.1	78	SW	3	1.3	.....	5k	5s	SW	.....	1.40	35.6	Cloudy	
Montgomery, Ala.	.....	.....	29.91	759.7	78	25.6	79	S	7	3.1	.....	2k	0	S	.....	0.50	12.7	Clear	
Morgantown, W. Va.	.....	.....	29.96	761.0	76	24.4	72	SE	1	0.4	.....	10c,cs	0	SW	.....	Inap.	Inap.	Cloudy	
Mt. Washington, N. H.	24.13	612.9	30.49	774.4	54	12.2	86	SW	20	8.9	.....	5c	2k	.....	SW	0	0	Fair	
Nashville, Tenn.	.....	.....	29.75	755.6	73	22.8	85	S	7	3.1	.....	2k	8ks	S	S	0.84	21.3	Cloudy	
New Haven, Conn.	.....	.....	30.23	767.8	69	20.6	84	S	5	2.2	.....	.....	10s,fog	.....	.....	0	0	Cloudy	
New London, Conn.	.....	.....	30.26	768.6	65	18.3	80	Calm	0	0	.....	.....	10s,fog	.....	.....	0	0	Cloudy	
New Orleans, La.	.....	.....	29.92	759.4	78	25.6	77	SW	4	1.8	.....	8k	0	W	.....	0	0	Fair	
Newport, R. I.	.....	.....	30.24	768 1	65	18.3	83	Calm	0	0	.....	0	Fog	.....	SW	0	0	Fair	
New York, N. Y.	.....	.....	30.24	768 1	62	16.7	100	NE	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
Norfolk, Va.	.....	.....	30.17	766.3	81	27.2	66	S	7	3.1	.....	5c	2k	SE	S	0	0	Fair	
North Platte, Neb.	27.21	691.1	29.76	755.9	53	11.7	66	N	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb.	28.81	731.8	29.86	758.4	56	13.3	78	NW	16	7.2	.....	0	8s	.....	N	0.59	15.0	Cloudy	
Oswego, N. Y.	.....	.....	30.06	763.5	76.5	24.7	69	SE	10	4.5	.....	2es	Haze	SE	.....	0	0	Fair	
Pembina, Dakota	.....	.....	30.06	763.5	49	7.8	80	NW	8	3.6	.....	5c	5s	NW	NW	0	0	Cloudy	
Philadelphia, Penn.	.....	.....	30.22	767.6	63	17.2	88	S	5	2.2	.....	.....	10s	.....	S	0	0	Cloudy	
Pike's Peak, Colorado	18.01	457.4	30.22	767.6	30	— 1.1	78	NE	30	13.4	.....	0	5k	.....	.....	0.10	2.5	Clear	
Pittsburgh, Penn.	.....	.....	29.95	760 7	76	24.4	64	S	10	4.5	.....	5k	0	S	.....	0	0	Fair	
Port Huron, Mich.	.....	.....	29.82	757.4	71	21.7	75	SE	10	4.5	.....	.....	10n	.....	S	Inap.	Inap.	Light rain	
Portland, Me.	.....	.....	30.26	768.6	60	15.6	82	E	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Portland, Oregon	.....	.....	30.18	766.6	65	18.3	58	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Punta Rassa, Fla.	.....	.....	30.02	762.5	81.7	27.6	82	E	4	1.8	.....	.....	.....	8ks	SE	0	0	Cloudy	
Rochester, N. Y.	.....	.....	30.00	762.0	76	24.4	64	S	10	4.5	.....	2ek	Haze	SW	.....	Inap.	Inap.	Fair	
Salt Lake City, Utah	25.81	655.6	30.14	765.5	67	19.4	33	E	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	30.22	767.6	65	18.3	94	SW	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	
San Diego, Cal.	.....	.....	29.89	759.2	64	17.8	88	NW	4	1.8	.....	.....	10s	.....	NW	0	0	Cloudy	
San Francisco, Cal.	.....	.....	29.85	758.2	62	16.7	83	Calm	0	0	.....	2c	0	.....	.....	0	0	Clear	
Santa Fe, N. M.	23.42	594.1	29.96	761.0	58	14.4	64	NE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.03	762.7	78	25.6	86	S	8	3.6	.....	.....	10s	.....	S	1.06	26.9	Cloudy	
Shreveport, La.	.....	.....	29.88	758.9	72	22.2	80	W	4	1.8	.....	2ek	0	SW	.....	0	0	Fair	
Smithville, N. C.	.....	.....	30.13	765.3	77	25.0	69	SE	21	9.4	.....	10ek	0	SW	.....	0	0	Cloudy	
Springfield, Mass.	.....	.....	30.23	767.8	68	20.0	84	S	4	1.8	.....	.....	10ks	.....	.....	0	0	Cloudy	
St. Louis, Mo.	.....	.....	29.64	752.8	69	20.6	90	S	4	1.8	.....	.....	10n	.....	.....	0.07	1.8	Light rain	
St. Marks, Fla.	.....	.....	29.96	761.0	77	25.0	90	W	4	1.8	.....	.....	10s	.....	SW	0.37	9.4	Cloudy	
St. Paul, Minn.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.34	8.6	.....	
St. Paul's Island, Alaska	.....	.....	30.02	762.5	33	0.6	80	E	6	2.7	.....	.....	Fog	.....	.....	0	0	Foggy	
Thatcher's Island, Mass.	.....	.....	30.21	767.3	64	17.8	89	SW	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Toledo, Ohio	.....	.....	29.81	757.2	70	21 1	90	SE	10	4.5	.....	.....	10n	.....	SE	0.38	9.7	Light rain	
Tucson, Arizona	27.43	696.0	30.02	762.5	85	29.4	.....	E	.....	.....	.....	0	Haze	.....	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30.03	762.7	76	24.4	90	S	8	3.6	.....	8c	5ks	.....	S	2.68	68.1	Cloudy	
Vicksburg, Miss.	.....	.....	29.8	758.2	76	24.4	70	S	1	0.4	.....	8ek	2s	SW	S	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.	24.54	623.3	30.02	762.5	55	12.8	50	Calm	0	0		0	0			0	0	Clear.	
Washington, D. C.			30.17	766.3	70.5	21.4	84	S	5	2.2			10s		SW	0	0	Cloudy.	
Wilmington, N. C.			30.13	765.3	77	25.0	69	SE	12	5.4		5ck	2ks	W	SE	0	0	Cloudy.	
Wood's Holl, Mass.			30.26	768.6	65	18.3	89	S	3	1.3		0	Fog			0	0	Light fog.	
Wytheville, Va.	27.75	704.8	29.85	758.2	64	17.8	94	SE	8	3.6			10ks		SW	0.01	0.3	Threatening	
Yankton, Dakota.	28.71	720.2	29.98	761.5	55	12.8	74	NW	8	3.6		0	0			0	0	Clear.	
Yuma, Arizona.			29.77	756.1	84	28.9		SW				2k	0			0	0	Fair.	
SUB-SERIES.																			
Bridgetown, B'b'dos, W. I.			30.07	763 8	83	28.3	64	SE	4	1.8		0	5ks		NE	0	0	Fair.	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.99	761 7	83	28.3	79	SE				0	8k			0	0	Fair.	L. V. Bigard.
Kingston, Jamaica, W. I.			30.16	766.1	81	27.2	74	Calm	0	0		0	0			0	0		James Gall.
Santiago de Cuba, W. I.			29.89	756.9	83	28.3	75	NW	2.4	1.1		2c	2k		NE	0	0	Fair.	Robert Mason.
Havana, Cuba, W. I.			29.98	761.5	79	26.1	82	S	1.2	0.6		10c	0	SE		0.89	22.6	Fair.	Charles Hasselbrink.
St. Georges, Bermudas.			30.24	768.1	74.0	23.3	81	ESE	13.0	5.8		5c	1fk	ESE		0	0	Fair.	C. F. Allen.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Navassa, W. I.																			
Clifton, Jamaica W. I.	27.21	691.1	29.99	761.7	74	22.2	90	Calm	0	0		0	0			0.26	6.6	Clear.	C. Partridge.
Paramaribo, D. Guiana, S. A.			30.05	763.3	82	27.8	83	E			1	7k	6k	E		2.005	50.9	Cloudy.	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.8			84.2	29										1.230	31.25		Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1			64.5	18.1	80	Calm	0	0		0	0			0	0	Clear.	Thomas Herran.
York Factory, B. A.			30.34	770.6	32	0.0	100	NE	7	3.1		2c	0	E		0	0		J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.			30.11	764.8	76	24.4	90	NE			5					0	0		Daniel Smith.
Makawao, Maui, H. I.			30.03	762.7	59	15.0	78	Calm	0	0						0	0	Misty.	F. L. Clarke.

MARINE SERIES.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—		
Steamer Nova Scotian N. 51° 38′, W. 18° 03′.	NW by W	9½	29.89	759.2	51	10.6		W			6				SW			Cloudy.	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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) 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, 6.51 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 JUNE 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	.....	.....	30.10	764.5	77.2	25.1	57	N	.....	.....	1	.....	1	.....	.....	0	0	Clear.....	Charnot.
Algiers	.....	.....	30.10	766.1	74.8	23.8	77	NNE	.....	.....	2	.....	4	.....	.....	0	0	Fair.....	Peter.
La Calle	.....	.....	.....	.....	76.8	24.9	.....	N	.....	.....	2	.....	1	.....	.....	0	0	Clear.....	Kunts.
Tunis	.....	.....	30.10	764.5	79.3	26.5	31	NW	.....	.....	4	.....	1	.....	.....	0	0	Clear.....	Jacques.
Sfax	.....	.....	30.06	763.4	77.5	25.3	57	NE	.....	.....	4	.....	1	.....	.....	0	0	Clear.....	Chauvey.
Saïda	.....	.....	30.15	765.9	83.3	28.5	18	NNW	.....	.....	1	.....	1	.....	.....	0	0	Clear.....	Millot.
Tebessa	.....	.....	30.14	765.6	71.2	21.8	.....	W	.....	.....	1	.....	1	.....	.....	0	0	Clear.....	Colin.
Geriville	.....	.....	30.17	766.2	82.0	27.8	21	W	.....	.....	1	.....	1	.....	.....	0	0	Clear.....	Buard.
Laghouat	.....	.....	30.07	765.6	91.4	33.0	.....	N	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Guyot.
Biskra	.....	.....	30.12	765.1	90.3	32.4	20	NW	.....	.....	3	.....	0	.....	.....	0	0	Clear.....	Laromer.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

AUSTRIAN SERIES.

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

Agram	.....	.....	29.81	757.1	68.4	20.2	65	NE	.....	.....	3	.....	7	.....	.....	0.020	2.5.0	Raining.....	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	29.83	757.7	74.8	23.8	61	NE	.....	.....	3	.....	9	.....	.....	0	0	.....	Dr. Wierzbicki.
Eperies	.....	.....	29.75	755.7	74 1	23.4	61	N	.....	.....	3	.....	5	.....	.....	0	0	.....	Julius Mikolik.
Gratz	28.66	727.9	29.83	757.7	67.1	19.5	55	NE	.....	.....	7	.....	5	.....	.....	0.016	0.4	.....	Andreas Rospini.
Hermannstadt	28.31	719.5	29.69	754.1	70.5	21.4	68	ESE	.....	.....	1	.....	9	.....	.....	0.241	6.20	Thunder-storm.	Prof. Reissenberger.
Kremsmünster	28.74	729.9	30.08	763.9	55.4	13.0	77	W	.....	.....	8	.....	10	.....	.....	0.181	4.6	.....	Prof. C. Wagner.
Lemberg	.....	.....	29.72	754.8	71.8	22.1	64	NE	.....	.....	2	.....	7	.....	.....	0.031	0.8	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habsuda Daniel.
Pola	.....	.....	29.85	758.3	71.7	21.8	67	N	.....	.....	1	.....	8cks	.....	.....	0.060	1.58	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	29.80	756.8	63 3	17.4	97	SW	.....	.....	2	.....	10	.....	.....	0.394	10.00	.....	Karl Stancel.
Trieste	.....	.....	29.87	758.8	73.0	23.3	66	W	.....	.....	1	.....	0	.....	.....	0	0	Covered	Prof. V. Farolfi.
Vienna	.....	.....	29.91	759.8	59.4	15 2	66	WNW	.....	.....	6	.....	0	.....	.....	0.016	0.4	.....	I. R. Central Met. Obs'y.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

Brussels	.....	.....	30.00	762.1	65.3	18.5	55	SSW	.....	.....	4	.....	9	.....	SW	0	0	Cloudy.....	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	.....	.....	29.63	752.6	55.2	12.9	.....	SSE	22	9.8	.....	.....	5	.....	.....	0	0	Blue sky	William Roswell.
Ardrossan	.....	.....	29.55	750.6	55	12.8	.....	S	.....	.....	3	.....	8	.....	.....	.....	.....	Raining	William McNeil.
Armagh, Observatory	.....	.....	29.49	749.0	56.8	13.8	.....	SSW	12	5.4	.....	.....	10	.....	.....	.....	.....	Gloomy	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	29.60	751.8	55.5	13.1	.....	SW	.....	.....	1–3	.....	10	.....	.....	.....	.....	Showery	J. Dreyer.
Bradford	.....	.....	29.71	754.6	60.0	15.6	.....	SW	.....	.....	3	.....	10	.....	.....	0	0	Overcast	J. McLandsborough.
Bridgetown, (Barbadoes)	.....	.....	30.00	762.0	82.0	27.8	.....	NE	.....	.....	3	.....	7	.....	.....	.....	.....	Overcast	Sergt. J. F. Halanen, A.
Cambridge, Observatory	.....	.....	29.85	758.2	58.2	14.6	.....	SSW	.....	.....	2	.....	10	.....	.....	.....	.....	Drizzling	H. Todd. [H. C.
Cardington	.....	.....	29.84	757.9	60.0	15.6	.....	SW	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast	John McLaren.
Carlisle	.....	.....	29.52	749.8	57.9	14.4	.....	S	.....	.....	2	.....	10	.....	.....	0.24	6.1	Raining	T. Bell, for J. Carmell.
Chatham, School M. E	.....	.....	29.89	759.2	58.5	14.7	.....	SW	.....	.....	3	.....	9	.....	.....	.....	.....	Gloomy	Capt. J. Fellowes, R.E.
Dartmoor	28.43	722.1	29.93	760.2	52.8	11.6	.....	W	.....	.....	2	.....	10	.....	.....	.....	.....	Rain and fog	R. E. Power.
Donaghadee	.....	.....	29.51	749.5	51	10.6	.....	SSW	.....	.....	5	.....	10	.....	.....	.....	.....	Raining	J. Mac Gowan.
Dover	.....	.....	29.93	760.2	57	13.9	.....	SW	.....	.....	3	.....	7	.....	.....	.....	.....	¾ clouded	J. Costello.
Eccles (near Manchester.)	.....	.....	29.70	754.4	59.7	15.4	.....	SSE	15.0	6.7	.....	.....	10	.....	.....	.....	.....	Gloomy	Thomas Mackereth.
Falmouth, Observatory	.....	.....	29.85	758.2	56.4	13.6	.....	WSW	25	11.2	.....	.....	10	.....	.....	.....	.....	Rain and fog	The Staff.
Fort Napier, (Natal)	27.91	708.9	30.14	765.5	74.4	23.6	.....	N	.....	.....	4	.....	3	.....	.....	.....	.....	*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.96	761.0	84	28.9	.....	E	.....	.....	4	.....	7	.....	.....	Blank	Blank	*D. clouds	
Galway, Queen's College	.....	.....	29.85	758.2	55	12.8	.....	SW	.....	.....	7	.....	10	.....	.....	.....	.....	Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.05	763.3	77.0	25.0	.....	E	.....	.....	5	.....	1	.....	.....	.....	.....	*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	29.56	750.8	53.0	11.7	.....	SSE	.....	.....	2	.....	10	.....	.....	.....	.....	Raining	Lewis Stuart.
Great Yarmouth	.....	.....	29.88	758.9	57	13.9	.....	S	.....	.....	4	.....	6	.....	.....	.....	.....	*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	29.88	758.9	58.0	14.4	.....	SSW	.....	.....	4	.....	10	.....	.....	.....	.....	Drizzling	The Staff, for G. B. Airy.
Guernsey	.....	.....	29.90	759.4	59.5	15.3	.....	WSW	.....	.....	4	.....	6	.....	.....	.....	.....	*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	29.73	755.1	60.0	15.6	.....	SSW	.....	.....	2	.....	10	.....	.....	.....	.....	Threatening	L. J. Crossley.
Helston	.....	.....	29.83	757.7	59	15.0	.....	W	.....	.....	4	.....	10	.....	.....	0.19	4.8	Overcast	M. P. Moyle.
Holyhead	.....	.....	29.62	752.3	55	12.8	.....	SSW	.....	.....	5	.....	10	.....	.....	.....	.....	Misty	John Tilston.
Kew, Observatory	.....	.....	29.87	758.7	58.2	14.6	.....	S	21	9.4	.....	.....	10	.....	.....	.....	.....	Raining	The Staff.
Kingstown	.....	.....	29.59	751.6	61	16.1	.....	SW	.....	.....	4	.....	9	.....	.....	.....	.....	Overcast	George Mitchell.
Leicester Museum	.....	.....	29.80	756.9	56.8	13.8	.....	S	.....	.....	5	.....	10	.....	.....	.....	.....	Threatening	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)	.....	.....	29.96	761.0	77.6	25.3	.....	NW	.....	.....	1	.....	4k	.....	.....	.....	.....	*D. clouds	Corp'l F. Fraser, A.M.C.
Nairn	.....	.....	29.50	749.3	61	16.1	.....	WSW	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast	W. D. Penny.
Nassau, (Bahamas	.....	.....	30.01	762.0	83.6	28.7	.....	NE	.....	.....	4	.....	8	.....	.....	Blank	Blank	*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	29.73	755.1	61.2	16.2	.....	S	.....	.....	6	.....	9k.d	.....	S	0	0	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	29.77	756.1	55.2	12.9	.....	S	.....	.....	3–4	.....	10	.....	.....	.....	.....	Drizzling	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	29.80	756.9	58	14.4	.....	SSW	.....	.....	3	.....	10	.....	.....	.....	.....	Gloomy	J. Lucas.
Plymouth	.....	.....	29.84	757.9	58	14.4	.....	S	.....	.....	3	.....	10	.....	.....	.....	.....	Misty	John Merrifield.
Roche's Point	.....	.....	29.68	753.9	60	15.6	.....	W	.....	.....	5	.....	5	.....	.....	.....	.....	Cloudy	W. Kennedy.
Saint Ann's Head	.....	.....	29.74	755.4	55	12.8	.....	WSW	.....	.....	3	.....	7	.....	.....	.....	.....	Misty	John C. Walker.
Saint Helier, Jersey	.....	.....	29.93	760.2	60.4	15.8	.....	W	.....	.....	5	.....	10	.....	.....	.....	.....	Overcast	A. P. Amy.
Sandwick Manse, Orkneys	.....	.....	29.57	751.1	59.0	15.0	.....	SSE	24	10.7	.....	.....	0	.....	.....	.....	.....	Blue sky	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	29.74	755.4	61.6	16.4	.....	SSW	.....	.....	3	.....	10	.....	.....	.....	.....	Overcast	F. Shaw.
Scutari Cemetery Turkey	.....	.....	29.70	754.4	72.4	22.4	.....	SW	.....	.....	1	.....	6	.....	.....	Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield	.....	.....	29.73	755.1	60.6	15.9	.....	SW	.....	.....	5	.....	9	.....	.....	0	0	Overcast	W. F. Cooper.
Silloth Rectory	.....	.....	29.61	752.1	56.1	13.4	87	SW	.....	.....	2	.....	9	.....	.....	0.246	6.25	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	29.68	753.9	58.1	14.5	.....	S	.....	.....	5	.....	10	.....	.....	Blank	Blank	Threatening	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.	.....	.....	29.52	749.8	55	12.8	.....	SE	.....	.....	3	.....	8	.....	.....	.....	.....	*D. clouds	John Smith.
Stratfield Turgiss	.....	.....	29.87	758.7	56.7	13.7	.....	SW	.....	.....	1–2	.....	10	.....	.....	.....	.....	Showery	Rev. Charles H. Griffith.
Thurso	.....	.....	29.54	750.3	61	16.1	.....	SSE	.....	.....	3	.....	4	.....	.....	.....	.....	*D. clouds	John Trotter.
Truro, Royal Institution	.....	.....	29.84	757.9	62	16.7	.....	W	.....	.....	6	.....	10	.....	.....	.....	.....	Raining	W. Newcombe.
Valencia, Observatory	.....	.....	29.68	753.9	57.0	13.9	.....	W	32	14.3	.....	.....	10	.....	.....	.....	.....	*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man	.....	.....	.....	.....	52	11.1	.....	S	.....	.....	1	.....	3	.....	.....	0.10	5.1	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.00	762.0	58.0	14.4	91	NNW	9	4.0	.....	5	5	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	30.12	765.0	52.6	11.4	74	N	.....	.....	1	.....	5k	.....	.....	0.03	0.8	.....	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	29.62	752.3	55.1	12.8	.....	SW	.....	.....	3	.....	10k	.....	.....	0	0	Cl ndy	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.29	769.4	69.9	21.1	65	ESE	24.1	10.8	.....	.....	6	.....	.....	0.02	0.5	Squally	C. Meldrum
Melbourne, Observatory	.....	.....	30.36	771.1	39.1	3.9	89	NW	6	2.7	.....	.....	0	.....	.....	0.12	0.5	Fine, clear.	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	29.14	747.8	50	10.0	.....	SE	.....	.....	4	.....	10	.....	.....	0	0	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	29.61	752.1	50	10.0	.....	SE	.....	.....	4	7	4	SE	.....	.....	.....	.....	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 676 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen	.....	.....	29.93	760.1	64.6	18.1	63	W	.....	.....	2	.....	10	.....	.....	.....	.....	.....	.....
Fanöe	.....	.....	29.95	760.8	59.9	15.5	72	W	.....	.....	6	.....	3	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	29.78	756.5	38.1	3.4	66	NNE	.....	.....	2	.....	5	.....	.....	.....	.....	.....	.....
Stykkisholm, (Iceland)	.....	.....	29.45	747.9	48.9	9.4	88	SE	.....	.....	2	.....	5	.....	.....	.....	.....	.....	.....
Thorshavn, (Faröe)	.....	.....	29.55	750.5	57.0	13.9	79	SE	.....	.....	2	.....	4	.....	.....	.....	.....	.....	.....
Vestervig	.....	.....	29.87	758.7	57.2	14.0	76	SW	.....	.....	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	.....	.....	30.03	762.7	60.8	16	89	SW	.....	.....	1	.....	10	.....	.....	0.161	4.1	Covered	Normal School.
Amiens	.....	.....	30.02	762.6	68.7	20.4	52	NW	.....	.....	3	.....	8	.....	NW	0.008	0.2	Very cloudy	Normal School.
Avignon	.....	.....	30.04	763.1	68.4	20.2	34	NNW	.....	.....	6	.....	0	.....	.....	0	0	Clear.....	Normal School.
Bar-sur-Seine	.....	.....	30.12	765.1	64.4	18.0	47	SW	.....	.....	2	.....	5	.....	SW	0	0	Cloudy.....	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.06	763.4	58.5	14.7	76	SW	17.7	7.9	.....	.....	10	.....	SW	0.028	0.7	Raining.....	Beaumette Observatory.
Beauvais	.....	.....	30.09	764.2	67.1	19.5	45	SSW	.....	.....	4	.....	10	.....	SW	0	0	Covered.....	Normal School.
Besançon	.....	.....	30.15	765.9	63.0	17.2	60	SW	.....	.....	2	.....	5	.....	SW	0.130	3.3	Cloudy.....	Normal School.
Bourg en Bresse	.....	.....	30.23	767.8	64.4	18	68	NE	.....	.....	3	.....	..k	.....	S	.....	.....	.....	Normal School.
Bourges	.....	.....	30.13	765.3	63.0	17.2	80	SW	.....	.....	2	.....	2	.....	SE	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	29.92	760.0	62.1	16.7	81	WSW	.....	.....	3	.....	10	.....	WSW	0.354	8.25	Light rain...	Naval Observatory.
Carcassonne	.....	.....	30.14	765.6	63.5	17.5	55	W	.....	.....	4	.....	2	.....	E	0	0	Slightly cl'dy	Normal School
Caen	.....	.....	30.03?	778.0?	62.4	16.9	81	S	.....	.....	8	.....	10	.....	SE	0	0	Covered	Normal School.
Chartres	.....	.....	30.07	763.6	61.9	16.6	.....	SW	.....	.....	4	.....	10	.....	.....	0	0	Covered	Normal School.
Clermont	.....	.....	30.11	764.9	62.2	16.8	58	E	.....	.....	2	.....	8	.....	.....	0	0	Very cloudy	Puy de Dome Obs'y.
Commercy	.....	.....	30.11	764.9	61.3	16.3	52	W	.....	.....	2	.....	5ku	.....	W	0.04	1.	Cloudy.....	Normal School.
Commune de Greasque*	.....	.....	30.03	762.8	65.3	18.5	37	NW	.....	.....	6	.....	0	.....	.....	0	0	.....	M. Kina.
Grenoble	.....	.....	30.14	765.6	68.7	20.4	81	NW	.....	.....	8	.....	5cs	.....	SW	0.24	6.	Cloudy.....	Normal School.
La Roche-sur-Yon	.....	.....	30.11	764.9	55.8	13.2	93	SW	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Le Mans	.....	.....	30.08	763.9	58.5	14.7	93	SSW	.....	.....	4	.....	8	.....	SSW	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.13	765.3	64.9	18.3	50	N	.....	.....	2	.....	5	.....	N	0	0	Cloudy.....	Normal School.
Mâcon	.....	.....	30.11	764.8	61.2	16.2	69	NW	.....	.....	2	.....	0	.....	.....	0.24	6.	Clear.....	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	30.05	763.2	62.4	16.9	52	W	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Nismes	.....	.....	30.04	763.0	71.6	22	28	NW	.....	.....	4	.....	0	.....	.....	0	0	Clear.....	Normal School.
Orleans	.....	.....	30.06	763.4	59.7	15.4	76	SW	.....	.....	2	.....	8	.....	SW	0.16	4.	Very cloudy	Normal School.
Paris, Observatory	.....	.....	30.07	763.6	64.9	18.3	47	SW	.....	.....	4	.....	7k	.....	.....	0	0	Cloudy.....	National Observatory.
Parthenay	.....	.....	30.11	764.8	61.7	16.5	90	S	.....	.....	4	.....	5	.....	W	0.08	2.	Cloudy.....	Normal School.
Privas	.....	.....	30.11	764.9	63.5	17.5	.....	N	.....	.....	4	.....	2	.....	N	.....	.....	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.19	766.8	61.0	16.1	67	SW	.....	.....	4	.....	10	.....	NE	0.039	1.0	Covered	Naval Observatory.
Rouen	.....	.....	30.02	762.4	61.9	16.6	55	S	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Saint Lo	.....	.....	29.70	754.4	59.2	15.1	93	SW	.....	.....	1	.....	10	.....	SW	0.075	1.9	.....	Normal School.
Tarbes	29.13	739.9	30.20	767.1	63.5	17.5	.....	WNW	.....	.....	2	.....	5	.....	E	0	0	Cloudy.....	Normal School
Villefranche	.....	.....	30.14	765.5	64.4	18	74	N	.....	.....	2	.....	8	.....	W	0.055	1.4	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.93	760.1	80.6	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	Inap.	Inap.	.....	L'Abbé Marchési.
Marseilles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Marseilles Observatory.
Mont-Louis	.....	.....	30.30	769.6	54.1	12.3	65	WNW	16.8	7.50	.....	.....	6	.....	W	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.07	763.8	64.9	18.3	52	SSW	.....	.....	3	.....	10	.....	SW	0	0	.....	Montsouris Observ'tory.
Perpignan	.....	.....	30.08	764.0	67.6	19.8	45	NW	14.9	6.66	.....	.....	1	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.07	763.8	67.8	19.9	46	SW	.....	.....	3	.....	9	.....	.....	0	0	Covered	E. Renou.
Toulouse	.....	.....	30.24	768.2	63.3	17.4	56	NNW	.....	.....	3	.....	7	.....	.....	Inap.	Inap.	.....	Toulouse Observatory.
Tours	.....	.....	30.10	764.6	60.3	15.7	69	SW	.....	.....	4	.....	10	.....	WSW	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.07	763.8	64.8	18.2	53	SW	.....	.....	4	.....	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.

Bamberg	.....	.....	30.08	763.9	55.4	13.0	85	W	.....	.....	3	.....	7	WSW	.....	0.315	8.0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.06	763.4	59.7	15.4	71	NW	.....	.....	2	.....	10	.....	.....	0.031	0.8	Raining.....	Prof. Arndt.
Breslau	.....	.....	29.99	761.7	66.2	19.0	71	NW	.....	.....	8	.....	8	.....	.....	0	0	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	30.09	764.3	65.1	18.4	45	SW	.....	.....	1	.....	9	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.06	763.4	64.6	18.1	46	SSW	.....	.....	5	.....	3	NW	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	29.98	761.5	67.1	19.5	57	S	.....	.....	3	.....	5	W	.....	0.197	5.0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.12	765.1	67.1	19.5	34	SW	.....	.....	1	.....	4	.....	.....	Inap.	Inap.	.....	Physical Society.
Friedrichshafen	.....	.....	30.14	765.6	59.7	15.4	73	SW	.....	.....	1	.....	7	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.02	762.6	64.6	18.1	56	WSW	.....	.....	3	.....	7k,n	SW	.....	0.465	11.8	Fair.....	Captain F. Hegemann.
Kiel	.....	.....	29.97	761.3	64.2	17.9	53	W	.....	.....	3	.....	7	.....	.....	0.197	5.0	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.91	759.7	65.3	18.5	76	W	.....	.....	2	.....	9	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	30.10	764.6	57.6	14.2	65	NNW	.....	.....	2	.....	9	NW	.....	0.134	3.4	.....	Prof. Bruhns.
Memel	.....	.....	29.92	760.0	65.5	18.6	82	WNW	.....	.....	4	.....	4ck,k	NW	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.01	762.3	64.9	18.3	52	.....	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.95	760.6	64.9	18.3	81	NE	.....	.....	2	.....	1	.....	.....	0	0	.....	A. Lothes.
Posen	.....	.....	29.96	761.0	75.2	24.0	55	SE	.....	.....	1	.....	2	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.13	765.2	63.7	17.6	44	W	.....	.....	1	.....	4	W	.....	0.055	1.4	.....	Dr. Schur.
Stuttgart	.....	.....	30.11	764 8	62.1	16.7	49	NW	.....	.....	1	.....	5	.....	.....	0.091	2.3	.....	Prof. Schoder.
Thorn	.....	.....	29.90	759.5	76.8	24.9	51	N	.....	.....	3	.....	3	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.06	763.4	65.8	18.8	44	S	.....	.....	5	.....	9	.....	.....	0	0	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	29.87	758.8	59.9	15.5	74	W	.....	.....	3	.....	10	.....	.....	0.012	0.3	.....	E. F. Schütt.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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			29.73	755.2	85.6	29.8		SW										Clear	

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

ITALIAN SERIES.

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

Udine			29.85	758.3	69.3	20.7	55	NE	3.1	1.4			9			0	0		
Padua			29.85	758.3	69.3	20.7	57	NW	9.8	4.4			7	W		0.224	5.7		
Vicenza			29.85	758.2	68.5	20.3	61	NW	4.3	1.9			3	E		0.079	2.0		
Verona			29.82	757.5	75.1	24.2	59	E			2		0			0	0		
Bergamo	28.56	725.4	29.81	758.0	66.9	19.4	68	S			2		9			0	0		
Domodossola	28.91	734.3	29.99	755.5	69.4	20.8	68	NNE			4		9	S		0	0		
Milan			29.93	760.2	67.1	19.5	87	WSW			2		9	WSW		0	0		
Pavia			29.93	760.1	64.4	18.1	72	E			1		9	SW		0.059	1.5		
Moncalieri			29.92	760.0	67.6	19.7	50	SE	1.8	0.8			9	NW		0	0		
Mondovi	28.06	712.8	29.93	760.1	61.9	16.6	50	SE			2		8	NNW		0	0		
Porto Maurizio			29.96	761.0	69.6	20.9	56	SW			4		7	E		0	0		
Genoa			29.89	759.3	68.0	20.0	51	N	3.8	1.7			4	N		0	0		
Piacenza			29.93	760.3	65.3	18.5	73	NW	4.9	2.2			10	NW		0.28	7.2		
Parma			29.91	759.6	67.8	19.9	72	WNW			4		9			0.035	0.9		
Bologna			29.89	759.3	69.1	20.6	44	SW			6		4	W		0	0		
Florence			29.89	759.1	72.5	22.7	36	NW			2		2	NW		0	0		
Leghorn			29.89	759.2	69.4	20.9	66	W	5.6	2.5			5			0	0		
Siena	28.67	728.3	29.85	758.3	67.3	19.6	50	WNW	3.1	1.4			4	SW		0.142	3.6		
Urbino																			
Pesaro																			
Ancona			29.88	758.9	72.4	22.2	64	Calm			0		10			0.315	8.0		
Grosseto																			
Rome			29.88	758.9	73.0	22.8	53	S	11.2	5.0			5	SW		0	0		
Naples, O. U			29.93	760.3	70.5	21.4	59	W			6		10	SW		0	0		
Lecce			29.87	758.6	77.7	25.4	53	NNE	15.4	6.9			4			0	0		
Cosenza			29.96	760.9	78.8	26.0	72	NW	5.6	2.5			9			0	0		
Riposto, (Sicily)			29.90	759.4	75.9	24.4	66	E			2		2	W		0	0		
Palermo			29.94	760.5	73.0	22.8	52	WNW	13.0	5.8			5			0	0		
Caltanissetta	28.09	711.1	29.90	759.4	74.7	23.7	40	NW			4		2	SE		0	0		
Sub-Series.																			
Naples, S. R			29.97	761.1	68.7	20.4	69	SW	4.9	2.2			8	SW		0.028	0.7		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather 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.

Flushing			30.03	762.7	62.2	16.8		SW			4								
Groningen			29.94	760.4	62.8	17.1		SSW			4								
Helder			29.97	761.1	59.7	15.4		SW			4								
Utrecht			29.97	761.2	66.4	19.1	58	SSW			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.

Bergen			29.69	754.2	55.0	12.8	94	S	12.3	5.5			10			0.354	9.0	Raining	
Bröno			29.71	754.5	67.6	19.8	51	ENE	11	5			10			0	0		
Christiania			29.76	756.0	68.7	20.4	42	S	13.2	5.9			0			0.024	0.6		
Tromsö			29.82	757.3	60.8	16.0	43	NE	0	0			0			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 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,)	.....	.....	30.33	770.4	71.2	21.8	81	WSW	2.4	1.08	.....	.....	5	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.07	763.6	82.0	27.8	17	NE	5.2	2.3	.....	.....	0	.....	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.27	768.9	69.4	20.8	68	SW	6.4	2.8	.....	.....	10	.....	.....	0	0	.....	Capt D. A. da Cunha.
Lisbon	.....	.....	30.18	766.5	71.2	21.8	35	N	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.

Warsaw	.....	.....	29.85	758.3	71.1	21.7	66	N	9	4	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.82	757.4	76.3	24.6	55	NW	9	4	.....	.....	2	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.79	756.7	81.5	27.5	54	WSW	2	1	.....	.....	4	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.76	756.0	76.3	24.6	76	WNW	7	3	.....	.....	6	.....	.....	.....	.....	Light rain...	Central Physical Obs.
Knopio	.....	.....	29.72	754.8	63.0	17.2	98	W	49	22	.....	.....	10	.....	.....	.....	.....	Thunder-storm..	Ch. Forsten.
Kieff	.....	.....	29.64	752.9	83.5	28.6	50	SE	4	2	.....	.....	4	.....	.....	.....	.....	.....	Physical Cab.net.
Nikolaiev	.....	.....	29.71	754.7	75.2	24.0	77	N	4	2	.....	.....	9	.....	.....	.....	.....	.....	Kurdukof.
Kertch	.....	.....	29.67	753.5	84.7	29.3	60	NNE	7	3	.....	.....	2	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.89	759.1	78.4	25.9	74	SW	4	2	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.70	754.3	93.2	34.0	23	E	13	6	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.91	759.8	55.2	12.9	82	E	18	8	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.31	719.1	29.03	762.6	84.6	29.2	28	SE	9	4	.....	.....	10	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.87	758.8	81.5	27.5	33	E	18	8	.....	.....	2	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.80	756.8	81.0	27.2	40	WNW	2	1	.....	.....	6	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	23.83	782.3	29.79	756.6	67.3	19.6	87	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.74	755.5	83.7	28.7	26	W	13	6	.....	.....	0	.....	.....	.....	.....	.....	.....
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.01	711.5	29.58	751.4	87.8	31.0	35	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.64	752.8	62.4	16.9	66	S	13	6	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.12	747.2	67.2	14.0	70	WNW	2	1	.....	.....	9	.....	.....	Blank	Blank	.....	Marks.
Irkutsk	28.24	717.4	29.59	751.5	53.4	11.9	93	Calm	0	0	.....	.....	10	.....	.....	.....	.....	Raining.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.85	758.3	80.2	26.8	50	ESE	11	5	.....	.....	5	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	29.95	760.6	56.7	13.7	95	SE	11	5	.....	.....	7	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	56.3	13.5	97	E	9	4	.....	.....	0	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 304.4? 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	.....	.....	30.06	763.5	79.3	26.3	26	N	3.7	1.67	.....	0	0	.....	.....	0	0	Clear.....	Royal Observatory.
San Fernando	.....	.....	30.11	764.7	73.4	23.0	59	W	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. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.87	758.7	61.2	16.2	71	NE	.....	.....	4	.....	10	.....	.....	0	0	.....	
Umea	.....	.....	29.79	756.7	55.4	13.0	89	NE	.....	.....	2	.....	10	.....	.....	0	0	.....	
Hernosand	.....	.....	29.79	756.6	51.4	10.8	95	NE	.....	.....	4	.....	10	.....	.....	0.118	3.0	Raining.....	
Stockholm	.....	.....	29.76	756.0	70.2	21.2	71	NW	.....	.....	2	.....	8	.....	.....	0	0	.....	
Wisby	.....	.....	29.90	759.4	65.5	18.6	66	WNW	.....	.....	4	.....	0	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.78	756.4	65.5	18.6	74	WNW	4.7	2.1	.....	.....	10	.....	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 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	28.70	729.1	30.11	764.9	59.7	15.4	45	N	.....	.....	4	.....	6	.....	.....	0.118	3.0	Cloudy	The Observatory.
Zurich	28.52	724.4	30.10	766.1	52.5	11.4	87	E	.....	.....	1	.....	10	.....	.....	1.079	27.4	Covered	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note—For Geneva the corresponding departures from the normal values are: Barometer, +2.5 mm; Thermometer, —5.5 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. Mill meters.	Weather.	Observer.
Constantinople	.....	.....	29.75	755.7	75.2	24.0	71	WSW	2	1.0	.....	.....	7	.....	WNW	0	0	.....	
Fao, (Persian Gulf)	.....	.....	29.69	754.0	95.0	35.0	.....	NW	.....	.....	4	.....	10	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.78	756.4	81.1	27.3	.....	N	.....	.....	2	.....	2	.....	.....	.....	.....	.....	
Valona	.....	.....	29.86	758.4	79.9	26.6	.....	SE	.....	.....	1	.....	2	.....	.....	.....	.....	.....	
Varna	.....	.....	29.72	755.0	87.8	31.0	.....	N	.....	.....	2	.....	5	.....	.....	Bl nk	Blank	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.85	758.2	84.9	29.4	.....	SW	.....	.....	3	.....	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.	.....	.....	30.02	762.5	63.9	17.7	84	NE	8	3.6	.....	0	.....	.....	.....	0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.04	763.0	72	22.2	.....	SW	5	2.2	.....	.....	10s	.....	SW	0	0	Cloudy	W. R Bigg.
*Chatham, N. B.	.....	.....	30.10	764.5	69	20.6	76	SW	12	5.4	.....	2c	0	SW	.....	0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.19	766.8	65	18.3	81	S	10	4.5	.....	5cs	0	S	.....	0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.97	761.2	83.5	28.6	65	SE	.....	.....	2	7k	0	.....	.....	0	0	Fair	James Smith, M. A.
Dalhousie, N. B.	.....	.....	30.05	763.3	67.8	19.9	74	W	.....	.....	2	0	0	.....	.....	0	0	.....	H. A. Johnson.
Esquimault, B. C.	.....	.....	29.93	760.2	56.2	13.4	94	NE	1	0.4	.....	0	0	.....	.....	0	0	Clear	W. H. Bevis.
Fredericton, N. B.	.....	.....	30.19	766.8	67.0	19.4	79	S	6	2.7	.....	0	0	.....	.....	0	0	air	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.21	767.3	44	6.7	84	N	9	4.0	.....	2c	2s	N	N	0	0	Fair	James Stewart.
Goderich, Ontario	.....	.....	29.72	754.9	73.1	22.8	83	S	.....	.....	2	.....	10n	.....	.....	0.115	2.92	Threatening	H. J. Strang, M. A.
Granton, Ontario	28.70	729.0	29.75	755.6	69	20.6	.....	SE	.....	.....	4	.....	10n	.....	.....	0	0	Cloudy	James Grant.
*Halifax, N. S.	.....	.....	30.24	768.1	66	18.9	90	SW	14	6.3	.....	.....	8n	.....	SW	0	0	Cloudy	F. Allison, M. A.
*Kingston, Ontario	.....	.....	29.99	761.7	70	21.1	80	S	20	8.9	.....	10cs	0	S	.....	Inap.	Inap.	Cloudy	S. Woods, M. A.
Little Glace Bay, N. S.	.....	.....	30.18	766.6	72.2	22.3	70	W	7	3.1	.....	4c	0	W	.....	0	0	Fair	C. H. Rigby.
*Montreal, Quebec	.....	.....	30.02	762.5	71	21.7	80	S	12	5.4	.....	1ocs	0	NW	.....	0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.95	760.7	77	25.0	61	S	14	6.3	.....	8ck	2n	S	S	0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.79	756.7	73	22.8	72	SE	14	6.3	.....	2cs	0	SW	.....	0	0	Fair	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	29.81	757.2	72	22.2	71	S	6	2.7	.....	10k	0	S	.....	0	0	Fair	H. Morgan.
Port Hastings, N. S.	.....	.....	30.24	768.1	61.2	16.2	.....	Calm	0	0	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
*Port Stanley, Ontario	.....	.....	29.78	756.4	70	21.1	76	SE	18	8.0	.....	.....	10ks	.....	SE	Inap.	Inap.	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	30.05	763.3	74	23.3	72	Calm	0	0	.....	2c	0	N	.....	0	0	Clear	Capt. Ashe, R. N.
St. John, N. B.	.....	.....	30.25	768.3	53	11.7	96	SE	3	1.3	.....	.....	Fog	.....	.....	0.010	0.25	Fog; y	G. Murdoch, C. E.
*Sangeen, Ontario	.....	.....	29.69	754.1	71	21.7	74	SE	8	3.6	.....	10cs	0	.....	.....	0	0	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	29.76	755.9	70	21.1	79	SE	5	2.2	.....	8ck	0	S	.....	Inap.	Inap.	Cloudy	R. J. Cole.
Stratford, Ontario	28.52	724.4	29.74	755.4	68.8	20.4	84	SE	9	4.0	.....	.....	10s	.....	.....	0	0	Cloudy	C. J. Macgregor, M. A.
*Sydney, C. B	.....	.....	30.22	767.6	69	20.6	76	SW	12	5.4	.....	5c	0	.....	.....	Inap.	Inap.	Fair	T. C. Hill.
*Toronto, Ontario	.....	.....	29.85	758.2	69	20.6	87	E	6	2.7	.....	5cs	5s	SW	SW	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.73	755.1	71.5	21.9	69	S	13	5.8	.....	.....	10s	.....	.....	0.25	6.3	Fin	J. Montgomery
Sub-Series.																			
St. John's, Newfoundland	.....	.....	30.23	768.6	61	16.1	83	NW	.....	.....	.....	Haze	7ks	.....	.....	0	0	Fine	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.		BAROMETER. Reduced to sea-level.		TEMPERATURE OF THE AIR.		RELATIVE HUMIDITY.	WIND. Direction.	WIND. Velocity.		WIND. Force.	CLOUDS. Amount.		CLOUDS. Direction.		RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS.		WEATHER.	OBSERVER.
	Inches.	Millimeters.	Inches	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10	Up'er 0—10	Low'r 0—10	Upper. From	Lower. From	Inches.	Millimeters.		
Albany, N. Y.	.....	.....	30.09	764.3	74	23.3	68	S	8	3.6	.....	8k	0	S	.....	0	0	Cloudy.....	
Alpena, Mich.	.....	.....	29.63	752.6	68	14.4	93	SE	12	5.4	.....	8ck	0	SE	.....	0.08	2.0	Fair.....	
Atlantic City, N. J.	.....	.....	30.14	765.5	70	21.1	90	S	8	3.6	.....	1cs	0	S	.....	0	0	Clear.....	
Augusta, Ga.	.....	.....	29.90	759.4	76	24.4	91	S	7	3.1	.....	.....	10n	.....	S	0.40	10.2	Light rain...	
Baltimore, Md.	.....	.....	30.08	764.0	75	23.9	81	SE	8	3.6	.....	.....	10s	.....	S	Inap.	Inap.	Cloudy.....	
Barnegat, N. J.	.....	.....	30.15	765.8	71	21.7	80	S	10	4.5	.....	5k	0	S	.....	0	0	Fair.....	
Benton, Montana T.	27.44	698.0	30.28	769.1	62	16.7	61	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Bismarck, Dakota.	28.49	723.6	30.18	766.6	44	6.7	59	N	8	3.6	.....	1k	Haze	N	N	0.12	3.0	Fair.....	
Boston, Mass.	.....	.....	30.19	766.8	71	21.7	71	SE	8	3.6	.....	8k	0	SW	.....	Inap.	Inap.	Fair.....	
Breckenridge, Minn.	.....	.....	30.01	762.2	47	8.3	77	N	24	10.7	.....	.....	10s	.....	N	0	0	Cloudy.....	
Buffalo, N. Y.	.....	.....	29.81	757.2	73.5	23.1	65	S	5	2.2	.....	5ck	5s	SW	S	0.06	1.5	Cloudy.....	
Burlington, Vt.	.....	.....	30.09	764.3	70	21.1	70	S	12	5.4	.....	2k	2s	.....	.....	0	0	Fair.....	
Cairo, Ill.	.....	.....	29.68	753.9	80	15.6	82	SW	9	4.0	.....	.....	10ks	.....	SW	0.37	9.4	Cloudy.....	
Cape Hatteras, N. C.	.....	.....	30.05	763.3	78	25.6	73	SE	24	10.7	.....	2k	5ks	SE	SE	0.01	0.3	Cloudy.....	
Cape Henry, Va.	.....	.....	30.08	764.0	74	23.3	81	SE	18	8.0	.....	8c	Haze	.....	.....	0	0	Fair.....	
Cape Lookout, N. C.	.....	.....	30.08	764.0	78	25.6	77	S	22	9.8	.....	2ck	2ks	SE	S	0.12	3.0	Fair.....	
Cape May, N. J.	.....	.....	30.13	765.3	69	20.6	95	SE	12	5.4	.....	5cs	2s	W	SE	0	0	Fair.....	
Charleston, S. C.	.....	.....	29.98	761.5	77	25.0	90	S	10	4.5	.....	.....	10s	.....	S	0.25	6.3	Cloudy.....	
Cheyenne, Wyoming.	24.25	615.9	30.19	766.8	51	10.6	79	NW	12	5.4	.....	0	1s	.....	.....	0	0	Clear.....	
Chicago, Ill.	.....	.....	29.44	747.8	65	18.3	100	SE	5	2.2	.....	.....	10n	.....	.....	1.30	33.0	Light rain...	
Cincinnati, Ohio.	.....	.....	29.55	750.6	73	22.8	76	S	12	5.4	.....	.....	10ks	.....	S	0.05	1.3	Cloudy.....	
Cleveland, Ohio.	.....	.....	29.72	754.9	66.2	19.0	84	SE	19	8.5	.....	.....	10n	.....	SW	0.02	0.5	Light rain...	
Colorado Springs, Col.	24.31	617.5	30.18	766.6	55	12.8	80	N	1	0.4	.....	.....	10ks	.....	SW	0.03	0.8	Cloudy.....	
Corsicana, Tex.	.....	.....	30.01	762.2	65	18.3	83	W	2	0.9	.....	8cs	2s	W	.....	0	0	Cloudy.....	
Davenport, Iowa.	.....	.....	29.48	748.8	51	10.6	86	N	16	7.2	.....	.....	10n	.....	.....	0.78	19.8	Light rain...	
Denison, Tex.	.....	.....	30.00	762.0	73	22.8	58	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear.....	
Denver, Col.	25.02	635.5	30.24	768.1	59	15.0	70	Calm	0	0	.....	.....	8s	.....	N	0	0	Cloudy.....	
Detroit, Mich.	.....	.....	29.63	752.6	68	20.0	84	SE	11	4.9	.....	.....	10n	.....	.....	0.16	4.1	Light rain...	
Dodge City, Kan.	27.44	697.0	29.68	753.9	59	15.0	70	W	24	10.7	.....	0	0	.....	.....	0	0	Clear.....	
Dubuque, Iowa.	.....	.....	29.56	750.8	49	9.4	85	N	12	5.4	.....	.....	10n	.....	.....	0.40	10.2	Light rain...	
Duluth, Minn.	.....	.....	29.85	758.2	47	8.3	76	N	14	6.3	.....	.....	10s	.....	N	0.16	4.1	Cloudy.....	
Eastport, Me.	.....	.....	30.22	767.6	55	12.8	93	S	7	3.1	.....	.....	Fog	.....	.....	0	0	Foggy	
Erie, Pa.	.....	.....	29.75	755.6	74	23.3	63	SE	28	12.5	.....	.....	10ks	.....	S	0	0	Threatening	
Escanaba, Mich.	.....	.....	29.63	752.6	43	6.1	83	N	17	7.6	.....	.....	10s	.....	N	1.08	27.4	Cloudy.....	
Fort Gibson, Indian Ter.	.....	.....	29.84	757.9	65	18.3	63	W	4	1.8	.....	0	0	.....	.....	0.08	2.0	Clear.....	
Ft. St. Michael, Alaska.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.81	731.8	29.88	758.9	69	20.6	56	NW	4	1.8	.....	0	8ks	.....	NW	0	0	Cloudy.....	
Fort Sully, Dakota.	28.49	723.6	30.18	766.6	47	8.3	77	N	16	7.2	.....	0	0	.....	.....	0.15	3.8	Clear.....	
Galveston, Tex.	.....	.....	30.01	762.2	80	26.7	74	NE	2	0.9	.....	2c	0	W	.....	0	0	Fair.....	
Grand Haven, Mich.	.....	.....	29.50	749.3	69	20.6	79	SE	10	4.5	.....	2c	2s	S	S	2.08	52.8	Fair.....	
Indianapolis, Ind.	.....	.....	29.55	750.6	65	18.3	89	SW	7	3.1	.....	.....	10s	.....	SW	0.24	6.1	Threatening	
Indianola, Tex.	.....	.....	30.00	762.0	86	30.0	72	Calm	0	0	.....	2c	0	.....	.....	0	0	Fair.....	
Jacksonville, Fla.	.....	.....	29.97	761.2	79	26.1	86	S	12	5.4	.....	.....	10s	.....	SW	0.45	11.4	Cloudy.....	
Keokuk, Iowa.	.....	.....	29.50	749.3	52	11.1	93	N	18	8.0	.....	.....	10n	.....	N	0.41	10.4	Light rain...	
Key West, Fla.	.....	.....	30.01	762.2	84.1	28.9	75	SW	4	1.8	.....	Haze	1ks	.....	E	0	0	Fair.....	
Kittyhawk, N. C.	.....	.....	30.11	764.8	70	21.1	90	SE	14	6.3	.....	8k	0	SW	.....	0.45	11.4	Fair.....	
Knoxville, Tenn.	.....	.....	29.77	756.1	67	19.4	90	S	12	5.4	.....	.....	10n	.....	S	0.69	15.0	Light rain...	
La Crosse, Wis.	.....	.....	29.67	753.6	45	7.2	100	N	20	8.9	.....	.....	10n	.....	N	1.66	42.2	Light rain...	
Leavenworth, Kan.	.....	.....	29.77	756.1	55	12.8	73	NW	18	8.0	.....	.....	10s	.....	N	0	0	Cloudy.....	
Lexington, Ky.	28.60	726.4	29.64	752.8	66	18.9	94	SW	20	8.9	.....	.....	10n	.....	SW	0.02	0.5	Light rain...	
Long Branch, N. J.	.....	.....	30.16	766.1	64	17.8	100	SE	10	4.5	.....	.....	Fog	.....	.....	Inap.	Inap.	Foggy	
Louisville, Ky.	.....	.....	29.61	752.1	68	20.0	79	S	12	5.4	.....	.....	10s	.....	S	0.84	21.1	Cloudy.....	
Lynchburg, Va.	.....	.....	29.93	760.2	73	22.8	85	S	10	4.5	.....	.....	10n	.....	S	0.08	2.0	Light rain...	
Malone, N. Y.	.....	.....	29.84	757.9	76	24.4	60	S	15	6.7	.....	5c	0	NW	.....	0	0	Fair.....	
Manhattan, Kan.	28.77	730.7	29.91	759.7	51	10.6	86	NW	20	8.9	.....	2ck	0	.....	.....	0	0	Clear.....	
Marquette, Mich.	.....	.....	29.71	754.6	39	3.9	91	NW	16	7.2	.....	.....	10n	.....	NW	0.25	6.3	Light rain...	
Memphis, Tenn.	.....	.....	29.78	756.4	65	18.3	68	W	10	4.5	.....	2ck	0	NW	.....	0.02	0.5	Clear.....	
Milwaukee, Wis.	.....	.....	29.52	749.8	50	10.0	100	NE	12	5.4	.....	.....	Fog	.....	.....	0.48	12.2	Dense fog....	
Mobile, Ala.	.....	.....	29.94	760.5	75	23.9	68	W	6	2.7	.....	0	0	.....	.....	0	0	Clear.....	
Montgomery, Ala.	.....	.....	29.88	758.9	74	23.3	76	W	2	0.9	.....	5k	0	W	.....	0.94	23.9	Fair	
Morgantown, W. Va.	.....	.....	29.80	756.9	72	22.2	80	SE	2	0.9	.....	.....	10s	.....	S	0.19	4.8	Light rain...	
Mt. Washington, N. H.	24.01	609.8	30.42	772.7	52	11.1	53	W	24	10.7	.....	2c	2s	NW	.....	0	0	Fair.....	
Nashville, Tenn.	.....	.....	29.72	754.9	69	20.6	65	S	7	3.1	.....	2k	0	S	.....	0.14	3.6	Clear.....	
New Haven, Conn.	.....	.....	30.18	766.6	68	20.0	90	SE	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy.....	
New London, Conn.	.....	.....	30.22	767.6	64	17.8	94	S	9	4.0	.....	.....	Fog	.....	S	0.03	0.8	Foggy.....	
New Orleans, La.	.....	.....	29.96	761.0	78.5	25.8	52	N	8	3.6	.....	0	0	.....	.....	0.01	0.3	Clear.....	
Newport, R. I.	.....	.....	30.22	767.6	66	18.9	94	S	2	0.9	.....	.....	Fog	.....	.....	0	0	Foggy	
New York, N. Y.	.....	.....	30.16	766.1	66	18.9	100	SE	12	5.4	.....	.....	Fog	.....	.....	Inap.	Inap.	Foggy	
Norfolk, Va.	.....	.....	30.08	764.0	80	26.7	70	S	13	5.8	.....	10cs	0	S	.....	0	0	Cloudy.....	
North Platte, Neb.	.....	.....	29.69	754.1	55	12.8	74	N	16	7.2	.....	2k	8s	NW	N	0	0	Threatening	
Omaha, Neb.	27.16	689.9	29.84	757.9	52	11.1	66	N	20	8.9	.....	.....	10s	.....	N	0	0	Cloudy.....	
Oswego, N. Y.	28.79	731.3	29.96	761.0	71.5	21.9	78	SE	12	5.4	.....	.....	10s	.....	SW	0.12	3.0	Threatening	
Pembina, Dakota.	.....	.....	30.13	765.3	44	6.7	83	N	8	3.6	.....	0	0	.....	.....	0	0	Clear.....	
Philadelphia, Penn.	.....	.....	30.12	765.0	74	23.3	76	S	10	4.5	.....	5k	0	S	.....	0	0	Fair.....	
Pike's Peak, Colorado.	17.92	455.2	30.19	766.8	28	— 2.2	83	NW	26	11.6	.....	2k	2k	NW	.....	0.03	0.8	Fair.....	
Pittsburgh, Penn.	.....	.....	29.80	756.9	68	20.0	90	SE	7	3.1	.....	.....	10n	.....	.....	0.37	9.4	Light rain...	
Port Huron, Mich.	.....	.....	29.66	753.4	69	20.6	75	SE	12	5.4	.....	.....	10s	.....	S	0.01	0.3	Threatening	
Portland, Me.	.....	.....	30.10	766.8	68	20.0	84	S	6	2.7	.....	10k	0	SW	.....	0	0	Cloudy.....	
Portland, Oregon.	.....	.....	29.88	758.9	68	20.0	64	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear.....	
Punta Rassa, Fla.	.....	.....	30.01	762.2	82.8	27.8	83	S	8	3.6	.....	Haze	5ks	SW	SW	0	0	Cloudy.....	
Rochester, N. Y.	.....	.....	29.87	758.7	74	23.3	76	SE	13	5.8	.....	2c	5s	SW	SW	0.07	1.8	Fair.....	
Salt Lake City, Utah.	25.75	654.0	30.06	764.0	63	17.2	51	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Sandy Hook, N. J.	.....	.....	30.15	765.8	68	20.0	100	SE	15	6.7	.....	.....	Fog	.....	.....	0.01	0.3	Foggy	
San Diego, Cal.	.....	.....	29.89	759.2	64	17.8	94	S	4	1.8	.....	.....	10s	.....	S	0	0	Cloudy.....	
San Francisco, Cal.	.....	.....	29.93	760.2	60	15.6	88	W	6	2.7	.....	.....	Fog	.....	.....	0	0	Foggy.....	
Santa Fé, N. M.	23.35	593.1	29.89	759.2	57	13.9	63	E	3	1.3	.....	0	0	.....	.....	0	0	Clear.....	
Savannah, Ga.	.....	.....	29.95	760.7	78	25.6	90	SW	4	1.8	.....	.....	10s	.....	S	0.86	21.8	Cloudy.....	
Shreveport, La.	.....	.....	30.00	762.0	69	20.6	70	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Smithville, N. C.	.....	.....	30.04	763.0	70	24.4	86	S	30	13.4	.....	.....	10n	.....	S	0.13	3.3	Light rain...	
Springfield, Mass.	.....	.....	30.19	766.8	69	20.6	84	S	4	1.8	.....	.....	10s	.....	S	0	0	Cloudy.....	
St. Louis, Mo.	.....	.....	29.57	751.1	59	15.0	81	W	12	5.4	.....	.....	10s	.....	.....	0.11	2.8	Cloudy.....	
St. Marks, Fla.	.....	.....	29.93	760.2	77	25.0	86	SW	7	3.1	.....	2cs	2ks	SW	SW	6.7	170.2	Fair.....	
St. Paul, Minn.	.....	.....	29.77	756.1	48	8.9	71	N	20	8.9	.....	.....	10s	.....	N	0.22	5.6	Cloudy.....	
St. Paul's Island, Alaska.	.....	.....	30.01	762.2	36	2.2	90	SE	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Thatcher's Island, Mass.	.....	.....	30.20	767.1	64	17.8	94	S	4	1.8	.....	.....	.....	.....	.....	0	0	Dense fog....	
Toledo, Ohio.	.....	.....	29.57	751.1	69	20.6	90	E	8	3.6	.....	.....	10s	.....	SE	0.42	10.7	Cloudy.....	
Tucson, Arizona.	27.18	690.0	30.07	763.8	82	27.8	.....	E	.....	.....	.....	0	Ha	.....	.....	0	0	Clear.....	
Tybee Island, Ga.	.....	.....	29.94	760.5	76	24.4	95	S	8	3.6	.....	.....	10ks	.....	.....	0.73	18.1	Cloudy.....	
Vicksburg, Miss.	.....	.....	29.93	760.2	75	23.9	56	W	4	1.8	.....	0	0	.....	.....	0.09	2.3	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.	24.51	622.5	29.99	761.7	59	15.0	54	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Washington, D. C.	.....	.....	30.05	763.3	74.5	23.6	78	S	14	6 3	.....	.....	10ks	.....	S	Inap.	Inap.	Cloudy.	
Wilmington, N. C	.....	.....	30.02	762.5	78	25.6	78	SE	13	5.8	.....	.....	10s	.....	SE	0	0	Cloudy.	
Wood's Holl, Mass.	.....	.....	30.23	767.8	66	18.9	94	SW	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy.	
Wytheville, Va.	27.57	700.3	29.62	752.3	68	20.0	90	S	8	3.6	.....	.....	10n	.....	S	1.11	28.2	Light rain.	
Yankton, Dakota	28.72	729.5	30.00	762.0	49	9.4	64	NW	22	9.8	.....	.....	10s	.....	NW	0	0	Cloudy.	
Yuma, Arizona	.....	.....	29.80	756.9	89	31.7	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear.	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.08	764.0	84	28.9	75	NE	4	1.8	.....	10k	10ks	NE	.....	0	0	Cloudy.	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.98	761.5	83	28.3	75	E	.....	...	.....	2c	0	.....	.....	0	0	Clear.	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.16	766.1	80	26.7	78	Calm	0	0	.....	2c	0	.....	.....	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.78	756.4	82	27.8	70	Calm	0	0	.....	2c	2k	NNE	.....	0.32	8.1	Fair.	Robert Mason.
Havana, Cuba, W. I.	.....	.....	29.97	761.2	85	29.4	79	Calm	0	0	.....	10c	0	.....	.....	0	0	Fair.	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.17	766.3	71.5	21.9	81	E	28.6	12.5	.....	10c	2fk	E	.....	0.04	1.0	Cloudy.	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2k	.....	.....	0	0	Fine.	
Clifton, Jamaica, W. I.	27.21	691.1	29.99	761.7	70	21.1	84	E	2.0	0.9	.....	0	5ks	E	.....	0.050	1.27	Dry.	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.06	763.5	82	27.8	87	E	.....	.....	2	6k	.....	.....	.....	1.122	28.50	.....	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.08	764.0	.....	.....	81.0	27.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.18	639.6	.....	.....	64.8	18.2	75	Calm	0	0	.....	3c	4s	.....	.....	0	0	Fair.	Thomas Herran.
York Factory, B. A.	.....	.....	30.28	769.1	39	3.9	91	S	6	2.7	.....	0	0	.....	.....	0	0	.....	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.11	764.8	76	24.4	90	NE	.....	.....	5	.....	.....	.....	.....	0	0	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	30.03	762.7	60	15.6	82	Calm	0	0	.....	.....	.....	.....	.....	0.3	7.6	Rainy.	F. L. Clarke.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	
	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....
Steamer Nova Scotian N. 51° 35′, W. 23° 29′.	NW by W ½ W	9	Moderate	NW	Partly cl'dy. 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft , or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) 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, 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 JUNE 18, 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			30.02	762.6	76.8	24.9	50	NE			2		3			0	0	Fair	Charnot.
Algiers			30.11	764.8	73.0	22.8	68	E			3		2			0	0	Clear	Peter.
La Calle					72.7	22.6		NW			3		5			0	0	Fair	Kuntz.
Tunis			30.10	764.6	75.2	24.0	45	NW			5		8			0	0	Cloudy	Jacques.
Sfax			30.10	764.5	77.0	25.0	40	E			3		1			0	0	Clear	Chauvey.
Saïda			30.05	763.2	90.5	32.5		N			2		1			0	0	Clear	Millot.
Tebessa			30.15	765.7	68.4	20.2		N			3		0			0	0	Clear	Colin.
Geriville			30.08	764.1	87.3	30.7	19	S			4		3			0	0	Fair	Buard.
Laghouat			30.06	763.5	93.2	34.0	27	E			2		2			0	0	Clear	Guyot.
Biskra			30.14	765.5	86.7	30.4	37	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			29.99	761.8	66.2	19.0	70	Calm			0		8			0.047	1.2		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.03	762.7	67.1	19.5	79	NE			1		10			0.055	1.4		Dr. Wierzbiski.
Eperies			29.90	759.4	66.2	19.0	83	N			2		10		S	0	0		Julius Mikolik.
Gratz	28.77	730.8	29.94	760.4	70.3	21.3	56	NW			5					0.0[illegible]	0.7		Andreas Rospini.
Hermannstadt	28.37	720.6	29.73	755.1	71.6	22.0	65	NNE			1		3			0	2.50	Raining	Prof. Reissenberger.
Kremsmünster	28.81	731.8	30.13	765.3	64.0	17.8	57	W			2		7			0	0		Prof. C. Wagner.
Lemberg			29.77	756.1	68.9	20.5	88	NE			2		8			1.126	28.6		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			29.99	761.7	70.5	21.4	53	ENE			2		1068			0.011	0.29		I.R.Hydrographic Office.
Segedin			29.83	757.6	66.9	19.4	81	W			3		10			0.465	11.80		Karl Stancel.
Trieste			30.01	762.2	73.9	23.3	56	W			1		5			0	0		Prof. V. Farolfi.
Vienna			30.06	763.5	61.7	16.5	67	W			6		5			0.283	7.2		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 1,126.0 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			30.09	764.2	66.9	19.4	63	SW			3		7		SSW	0.036	0.9[illegible]		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			29.68	753.9	60.7	15.9		W	19	8.5			4			0.040	1.02	Blue sky	William Boswell.
Ardrossan																			William McNeil.
Armagh, Observatory			29.96	761.0	58.9	14.9		SW	8	3.6									S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.98	761.5	59.0	15.0		SW			1		9					*D. clouds	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	81.5	27.5		NE			4		8					Overcast	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.05	763.3	65.0	18.3		SW			2		1					*D. clouds	H. Todd. [H. C.
Cardington			30.07	763.8	66.4	19.1		W			1		6					*D. clouds	John McLaren.
Carlisle			29.95	760.7	59	15.0		W			6		9			0	0	*D. clouds	T. Bell, for J. Carmell.
Chatham, School M. E			30.06	763.5	65.7	18.7		SW			1		8					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.68	728.5	30.17	766.3	57.6	14.2		S			2		5					*D. clouds	R. E. Power.
Donaghadee			29.93	760.2	61	16.1		W			5		3					*D. clouds	J. Mac Gowan.
Dover			30.09	764.3	60	15.6		WSW			4		5					½ clouded	J. Costello.
Eccles, (near Manchester.)			30.00	762.0	59.7	15.4		SW	7.8	3.5			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			30.12	765.0	62.0	16.7		SW	12	5.4			8					Overcast	The Staff.
Fort Napier, (Natal)	27.81	706.4	30.04	763.0	70.9	21.6		E			1		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.05	763.3	80	26.7		E			2		8			Blank	Blank	Overcast	
Galway, Queen's College			29.91	759.7	57	13.9		SW			3		9					Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.03	762.7	71.5	21.9		E			5		5					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			29.87	758.7	58.6	14.8		W			1		6					Fine	Lewis Stuart.
Great Yarmouth			30.04	763.0	65	18.3		W			3		2					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			30.08	764.0	67.7	19.8		WSW			1		8			Blank	Blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.15	765.8	57.5	14.2		SW			1		7					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y																			L. J. Crossley.
Helston			30.07	763.8	63	17.2		SW			4		26			0	0	Fine	M. P. Moyle.
Holyhead			30.02	762.5	60	15.6		SSW			4		2					Blue sky	John Tilston.
Kew, Observatory			30.08	764.0	63.2	17.3		WSW	11	4.9			5					*D. clouds	The Staff.
Kingstown			29.99	761.7	60	15.6		ENE			3		7					*D. clouds	George Mitchell.
Leicester Museum			30.06	763.5	59.0	15.0		W			2		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.99	761.7	72	22.2		NW			1		4k					*D. clouds	Corp'l F. Fraser, A.M.C.
Nairn			29.77	756.1	60	15.6		WSW			3		5					½ clouded	W. D. Penny.
Nassau, (Bahamas)			29.90	759.4	82.3	27.9		SE			3		8			Blank	Blank	*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.03	762.7	65.1	18.4		WSW			5		8k		SW	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.02	762.5	61.0	16.1		SW			4		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.05	763.3	65	18.3		WSW			1		7					*D. clouds	J. Lucas.
Plymouth			30.10	764.5	63.5	17.5		SW			4		1					*D. clouds	John Merrifield.
Roche's Point			30.02	762.5	60	15.6		SW			3		5					Cloudy	W. Kennedy.
Saint Ann's Head	29.87	758.7																	John C. Walker.
Saint Helier, (Jersey)			30.15	765.8	63.0	17.2		SSW			2		8					¾ clouded	A. P Amy.
Saudwick Manse, (Orkneys)			29.67	753.6	54.0	12.2		W	20	8.9			5					Showery	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, Turkey			29.74	755.1	74.4	23.6		SW			1		6					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.00	762.0	58.0	14.4		W			3		6			0	0	*D. clouds	W. F. Cooper.
Silloth Rectory			29.98	761.5	58.3	14.6	75	SW			2		3			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.00	762.0	56.9	13.8		W			3		4			Blank	Blank	*D. clouds	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.			29.75	755.6	58	14.4		WNW			4		10					Overcast	John Smith.
Stratfield Turgiss			30.08	764.0	62.9	17.2		NW			1		8					*D. clouds	Rev. Charles H. Griffith.
Thurso			29.71	754.6	58	14.4		NW			5		4					*D. clouds	John Trotter.
Truro, Royal Institution			30.09	764.3	67	19.4		SW			4		7					*D. clouds	W. Newcombe.
Valencia, Observatory			29.97	761.2	56.7	13.7		S	27	12.1			8					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					54	12.2		W			3		0			0	0		Thomas Dawson.
Cape Good Hope, Obs'y			30.23	767.8	60.6	15.9	80	NW	14	6.3		6	2						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.02	762.5	55.0	12.8	86	N			1		7k			0	0		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.90	759.4	63.4	17.4		W			4		5k			0.12	3.0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory			30.34	770.6				ESE	22.1	9.9						0	0		C. Meldrum
Melbourne, Observatory			30.36	771.1	48.6	9.2	55	N	23	10.7			0			0	0	Squally	R. L. J. Ellery.
Monach Lt-house, Hebrides			29.78	756.4	53	11.7		SW			3	5	3	SW		0.8	7.0		J. Youngclause.
North Unst, (Shetland Is.)			29.62	752.3	50	10.0		SE			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, 2,220 ft., or 676 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			30.06	763.4	66.7	19.3	53	SE			4		0						
Faröe			30.01	762.3	60.4	15.8	91	SW			6		7						
Godthaab, (Greenland)			29.66	753.3	44.4	6.9	60	NE			2		2					Foggy	
Stykkisholm, (Iceland)			29.46	748.2	46.9	8.3	87	SE			6		8						
Thorshavn, (Faröe)			29.67	753.7	54.7	12.6	77	Calm			0		3						
Vestervig			29.89	759.2	58.3	14.6	89	SW			4		4						

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

FRENCH SERIES.

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

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	30.13	765.2	62.6	17	76	NW	.....	.....	1	..c	..n	.....	NW	0.039	1.0	Cloudy	Normal School.
Amiens	.....	.....	30.03	762.7	68.0	20.0	67	NW	.....	.....	3	.....	0	.....	.....	0.110	2.8	Clear	Normal School.
Avignon	.....	.....	30.08	764.1	73.9	23.3	40	NNW	.....	.....	6	.....	0	.....	.....	0	0	Clear	Normal School.
Bar-sur-Seine	.....	.....	30.17	766.4	61.2	16.2	83	SW	.....	.....	1	.....	10	.....	SW	0 0 8	0.2	Showery	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.14	765.5	67.5	19.7	68	SW	4.5	2.0	.....	.....	10	.....	SW	0.012	0.3	Covered	Beaumette Observatory.
Beauvais	.....	.....	30.19	766.8	68.5	20.3	49	W	.....	.....	2	.....	5	.....	W	0.04	1.	Cloudy	Normal School.
Besançon	.....	.....	30.18	766.6	70.2	21.2	62	SW	.....	.....	2	.....	5	.....	SW	0	0	Cloudy	Normal School.
Bourg en Bresse	.....	.....	30.26	768.7	68.0	20	64	NNE	.....	.....	1	..c	.....	W	.....	.....	.....	.....	Normal School.
Bourges	.....	.....	30.19	766.7	62.6	17	96	SW	.....	.....	1	.....	8	.....	E	0.031	0.8	Very cloudy	Normal School.
Brest	.....	.....	30.11	764.7	66.0	18.9	67	SW	.....	.....	2	.....	8k	.....	SW	0.049	1.25	.....	Naval Observatory.
Carcassonne	.....	.....	29.19	755.7	66.4	19.1	38	W	.....	.....	3	.....	2	.....	E	0	0	Slightly cl'dy	Normal School
Caen	.....	.....	30.042	778.37	64.8	18.2	80	SW	.....	.....	2	.....	10	.....	E	0.16	4.	Covered	Normal School.
Chartres	.....	.....	30.17	766.4	68.4	20.2	.....	W	.....	.....	1	.....	6	.....	E	0.12	3.	.....	Normal School.
Clermont	.....	.....	30.16	766.1	68.7	20.4	81	N	.....	.....	2	.....	10	.....	N	0	0	Covered	Puy de Dome Obs'y.
Commercy	.....	.....	30.19	766.8	62.4	16.9	73	WSW	.....	.....	4	.....	8n	.....	WSW	0	0	Very cloudy	Normal School.
Commune de Greasque*	.....	.....	30.13	765.3	75.6	24.2	31	NW	.....	.....	1	.....	2	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.08	763.9	70.3	21.3	40	NW	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
La Roche-sur-Yon	.....	.....	30.17	766.4	66.2	19.0	79	W	.....	.....	2	.....	5	.....	NE	0	0	Cloudy	Normal School.
Le Mans	.....	.....	30.16	766.0	67.5	19.7	83	W	.....	.....	2	.....	2	.....	W	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier	.....	.....	30.18	766.6	68.5	20.3	61	NW	.....	.....	2	.....	5	.....	SW	0	0	Cloudy	Normal School.
Mâcon	.....	.....	30.17	766.3	63.5	17.5	88	Calm	.....	.....	0	.....	5	.....	S	0	0	Cloudy	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	30.08	764.1	68.2	20.1	84	SW	.....	.....	2	.....	10	.....	NE	0	0	Covered	Normal School.
Nimmes	.....	.....	30.08	764.0	77.0	25	34	N	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	30.08	764.0	65.1	18.4	66	SW	.....	.....	2	.....	8	.....	W	0	0	Very cloudy	Normal School.
Paris, Observatory	.....	.....	30.14	765.6	67.6	19.8	65	S	.....	.....	3	.....	8k	.....	W	0.007	0.17	Very cloudy	National Observatory.
Parthenay	.....	.....	30.15	766.1	64.4	18	80	NW	.....	.....	4	.....	10	.....	.....	0.16	4.	Covered	Normal School.
Privas	.....	.....	30.12	765.0	69.3	20.7	.....	NW	.....	.....	2	.....	2	.....	NW	.....	.....	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.23	767.9	65.8	18.8	74	W	.....	.....	3	.....	10	.....	NE	0	0	Covered	Naval Observatory.
Rouen	.....	.....	30.15	765.8	65.1	18.4	59	WNW	.....	.....	2	.....	5	.....	E	0.22	5.6	Cloudy	Normal School.
Saint Lo	.....	.....	29.60	751.9	62.6	17	95	W	.....	.....	1	.....	8	.....	NW	0.071	1.8	.....	Normal School.
Tarbes	29.16	740.6	30.22	767.6	64.8	18.2	.....	N	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School
Villefranche	.....	.....	30.15	765.9	71.6	22	88	NW	.....	.....	1	.....	8	.....	SE	0	0	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.93	760.1	81.0	27.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	lank	Blank	.....	L'Abbé Marchésl.
Marseilles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Marseilles Observatory.
Mont-Louis	.....	.....	30.36	771.2	63.3	17.4	51	N	5.6	2.50	.....	.....	2	.....	N	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.14	765.5	69.8	21.0	62	WSW	.....	2	.....	.....	9	.....	WSW	0.01	0.4	.....	Montsouris Observatory.
Perpignan	.....	.....	30.13	765.4	75.6	24.2	50	N	13.0	5.83	.....	.....	0	.....	.....	0	0	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.14	765.6	67.8	19.9	68	S	.....	.....	1	.....	9	.....	.....	0	0	Very cloudy	L. Renou.
Toulouse	.....	.....	30.27	768.8	69.3	20.7	59	NNW	.....	.....	3	.....	4	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.17	766.4	68.4	20.2	65	SW	.....	.....	1	.....	9	.....	WNW	0.016	0.4	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.15	765.7	69.4	20.8	67	W	.....	.....	2	.....	7	.....	.....	0.031	0.79	Partly 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 1,686.40 meters, or 5,204.5 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.

Bamberg	.....	.....	30.10	764.4	67.5	19.7	44	W	.....	.....	3	.....	3	W	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.14	765.5	72.5	22.5	46	S	.....	.....	1	.....	3	.....	.....	0.020	0.5	.....	Prof. Arndt.
Breslau	.....	.....	30.18	766.6	68.4	20.2	55	NW	.....	.....	5	.....	10	.....	.....	0.248	6.3	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	30.13	765.4	69.8	21.0	43	SW	.....	.....	3	.....	1	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.14	765.5	70.5	21.4	46	S	.....	.....	5	.....	6	SSW	.....	Inap.	Inap.	.....	Dr. H. Möhl.
Emden	.....	.....	30.00	762.1	68.7	20.4	61	WSW	.....	.....	4	.....	5	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.17	766.3	73.9	23.3	40	SW	.....	.....	2	.....	5	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	30.19	766.7	62.1	16.7	92	SW	.....	.....	1	.....	1	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.11	764.9	68.9	20.5	61	SW	.....	.....	4	.....	8k	.....	.....	0	0	Cloudy	Captain F. Hegemann.
Kiel	.....	.....	30.03	762.7	68.9	20.5	61	SW	.....	.....	3	.....	5	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	30.07	763.6	70.3	21.3	64	NW	.....	.....	5	.....	2	.....	.....	0	0	.....	Prof. E. Luther.
Kostin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	30.16	766.1	70.0	21.1	45	SW	.....	.....	2	.....	4	.....	.....	0.055	1.4	.....	Prof. Bruhns.
Memel	.....	.....	30.08	763.9	63.1	17.3	78	NNW	.....	.....	4	.....	2c	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.09	764.2	70.2	21.2	55	.....	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.13	765.3	63.0	17.2	76	NW	.....	.....	3	.....	6	SSW	.....	0	0	.....	A. Lothes.
Posen	.....	.....	30.17	766.2	73.8	23.2	49	NNW	.....	.....	7	.....	1	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (In Alsace)	.....	.....	30.16	766.1	70.2	21.2	35	S	.....	.....	1	.....	2	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	30.14	765.5	70.3	21.3	38	S	.....	.....	2	.....	4	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	30.08	764.0	73.2	22.9	56	N	.....	.....	3	.....	9	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.93	760.2	66.2	19.0	65	WSW	.....	.....	5	.....	10	.....	.....	0	0	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	29.95	760.6	70.3	21.3	45	WSW	.....	.....	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	.....	.....	29.72	754.9	82.4	28.0	.....	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.

Udine	.....	.....	29.97	761.3	75.2	24.0	45	W	0.7	0.3	.....	.....	4	.....	.....	0	0	.....	
Padua	.....	.....	29.98	761.6	73.6	23.1	45	SW	3.8	1.7	.....	.....	2	.....	.....	0	0	.....	
Vicenza	.....	.....	29.99	761.7	76.6	24.8	40	SSW	3.8	1.7	.....	.....	1	SE	.....	0	0	.....	
Verona	.....	.....	29.97	761.3	77.2	25.1	62	E	.....	.....	1	.....	0	.....	.....	0	0	.....	
Bergamo	28.67	728.3	29.96	760.9	73.4	23.0	44	S	.....	.....	1	.....	4	.....	.....	0	0	.....	
Domodossola	28.98	73.5.0	29.97	761.2	75.2	24.0	49	SSW	.....	.....	4	.....	1	.....	.....	0	0	.....	
Milan	.....	.....	30.00	761.9	81.0	27.2	44	SW	.....	.....	2	.....	2	SW	.....	0	0	.....	
Pavia	.....	.....	30.02	762.4	73.8	23.2	38	NW	.....	.....	1	.....	1	.....	.....	0	0	.....	
Moncalieri	.....	.....	30.03	762.7	72.0	22.2	42	SE	1.8	0.8	.....	.....	1	NE	.....	0	0	.....	
Mondovi	28.15	715.1	30.02	762.4	72.1	22.3	27	NE	.....	.....	2	.....	0	.....	.....	0	0	.....	
Porto Maurizio	.....	.....	30.08	763.9	72.9	22.7	50	SW	.....	.....	2	.....	1	.....	.....	0	0	.....	
Genoa	.....	.....	30.01	762.3	74.8	23.8	43	SW	2.5	1.1	.....	.....	0	.....	.....	0	0	.....	
Piacenza	.....	.....	30.03	762.7	73.4	23.0	46	N	3.1	1.4	.....	.....	1	.....	.....	0	0	.....	
Parma	.....	.....	30.02	762.5	75.2	24.0	53	NW	.....	.....	2	.....	1	.....	.....	0	0	.....	
Bologna	.....	.....	29.92	762.6	75.6	24.2	42	ENE	.....	.....	6	.....	4	S	.....	0	0	.....	
Florence	.....	.....	29.92	762.5	76.8	24.9	37	NE	.....	.....	4	.....	8	NE	.....	0	0	.....	
Leghorn	.....	.....	30.00	762.0	72.1	22.3	67	W	5.6	2.5	.....	.....	2	.....	.....	0	0	.....	
Siena	28.79	731.2	29.97	761.2	71.6	22.0	48	W	0.7	0.3	.....	.....	7	N	.....	0	0	.....	
Urbino	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Pesaro	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ancona	.....	.....	30.01	762.2	73.8	23.2	66	NW	.....	.....	6	.....	2	.....	.....	0.260	6.6	.....	
Grosseto	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Rome	.....	.....	29.95	760.6	77.9	25.5	40	NNW	5.6	2.5	.....	.....	5	NE	.....	0	0	.....	
Naples, O. U	.....	.....	29.93	760.3	78.3	25.7	46	SE	.....	.....	4	.....	0	N	.....	0.130	3.3	.....	
Lecce	.....	.....	29.87	758.7	73.4	23.0	55	SSE	18.6	8.3	.....	.....	9	.....	.....	0	0	.....	
Cosenza	.....	.....	29.95	760 8	78.4	25.8	70	NW	8.1	3.6	.....	.....	9	.....	.....	0	0	.....	
Riposto, (Sicily)	.....	.....	29.66	761.0	75.9	24.4	57	SE	.....	.....	2	.....	3	W	.....	0	0	.....	
Palermo	.....	.....	29.95	760.6	70.7	21.5	53	WNW	18.1	8.1	.....	.....	9	WNW	.....	0	0	.....	
Caltanissetta	28.00	711.2	29.90	759.5	67.1	19.5	41	NW	.....	.....	4	.....	1	SE	.....	0	0	.....	
Sub-Series.																			
Naples, S. R	.....	.....	29.95	760.8	74.7	23.7	53	NE	6.3	2.8	.....	.....	10	NW	.....	0.079	2.0	.....	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.

Flushing	.....	.....	30.14	765.5	61.0	16.1	.....	WNW	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	
Groningen	.....	.....	29.98	761.6	65.1	18.4	.....	SW	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	
Helder	.....	.....	30.06	763.5	61.5	16.4	.....	SW	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	
Utrecht	.....	.....	30.06	763.5	66.4	19.1	64	WSW	.....	.....	3	.....	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.

Bergen	.....	.....	29.67	753.7	55.4	13.0	85	S	17.9	8.0	.....	.....	10	.....	.....	0.591	15.0	Raining	
Brönö	.....	.....	29.83	757.6	62.6	17.0	70	Calm	0	0	.....	.....	5	.....	.....	0.051	1 3	.....	
Christiania	.....	.....	29.90	759.4	60.8	16.0	64	SSE	12.1	5.4	.....	.....	10	.....	.....	0.008	0.2	.....	
Tromsö	.....	.....	29.75	755.6	63.0	17.2	53	S	11	5	.....	.....	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,)	.....	.....	30.24	768.2	70.9	21.6	84	SSW	1.6	0.73	.....	.....	6	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.90	760.9	66.7	32.6	16	E	6.7	3.00	.....	.....	2	.....	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.17	766.4	68.0	20.0	64	SW	3.8	1.69	.....	.....	2	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.02	762.6	79.0	26.1	38	S	6.3	2.8	.....	.....	3	NNW	.....	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	.....	.....	30.01	762.3	63.5	17.5	85	NNW	18	8	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.95	760.8	73.9	23.3	62	NW	11	5	.....	.....	7	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.97	761.2	72.0	22.2	52	NW	7	3	.....	.....	5	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.90	759.4	66.2	19.0	80	NW	20	9	.....	.....	5	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.81	757.2	74.1	23.4	77	W	22	10	.....	.....	8	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.79	756.6	86.0	30.0	45	SE	7	3	.....	.....	2	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.78	756.5	91.8	33.2	35	ENE	13	6	.....	.....	10	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.75	755.6	80.4	26.9	73	S	13	6	.....	.....	4	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.82	757.5	89.2	31.8	43	SSE	4	2	.....	.....	5	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.67	753.7	90.3	32.4	19	NE	40	18	.....	.....	2	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.90	759.4	59.9	15.5	55	SSE	13	6	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.40	721.3	29.71	754.7	86.0	30.0	18	S	11	5	.....	.....	4	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.84	757.9	103.5	39.7	41	SE	9	4	.....	.....	5	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.71	754.5	82.2	27.9	55	W	4	2	.....	.....	4	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ekaterinburg	28.84	732.6	29.81	757.1	65.1	18.4	67	NE	9	4	.....	.....	7	.....	.....	.....	.....	.....	Tschernischef.
Nukuss	.....	.....	29.67	753.5	89.6	32.0	20	N	4	2	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Barnaul	28.13	714.6	29.72	755.0	83.7	28.7	46	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	Michelson.
Yeniseisk	.....	.....	29.71	754.7	58.8	14.9	69	NW	0	0	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Irkutsk	.....	.....	29.55	750.6	56.1	13.4	55	NW	4	2	.....	.....	3	.....	.....	Blank	Blank	.....	Marks.
Oorga	28.18	715.8	29.53	750.1	49.5	9.7	94	Calm	0	0	.....	.....	10	.....	.....	.....	.....	Raining	Usolzef.
Peking, (China)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Nertchinsk	.....	.....	29.81	757.1	83.8	28.8	41	SSW	9	4	.....	.....	1	.....	.....	.....	.....	.....	Physical Observatory.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Nikolaievsk, on the Amoor	.....	.....	29.97	761.3	53.8	12.1	98	SE	11	5	.....	.....	10	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	55.8	13.2	93	ENE	7	3	.....	.....	2	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of *Tiflis is* 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, m. 404.2?, or 1,021.3? 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	.....	.....	30.02	762.6	84.0	28.9	29	E	5.2	2.3?	.....	0	1	.....	.....	0	0	Almost clear	Royal Observatory.
San Fernando	.....	.....	29.98	761.6	83.7	28.7	35	E	24.4	10.9	.....	4	2	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.

Haparanda	.....	.....	29.89	759.3	52.2	11.2	90	NE	.....	.....	2	.....	10	.....	.....	0	0	.....	
Umea	.....	.....	29.90	759.4	58.5	14.7	83	SSW	.....	.....	2	.....	0	.....	.....	0	0	.....	
Hernosand	.....	.....	29.86	758.4	59.4	15.2	85	SSW	.....	.....	2	.....	1	.....	.....	0.591	15.0	.....	
Stockholm	.....	.....	29.98	761.4	70.9	21.6	32	W	.....	.....	4	.....	0	.....	.....	0	0	.....	
Wisby	.....	.....	30.13	765.4	61.9	16.6	54	NW	.....	.....	2	.....	3	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.98	761.0	70.9	21.6	37	SW	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 rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28.77	730.7	30.17	766.2	64.6	18.1	40	N	.....	.....	1	.....	0	.....	.....	0	0	Clear	The Observatory.
Zurich	28.59	725.4	30.15	765.9	67.3	19.6	54	W	.....	.....	1	.....	1	.....	.....	0	0	Clear	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE—For Geneva the corresponding departures from the normal values are: Barometer, +4.1 mm; Thermometer, —2.9 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 Prof. C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	29.79	756.6	73.8	23.2	75	S	7	3.0	.....	.....	7	.....	WSW	0.270	7.0	.....	
Fao, (Persian Gulf)	.....	.....	29.79	756.7	95.0	35.0	.....	NW	.....	.....	4	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.82	757.3	80.6	27.0	.....	SE	.....	.....	2	.....	5	.....	.....	.....	.....	Raining	
Valona	.....	.....	29.84	757.9	71.2	21.8	.....	NW	.....	.....	2	.....	2	.....	.....	.....	.....	Stormy	
Varna	.....	.....	29.84	758.0	55.4?	13.0?	.....	W	.....	.....	2	.....	5	.....	.....	.....	.....	Stormy	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.91	759.7	86.0	30.0	55	SW	.....	.....	3	.....	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.

Bathurst, N. B	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.90	759.4	71	21.7	.....	S	1	0.4	.....	.....	10s	.....	S	Inap.	Inap	Light rain	W. R Bigg.
*Chatham, N. B	.....	.....	30.13	765.3	75	23.9	74	SW	10	4.5	.....	8c	0	SW	.....	0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.19	766.8	66	18.9	89	SW	13	5.8	.....	5cs	0	.....	.....	0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.88	758.9	71.7	22.1	68	SE	.....	.....	1	.....	9n	.....	.....	0.691	2.31	Threatening	James Smith, M. A.
Dalhousie, N. B	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. A. Johnson.
Esquimault, B. C	.....	.....	29.85	757.7	58.2	14.6	82	SW	1	0.4	.....	8cs	0	.....	.....	0	0	Cloudy	W. H. Bevis.
Fredericton, N. B	.....	.....	30.21	767.3	72.1	22.3	75	S	10	4.5	.....	0	4ks	.....	.....	0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.00	762.0	49	9.4	74	N	14	6.3	.....	0	0	.....	.....	0	0	Clear	James Stewart.
Goderich, Ontario	.....	.....	29.65	753.1	66.4	19.1	77	S	.....	.....	4	6k	0	S	.....	0.751	19.08	Clearing	H. J. Strang, M. A.
Granton, Ontario	28.69	726.4	29.07	753.6	61.0	16.1	.....	SE	.....	.....	2	.....	10n	.....	.....	0.40	10.2	Cloudy	James Grant.
*Halifax, N. S	.....	.....	30.29	769.4	72	22.2	60	W	10	4.5	.....	0	5ks	.....	W	0	0	Fair	F. Allison, M. A.
*Kingston, Ontario	.....	.....	29.95	760.7	79	21.1	74	S	20	8.9	.....	.....	10ks	.....	S	0.08	2.0	Cloudy	S. Woods, M. A.
Little Glace Bay, N. S	.....	.....	30.13	765.3	77.0	25.0	66	W	10	4.5	.....	6k	0	W	.....	0	0	Fair	C. H. Rigby.
*Montreal, Quebec	.....	.....	29.96	761.0	70	21.1	90	SE	11	4.9	.....	1c	2ks	.....	W	0	0	Fair	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.88	758.9	66	18.9	71	E	11	4.9	.....	.....	1ks	.....	S	0.03	0.8	Threatening	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.68	753.9	68	20.0	84	SE	14	6.3	.....	2ck	5ks	SE	SE	0.13	3.3	Fair	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	29.74	755.4	65	18.3	68	S	14	6.3	.....	0	0	.....	.....	0.48	12.2	Clear	H. Morgan.
Port Hastings, N. S	.....	.....	30.21	767.3	70.2	21.2	.....	NW	8	3.6	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
*Port Stanley, Ontario	.....	.....	29.70	754.4	64	17.8	77	SE	14	6.3	.....	.....	10s	.....	S	0.22	5.6	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	30.06	763.5	84	28.9	54	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	Capt. Ashe, R. N.
St. John, N. B	.....	.....	30.30	769.6	53	11.7	93	S	4	1.8	.....	..	Fog	.....	.....	0.01	0.3	Dense fog	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.64	752.1	67	19.4	68	S	11	4.9	.....	2cs	0	.....	.....	0.85	21.6	Clear	K. Stewart.
Stayner, Ontario	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.16	4.1	.....	R. J. Cone.
Stratford, Ontario	28.44	722.4	29.07	753.6	61.5	16.4	84	S	12	5.4	.....	7k	0	S	.....	0.401	10.19	Fine	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.18	766.6	76	24.4	75	SW	10	4.5	.....	8c	0	.....	.....	0	0	Fair	T. C. Hill.
*Toronto, Ontario	.....	.....	29.75	755.6	66	18.9	82	S	8	3.6	.....	5ck	2ks	SE	.....	0.46	11.7	Fair	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.72	754.9	64.8	18.0	70	S	25	11.2	.....	7k	0	SE	.....	0	0	Fine	J. Montgomery
Sub-Series.																			
St. John's, Newfoundland	.....	.....	30.24	768.1	47	8.3	92	SE	.....	.....	.....	.....	10n	.....	.....	0	0	Dull, foggy	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	.....	.....	29.97	761.2	77	25.0	65	S	22	9.8	.....	5k	2ks	S	S	0	0	Cloudy	
Alpena, Mich	.....	.....	29.50	749.3	57	13.9	75	SE	16	7.2	.....	0	1ks	.....	SE	0.13	3.3	Clear	
Atlantic City, N. J	.....	.....	30.03	762.7	68	20.0	94	SE	17	7.6	.....	.....	10n	.....	SE	Inap.	Inap.	Light rain	
Augusta, Ga	.....	.....	29.93	760.2	72	22.2	67	Calm	0	0	.....	0	0	.....	.....	0.11	2.8	Clear	
Baltimore, Md	.....	.....	29.91	759.7	72	22.2	85	SE	16	7.2	.....	.....	10s	.....	S	0.37	9.4	Threatening	
Barnegat, N. J	.....	.....	30.01	762.0	66	18.9	92	S	16	7.2	.....	.....	10s	.....	S	0	0	Cloudy	
Benton, Montana	27.42	696.5	30.22	767.6	60	15.6	70	E	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.42	721.9	30.08	764.0	47	8.3	55	NW	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass	.....	.....	30.15	765.8	72	22.2	85	S	12	5.4	.....	.....	10ks	.....	S	0	0	Threatening	
Breckenridge, Minn	.....	.....	29.74	755.4	48	8.9	48	NW	30	13.4	.....	10cs	0	NW	.....	0	0	Cloudy	
Buffalo, N. Y	.....	.....	29.73	755.1	68	20.0	79	S	0	2.7	.....	5k	2s	S	S	0.41	10.4	Fair	
Burlington, Vt	.....	.....	30.00	762.0	77	25.0	69	S	15	6.7	.....	8k	0	S	.....	0	0	Cloudy	
Cairo, Ill	.....	.....	29.87	758.7	56	13.3	74	W	9	4.0	.....	0	0	.....	.....	0.12	3.0	Clear	
Cape Hatteras, N. C	.....	.....	29.94	760.5	77	25.0	77	SE	32	14.3	.....	5cs	5ks	.....	S	Inap.	Inap.	Cloudy	
Cape Henry, Va	.....	.....	29.96	761.0	68	20.0	100	SE	21	9.4	.....	.....	10n	.....	.....	0.72	18.3	Heavy rain	
Cape Lookout, N. C	.....	.....	29.90	759.4	76	24.4	85	S	32	14.3	.....	2ck	5ks	S	S	0.38	9.7	Cloudy	
Cape May, N. J	.....	.....	29.98	761.5	68	20.0	90	SE	22	9.8	.....	.....	10s	.....	SE	Inap.	Inap.	Threatening	
Charleston, S. C	.....	.....	29.93	760.2	77	25.0	65	N	8	3.6	.....	0	2ks	.....	SW	0.61	15.5	Fair	
Cheyenne, Wyoming	24.18	614.2	30.12	765.0	44	6.7	75	NW	8	3.6	.....	10cs	0	N	.....	0	0	Cloudy	
Chicago, Ill	.....	.....	29.51	749.5	47	8.3	85	SW	12	5.4	.....	.....	10s	.....	SW	0.32	8.1	Threatening	
Cincinnati, Ohio	.....	.....	29.70	754.4	69	15.6	90	SW	16	7.2	.....	.....	10ks	.....	SW	0.47	11.9	Cloudy	
Cleveland, Ohio	.....	.....	29.68	753.9	62.2	16.8	87	SE	.....	.....	5	2k	0	SW	.....	0.13	3.3	Clear	
Colorado Springs, Col	24.25	615.9	30.12	765.0	49	9.4	64	NE	8	3.6	.....	1ck	1k	N	.....	0	0	Clear	
Corsicana, Tex	.....	.....	30.03	762.7	66	18.9	76	S	2	0.9	.....	5cs	5s	NW	.....	0	0	Cloudy	
Davenport, Iowa	.....	.....	29.69	754.8	46	7.8	80	W	12	5.4	.....	.....	10s	.....	W	0.50	12.7	Threatening	
Denison, Tex	.....	.....	30.05	763.3	67	19.4	59	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Denver, Col	24.05	633.7	30.17	766.3	56	13.3	51	SE	1	0.4	.....	5k	0	NW	.....	0	0	Fair	
Detroit, Mich	.....	.....	29.81	757.1	57	13.9	57	SW	22	9.8	.....	2k	0	SW	.....	0.25	6.3	Fair	
Dodge City, Kan	27.48	698.0	29.73	755.1	58	14.4	65	NW	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Dubuque, Iowa	.....	.....	29.55	750.6	43	6.1	83	W	8	3.6	.....	.....	10n	.....	.....	1.40	35.6	Light rain	
Duluth, Minn	.....	.....	29.55	750.6	39	3.9	81	NW	20	8.9	.....	.....	10s	.....	NW	0.33	8.4	Cloudy	
Eastport, Me	.....	.....	30.24	768.1	57	13.9	93	S	3	1.3	.....	.....	Fog	.....	.....	0	0	Foggy	
Erie, Pa	.....	.....	29.71	754.6	68	20.0	64	S	16	7.2	.....	3c	0	.....	.....	0.40	10.2	Fair	
Escanaba, Mich	.....	.....	29.37	746.0	46	7.8	92	E	10	4.5	.....	.....	10n	.....	.....	0.73	18.5	Light rain	
Fort Gibson, Indian Ter	.....	.....	29.95	760.7	57	13.9	81	SE	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Fort St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T	28.81	731.8	29.88	758.9	68	20.0	56	W	8	3.6	.....	0	5s	.....	NW	0	0	Fair	
Fort Sully, Dakota	28.40	721.3	30.09	763.5	50	10.0	51	N	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex	.....	.....	30.04	763.0	79	26.1	73	NW	8	3.6	.....	5k	0	NW	.....	0	0	Fair	
Grand Haven, Mich	.....	.....	29.43	747.5	54	12.2	79	SE	19	8.5	.....	.....	10s	.....	S	1.68	42.7	Cloudy	
Indianapolis, Ind	.....	.....	29.70	754.4	54	12.2	73	SW	14	6.3	.....	.....	10s	.....	SW	0.07	1.8	Cloudy	
Indianola, Tex	.....	.....	30.01	762.2	82	27.8	78	S	7	3.1	.....	5ck	0	S	.....	0	0	Fair	
Jacksonville, Fla	.....	.....	29.96	761.0	78	25.6	95	W	5	2.2	.....	0	0	.....	.....	0.21	5.3	Clear	
Keokuk, Iowa	.....	.....	29.64	752.8	50	10.0	76	W	12	5.4	.....	8k	0	W	.....	0.07	24.6	Clearing	
Key West, Fla	.....	.....	30.01	762.2	83.6	28.8	68	NW	4	1.8	.....	5c	1ks	W	.....	0	0	Hazy	
Kittyhawk, N. C	.....	.....	29.98	761.5	67	19.4	94	SE	22	9.8	.....	.....	10n	.....	S	0.28	7.1	Light rain	
Knoxville, Tenn	.....	.....	29.87	758.7	62	16.7	80	S W	6	2.7	.....	1ck	0	SW	.....	0.03	0.8	Clear	
La Crosse, Wis	.....	.....	29.52	749.8	42	5.6	83	NW	16	7.2	.....	.....	10s	.....	NW	1.50	38.1	Cloudy	
Leavenworth, Kan	.....	.....	29.85	758.2	51	10.0	52	N W	15	6.7	.....	0	0	.....	.....	0	0	Clear	
Lexington, Ky	28.72	729.5	29.80	756.9	57	13.9	75	SW	20	8.9	.....	2c	0	.....	.....	0.65	16.5	Clear	
Long Branch, N. J	.....	.....	30.06	763.6	66	18.9	94	SE	20	8.9	.....	10ck	0	SW	.....	0	0	Cloudy	
Louisville, Ky	.....	.....	29.79	756.7	57	13.9	75	SW	12	5.4	.....	.....	10s	.....	SW	0.16	4.1	Cloudy	
Lynchburg, Va	.....	.....	29.83	757.7	71	21.7	79	S	2	0.9	.....	5k	0	S	.....	2.79	70.9	Clearing	
Malone, N. Y	.....	.....	29.84	757.9	75	23.9	56	SW	19	8.5	.....	.....	10s	.....	SW	0	0	Cloudy	
Manhattan, Kan	29.84	732.5	30.01	762.2	38	2.2	62	NW	12	5.4	.....	2ck	0	.....	.....	0	0	Clear	
Marquette, Mich	.....	.....	29.43	747.5	43	6.1	91	Calm	0	0	.....	.....	10n	.....	NW	0.97	24.6	Light rain	
Memphis, Tenn	.....	.....	29.94	760.5	65	18.3	58	SW	6	2.7	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Milwaukee, Wis	.....	.....	29.47	748.5	44	6.7	92	W	8	3.6	.....	10n	Fog	W	.....	0.74	18.8	Light rain	
Mobile, Ala	.....	.....	29.99	761.7	74	23.3	55	NW	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Montgomery, Ala	.....	.....	29.98	761.5	70	21.1	71	SW	5	2.2	.....	2k	0	SW	.....	0	0	Clear	
Morgantown, W. Va	.....	.....	29.76	755.9	75	23.9	56	S	7	3.1	.....	0	0	.....	.....	0.26	6.6	Clear	
Mt. Washington, N. H	24.09	609.6	30.36	771.1	50	10.0	100	SW	52	23.2	.....	.....	10n	.....	SW	0.16	4.1	Light rain	
Nashville, Tenn	.....	.....	29.88	758.9	60	15.0	70	SW	4	1.8	.....	10k	0	SW	.....	0.36	9.1	Cloudy	
New Haven, Conn	.....	.....	30.10	764.5	77	25.0	69	S	12	5.4	.....	5k	Haze	SE	.....	0	0	Fair	
New London, Conn	.....	.....	30.16	766.1	70	21.1	84	SE	16	7.2	.....	2cs	2s	SW	SE	0	0	Clear	
New Orleans, La	.....	.....	29.99	761.7	78	25.6	95	W	2	0.9	.....	2k	0	W	.....	0	0	Clear	
Newport, R. I	.....	.....	30.17	766.3	72	22.2	80	SE	12	5.4	.....	2k	0	SW	.....	0	0	Fair	
New York, N. Y	.....	.....	30.07	763.6	70	21.1	84	SE	19	8.5	.....	.....	10ks	.....	SE	0	0	Cloudy	
Norfolk, Va	.....	.....	29.96	761.0	71	21.7	95	S	15	6.7	.....	.....	10n	.....	.....	0.88	22.4	Heavy rain	
North Platte, Neb	27.17	690.1	29.73	755.1	50	10.0	44	NW	6	2.7	.....	5k	0	NW	.....	0	0	Fair	
Omaha, Neb	28.75	730.2	29.81	757.2	49	9.4	57	NW	12	5.4	.....	2c	0	.....	.....	0	0	Clear	
Oswego, N. Y	.....	.....	29.82	757.4	72	22.2	73	SE	10	4.5	.....	.....	10n	.....	S	0.03	0.8	Light rain	
Pembina, Dakota	.....	.....	29.91	759.7	50	10.0	64	N	16	7.2	.....	2cs	0	.....	.....	0	0	Fair	
Philadelphia, Penn	.....	.....	30.00	762.0	72	22.2	80	S	16	7.2	.....	.....	10ks	.....	S	Inap.	Inap.	Threatening	
Pike's Peak, Colorado	17.92	455.2	30.13	765.3	25	— 3.9	75	NW	32	14.3	.....	2k	0	NW	.....	0.02	0.5	Fair	
Pittsburgh, Penn	.....	.....	29.77	756.1	67	19.4	69	S	8	3.6	.....	2c	0	SW	.....	0.19	4.8	Clear	
Port Huron, Mich	.....	.....	29.59	751.6	58	14.4	75	S	12	5.4	.....	.....	10ks	.....	S	0.11	2.8	Cloudy	
Portland, Me	.....	.....	30.19	766.8	66	18.9	89	S	7	3.1	.....	.....	Fog	.....	.....	0	0	Foggy	
Portland, Oregon	.....	.....	30.00	762.0	61	16.1	70	S	4	1.8	.....	2cs	0	S	.....	0	0	Fair	
Punta Rassa, Fla	.....	.....	30.01	762.2	80.7	27.1	78	NW	18	8.0	.....	2ck	5ks	NW	NW	0	0	Cloudy	
Rochester, N. Y	.....	.....	29.79	756.7	64	17.8	89	SE	7	3.1	.....	.....	10n	.....	SW	1.50	38.1	Light rain	
Salt Lake City, Utah	25.68	652.3	30.09	762.0	71	21.7	33	Calm	0	0	.....	2c	0	.....	.....	0	0	Clear	
Sandy Hook, N. J	.....	.....	30.05	763.3	70	21.1	90	SE	20	8.9	.....	.....	10s	.....	SE	0	0	Cloudy	
San Diego, Cal	.....	.....	29.95	760.7	63	17.2	94	SW	8	3.6	.....	.....	10s	.....	SW	0	0	Cloudy	
San Francisco, Cal	.....	.....	29.98	761.5	56	13.3	87	W	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Santa Fé, N. M	23.31	592.8	29.88	758.9	51	10.6	65	NE	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga	.....	.....	29.95	760.7	78	25.6	61	NW	4	1.8	.....	2k	0	.....	.....	0.78	19.8	Clear	
Shreveport, La	.....	.....	30.08	764.0	66	18.9	84	W	3	1.3	.....	8ck	0	W	.....	0	0	Fair	
Smithville, N. C	.....	.....	29.90	759.4	76	24.4	86	SW	10	4.5	.....	2k	2ks	W	.....	0.22	5.6	Fair	
Springfield, Mass	.....	.....	30.10	764.5	74	23.3	81	S	8	3.6	.....	.....	10ks	.....	S	Inap.	Inap.	Cloudy	
St. Louis, Mo	.....	.....	29.78	760.4	64	12.2	68	W	16	7.2	.....	0	5s	.....	W	0.13	3.3	Fair	
St. Marks, Fla	.....	.....	29.99	761.7	74	23.3	76	W	2	0.9	.....	2cs	0	.....	.....	0.02	0.5	Fair	
St. Paul, Minn	.....	.....	29.55	750.6	40	4.4	91	NW	15	6.7	.....	.....	10n	.....	NW	0.22	5.6	Light rain	
St. Paul's Island, Alaska	.....	.....	30.06	763.5	37	2.8	81	SE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Thatcher's Island, Mass	.....	.....	30.17	766.3	64	17.8	94	S	5	2.2	.....	.....	.....	.....	.....	0	0	Dense fog	
Toledo, Ohio	.....	.....	29.60	751.8	60	15.6	70	SE	19	8.5	.....	10k	0	S	.....	0.04	1.0	Cloudy	
Tucson, Arizona	27.49	698.2	30.08	764.0	84	28.9	.....	SE	.....	.....	.....	0	Haze	.....	.....	0	0	Clear	
Tybee Island, Ga	.....	.....	29.92	760.0	75	23.9	67	NW	3	1.3	.....	0	2s	.....	.....	0.25	6.3	Fair	
Vicksburg, Miss	.....	.....	30.02	762.5	71	21.7	64	N	5	2.2	.....	5c	0	W	.....	0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Virginia City, M. T.	24.42	620.7	29.90	759.4	56	13.3	62	SE	2	0.9	.....	0	0	.....	.....	0	0	Clear.	
Washington, D. C.	.....	.....	29.89	759.2	71	21.7	87	S	16	7.2	.....	.....	10n	.....	S	0.65	16.5	Light rain.	
Wilmington, N. C.	.....	.....	29.90	759.4	72	22.2	95	SW	4	1.8	.....	2cs	5ks	SW	SW	1.29	32.8	Clearing.	
Wood's Holl, Mass.	.....	.....	30.18	766.6	71	21.7	84	SE	11	4.9	.....	0	2s	.....	SE	0	0	Clear.	
Wytheville, Va.	27.56	700.0	29.64	752.8	60	15.6	88	Calm	0	0	.....	0	1ks	.....	W	0.93	23.6	Clear.	
Yankton, Dakota.	28.61	726.7	29.90	759.4	47	8.3	55	NW	20	8.9	.....	8cs	0	NW	.....	0	0	Fair.	
Yuma, Arizona.	.....	.....	29.79	756.7	85	29.4	.....	SE	.....	.....	.....	2c	0	SE	.....	0	0	Fair.	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.05	763.3	82	27.8	83	E	5	2.2	.....	5k	10ks	E	NW	0	0	Cloudy.	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.98	761.5	83	28.3	72	E	.....	.....	.....	2ks	5k	.....	.....	0	0	Fair.	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.15	765.8	81	27.2	82	Calm	0	0	.....	5c	2s	.....	E	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.80	756.9	83	28.3	75	NE	1.2	0.5	.....	4c	2k	.....	.....	0	0	Fair.	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.02	762.5	85	29.4	79	Calm	0	0	.....	10ck	0	.....	.....	0	0	Fair.	Charles Hasselbrink.
St. Georges, Bermudas.	.....	.....	30.09	764.3	75.0	23.9	88	S	9.0	4.0	.....	10ck	5fk	S	.....	2.30	58.4	Cloudy.	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica, W. I.	27.21	691.1	29.98	761.5	70	21.1	84	NE	2.0	0.9	.....	0	2k	.....	.....	0	0	Fine.	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.06	763.5	78	25.6	91	E	.....	.....	1	4c	4cks	.....	.....	0.876	22.23	Fair.	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.11	764.9	.....	.....	79.2	26.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.433	11.00	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.18	639.6	.....	.....	67.0	19.4	84	Calm	0	0	.....	4c	4s	.....	.....	0	0	Fair.	Thomas Herran.
York Factory, B. A.	.....	.....	30.17	766.3	60.5	10.3	79	S	5	2.2	.....	0	0	.....	.....	0	0	.....	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.12	765.0	77	25.0	90	NE	.....	.....	2	.....	.....	.....	.....	0	0	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	30.05	763.3	56	13.3	80	Calm	0	0	.....	.....	.....	.....	.....	0.1	2.5	Misty.	F. L. Clarke.
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Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
Steamer Nova Scotian, N. 51° 01′, W. 29° 48′.	NW by W ½ W	6	Heavy sea.	NW	Squally.
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....

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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,208.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are 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 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, 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 JUNE 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.	Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	73 6	23.1	66	NNW	.....	.....	1	.....	10	.....	....	0	0	Hidden.....	Charnot.
Algiers	.....	.....	30.07	763.7	72.3	22.4	75	NE	.....	.....	2	.....	4	.....	.....	0	0	Fair.....	Peter.
La Calle	.....	.....	.....	.....	71.1	21.7	.....	NE	.....	.....	3	.....	1	.....	.....	0	0	Clear.....	Kuntz.
Tunis	.....	.....	30.10	764.6	70.3	20.5	63	E	.....	.....	3	.....	0	.....	.....	0	0	Clear.....	Jacques.
Sfax	.....	.....	30.14	765.6	78.1	25.6	55	SE	.....	.....	3	.....	1	.....	.....	0	0	Clear.....	Chauvey.
Saida	.....	.....	30.02	762.6	89.6	32.0	24	NW	.....	.....	2	.....	1	.....	.....	0	0	Clear.....	Millot.
Teberssa	.....	.....	30.10	764.5	77.2	25.1	.....	N	.....	.....	2	.....	4	.....	.....	0	0	Fair.	Colin.
Géryville	.....	.....	30.06	763.6	90.9	32.7	23	SE	.....	.....	4	.....	1	.....	.....	0	0	Clear.....	Buard.
Laghouat	.....	.....	30.04	763.0	91.4	33.0	50	SE	.....	.....	3	.....	2	.....	.....	0	0	Clear.....	Guyot.
Biskra	.....	.....	30.08	764.0	88.2	31.2	37	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	.....	.....	30.01	762.2	69.1	20.6	62	NE	.....	.....	4	.....	7	.....	.....	0	0	.....	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	30.11	764.8	64.4	18.0	92	W	.....	.....	1	.....	10	.....	.....	1.417	36.0	.....	Dr. Wierzbiski.
Eperies	.....	.....	29.97	761.1	71.8	22.1	77	NE	.....	.....	3	.....	10	.....	S	0.124	3.16	.....	Julius Mikolik.
Gratz	28.83	732.3	30.00	762.1	68.0	20.0	68	NW	.....	.....	5	.....	8	.....	.....	0.075	1.9	.....	Andreas Rospini.
Hermannstadt	28.37	720.5	29.75	755.6	61.9	16.6	91	ESE	.....	.....	1	.....	10	.....	.....	0.642	16.30	.....	Prof. Reissenberger.
Kremsmünster	28.81	731.8	30.11	764.8	69.4	20.8	54	WSW	.....	.....	1	.....	8	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	.....	.....	29.88	759.0	75.0	23.9	79	NE	.....	.....	2	.....	9	.....	.....	0.114	2.9	.....	Dr. T. Stanecki.
Nyireghaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habasuda Daniel.
Pola	.....	.....	30.02	762.4	77.0	25.0	51	WNW	.....	.....	2	.....	10ks	.....	.....	0	0	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	29.82	757.3	75.0	23.9	79	NW	.....	.....	2	.....	6	.....	.....	0.041	1.05	.....	Karl Stancel.
Trieste	.....	.....	30.03	762.8	70.7	26.5	64	Calm	.....	.....	0	.....	7	.....	.....	0	0	.....	Prof. V. Farolfi.
Vienna	.....	.....	30.09	764.2	64.4	18 0	70	N	.....	.....	2	.....	10	.....	.....	0.083	2.1	.....	I. R. Central Met. Obs'y.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 388.9 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Brussels	.....	.....	30.17	766.2	70.3	21.3	55	N	.....	.....	1	.....	4	.....	S	0	0	.....	Royal Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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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	59.5	15.3	.....	S	22	9.8	.....	.....	6	.....	.....	0.010	0.25	*D. clouds	William Boswell.
Ardrossan	.....	.....	29.92	760.0	58	14.4	.....	S	.....	.....	6	.....	7	.....	.....	.....	.....	*D. clouds	William McNeil.
Armagh, Observatory	.....	.....	29.86	758.4	65.2	18.4	.....	S	24	10.7	.....	.....	7	.....	.....	.....	.....	Squally	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	29.82	757.4	64.3	17.9	.....	S	.....	.....	2–3	.....	10	.....	.....	.....	.....	*D. clouds	J. Dreyer.
Bradford	.....	.....	30.04	763.0	71.0	21.7	.....	SW	.....	.....	0	.....	3	.....	.....	0.02	0.5	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.05	763.3	83.0	28.3	.....	SE	.....	.....	2	.....	9	.....	.....	.....	.....	Overcast	Sergt. J. F. Halanen, A. (H. C.
Cambridge, Observatory	.....	.....	30.14	765.5	69.2	20.7	.....	SSW	.....	.....	1	.....	7	.....	.....	.....	.....	*D. clouds	H. Todd.
Cardington	.....	.....	30.13	765.3	74.0	23.3	.....	SW	.....	.....	1	.....	6	.....	.....	.....	.....	*D. clouds	John McLaren.
Carlisle	.....	.....	29.97	761.2	71.1	21.7	.....	S	.....	.....	3	.....	8	.....	.....	0	0	*D. clouds	T. Bell, for J. Carmell.
Chatham, School M. E	.....	.....	30.14	765.5	68.2	20.1	.....	SW	.....	.....	2	.....	8	.....	.....	.....	.....	*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.67	728.2	30.15	765.8	61.0	16.1	.....	SE	.....	.....	2	.....	6	.....	.....	.....	.....	*D. clouds	R. E. Power.
Donaghadee	.....	.....	29.90	759.4	60	15.6	.....	S	.....	.....	6	.....	8	.....	.....	.....	.....	*D. clouds	J. Mac Gowan.
Dover	.....	.....	30.17	766.3	62	16.7	.....	NE	.....	.....	2	.....	5	.....	.....	.....	.....	½ clouded	J. Costello.
Eccles, (near Manchester)	.....	.....	30.05	763.3	68.7	20.4	.....	SW	6.2	2.8	.....	.....	4	.....	.....	.....	.....	*D. clouds	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.08	764.0	56.8	13.8	.....	S	14	6.3	.....	.....	10	.....	.....	.....	.....	Foggy	The Staff.
Fort Napier, (Natal)	27.86	707.6	30.10	764.5	66.7	19.3	.....	SE	.....	.....	1	.....	1	.....	.....	.....	.....	*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.96	761.0	83	28.3	.....	SE	.....	.....	2	.....	6	.....	.....	.....	.....	*D. clouds	
Galway, Queen's College	.....	.....	29.72	754.9	58	14.4	.....	S	.....	.....	6	.....	10	.....	.....	.....	.....	Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.01	762.2	74.0	23.4	.....	SE	.....	.....	2	.....	6	.....	.....	.....	.....	*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	29.93	760.2	58.0	14.4	.....	S	.....	.....	3	.....	10	.....	.....	.....	.....	Overcast	Lewis Stuart.
Great Yarmouth	.....	.....	30.16	766.1	59	15.0	.....	SSE	.....	.....	4	.....	2	.....	.....	.....	.....	Blue sky	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	30.15	765.8	72.3	22.4	.....	SSW	.....	.....	1	.....	6	.....	.....	.....	.....	*D. clouds	The Staff, for G. B. Airy.
Guernsey	.....	.....	30.11	764.8	59.5	15.3	.....	SSE	.....	.....	1	.....	7	.....	.....	.....	.....	Hazy	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	30.04	763.0	73.6	23.1	.....	SW	.....	.....	2	.....	3	.....	.....	.....	.....	*D. clouds	L. J. Crossley.
Helston	.....	.....	30.04	763.0	62	16.7	.....	S	.....	.....	4	.....	10	.....	.....	0.5	12.7	Misty	M. P. Moyle.
Holyhead	.....	.....	29.99	761.7	59	15 0	.....	SSW	.....	.....	4	.....	6	.....	.....	.....	.....	Hazy	John Tilston.
Kew, Observatory	.....	.....	30.14	765.5	69.8	21.0	.....	S	9	4.0	.....	.....	8	.....	.....	.....	.....	*D. clouds	The Staff.
Kingstown	.....	.....	29.93	760.2	61	16.1	.....	S	.....	.....	4	.....	9	.....	.....	.....	.....	Overcast	George Mitchell.
Leicester Museum	.....	.....	30.13	765.3	61.9	16.6	.....	S	.....	.....	2	.....	8	.....	.....	.....	.....	*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean	.....	.....	30.01	762.2	75.6	24.2	.....	NW	.....	.....	1	.....	4k	.....	.....	.....	.....	*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn	.....	.....	29.84	757.9	64	17.8	.....	S	.....	.....	2	.....	8	.....	.....	.....	.....	¾ clouded	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.10	764.5	77.6	25.3	.....	SE	.....	.....	2	.....	10	.....	.....	.....	.....	Raining	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	30.11	764.8	69.1	20.6	.....	S	.....	.....	4	.....	4k	.....	S	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.11	764 8	59.8	15.4	.....	S	.....	.....	4	.....	10	.....	.....	.....	.....	Fair	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	30.11	764.8	65	18.3	.....	S	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast	J. Lucas.
Plymouth	.....	.....	30.09	764.3	63.3	17.4	.....	S	.....	.....	3	.....	1	.....	.....	.....	.....	*D. clouds	John Merrifield.
Roche's Point	.....	.....	29.91	759.7	58	14.4	.....	SSW	.....	.....	5	.....	10	.....	.....	.....	.....	Misty	W. Kennedy.
Saint Ann's Head	.....	.....	30.04	763.0	55	12.8	.....	S	.....	.....	4	.....	10	.....	.....	.....	.....	Misty	John C. Walker.
Saint Helier, (Jersey)	.....	.....	30.12	765.0	64.8	18.2	.....	ESE	.....	.....	2	.....	0	.....	.....	.....	.....	Clear	A. P. Amy.
Sandwick Manse, Orkneys)	.....	.....	29.82	757.4	61.5	16.4	.....	SSE	37	16.5	.....	.....	0	.....	.....	.....	.....	Blue sky	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	30.07	763.8	68.3	20.2	.....	S	.....	.....	3	.....	1	.....	.....	.....	.....	Blue sky	F. Shaw.
Scutari Cemetery Turkey	.....	.....	29.75	755.6	72.4	22.4	.....	S	.....	.....	1	.....	9	.....	.....	.....	.....	Gloomy	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.07	763.8	69.0	20.6	.....	SW	.....	.....	3	.....	1	.....	.....	0	0	Blue sky	W. F. Cooper.
Silloth Rectory	.....	.....	30.00	762.0	68.1	20.1	71	SW	.....	.....	3	.....	3	.....	.....	0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	30.04	763.0	64.0	17.8	.....	S	.....	.....	3	.....	5	.....	.....	.....	.....	*D. clouds	Rev. S. J. Perry.
Stornoway, Lewis C. Hebr.	.....	.....	29.71	754.6	55	12.8	.....	SSW	.....	.....	7	.....	10	.....	.....	.....	.....	Raining	John Smith.
Stratfield Turgiss	.....	.....	30.14	765.5	66.4	19.1	.....	SW	.....	.....	1	.....	7	.....	.....	.....	.....	*D. clouds	Rev. Charles H. Griffith.
Thurso	.....	.....	29.80	756.9	63	17.2	.....	S	.....	.....	5	.....	7	.....	.....	.....	.....	Gloomy	John Trotter.
Truro, Royal Institution	.....	.....	30.09	764.3	60	15.6	.....	SE	.....	.....	6	.....	10	.....	.....	.....	.....	Gloomy	W. Newcombe.
Valencia, Observatory	.....	.....	29.77	756.1	58.5	14.7	.....	SSE	44	19.7	.....	.....	10	.....	.....	.....	.....	Misty	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	55	12.8	.....	S	.....	.....	1	.....	3	.....	.....	0	0	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.37	771.4	59.0	15.0	90	NW	10	4.5	.....	0	2	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	30.12	765.0	60.0	15.6	81	NW	.....	.....	1	.....	8k	.....	.....	0	0	.....	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	29.96	761.0	68.0	20.0	.....	SW	.....	.....	5	.....	4k	.....	.....	0	0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.29	769.4	70.7	21.5	62	ESE	21.1	9.4	.....	.....	2	.....	.....	0.04	1.0	Squally	C. Meldrum
Melbourne, Observatory	.....	.....	30.34	770.6	49.0	9.4	54	NNE	20	8.9	.....	.....	10	.....	.....	.....	.....	Dull	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	29.60	751.8	55	12.8	.....	S	.....	.....	6	.....	10	.....	.....	0.20	5.1	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	29.91	759.7	55	12.8	.....	S	.....	.....	7	6	3	S	.....	.....	.....	.....	Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, distinction between upper and low r 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	.....	.....	30.25	768.4	63.5	17.5	65	NE	.....	.....	2	.....	10	.....	.....	.....	.....	.....	
Fanöe	.....	.....	30.26	768.7	63.1	17.2	68	SW	.....	.....	4	.....	1	.....	.....	.....	.....	.....	
Godthaab, (Greenland)	.....	.....	29.86	758.5	38.8	3.8	73	NW	.....	.....	2	.....	5	.....	.....	.....	.....	Foggy	
Stykkisholm, (Iceland)	.....	.....	29.26	743.1	43.2	6.2	85	E	.....	.....	4	.....	8	.....	.....	.....	.....	.....	
Thorshavn, (Faröe)	.....	.....	29.63	752.5	51.3	10.7	94	SE	.....	.....	6	.....	10	.....	.....	.....	.....	Raining	
Vestervig	.....	.....	30.23	767.8	61.9	16.6	79	SW	.....	.....	2	.....	0	.....	.....	.....	.....	.....	

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

FRENCH SERIES.

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

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	30.10	764.6	64.4	18	46	S	.....	.....	1	5c	.....	S	.....	0	0	Cloudy	Normal School.
Amiens	.....	.....	30.16	766.0	70.9	26.6	52	NW	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	30.07	763.7	81.0	27.2	35	N	.....	.....	2	.....	0	.....	.....	0	0	Very clear	Normal School.
Bar-sur-Seine	.....	.....	30.15	765.7	75.7	24.3	45	E	.....	.....	2	.....	5	.....	NE	0.004	0.1	Cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.07	763.8	76.3	24.6	49	E	3.8	1.7	.....	.....	2	.....	SSW	0	0	Slightly cl'dy	Beaumette Observatory.
Beauvais	.....	.....	30.17	766.4	72.5	22.5	44	SE	.....	.....	2	.....	2	.....	S	0	0	Slightly cl'dy	Normal School.
Besançon	.....	.....	30.11	764.9	74.5	23.6	58	WSW	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Besançon en Bresse	.....	.....	30.20	767.1	78.8	26	55	W	.....	.....	2	.....	0	.....	.....	.....	.....	Clear	Normal School.
Bourges	.....	.....	30.13	765.3	70.2	21.2	63	NE	.....	.....	2	.....	1	.....	SW	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	29.98	761.6	72.5	22.5	72	SW	.....	.....	2	.....	1k	.....	SW	0	0	.....	Naval Observatory.
Carcassonne	.....	.....	30.02	762.0	72.1	22.3	29	W	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Caen	.....	.....	30.62?	777.8?	68.4	20.2	92	SSE	.....	.....	4	..c	.....	N	.....	0	0	.....	Normal School.
Chartres	.....	.....	30.15	765.8	75.0	23.9	.....	E	.....	.....	2	.....	1	.....	W	0	0	.....	Normal School.
Clermont	.....	.....	30.07	763.8	73.0	22.8	55	NE	.....	.....	2	.....	5	.....	E	0	0	Cloudy	Puy de Dome Obs'y.
Commercy	.....	.....	30.19	766.8	68.9	20.5	51	E	.....	.....	2	.....	5k	.....	E	0	0	Cloudy	Normal School.
Commune de Greasque*	.....	.....	30.13	765.2	80.8	27.1	27	SW	.....	.....	4	...	2	.....	SW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.16	766.0	72.7	22.6	49	NNE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
La Roche-sur-Yon	.....	.....	30.07	763.7	76.6	24.8	65	NE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Le Mans	.....	.....	30.13	765.2	75.0	23.9	72	S	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Lons-Le-Saulnier	.....	.....	30.06	763.5	73.8	23.2	68	NE	.....	.....	2	.....	1	.....	NE	0	0	Clear	Normal School.
Mâcon	.....	.....	30.09	764.3	71.8	22.1	61	WNW	.....	.....	2	.....	5	.....	SW	0	0	Cloudy	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	30.10	764.5	71.2	21.8	48	NNE	.....	.....	4	.....	1	.....	S	0	0	Clear	Normal School.
Nismes	.....	.....	30.06	763.4	83.5	28.6	37	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	30.08	764.1	74.8	23.8	35	E	.....	.....	1	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Paris, Observatory	.....	.....	30.15	765.9	75.0	23.9	44	S	.....	.....	2	.....	4k	.....	N	0	0	Cloudy	National Observatory.
Parthenay	.....	.....	30.01	762.1	84.2	29	51	NE	.....	.....	2	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Privas	.....	.....	30.07	763.6	75.2	24	.....	NE	.....	.....	2	.....	2	.....	NE	.....	.....	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.08	764.0	79.0	26.1	65	E	.....	.....	5	.....	0	.....	.....	0	0	Blue sky	Naval Observatory.
Rouen	.....	.....	30.13	765.4	76.6	24.8	42	S	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Saint Lo	.....	.....	29.80	756.9	75.2	24	87	SW	.....	.....	3	.....	1	.....	W	0	0	.....	Normal School.
Tarbes	28.90	735.7	30.17	766.3	71.6	22	.....	E	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School
Villefranche	.....	.....	30.11	764.8	78.8	26	84	NNW	.....	.....	1	.....	2	.....	S	0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.92	760.0	82.4	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	Blank	Blank	.....	L'Abbé Marchési.
Marseilles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Marseilles Observatory.
Mont-Louis	.....	.....	30.30	769.6	65.3	18.5	61	NNE	14.9	6.66	.....	.....	2	.....	E	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.15	765.9	78.6	25.9	42	E	.....	.....	2	.....	5	.....	E	0	0	.....	Montsouris Observ'tory.
Perpignan	.....	.....	30.07	763.8	74.8	23.8	50	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)	.....	.....	30.16	766.1	77.2	25.1	50	NE	.....	.....	1	.....	2	.....	.....	0	0	Clear	E. Renou.
Toulouse	.....	.....	30.10	764.4	79.0	26.1	40	E	.....	.....	1	.....	0	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.11	764.8	75.9	24.4	47	SE	.....	.....	3	.....	2	.....	W	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.17	766.3	74.5	23.6	48	S	.....	.....	2	.....	3	.....	.....	0	0	Fair	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Le Léc, S. J.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

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,) 2,368 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.

Bamberg	.....	.....	30.13	765.3	73.2	22.9	53	N	.....	.....	3	.....	4	E	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.22	767.6	74.3	23.5	46	N	.....	.....	2	.....	4	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.25	768.3	71.6	22.0	36	N	.....	.....	3	.....	7	.....	.....	0	0	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	30.19	766.9	71.1	21.7	46	E	.....	.....	3	.....	7	.....	.....	0	0	.....	A. Sens.
Cassel	.....	.....	30.19	766.9	75.7	24.3	49	E	.....	.....	7	.....	6	SW	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	30.23	767.8	70.9	21.6	49	NE	.....	.....	1	.....	1	.....	.....	0.012	0.3	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.21	767.4	75.4	24.1	37	E	.....	.....	1	.....	5	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	30.12	765.1	70.9	21.6	50	NE	.....	.....	4	.....	1	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.27	768.8	69.1	20.6	55	Calm	.....	.....	0	.....	0	.....	.....	0	0	Clear	Captain F. Hegemann.
Kiel	.....	.....	30.26	768.5	63.7	17.6	57	NE	.....	.....	2	.....	5	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	30.19	766.7	70.9	21.6	49	NW	.....	.....	2	.....	2	.....	.....	0	0	.....	Prof. E. Luther
Koslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	30.18	766.6	75.2	24.0	48	ESE	.....	.....	1	.....	6	.....	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	30.20	767.1	64.8	18.2	70	NNW	.....	.....	3	.....	8c	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Munster	.....	.....	30.16	766.0	74.5	23.6	54	.....	.....	.....	1	.....	0	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.24	768.0	67.6	19.8	58	N	.....	.....	1	.....	7	.....	.....	0	0	.....	A. Lothes.
Posen	.....	.....	30.26	768.5	73.8	23.2	41	N	.....	.....	7	.....	2	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.15	765.9	74.1	23.4	38	SE	.....	.....	2	.....	2	SE	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	30.15	765.9	72.5	22.5	46	NE	.....	.....	1	.....	5	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	30.20	767.0	74.1	23.4	40	NE	.....	.....	3	.....	3	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.13	765.4	72.3	22.4	50	ESE	.....	.....	3	.....	4	.....	.....	0	0	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	30.14	765.6	61.9	16.6	67	WNW	.....	.....	1	.....	0	.....	.....	0	0	.....	E. F. Schütz.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

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	79.2	26.2		S										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			30.00	761.9	78.6	25.9	39	Calm	0	0			6			0	0		
Padua			30.00	762.0	78.1	25.6	42	SW	3.1	1.4			6	E		0	0		
Vicenza			30.00	762.0	80.6	27.0	35	SW	2.5	1.1			1			0	0		
Verona			29.99	761.8	80.6	27.0	47	E			1		0			0	0		
Bergamo	28.70	728.9	29.98	761.5	77.4	25.2	46	SW			2		1			0	0		
Domodossola	28.98	736.2	29.98	761.4	78.8	26.0	57	SSW			4		1			0	0		
Milan			30.04	762.9	81.0	27.2	43	NNE			2		3	NNE		0	0		
Pavia			30.03	762.8	77.4	25.2	41	S			1		0			0	0		
Moncalieri			30.04	762.9	76.3	24.6	48	SE	1.8	0.8			1			0	0		
Mondovi	28.17	715.5	30.03	762.8	74.5	23.6	36	NNW			2		0			0	0		
Porto Maurizio			30.10	764.4	73.9	23.3	64	SW			2		0			0	0		
Genoa			30.06	763.4	74.1	23.4	60	SW	1.3	0.6			0			0	0		
Piacenza			30.04	763.0	77.5	25.3	42	N	2.5	1.1			1	N		0	0		
Parma			30.02	762.5	79.0	26.1	50	WSW			2		0			0	0		
Bologna			30.07	763.8	81.0	27.2	39	SE			6		4	N		0	0		
Florence			30.04	763.1	82.9	28.3	35	E			4		0	E		0	0		
Leghorn			30.07	763.6	73.4	23.0	66	WNW	5.6	2.5			2			0	0		
Siena	28.84	732.5	30.02	762.5	73.4	23.0	47	NE	0	0			10	NE		0	0		
Urbino																			
Pesaro																			
Ancona			30.05	763.3	74.8	23.8	39	Calm			0		3			0	0		
Grosseto																			
Rome			29.99	761.7	79.5	26.4	57	W	7.4	3.3			2			0	0		
Naples, O. U			29.99	761.7	78.8	26.0	55	SW			4		6	NW		0.020	0.5		
Lecce			29.89	759.3	74.5	23.6	54	WNW	24.8	11.1			7			0	0		
Cosenza			29.99	761.7	78.8	26.0	69	NW	8.1	3.6			8			0	0		
Riposto, (Sicily)			29.97	761.3	76.6	24.8	56	S			2		2	N		0	0		
Palermo			29.98	761.5	75.3	24.0	48	WNW	15.4	6.9			1	WNW		0	0		
Caltanissetta	28.04	712.2	29.94	760.5	73.0	22.8	34	NW			4		2	SE		0	0		
Sub-Series.																			
Naples, S. R			30.02	762.5	75.7	24.3	57	SW	6.3	2.8			10	W		0.063	1.6		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known; Domodossola, 308 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	64.8	18.2		NW			2								
Groningen			30.18	766.5	67.1	19.5		ESE			2								
Helder			29.21	767.2	66.6	19.3		ESE			2								
Utrecht			30.17	766.3	72.1	22.3	52	SSE			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			30.09	764.2	62.2	16.8	68	SSW	23.0	10.3			3			0	0		
Brönö			30.11	764.7	54.7	12.6	80	WSW	7	3			10			0	0		
Christiania			30.10	764.4	70.2	21.2	44	SW	3.6	1.6			3			0.071	1.8		
Tromsö			29.92	759.9	53.6	12.0	79	NE	2	1			10			0.042	1.1		

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 1 h., 4 min.

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores,)	.....	.....	30.01	762.3	70.2	21.2	87	W	9.0	4.03	.....	.....	7	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.88	758.9	87.8	31.0	26	SW	3.9	1.75	.....	.....	6	S	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.15	765.7	66.2	19.0	73	WSW	3.8	1.69	.....	.....	10	.....	.....	0	0	.....	Capt D. A. da Cunha.
Lisbon	.....	.....	29.98	761.5	74.8	23.8	51	SSW	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 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	.....	.....	30.11	764.9	64.6	18.1	84	N	25	11	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.07	763.6	75.4	24.1	61	NNW	11	5	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.09	764.2	71.8	22.1	43	WNW	7	3	.....	.....	6	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.99	761.7	68.4	20.2	60	WNW	20	9	.....	.....	6	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.89	759.3	72.0	22.2	61	W	27	12	.....	.....	7	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.83	757.7	90.3	32.4	30	S	4	2	.....	.....	2	.....	.....	.....	.....	Smoke-haze	Physical Cabinet.
Nikolaiev	.....	.....	29.88	759.0	88.3	31.3	45	SW	11	5	.....	.....	0	.....	.....	.....	.....	.....	Kurdukof.
Kertch	.....	.....	29.84	757.7	86.0	30.0	54	S	13	6	.....	.....	0	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.87	758.8	82.9	28.3	48	NW	4	2	.....	.....	3	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.74	755.5	91.2	32.9	49	ESE	18	8	.....	.....	8	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	29.86	758.5	59.5	15.3	66	SE	9	4	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.43	722.2	29.76	755.9	83.5	28.6	32	NW	11	5	.....	.....	7	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.84	757.9	89.4	31.9	26	S	4	2	.....	.....	2	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.69	754.1	74.7	23.7	59	N	11	5	.....	.....	8	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.82	731.9	29.80	756.8	57.7	14.3	74	SE	9	4	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.70	754.4	89.4	31.9	32	NNE	11	5	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.05	712.4	29.63	752.7	84.2	29.0	58	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.63	752.5	63.9	17.7	62	WNW	7	3	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.15	747.9	63.5	17.5	43	NNW	2	1	.....	.....	8	.....	.....	.....	.....	.....	Marks.
Irkutsk	28.14	714.8	29.48	748.9	54.5	12.5	95	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.78	756.4	80.6	27.0	51	NNW	25	11	.....	.....	6	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	29.87	758.6	51.6	10.9	98	SE	9	4	.....	.....	10	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	47.7	8.7	91	ENE	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, 1,281.6 m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	29.92	760.0	85.5	29.7	27	SE	7.4	3.33	.....	2	0	SW	.....	0	0	Light clouds	Royal Observatory.
San Fernando	.....	.....	30.03	762.7	73.2	22.9	64	SSW	14.5	6.5	.....	0	4	.....	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.

Haparanda	.....	.....	29.91	759.8	60.1	15.6	66	S	.....	.....	2	.....	7	.....	.....	0.04	1.	.....	
Umea	.....	.....	29.99	759.5	65.3	18.5	61	SW	.....	.....	4	.....	7	.....	.....	0	0	.....	
Hernosand	.....	.....	29.95	760.6	64.2	17.9	63	N	.....	.....	4	.....	5	.....	.....	0	0	.....	
Stockholm	.....	.....	30.07	763.8	68.0	20.0	49	W	.....	.....	4	.....	3	.....	.....	0	0	.....	
Wisby	.....	.....	30.20	767.1	63.7	17.6	70	W	.....	.....	4	.....	0	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.09	764.2	68.7	20.4	49	W	10.3	4.6	.....	.....	7	.....	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 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	729.5	30.10	764.6	70.2	21.2	51	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	The Observatory.
Zurich	28.54	724.8	30.11	764.8	72.7	22.6	50	E	.....	.....	2	.....	1	.....	.....	0	0	Clear	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note—For Geneva the corresponding departures from the normal values are: Barometer, +2.8 mm; Thermometer, +0.1 cent.; Relative Humidity, —4 per cent.

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

Constantinople	.....	.....	29.79	756.7	82.4	28.0	42	WSW	4	2.0	.....	.....	10	.....	SW	0.091	2.3	.....	
Fao, (Persian Gulf)	.....	.....	29.75	755.6	98.6	37.0	.....	NW	.....	.....	4	.....	10	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.84	757.8	79.9	26.6	.....	W	.....	.....	2	.....	2	.....	.....	.....	.....	.....	
Valona	.....	.....	29.87	758.7	70.2	21.2	.....	NW	.....	.....	3	.....	8	.....	.....	.....	.....	.....	
Varna	.....	.....	29.80	757.0	84.2	29.0	.....	N	.....	.....	2	.....	5	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.98	761.5	84.7	29.3	61	W	.....	.....	2	.....	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.

Bathurst, N. B	.....	.....	30.12	765.0	75.8	24.3	66	SW	9	4.0	.....	0	0	.....	.....	0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.02	762.5	70	21.1	.....	W	5	2.2	.....	2c	2c	S	W	1.27	32.3	Fair	W. R Bigg.
*Chatham, N. B	.....	.....	30.19	766.8	72	22.2	77	SW	10	4.5	.....	5c	0	SW	.....	0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.26	768.6	69	20.6	82	S	10	4.5	.....	0	0	.....	.....	0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.95	760.7	69.7	20.9	86	S	.....	.....	1	10k	0	W	.....	0.529	13.44	Unsettled	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.14	765.5	71.5	21.9	75	W	.....	.....	3	5k	0	.....	.....	0	0	.....	H. A. Johnson.
Esquimault, B. C	.....	.....	29.94	760.5	57.2	14.0	74	Calm	0	0	.....	10cs	0	.....	.....	0	0	Cloudy	W. H. Bevis.
Fredericton, N. B	.....	.....	30.24	768.1	72.0	22.2	77	S	5	2.2	.....	.....	10ks	.....	.....	0.04	1.0	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.91	759.7	44	6.7	88	NW	4	1.8	.....	Haze	5ks	N	N	0	0	Fair	James Stewart.
Goderich, Ontario	.....	.....	29.86	758.4	62.0	16.7	81	S	.....	.....	3	7ck	0	S	.....	0	0	Unsettled	H. J. Strang, M. A.
Granton, Ontario	28.79	731.3	29.85	758.2	61.2	16.2	.....	SE	.....	.....	2	1c	0	NW	.....	0	0	Clear	James Grant.
*Halifax, N. S	.....	.....	30.27	768.8	69	20.6	95	S	6	2.7	.....	.....	8n	SW	.....	0.01	0.3	Cloudy	F. Allison, M. A.
*Kingston, Ontario	.....	.....	30.02	762.5	59	15.0	96	S	1	0.4	.....	.....	Fog	S	.....	0.99	25.1	Foggy	S. Woods, M. A.
Little Glace Bay, N. S	.....	.....	30.26	768.6	73.3	22.9	79	W	7	3.1	.....	0	0	.....	.....	0	0	Fair	C. H. Rigby.
*Montreal, Quebec	.....	.....	29.97	761.2	66	18.3	93	S	7	3.1	.....	.....	10n	.....	SW	0.73	18.5	Heavy rain	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.94	760.5	67	19.4	83	S	5	2.2	.....	8k	0	S	.....	1.07	27.2	Clearing	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.89	759.2	63	17.2	67	S	17	7.6	.....	0	0	.....	.....	0	0	Clear	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	29.91	759.7	64	17.8	63	S	12	5.4	.....	0	0	.....	.....	0	0	Clear	H. Morgan.
Port Hastings, N. S	.....	.....	30.29	769.4	68.0	20.0	.....	Calm	0	0	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
*Port Stanley, Ontario	.....	.....	29.88	758.9	64	17.8	65	SE	20	8.9	.....	2c	0	S	.....	0	0	Clear	M. Payne.
*Quebec, Quebec	.....	.....	30.04	763.0	68	20.0	74	NE	4	1.8	.....	.....	10n	.....	NE	0.03	0.8	Cloudy	Capt. Ashe, R. N.
St. John, N. B	.....	.....	30.29	769.4	60	15.6	94	Calm	0	0	.....	.....	Fog	.....	.....	0.04	1.0	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.82	757.4	61	16.1	66	S	4	1.8	.....	8cs	0	.....	.....	0	0	Fair	K. Stewart.
Stayner, Ontario	.....	.....	29.87	758.7	63	17.2	74	SE	10	4.5	.....	0	0	.....	.....	0	0	Clear	R. J. Cole.
Stratford, Ontario	28.61	726.7	29.86	758.4	57.2	14.0	85	S	10	4.5	.....	3ck	0	SW	.....	0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.28	769.1	78	25.6	65	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	T. C. Hill.
*Toronto, Ontario	.....	.....	29.95	760.7	62	16.7	83	SE	7	3.1	.....	0	0	.....	.....	0	0	Clear	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.85	758.2	61.6	16.4	74	S	15	6.7	.....	1ck	0	.....	.....	Inap.	Inap.	Fine	J. Montgomery
Sub-Series.																			
St. John's, Newfoundland	.....	.....	30.38	771.6	46	7.8	92	SE	.....	.....	.....	.....	10c	.....	.....	0	0	Very dull	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 360.3 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	70	21.1	90	Calm	0	0	.....	.....	10s	.....	S	0.62	15.7	Threatening	
Alpena, Mich	.....	.....	29.73	755.1	55	12.8	74	S	12	5.4	.....	2k	0	S	.....	0	0	Fair	
Atlantic City, N. J.	.....	.....	30.00	762.0	69	20.6	95	S	10	4.5	.....	0	5s	.....	S	0.23	5.8	Fair	
Augusta, Ga.	.....	.....	30.04	763.0	73	22.2	72	NW	4	1.8	.....	5cs	0	W	.....	0	0	Fair	
Baltimore, Md.	.....	.....	29.99	761.7	71	21.7	85	SW	2	0.9	.....	5c	2ks	SW	SW	0.50	12.7	Fair	
Barnegat, N. J.	.....	.....	30.00	762.0	65	18.3	97	S	12	5.4	.....	.....	Fog	.....	.....	0.10	2.5	Foggy	
Benton, Montana	27.14	689.3	29.94	760.5	65	18.3	60	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.19	716.0	29.83	757.7	47	8.3	55	NW	5	2.2	.....	Haze	Haze	.....	.....	0	0	Clear	
Boston, Mass	.....	.....	30.08	764.0	66	18.9	100	SE	5	2.2	.....	10s	Fog	SE	SE	0.10	2.5	Foggy	
Breckenridge, Minn	.....	.....	29.76	755.9	45	7.2	76	NW	20	8.9	.....	.....	10ks	.....	N	0.05	1.3	Cloudy	
Buffalo, N. Y.	.....	.....	29.91	759.7	65	18.3	58	S	5	2.2	.....	1k	0	S	.....	Inap.	Inap.	Clear	
Burlington, Vt.	.....	.....	29.99	761.7	67	19.4	100	S	7	3.1	.....	.....	10n	.....	.....	0.71	18.0	Light rain	
Cairo, Ill.	.....	.....	29.90	759.4	61	16.1	66	S	12	5.4	.....	2cs	0	.....	.....	0	0	Clear	
Cape Hatteras, N. C.	.....	.....	30.01	762.2	80	26.7	70	W	4	1.8	.....	5c	2s	W	.....	0.11	2.8	Fair	
Cape Henry, Va	.....	.....	30.01	762.2	77	25.0	69	SW	6	2.7	.....	2c	Haze	.....	.....	0.82	20.8	Fair	
Cape Lookout, N. C.	.....	.....	30.08	764.0	77	25.0	90	SW	4	1.8	.....	5c	2k	SW	.....	0.25	6.3	Fair	
Cape May, N. J.	.....	.....	30.01	762.2	66	18.9	94	S	14	6.3	.....	0	Fog	.....	.....	0.37	9.4	Foggy	
Charleston, S. C.	.....	.....	30.07	763.8	79	26.1	73	SE	4	1.8	.....	1cs	0	.....	.....	0	0	Clear	
Cheyenne, Wyoming	24.08	611.6	30.02	762.5	40	4.4	56	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	29.98	761.9	55	12.8	68	SW	12	5.4	.....	0	10k	.....	SW	0.04	1.0	Cloudy	
Cincinnati, Ohio	.....	.....	29.83	757.7	63	17.2	67	SW	12	5.4	.....	5cs	0	.....	.....	0.07	1.8	Fair	
Cleveland, Ohio	.....	.....	29.89	759.2	58.5	14.7	64	SE	12	5.4	.....	0	2ks	.....	S	Inap.	Inap.	Clear	
Colorado Springs, Col.	24.14	613.1	30.01	762.2	46	7.8	61	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Corsicana, Tex	.....	.....	30.03	762.7	64	17.8	78	N	2	0.9	.....	.....	10s	.....	SW	Inap.	Inap.	Cloudy	
Davenport, Iowa	.....	.....	29.69	754.1	49	9.4	85	W	8	3.6	.....	.....	10s	.....	W	0.05	1.3	Cloudy	
Denison, Tex	.....	.....	30.03	762.7	68	20.0	79	SW	4	1.8	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Denver, Col.	24.86	631.4	30.08	764.0	49	9.4	50	S	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich	.....	.....	29.79	756.7	59	15.0	70	S	12	5.4	.....	2cs	5k	W	S	0.06	1.5	Fair	
Dodge City, Kan	27.43	696.7	29.70	754.4	53	11.7	30	W	4	1.8	.....	2ck	0	W	.....	0	0	Fair	
Dubuque, Iowa	.....	.....	29.63	752.6	49	9.4	85	W	4	1.8	.....	.....	10s	.....	.....	0.15	3.8	Cloudy	
Duluth, Minn	.....	.....	29.61	752.1	45	7.2	92	Calm	0	0	.....	.....	10n	.....	.....	0.12	3.0	Light rain	
Eastport, Me.	.....	.....	30.25	768.3	53	11.7	100	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Erie, Pa.	.....	.....	29.89	759.2	64	17.8	62	S	10	4.5	.....	1c	0	.....	.....	0	0	Clear	
Escanaba, Mich	.....	.....	29.83	757.8	51	10.6	78	S	16	7.2	.....	.....	10s	.....	S	0.37	9.4	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	29.63	752.6	51	10.6	78	S	16	7.2	.....	.....	10s	.....	S	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	29.95	760.7	58	14.4	87	SW	1	0.4	.....	2k	5k	SW	SW	0	0	Fair	
Fort Sill, Indian T.	28.78	731.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sully, Dakota	28.26	717.8	29.86	758.4	67	19.4	84	Calm	0	0	.....	0	2s	.....	NW	0	0	Clear	
Galveston, Tex.	.....	.....	29.89	759.2	53	11.7	79	NW	15	6.7	.....	0	0	.....	.....	0	0	Clear	
Grand Haven, Mich.	.....	.....	30.05	763.3	77	25.0	69	SE	8	3.6	.....	.....	10k	.....	.....	0.20	5.1	Cloudy	
Indianapolis, Ind.	.....	.....	29.96	760.4	52	11.1	86	S	7	3.1	.....	.....	10n	.....	S	0.21	5.3	Light rain	
Indianola, Tex.	.....	.....	29.79	756.7	57	13.9	75	S	7	3.1	.....	.....	10s	.....	SW	0.31	7.9	Cloudy	
Jacksonville, Fla.	.....	.....	30.04	763.0	78	25.6	86	SE	9	4.0	.....	8ks	2s	.....	.....	0.01	0.3	Cloudy	
Keokuk, Iowa	.....	.....	30.06	763.5	81	27.2	70	SE	4	1.8	.....	5k	0	.....	.....	0	0	Fair	
Key West, Fla.	.....	.....	29.70	754.4	48	8.9	85	NW	6	2.7	.....	.....	10s	.....	NW	0.19	4.8	Cloudy	
Kittyhawk, N. C.	.....	.....	30.06	763.5	82.8	28.3	67	NE	6	2.7	.....	2cs	1ks	.....	.....	0	0	Fair	
Knoxville, Tenn	.....	.....	30.06	763.5	76	24.4	78	W	6	2.7	.....	5c	Haze	.....	.....	2.09	53.1	Fair	
La Crosse, Wis.	.....	.....	30.05	763.3	59	15.0	70	SW	1	0.4	.....	2cs	0	SW	.....	0	0	Clear	
Leavenworth, Kan.	.....	.....	29.61	752.1	48	8.9	92	NW	4	1.8	.....	.....	8s	.....	NW	0.15	3.8	Clearing	
Lexington, Ky.	28.83	732.3	29.83	757.7	54	12.2	60	NW	12	5.4	.....	0	5s	.....	NW	Inap.	Inap.	Fair	
Long Branch, N. J.	.....	.....	29.91	759.7	61	16.1	66	S	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Louisville, Ky.	.....	.....	30.00	762.0	66	18.9	100	S	14	6.3	.....	.....	10n	.....	S	0.20	5.1	Heavy rain	
Lynchburg, Va.	.....	.....	29.98	758.9	62	16.7	66	S	4	1.8	.....	2ck	0	.....	.....	0.05	1.3	Clear	
Malone, N. Y.	.....	.....	29.98	761.5	68	20.0	75	W	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Manhattan, Kan.	28.70	729.0	29.92	760.0	68	20.0	78	S	4	1.8	.....	.....	10n	.....	S	0.51	13.0	Light rain	
Marquette, Mich.	.....	.....	29.83	757.7	50	10.0	86	NW	16	7.2	.....	2ck	0	.....	.....	0	0	Clear	
Memphis, Tenn	.....	.....	29.63	752.6	49	9.4	93	SE	6	2.7	.....	.....	10s	.....	SE	0.07	1.8	Cloudy	
Milwaukee, Wis.	.....	.....	30.00	762.0	69	20.6	70	S	5	2.2	.....	2cs	0	.....	.....	Inap.	Inap.	Fair	
Mobile, Ala.	.....	.....	29.85	758.1	47	8.3	85	SW	8	3.6	.....	.....	10ks	.....	SW	0.07	1.8	Cloudy	
Montgomery, Ala.	.....	.....	30.00	762.0	72	22.2	67	N	3	1.3	.....	.....	10s	.....	NW	Inap.	Inap.	Cloudy	
Morgantown, W. Va.	.....	.....	30.10	764.5	67	19.4	84	NW	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Mt. Washington, N. H.	23.97	608.8	29.95	760.7	70	21.1	70	Calm	0	0	.....	0	0	.....	.....	0.11	2.8	Clear	
Nashville, Tenn	.....	.....	30.33	770.4	50	10.0	100	S	60	26.8	.....	.....	Fog	.....	.....	0.90	22.9	Foggy	
New Haven, Conn	.....	.....	29.94	760.5	69	20.6	56	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
New London, Conn	.....	.....	30.03	762.7	74	23.3	81	SE	10	4.5	.....	.....	10s	.....	S	0	0	Cloudy	
New Orleans, La	.....	.....	30.09	764.3	66	18.9	100	S	9	4.0	.....	.....	Fog	.....	S	0	0	Foggy	
Newport, R. I.	.....	.....	30.08	764.0	74	23 3	63	E	4	1.8	.....	5k	2s	W	.....	0.01	0.3	Fair	
New York, N. Y.	.....	.....	30.08	764.0	69	20.6	100	SE	8	3.6	.....	.....	Fog	.....	.....	0.05	1.3	Foggy	
Norfolk, Va.	.....	.....	30.01	762.2	69	20.6	90	SE	14	6.3	.....	.....	10ks	.....	SE	0.12	3.0	Cloudy	
North Platte, Neb.	.....	.....	30.05	763.3	82	27.8	63	SW	5	2.2	.....	8c	0	S	.....	0.17	4.3	Fair	
Omaha, Neb.	27.04	687.8	29.93	752.6	50	10.0	44	W	7	3.1	.....	0	Haze	.....	.....	0	0	Clear	
Oswego, N. Y.	28.73	729.7	29.78	756.4	49	9.4	77	NW	8	3.6	.....	5c	2cs	NW	.....	0	0	Fair	
Pembina, Dakota	.....	.....	29.98	761.5	67.1	19.5	84	SE	3	1.3	.....	0	5ks	.....	S	1.70	43.2	Fair	
Philadelphia, Penn	.....	.....	29.85	758.2	48	8.9	70	NW	12	5.4	.....	2c	0	.....	.....	0	0	Fair	
Pike's Peak, Colorado	17.89	454.4	30.01	762.0	72	22.2	90	SW	5	2.2	.....	.....	10ks	.....	SW	0.31	7.9	Cloudy	
Pittsburgh, Penn	.....	.....	30.10	764.5	29	— 1.7	59	N	34	14.3	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Port Huron, Mich	.....	.....	29.94	760.5	65	18.3	58	S	1	0.4	.....	2c	2k	SW	SW	0	0	Fair	
Portland, Me.	.....	.....	29.81	757.2	56	13.3	74	S	11	4.9	.....	.....	10s	.....	SW	0.01	0.3	Cloudy	
Portland, Oregon	.....	.....	30.13	765.3	64	17.8	89	SE	7	3.1	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Punta Rassa, Fla.	.....	.....	29.96	761.0	60	15.6	82	S	3	1.3	.....	10cs	0	S	.....	0	0	Cloudy	
Rochester, N. Y.	.....	.....	30.00	763.5	79.3	26.3	69	N	2	0.9	.....	.....	8s	.....	SW	0	0	Cloudy	
Salt Lake City, Utah	25.52	648.2	29.94	760.5	63	17.2	83	S	3	1.3	.....	5k	0	SW	.....	0.35	8.9	Fair	
Sandy Hook, N. J.	.....	.....	29.85	758.2	70	21.1	36	Calm	0	0	.....	5k	0	NW	.....	0	0	Fair	
San Diego, Cal.	.....	.....	30.00	762.0	71	21.7	90	SE	15	6.7	.....	.....	10n	.....	SE	Inap.	Inap.	Light rain	
San Francisco, Cal.	.....	.....	29.93	760.7	63	17.2	88	SE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Santa Fé, N. M.	.....	.....	29.95	760.7	56	13.3	87	W	16	7.2	.....	5cs	Fog	.....	W	0	0	Fair	
Savannah, Ga.	23.32	592.3	29.86	758.4	56	13.3	92	N	5	2.2	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Shreveport, La.	.....	.....	30.00	762.5	84	28.9	61	SW	4	1.8	.....	2k	Sm'e	.....	.....	0	0	Clear	
Smithville, N. C.	.....	.....	30.08	764.0	66	18.9	84	SE	4	1.8	.....	.....	10ks	.....	W	Inap.	Inap.	Cloudy	
Springfield, Mass.	.....	.....	30.07	763.8	77	25.0	76	W	2	0.9	.....	2c	0	W	.....	0	0	Clear	
St. Louis, Mo.	.....	.....	30.03	762.7	75	23.9	81	S	8	3.6	.....	5cs	5ks	.....	S	0.12	3.0	Cloudy	
St. Marks, Fla	.....	.....	29.78	756 4	60	15.6	49	SW	16	7.2	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
St. Paul, Minn.	.....	.....	30.07	763.8	74	23.3	81	Calm	0	0	.....	2c	2ks	SW	.....	0	0	Fair	
St. Paul's Island, Alaska	.....	.....	29.59	751.6	45.5	7.5	92	NW	7	3.1	.....	.....	10n	.....	NW	0.23	5.8	Light rain	
Thatcher's Island, Mass.	.....	.....	29.87	758.7	36	2.2	90	NE	20	8.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Toledo, Ohio	.....	.....	30.00	762 0	64	17.8	94	SE	15	6.7	.....	.....	.....	.....	.....	0	0	Dense fog	
Tucson, Arizona	.....	.....	29.78	756.4	58	14.4	76	E	8	3.6	.....	5cs	0	SW	.....	0.05	1.3	Fair	
Tybee Island, Ga.	27.45	697.2	30.04	763.0	78	25.6	.....	SE	.....	.....	.....	2k	0	E	.....	0	0	Clear	
Vicksburg, Miss.	.....	.....	30.04	763.0	70	26 1	74	W	1	0.4	.....	0	2s	.....	.....	0	0	Fair	
	.....	.....	30.12	765.0	70 5	21.4	75	N	4	1.8	.....	8k	2ks	W	W	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.	24.24	615.7	29.72	754.9	60	15.6	55	Calm	0	0	.....	2c	0	.....	.....	0	0	Fair.	
Washington, D. C.	.....	.....	29.99	761.7	73	22.8	83	SW	3	1 3	.....	5c	0	W	.....	0.09	2.3	Fair.	
Wilmington, N. C.	.....	.....	30.07	763.8	75	23.9	76	S	4	1.8	.....	2cs	0	W	.....	0 08	2.0	Fair.	
Wood's Holl, Mass.	.....	.....	30.10	764.5	69	20.6	95	S	10	4.5	.....	0	5s	.....	S	0.29	7.4	Fair.	
Wytheville, Va.	27.70	703.6	29.81	757.2	59	15.0	81	W	3	1.3	.....	8c,ck	0	W	.....	0.12	3.0	Fair.	
Yankton, Dakota.	28.58	725.9	29.85	758.2	51	10.6	52	NW	20	8.9	.....	0	0	.....	.....	0	0	Clear.	
Yuma, Arizona.	.....	.....	29.79	756.7	86	30.0	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear.	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
SUB-SERIES.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.08	764.0	85	29.4	67	NE	7	3.1	.....	5k	10ks	E	E	1.35	34 3	Cloudy.	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	30.01	762.2	83	28.3	87	E	.....	.....	.....	0	8ks	.....	.....	0.22	5.6	Fair.	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.10	764.5	82	27.8	74	SE	4	1.8	.....	5c	0	SE	.....	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.82	757.4	83	28.3	75	WSW	1.2	0.5	.....	0	4ks	.....	.....	0	0	Fair.	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.02	762.5	85	29.4	79	NE	2.4	1.1	.....	10c, ck	2ks	SW	SE	0	0	Cloudy.	Charles Hasselbrink.
St. Georges, Bermudas.	.....	.....	30.25	768.3	80.0	26.7	76	SE	9.0	4.0	.....	0	5tk	.....	.....	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.	27.22	691.4	29.99	761.7	71	21.7	90	NE	2.5	1.1	.....	0	5k	.....	.....	0	0	Fine.	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.05	763.3	79	26.1	91	E	.....	.....	3	.....	1cn	.....	E	0.780	19.81	Rainy.	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.15	765.7	.....	.....	83.3	28.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.630	16.00	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.18	639.6	.....	.....	67.4	19.7	81	S	1	0.4	.....	8c	1ks	.....	.....	0	0	Cloudy.	Thomas Herran.
York Factory, B. A.	.....	.....	29.89	759.2	50	10.0	75	S	8	3.6	.....	2c	0	W	.....	0	0	.....	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.14	765.5	76	24.4	90	NE	.....	.....	5	.....	.....	.....	.....	0	0	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	30.07	763.8	57	13.9	78	Calm	0	0	.....	.....	.....	.....	.....	0	0	Misty.	F. L. Clarke.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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MARINE SERIES.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
Steamer Nova Scotian N. 50° 47′, W. 33° 41′.	NW by W	6	Heavy sea.	NW	Showery. 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.; 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 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.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,263.8 ft., or 1,301.1 m.; Santa 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.

.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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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, 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't.) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JUNE 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			30.08	764.0	74.3	23.5	72	E			3		0			0	0	Fair	Charnot.
Algiers			30.07	763.8	73.4	23.0	74	NE			3		8			0	0	Cloudy	Peter.
La Calle					74.1	23.4		NE			2		5			0	0	Fair	Kunta.
Tunis			30.05	763.2	83.1	28.4	39	E			3		2			0	0	Clear	Jacques.
Sfax			30.10	764.5	78.4	25.8	58	ESE			2		1			0	0	Clear	Chauvey.
Saida			30.09	764.3	84.2	29.0	29	NW			1		1			0	0	Clear	Millot.
Tebessa			30.07	763.7	84.9	29.4		NW			1		0			0	0	Clear	Colin.
Gerfville			30.08	764.1	88.3	31.3	18	WNW			2		1			0	0	Clear	Buard.
Laghouat			30.04	762.9	95.0	35 0	36	E			2		2			0	0	Clear	Guyot.
Biskra			30.06	763.5	93.0	33.9	34	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.

Agram			29.95	760.8	79.5	26.4	51	NE			3		5			Inap.	Inap.		Prof. Ivan Stosir.
Cracow, I. R. Observatory			30.11	764.7	70.9	21.6	74	W			1		7			0.063	1 6		Dr. Wierzbiski.
Eperies			29.99	761.7	73.4	23.0	74	N			1		9		S	0.089	2.26		Julius Mikolik.
Gratz			29.99	761.7	71.8	22.1	84	N			4		8			0.165	4.2		Andreas Rospini.
Hermannstadt	28.83	732.2	29.80	757.2	71.7	23.7	62	NE			3		5			1.150	29.20	Thunder-storm.	Prof. Reissenberger.
Kremsmünster	28.45	722.7	29.81	757.2	69 8	21.0	65	NE			3		7			0	0		Prof. C. Wagner.
Lemberg	28.78	731.0	30.08	764.0	77.2	25.1	69	NE			2		5			0.142	3.6		Dr. T. Stanecki.
Nyiregyhaza			29.91	759.6															Habsuda Daniel.
Pola					78.6	25.9	60	WNW			1		1k			0	0		I.R.Hydrographic Office.
Szegedin			29.97	761.3	80 1	26.7	50	E			1		6			0.398	10.10		Karl Stancel.
Trieste			29.87	758.8	82.4	28.0	59	Calm			0		4			0	0		Prof. V. Farolfi.
Vienna			30.03	762.7	72.9	22.7	66	NW			2		8			0.071	1.8		I. R. Central Met. Obs'y.

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

Brussels			30.04	762.9	77.5	25.3	50	NE			2		3		SE	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	.....	.....	30.14	765.5	59.0	15.0	.....	SSE	20	8.9	.....	....	0	.....	.....	0	0	Blue sky..	William Foswell.
Ardrossan	.....	.....	29.96	761.0	72	22.2	.....	ESE	.....	.....	2	.....	2	.....	.....	.....	.....	Blue sky..	William McNeil.
Armagh, Observatory	.....	.....	29.88	758.9	71.2	21.8	.....	SSE	29	13.0	.....	.....	3	.....	.....	.....	.....	Squally	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	29.81	757.2	68.9	20.5	.....	SE	... ...	.....	3	.....	8	.....	.....	.....	.....	*D. clouds	J. Dreyer.
Bradford	.....	.....	30.06	763.5	76.0	24.4	.....	E	.....	.....	1	.....	2	.....	.....	0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.05	763.3	83.5	28.6	.....	NE	.....	.....	3	.....	6	.....	.....	.....	.....	*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory	.....	.....	30.07	763.8	82.0	27.8	.....	SE	.....	.....	1	.....	4	.....	.....	.....	.....	*D. clouds	H. Todd.
Cardington	.....	.....	30.06	763.5	81.0	27.2	.....	SE	.....	.....	1	.....	1	.....	.....	.....	.....	Blue sky	John McLaren.
Carlisle	.....	.....	30.01	762.2	80.5	26.9	.....	S	.....	.....	3	.....	1	.....	.....	0	0	Blue sky	T. Bel , for J. Carmell.
Chatham, School M. E	.....	.....	30.06	763.5	71.0	21.7	.....	NE	.....	.....	2	.....	.....	.....	.....	.....	.....	Blue sky	Capt. J. Fellowes, R.E.
Dartmoor	23.56	725.4	30.02	762.5	66.8	19.3	.....	S	.....	.....	6	.....	6	.....	.....	.....	.....	*D. clouds	R. E. Power.
Donaghadee	.....	.....	29.93	760.2	62	16.7	.....	SE	.....	.....	4	.....	0	.....	.....	.....	.....	Blue sky	J. Mac Gowan.
Dover	.....	.....	30.05	763.3	69	20.6	.....	ENE	.....	.....	3	.....	2	.....	.....	.....	.....	¼ cl uded	J. Costello.
Eccles (near Manchester.)	.....	.....	30.01	762.2	79.8	26.6	.....	SE	15.4	6.9	.....	.....	5	.....	.....	.....	.....	*D. clouds	Thomas Mackereth.
Falmouth, Observatory	.....	.....	29.92	760.0	62.9	17.2	.....	SE	12	5.4	.....	.....	2	.....	.....	.....	.....	Hazy	The Staff.
Fort Napier, (Natal)	27.99	708.6	30.14	765.5	66.5	19.2	.....	N	.....	.....	1	.....	1	.....	.....	.....	.....	*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	30.06	763.5	85	29.4	.....	N	.....	.....	3	.....	5	.....	.....	.....	.....	*D. clouds	
Galway, Queen's College	.....	.....	29.74	755.4	60	15.6	.....	S	.....	.....	2	.....	3	.....	.....	.....	.....	*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.06	763.5	73.0	22.8	.....	W	.....	.....	4	.....	6	.....	.....	.....	.....	*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	29.98	761.5	70.2	24.6	.....	SSE	.....	.....	2	.....	1	.....	.....	.....	.....	Fine	Lewis Stuart.
Great Yarmouth	.....	.....	30.13	765.3	64	17.8	.....	E	.....	.....	2	.....	0	.....	.....	.....	.....	Hazy	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	30.05	763.3	81.8	27.7	.....	E	.....	.....	4	.....	1	.....	.....	.....	.....	Blue sky	The Staff. for G. B. Airy.
Guernsey	.....	.....	29.93	760.2	73.5	23.1	.....	ESE	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky	Dr. S. L. Hoskins.
Halifax, Moorside Obs'y	.....	.....	30.05	763.3	78.6	25.9	.....	SE	.....	.....	4	.....	2	.....	.....	.....	.....	*D. clouds	L. J. Crossley.
Helston	.....	.....	29.87	758.7	70	21.1	.....	E	.....	.....	6	.....	10	.....	.....	0	0	Fine	M. P. Moyle.
Holyhead	.....	.....	29.93	760.2	78	25.6	.....	SSW	.....	.....	2	.....	3	.....	.....	.....	.....	*D. clouds	John Tilston.
Kew, Observatory	.....	.....	30.03	762.7	78.9	26.1	.....	E	20	8.9	.....	.....	3	.....	.....	.....	.....	Hazy	The Staff.
Kingstown	.....	.....	29.89	759.2	66	18.9	.....	SSE	.....	.....	5	.....	4	.....	.....	.....	.....	*D. clouds	George Mitchell.
Leicester Museum	.....	.....	30.06	763.5	78.1	25.6	.....	SE	.....	.....	1	.....	3	.....	.....	.....	.....	*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)	.....	.....	29.99	761.7	76.8	24.9	.....	NW	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky	Corp'l F. Fraser, A. M. C.
Nairn	.....	.....	30.05	763.0	85	29.4	.....	Calm	.....	.....	0	.....	0	.....	.....	.....	.....	Clear	W. D. Lenny.
Nassau, (Bahamas)	.....	.....	30.13	765.3	78.4	25.8	.....	SE	.....	.....	2	.....	10	.....	.....	.....	.....	Raining	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	30.07	763.8	81.2	27.3	.....	SE	.....	.....	5	.....	2ck	.....	S,SE	0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.01	762.2	77.9	25.5	.....	ESE	.....	.....	4	.....	5	.....	.....	.....	.....	*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	29.97	761.2	79	26.1	.....	SE	.....	.....	1	.....	7	.....	.....	.....	.....	*D. clouds	J. Lucas.
Plymouth	.....	.....	29.92	760.0	75	23.9	.....	E	.....	.....	5	.....	4	.....	.....	.....	.....	*D. clouds	John Merrifield.
Roche's Point	.....	.....	29.82	757.4	62	16.7	.....	S	.....	.....	4	.....	10	.....	.....	.....	.....	Misty	W. Kennedy.
Saint Ann's Head	.....	.....	29.88	758.9	68	20.0	.....	ESE	.....	.....	6	.....	2	.....	.....	.....	.....	.....	John C. Walker.
Saint Helier, Jersey	.....	.....	29.92	760.0	83.2	28.4	.....	E	.....	.....	2	.....	2	.....	.....	.....	.....	¼ clo ded	A. P Amy.
Sandwick Manse, Orkneys	.....	.....	30.02	762.5	64.2	17.9	.....	SSE	38	17.0	.....	.....	0	.....	.....	.....	.....	Blue sky	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	30.19	766.8	59.7	15.4	.....	SSE	.....	.....	3	.....	0	.....	.....	.....	.....	Blue sky	F. Shaw.
Scutari Cemetery, Turkey	.....	.....	29.81	757.2	77.4	25.2	.....	SW	.....	.....	1	.....	7	.....	.....	Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.02	762.5	78.2	25.7	.....	SE	.....	.....	4	.....	2	.....	.....	0	0	Blue sky	W. F. Cooper.
Silloth Rectory	.....	.....	29.99	761.7	81.2	27.3	49	S	.....	.....	3	.....	0	.....	.....	0	0	Blue sky	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	30.01?	762.2?	.....	.....	.....	SE	.....	.....	3	.....	3	.....	.....	.....	.....	*D. clouds	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.	.....	.....	29.88	758.9	67	19.4	.....	SSE	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky	John Smith.
Stratfield Turgiss	.....	.....	30.04	763.0	79.0	26.1	.....	SE	.....	.....	2	.....	5	.....	.....	.....	.....	Blue sky	Rev. Charles H. Griffith.
Thurso	.....	.....	29.99	761.7	73	22.8	.....	SSE	.....	.....	5	.....	0	.....	.....	.....	.....	Blue sky	John Trotter.
Truro, Royal Institution	.....	.....	29.93	760.2	74	23.3	.....	SE	.....	.....	4	.....	4	.....	.....	.....	.....	*D. clouds	W. Newcombe.
Valencia, Observatory	.....	.....	29.73	755.1	59.9	15.5	.....	SE	31	13.9	.....	...	10	.....	.....	.....	.....	Misty	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	54	12.2	.....	E	.....	.....	1	.....	2	.....	.....	0	0	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.34	770.6	64.0	17.8	63	SE	10	4.5	.....	0	1	.....	.....	.....	.....	.....	The Staff. for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	30.02	762.5	58.0	14.4	81	NW	.....	.....	2	.....	10n	.....	.....	.....	.....	Light rain	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	30.06	763.5	79.0	26.1	.....	E	.....	.....	3	.....	4k	.....	.....	0	0	Fine	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.25	768.3	71.4	21.9	71	E	16.1	7.2	.....	.....	8	.....	WSW	0	0	*D. clouds	C. Meldrum
Melbourne, Observatory	.....	.....	30.27	768.8	47.0	8 3	85	W	12	5.4	.....	.....	10	.....	.....	0	0	Full	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	29.78	756.4	61	16.1	.....	SSE	.....	.....	4	3	3	.....	S	0.2	5.1	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	30.10	764.5	55	12.8	.....	S	.....	.....	7	0	3	.....	.....	.....	.....	.....	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 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen	.....	.....	30.31	769.8	66.2	19.0	63	NNE	.....	.....	2	.....	0	.....	.....	.....	.....	.....	.....
Fanöe	.....	.....	30.30	769.6	69.4	20.8	56	E	.....	.....	4	.....	1	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	29.70	754.3	43.9	6.6	47	ENE	.....	.....	2	.....	0	.....	.....	.....	.....	.....	.....
Stykkisholm, Iceland)	.....	.....	29.46	748.2	53.1	11.7	66	SE	.....	.....	6	.....	8	.....	.....	.....	.....	.....	.....
Thorshavn, (Faröe)	.....	.....	29.98	761.4	58.3	14.6	80	SE	.....	.....	6	.....	5	.....	.....	.....	.....	.....	.....
Vestervig	.....	.....	30.29	769.4	70.5	21.4	46	NE	.....	.....	4	.....	0	.....	.....	.....	.....	.....	.....

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

FRENCH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	29.93	760.7	66.2	19	59	SW	.....	.....	1	..c	..8	.....	SW	0	0	Clear	Normal School.
Amiens	.....	.....	30.03	762.7	84.2	29.0	46	NW	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	30.02	762.6	82.0	27.8	34	S	.....	.....	2	.....	0	.....	.....	0	0	Very clear	Normal School.
Bar-sur-Seine	.....	.....	29.97	761.1	80.1	26.7	30	E	.....	.....	2	.....	2	.....	SE	0	0	Slightly cl'dy	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.87	758.8	85.5	29.7	34	E	3.6	1.6	.....	.....	2	.....	SSW	0	0	Slightly cl'dy	Beaumette Observatory.
Beauvais	.....	.....	30.02	762.4	77.9	25.5	39	ESE	.....	.....	3	.....	2	.....	SE	0	0	Slightly cl'dy	Normal School.
Besançon	.....	.....	30.00	761.9	80.6	27	50	SE	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Bourg en Bresse	.....	.....	30.10	764.5	86.0	30	59	S	.....	.....	2	.....	..k	.....	N	.....	.....	.....	Normal School.
Bourges	.....	.....	29.95	760.6	75.9	24.4	65	NE	.....	.....	2	.....	1	.....	SW	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	29.82	757.5	75.7	24.3	60	SSE	.....	.....	1	.....	10	.....	.....	0	0	Stormy	Naval Observatory.
Carcassonne	.....	.....	29.97	761.2	71.8	22.1	37	E	.....	.....	3	.....	2	.....	W	0	0	Slightly cl'dy	Normal School.
Caen	.....	.....	30.032	777.97	74.3	23.5	79	SE	.....	.....	0	..c	.....	E	.....	0	0	.....	Normal School.
Chartres	.....	.....	29.96	761.0	81.7	27.6	.....	E	.....	.....	1	.....	4	.....	SE	0	0	.....	Normal School.
Clermont	.....	.....	29.91	759.6	83.3	28.5	35	E	.....	.....	2	.....	2	.....	SE	0	0	Slightly cl'dy	Puy de Dome Obs'y.
Commercy	.....	.....	30.03	762.8	74.1	23.4	56	E	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Commune de Greasque*	.....	.....	30.09	764.3	80.4	26.9	26	SW	.....	.....	4	.....	2	.....	SW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.00	762.0	78.6	25.9	57	NW	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
La Roche-sur-Yon	.....	.....	29.86	758.5	85.3	29.6	49	E	.....	.....	2	.....	2	.....	SW	0	0	Slightly cl'dy	Normal School.
Le Mans	.....	.....	30.11	764.7	80.8	27.1	71	SE	.....	.....	3	.....	2	.....	SE	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier	.....	.....	29.98	761.5	76.5	24.7	68	NE	.....	.....	.....	.....	0	.....	.....	0	0	Clear	Normal School.
Mâcon	.....	.....	30.04	762.9	75.7	24.3	74	Calm	.....	.....	0	.....	5	.....	NE	0	0	Cloudy	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	29.94	760.4	75.7	24.3	50	ENE	.....	.....	2	.....	1	.....	WSW	0	0	Clear	Normal School.
Nismes	.....	.....	30.07	763.6	80.6	30	34	S	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	29.92	759.9	80 6	27	36	ENE	.....	.....	1	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Paris, Observatory	.....	.....	29.98	761.0	79.5	26.4	38	E	.....	.....	2	2c	.....	W	.....	0	0	Slightly cl'dy	National Observatory.
Parthenay	.....	.....	29.85	758.1	87.8	31	44	NE	.....	.....	2	.....	2	.....	SE	0	0	Slightly cl'dy	Normal School.
Privas	.....	.....	30.02	762.6	82.2	27.9	.....	SW	.....	.....	2	.....	0	.....	.....	.....	.....	Clear	Normal School.
Rochefort, Observatory	.....	.....	29.92	759.9	86.0	30.0	63	SSE	.....	.....	3	.....	0	.....	.....	0	0	Blue sky	Naval Observatory.
Rouen	.....	.....	29.99	761.8	84.9	29.4	36	SE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Saint Lo	.....	.....	29.76	756.0	74.8	23.8	65	SE	.....	.....	1	.....	1	.....	NW	0	0	.....	Normal School.
Tarbes	28.06	735.7	30.02	762.5	68.0	20	.....	E	.....	.....	2	.....	8	.....	E	0	0	Cloudy	Normal School
Villefranche	.....	.....	29.98	761.4	83.3	28.5	54	SE	.....	.....	1	.....	2	.....	.....	0	0	Slightly cl'd	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.92	760.0	82.4	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	Blank	Blank	.....	L'Abbé Marchési.
Marseilles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Marseilles Observatory.
Mont-Louis	.....	.....	30.21	767.2	67.3	19.6	82	ESE	5.6	2.50	.....	.....	5	.....	SSW	0	0	.....	—. Faiguère.
Montsouris, Paris	.....	.....	29.99	761.7	82.6	28.1	36	ESE	.....	.....	2	.....	3	.....	S	0	0	.....	Montsouris Observ'tory.
Perpignan	.....	.....	30.01	762.3	68.2	20.1	73	SE	5.6	2.50	.....	.....	8	.....	NE	0	0	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.99	761.7	81.1	27.3	43	ENE	.....	.....	1	.....	0	.....	.....	0	0	Clear	E. Renou.
Toulouse	.....	.....	30.00	762.1	81.0	27.2	41	SE	.....	.....	3	.....	4	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	29.93	760.3	82.8	28.2	39	ESE	.....	.....	2	.....	2	.....	SSE	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.00	762.0	81.0	27.2	40	SE	.....	.....	3	.....	2	.....	.....	0	0	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 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.

Bamberg	.....	.....	30.11	764.7	75.7	24.3	48	E	.....	.....	3	.....	4	E	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.23	767.8	74.1	23.4	53	E	.....	.....	2	.....	5	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.24	768 1	76.1	24.5	40	NE	.....	.....	6	.....	8	.....	.....	0	0	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	30.02	762.5	78.8	26.0	54	E	.....	.....	3	.....	2	.....	.....	0	0	.....	A. Sena.
Cassel	.....	.....	30.14	765.5	79.3	26.3	40	E	.....	.....	7	.....	4	E	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	30.16	766.0	77.7	25.4	56	NE	.....	.....	3	.....	1	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.11	764.7	79.5	26.4	31	NNE	.....	.....	3	.....	2	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	30.02	762.6	71.1	21.7	62	NE	.....	.....	4	.....	3	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.25	768.4	70.2	21.2	57	ENE	.....	.....	3	.....	3k	ENE	.....	0	0	Very fine	Captain F. Hegemann.
Kiel	.....	.....	30.26	768.6	67.3	19.6	48	NE	.....	.....	2	.....	0	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	30.25	768.3	67.1	19.5	61	N	.....	.....	2	.....	2	.....	.....	0	0	.....	Prof. E. Luther
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	30.19	766.7	75.0	23.9	41	E	.....	.....	3	.....	4	E	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	30.26	768.7	64.0	17.8	71	NNW	.....	.....	5	.....	1k	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.19	766.9	77.5	25.3	51	.....	.....	.....	1	.....	0	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.30	769.6	65.8	18.8	75	NW	.....	.....	2	.....	3	.....	.....	0	0	.....	A. Lothes.
Posen	.....	.....	30.26	768.7	73.2	22.9	44	NNE	.....	.....	7	.....	3	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.02	762.5	79.2	26.2	42	NE	.....	.....	2	.....	2	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	30.05	763.3	70.1	21.5	47	SE	.....	.....	1	.....	4	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	30.21	767.3	74.8	23.8	44	NE	.....	.....	4	.....	3	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.02	762.6	70.9	20.6	41	E	.....	.....	7	.....	2	.....	.....	0	0	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	30.16	766.0	68.7	20.4	52	ENE	.....	.....	2	.....	0	.....	.....	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			29.85	758.3	80.6	27.0		S					k					Cloudy	

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

ITALIAN SERIES.

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

Udine			29.95	760.6	82.8	28.2	36	W	0.7	0.3			1			0	0		
Padua			29.97	761.2	79.9	26.6	46	E	4.3	1.9			0			0	0		
Vicenza			29.96	761.0	81.3	27.4	43	SE	1.8	0.8			1			0	0		
Verona			29.93	760.2	82.8	28.2	52	E			1		0			0	0		
Bergamo	28.66	728.0	29.95	760.6	82.4	28.0	48	S			1		3			0	0		
Domodossola	28.93	734.8	29.92	760.0	83.7	28.4	52	SSW			4		3			0	0		
Milan			30.00	761.9	82.6	28.1	44	NW			2		3	NW		0	0		
Pavia			29.99	761.8	80.1	26.7	42	SW			1		0			0	0		
Moncalieri			30.00	761.9	79.7	26.5	49	SSE	3.1	1.4			1			0	0		
Mondovi	28.13	714.6	30.00	761.9	78.4	25.8	34	WW			4		0			0	0		
Porto Maurizio			30.07	763.6	74.5	23.6	74	SW			2		1			0	0		
Genoa			30.02	762.5	75.9	24.4	58	SW	1.3	0.6			0			0	0		
Piacenza			29.99	761.8	79.5	26.4	40	N	1.8	0.8			1			0	0		
Parma			29.97	761.3	84.7	29.3	44	E			2		1			0	0		
Bologna			30.04	762.9	81.5	27.5	46	WNW			6		4	S		0	0		
Florence			30.00	762.0	83.8	28.8	37	NW			2		5	NE		0	0		
Leghorn			30.02	762.6	77.4	25.2	51	W	4.9	2.2			2			0	0		
Siena	28.80	731.5	29.98	761.5	78.6	25.9	42	NE	0.7	0.3			7	NE		0	0		
Urbino																			
Pesaro																			
Ancona			30.01	762.2	77.4	25.2	64	Calm			0		1			0	0		
Grosseto																			
Rome			29.98	761.6	81.0	27.2	52	SW	7.4	3.3			3	ESE		0	0		
Naples, O. U			29.99	761.8	80.6	27.0	65	SW			2		8	NE		0	0		
Lecce			29.92	759.9	78.1	25.6	42	W	18.6	8.3			5			0	0		
Cosenza			29.99	761.8	80.2	26.8	64	NW	3.1	1.4			7			0	0		
Riposto, (Sicily)			29.98	761.5	73.0	22.8	69	ENE			2		2			0	0		
Palermo			29.96	760.9	72.5	22.5	67	NE	2.6	1.1			1			0	0		
Caltanissetta	28.01	711.5	29.91	759.8	78.3	25.7	39	S			2		1	N		0	0		
Sub-Series.																			
Naples, S. R			30.02	762.5	75.7	24.3	64	SW	3.8	1.7			6	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, 806 m., or 1,003.9 feet; Mondovi, 555 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.

Flushing			30.10	764.5	78.4	25.8		SE			4								
Groningen					75.7	24.3		ENE			4								
Helder			30.15	765.9	68.0	20.0		ENE			2								
Utrecht			30.08	764.1	80.4	26.9	50	ESE			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.

Bergen			30.32	770.1	65.5	18.6	57	NW	2.2	1.0			0			0	0		
Brönö			30.42	772.7	60.1	15.8	64	NNE	11	5			2			0	0		
Christiania			30.34	770.6	75.2	24.0	44		4.5	2.0			0			0	0		
Tromsö			30.45	773.4	52.5	11.4	76	NW	2	1			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 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.		Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Winds. Direction.	Winds. Velocity.		Winds. Force.	Clouds. Amount.		Clouds. Direction.		Rain-fall or melted snow in the past 24 hours.		Weather.	Observer.
	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.		
Angra, (Azores,)	.....	.....	30.02	762.4	65.5	18.6	63	WNW	11.4	5.11	.....	.....	5	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Maior	.....	.....	30.03	762.9	68.7	20.4	71	SSW	13.4	5.97	.....	.....	10	SSW	.....	0.067	1.7	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.13	765.3	70.7	21.5	62	SW	12.6	5.64	.....	.....	0	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.10	764.4	62.4	16.9	75	SSW	15.0	6.7	.....	.....	10	.....	.....	0.244	6.2	.....	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	.....	.....	30.11	764.9	73.6	23.1	51	SE	20	9	.....	.....	8	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.08	763.9	72.5	22.5	41	NW	11	5	.....	.....	2	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.13	765.3	72.0	22.2	42	NNW	9	4	.....	.....	0	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.06	763.6	60.4	15.8	82	NW	18	8	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Kuoplo	.....	.....	30.15	765.7	63.9	17.7	68	N	29	13	.....	.....	8	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.89	759.3	65.5	18.6	92	N	13	6	.....	.....	9	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.80	758.5	79.9	26.6	63	SW	25	11	.....	.....	7	.....	.....	.....	.....	Thunder-storm.	Kurdukof.
Kertch	.....	.....	29.82	757.3	84.6	29.2	54	S	7	3	.....	.....	0	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.90	759.5	74.7	23.7	42	N	4	2	.....	.....	2	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.82	757.4	90.5	32.5	33	E	13	6	.....	.....	3	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.01	762.2	52.0	11.1	59	NNE	18	8	.....	.....	8	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.47	723.1	29.77	756.1	93.2	34.0	22	SW	4	2	.....	.....	2	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.76	755.9	91.6	33.1	32	S	9	4	.....	.....	2	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.74	755.5	77.4	25.2	38	W	4	2	.....	.....	4	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.95	735.3	29.92	759.9	60.6	19.2	83	SSE	4	2	.....	.....	3	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.69	754.2	94.1	34.5	18	NNE	4	2	.....	.....	5	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.17	715.5	29.77	756.1	82.6	28.1	44	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.87	758.6	52.7	11.5	52	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.44	747.8	46.2	7.9	83	SW	16	7	.....	.....	10	.....	.....	.....	.....	Raining.	Marks.
Irkutsk	28.20	716.4	29.53	750.1	59.9	15.5	90	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.65	753.0	85.3	29.6	29	SW	9	4	.....	.....	3	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	29.75	755.6	55.4	13.0	94	SE	11	5	.....	.....	10	.....	.....	Blank	Blank	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	45.0	7.2	98	ENE	4	2	.....	.....	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, 308.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	29.88	759.0	88.3	31.3	26	S	8.9	4.00	.....	0	6	.....	.....	0	0	Cloudy.	Royal Observatory.
San Fernando	.....	.....	30.08	764.1	68.4	20.2	65	SW	9.2	4.1	.....	0	10	.....	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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	30.32	770.2	64.4	18.0	92	N	.....	.....	6	.....	1	.....	.....	0	0	.....	
Umea	.....	.....	30.39	771.8	65.5	18.6	60	E	.....	.....	4	.....	4	.....	.....	0	0	.....	
Hernosand	.....	.....	30.37	771.3	71.1	21.7	46	ESE	.....	.....	4	.....	3	.....	.....	0.026	0.5	.....	
Stockholm	.....	.....	30.31	769.8	70.5	21.4	35	NNE	.....	.....	6	.....	0	.....	.....	0	0	.....	
Wisby	.....	.....	30.31	770.7	65.1	18.4	62	NNE	.....	.....	6	.....	3	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.33	770.3	71.1	21.7	87	NNE	14.1	6.3	.....	.....	1	.....	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	28.63	727.3	30.01	762.2	71.8	22.1	57	N	.....	.....	1	.....	1	.....	.....	0	0	Clear	The Observatory.
Zurich	28.45	722.6	30.01	762.3	76.6	24.8	55	E	.....	.....	1	.....	1	.....	.....	0	0	Clear	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +0.6 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.

Constantinople	.....	.....	29.87	758.8	80.2	26.8	48	SW	2	1.0	.....	.....	7	.....	SW	0	0	.....	
Fao, (Persian Gulf)	.....	.....	29.72	755.0	96.8	36.0	.....	NW	.....	.....	4	.....	10	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.91	759.8	77.4	25.2	.....	E	.....	.....	2	.....	2	.....	.....	.....	.....	Light rain	
Valona	.....	.....	29.89	759.3	79.0	26.1	.....	W	.....	.....	2	.....	5	.....	.....	Blank	Blank	.....	
Varna	.....	.....	29.84	758.0	69.8	21.0	.....	NE	.....	.....	2	.....	5	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.92	760 0	83.3	28.5	51	N	.....	.....	1	.....	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.

Bathurst, N. B	.....	.....	29.88	758.9	75.0	23.9	78	SW	18	8.0	.....	0	8	.....	.....	0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.94	760.5	74	23.3	.....	SW	1	0.4	.....	0	2s	.....	SW	0	0	Fair	W. R Bigg.
*Chatham, N. B	.....	.....	29.96	761.0	70	21.1	89	SW	11	4.9	.....	2k	8ks	SW	SW	0	0	Cloudy	G. A. Blair.
Charlottetown P. E. Island	.....	.....	30.06	763.5	67	19.4	87	S	13	5.8	.....	5c	0	.....	.....	0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.88	758.9	76.9	24.9	91	S	.....	.....	2	.....	.....	.....	.....	0	0	Fair	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.92	760.0	70.0	21.1	84	E	.....	.....	1	0	4n	.....	.....	0	0	.....	H. A. Johnson.
Esquimault, B C	.....	.....	29.79	756.7	54.7	12.6	97	SE	2	0.9	.....	10cs	0	.....	.....	0.02	0.5	Cloudy	W. H. Bevis.
Fredericton, N. B	.....	.....	30.02	762.5	74.1	23.4	76	S	6	2.7	.....	0	3ks	.....	.....	0.07	1.8	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.64	752.8	59	15.0	79	W	10	4.5	.....	2c	Haze	W	W	0	0	Fair	James Stewart.
Goderich, Ontario	.....	.....	29.88	758.9	58.3	14.6	88	S	.....	.....	4	4ck	0	W	.....	0.051	1.30	Clearing	H. J. Strang, M. A.
Granton, Ontario	28.80	731.5	29.88	758.9	55.2	12.9	.....	SW	.....	.....	2	.....	10n	.....	.....	0	0	Cloudy	James Grant.
*Halifax, N. S	.....	.....	30.08	764.0	65	18.3	97	SE	1	0.4	.....	.....	8n	.....	.....	0.23	5.8	Cloudy	F. Allison, M. A.
*Kingston, Ontario	.....	.....	29.94	760.5	65	18.3	78	SW	5	2.2	.....	5cs	0	.....	.....	0.03	0.8	Fair	S. Woods, M. A.
Little Glace Bay, N. S	.....	.....	30.11	764.8	75.5	24.2	93	W	8	3.6	.....	5k	0	W	.....	0	0	Fair	C. H. Rigby.
*Montreal, Quebec	.....	.....	29.91	759.7	70	21.1	83	S	2	0.9	.....	2ck	2ks	W	.....	0.05	1.3	Clear	C. H. McLeod, C E.
*Ottawa, Ontario	.....	.....	29.91	759.7	67	19.4	74	S	6	2.7	.....	5cs	0	S	.....	Inap.	Inap	Fair	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.85	758.2	56	13.3	87	SW	12	5.4	.....	2k	5ks	SW	S S	0.21	5.3	Fair	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	29.89	759.2	62	16.7	72	SW	13	5.8	.....	8ck	0	SW	.....	0	0	Fair	H. Morgan.
Port Hastings, N. S	.....	.....	30.14	765.5	64.2	17.9	.....	Calm	0	0	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
*Port Stanley, Ontario	.....	.....	29.90	759.4	60	15.6	74	W	10	4.5	.....	.....	8ks	.....	SW	0	0	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	29.93	760.2	75	23.9	77	Calm	0	0	.....	5k	8n	SE	SE	0.68	17.3	Fair	Capt. Ashe, R. N.
St. John, N. B	.....	.....	30.08	764.0	57	13.9	94	S	6	2.7	.....	.....	Fog	.....	.....	0.02	0.5	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.81	757.2	59	15.0	78	SW	6	2.7	.....	.....	10n	.....	.....	0.10	2.5	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	29.81	757.2	61	16.1	66	W	6	2.7	.....	5k	0	W	.....	Inap.	Inap.	Cloudy	R. J. Cole.
Stratford, Ontario	28.60	726.4	29.86	758.4	55.0	12.8	91	SW	11	4.9	.....	10k	0	SW	.....	0	0	Fair	C. J. Macgregor, M. A.
*Sydney, C. B	.....	.....	30.11	764.8	75	23.9	79	SW	11	4.9	.....	2cs	2ks	W	SW	0	0	Clear	T. C. Hill.
*Toronto, Ontario	.....	.....	29.9	759.4	63	17.2	73	SW	10	4.5	.....	5cs	5cs?	SW	SW	Inap.	Inap.	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.88	758.9	60.3	15.7	73	NW	10	4.5	.....	10ck	0	W	.....	Inap.	Inap.	Fine	J. Montgomery.
Sub-Series.																			
St. John's, Newfoundland	.....	.....	30.17	766.3	69	20.6	90	W	.....	.....	.....	0	5cs	.....	.....	0	0	Fair	John Delaney.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals for Brockville, Charlottetown, St. Johns, N. F., Stavner 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.	.....	.....	29.04	760.5	70	21.1	84	S	1	0.4	.....	.....	10ks	.....	S	0.03	0.8	Cloudy	
Alpena, Mich.	.....	.....	29.75	755.6	55	12.8	68	SW	6	2.7	.....	.....	10s	.....	SW	0.05	1.3	Cloudy	
Atlantic City, N. J.	.....	.....	30.02	762.5	70	21.1	95	SW	4	1.8	.....	5k	0	SW	.....	0	0	Fair	
Augusta, Ga.	.....	.....	30.09	764.3	70	21.1	75	NW	2	0.9	.....	2k	0	W	.....	0	0	Clear	
Baltimore, Md.	.....	.....	30.01	762.2	74	23.3	68	SW	3	1.3	.....	5c	2s	SW	.....	0	0	Fair	
Barnegat, N. J.	.....	.....	30.03	762.7	68	20.0	90	SW	12	5.4	.....	10k	0	SW	.....	0	0	Cloudy	
Benton, Montana	27.90	685.8	29.80	756.9	65	18.3	64	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.06	712.7	29.05	753.1	55	12.8	68	N	2	0.9	.....	Haze	Haze	N	N	0	0	Hazy	
Boston, Mass.	.....	.....	30.06	763.5	74	23.3	72	S	7	3.1	.....	5ck	Haze	W	.....	Inap.	Inap.	Hazy	
Breckenridge, Minn.	.....	.....	29.81	757.2	47	8.3	77	W	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	29.87	758.7	64.5	18.1	61	S	7	3.1	.....	5k	5s	S	S	Inap.	Inap.	Cloudy	
Burlington, Vt.	.....	.....	29.95	760.7	69	20.6	70	S	4	1.8	.....	5k	0	.....	.....	0.21	5.3	Fair	
Cairo, Ill.	.....	.....	29.97	761.2	59	15.0	87	S	5	2.2	.....	5k	0	W	.....	0.01	0.3	Fair	
Cape Henry, Va.	.....	.....	30.01	762.2	80	26.7	74	W	7	3.1	.....	5c	2ks	W	W	0.05	1.3	Cloudy	
Cape Lookout, N. C.	.....	.....	30.02	762.5	76	24.4	72	SW	9	4.0	.....	0	Ha...	.....	.....	0	0	Clear	
Cape May, N. J.	.....	.....	30.00	762.0	79	26.1	73	W	5	2.2	.....	2c	2k	.....	.....	0	0	Fair	
Charleston, S. C.	.....	.....	30.02	762.5	67	19.4	90	SE	12	5.4	.....	5k	Fog	SW	.....	0	0	Foggy	
Cheyenne, Wyoming	23.98	609.1	29.02	760.0	49	9.4	59	W	4	1.8	.....	2cs	0	SW	.....	0	0	Fair	
Chicago, Ill.	.....	.....	29.82	757.4	55	12.8	68	SW	8	3.6	.....	8c	0	.....	.....	0	0	Fair	
Cincinnati, Ohio	.....	.....	29.88	758.9	65	18.3	63	SE	7	3.1	.....	.....	10s	.....	SW	0.06	1.5	Cloudy	
Cleveland, Ohio	.....	.....	29.91	759.7	61.2	16.2	60	S	10	7.2	.....	5ck	0	.....	.....	Inap.	Inap.	Fair	
Colorado Springs, Col.	24.08	611.6	29.05	760.7	52	11.1	59	N	4	1.8	.....	0	5ks	.....	W	Inap.	Inap.	Fair	
Louisiana, Tex.	.....	.....	29.98	761.5	73	22.8	90	S	7	3.1	.....	2c	1s	.....	.....	0	0	Fair	
Davenport, Iowa	.....	.....	29.88	758.9	52	11.1	90	NW	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Denison, Texas	.....	.....	29.99	761.7	69	20.6	90	SE	8	3.6	.....	.....	10s	.....	NW	0.01	0.3	Cloudy	
Denver, Col.	24.75	628.6	29.97	761.2	53	11.7	60	Calm	0	0	.....	5c	0	.....	.....	0	0	Cloudy	
Detroit, Mich.	.....	.....	29.85	758.2	55	12.8	73	SW	0	0	.....	.....	10s	.....	.....	0	0	Fair	
Dodge City, Kan.	27.35	694.7	29.56	750.8	63	17.2	61	E	8	3.6	.....	.....	10s	.....	SW	0.03	0.8	Cloudy	
Dubuque, Iowa	.....	.....	29.83	757.7	53	11.7	79	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Duluth, Minn.	.....	.....	29.77	756.1	52	11.1	72	NW	4	1.8	.....	.....	10s	.....	.....	0.05	1.3	Cloudy	
Eastport, Me.	.....	.....	30.04	763.0	56	13.3	93	S	12	5.4	.....	5k	5s	W	.....	0.11	2.8	Cloudy	
Erie, Pa.	.....	.....	29.88	758.9	65	18.3	58	SW	7	3.1	.....	.....	Fog	.....	.....	0	0	Foggy	
Escanaba, Mich.	.....	.....	29.74	755.4	50	10.0	86	NW	12	5.4	.....	.....	10ks	.....	SW	0	0	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	29.89	759.2	69	20.6	79	S	4	1.8	.....	.....	10s	.....	NW	0	0	Cloudy	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	2	0.9	.....	8k	0	S	.....	0	0	Fair	
Fort Sill, Indian T.	28.72	729.5	29.78	756.4	71	21.7	75	S	8	3.6	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sully, Dakota	28.18	715.8	29.80	756.9	56	13.3	62	SE	4	1.8	.....	2cs	0	S	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.02	762.5	80	26.7	82	S	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Grand Haven, Mich.	.....	.....	29.81	757.2	54	12.2	80	SW	14	6.3	.....	1c	0	.....	.....	0	0	Clear	
Indianapolis, Ind.	.....	.....	29.88	758.9	57	13.9	81	S	4	1.8	.....	.....	10s	.....	SW	1.43	36.3	Clear	
Indianola, Texas	.....	.....	29.98	761.5	79	26.1	78	S	12	5.4	.....	.....	10s	.....	.....	0.11	2.8	Cloudy	
Jacksonville, Fla.	.....	.....	30.07	763.8	82	27.8	78	E	4	1.8	.....	5c	0	S	.....	0.08	2.0	Cloudy	
Keokuk, Iowa	.....	.....	29.85	758.2	56	13.3	68	NW	5	2.2	.....	8ck	0	SW	.....	0	0	Fair	
Key West, Fla.	.....	.....	30.06	763.5	81.4	27.5	87	SE	3	1.3	.....	2k	0	NW	.....	0.04	1.0	Fair	
Kittyhawk, N. C.	.....	.....	30.05	763.3	77	25.0	77	W	11	4.9	.....	5ck	Haze	S	SE	1.09	27.7	Fair	
Knoxville, Tenn.	.....	.....	30.07	763.8	61	16.1	88	NE	2	0.9	.....	2ck	0	.....	.....	0	0	Clear	
La Crosse, Wis.	.....	.....	30.07	763.8	61	16.1	88	NE	2	0.9	.....	1k	0	SW	.....	0.19	4.8	Clear	
Leavenworth, Kan.	.....	.....	29.83	757.7	51	10.6	80	W	3	1.3	.....	.....	10s	.....	W	0.09	2.3	Cloudy	
Lexington, Ky.	.....	.....	29.90	759.4	57	13.9	75	Calm	0	0	.....	5c	0	NW	.....	0	0	Fair	
Long Branch, N. J.	28.86	733.0	29.94	760.5	63	17.2	77	S	16	7.2	.....	5c	0	S	.....	0	0	Fair	
Louisville, Ky.	.....	.....	30.03	762.7	66	18.9	90	SE	5	2.2	.....	10ck	0	SW	.....	0.25	6.3	Cloudy	
Lynchburg, Va.	.....	.....	29.92	760.0	63	17.2	67	S	12	5.4	.....	.....	8ks	.....	SW	Inap.	Inap.	Cloudy	
Malone, N. Y.	.....	.....	30.03	762.7	67	19.4	68	Calm	0	0	.....	8c	0	SW	.....	0	0	Cloudy	
Manhattan, Kan.	.....	.....	29.82	757.4	69	20.6	70	SW	7	3.1	.....	0	0	.....	.....	0.15	3.8	Clear	
Marquette, Mich.	28.75	730.3	29.88	758.9	53	11.7	79	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn.	.....	.....	29.74	755.4	47	8.3	92	NE	4	1.8	.....	.....	10s	.....	NW	0	0	Cloudy	
Milwaukee, Wis.	.....	.....	30.00	762.0	67	19.4	84	SW	8	3.6	.....	5cs	0	W	.....	0.28	7.1	Fair	
Mobile, Ala.	.....	.....	29.82	757.4	52	11.1	86	SW	7	3.1	.....	.....	8ks	.....	SW	0.03	0.8	Cloudy	
Montgomery, Ala.	.....	.....	30.10	764.5	75	23.9	72	S	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Morgantown, W. Va.	.....	.....	30.10	764.5	73	22.8	50	SE	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Mt. Washington, N. H.	.....	.....	29.95	760.7	70	21.1	57	S	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Nashville, Tenn.	23.92	607.8	30.28	769.1	49	9.4	100	W	24	10.7	.....	.....	Fog	.....	.....	0.43	10.9	Foggy	
New Haven, Conn.	.....	.....	29.90	761.0	70	21.1	56	SW	5	2.2	.....	2k	0	S	.....	0	0	Clear	
New London, Conn.	.....	.....	30.05	763.3	71	21.7	80	W	4	1.8	.....	8k	Haze	SW	.....	0.10	2.5	Cloudy	
New Orleans, La.	.....	.....	30.07	763.8	70	21.1	70	S	7	3.1	.....	20k	2s	SW	SW	0	0	Fair	
Newport, R. I.	.....	.....	30.07	763.8	78	25.6	71	S	4	1.8	.....	5k	0	SW	.....	Inap.	Inap.	Fair	
New York, N. Y.	.....	.....	30.06	763.5	70	21.1	84	S	12	5.4	.....	5cs	0	W	.....	0	0	Fair	
Norfolk, Va.	.....	.....	30.03	762.7	67	19.4	90	SW	4	1.8	.....	.....	10n	.....	SW	0.09	2.3	Light rain	
North Platte, Neb.	.....	.....	30.05	763.3	81	27.2	66	SW	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb.	27.02	686.3	29.52	749.8	55	12.8	68	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	28.83	732.3	29.82	757.9	54	12.2	79	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	
Pembina, Dakota	.....	.....	29.92	760.0	69	20.6	62	SE	7	3.1	.....	2ck	2s	SW	.....	0	0	Fair	
Philadelphia, Penn.	.....	.....	29.66	753.4	59	15.0	76	W	4	1.8	.....	2cs	Haze	.....	.....	0	0	Cloudy	
Pike's Peak, Colorado	.....	.....	30.01	762.2	72	22.2	74	SW	8	3.6	.....	5ck	0	SW	.....	0.14	3.6	Fair	
Pittsburgh, Penn.	17.94	455.7	29.15	755.8	35	1.7	52	W	16	7.2	.....	5c	0	.....	.....	0.13	3.3	Fair	
Port Huron, Mich.	.....	.....	29.93	760.2	67	19.4	54	S	19	4.5	.....	8ck	0	SW	.....	0	0	Fair	
Portland, Me.	.....	.....	29.84	757.9	53	11.7	80	SW	10	4.5	.....	.....	10s	.....	SW	0.04	1.0	Cloudy	
Portland, Oregon	.....	.....	30.01	762.2	69	20.6	85	S	5	2.2	.....	8k	Fog	SW	.....	0.03	0.8	Cloudy	
Punta Rassa, Fla.	.....	.....	29.87	758.7	62	16.7	77	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Rochester, N. Y.	.....	.....	30.07	763.8	81.5	27.5	78	E	4	1.8	.....	1cs	Sm'e	SW	.....	0	0	Cloudy	
Salt Lake City, Utah	25.44	646.2	29.90	759.4	64	17.8	67	SW	7	3.1	.....	8k	2s	S	SW	0.01	0.3	Cloudy	
Sandy Hook, N. J.	.....	.....	29.77	756.1	60.9	16.1	80	S	4	1.8	.....	Haze	Haze	.....	.....	0	0	Hazy	
San Diego, Cal.	.....	.....	30.02	762.5	71	21.7	85	SW	5	2.2	.....	.....	10ks	.....	SW	0.09	2.3	Cloudy	
San Francisco, Cal.	.....	.....	29.94	760.5	63	17.2	83	S	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Santa Fé, N. M.	.....	.....	29.93	760.2	60	15.6	94	SW	6	2.7	.....	.....	Fog	.....	.....	0	0	Foggy	
Savannah, Ga.	23.27	591.0	29.81	757.2	57	13.9	69	NE	3	1.3	.....	5k	0	W	.....	Inap.	Inap.	Fair	
Shreveport, La.	.....	.....	30.08	764.0	84	28.9	67	SW	1	0.4	.....	5k	0	SW	.....	Inap.	Inap.	Fair	
Smithville, N. C.	.....	.....	30.08	764.0	66	18.9	84	Calm	0	0	.....	10ck	0	W	.....	0.07	1.8	Cloudy	
Springfield, Mass.	.....	.....	30.10	764.5	78	25.6	72	SW	3	1.3	.....	2k	0	W	.....	0	0	Fair	
St. Louis, Mo.	.....	.....	30.01	763.0	68.5	20.3	90	S	8	3.6	.....	.....	10n	.....	.....	0.11	2.8	Light rain	
St. Marks, Fla.	.....	.....	29.93	760.2	66	18.3	74	NW	8	3.6	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
St. Paul, Minn.	.....	.....	30.08	764.0	75	23.9	81	N	4	1.8	.....	5cs	0	SW	.....	0	0	Fair	
St. Paul's Island, Alaska	.....	.....	29.81	757.2	52	11.7	73	NW	1	0.4	.....	.....	10ks	.....	NW	0.04	1.0	Cloudy	
Thatcher's Island, Mass.	.....	.....	29.84	757.9	34	1.1	90	NW	9	4.0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Toledo, Ohio	.....	.....	29.85	758.2	56	13.3	89	S	11	4.9	.....	.....	.....	.....	.....	0	0	Dense fog	
Tucson, Arizona	27.44	697.0	30.03	762.7	81	27.2	.....	E	.....	.....	.....	0	Haze	.....	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30.07	763.8	81	27.2	74	Calm	0	0	.....	0	5ks	.....	W	0	0	Fair	
Vicksburg, Miss.	.....	.....	30.08	764.0	68.5	20.3	82	S	3	1.3	.....	0	8ks	.....	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.	24.15	613.4	29.63	752.6	60	15.6	49	Calm	0	0	.....	1c	0	NW	.....	Inap.	Inap.	Clear.	
Washington, D. C.	.....	.....	30.02	762.5	73	22.8	69	SW	3	1.3	.....	2ck	8k-	SW	SW	0	0	Cloudy.	
Wilmington, N. C.	.....	.....	30.09	764.3	78	25.6	73	SW	6	2.7	.....	1cs	0	SW	.....	0	0	Clear.	
Wood's Holl, Mass.	.....	.....	30.08	764.0	67	19.4	90	S	11	4.9	.....	0	0	.....	.....	0	0	Clear.	
Wytheville, Va.	27.74	704.8	29.85	758.2	60	15.6	81	Calm	0	0	.....	1cs	0	.....	.....	0	0	Clear.	
Yankton, Dakota.	28.63	727.2	29.90	759.4	52	11.1	66	Calm	0	0	.....	Haze	0	.....	.....	0	0	Clear.	
Yuma, Arizona.	.....	.....	29.79	756.7	76	24.4	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear.	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.07	763 8	83	28.3	75	E	8	3.6	.....	5k	10ks	E	NE	0.10	2.5	Cloudy..	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	30.00	762.0	82	27.8	87	E	.....	.....	.....	0	8ks	.....	.....	0.13	3.3	Fair.	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.19	766.8	81	27.2	78	NW	2	0.9	.....	5ck	2s	E	.....	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.83	757.7	84	28.9	70	N	2.4	1.1	.....	8c	0	N	.....	0.29	7.4	Fair.	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.03	762.7	81	27.2	79	NE	1.2	0.5	.....	2c	0	.....	.....	0.58	14.7	Fair.	Charles Hasselbrink.
St. Georges, Bermudas.	.....	.....	30.31	769.9	75.5	24.2	80	SE	9.0	4.0	.....	0	1k	.....	.....	0	0	Fair.	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica W. I.	27.23	691.6	30.00	762.0	71	21.7	90	NE	5.0	2.2	.....	0	5k	.....	.....	0	0	Fine.	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.06	763.5	80	26.7	87	SE	.....	.....	2	6k	5k	E	.....	0.850	21.59	Cloudy.	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.8	.....	.....	82.8	28.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.004	25.50	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.19	639.8	.....	.....	66.0	18.9	82	Calm	0	0	.....	7k	3ks	.....	.....	0.30	7.6	Cloudy.	Thomas Herran
York Factory, B. A.	.....	.....	29.01	752.1	42	5.6	96	N	4	1.8	.....	.....	9s	.....	.....	1.10	27.9	.....	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.15	765.8	76	24.4	90	NE	.....	.....	5	.....	.....	.....	.....	0	0	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. L. Clarke.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	
}	.....	.....	.....	.....	.....
}	.....	.....	.....	.....	.....
Steamer Nova Scotian }	NW by W	9	Rough	.....	Squally.
N. 50° 06′, W. 37° 40′. }					
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....

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 2.89.2 ft., or 881.5 m.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft, or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,298.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are 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, 0.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. 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, 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 JUNE 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			30.11	764.9	72.0	22.2	67	NNW			1		0			0	0	Hidden	Charnot.
Algiers			30.08	763.9	72.7	22.6	75	N			3		4			0	0	Fair	Peter.
La Calle					75.0	23.9		NW			1		5			0	0	Fair	Kuntz.
Tunis			30.03	762.8	79.9	26.6	45	NNE			2		0			0	0	Cloudy	Jacques.
Sfax			30.08	764.0	83.1	28.4	49	E			2		1			0	0	Clear	Chauvey.
Saida			30.11	764.9	82.4	28.0	27	NW			1		1			0	0	Clear	Millot.
Tebessa			30.07	763.8	83.3	28.5		NNW			2		10			0	0	Hidden	Colin.
Gerfville			30.10	764.4	87.8	31.0	23	NNW			2		2			0	0	Clear	Buard.
Laghouat			30.03	762.8	102.2	39.0	55	SW			7		2			0	0	Clear	Guyot.
Biskra			30.02	762.4	91.8	33.2	54	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			29.87	758.8	79.0	26.1	54	SW			2		8			1.169	29.7		Prof. Ivan Stosir.
Cracow, I. R. Observatory			29.99	761.8	72.7	22.6	56	NE			1		10			0	0		Dr. Wierzbiski.
Eperies			29.91	759.6	72.9	22.8	64	N			1		9		S	0	0		Julius Mikolik.
Gratz			29.91	759.6	64.4	18.0	81	SW			3		8			0.094	2.4		Andreas Rospini.
Hermannstadt	28.72	729.6	29.91	759.6	64.4	18.0	81	SW			3		8			0.394	10.40	Raining	Prof. Reissenberger.
Kremsmünster	28.39	721.2	29.74	755.5	73.4	23.0	58	NW			1		5			0.409	10.40		Prof. C. Wagner.
Lemberg	28.69	726.4	29.88	758.9	74.1	23.4	53	E			2		2			0	0		Dr. T. Stanecki.
Nyiregyhaza			29.83	757.6	72.1	22.3	77	NE			5		5			0	0		Habzsuda Daniel.
Pola																			
Szegedin			29.89	759.3	80.4	26.9	50	W			1		0cks			0	0		I.R.Hydrographic Office.
Trieste			29.79	756.7	77 2	25.1	61	N			2		8			0	0		Karl Stancel.
Vienna			29.88	759.0	82.8	28.2	40	NW			1		6			0	0		Prof. V. Farolfi.
			29.89	759.2	78.1	25.6	30	N			2		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			29.88	759.0	78.0	25.9	53	E			3		2		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			30.11	764.8	57.5	14.2		SE	14	6.3			2			0	0	Blue sky	William Boswell.
Ardrossan			29.84	757.9	78	25.6		ESE			6		4					*D. clouds	William McNeil.
Armagh, Observatory			29.78	756.4	68.9	20.5		SSE	18	8.0			9					Squally	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.76	755.9	60.7	15.9		SSW			1		10					Showery	J. Dreyer.
Bradford			29.88	758.9	75.4	24.1		E			0		1			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.07	763.8	79.0	26.1		SE			1		10					Raining	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			29.89	759.2	83.0	28.3		ESE			2		2					Hazy	H. Todd.
Cardington			29.88	758.9	84.0	28.9		SE			3		2					Blue sky	John McLaren.
Carlisle			29.90	759.4	79.4	26.3		E			7		1			0	0	Blue sky	T. Bel, for J. Carmell.
Chatham, School M. E			29.87	758.7	71.5	21.9		NE			2		2					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.47	723.1	29.96	761.0	56.0	13.3		SW			1		10					Foggy	R. E. Power.
Donaghadee			29.76	755.9	67	19.4		SSW			4		0					Blue sky	J. Mac Gowan.
Dover			29.88	758.9	70	21.1		ENE			2		2					¼ clouded	J. Costello.
Eccles, (near Manchester.)			29.87	758.7	83.3	28.5		SE	7.8	3.5			4					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			29.89	759.2	61.5	16.4		WSW	13	5.8			10					Overcast	The Staff.
Fort Napier, (Natal)	27.94	709.7	30.18	766.6	65.4	18.6		SE			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.04	763.0	83	28.3		N			1		7					*D. clouds	
Galway, Queen's College			29.81	757.2	57	13.9		S			7		10					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.09	764.3	75.0	23.9		W			6		6					*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			29.87	758.7	68.7	20.4		NE			6		2					Fine	Lewis Stuart.
Great Yarmouth			29.96	761.0	62	16.7		E			5		0					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			29.89	759.2	82.3	27.9		ESE			2		3					Blue sky	The Staff, for G. B. Airy.
Guernsey			29.92	760.0	63	17.2		WNW			2		8					Hazy	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y			29.89	759.2	78.4	25.8		ESE			4		2					*D. clouds	L. J. Crossley.
Helston			29.85	758.2	64	17.8		SW			4		10			0	0	Overcast	M. P. Moyle.
Holyhead			29.93?	760.2?	62	16.7		SSW			4		10					Hazy	John Tilston.
Kew, Observatory			29.86	758.4	82.7	28.2		Sb	16	7.2			4					*D. clouds	The Staff.
Kingstown			29.78	756.4	67	19.4		W			4		10					Overcast	George Mitchell.
Leicester Museum			29.87	758.7	81.3	27.4		E			2		2					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.97	761.2	78.2	25.7		NW			1		8k					*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn			29.95	760.7	75	23.9		ESE			2		0					Clear	W. D. Penny.
Nassau, (Bahamas)			30.16	766.1	79.4	26.3		SE			3		10					Raining	Surg. Maj. Henry.
Nottingham, Observatory			29.91	759.7	85.0	29.4		SSE			5		4k		SE	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.83	757.7	78.3	25.7		SE			4		9					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.83	757.7	84	28.9		SE			2		7					*D. clouds	J. Lucas.
Plymouth			29.87	758.7	62.5	16.9		S			2		10					Misty	John Merrifield.
Roche's Point			29.81	757.2	58	14.4		S			5		5					Cloudy	W. Kennedy.
Saint Ann's Head			29.84	757.9	59	15.0		SSW			3		10					Misty	John C. Walker.
Saint Helier, (Jersey)			29.91	759.7	69.5	20.8		NW			3		5					½ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			30.09	764.3	61.0	16.1		SE	40	17.9			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough			30.02	762.5	58.3	14.6		SE			2		1					Blue sky	F. Shaw.
Scutari Cemetery, Turkey			29.76	755.9	73.2	22.9		SE			1		7			Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.88	758.9	80.0	26.7		ESE			3		3			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			29.84	757.9	80.0	26.7	45	SE			6		1			0.102	2.59	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.83	757.7	76.9	24.9		E			4		1					*D. clouds	Rev. S. J. Perry.
Stornoway, Lews C., Hebr.			29.89	759.2	71	21.7		E			4		0					Blue sky	John Smith.
Stratfield Turgiss			29.85	758.2	82.4	28.0		S			1		7					*D. clouds	Rev. Charles H. Griffith.
Thurso			30.06	763.5	65	18.3		SE			5		0					Blue sky	John Trotter.
Truro, Royal Institution			29.93	759.2	60	15.6		SW			5		10					Raining	W. Newcombe.
Valencia, Observatory			29.70	754.4	58.0	14.4		S	39	17.4			7					D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					54	12.2		E			1		2			0	0		Thomas Dawson.
Cape Good Hope, Obs'y			30.18	766.6	59.2	15.1	67	NNW	5	2.2			5						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.34	770.6	57.0	13.9	80	SW			1		7kn			0.01	0.3	Cloudy, hazy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.97	761.2	64.2	17.9		E			3					0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.20	767.1	72.0	22.2	66	E	14.1	6.3			2			0.06	1.5	Blue sky	C. Meldrum
Melbourne, Observatory			30.46	773.7	47.4	8.6	79	S	10	4.5			4			0.9	2.8	Showery	R. L. J. Ellery.
Monach Lt-house, Hebrides			29.80	756.9	62	16.7		SE			4	3	0	SE		0	0		J. Youngclause.
North Unst, (Shetland Is.)			30.18	766.6	57	13.9		SE			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 1,409 feet, or 426.7 meters; Fort Napier, 2,210 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	67.6	19.8	63	SE			2		6						
Fanöe			30.19	766.7	70.2	21.2	61	E			6		1						
Godthaab, (Greenland)			29.86	758.4	39.6	4.2	84	S			3		9					Foggy	
Stykkisholm, Iceland)			29.89	759.1	51.3	10.7	95	SE			4		10					Raining	
Thorshavn, (Faröe)			30.15	765.7	55.8	13.2	83	ESE			4		1						
Vestervig			30.19	766.9	73.8	23.2	38	ENE			6		0						

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

FRENCH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	29.81	757.2	69.8	21	57	SW	.....	.....	1	.....	5n, k	.....	SW	0	0	Cloudy	Normal School.
Amiens	.....	.....	29.89	759.1	90.3	32.4	48	S	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	30.00	761.9	82.4	28	33	S	.....	.....	2	.....	0	.....	.....	0	0	Very clear	Normal School.
Bar-sur-Seine	.....	.....	29.91	759.8	83.5	28.6	37	W	.....	.....	2	.....	2	.....	SW	0	0	Slightly cl'dy	C. Sellard.
Beaumette, (near Angers)	.....	.....	29.87	758.8	79.9	26.6	54	SW	10.5	4.7	.....	.....	5	.....	SSW	0	0	Cloudy	Beaumette Observatory.
Beauvais	.....	.....	29.96	760.9	81.4	28.6	38	S	.....	.....	2	.....	2	.....	SSE	0	0	Slightly cl'dy	Normal School.
Besançon	.....	.....	29.93	760.1	82.8	28.2	52	SSW	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Bourg en Bresse	.....	.....	30.04	762.9	84.2	29	34	S	.....	.....	2	.....	..k	.....	.....	.....	.....	.....	Normal School.
Bourges	.....	.....	29.86	758.5	79.5	26.4	66	S	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	29.87	758.6	66.7	19.3	73	SW	.....	.....	2	.....	10	.....	SW	0	0	Stormy	Naval Observatory.
Carcassonne	.....	.....	29.95	760.6	72.0	22.2	47	E	.....	.....	3	.....	1	.....	W	0	0	Clear	Normal School.
Caen	.....	.....	30.56?	776.1?	77.0	25	75	NNW	.....	.....	0	..c	.....	N	.....	0	0	.....	Normal School.
Chartres	.....	.....	29.87	758.6	87.4	30.8	.....	E	.....	.....	1	.....	3	.....	S	0	0	.....	Normal School.
Clermont	.....	.....	29.86	758.5	84.2	29.0	35	E	.....	.....	2	.....	5	.....	SW	0	0	Cloudy	Puy de Dome Obs'y.
Commercy	.....	.....	29.92	759.9	78.6	25.9	60	E	.....	.....	2	.....	2k	.....	E	0	0	Slightly cl'dy	Normal School.
Commune de Greasque*	.....	.....	30.08	763.9	79.3	26.3	31	SW	.....	.....	2	.....	0	.....	.....	0	0	.....	M. Kina.
Grenoble	.....	.....	29.93	760.3	78.6	25.9	64	NW	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
La Roche-sur-Yon	.....	.....	29.91	759.6	77.0	25.0	60	SW	.....	.....	2	.....	5	.....	NE	0	0	Cloudy	Normal School.
Le Mans	.....	.....	29.87	758.7	83.3	28.5	73	W	.....	.....	3	.....	5	.....	SW	0	0	Cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	29.89	759.1	79.3	26.3	48	W	.....	.....	.....	.....	10	.....	.....	0	0	Covered	Normal School.
Mâcon	.....	.....	29.93	760.2	77.4	25.2	69	SE	.....	.....	4	.....	5	.....	NE	0	0	Cloudy	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	29.83	757.6	78.1	25.6	45	ESE	.....	.....	1	.....	1	.....	W	0	0	Clear	Normal School.
Mismes	.....	.....	29.96	761.0	85.6	29.8	34	SW	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	29.82	757.5	84.2	29	36	E	.....	.....	1	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Paris, Observatory	.....	.....	29.87	758.6	85.6	29.8	30	WSW	.....	.....	2	.....	5k	.....	WSW	0	0	Cloudy	National Observatory.
Parthenay	.....	.....	29.65	753.0	80.6	27	67	SW	.....	.....	2	.....	1	.....	SW	0	0	Slightly cl'dy	Normal School.
Privas	.....	.....	29.98	761.6	80.6	27	.....	SW	.....	.....	2	.....	0	.....	.....	.....	.....	Clear	Normal School.
Rochefort, Observatory	.....	.....	30.20	767.1	78.3	25.7	61	W	.....	.....	3	.....	0	.....	.....	0	0	Blue sky	Naval Observatory.
Rouen	.....	.....	29.86	758.5	85.6	29.8	36	SSE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Saint Lo	.....	.....	29.62	752.3	77.0	25	72	NW	.....	.....	1	.....	3	.....	NW	0	0	.....	Normal School.
Tarbes	28.86	733.1	29.91	759.6	71.6	22	.....	WNW	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Villefranche	.....	.....	29.94	760.4	83.8	28.8	72	S	.....	.....	1	.....	2	.....	.....	0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.97	761.3	79.5	26.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	Blank	Blank	.....	L'Abbé Marchéal.
Marseilles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Marseilles Observatory.
Mont-Louis	.....	.....	30.19	766.7	66.7	19.3	67	SSE	14.9	6.66	.....	.....	4	.....	WSW	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	29.87	758.8	89.1	31.7	20	WSW	.....	.....	2	.....	2	.....	SW	0	0	.....	Montsouris Observatory.
Perpignan	.....	.....	29.95	760.8	73.0	22.8	67	SE	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)	.....	.....	29.88	758.9	86.0	30.5	36	SSE	.....	.....	1	.....	1	.....	.....	0	0	Clear	E. Renou.
Toulouse	.....	.....	30.01	762.2	79.2	26.2	58	SE	.....	.....	2	.....	1	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	29.87	758.8	87.1	30.6	40	S	.....	.....	1	.....	3	.....	SSW	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.89	759.2	88.2	31.2	35	SW	.....	.....	1	.....	5	.....	.....	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 1,272.9 ft; Commune de Greasque, 322 m., or 1,050.4 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	.....	.....	29.96	760.9	77.0	25.5	49	E	.....	.....	3	.....	5	NE	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.09	764.2	76.3	24.6	35	SE	.....	.....	3	.....	3	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.10	764.6	75.6	24.2	39	ENE	.....	.....	4	.....	10	.....	.....	0	0	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	29.90	759.4	79.2	26.2	57	E	.....	.....	2	.....	3	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	29.97	761.1	79.7	26.5	43	E	.....	.....	6	.....	1	E	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	30.00	762.0	76.6	24.8	49	E	.....	.....	4	.....	0	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.98	761.5	80.6	27.0	47	E	.....	.....	2	.....	5	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	29.92	759.9	72.0	22.2	70	SW	.....	.....	1	.....	2	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.12	765.0	71.1	21.7	49	ENE	.....	.....	5	.....	2k	.....	.....	0	0	Clear	Captain F. Hegemann.
Kiel	.....	.....	30.15	765.9	65.3	18.5	67	ENE	.....	.....	5	.....	4	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	30.15	765.8	71.6	22.0	51	NE	.....	.....	5	.....	4	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	30.05	763.3	70.6	21.8	45	ENE	.....	.....	3	.....	6	E	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	30.21	767.3	71.1	21.7	43	ENE	.....	.....	4–5	.....	0	.....	.....	0	0	Clear	Reinbrecht & Skalweit.
Münster	.....	.....	30.07	763.7	70.3	20.3	48	.....	.....	.....	1	.....	0	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.21	767.4	66.2	19.0	85	N	.....	.....	4	.....	1	.....	.....	0	0	.....	A. Lothes.
Posen	.....	.....	30.14	765.5	75.7	24.3	47	NE	.....	.....	8	.....	2	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.92	759.9	79.5	26.4	44	NE	.....	.....	1	.....	2	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.93	760.3	77.9	25.5	55	NE	.....	.....	1	.....	5	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	30.08	764.1	77.9	25.5	43	NE	.....	.....	3	.....	4	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.89	759.1	81.1	27.3	46	E	.....	.....	4	.....	5	.....	.....	0	0	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	30.11	764.8	64.2	17.9	71	ENE	.....	.....	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			29.86	758.4	80.8	27.1		S					-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.

Udine			29.85	758.2	67.5	19.7	82	SE	3.1	1.4			10			0.815	20.7	Showery	
Padua			29.86	758.4	80.6	27.0	53	SW	5.6	2.5			2			0.028	0.7		
Vicenza			29.86	758.4	78.4	25.8	55	S	4.3	1.9			5	E		0	0		
Verona			29.88	759.0	80.1	26.7	69	E			2		10			0.217	5.5		
Bergamo	28.57	725.7	29.84	757.9	81.0	27.2	48	W			4		2			0.050	1.5		
Domodossola	28.87	733.3	29.84	758.0	82.8	28.2	53	SSW			4		3			0	0		
Milan			29.90	759.4	82.4	28.0	56	NNW			2		6	WNW		0	0		
Pavia			29.90	759.4	82.2	27.9	50	E			1		2	SE		0	0		
Moncalieri			29.93	760.1	77.7	25.4	63	SW	3.1	1.4			5	SE		0	0		
Mondovi	28.79	713.2	29.93	760.1	77.2	25.1	44	N			1		4	NE		0	0		
Porto Maurizio			30.00	762.0	74.8	23.8	76	WSW			2		3	S		0	0		
Genoa			29.97	761.1	74.1	23.4	65	SW	1.3	0.6			2			0	0		
Piacenza			29.89	759.3	80.6	27.0	55	N	4.5	1.9			4	W		0	0		
Parma			29.89	759.2	85.3	29.6	49	NW			4		2			0	0		
Bologna			29.94	760.4	83.6	28.6	41	WNW			1		3	N		0	0		
Florence			29.94	760.5	83.8	28.8	46	NW			2		10	NW		0	0		
Leghorn			29.98	761.5	75.4	24.1	65	WSW	13.0	5.8			3			0	0		
Siena	28.75	730.3	29.92	759.9	79.0	26.1	42	NW	2.5	1.1			4	W		0	0		
Urbino	28.43	722.1	29.93	760.2	75.9	24.4	59	NNW			2		5			0	0		
Pesaro																			
Ancona			29.90	759.4	79.9	26.6	54	NNW			4		3			0	0		
Grosseto			29.95	760.8	81.0	27.2	35	NNW			4		4	S		0	0		
Rome			29.96	760.9	77.7	25.4	66	SW	8.1	3.6			6			0	0		
Naples, O. U			29.98	761.6	79.5	26.4	63	SSW			4		8	NW		0	0		
Lecce			29.93	760.1	79.2	26.2	49	NNW	7.4	3.3			4	NW		0	0		
Cosenza			29.93	760.3	87.8	31.0	71	NW	1.3	0.6			5			0	0		
Riposto, (Sicily)			29.96	761.0	76.6	24.8	62	SE			2		2	NW		0	0		
Palermo			29.94	760.4	72.9	22.7	73	NE	6.3	2.8			1			0	0		
Caltanissetta	28.00	711.3	29.86	758.4	75.2	24.0	42	S			2		2	NW		0	0		
Sub-Series.																			
Naples, S. R.			29.99	761.7	76.1	24.5	64	SW	1.8	0.8			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.

Flushing			29.94	760.5	78.1	25.6		SE			3								
Groningen			30.00	762.0	74.5	23.6		E			4								
Helder			29.00	762.1	72.9	22.7		E			3								
Utrecht			29.92	759.9	80.1	26.7	45	SE			3		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.

Bergen			30.31	769.9	74.5	23.6	42	NNW	5.1	2.3			0			0	0		
Brönö			30.39	771.9	57.2	14.0	100	NNE	7	3			2			0	0		
Christiania			30.34	770.5	76.1	24.5	39	E	4.7	2.1			5			0	0		
Tromsö			30.48	774.2	65.1	18.4	50	NE	0	0			0			0	0		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores,)	.....	.....	30.17	766.4	66.7	19.3	65	W	12.7	5.67	.....	.....	4	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.07	763.8	72.5	22.5	45	SSW	6.9	3.09	.....	.....	9	SW	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.20	767.0	69.8	21.0	80	WSW	8.0	3.58	.....	.....	10	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.12	765.1	61.2	16.2	97	SW	9.8	4.4	.....	.....	10	.....	.....	0.098	2.5	Raining.....	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	.....	.....	30.01	762.2	73.9	23.3	50	NE	18	8	.....	.....	2	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.08	764.0	70.3	21.3	84	NW	13	6	.....	.....	0	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.27	768.8	62.4	16.9	46	NNE	13	6	.....	.....	0	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.26	768.7	54.5	12.5	49	ENE	16	7	.....	.....	0	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	30.33	770.4	63.5	17.5	48	NE	18	8	.....	.....	2	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.78	756.3	68.0	20.0	65	N	9	4	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.71	754.7	78.8	26.0	67	SW	9	4	.....	.....	9	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.69	754.2	81.5	27.5	59	S	9	4	.....	.....	6	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.93	760.2	57.2	14.0	51	NNW	18	6	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.44	747.7	73.4	23.0	64	WNW	49	22	.....	.....	8	.....	.....	Blank	Blank	.....	Meteorological Obs.
Arohangel	.....	.....	30.26	768.6	50.2	10.1	50	N	29	13	.....	.....	2	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	20.32	719.3	29.65	753.0	79.2	26.2	41	NNW	9	4	.....	.....	10	.....	.....	.....	.....	Light rain...	Physical Observatory.
Astrakhan	.....	.....	29.61	752.9	88.0	31.1	42	SW	18	6	.....	.....	5	.....	.....	Blank	Blank	.....	Sebastianof.
Kasan	.....	.....	29.57	751.1	73.8	23.2	66	NNW	9	4	.....	.....	4	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.80	731.0	29.78	756.4	59.7	15.4	57	SE	16	7	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Nukliss	.....	.....	29.67	753.5	93.0	33.9	29	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Barnaul	28.17	715.4	29.77	756.2	79.3	26.3	67	.....	.....	.....	.....	.....	6	.....	.....	.....	.....	.....	Michelson.
Yeniseisk	.....	.....	29.84	758.0	62.1	16.7	42	NE	22	10	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Irkutsk	28.41	721.7	29.70	756.0	60.4	15.8	62	WNW	2	1	.....	.....	2	.....	.....	.....	.....	.....	Marks.
Oorga	.....	.....	29.75	755.7	60.6	15.9	81	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Usolzef.
Peking	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Nertchinsk (China)	.....	.....	29.53	750.1	86.5	30.3	19	NW	9	4	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Nikolaievsk, on the Amoor	.....	.....	29 05	753.0	56.8	13.8	86	SE	18	8	.....	.....	10	.....	.....	Blank	Blank	.....	
	.....	.....	.....	.....	50.0	10.0	96	E	7	3	.....	.....	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 400. 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	.....	.....	29.97	761.1	78.3	25.7	34	SW	8.2	3.67	.....	0	0	.....	.....	0	0	Clear.....	Royal Observatory.
San Fernando	.....	.....	30.17	766.2	69.6	20.9	62	W	10.1	4.5	.....	1	2	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. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	30.51	774.9	65.5	18.6	44	NE	.....	.....	4	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	30.46	773.6	62.8	17.1	51	E	.....	.....	4	.....	2	.....	.....	0	0	.....	
Hernosand	.....	.....	30.50	774.6	66.2	19.0	48	E	.....	.....	4	.....	1	.....	.....	0	0	.....	
Stockholm	.....	.....	30.35	771.0	69.4	20.8	44	ENE	.....	.....	4	.....	2	.....	.....	0	0	.....	
Wisby	.....	.....	30.37	771.5	60.8	16.0	64	NNE	.....	.....	6	.....	6	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.37	771.5	68.7	20.4	35	NE	11.9	5.3	.....	.....	0	.....	.....	0	0	Solar corona..	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	28.55	725.1	29.91	759.8	75 4	24.1	59	NW	.....	.....	3	.....	5	.....	.....	0	0	Cloudy.....	The Observatory.
Zurich	28.35	720.0	29.89	759.5	82.4	28.0	49	W	.....	.....	1	.....	3	.....	.....	0	0	Clear.....	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note—For Geneva the corresponding departures from the normal values are: Barometer, −1.7 mm; Thermometer, +2.8 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.

Constantinople	.....	.....	29.81	757 1	73.8	23.2	72	SSW	6	2.5	.....	.....	7	.....	WNW	0	0	.....	
Fao, (Persian Gulf)	.....	.....	29.73	755.2	95.0	35.0	.....	NW	.....	.....	4	.....	10	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.85	758.2	77.0	25.0	.....	SW	.....	.....	2	.....	2	.....	.....	.....	.....	.....	
Valona	.....	.....	29.89	759.2	80.2	26.8	.....	NW	.....	.....	2	.....	5	.....	.....	.....	.....	.....	
Varna	.....	.....	29.89	757.0	78.8	26.0	.....	N	.....	.....	3	.....	8	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.95	760.7	86.0	30.0	52	W	.....	.....	2	.....	7s	.....	W	0	0	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.

Bathurst, N. B	.....	.....	29.82	757.4	72.4	22.4	72	SW	15	6.7	.....	0	5	.....	.....	0	0	Squally.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.95	760.7	66	18.9	.....	Calm	0	0	.....	.....	8s	.....	SW	0.24	6.1	Cloudy.....	W. R Bigg.
*Chatham, N. B	.....	.....	29.91	759.7	65	18.3	89	SW	10	4.5	.....	2k	8ks	S	S	0	0	Cloudy.....	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.99	761.7	67	19.4	88	S	8	3.6	.....	.....	10ks	.....	.....	0	0	Cloudy.....	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.82	757.4	61.0	16.1	91	SE	.....	.....	1	.....	10ks	.....	.....	0.663	16.84	Unsettled....	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.89	759.2	71.9	22.2	85	W	.....	.....	1	0	0	.....	.....	0	0	.....	H. A. Johnson.
Esquimault, B. C	.....	.....	29.77	756.1	54.7	12.6	97	W	1	0.4	.....	10cs	0	.....	.....	0	0	Cloudy.....	W. H. Bevis.
Fredericton, N. B	.....	.....	29.96	761.0	63.2	17.3	88	S	4	1.8	.....	.....	10s	.....	.....	0.02	0.5	Cloudy.....	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.68	753.9	60	15.6	88	SW	3	1.3	.....	0	0	.....	.....	0	0	Clear.....	James Stewart.
Goderich, Ontario	.....	.....	29.96	761.0	55.9	13.3	91	Calm	.....	.....	0	.....	10s	.....	.....	0.01	0.33	Threatening	B. J. Strang, M. A.
Granton, Ontario	28.84	732.5	29.92	760.0	56	13.3	.....	W	.....	.....	1	.....	10n	.....	.....	0	0	Cloudy.....	James Grant.
*Halifax, N. S	.....	.....	30.02	762.5	64	17.8	94	S	3	1.3	.....	.....	Fog	.....	.....	0.06	1.5	Foggy	F. Allison, M. A.
*Kingston, Ontario	.....	.....	29.92	760.0	61	16.1	82	Calm	0	0	.....	10cs	0	.....	.....	0.31	7.9	Cloudy.....	S. Woods, M. A.
Little Glace Bay, N. S	.....	.....	30.02	762.5	72.8	22.7	83	SW	6	2.7	.....	8ks	0	SW	.....	0.02	0.5	Cloudy.....	C. H. Rigby.
*Montreal, Quebec	.....	.....	29.89	759.2	62	16.7	81	SW	4	1.8	.....	8k	2ks	W	W	Inap.	Inap.	Cloudy.....	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.88	758.9	64	17.8	78	Calm	0	0	.....	.....	10ks	.....	S	0.05	1.3	Threatening	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.89	759.2	58	14.4	82	W	4	1.8	.....	2ck	0	W	.....	0.02	0.5	Fair.....	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	29.94	760 5	56	13.3	87	W	6	2.7	.....	8k	0	W	.....	0 23	5.8	air.....	H. Morgan.
Port Hastings, N. S	.....	.....	30.07	763.8	60.3	15.7	.....	SE	6	2.7	.....	...	.....	.....	.....	0	0	Fine.....	Peter Grant.
*Port Stanley, Ontario	.....	.....	29.95	760.7	59	15.0	76	W	8	3.6	.....	8ck	0	W	.....	0.03	0.8	Fair.....	M. Payne.
*Quebec, Quebec	.....	.....	29.89	759.2	62	16.7	83	SW	3	1.3	.....	.....	10s	.....	SW	1.14	29.0	Cloudy	Capt. Ashe, R. N.
St. John, N. B	.....	.....	30.03	762.7	53	11.7	100	S	2	0.9	.....	.....	Fog	.....	.....	0.245	6.23	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.87	758.7	57	13.9	87	W	7	3 1	.....	10cs	0	.....	.....	0.04	1.0	Cloudy... ...	K. Stewart.
Stayner, Ontario	.....	.....	29.86	758.4	59	15.0	76	NW	3	1.3	.....	5k	2n	NW	NW	0.05	1.5	Cloudy.....	R. J. Cole.
Stratford, Ontario	28.66	728.0	29.91	759.7	54.9	12.7	92	W	9	4 0	.....	.....	10s,n	.....	.....	0 204	5.18	Cloudy.....	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.07	763.8	71	21.7	90	SW	8	3.6	.....	5cs	8s	W	SW	0.03	0.8	Clea ing.....	T. C. Hill.
*Toronto, Ontario	.....	.....	29.92	760.0	59	15.0	82	W	6	2.7	.....	.....	10ks	.....	W	0.02	0.5	Cloudy.....	Magnetic Observatory
Woodstock, Ontario	.....	.....	29.93	760.2	57.8	14.3	84	W	10	4.5	.....	10ck	0	.....	.....	0	0	Gloomy.....	J. Montgomery.
Sub-Series.																			
St. John's, Newfoundland	.....	.....	30.12	765.0	68	20.0	79	W	.....	.....	.....	0	7ks	.....	.....	0	0	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.	.....	.....	29.88	758.9	67	19.4	84	Calm	0	0	.....	5k	5ks	SW	S	0	0	Cloudy	
Alpena, Mich.	.....	.....	29.86	758.4	54	12.2	86	W	7	3.1	.....	.....	10s	.....	W	0.38	9.7	Cloudy	
Atlantic City, N. J.	.....	.....	29.95	760.7	72	22.2	80	SW	4	1.8	.....	8cs	1s	SW	W	0.25	6.3	Cloudy	
Augusta, Ga.	.....	.....	30.12	765.0	72	22.2	80	NW	1	0.4	.....	5k	0	W	.....	0.04	1.0	Fair	
Baltimore, Md.	.....	.....	30.02	762.5	70	21.1	61	NW	7	3.1	.....	0	Sm'e	.....	.....	0	0	Clear	
Barnegat, N. J.	.....	.....	29.94	760.5	72	22.2	85	W	9	4.0	.....	2c	2k	.....	W	0.20	5.1	Fair	
Benton, Montana	26.94	684.3	29.74	755.4	70	21.1	75	SW	1	0.4	.....	0	0	.....	.....	0.08	2.0	Clear	
Bismarck, Dakota	27.93	709.4	29.51	749.5	58	14.4	53	SE	7	3.1	.....	Haze	Haze	SE	SE	0	0	Hazy	
Boston, Mass.	.....	.....	29.92	760.0	72	22.2	80	SE	6	2.7	.....	10cs	Haze	S	.....	0	0	Cloudy	
Breckenridge, Minn.	.....	.....	29.71	754.6	58	14.4	69	SE	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	29.89	759.2	59	15.0	81	W	7	3.1	.....	0	8ks	.....	W	0.19	4.8	Fair	
Burlington, Vt.	.....	.....	29.88	758.9	65	18.3	73	S	2	0.9	.....	5ck	2s	.....	.....	0.45	11.4	Cloudy	
Cairo, Ill.	.....	.....	30.05	763.3	67	19.4	79	S	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Cape Hatteras, N. C.	.....	.....	30.01	762.2	79	26.1	82	SW	13	5.8	.....	2ck	5ks	SW	SW	0	0	Fair	
Cape Henry, Va.	.....	.....	30.02	762.5	76	24.4	77	W	6	2.7	.....	5c	2ks,hz	.....	SW	0	0	Fair	
Cape Lookout, N. C.	.....	.....	30.08	764.0	78	25.6	86	SW	11	4.9	.....	2ck	5ks	SW	SW	0	0	Cloudy	
Cape May, N. J.	.....	.....	29.97	761.2	67	19.4	84	W	10	4.5	.....	5cs	2s	SW	SW	0.08	2.0	Fair	
Charleston, S. C.	.....	.....	30.12	765.0	75	23.9	81	NW	6	2.7	.....	5ck	2cs	W.	.....	0.10	2.5	Fair	
Cheyenne, Wyoming	23.92	607.8	29.86	758.4	60	15.6	40	W	4	1.8	.....	1cs	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	29.97	761.2	60	15.6	76	SW	6	2.7	.....	5ck	Haze	S	.....	0.01	0.3	Fair	
Cincinnati, Ohio	.....	.....	30.03	762.7	62	16.7	61	W	6	2.7	.....	5k	Sm'e	W	.....	0.24	6.1	Fair	
Cleveland, Ohio	.....	.....	30.00	762.0	57.3	14.1	79	SW	10	4.5	.....	.....	10ks	.....	W	0.06	1.5	Cloudy	
Colorado Springs, Col.	24.02	611.6	29.89	759.2	61	16.1	55	NE	4	1.8	.....	1c	0	.....	.....	0.06	1.5	Clear	
Corsicana, Tex.	.....	.....	29.99	761.7	71.6	22.0	85	S	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Davenport, Iowa	.....	.....	29.98	761.5	59	15.0	81	SW	4	1.8	.....	5cs	0	N	.....	0	0	Fair	
Denison, Tex.	.....	.....	30.00	762.0	71	21.7	84	S	16	7.2	.....	.....	10s	.....	S	0.02	0.5	Cloudy	
Denver, Col.	24.67	626.6	29.89	759.2	63	17.2	42	S	8	3.6	.....	8c	0	SW	.....	0	0	Fair	
Detroit, Mich.	.....	.....	29.95	760.7	56	13.3	80	W	7	3.1	.....	2k	5ks	W	SW	0.01	0.3	Fair	
Dodge City, Kan.	27.24	697.0	29.40	746.7	70	21.1	66	E	14	6.3	.....	5c	0	.....	.....	0	0	Fair	
Dubuque, Iowa	.....	.....	29.93	760.2	60	15.6	76	SW	4	1.8	.....	2c	Haze	.....	.....	0	0	Fair	
Duluth, Minn.	.....	.....	29.82	757.4	47	8.3	92	Calm	0	0	.....	.....	Fog	.....	.....	0.22	5.6	Foggy	
Eastport, Me.	.....	.....	29.97	761.2	52	11.1	100	S	4	1.8	.....	.....	10n	.....	.....	0.03	0.8	Light rain	
Erie, Pa.	.....	.....	29.93	760.2	58	14.4	81	S	8	3.6	.....	.....	10n	.....	W	0.41	10.4	Light rain	
Escanaba, Mich.	.....	.....	29.84	757.9	56	13.3	89	SW	2	0.9	.....	.....	10s	.....	SW	0.11	2.8	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	29.93	760.2	78	22.8	85	SW	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.74	730.0	29.78	756.4	79	26.1	78	SW	12	5.4	.....	5k	0	SW	.....	0	0	Fair	
Fort Sully, Dakota	27.96	710.2	29.52	749.8	67	19.4	64	S	12	5.4	.....	2c	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.00	762.5	80	26.7	86	SW	1	0.4	.....	5k	0	S	.....	0.04	1.0	Fair	
Grand Haven, Mich.	.....	.....	29.94	760.5	61	16.1	73	W	12	5.4	.....	3ck	2s	W	W	0	0	Fair	
Indianapolis, Ind.	.....	.....	30.05	763.3	61	16.1	77	SW	1	0.4	.....	0	8s	.....	W	0	0	Fair	
Indianola, Texas	.....	.....	30.02	762.5	82	27.8	83	S	14	6.3	.....	2k	0	SW	.....	0	0	Fair	
Jacksonville, Fla.	.....	.....	30.09	764.8	81	27.2	78	NE	6	2.7	.....	0	0	.....	.....	0.07	1.8	Clear	
Keokuk, Iowa	.....	.....	29.92	760.0	64	17.8	67	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla.	.....	.....	30.12	765.0	81.6	27.6	74	Calm	0	0	.....	5cs	2ks	S	S	0.06	1.5	Cloudy	
Kittyhawk, N. C.	.....	.....	30.05	763.3	77	25.0	77	W	12	5.4	.....	5k	Haze	W	.....	0	0	Fair	
Knoxville, Tenn.	.....	.....	30.12	765.0	64	17.8	78	SW	5	2.2	.....	1ck	0	SW	.....	Inap.	Inap.	Clear	
La Crosse, Wis.	.....	.....	29.86	758.4	58	14.4	81	S	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan.	.....	.....	29.87	758.7	66	18.9	73	S	2	0.9	.....	2k	0	SW	.....	0	0	Clear	
Lexington, Ky.	29.00	736.6	30.08	764.0	61	16.1	77	S	4	1.8	.....	0	0	.....	.....	0.23	5.8	Clear	
Long Branch, N. J.	.....	.....	29.94	760.5	66	18.9	90	Calm	0	0	.....	10ck	0	SW	.....	0.34	8.6	Cloudy	
Louisville, Ky.	.....	.....	30.00	762.5	63	17.2	67	SW	4	1.8	.....	0	0	.....	.....	0.22	5.6	Clear	
Lynchburg, Va.	.....	.....	30.03	762.7	70	21.1	60	W	4	1.8	.....	0	0	.....	.....	0.01	0.3	Clear	
Malone, N. Y.	.....	.....	29.82	757.4	61	16.1	77	NW	4	1.8	.....	.....	10ks	.....	NW	0.30	7.6	Cloudy	
Manhattan, Kan.	28.73	729.7	29.82	757.4	67	19.4	79	SE	8	3.6	.....	0	2ks	.....	.....	0	0	Clear	
Marquette, Mich.	.....	.....	29.83	757.7	50	10.0	86	SE	4	1.8	.....	5cs	0	S	.....	0.09	2.3	Fair	
Memphis, Tenn.	.....	.....	30.07	763.8	73	22.8	81	S	3	1.3	.....	0	Haze	.....	.....	0	0	Clear	
Milwaukee, Wis.	.....	.....	29.95	760.7	57	13.9	81	W	12	5.4	.....	.....	10ks	.....	W	Inap.	Inap.	Cloudy	
Mobile, Ala.	.....	.....	30.14	765.5	72	22.2	90	N	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Montgomery, Ala.	.....	.....	30.15	765.8	72	22.2	81	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Morgantown, W. Va.	.....	.....	30.03	762.7	62	16.7	71	SW	10	4.5	.....	.....	10s	.....	SW	0.05	1.3	Cloudy	
Mt. Washington, N. H.	23.81	605.8	30.21	767.3	46	7.8	100	SW	20	8.9	.....	.....	Fog	.....	.....	0.33	8.4	Foggy	
Nashville, Tenn.	.....	.....	30.06	763.5	73	22.8	71	SE	1	0.4	.....	5cs	0	SW	.....	0.31	8.0	Fair	
New Haven, Conn.	.....	.....	29.92	760.0	71	21.7	85	S	5	2.2	.....	Fog	10s	.....	S	0.10	2.5	Cloudy	
New London, Conn.	.....	.....	29.95	760.7	70	21.1	84	SW	3	1.3	.....	2ck	8s	SW	SW	0.01	0.3	Cloudy	
New Orleans, La.	.....	.....	30.11	764.8	79	26.1	76	S	1	0.4	.....	2c	0	W	.....	0	0	Clear	
Newport, R. I.	.....	.....	29.94	760.5	69	20.6	95	SW	2	0.9	.....	.....	Fog	.....	.....	0	0	Foggy	
New York, N. Y.	.....	.....	29.94	760.5	67	19.4	79	S	6	2.7	.....	.....	10ks	.....	SW	0.19	4.8	Cloudy	
Norfolk, Va.	.....	.....	30.04	763.0	78	25.6	73	SW	6	2.7	.....	8c	0	.....	.....	0.09	2.3	Fair	
North Platte, Neb.	26.84	681.7	29.24	742.7	69	20.6	74	SE	12	5.4	.....	5k	0	SE	.....	0	0	Fair	
Omaha, Neb.	28.78	731.0	29.80	756.9	66	18.9	68	SE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	29.99	759.4	60	15.6	88	W	4	1.8	.....	5ck	2s	W	W	0.43	10.9	Fair	
Pembina, Dakota	.....	.....	29.66	753.4	61	16.1	79	SE	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Penn.	.....	.....	29.96	761.0	68	20.0	79	SW	8	3.6	.....	5ck	0	SW	.....	0.03	0.8	Fair	
Pike's Peak, Colorado	17.92	455.2	30.13	765.3	33	0.6	89	W	36	16.1	.....	2c	0	W	.....	Inap.	Inap.	Fair	
Pittsburgh, Penn.	.....	.....	29.90	761.7	60	15.6	82	W	5	2.2	.....	.....	10s	.....	.....	0.18	4.6	Cloudy	
Port Huron, Mich.	.....	.....	29.92	760.0	56	13.3	74	SW	6	2.7	.....	.....	8s	.....	W	Inap.	Inap.	Cloudy	
Portland, Me.	.....	.....	29.94	760.5	68	20.0	90	S	6	2.7	.....	.....	Fog	.....	.....	0.18	4.6	Foggy	
Portland, Oregon	.....	.....	29.92	760.0	58	14.4	87	S	11	4.9	.....	.....	10s	.....	S	0.26	6.6	Cloudy	
Punta Rassa, Fla.	.....	.....	30.12	765.0	82.5	28.1	70	NW	10	4.5	.....	8cs	2cs	SW	SW	0	0	Cloudy	
Rochester, N. Y.	.....	.....	29.88	758.9	60	15.6	82	W	3	1.3	.....	.....	10s	.....	W	0.16	4.1	Threatening	
Salt Lake City, Utah	25.42	645.7	29.75	755.6	60	20.0	40	NE	4	1.8	.....	2c	Haze	.....	.....	0	0	Fair	
Sandy Hook, N. J.	.....	.....	29.92	760.0	68	20.0	90	SE	4	1.8	.....	.....	10ks	.....	SW	0.52	13.2	Cloudy	
San Diego, Cal.	.....	.....	29.94	760.5	64	17.8	88	W	8	3.6	.....	0	8s	.....	W	0	0	Cloudy	
San Francisco, Cal.	.....	.....	29.97	761.2	56	13.3	87	W	16	7.2	.....	0	0	.....	.....	0.04	1.0	Clear	
Santa Fé, N. M.	23.26	590.8	29.80	756.9	61	16.1	50	Calm	0	0	.....	1c	1k	SW	SW	Inap.	Inap.	Fair	
Savannah, Ga.	.....	.....	30.12	765.0	74	23.3	81	N	4	1.8	.....	5k	0	W	.....	2.54	64.5	Fair	
Shreveport, La.	.....	.....	30.10	764.5	68.5	20.3	90	Calm	0	0	.....	Haze	Sm'e	.....	.....	0	0	Hazy	
Smithville, N. C.	.....	.....	30.09	764.3	79	26.1	74	W	9	4.0	.....	5k	0	.....	.....	0	0	Fair	
Springfield, Mass.	.....	.....	29.92	760.0	70	21.1	79	S	4	1.8	.....	.....	10ks	.....	S	0.20	5.1	Cloudy	
St. Louis, Mo.	.....	.....	30.01	762.2	65	18.3	63	S	8	3.6	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.11	764.8	77	25.0	77	N	4	1.8	.....	2c	0	W	.....	0	0	Fair	
St. Paul, Minn.	.....	.....	29.80	756.9	62	16.7	68	Calm	0	0	.....	8c	Haze	.....	.....	0	0	Fair	
St. Paul's Island, Alaska	.....	.....	29.97	761.2	34	1.1	79	NW	14	6.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Thatcher's Island, Mass.	.....	.....	29.94	760.5	64	17.8	83	S	4	1.8	.....	2c	5s	SW	SW	0	0	Foggy	
Toledo, Ohio	.....	.....	29.95	760.7	60	15.6	82	SW	8	3.6	.....	.....	10ks	.....	SW	0	0	Cloudy	
Tucson, Arizona	27.44	697.0	30.03	762.7	77	25.0	.....	S	.....	.....	.....	0	Haze	.....	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30.12	765.0	76	24.4	81	N	8	3.6	.....	5ck	0	W	.....	1.75	44.5	Fair	
Vicksburg, Miss.	.....	.....	30.11	764.8	74	23.3	85	SE	5	2.2	.....	5cs	1k	.....	SE	0.76	19.3	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.	24.09	611.9	29.57	751.1	58	14.4	58	Calm	0	0	.....	8k	0	W	.....	0	0	Cloudy	
Washington, D. C.	.....	.....	30.02	762.5	69	20.6	64	NW	3	1.3	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Wilmington, N. C	.....	.....	30.08	764.0	78	25.6	82	W	8	3.6	.....	5ck	2ks	SW	W	Inap.	Inap.	Cloudy	
Wood's Holl, Mass.	.....	.....	29.96	761.0	69	20.6	100	S	5	2.2	.....	.....	Fo2	.....	.....	0	0	Dense fog	
Wytheville, Va.	27.77	705.4	29.88	758.9	61	16.1	76	W	6	2.7	.....	0	4ks	.....	W	0.03	0.8	Fair	
Yankton, Dakota	28.52	724.4	29.75	755.6	65	18.3	68	SE	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	29.75	755.6	74	23.3	.....	NE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.11	764.8	82	27.8	83	SE	6	2.7	.....	0	5n	.....	E	1.40	35.6	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	30.09	764.3	77	25.0	95	SE	.....	.....	.....	Haze	8n	.....	.....	0.41	10.4	Rainy	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.22	767.6	83	28.3	74	Calm	0	0	.....	8c	0	.....	.....	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.77	756.1	84	28.9	75	N	1.2	0.5	.....	Haze	2k	.....	.....	0	0	Fair	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.06	763.5	80	26.7	78	NE	4.8	2.1	.....	1oc	0	.....	.....	0.74	18.8	Fair	Charles Hasselbrinks.
St. Georges, Bermudas	.....	.....	30.29	769.4	80.0	26.7	76	SE	12.0	5.4	.....	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.	27.27	692.6	30.03	762.7	73	22.8	72	E	4.0	1.8	.....	5c	0	E	.....	0	0	Fine, clear	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.07	763.8	80	26.7	91	E	.....	.....	2	3c	7k	E	.....	0	0	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.7	.....	.....	86.0	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.394	10.00	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.23	640.8	.....	.....	65.5	18.6	80	Calm	0	0	.....	7ck	3s	.....	.....	0.06	1.5	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	29.87	758.7	36	2.2	95	N	5	2.2	.....	.....	9s	.....	.....	0	0	.....	J. Fortescue, W. Woods
Honolulu, Oahu, H. I.	.....	.....	30.15	765.8	76	24.4	90	NE	.....	.....	3	.....	.....	.....	.....	0	0	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	30.07	763.8	60	15.6	80	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—		
Steamer Nova Scotian N. 49° 11′, W. 45° 04′.	W N W	11	29.93	760.2	45	7.2	.....	Var.	.....	.....	2	.....	10	.....	.....	Smooth	.....	Cloudy	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.; 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.; 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, 4,208.8 ft., or 1,301.1 m.; Santa Fè, 6,802.2 (?) ft., or 2,001.6 (?) 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't.) Chief Signal Officer, U. S. A.

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JUNE 22, 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	.....	.....	30.10	764.4	78.1	25.6	54	Calm	.....	.....	0	.....	0	.....	.....	0.020	0.5	Clear.....	Charnot.
Algiers	.....	.....	30.08	764.1	76.6	24.8	63	N	.....	.....	2	.....	4	.....	.....	Inap	Inap.	Fair.....	Peter.
La Calle	.....	.....	.....	.....	77.0	25.0	.....	NW	.....	.....	1	.....	4	.....	.....	0	0	Fair.....	Kuntz.
Tunis	.....	.....	30.03	762.8	81.7	27.6	59	ENE	.....	.....	3	.....	2	.....	.....	0	0	Clear.....	Jacques.
Sfax	.....	.....	30.08	764.0	77.7	25.4	51	NE	.....	.....	3	.....	2	.....	.....	0	0	Clear.....	Chauvey.
Saïda	.....	.....	30.12	765.1	80.6	27.0	34	NNW	.....	.....	2	.....	1	.....	.....	0	0	Clear.....	Millot.
Tebessa	.....	.....	30.08	764.1	78.4	25.8	.....	SE	.....	.....	3	.....	3	.....	.....	0	0	Fair.....	Colin.
Geriville	.....	.....	30.11	764.7	79.3	26.3	26	NNE	.....	.....	3	.....	1	.....	.....	0.	0	Clear.....	Buard.
Laghouat	.....	.....	30.04	762.9	91.4	33.0	.....	NE	.....	.....	3	.....	0	.....	.....	0	0	Clear.....	Guyot.
Biskra	.....	.....	30.01	762.2	94.5	34.7	31	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	.....	.....	29.88	759.0	77.5	25.3	57	NE	.....	.....	3	.....	5	.....	.....	0	0	.....	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	30.00	762.0	70.2	21.2	46	NE	.....	.....	3	.....	4	.....	.....	0	0	.....	Dr. Wierzbicki.
Eperies	.....	.....	29.90	759.5	72.0	22.2	50	N	.....	.....	5	.....	2	.....	S	0	0	.....	Julius Mikolik.
Gratz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.146	3 7	.....	Andreas Rospini.
Hermannstadt	28.72	729.5	29.88	758.9	73.6	23.1	67	SSE	.....	.....	3	.....	6	.....	.....	0	0	.....	Prof. Reissenberger.
Kremsmünster	28.41	721.5	29.76	755.8	73.0	22.8	54	ENE	.....	.....	2	.....	5	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	28.64	727.4	29.92	760.0	73.0	22.8	47	E	.....	.....	2	.....	3	.....	.....	0	0	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	29.88	759.0	68.0	20.0	75	NE	.....	.....	3	.....	5	.....	.....	.....	.....	.....	Habsuda Daniel.
Pola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	29.91	759.8	70.7	20.5	63	WNW	.....	.....	2	.....	8cks	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	29.81	757.8	78.1	25.6	39	N	.....	.....	2	.....	6	.....	.....	0	0	.....	Prof. V. Farolfi.
Vienna	.....	.....	29.80	759.3	84.4	29.1	57	WNW	.....	.....	1	.....	8	.....	.....	0	0	.....	I. R. Central Met. Obs'y.
	.....	.....	29.93	760.1	74.5	23.6	44	N	.....	.....	1	.....	8	.....	.....	0	0	.....	

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 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	.....	.....	29.80	756.3	77.0	25.0	66	NW	.....	.....	1	2	4	SSW	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.	Millimeters.	Barometer. Reduced to sea-level. Inches.	Millimeters.	Temperature of the Air. Fahrenheit.	Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Velocity. Miles per hour.	Meters per second.	Force. 0–10.	Clouds. Amount. Up'er. 0–10.	Low'r. 0–10.	Direction. Upper. From—	Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Millimeters.	Weather.	Observer.
Aberdeen			30.07	763.8	52.9	11.6		SE	13	5.8			10			0	0	Raining	William Boswell.
Ardrossan			30.03	762.7	59	15.0		SW			2		6			Blank	Blank	*D. clouds	William McNeil.
Armagh, Observatory			30.02	762.5	64.8	18.2		SW	4	1.8			7					*D. clouds	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown).			30.00	762.0	64.7	18.2		SE			1		6					*D. clouds	J. Dreyer.
Bradford			30.00	762.0	67.4	19.7		W			0		10			0.06	1.5	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.05	763.3	82.5	28.1		NE			4		6					*D. clouds	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			30.01	752.2	71.0	21.7		NW			1		10			Blank	Blank	Overcast	H. Todd.
Cardington			30.01	762.2	72.0	22.2		N			1		9					Overcast	John McLaren.
Carlisle			30.00	762.0	68.3	20.2		W			1		10			0.14	3.6	Overcast	T. Bell, for J. Carmell.
Chatham, School M. E			29.97	761.2	71.0	21.7		NE			4							*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.61	726.7	30.09	764.3	60.8	16.0		S			1		7					*D. clouds	R. F. Power.
Donaghadee			30.03	762.7	65	18.3		ESE			3		2					*D. clouds	J. Mac Gowan.
Dover			29.97	761.2	66	18.9		W			1		0					Clear	J. Costello.
Eccles (near Manchester.)			30.02	762.5	64.3	17.9		W	7.0	3.1			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			30.06	763.5	60.7	15.9		SSE	11	4.9			2					*D. clouds	The Staff.
Fort Napier, (Natal)	27.81	706.4	30.04	763.0	70.3	21.3		E			1		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.04	763.0	84	28.9		N			2		5					*D. clouds	
Galway, Queen's College			29.83	757.7	59	15.0		S			5		4					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean).			30.12	765.0	76.0	23.9		W			5		2						Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			30.00	762.0	63.7	17.6		WSW			1		9					*D. clouds	Lewis Stuart.
Great Yarmouth			29.97	761.2	69	20.6		NNE			3		7					Hazy	G. T. Watson.
Greenwich, Royal Obs'y			29.98	761.5	71.3	21.8		N			1		10					Overcast	The Staff, for G. B. Airy.
Guernsey			30.04	763.0	60	15.6		NNW			1		7					*D clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y			30.02	762.5	66.6	19.2		WNW			2		10			Blank	Blank	Overcast	L. J. Crossley.
Helston			29.11?	739.4?	64	17.8		S			4		10			0.5	12.7	Fine	M. P. Moyle.
Holyhead			30.06	763.5	59	15.0		NW			2		3					*D. clouds	John Tilston.
Kew, Observatory			29.99	761.7	69.4	20.8		NW	6	2.7			9					Hazy	The Staff.
Kingstown			30.05	763.3	62	16.7		SSE			4		2					Blue sky	George Mitchell.
Leicester Museum			30.03	762.7	65.0	18.3		W			1		10			Blank	Blank	Overcast	Wm. J. Harrison, F.G.S.
Malta, Mediterranean)			29.95	760.7	77	25.0		NW			1		4k					*D clouds	Corp'l F. Fraser, A. M. C.
Nairn			30.01	762.2	59	15.0		Calm			0		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.18	766.6	83.7	28.7		NE			4		10					Overcast	Surg. Maj. Henry.
Nottingham, Observatory			29.99	761.7	72.3	22.4		SW			3		10k		SSE	0.016	0.40	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.01	762.2	62.7	17.1		NNW			3		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.00	762.0	65	18.3		N			1		10					Gloomy	J. Lucas.
Plymouth			30.04	763.0	63.5	17.5		SW			3		5					*D. clouds	John Merrifield.
Roche's Point			30.01	762.2	64	17.8		S			4		2					Fine	W. Kennedy.
Saint Ann's Head			30.05	763.3	62	16.7		Calm			0		2					Blue sky	John C. Walker.
Saint Helier, Jersey)			30.03	762.7	63.5	17.5		ENE			1		8					¾ clouded	A. P. Amy.
Sandwick Manse (Orkneys)			30.07	763.8	59.1	15.1		SE	40	17.9			10					Misty	Rev. C. Clouston, LL. D.
Scarborough			30.00	762.0	53.5	11.9		N			3		10			Blank	Blank	Foggy	F. Shaw.
Scutari Cemetery Turkey			29.74	755.4	74.8	23.8		SSW			1		4					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.00	762.0	69.4	20.8		NE			1		9			0.043	1.09	Overcast	W. F. Cooper.
Silloth Rectory			30.03	762.7	68.1	20.1	66	SW			1		4			0.275	6.99	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory.			30.01	762.2	63.1	17.3		W			2					Blank	Blank		Rev. S. J. Perry.
Stornoway, Lews C. Hebr.			30.04	763.0	61	16.1		ENE			1		8					*D. clouds	John Smith.
Stratfield Turgiss			30.01	762.2	65.8	18.8		N			1		10					Overcast	Rev. Charles H. Griffith.
Thurso			30.03	762.7	56	13.3		SE			4		10					Overcast	John Trotter.
Truro, Royal Institution			30.05	763.3	70	21.1		S			4		4					*D. clouds	W. Newcombe.
Valencia, Observatory			29.96	761.0	60.9	16.1		SSE	29	13.0			6					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					53	11.7		SW			3		10			0	0		Thomas Dawson.
Cape Good Hope, Obs'y			30.13	765.3	58.1	14.5	79	NNW	11	4.9		5	5						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.32	770.1	58.0	14.4	81	W			1		8kn			0.02	0.5	Cloudy, hazy.	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			30.02	762.5	59.0	15.0		E			2		10s			0.40	10.2	Overcast	Andrew Gibb.
Mauritius, Observatory			30.22	767.6				ESE	15.6	7.0						0.03	0.8		C. Meldrum
Melbourne, Observatory			30.49	774.4	48.6	9.2	81	SW	3	1.3			3			0.07	1.8	Fine	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.00	762.0	59	15.0		S			3	5	3	S		0	0		J. Youngclause.
North Unst, (Shetland Is.)			30.27	768.8	58	14.4		SE			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, 0 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. Inches.	Millimeters.	Reduced. Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	Wind from—	Miles per hour.	Meters per second.	Force.	Clouds Up'er.	Low'r.	Upper from—	Lower from—	Rain Inches.	Millimeters.	Weather.
Copenhagen			30.26	768.7	66.4	19.1	50	ESE			2		0					
Fanöe			30.18	766.6	69.8	21.0	54	E			6		1					
Godthaab, (Greenland)			30.06	763.5	36.3	2.4	94	Calm			0		0					Foggy
Stykkisholm, (Iceland)			29.86	758.5	54.9	12.7	77	SE			4		8					Raining
Thorshavn, (Faröe)			30.15	765.8	57.2	14.0	80	E			4		5					
Vestervig			30.22	767.5	69.1	20.6	41	E			6		0					

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

FRENCH SERIES.

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

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	29.99	761.8	68.0	20	66	NE	.....	.....	1	.....	8s,n	.....	NE	0.165	4.2	Cloudy	Normal School.
Amiens	.....	.....	29.95	760.7	77.7	25.4	65	S	.....	.....	3	.....	5	.....	SW	0	0	Cloudy	Normal School.
Avignon	.....	.....	29.97	761.2	79.5	26.4	42	S	.....	.....	2	..c	.....	.....	.....	0	0	Light clouds	Normal School.
Bar-sur-Seine	.....	.....	29.89	759.2	81.9	27.7	49	N	.....	.....	2	8c	.....	N	.....	0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.99	761.8	62.2	16.8	94	W	4.5	2.0	.....	.....	10	.....	N	0.311	7.9	Raining.	Beaumette Observatory.
Beauvais	.....	.....	29.97	761.2	74.5	23.6	54	NW	.....	.....	2	.....	2	.....	.....	0.167	4.25	Slightly cl'dy	Normal School.
Besançon	.....	.....	29.90	759.4	82.8	28.2	56	ENE	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Bourg en Bresse	.....	.....	30.00	762.1	86.0	30	47	NNE	.....	.....	1	.....	..ks	.....	.....	.....	.....	.....	Normal School.
Bourges	.....	.....	29.91	759.6	72.7	22.6	86	W	.....	.....	2	.....	5	.....	NE	0.35	9.	Partly cloudy	Normal School.
Brest	.....	.....	29.98	761.4	73.2	22.9	58	SW	.....	.....	1	.....	2	.....	.....	0	0	Stormy	Naval Observatory.
Carcassonne	.....	.....	29.90	759.4	73.6	23.1	42	SW	.....	.....	1	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Caen	.....	.....	30.027	777.7?	60.8	21	80	N	.....	.....	1	.....	10	.....	N	0.024	0.6	Covered	Normal School.
Chartres	.....	.....	29.94	760.4	80.2	26.8	24	NNW	.....	.....	2	.....	5	.....	NW	0	0	.....	Normal School.
Clermont	.....	.....	29.86	758.5	80.6	27.0	53	NE	.....	.....	1	.....	5	.....	.....	.....	.....	Raining	Puy de Dome Obs'y.
Commercy	.....	.....	29.91	759.8	77.4	25.2	58	NW	.....	.....	2	.....	5kn	.....	NW	0	0	Cloudy	Normal School.
Commune de Greasque*	.....	.....	30.03	762.7	79.7	26.5	38	SE	.....	.....	2	.....	2	.....	SE	0	0	.....	M. Kina.
Grenoble	.....	.....	29.89	759.3	79.0	26.1	64	NNE	.....	.....	1	.....	2ck	.....	SE	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon	.....	.....	29.97	761.2	63.7	17.6	90	NW	.....	.....	2	.....	10	.....	.....	0.126	3.2	Covered	Normal School.
Le Mans	.....	.....	29.98	761.6	68.0	20	89	NNE	.....	.....	4	.....	5	.....	SW	0.307	7.8	Cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	29.91	759.6	80.8	27.1	50	S	.....	.....	.....	.....	10	.....	.....	0.008	0.20	Covered	Normal School.
Mâcon	.....	.....	29.93	760.2	79.3	26.3	75	S	.....	.....	2	.....	5	.....	NE	0	0	Cloudy	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	29.91	759.8	79.5	26.4	40	NW	.....	.....	4	.....	10	.....	SE	0	0	Covered	Normal School.
Nîmes	.....	.....	29.95	760.7	80.2	26.8	81	SW	.....	.....	2	.....	2	.....	.....	0	0	Slightly cl'dy	Normal School.
Orleans	.....	.....	29.91	759.7	74.8	23.8	67	NNE	.....	.....	1	.....	8	.....	NW	0.12	3.	Very cloudy	Normal School.
Paris, Observatory	.....	.....	29.95	760.8	73.8	23.2	60	NNW	.....	.....	2	.....	2	.....	.....	0.215	5.46	Slightly cl'dy	National Observatory.
Parthenay	.....	.....	29.96	760.9	68.0	20	54	NW	.....	.....	4	.....	10	.....	.....	0	0	Covered	Normal School.
Privas	.....	.....	29.93	760.1	83.8	28.8	.....	SW	.....	.....	2	.....	2	.....	SW	.....	.....	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.00	763.5	65.8	18.8	83	NNW	.....	.....	3	.....	10	.....	SW	0.079	2.0	Covered	Naval Observatory.
Rouen	.....	.....	29.98	761.4	75.9	24.4	56	NNW	.....	.....	2	.....	2	.....	SW	0.110	2.8	Slightly cl'dy	Normal School.
Saint Lo	.....	.....	29.55	750.6	64.4	18	72	NW	.....	.....	2	.....	9	.....	SW	0	0	.....	Normal School.
Tarbes	28.94	735.2	30.00	761.9	68.0	20	.....	E	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School
Villefranche	.....	.....	30.01	762.2	86.0	30	74	E	.....	.....	1	.....	5	.....	.....	0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.95	760.6	81.0	27.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	lank	Blank	.....	L'Abbé Marchési.
Marseilles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Marseilles Observatory.
Mont-Louis	.....	.....	30.15	765.8	68.0	20.0	80	ESE	13.0	5.83	.....	.....	8	.....	W	0.047	1.2	.....	—. Faiguère.
Montsouris, Paris	.....	.....	29.96	760.9	74.3	23.5	62	NW	.....	.....	3	.....	3	.....	S	0.425	10.8	.....	Montsouris Observ'tory.
Perpignan	.....	.....	29.93	760.3	74.5	23.6	66	SE	9.3	4.17	.....	.....	5	.....	E	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	76.8	24.9	57	NNW	.....	.....	1	.....	2	.....	.....	0.185	4.7	Slightly cl'dy	E. Renou.
Toulouse	.....	.....	30.00	761.9	75.6	24.2	57	NW	.....	.....	1	.....	6	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	29.95	760.7	78.3	25.7	57	NNW	.....	.....	1	.....	10	.....	SSW	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.97	761.2	75.6	24.2	63	N	.....	.....	2	.....	7	.....	.....	0.152	3.86	Stormy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Le Lec, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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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 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.

Bamberg	.....	.....	29.95	760.8	75.2	24.0	53	E	.....	.....	2	.....	4	E	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.09	764.2	76.1	24.5	37	SE	.....	.....	2	.....	3	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.10	764.6	72.7	22.6	36	NE	.....	.....	5	.....	5	.....	.....	0	0	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	29.89	759.1	81.3	27.4	57	NE	.....	.....	3	.....	4	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	29.95	760.6	81.7	27.6	40	E	.....	.....	6	.....	5	E	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	29.94	760.5	80.4	26.9	51	E	.....	.....	6	.....	0	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.95	760.7	83.3	28.5	30	ESE	.....	.....	1	.....	5	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	29.93	760.1	74.5	23.6	71	SW	.....	.....	2	.....	7	.....	.....	0.791	20.1	Foggy	M. Wilhelm.
Hamburg	.....	.....	30.10	764.5	75.2	24.0	48	NE	.....	.....	5	.....	3k	NE	.....	0	0	Very fine	Captain F. Hegemann.
Kiel	.....	.....	30.15	765.9	66.2	19.0	66	NE	.....	.....	6	.....	1	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	30.13	765.4	65.5	18.6	40	NE	.....	.....	5	.....	2	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	30.03	762.8	79.0	26.1	39	E	.....	.....	3	.....	6	E	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	30.19	766.9	64.8	18.2	35	ENE	.....	.....	4	.....	2cs	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.02	762.4	81.3	27.4	50	.....	.....	.....	1	.....	0	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.23	767.9	62.6	17.0	63	N	.....	.....	4	.....	10	.....	.....	0	0	Squally	A. Lothes.
Posen	.....	.....	30.16	766.0	71.6	22.0	41	N	.....	.....	7	.....	1	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.91	759.8	81.3	27.4	55	Calm	.....	.....	0	.....	0	E	.....	0	0	.....	Dr. Schür.
Stuttgart	.....	.....	29.91	759.7	80.2	26.8	48	E	.....	.....	1	.....	2	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	30.13	765.2	73.4	23.0	82	NE	.....	.....	3	.....	1	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.88	758.9	78.8	26.0	60	W	.....	.....	6	.....	10	.....	.....	0.055	1.4	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	30.10	764.4	69.1	20.6	51	ENE	.....	.....	3	.....	0	.....	.....	0	0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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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	74.7	23.7		SW										Sprinkling	

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	758.7	82.2	27.9	39	W	0.7	0.3			7			0	0		
Padua			29.88	759.0	80.1	26.7	51	SSW	3.8	1.7			3			0	0		
Vicenza			29.88	758.9	83.7	28.7	42	SE	4.9	2.2			10	SW		0.452	11.5		
Verona			29.84	758.0	77.0	25.0	70	E			1		10			0.362	9.2		
Bergamo	28.58	725.9	29.85	758.1	78.8	26.0	51	N			1		3			0	0		
Domodossola	28.87	733.3	29.84	758.0	82.4	28.0	66	SSW			4		3			0	0		
Milan			29.90	759.4	85.5	29.7	54	SSW			1		6	SSW		0	0		
Pavia			29.89	759.3	82.0	27.8	52	E			1		0			0	0		
Moncalieri			29.89	759.2	80.1	26.7	55	SSE	4.9	2.2			4	SW		0.016	0.4		
Mondovi	28.03	712.0	29.88	758.9	81.0	27.2	44	S			2		4	NNW		0	0		
Porto Maurizio			30.00	762.1	76.1	24.5	71	SE			2		4	SW		0	0		
Genoa			29.95	760.8	74.5	23.6	64	SW	3.8	1.7			0			0	0		
Piacenza			29.90	759.4	82.2	27.9	51	NE	2.5	1.1			1			0	0		
Parma			29.89	759.1	85.1	29.5	49	E			2		1			0	0		
Bologna			29.96	761.0	84.2	29.0	42	WNW			1		3	S		0	0		
Florence			29.97	761.2	80.4	27.0	46	SW			2		2	NW		0	0		
Leghorn			29.98	761.5	76.1	24.5	75	WSW	6.3	2.8			3			0	0		
Siena	28.76	730.5	29.93	760.1	77.7	25.4	48	W	5.6	2.5			2	SW		0	0		
Urbino	28.42	721.9	29.92	760.0	74.7	23.7	55	NNE			2		2			0	0		
Pesaro																			
Ancona			29.93	760.1	78.8	26.0	59	NW			4		2			0	0		
Grosseto			29.98	761.4	82.0	27.8	38	WNW			4		3	SE		0	0		
Rome			29.95	760.6	80.2	26.8	44	W	8.7	3.9			1			0	0		
Naples, O. U.			29.97	761.3	78.6	25.9	67	SW			4		1			0	0		
Lecce			29.90	759.5	77.7	25.4	49	WNW	13.7	6.1			2			0	0		
Cosenza			29.92	760.0	85.3	29.6	74	NW	6.3	2.8			3			0	0		
Riposto, (Sicily)			29.93	760.2	78.4	25.8	53	SE			2		0			0	0		
Palermo			29.93	760.3	79.0	26.1	36	NE	4.9	2.2			0			0	0		
Caltanissetta	28.00	711.3	29.86	758.5	79.0	26.1	27	NW			6		0			0	0		
Sub-Series.																			
Naples, S. R.			29.98	761.4	77.4	25.2	72	SW	4.3	1.9			6	SW		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 550 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

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

NETHERLANDS' SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Flushing			29.98	761.5	67.3	19.6		W			2								
Groningen			29.95	760.6	78.1	25.6		E			5								
Helder			29.96	760.9	77.4	25.2		E			2								
Utrecht			29.91	759.7	84.0	28.9	45	SSE			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			30.28	769.0	70.7	21.5	50	W	11.0	4.9			0			0	0		
Brönö			30.39	771.9	82.4	28.0	39	NE	7	3			0			0	0		
Christiania			30.33	770.3	75.9	24.4	27	NE	1.8	0.8			1			0	0		
Tromsö			30.42	772.6	64.0	17.8	58	NE	0	0			0			0	0		

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores.)	.....	.....	30.13	765.3	69.3	20.7	83	WSW	6.5	2.92	.....	.....	6	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.09	764.3	72.5	22.5	28	W	9.1	4.08	.....	.....	2	.....	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.22	767.5	70.0	21.1	73	Calm	0	0	.....	.....	10	.....	.....	0	0	.....	Capt D. A. da Cunha.
Lisbon	.....	.....	30.19	766.9	63.1	17.3	91	SSW	18.6	8.3	.....	.....	7	N	.....	0.067	1.7	Raining	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	.....	.....	30.05	763.3	65.8	18.8	42	NNE	18	8	.....	.....	4	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.04	763.1	61.9	16.6	38	NE	11	5	.....	.....	6	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.17	766.2	60.6	15.9	52	NE	11	5	.....	.....	4	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.17	766.3	60.1	15.6	41	NE	18	8	.....	.....	6	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	30.29	769.3	65.8	18.8	57	NE	18	8	.....	.....	3	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.86	758.4	60.1	15.6	47	N	11	5	.....	.....	6	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.81	757.1	69.1	20.6	58	NE	20	9	.....	.....	6	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.63	752.7	75.4	24.1	69	NW	13	6	.....	.....	9	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.88	758.9	51.8	11.0	85	NW	4	2	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.91	759.8	58.3	14.6	87	N	34	15	.....	.....	10	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	30.24	768.0	57.7	14.3	40	N	22	10	.....	.....	7	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.26	717.9	29.58	751.4	83.1	28.4	42	NW	4	2	.....	.....	8	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.56	750.9	89.4	31.9	30	S	9	4	.....	.....	4	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.70	754.4	54.3	12.4	90	NNE	13	6	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.82	732.0	29.77	756.2	70.3	21.3	59	E	4	2	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Nukluss	.....	.....	29.61	752.2	92.3	33.5	28	N	4	2	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.10	713.8	29.67	753.7	90.0	32.2	37	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.79	756.6	70.7	21.5	32	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.84	757.9	63.3	17.4	50	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	Marks.
Irkutsk	28.53	724.6	29.89	759.2	53.1	11.7	76	NW	18	8	.....	.....	10	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.69	754.1	81.7	27.6	37	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	29.84	757.9	53.1	11.7	95	SE	2	1	.....	.....	10	.....	.....	Blank	Blank	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	48.6	9.2	98	NW	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. 494.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	29.97	761.1	77.9	25.5	43	SW	17.9	8.00	.....	1	7	S	.....	0	0	Cloudy	Royal Observatory.
San Fernando	.....	.....	30.18	766.6	69.4	20.8	70	WNW	11.2	5.0	.....	4	6	SW	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.

Haparanda	.....	.....	30.44	773.2	70.6	24.8	38	N	.....	.....	2	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	30.45	773.5	69.8	21.0	46	E	.....	.....	2	.....	0	.....	.....	0	0	.....	
Hernosand	.....	.....	30.45	773.4	66.9	19.4	45	E	.....	.....	2	.....	0	.....	.....	0	0	.....	
Stockholm	.....	.....	30.30	769.7	68.5	20.3	41	NE	.....	.....	4	.....	2	.....	.....	0	0	.....	
Wisby	.....	.....	30.30	769.5	60.8	16.0	56	NE	.....	.....	7	.....	5	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.34	770.7	68.9	20.5	32	NE	12.3	5.5	.....	.....	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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. 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	724.8	29.89	759.3	78.1	25.6	41	NNW	.....	.....	1	.....	5	.....	.....	0	0	Vapory	The Observatory.
Zurich	28.35	720.1	29.91	759.6	80.2	26.8	58	E	.....	.....	1	.....	4	.....	.....	0.343	8.7	Clear	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note—For Geneva the corresponding departures from the normal values are: Barometer, —2.0 mm; Thermometer, +4.2 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.

Constantinople	.....	.....	29.80	756.8	75.4	24.1	65	SSW	8	3.5	.....	.....	5	.....	WNW	0.283	7.2	.....	
Fao, (Persian Gulf)	.....	.....	29.76	755.9	95.0	.....		NW	.....	.....	6	.....	10	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.82	757.4	72.1	22.3	.....	NW	.....	.....	1	.....	2	.....	.....	.....	.....	Light rain	
Valona	.....	.....	29.89	759.2	76.1	24.5	.....	NW	.....	.....	2	.....	2	.....	.....	.....	.....	.....	
Varna	.....	.....	29.78	756.5	68.0	20.0	.....	NW	.....	.....	3	.....	10	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.90	759 5	84.9	29.4	52	WSW	.....	.....	3	.....	2k	.....	WSW	0.04	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.

Bathurst, N. B	.....	.....	29.59	751.6	65.9	18.8	78	N	4	1.8	.....	0	4	.....	.....	0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.00	762.0	66	18.9	.....	SW	3	1.3	.....	.....	2s	.....	SW	0.20	5.1	Fair	W. R Bigg.
*Chatham, N. B	.....	.....	29.65	753.1	66	18.9	86	S	9	4.0	.....	2k	8ks	SW	SW	0.22	5.6	Cloudy	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.72	754.9	68	20.0	82	SW	13	5.8	.....	0	5ks	.....	.....	0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.89	759.2	63.4	17.4	74	W	.....	.....	3	.....	10ks	.....	.....	0 199	5.06	Dull	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.63	752.6	62.0	16.7	93	W	.....	.....	3	9k	0	.....	.....	0.42	10.7	.....	H. A. Johnson.
Esquimault, B. C	.....	.....	30.11	764.8	50.3	10.2	87	SW	4	1.8	.....	6ck	0	.....	.....	0	0	Cloudy	W. H. Bevis.
Fredericton, N. B	.....	.....	29.74	755.4	64.1	17.8	72	SW	8	3.6	.....	4k	0	.....	.....	0.02	0.5	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.61	752.1	72	22.2	85	S	8	3.6	.....	0	0	.....	.....	0	0	Clear	James Stewart.
Goderich, Ontario	.....	.....	30.06	763.5	61.4	16.3	87	Calm	.....	.....	0	3c	0	W	.....	0.026	0.66	Fine	H. J. Strang, M. A.
Granton, Ontario	28.94	735.1	30.02	762.5	62.2	16.8	.....	Calm	.....	.....	0	0	0	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S	.....	.....	29.76	755.9	59	15.0	98	S	4	1.8	.....	.....	8n	.....	.....	0.08	2.0	Cloudy	F. Allison, M. A.
*Kingston, Ontario	.....	.....	29.99	761.7	60	15.6	78	W	4	1.8	.....	0	0	.....	.....	0.13	3.3	Clear	S. Woods, M. A.
Little Glace Bay, N. S	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.13	3.3	.....	C. H. Rigby
*Montreal, Quebec	.....	.....	29.80	758.4	59	15.0	87	SW	11	4.9	.....	8k	2ks	NW	.....	0 41	10.4	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.92	760.0	62	16.7	73	SW	8	3.6	.....	2ck	0	W	.....	0.10	2.5	Clear	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.02	762.5	59	15.0	76	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	30.01	762.2	61	16.1	83	NW	7	3.1	.....	0	0	.....	.....	0.01	0.3	Clear	H. Morgan.
Port Hastings, N. S	.....	.....	29.84	757.9	62.3	16.8	.....	SW	4	1.8	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
*Port Stanley, Ontario	.....	.....	30.02	762.5	61	16.1	88	N	4	1.8	.....	.....	10n	.....	NW	0.24	6.1	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	29.78	756.4	63	17.2	72	SW	14	6.3	.....	0	0	.....	.....	0.59	15.0	Clear	Capt. Ashe, R. N.
St. John, N. B	.....	.....	29.79	756.7	50	10.0	100	S	1	0.4	.....	.....	Fog	.....	.....	0.07	1.8	Foggy	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.02	762.5	57	13.9	94	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	K. Stewart.
Stayner, Ontario	.....	.....	30.00	762.0	63	17.2	59	N	8	3.6	.....	5c	0	NW	.....	0.10	2.5	Fair	R. J. Cole.
Stratford, Ontario	28.76	730.5	30.01	762.2	58.6	14.8	79	NW	3	1.3	.....	0	0	.....	.....	0	0	Fine	C. J. Macgregor, M. A.
*Sydney, C. B	.....	.....	29.79	756.7	64	17.8	94	SW	7	3.1	.....	....	10n	.....	.....	0.05	1.3	Cloudy	T. C. Hill.
*Toronto, Ontario	.....	.....	30.03	762.7	60	15.6	71	W	4	1.8	.....	0	0	.....	.....	0.12	3.0	Clear	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.03	762.7	61.8	16.6	79	E	2	0.9	.....	0	0	.....	.....	0	0	Fine	J. Montgomery.
Sub-Series.																			
St. John's, Newfoundland	.....	.....	30.07	763.8	66	18.9	84	S	.....	.....	.....	.....	10n	.....	.....	0.08	2.0	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 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	62	16.7	83	Calm	0	0	.....	2k	2ks	SW	S	0.03	0.8	Fair.	
Alpena, Mich.	.....	.....	30.00	762.0	58	14.4	87	NW	2	0.9	.....	1c	0	NE	....	0	0	Clear.	
Atlantic City, N. J.	.....	.....	30.06	763.5	70	21.1	61	W	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Augusta, Ga.	.....	.....	30.17	766.3	74	23.3	74	NW	2	0.9	.....	5es	0	NW	.....	0	0	Fair.	
Baltimore, Md.	.....	.....	30.10	764.5	69	20.6	61	SW	8	3.6	.....	2c	Sm'e	SW	.....	0	0	Fair.	
Barnegat, N. J.	.....	.....	30.03	762.7	72	22.2	62	W	13	5.8	.....	2k	0	NW	.....	0	0	Fair.	
Benton, Montana	27.07	687.6	29.87	758.7	59	15.0	66	SW	5	2.2	.....	.....	10s	.....	SW	0	0	Cloudy.	
Bismarck, Dakota	27.82	706.6	29.32	744.7	75	23.9	68	SW	14	6.3	.....	5k	Haze	SW	.....	0	0	Fair.	
Boston, Mass.	.....	.....	29.90	759.4	66	18.9	64	W	12	5.4	.....	8es	Haze	W	.....	0.02	0.5	Fair.	
Breckenridge, Minn.	.....	.....	29.61	752.1	71	21.7	85	SE	22	9.8	.....	0	8ks	.....	S	0	0	Cloudy.	
Buffalo, N. Y.	.....	.....	29.99	761.7	61	16.1	77	N	3	1.3	.....	5k	0	N	.....	Inap.	Inap.	Fair.	
Burlington, Vt.	.....	.....	29.89	759.2	63	17.2	67	S	5	2.2	.....	5k	2s	W	.....	0.25	6.3	Cloudy.	
Cairo, Ill.	.....	.....	30.08	764.0	77	25.0	77	SW	5	2.2	.....	5ek	0	W	.....	0	0	Fair.	
Cape Hatteras, N. C.	.....	.....	30.04	763.0	78	25.6	72	NE	4	1.8	.....	Haze	0	....	.....	Inap.	Inap.	Cloudy.	
Cape Henry, Va.	.....	.....	30.10	764.5	76	24.4	64	NW	7	3.1	.....	0	Haze	.....	.....	0	0	Clear.	
Cape Lookout, N. C.	.....	.....	30.13	765.3	78	25.6	82	W	4	1.8	.....	0	0	.....	.....	Inap.	Inap.	Clear.	
Cape May, N. J.	.....	.....	30.08	764.0	67	19.4	79	W	14	6.3	.....	0	0	.....	.....	0	0	Clear.	
Charleston, S. C.	.....	.....	30.17	766.3	78	25.6	69	W	4	1.8	.....	2c	Haze	NW	.....	0	0	Fair.	
Cheyenne, Wyoming	23.90	608.6	29.90	759.4	62	16.7	16	NW	12	5.4	.....	Haze	0	.....	.....	0	0	Hazy.	
Chicago, Ill.	.....	.....	29.97	761.2	70	21.1	75	SW	6	2.7	.....	0	Sm'e	.....	.....	0	0	Clear.	
Cincinnati, Ohio.	.....	.....	30.03	762.7	67	19.4	73	SE	4	1.8	.....	0	Sm'e	.....	.....	0	0	Clear.	
Cleveland, Ohio.	.....	.....	30.05	763.3	65	18.3	73	W	6	2.7	.....	.....	10ks	.....	W	0	0	Cloudy.	
Colorado Springs, Col.	24.07	611.4	29.94	760.5	60	15.6	44	N	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Corsicana, Tex.	.....	.....	30.03	763.3	76	24.4	90	SE	6	2.7	.....	2c	2k	....	S	0	0	Fair.	
Davenport, Iowa.	.....	.....	29.93	760.2	72	22.2	83	S	4	1.8	.....	5ek	0	.....	.....	0	0	Fair.	
Denison, Tex.	.....	.....	30.05	763.3	75	23.9	76	S	20	8.9	.....	.....	10s	.....	S	0	0	Cloudy.	
Denver, Col.	24.72	627.9	29.94	760.5	63	17.2	33	S	5	2.2	.....	0	Haze	.....	.....	0	0	Clear.	
Detroit, Mich.	.....	.....	30.01	762.2	64	17.8	83	Calm	0	0	.....	0	8s	.....	NW	0.02	0.5	Fair.	
Dodge City, Kan.	27.28	692.9	29.43	747.5	74	23.3	77	SE	12	5.4	.....	0	0	.....	.....	0	0	Clear.	
Dubuque, Iowa.	.....	.....	29.91	759.7	70	21.1	70	S	2	0.9	.....	0	0	.....	.....	0	0	Clear.	
Duluth, Minn.	.....	.....	29.92	760.0	45	7.2	84	Calm	0	0	.....	0	Fog	.....	.....	0	0	Fair.	
Eastport, Me.	.....	.....	29.76	755.9	65	18.3	81	SW	3	1.3	.....	2k	0	NW	.....	0.04	1.0	Fair.	
Erie, Pa.	.....	.....	30.00	762.0	63	17.2	94	NW	6	2.7	.....	.....	10ks	.....	NW	0.72	18.3	Cloudy.	
Escanaba, Mich.	.....	.....	30.00	762.0	56	13.3	74	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Dense fog.	
Fort Gibson, Indian Ter.	.....	.....	29.96	761.0	80	26.7	78	S	8	3.6	.....	2c	2s	.....	S	0	0	Fair.	
Ft. St. Michael, Alaska.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.78	731.0	29.83	757.7	80	26.7	70	S	12	5.4	.....	5es	0	S	....	0	0	Fair.	
Fort Sully, Dakota.	27.79	705.8	29.31	744.5	74	23.3	72	SE	8	3.6	.....	1c	0	.....	.....	Inap.	Inap.	Clear.	
Galveston, Tex.	.....	.....	30.12	765.0	82	27.8	83	SE	5	2.2	.....	1c	0	W	....	0	0	Clear.	
Grand Haven, Mich.	.....	.....	30.09	764.0	68	20.0	74	SW	3	1.3	.....	0	0	.....	.....	0.03	0.8	Clear.	
Indianapolis, Ind.	.....	.....	30.01	762.2	71	21.7	75	S	3	1.3	.....	0	0	.....	.....	0	0	Clear.	
Indianola, Tex.	.....	.....	30.10	764.5	82	27.8	78	SE	8	3.6	.....	5k	0	.....	.....	0	0	Fair.	
Jacksonville, Fla.	.....	.....	30.18	766.6	81	27.2	74	E	4	1.8	.....	0	0	.....	....	0	0	Clear.	
Keokuk, Iowa.	.....	.....	29.91	759.7	73	22.8	90	W	16	7.2	.....	.....	10n	.....	W	0.08	2.0	Light rain.	
Key West, Fla.	.....	.....	30.15	765.8	83.4	28.6	79	E	3	1.3	.....	2k	2ks	E	E	0	0	Cloudy.	
Kittyhawk, N. C.	.....	.....	30.11	764.8	69	20.6	84	N	4	1.8	.....	2c	0	.....	.....	0	0	Clear.	
Knoxville, Tenn.	.....	.....	30.13	765.3	69	20.6	84	Calm	0	0	.....	8es	0	W	.....	Inap.	Inap.	Cloudy.	
La Crosse, Wis.	.....	.....	29.88	758.9	67	19.4	84	S	3	1.3	.....	0	0	....	.....	0	0	Clear.	
Leavenworth, Kan.	.....	.....	29.83	757.7	77	25.0	82	S	12	5.4	.....	0	0	.....	.....	0	0	Clear.	
Lexington, Ky.	29.00	736.6	30.06	763.5	73	23.8	80	SW	8	3.6	.....	2c	0	.....	.....	0	0	Clear.	
Long Branch, N. J.	.....	.....	30.02	762.5	66	18.9	68	W	8	3.6	.....	0	8ks	.....	W	0	0	Cloudy.	
Louisville, Ky.	.....	.....	30.04	763.0	74	23.3	72	Calm	0	0	.....	0	Fog	.....	.....	0	0	Fair.	
Lynchburg, Va.	.....	.....	30.13	765.3	71	21.7	67	NW	2	0.9	.....	5c	0	SW	.....	0	0	Fair.	
Malone, N. Y.	.....	.....	29.8?	757.4	60	15.6	70	W	8	3.6	.....	8ek	0	NW	....	0.38	9.7	Cloudy.	
Manhattan, Kan.	28.66	728.0	29.74	755.4	77	25.0	69	S	24	10.7	.....	2es	0	.....	.....	0	0	Clear.	
Marquette, Mich.	.... .	.....	29.92	760.0	67	19.4	64	SE	16	7.2	.....	0	0	.....	.....	0	0	Clear.	
Memphis, Tenn.	.....	.....	30.11	764.8	80	26.7	70	SW	5	2.2	.....	0	0	.....	.....	0	0	Clear.	
Milwaukee, Wis.	.....	.....	30.09	764.0	67	19.4	79	W	4	1.8	.....	0	Sm'e	.....	.....	0	0	Clear.	
Mobile, Ala.	.....	.....	30.20	767.1	76	24.4	81	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Montgomery, Ala.	.....	.....	30.20	767.1	78	25.6	77	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Morgantown, W. Va.	.....	.....	30.08	764.0	67	19.4	64	S	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
Mt. Washington, N. H.	23.67	601.0	30.03	762.7	30	2.2	100	NW	30	13.4	.....	.....	Fog	.....	.....	0.74	18.8	Foggy.	
Nashville, Tenn.	.....	.....	30.10	764.5	74	23.3	81	Calm	0	0	.....	5k	5s	W	.....	0	0	Cloudy.	
New Haven, Conn.	.....	.....	29.94	760.5	74	23.3	45	NW	10	4.5	.....	Haze	0	.....	.....	0	0	Clear.	
New London, Conn.	.....	.....	29.98	761.5	68	20.0	60	W	4	1.8	.....	2c	0	SW	.....	0	0	Fair.	
New Orleans, La.	.....	.....	30.17	766.3	78.5	25.8	78	S	3	1.3	.....	0	0	.....	.....	0	0	Clear.	
Newport, R. I.	.....	.....	29.96	761.0	65	18.3	73	SW	8	3.6	.....	2c	0	W	.....	0	0	Fair.	
New York, N. Y.	.....	.....	30.0]	762.2	64	17.8	67	W	11	4.9	.....	2k	0	W	.....	Inap.	Inap.	Clear.	
Norfolk, Va.	.....	.....	30.12	765.0	74	23.3	63	NW	7	3.1	.....	0	Haze	.....	.....	0	0	Clear.	
North Platte, Neb.	26.85	682.0	29.19	741.4	74	23.3	47	SE	12	5.4	.....	2k	0	.....	.....	0	0	Clear.	
Omaha, Neb.	28.71	729.2	29.71	754.6	78	25.6	82	S	10	4.5	.....	2k	0	S	.....	0	0	Clear.	
Oswego, N. Y.	.....	.....	30.00	762 0	58.2	14.6	78	W	10	4.5	.....	0	Haze	.....	.....	Inap.	Inap.	Clear.	
Pembina, Dakota.	.....	.....	29.56	750.8	72	22.2	75	SE	12	5.4	.....	5c	0	.....	.....	0	0	Fair.	
Philadelphia, Penn.	.....	.....	30.07	763.8	67	19.4	64	W	5	2.2	.....	5ks	Sm'e	W	.....	0	0	Fair.	
Pike's Peak, Colorado.	17.93	455.4	30.14	765.5	33	0.6	69	W	50	22.4	.....	0	Haze	.....	.....	0	0	Clear.	
Pittsburgh, Penn.	.....	.....	30.06	763.5	63	17.2	69	W	8	3.6	.....	.....	10ks	....	W	0	0	Cloudy.	
Port Huron, Mich.	.....	.....	30.02	762 5	60	15.6	88	NE	5	2.2	.....	5k	0	NW	.....	0.76	19.3	Fair.	
Portland, Me.	.....	.....	29.86	758.4	64	17.8	67	W	10	4.5	.....	2c	0	W	....	0.22	5.6	Fair.	
Portland, Oregon.	.....	.....	30.22	767.6	52	11.1	93	Calm	0	0	.....	.....	10s	.....	SW	0.13	3.3	Cloudy.	
Punta Rassa, Fla.	.....	.....	30.18	766.6	79.0	26.1	72	E	8	3.6	.....	Haze	2s	....	NE	0	0	Fair.	
Rochester, N. Y.	.....	.....	29.98	761.5	62	16.7	71	NW	6	2.7	.....	0	Haze	.....	.....	0.10	2.5	Clear.	
Salt Lake City, Utah	25.70	652.8	30.03	762.7	67	19.4	52	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Sandy Hook, N. J.	.....	.....	30.00	762.0	66	18.9	78	W	15	6.7	.....	1c	1s	SW	W	0	0	Clear.	
San Diego, Cal.	.....	.....	29.92	760.0	64	17.8	88	SE	8	3.6	.....	.....	10s	.....	SE	0	0	Cloudy.	
San Francisco, Cal.	.....	.....	29.96	761.0	55	12.8	80	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Santa Fé, N. M.	23.32	592.3	29.86	758.4	61	16.1	60	E	1	0.4	.....	2k	0	.....	.....	0	0	Fair.	
Savannah, Ga.	.....	.....	30.18	766.6	78	25.6	72	W	3	1.3	.....	0	0	.....	.....	0	0	Clear.	
Shreveport, La.	.....	.....	30.15	765.8	75	23.9	90	S	4	1.8	.....	8ek	0	SW	.....	0	0	Cloudy.	
Smithville, N. C.	.....	.....	30.14	765.5	70	21.1	58	N	2	0.9	.....	0	0	.....	.....	0	0	Clear.	
Springfield, Mass.	.....	.....	29.95	760.7	66	18.9	73	S	4	1.8	.....	8ek	1s	N	.....	0.05	1.3	Fair.	
St. Louis, Mo.	.....	.....	29.99	761.7	74	23.3	81	S	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
St. Marks, Fla.	.....	.....	30.17	766.3	79	26.1	73	NW	3	1.3	.....	2c	0	NW	.....	0	0	Fair.	
St. Paul, Minn.	.....	.....	29.78	756.4	71.5	21.9	78	SE	8	3.6	.....	0	0	.....	.....	0	0	Clear.	
St. Paul's Island, Alaska.	.....	.....	29.85	758.2	36	2.2	100	NW	21	9.4	.....	.....	10n	.....	.....	0.02	0.5	Light rain.	
Thatcher's Island, Mass.	.....	.....	29.99	759.4	64	17.8	62	W	15	6.7	.....	1c	0	W	.....	0	0	Clear.	
Toledo, Ohio.	.....	.....	30.01	762.2	65	18.3	78	SW	6	2.7	.....	.....	10ks	.....	SW	0	0	Cloudy.	
Tucson, Arizona.	27.51	698.7	30.10	764.5	76	24.4	.....	S	.....	.....	.....	5c	2ks	SE	S	0	0	Fair.	
Tybee Island, Ga.	.....	.....	30.18	766.6	76	24.4	81	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Vicksburg, Miss.	.....	.....	30.18	766.6	78.5	25.8	82	S	2	0.9	.....	2c, hz	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.	24.27	616.4	29.75	755.6	42	5.6	83	Calm	0	0	.....	8c	0	W	.....	0.81	20.6	Cloudy	
Washington, D. C.	.....	.....	30.10	764.5	71	21.7	65	SW	3	1.3	.....	0	Haze	.....	.....	0	0	Clear	
Wilmington, N. C	.....	.....	30.14	765.5	75	23.9	72	NW	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Wood's Holl, Mass.	.....	.....	29.95	760.7	68	20.0	69	W	6	2.7	.....	5c	0	NW	.....	0	0	Fair	
Wytheville, Va.	27.83	706.9	29.94	760.5	64	17.8	83	SW	4	1.8	.....	5c	2ks	W	W	0	0	Cloudy..	
Yankton, Dakota.	28.41	721.6	29.69	754.8	78	25.6	69	S	25	11.2	.....	0	1s	.....	SW	0	0	Clear	
Yuma, Arizona	.....	.....	29.84	757.9	78	25.6	.....	E	.....	.....	.....	0	0	.....	.....	0	0	Clear	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
SUB-SERIES.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.12	765.0	83	22.8	79	NE	6	2.7	.....	.....	1ks	.....	.....	0.25	6.3	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	30.07	763.8	82	27.8	87	E	.....	.....	.....	5k	5ks	.....	.....	0	0	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.24	768.1	82	27.8	74	SE	8	3.6	.....	8c	2s	.....	NE	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.87	758.7	84	28.9	75	NW	1.2	0.5	.....	2c	0	N	.....	0	0	Fair	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.12	765.0	84	28.9	83	E	2.4	1.1	.....	2c,ck	0	.....	.....	0	0	Fair	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.10	764.5	78.0	25.6	82	S	8.0	3.6	.....	..pc	10k	.....	.....	0.16	4.1	Cloudy	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica, W. I.	27.29	693.2	30.06	763.5	72	22.2	81	N	3.0	1.3	.....	8c	5k	NE	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.07	763.8	80	26.7	87	E	.....	.....	2	8ks	7ks	E	.....	0.390	9.91	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.6	.....	.....	86.0	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.26	641.6	.....	.....	64.0	17.8	85	W	4	1.8	.....	2ck	6ks	.....	.....	0.30	7.6	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	29.78	756.4	51	10.6	79	SE	10	4.5	.....	2c	0	SE	.....	0	0	.....	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.17	766.3	75	23.9	90	NE	.....	.....	5	.....	.....	.....	.....	0	0	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	30.04	763.0	60	15.6	82	Calm	0	0	.....	0	0	.....	.....	0	0	Changeable	F. L. Clarke.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

MARINE SERIES.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	
}	.....	.....	.....	.....	.....
}	.....	.....	.....	.....	.....
}	.....	.....	.....	.....	.....
Steamer Nova Scotian N. 48° 03′, W. 51° 04′. }	W by N ½ N	10½	29.97	761.2	47	8.3	.....	SW	.....	.....	3	.....	.....	.....	.....	Smooth	.....	Fog & mist	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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,264.8 ft., or 1,301.1 m.; Santa Fé, 6,892.2 (?) 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.; 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 Ammon, 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, 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 JUNE 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			30.03	762.7	78.4	25.8	51	Calm			0		3			0	0	Fair	Charnot.
Algiers			30.01	762.3	77.7	25.4	48	N			3		0			0	0	Clear	Peter.
La Calle					77.9	25.5		NW			1		1			0	0	Clear	Kunts.
Tunis			29.97	761.2	80.6	27.0	64	E			4		1			0	0	Clear	Jacques.
Sfax			30.05	763.2	79.2	26.2	67	NE			2		1			0	0	Clear	Chauvey.
Saida			30.07	763.7	82.4	28.0	27	NW			1		1			0	0	Clear	Millot.
Tebessa			30.04	763.0	77 4	25.2		NNW			2		0			0	0	Clear	Colin.
Gerfville			30.06	763.5	85.6	29.8	22	SSE			3		2			0	0	Clear	Buard.
Laghouat			30.02	762.6	93.2	34.0	31	NE			1		2			0.276	7.0	Clear	Guyot.
Biskra			30.05	763.2	92.3	33.5	25	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			29.82	757.4	68.7	20.4	69	NE			2		10			0.272	6.9		Prof. Ivan Stosir.
Cracow, I. R. Observatory			29.88	758.9	68.0	20.0	41	E			1		7			0	0		Dr. Wierzbicki.
Eperies			29.84	758.0	64.6	18.1	42	N			3		8		S	0	0		Julius Mikolik.
Gratz	28.64	727.5	29.82	757.3	66.7	19.3	76	SW			2		6			0.280	7.1		Andreas Rospini.
Hermannstadt	28.35	720.0	29.71	754.6	69.1	20.6	47	WNW			3		5			0	0		Prof. Reissenberger.
Kremsmünster	28.53	724.7	29.82	757.5	68.4	20.2	54	SSE			2		6			0	0		Prof. C. Wagner.
Lemberg			29.80	757.0	60.1	15.6	82	NE			1		4			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.81	757.1	77.2	25.1	67	WSW			1		Broke			0	0		I.R.Hydrographic Office.
Szegedin			29.80	756.9	69.6	20.9	75	NE			1		5			0	0		Karl Stancel.
Trieste			29.80	757.0	82.8	28.2	61	W			1		7			0.051	1.3	Stormy	Prof. V. Farolfi.
Vienna			29.84	758.0	69.8	21.0	44	N			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.; 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			29.91	759.7	67.6	19.8	82	W			1		10		SW	0.020	0.5	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	.....	.....	30.16	766.1	57.0	13.9	.....	E	11	4.9	.....	.....	2	.....	.....	0.145	3.69	Blue sky.....	William Boswell.
Ardrossan	.....	.....	30.09	762.0	58	14.4	.....	E	.....	.....	1	.....	9	.....	.....	.....	.....	Raining.....	William McNeil.
Armagh, Observatory	.....	.....	30.00	762.0	58.6	14.8	.....	ENE	3	1.3	.....	.....	.....	.....	.....	.....	.....	.....	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	29.97	761.2	67.7	19.8	.....	ESE	.....	.....	1	.....	7	.....	.....	.....	.....	*D. clouds.....	J. Dreyer.
Bradford	.....	.....	29.97	761.2	58.8	14.9	.....	NE	.....	.....	1	.....	10	.....	.....	0.22	5.6	Raining.....	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.05	763.3	83.0	28.3	.....	NE	.....	.....	3	.....	5	.....	.....	.....	.....	*D. clouds.....	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory	.....	.....	29.97	761.2	60.0	15.6	.....	NW	.....	.....	1	.....	10	.....	.....	.....	.....	Raining.....	H. Todd.
Cardington	.....	.....	29.97	761.2	62.0	16.7	.....	W	.....	.....	0	.....	10	.....	.....	.....	.....	Overcast.....	John McLaren.
Carlisle	.....	.....	30.01	762.2	59.4	15.2	.....	E	.....	.....	1	.....	10	.....	.....	0.52	13.2	Threatening	T. Bell, for J. Carmell.
Chatham, School M. E	.....	.....	29.94	760.5	60.5	15.8	.....	NW	.....	.....	1	.....	.....	.....	.....	.....	.....	Raining.....	Capt. J. Fellowes, R.E.
Dartmoor	28.58	725.9	30.06	763.5	61.6	16.4	.....	SW	.....	.....	2	.....	2	.....	.....	.....	.....	Blue sky	R. E. Power.
Donaghadee	.....	.....	29.98	761.5	58	14.4	.....	NNW	.....	.....	3	.....	10	.....	.....	.....	.....	Overcast.....	J. Mac Gowan.
Dover	.....	.....	29.96	761.0	59	15.0	.....	Calm	.....	.....	0	.....	10,fog	.....	.....	.....	.....	Overcast.....	J. Costello.
Eccles (near Manchester.)	.....	.....	29.97	761.2	56.5	13.6	.....	W	2.2	1.0	.....	.....	10	.....	.....	.....	.....	Raining.....	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.00	762.0	61.9	16.6	.....	S	12	5.4	.....	.....	2	.....	.....	.....	.....	*D. clouds.....	The Staff.
Fort Napier, (Natal)	27.74	704.8	29.97	761.2	71.1	21.7	.....	E	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky...	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	30.04	763.0	83	28.3	.....	N	.....	.....	3	.....	6	.....	.....	Blank	Blank	*D. clouds....	
Galway, Queen's College	.....	.....	29.94	760.5	63	17.2	.....	SSE	.....	.....	6	.....	2	.....	.....	.....	.....	*D. clouds....	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.10	764.5	75.0	23.9	.....	W	.....	.....	5	.....	0	.....	.....	.....	.....	.....	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	29.98	761.5	56.4	13.6	.....	NE	.....	.....	1	.....	10	.....	.....	.....	.....	Wet.....	Lewis Stuart.
Great Yarmouth	.....	.....	29.94	760.5	59	15.0	.....	E	.....	.....	2	.....	8	.....	.....	.....	.....	Raining.....	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	29.96	761.0	60.5	15.8	.....	WSW	.....	.....	1	.....	10	.....	.....	Blank	Blank	Gloomy.....	The Staff, for G. B. Airy.
Guernsey	.....	.....	30.00	762.0	64.5	18.1	.....	NE	.....	.....	1	.....	3	.....	.....	.....	.....	*D. clouds....	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	29.99	761.7	59.5	15.3	.....	NW	.....	.....	1	.....	10	.....	.....	.....	.....	Raining.....	L. J. Crossley.
Helston	.....	.....	29.96	761.0	68	20.0	.....	SW	.....	.....	4	.....	3c	.....	.....	0	0	Fine.....	M. P. Moyle.
Holyhead	.....	.....	29.98	761.5	59	15.0	.....	N	.....	.....	1	.....	1	.....	.....	.....	.....	Blue sky.....	John Tilston.
Kew, Observatory	.....	.....	29.96	761.0	62.3	16.8	.....	NW	5	2.2	.....	.....	10	.....	.....	.....	.....	Raining.....	The Staff.
Kingstown	.....	.....	30.02	762.5	61	16.1	.....	ESE	.....	.....	2	.....	1	.....	.....	.....	.....	Blue sky.....	George Mitchell.
Leicester Museum	.....	.....	29.99	761.7	57.8	14.3	.....	W	.....	.....	1	.....	10	.....	.....	.....	.....	Drizzling....	Wm. J. Harrison, F.G.S.
Malta, Mediterranean	.....	.....	29.91	759.7	78.4	25.8	.....	NW	.....	.....	1	.....	4k	.....	.....	.....	.....	*D. clouds....	Corp'l F. Fraser, A. M. C.
Nairn	.....	.....	30.08	764.0	70	21.1	.....	ESE	.....	.....	2	.....	5	.....	.....	.....	.....	½ clouded...	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.15	765.8	81.6	29.2	.....	NE	.....	.....	3	.....	9	.....	.....	.....	.....	Overcast.....	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	29.98	761.5	60.5	15.8	.....	W	.....	.....	1	.....	10n	.....	.....	0.317	8.05	Raining.....	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	29.99	761.7	54.2	12.3	.....	NW	.....	.....	2	.....	10	.....	.....	Blank	Blank	Misty.....	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	29.95	760.7	60	15.6	.....	NW	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast.....	J. Lucas.
Plymouth	.....	.....	30.00	762.0	64.8	18.2	.....	S	.....	.....	2	.....	0	.....	.....	.....	.....	Blue sky.....	John Merrifield.
Roche's Point	.....	.....	29.99	761.7	65	18.3	.....	SE	.....	.....	3	.....	2	.....	.....	.....	.....	Fine.....	W. Kennedy.
Saint Ann's Head	.....	.....	29.97	761.2	63	17.2	.....	Calm	.....	.....	0	.....	2	.....	.....	.....	.....	Blue sky.....	John C. Walker.
Saint Helier, (Jersey)	.....	.....	30.02	762.5	62.0	16.7	.....	S	.....	.....	3	.....	5	.....	.....	.....	.....	½ clouded...	A. P Amy.
Sandwick Manse, (Orkneys)	.....	.....	30.21	767.3	64.0	17.8	.....	ESE	32	14.3	.....	.....	0	.....	.....	.....	.....	Blue sky.....	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	30.01	762.2	55.6	13.1	.....	SE	.....	.....	1	.....	10	.....	.....	Blank	Blank	Overcast.....	F. Shaw.
Scutari Cemetery Turkey	.....	.....	29.80	756.9	81.4	27.4	.....	NE	.....	.....	2	.....	6	.....	.....	.....	.....	Hazy.....	Sergt. W. H. Lyne.
Sheffield	.....	.....	29.98	761.5	60.0	18.6	.....	NNE	.....	.....	1	.....	10	.....	.....	0.241	6.13	R. ining.....	W. F. Cooper.
Silloth Rectory	.....	.....	29.98	761.5	59.1	15.1	91	SW	.....	.....	1	.....	10	.....	.....	0.335	8.51	Overcast.....	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	29.98	761.5	57.7	14.3	.....	SW	.....	.....	1	.....	10	.....	.....	.....	.....	Raining.....	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.	.....	.....	30.05	763.3	62	16.7	.....	NE	.....	.....	1	.....	8	.....	.....	.....	.....	*D. clouds.....	John Smith.
Strathfield Turgiss	.....	.....	29.98	761.5	63.3	17.4	.....	N	.....	.....	1	.....	9	.....	.....	.....	.....	*D. clouds.....	Rev. Charles H. Griffith.
Thurso	.....	.....	30.15	765.8	64	17.8	.....	ESE	.....	.....	5	.....	0	.....	.....	.....	.....	Blue sky.....	John Trotter.
Truro, Royal Institution	.....	.....	30.03	762.7	68	20.0	.....	S	.....	.....	3	.....	5	.....	.....	.....	.....	*D. clouds....	W. Newcombe.
Valencia, Observatory	.....	.....	29.96	761.0	66.8	19.3	.....	S	11	4.9	.....	.....	5	.....	.....	.....	.....	*D. clouds....	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man	.....	.....	.....	.....	53	11.7	.....	NE	.....	.....	3	.....	3	.....	.....	0	0	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.15	765.8	54.0	12.2	74	SSW	16	7.2	.....	4	4	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	30.22	767.6	60.0	15.6	87	N	.....	.....	2	.....	8kn	.....	.....	0.03	0.8	Showery.....	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	29.94	763.0	57.2	14.0	.....	E	.....	.....	3	.....	10s	.....	.....	0.88	22.4	Overcast.....	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.23	767.8	.....	.....	.....	ESE	18.6	8.3	.....	.....	.....	.....	.....	0	0	.....	C. Meldrum
Melbourne, Observatory	.....	.....	30.47	773.9	44.2	6.8	96	SSW	2	0.9	.....	.....	0	.....	.....	0.03	0.8	Fine, clear...	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	30.05	763.3	60	15.6	.....	SE	.....	.....	3	.....	10	.....	.....	0.2	5.1	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	30.30	769.6	60	15.6	.....	SE	.....	.....	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. Heller, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off, and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; 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	.....	.....	30.09	764.2	63.7	17.6	62	SSE	.....	.....	2	.....	10	.....	.....	.....	.....	.....	.....
Fanöe	.....	.....	30.11	764.8	68.5	20.3	49	ENE	.....	.....	6	.....	1	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	29.97	761.2	49.6	9.8	69	Calm	.....	.....	0	.....	8	.....	.....	.....	.....	.....	.....
Stykkisholm, Iceland	.....	.....	30.21	767.4	57.0	13.9	67	SE	.....	.....	2	.....	2	.....	.....	.....	.....	.....	.....
Thorshavn, (Faröe)	.....	.....	30.34	770.5	57.4	14.1	73	E	.....	.....	2	.....	1	.....	.....	.....	.....	.....	.....
Vestervig	.....	.....	30.13	765.2	70.9	21.6	42	E	.....	.....	6	.....	0	.....	.....	.....	.....	.....	.....

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

FRENCH SERIES.

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

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	29.08	761.4	68.0	20	62	W	.....	.....	2	..c	..n	.....	W	0.308	10.1	Slightly cl'dy	Normal School.
Amiens	.....	.....	29.95	760.6	66.6	19.2	81	SW	.....	.....	3	.....	10	.....	....	0.285	7.2	Covered	Normal School.
Avignon	.....	.....	29.87	758.8	82.6	28.1	32	NW	.....	.....	2	.....	0	.....	.....	0.04	1.	Clear...	Normal School.
Bar-sur-Seine	.....	.....	29.95	760.8	68.4	20.2	73	W	.....	.....	2	.....	8	.....	NW	0.650	16.5	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.97	761.3	68.9	20.5	41	NW	2.2	1.0	.....	.....	5	.....	SW	0	0	Cloudy.....	Beaumette Observatory.
Beauvais	.....	.....	29.99	761.7	65.3	18.5	70	NNW	.....	.....	2	.....	10	.....	NNW	0.43	11.	Covered	Normal School.
Besançon	.....	.....	29.94	760.0	72.7	22.6	69	NW	.....	.....	2	.....	5	.....	NW	0.39	10.	Cloudy.....	Normal School.
Bourg en Bresse	.....	.....	30.06	763.4	69.8	21	82	W	.....	.....	4	.....	..n	.....	E	.....	.....	.....	Normal School.
Bourges	.....	.....	30.01	762.2	66.2	19	75	W	.....	.....	2	.....	5	..	NE	0.12	3.	Cloudy.....	Normal School.
Brest	.....	.....	29.93	760.3	68.5	20.3	68	SW	.....	.....	2	.....	10	....	SW	0	0	Stormy.....	Naval Observatory.
Carcassonne	.....	.....	29.97	761.2	68.4	20.2	58	E	.....	.....	3	.....	2	....	W	1.228	31.2	Slightly cl'dy	Normal School.
Caen	.....	.....	30.01?	777.5?	70.0	21.1	94	W	.....	.....	1	.....	5	.....	S	0.138	3.5	Cloudy.....	Normal School.
Chartres	.....	.....	29.97	761.1	68.5	20.3	.....	NW	.....	.....	2	.....	8	....	SW	1.228	31.2	.....	Normal School.
Clermont	.....	.....	29.99	761.8	60.4	15.8	85	NE	.....	.....	1	.....	10	.....	SW	0.366	9.3	Raining.....	Puy de Dome Obs'y.
Commercy	.....	.....	29.96	760.9	64.6	18.1	88	WNW	.....	.....	2	.....	10n	.....	NW	2.386	60.6	Covered	Normal School.
Commune de Greasque*	.....	.....	29.93	760.2	81.3	27.4	46	W	.....	.....	2	.....	2	.....	W	0	0	.....	M. Klna.
Grenoble	.....	.....	29.99	761.8	74.5	23.6	73	NW	.....	.....	4	.....	5ns	.....	NE	0.248	6.3	Cloudy	Normal School.
La Roche-sur-Yon	.....	.....	29.98	761.6	70.9	21.6	62	W	.....	.....	1	.....	5	.....	E	0.374	9.5	Cloudy.....	Normal School.
Le Mans	.....	.....	30.00	762.1	67.1	19.5	77	WNW	.....	.....	3	.....	2	.....	WNW	0.39	10.	Slightly cl'dy	Normal School.
Lons-Le-Saulnier	.....	.....	29.96	760.9	73.6	23.1	74	NE	.....	.....	.....	.....	10	.....	N	0	0	Covered.....	Normal School.
Mâcon	.....	.....	29.96	761.0	66.7	19.3	79	NW	.....	.....	6	.....	5	.....	SE	0	0	Cloudy...	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	29.88	759.0	67.3	19.6	56	NNW	.....	.....	4	.....	10	.....	SSE	0.638	16.2	Covered	Normal School.
Nismes	.....	.....	29.95	760.7	84.2	29	35	N	.....	.....	2	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Orleans	.....	.....	29.95	760.8	64.8	18.2	82	NNW	.....	.....	1	.....	8	....	W	0.150	3.8	Very cloudy	Normal School.
Paris, Observatory	.....	.....	29.98	761.4	64.8	18.2	65	NW	.....	.....	1	.....	10k	.....	W	1.703	43.26	Covered	National Observatory.
Parthenay	.....	.....	29.93	760.3	74.8	23.8	33	N	.....	.....	2	.....	2	.....	.....	0	0	Slightly cl'dy	Normal School.
Privas	.....	.....	29.88	759.0	78.1	25.6	.....	NW	.....	.....	2	.....	2	.....	NW	.....	.....	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.05	763.2	66.2	19.0	79	NNW	.....	.....	3	.....	5	.....	SE	0	0	½ covered...	Naval Observatory.
Rouen	.....	.....	29.99	761.7	68.7	20.4	58	W	.....	.....	2	.....	5	....	W	0.319	8.1	Cloudy.....	Normal School.
Saint Lo	.....	.....	29.95	753.1	68.0	20	68	NW	.....	.....	1	.....	6	....	SW	0.094	2.4	.....	Normal School.
Tarbes	28.94	735.2	30.00	762.0	66.2	19	.....	WNW	.....	.....	2	.....	10	.. ..	.....	0	0	Cov red	Normal School
Villefranche	.....	.....	29.97	761.1	72.5	22.5	80	NW	.....	.....	3	.....	8	.....	N	0	0	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.95	760.6	81.3	27.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	Inap.	Inap.	.....	L'Abbé Marchésl.
Marseilles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Marseilles Observatory.
Mont-Louis	.....	.....	30.15	765.8	64.4	18.0	63	SSE	9.3	4.17	... ..	.....	5	.....	SSW	0.020	0.5	....	—. Faiguère.
Montsouris, Paris	.....	.....	29.98	761.4	65.8	18.8	69	NW	.....	.....	3	.....	9	.....	NW	1.595	40.5	....	Montsouris Observ'tory.
Perpignan	.....	.....	30.24	768.0	77.6	25.0	45	NW	11.2	5.00	.....	.....	4	.....	SW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.98	761 4	65.8	18.8	73	NW	....	.....	1	.....	10	.....	.....	1.008	25.6	Very cloudy	L. Renou.
Toulouse	.....	.....	30.06	763.4	66.4	19.1	73	NW	.....	.....	1	.....	3	.....	.....	0	0	Solar halo....	Toulouse Observatory.
Tours	.....	.....	30.00	762.1	71.6	22.0	48	NW	.....	.....	1	.....	3	.....	N	0.283	7.2	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.98	761.4	70.2	21.2	67	NW	.....	.....	2	.....	9	.....	.....	0.928	23.58	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 1,580.40 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 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.

Bamberg	.....	.....	29.80	759.3	74.3	23.5	38	NE	.....	.....	4	.....	4	.....	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.98	761.6	68.7	20.4	38	NE	.....	.....	2	.....	7	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	29.99	761.7	66.0	18.9	37	NE	.....	.....	3	.....	8	.....	.....	0	0	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	29.85	758.1	73.4	23.0	64	SW	.....	.....	5	.....	10	.....	.....	0	0	.....	A. Senx.
Cassel	.....	.....	29.93	760.3	70.6	24.8	28	E	.....	.....	6	.....	1	E	....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	30.02	762.6	73.6	23.1	32	E	.....	.....	6	.....	0	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.89	759.2	79.0	26.1	33	NE	.....	.....	2	.....	3	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	29.91	759.7	66.2	19.0	78	W	.....	.....	1	.....	10	.....	.....	0.03'	0.8	Raining.	M. Wilhelm.
Hamburg	.....	.....	30.07	763.7	65.8	18.8	47	NE	.....	.....	6	.....	0	.....	.....	0	0	Clear.....	Captain F. Hegemann.
Kiel	.....	.....	30.08	763.9	65.7	18.7	52	NE	.....	.....	6	.....	1	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.93	760.1	64.6	18.1	46	NE	.....	.....	5	.....	4	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	29.97	761.3	69.6	20.9	32	NNE	.....	.....	2	.....	2	.....	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	29.98	761.4	64.4	18.0	38	E	.....	.....	4	.....	7ks	ENE	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.00	762.1	76.1	24.5	34	.....	.....	.....	3	.....	0	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.02	762.5	61.9	16.6	75	NW	.....	.....	4	.....	6	....	.....	0	0	.....	A. Lothes.
Posen	.....	.....	30.02	762 5	67.3	19.6	37	E	.....	.....	7	.....	10	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.91	759.7	67.3	19.6	83	Calm	.....	.....	0	.....	10	NW	.....	0.201	5.1	.....	Dr. Schur.
Stuttgart	.....	.....	29.87	758.8	68.9	20.0	70	W	.....	.....	1	.....	8	.....	.....	0.201	5.1	Thunder-storm..	Prof. Schoder.
Thorn	.....	.....	29.95	760.6	66.2	19.0	41	NE	.....	.....	4	.....	8	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.87	758.8	68.2	20.1	74	SW	.....	.....	4	.....	10	.....	.....	0.134	3.4	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	30.00	762.0	65.1	18.4	55	ENE	.....	.....	2	.....	8	.....	.....	0	0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The elevation of Friedrichshafen is 419.4 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	82.9	28.3	.....	S	.....	.....	.....	.....	..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.

Udine	.....	.....	29.76	756.0	76.3	24.6	53	E	1.8	0.8	.....	.....	9	.....	.....	0	0	.....	
Padua	.....	.....	29.79	756.7	73.9	23.3	45	NW	8.1	3.6	.....	.....	10	N	.....	0.039	1.0	.....	
Vicenza	.....	.....	29.81	757.2	70.5	21.4	82	SW	5.6	2.5	.....	.....	9	N	.....	0.028	0.7	.....	
Verona	.....	.....	29.80	756.8	76.5	24.7	65	E	.....	.....	1	.....	10	.....	.....	0.543	13.8	.....	
Bergamo	28.47	723.1	29.74	755.3	78.8	26.0	68	S	.....	.....	2	.....	9	.....	.....	0.307	7.8	.....	
Domodossola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Milan	.....	.....	29.81	757.1	79.7	26.5	60	WNW	.....	.....	4	.....	7	NW	.....	0.118	3.0	.....	
Pavia	.....	.....	29.80	757.0	76.1	24.5	61	W	.....	.....	1	.....	0	.....	.....	0.098	2.5	.....	
Moncalieri	.....	.....	29.80	756.8	74.5	23.6	65	ESE	1.3	0.6	.....	.....	6	SE	.....	0	0	.....	
Mondovi	27.94	709.8	29.79	756.7	77.4	25.2	52	E	.....	.....	4	.....	4	W	.....	0	0	.....	
Porto Maurizio	.....	.....	29.90	759.5	76.6	24.8	68	SSW	.....	.....	2	.....	7	.....	.....	0	0	.....	
Genoa	.....	.....	29.88	758.9	72.0	22.2	67	Calm	0	0	.....	.....	10	S	.....	0	0	.....	
Piacenza	.....	.....	29.81	757.1	75.7	24.3	57	NW	6.9	3.1	.....	.....	2	.....	.....	0.063	1.6	.....	
Parma	.....	.....	29.82	757.3	77.9	25.5	61	NW	.....	.....	4	.....	2	.....	.....	0	0	.....	
Bologna	.....	.....	29.84	758.0	79.9	26.6	48	NW	.....	.....	6	.....	4	WNW	.....	0	0	.....	
Florence	.....	.....	29.87	758.8	80.6	27.0	50	WSW	.....	.....	2	.....	6	SW	.....	0	0	.....	
Leghorn	.....	.....	29.88	758.9	76.6	24.8	57	W	8.7	3.9	.....	.....	9	.....	.....	0	0	.....	
Siena	28.69	728.6	29.85	758.2	75.6	24.2	50	W	4.9	2.2	.....	.....	4	W	.....	0	0	.....	
Urbino	28.33	719.6	29.83	757.7	78.3	25.7	48	SW	.....	.....	2	.....	3	.....	.....	0	0	.....	
Pesaro	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ancona	.....	.....	29.84	757.9	79.5	26.4	65	N	.....	.....	4	.....	8	.....	.....	0	0	.....	
Grosseto	.....	.....	29.89	759.3	79.2	26.2	51	NNW	.....	.....	4	.....	5	NW	.....	0	0	.....	
Rome	.....	.....	29.89	759.2	80.4	26.9	50	SW	6.3	2.8	.....	.....	1	.....	.....	0	0	.....	
Naples, O. U	.....	.....	29.93	760.3	78.4	25.8	61	WSW	.....	.....	6	.....	1	NW	.....	0	0	.....	
Lecce	.....	.....	29.88	759.0	79.2	26.2	52	NNW	11.2	5.0	.....	.....	5	.....	.....	0	0	.....	
Cosenza	.....	.....	29.89	759.1	85.6	29.9	73	NW	4.3	1.9	.....	.....	1	.....	.....	0	0	.....	
Riposto, (Sicily)	.....	.....	29.92	760.0	75.7	24.3	61	NE	.....	.....	2	.....	4	SW	.....	0	0	.....	
Palermo	.....	.....	29.89	759.3	77.7	25.4	54	NE	3.8	1.7	.....	.....	2	.....	.....	0	0	.....	
Caltanissetta	27.96	710.2	29.82	757.3	80.6	27.0	20	W	.....	.....	2	.....	1	E	.....	0	0	.....	
Sub-Series.																			
Naples, S. R	.....	.....	29.94	760.4	76.8	24.9	66	SSW	3.1	1.4	.....	.....	3	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.

Flushing	.....	.....	29.96	761.0	64.2	17.9	.....	NW	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	
Groningen	.....	.....	29.96	761.0	70.7	21.5	.....	NE	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	
Helder	.....	.....	29.96	761.0	68.4	20.2	.....	ENE	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	
Utrecht	.....	.....	29.89	759.1	78.1	25.6	44	ESE	.....	.....	3	.....	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.

Bergen	.....	.....	30.23	767.8	80.2	26.8	75	NNW	7.2	3.2	.....	.....	0	.....	.....	0	0	.....	
Brönö	.....	.....	30.34	770.7	66.6	19.2	61	NNE	11	5	.....	.....	0	.....	.....	0	0	.....	
Christiania	.....	.....	30.23	767.9	80.6	27.0	79	E	9.4	4.2	.....	.....	1	.....	.....	0	0	.....	
Tromsö	.....	.....	30.37	771.4	57.6	14.2	67	NE	0	0	.....	.....	0	.....	.....	0	0	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

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

PORTUGUESE SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores,)	.....	.....	30.16	766.0	70.5	21.4	82	W	7.3	3.28	.....	.....	5	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.03	762.8	72.5	22.5	84	SW	8.0	3.58	.....	.....	8	.....	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.24	768.1	69.3	20.7	68	SW	3.0	1.34	.....	.....	10	.....	.....	0	0	.....	Capt D. A. da Cunha.
Lisbon	.....	.....	30.10	764.5	65.1	18.4	81	SSW	17.4	7.8	.....	.....	9	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 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	.....	.....	29.89	759.2	63.1	17.3	46	NE	11	5	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.89	759.2	55.2	12.9	68	NNE	7	3	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.06	763.4	61.3	16.3	43	ENE	13	6	.....	.....	9	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.10	764.4	62.6	17.0	46	NE	13	6	.....	.....	3	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	30.19	766.9	72.7	22.6	63	NE	13	6	.....	.....	2	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.84	757.9	59.4	15.2	55	SW	13	6	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.90	759.4	72.3	22.4	37	NW	4	2	.....	.....	4	.....	.....	.....	.....	.....	Kurdukof.
Kertch	.....	.....	29.85	758.2	70.0	21.1	53	N	9	4	.....	.....	4	.....	.....	.....	.....	.....	Lugorio.
Moscow	.....	.....	29.89	759.3	59.2	15.1	61	NW	9	4	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.76	755.8	63.1	17.3	68	N	18	8	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.13	765.4	64.2	17.9	58	NW	22	10	.....	.....	5	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.38	720.8	29.78	755.1	73.0	22.8	56	N	18	8	.....	.....	9	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.75	755.6	76.1	24.5	57	NNW	9	4	.....	.....	9	.....	.....	Blank	Blank	.....	Sebastianof.
Kasan	.....	.....	29.61	752.1	65.8	18.8	87	ENE	9	4	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.93	734.9	29.92	759.9	57.7	14.3	94	ENE	9	4	.....	.....	10	.....	.....	.....	.....	Raining.....	Meteorological Obs.
Nukuss	.....	.....	29.60	751.7	94.1	34.5	29	NW	4	2	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.19	713.8	29.68	753.8	89.8	32.1	45	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.67	753.6	74.8	23.8	38	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.49	749.1	69.3	20.7	51	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	28.31	719.1	29.62	752.4	65.7	18.7	62	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.79	756.7	76.1	24.5	61	ESE	13	6	.....	.....	4	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.02	762.4	52.2	11.2	92	SE	2	1	.....	.....	7	.....	.....	Blank	Blank	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	41.7	5.4	95	N	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 400. 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	.....	.....	29.92	760.0	80.2	26.8	24	SW	9.7	4.34	.....	2	2	WSW	.....	0	0	Cloudy.....	Royal Observatory.
San Fernando	.....	.....	30.00	764.3	71.4	21.9	59	W	10.1	4.5	.....	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. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	30.29	769.3	82.4	28.0	44	N	.....	.....	.....	2	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	30.30	769.5	80.8	27.1	43	SSW	.....	.....	.....	2	.....	2	.....	.....	0	0	.....	
Hernosand	.....	.....	30.30	769.7	79.9	26.6	33	ENE	.....	.....	.....	2	.....	1	.....	.....	0	0	.....	
Stockholm	.....	.....	30.18	766.5	67.8	19.9	79	ENE	.....	.....	.....	6	.....	4	.....	.....	0	0	.....	
Wisby	.....	.....	30.17	766.2	61.5	16.4	40	NE	.....	.....	.....	7	.....	3	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.21	767.4	67.8	19.9	37	ENE	16.1	7.2	.....	.....	7	ENE	.....	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	28.50	724.0	29.89	759.1	69.1	20.6	70	S			2		9			0.004	0.1	Covered	The Observatory.
Zurich	28.32	719.4	29.93	760.5	61.9	16.6	90	NE			1		10		SW	1.772	45.0	Raining	The Observatory.

Note—For Geneva the corresponding departures from the normal values are: Barometer, —2.9 mm; Thermometer, —0.8 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 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	70.2	21.2	81	N	15	6.5			8		NE	0	0		
Fao, (Persian Gulf)			29.74	755.4	93.7	34.3		NW			4		10						
Salonica			29.86	758.4	81.7	27.6		SE			2		2						
Valona			29.86	758.5	86.2	30.1		SW			2		2						
Varna			29.84	758.0	75.2	24.0		NE			3		10			Blank	Blank		
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.87	758.7	81.9	27.7	61	W			2		7s		S	0	0	Cov. red	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.			29.57	751.1	58.9	14.9	87	NW	6	2.7			10					Raining	Hon. J. Ferguson.
Brockville, Ontario			29.94	760.5	62	16.7		SW	1	0.4			10s		W	0	0	Cloudy	W. R Bigg.
*Chatham, N. B.			29.60	751.8	62	16.7	77	W	5	2.2		2k	8ks	W	W	0.02	0.5	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			29.61	752.1	61	16.1	75	SW	9	4.0		0	0			0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			29.84	757.9	72.2	22.3	65	SW			3	3ck	0			0.125	3.18	Fair	James Smith, M. A.
Dalhousie, N. B.			29.62	752.3	58.0	14.4	83	W			3		9n			0.22	5.6		H. A. Johnson.
Esquimault, B. C.			29.94	760.5	52.3	11.3	86	Calm	0	0		10cs	0			0.20	5.1	Cloudy	W. H. Bevis.
Fredericton, N. B.			29.71	754.6	54.6	12.6	64	NW	14	6.3			10ks			0.01	0.3	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.67	753.6	60	15.6	76	SW	15	6.7		0	0			0.89	22.6	Clear	James Stewart.
Goderich, Ontario			29.94	760.5	66.4	19.1	87	S			2	7k	0	SW		0	0	Fine	H. J. Strang, M. A.
Granton, Ontario	28.87	733.3	29.92	760.0	67.5	19.7		SW			1	0	0			0	0	Clear	James Grant.
*Halifax, N. S.			29.66	753.4	59	15.0	81	W	6	2.7		0	0			0	0	Clear	F. Allison, M. A.
*Kingston, Ontario			29.93	760.2	64	17.8	76	W	3	1.3		10ck	0	W		Inap.	Inap.	Cloudy	S. Woods, M. A.
Little Glace Bay, N. S.			29.65	753.1	70.0	21.1	59	W	5	2.2		2k	0	W		0	0	Fair	C. H. Rigby.
*Montreal, Quebec			29.82	757.4	64	17.8	76	W	6	2.7		2c	0	W		0.23	5.8	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			29.86	758.4	62	16.7	79	SW	6	2.7		5cs	0	W		0.12	3.0	Fair	J. B. Haney.
*Parry Sound, Ontario			29.90	759.4	66	18.9	64	W	6	2.7		0	0			0	0	Clear	Rev. R. Mosley.
*Port Dover, Ontario			29.98	761.5	62	16.7	83	S	5	2.2		5k	0	W		0	0	Fair	H. Morgan.
Port Hastings, N. S.			29.67	753.6	63.5	17.5		W	8	3.6						0.50	12.7	Fine	Peter Grant.
*Port Stanley, Ontario			29.98	761.5	65	18.3	92	SE	4	1.8		2ck	0	NW		0	0	Clear	M. Payne.
*Quebec, Quebec			29.78	756.4	64	17.8	63	Calm	0	0		0	0			0.02	0.5	Clear	Capt. Ashe, R. N.
St. John, N. B.			29.73	755.1	57	13.9	81	W	8	3.6		9k	0			0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			29.89	759.2	69	20.6	79	W	5	2.2		10cs	0			0	0	Cloudy	K. Stewart.
Stayner, Ontario			29.86	758.4	74	23.3	68	W	4	1.8		0	Haze			0	0	Hazy	R. J. Cole.
Stratford, Ontario	28.69	728.7	29.93	760.2	62.9	17.2	86	SW	12	5.4		0	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.63	752.6	70	21.1	68	SW	9	4.0		0	0			0	0	Clear	T. C. Hill.
*Toronto, Ontario			29.95	760.7	65	18.3	76	SW	5	2.2		0	0			0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.00	762.0	66.9	19.4	76	W	7	3.1		3c	0			Inap.	Inap	Fine	J. Montgomery.
Sub-Series.																			
St. John's, Newfoundland			29.79	756.7	63	17.2	94	SW					10c			0	0	Dull	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.	.....	.....	29.91	759.7	68	20.0	64	Calm	0	0	.....	8k	0	NW	.....	0	0	Fair	
Alpena, Mich	.....	.....	29.87	758.7	59	15.0	87	S	1	0.4	.....	8ck	Haze	NE	.....	0	0	Fair	
Atlantic City, N. J.	.....	.....	30.02	762.5	72	22.2	67	N	4	1.8	.....	5c	0	N	.....	0.01	0.3	Fair	
Augusta, Ga.	.....	.....	30.14	765.5	71	21.7	80	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Baltimore, Md.	.....	.....	30.05	763.3	72	22.2	62	N	4	1.8	.....	5c	Sm'e	W	.....	0.20	5.1	Cloudy	
Barnegat, N. J.	.....	.....	30.01	762.2	73	22.8	58	NW	6	2.7	.....	1c	0	NW	.....	0	0	Clear	
Benton, Montana	27.22	691.4	30.02	762.5	66	18.9	20	Calm	0	0	.....	0	0	..	.....	0	0	Clear	
Bismarck, Dakota	28.21	716.5	29.81	757.2	59	15.0	48	N	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass	.....	.....	29.89	759.2	68	20.0	60	W	9	4.0	.....	2cs	Haze	W	.....	Inap.	Inap.	Clear	
Breckenridge, Minn	.....	.....	29.87	758.7	55	12.8	73	S	4	1.8	.....	0	0	.....	.....	0.07	1.8	Clear	
Buffalo, N. Y.	.....	.....	29.94	760.5	64	17.8	67	SW	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Burlington, Vt.	.....	.....	29.85	758.2	66	18.9	68	S	6	2.7	.....	2k	0	.....	.....	0.09	2.3	Fair	
Cairo, Ill.	.....	.....	30.08	764.0	76	24.4	81	S	1	0.4	.....	5c	0	.....	.....	0	0	Fair	
Cape Hatteras, N. C.	.....	.....	29.98	761.5	80	26.7	65	W	5	2.2	.....	2c	Haze	.....	.....	0	0	Fair	
Cape Henry, Va.	.....	.....	30.01	762.2	79	26.1	66	W	8	3.6	.....	5c	Haze	SW	.....	0	0	Fair	
Cape Lookout, N. C.	.....	.....	30.05	763.3	78	25.6	69	W	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Cape May, N. J.	.....	.....	30.03	762.7	69	20.6	79	E	4	1.8	.....	8c	0	NW	.....	0.16	4.1	Fair	
Charleston, S. C.	.....	.....	30.11	764.8	76	24.4	64	NW	6	2.7	.....	0	Haze	.....	.....	0.59	15.0	Clear	
Cheyenne, Wyoming	24.16	613.6	30.10	764.5	52	11.1	32	NW	8	3.6	.....	Haze	1s	.....	.....	0	0	Clear	
Chicago, Ill	.....	.....	29.84	757.9	78	25.6	77	SW	7	3.1	.....	5cs	0	.....	.....	0	0	Fair	
Cincinnati, Ohio	.....	.....	30.00	762.0	72	22.2	81	Calm	0	0	.....	.....	10ks	.....	NW	0.87	22.1	Cloudy	
Cleveland, Ohio	.....	.....	29.96	761.0	65.7	18.7	66	SE	8	3.6	.....	1c	0	W	.....	0	0	Clear	
Colorado Springs, Col.	24.19	614.4	30.06	763.5	63	17.2	40	N	12	5.4	.....	1ck	0	W	.....	0	0	Clear	
Corsicana, Tex	.....	.....	30.12	765.0	77	25.0	88	S	6	2.7	.....	2c	5k	.....	S	0	0	Cloudy	
Davenport, Iowa	.....	.....	29.91	759.7	76	24.4	80	SW	8	3.6	.....	7ck	0	W	.....	Inap.	Inap.	Fair	
Denison, Tex.	.....	.....	30.13	765.3	78	25.6	65	S	12	5.4	.....	5c	1s	SW	.....	0	0	Fair	
Denver, Col.	24.90	632.4	30.12	765.0	64	17.8	47	Calm	0	0	.....	8c	Haze	.....	.....	0	0	Fair	
Detroit, Mich	.....	.....	29.89	759.2	68	20.0	70	SW	7	3.1	.....	8cs	0	SW	.....	0	0	Fair	
Dodge City, Kan	27.39	695.7	29.54	750.3	78	25.6	53	E	11	4.9	.....	2c	0	.....	.....	0	0	Fair	
Dubuque, Iowa	.....	.....	29.93	758.4	79	26.1	82	SW	12	5.4	.....	5k	0	.....	.....	0	0	Fair	
Duluth, Minn	.....	.....	29.77	756.1	65	18.3	80	NW	6	2.7	.....	8c	0	W	.....	1.00	25.4	Fair	
Eastport, Me.	.....	.....	29.74	755.4	62	16.7	61	NW	14	6.3	.....	2c	5ks	NW	NW	0.04	1.0	Fair	
Erie, Pa	.....	.....	29.94	760.5	68	20.0	60	S	10	4.5	.....	1ck	0	.....	.....	0	0	Clear	
Escanaba, Mich	.....	.....	29.74	755.4	61	16.1	100	SE	10	4.5	.....	.....	10n	.....	.....	0.89	22.6	Light rain	
Fort Gibson, Indian Ter.	.....	.....	30.02	762.5	81	27.2	74	S	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.86	733.0	29.92	760.0	80	26.7	70	S	4	1.8	.....	2cs	0	S	.....	0	0	Clear	
Fort Sully, Dakota	28.29	718.6	29.90	759.4	63	17.2	62	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.16	766.1	81	27.2	87	Calm	0	0	.....	2cs,k	0	.....	.....	0	0	Fair	
Grand Haven, Mich.	.....	.....	29.85	758.2	68	20.0	92	SW	17	7.6	.....	.....	Fog	.....	.....	0	0	Foggy	
Indianapolis, Ind.	.....	.....	29.97	761.2	73	22.8	85	SW	3	1.3	.....	10cs	0	.....	.....	0.26	6.6	Fair	
Indianola, Tex.	.....	.....	30.14	765.5	85	29.4	79	SE	10	4.5	.....	5c	0	.....	.....	0	0	Fair	
Jacksonville, Fla.	.....	.....	30.14	765.5	76	24.4	76	N	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Keokuk, Iowa	.....	.....	29.88	758.9	80	26.7	70	W	11	4.9	.....	5c	0	W	.....	0.04	1.0	Fair	
Key West, Fla.	.....	.....	30.14	765.5	80.8	27.1	82	E	4	1.8	.....	0	5ks	.....	E	0.22	5.6	Threatening	
Kittyhawk, N. C.	.....	.....	30.00	762.0	76	24.4	72	W	8	3.6	.....	2c	0	N	..	0.07	1.8	Clear	
Knoxville, Tenn	.....	.....	30.17	766.3	63	17.2	88	Calm	0	0	.....	.....	10ks	.....	NW	0.23	5.8	Cloudy	
La Crosse, Wis.	.....	.....	29.81	757.2	73	22.8	85	N	10	4.5	.....	.....	10s	.....	N	0.50	12.7	Cloudy	
Leavenworth, Kan	.....	.....	29.86	758.4	79	26.1	78	S	12	5.4	.....	2c	0	.....	.....	0	0	Clear	
Lexington, Ky.	28.99	736.3	30.06	763.5	68	20.0	90	S	8	3.6	.....	.....	10ks	.....	S	0	0	Cloudy	
Long Branch, N. J.	.....	.....	30.00	762.0	68	20.0	64	NW	8	3.6	.....	5cs	0	W	.....	0	0	Fair	
Louisville, Ky.	.....	.....	30.03	762.7	73	22.8	81	SW	4	1.8	.....	0	5ks	.....	N	0	0	Fair	
Lynchburg, Va.	.....	.....	30.05	763.3	76	24.4	65	W	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	29.81	757.2	64	17.8	78	W	8	3.6	.....	2ck	0	NW	.....	0	0	Fair	
Manhattan, Kan.	28.81	731.8	29.90	759.4	74	23.3	85	SW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Marquette, Mich.	.....	.....	29.99	754.1	66	18.9	78	SW	4	1.8	.....	.....	8s	.....	SW	0.82	20.8	Cloudy	
Memphis, Tenn	.....	.....	30.14	765.5	81	27.2	70	SW	3	1.3	.....	2ck	Haze	.....	.....	0	0	Fair	
Milwaukee, Wis.	.....	.....	29.82	757.4	76	24.4	90	W	10	4.5	.....	10s	Sm'e	W	.....	0	0	Cloudy	
Mobile, Ala.	.....	.....	30.19	766.8	78	25.6	77	SW	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Montgomery, Ala.	.....	.....	30.17	766.3	78	25.6	77	S	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Morgantown, W. Va.	.....	.....	30.01	762.2	70	21.1	74	S	4	1.8	.....	10c	0	SW	.....	0	0	Cloudy	
Mt. Washington, N. H.	23.64	600.4	30.00	762.0	36	2.2	100	NW	50	22.4	.....	.....	Fog	.....	..	0.42	10.7	Foggy	
Nashville, Tenn.	.....	.....	30.10	764.5	76	24.4	72	Calm	0	0	.....	0	0	.....	.....	0.58	14.7	Clear	
New Haven, Conn	.....	.....	29.94	760.5	71	21.7	52	NW	10	4.5	.....	5c	Haze	W	.....	0	0	Fair	
New London, Conn.	.....	.....	29.96	761.0	70	21.1	56	NW	3	1.3	.....	5c	0	NW	.....	0	0	Fair	
New Orleans, La	.....	.....	30.18	766.6	80	26.7	80	W	2	0.9	.....	7k	0	NW	.....	0	0	Fair	
Newport, R. I.	.....	.....	29.93	760.2	67	19.4	84	W	8	3.6	.....	8cs	0	W	.....	0	0	Cloudy	
New York, N. Y.	.....	.....	30.01	762.2	62	16.7	67	W	6	2.7	.....	8c	Sm'e	.....	.....	0	0	Fair	
Norfolk, Va.	.....	.....	30.03	762.7	79	26.1	65	W	5	2.2	.....	8c	0	.....	.....	0.02	0.5	Fair	
North Platte, Neb.	.....	.....	29.52	749.8	69	20.6	51	NE	8	3.6	.....	2cs	Haze	.....	.....	0	0	Fair	
Omaha, Neb.	27.10	688.7	29.81	757.2	79	26.1	78	SE	4	1.8	.....	2ck	0	.....	.....	0	0	Clear	
Oswego, N. Y.	28.81	731.8	29.91	760.5	65	18.3	68	SW	10	4.5	.....	.....	10s	.....	NW	0	0	Cloudy	
Pembina, Dakota	.....	.....	29.71	754.6	62	16.7	66	SW	8	3.6	.....	0	0	.....	.....	0.11	2.8	Clear	
Philadelphia, Penn	.....	.....	30.03	762.7	71	21.7	49	NW	3	1.3	.....	5ck	0	NW	.....	Ina.	Inap.	Fair	
Pike's Peak, Colorado	.....	.....	30.25	768.3	35	1.7	70	S	15	6.7	.....	2cs	Haze	E	.....	0	0	Fair	
Pittsburgh, Penn.	18.04	458.2	30.01	762.2	59	15.0	94	N	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	
Port Huron, Mich.	.....	.....	29.89	759.2	66	18.9	73	S	9	4.0	.....	8c	2s	N	.....	0	0	Cloudy	
Portland, Me.	.....	.....	29.86	758.4	66	18.9	59	W	9	4.0	.....	1k	Haze	.....	.....	Inap.	Inap.	Clear	
Portland, Oregon	.....	.....	30.05	764.0	55	12.8	87	SE	8	3.6	.....	.....	10s	.....	SW	0	0	Cloudy	
Punta Rassa, Fla.	.....	.....	30.16	766.1	82.0	27.8	78	E	5	2.2	.....	Haze	2ks	.....	W	0.16	3.8	Hazy	
Rochester, N. Y.	.....	.....	29.93	760.2	65	18.3	63	SW	10	4.5	.....	2ck	Haze	W	.....	0	0	Fair	
Salt Lake City, Utah	25.08	652.3	30.01	762.2	61	16.1	45	SW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	29.99	761.7	66	18.9	68	W	15	6.7	.....	8c	0	N	.....	0	0	Fair	
San Diego, Cal.	.....	.....	29.99	761.7	63	17.2	88	NW	4	1.8	.....	.....	10s	.....	NW	0	0	Cloudy	
San Francisco, Cal.	.....	.....	29.97	761.2	53	11.7	79	S	6	2.7	.....	Haze	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23.35	593.1	29.89	759.2	61	16.1	66	SE	7	3.1	.....	5c	0	SE	.....	Inap	Inap	Fair	
Savannah, Ga.	.....	.....	30.13	765.3	76	24.4	70	NW	3	1.3	.....	2k	0	.....	.....	0.12	3.0	Clear	
Shreveport, La.	.....	.....	30.20	767.1	76	24.4	91	SW	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Smithville, N. C.	.....	.....	30.08	764.0	79	26.1	65	N	4	1.8	.....	1c	0	NW	.....	0	0	Clear	
Springfield, Mass.	.....	.....	29.93	760.2	66.5	19.2	68	S	4	1.8	.....	8ck	0	.....	.....	0	0	Cloudy	
St. Louis, Mo.	.....	.....	29.99	761.7	81	27.2	70	SW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla	.....	.....	30.14	765.5	79	26.1	78	NW	4	1.8	.....	2ck	0	.....	.....	0	0	Fair	
St. Paul, Minn.	.....	.....	29.82	757.4	73	22.8	63	W	2	0.9	.....	8c	0	SW	.....	0	0	Fair	
St. Paul's Island, Alaska	.....	.....	29.94	760.5	38	3.3	81	SE	6	2.7	.....	.....	10s	.....	.....	0.15	3.8	Cloudy	
Thatcher's Island, Mass.	.....	.....	29.89	759.2	65	18.3	63	W	15	6.7	.....	0	0	.....	.....	0	0	Clear	
Toledo, Ohio	.....	.....	29.90	759.4	72	22.2	75	SW	6	2.7	.....	5c	Haze	.....	.....	0	0	Fair	
Tucson, Arizona	27.60	701.3	30.19	766.8	71	21.7	.....	S	.....	.....	.....	.....	10s	.....	SE	0.03	0.8	Light rain	
Tybee Island, Ga.	.....	.....	30.12	765.0	74	23.3	81	NW	8	3.6	.....	0	0	.....	.....	0.20	5.1	Clear	
Vicksburg, Miss.	.....	.....	30.18	766.6	82	27.8	74	S	1	0.4	.....	8c	0	NW	.....	0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer
Virginia City, M. T.	24.36	618.7	29.84	757.9	50	10.0	58	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Washington, D. C.	.....	.....	30.05	763.3	70	21.1	75	N	3	1.3	.....	2c	Haze	N	.....	0	0	Fair.	
Wilmington, N. C.	.....	.....	30.08	764.0	76	24.4	76	W	5	2.2	.....	2c	0	N	.....	0	0	Fair.	
Wood's Holl, Mass.	.....	.....	29.93	760.2	70	21.1	56	NW	10	4.5	.....	5c	0	W	.....	0	0	Fair.	
Wytheville, Va.	27.81	706.4	29.89	759.2	68	20.0	79	SW	5	2.2	.....	0	8ks	.....	W	0	0	Cloudy.	
Yankton, Dakota.	28.72	729.5	29.94	760.5	73	22.8	59	NE	1	0.4	.....	0	0	.....	.....	0	0	Clear.	
Yuma, Arizona.	.....	.....	29.93	760.2	77	25.0	.....	E	.....	.....	.....	2ck	0	SE	.....	0	0	Fair.	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.11	764.8	83	28.3	70	NE	6	2.7	.....	5c	5ks	E	E	0	0	Cloudy.	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	30.04	763.0	80	26.7	78	E	.....	....	.....	2pc	5ks	.....	.....	0.05	1.3	Fair.	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.24	768.1	83	28.3	83	SE	6	2.7	.....	8c	5s	E	.....	0.04	1.0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.87	758 7	83	28.3	70	E	1.2	0.5	.....	8cs	4n	S	W	0	0	Cloudy.	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.11	764.8	84	28.9	79	NE	2.4	1.1	.....	2c	0	NW	.....	0	0	Fair.	Charles Hasselbrink.
St. Georges, Bermudas.	.....	.....	30.12	765.0	77.0	25.0	82	WNW	8.0	3.6	.....	2c	5k	.....	.....	0.86	21.8	Fair.	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica, W. I.	27.30	693.4	30.08	764.0	69	20.6	75	SE	4.0	1.8	.....	.....	10k	.....	.....	0.12	3.0	Dull.	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.06	763.5	79	26.1	86	E	.....	.....	2	.....	10n	.....	E	.....	.....	Raining.	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.11	764.8	.....	.....	85.1	29.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.285	7.25	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.24	641.1	.....	.....	66.0	18.9	78	W	1	0.4	.....	1c	3s	.....	.....	0.03	0.8	Fair.	Thomas Herran
York Factory, B. A.	.....	.....	29.27	743.4	68	20.0	60	SE	2	0.9	.....	0	8s	.....	S	.....	.....	.....	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.18	766.6	76	24.4	90	NE	.....	.....	2	.....	.....	.....	.....	0	0	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	30.00	762.0	59	15.0	80	Calm	0	0	.....	2c	0	SW	.....	0	0	Threatening	F. L. Clarke.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Nova Scotian N. 46° 38′, W. 52° 46′.	SW by S	10½	29.73	755.1	49	9.4	.....	SW	.....	.....	4	.....	.....	.....	.....	Smooth	.....	Overcast.	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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,253.8 ft., or 1,301.1 m.; Santa Fé, 6,892.2 (?) 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 JUNE 24, 1876.

7:35 A. M. WASHINGTON mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:18 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	76.3	24.6	63	Calm	.....	.....	0	.....	6	.....	.....	0	0	Fair	Charnot.
Algiers	.....	.....	29.84	758.0	80.6	27.0	38	WNW	.....	.....	3	.....	3	.....	.....	0	0	Fair	Peter.
La Calle	.....	.....	.....	.....	72.0	22.2	.....	NW	.....	.....	2	.....	6	.....	.....	0	0	Fair	Kunts.
Tunis	.....	.....	29.89	759.3	83.1	28.4	54	ENE	.....	.....	3	.....	9	.....	.....	0	0	Hidden	Jacques.
Sfax	.....	.....	29.97	761.1	81.7	27.6	57	NE	.....	.....	2	.....	1	.....	.....	0	0	Clear	Chauvey.
Sahlas	.....	.....	29.99	761.7	80.6	27.0	23	NW	.....	.....	1	.....	2	.....	.....	0	0	Clear	Millot.
Tebessa	.....	.....	29.95	760.7	84.4	29.1	.....	W	.....	.....	2	.....	2	.....	.....	0	0	Clear	Colin.
Gerrville	.....	.....	30.00	762.0	76.1	24.5	53	NW	.....	.....	2	.....	2	.....	.....	0.030	16.0	Clear	Buard.
Laghouat	.....	.....	29.95	760.6	87.8	31.0	48	S	.....	.....	3	.....	4	.....	.....	0	0	Fair	Guyot.
Biskra	.....	.....	29.98	761.4	87.8	31.0	48	NE	.....	.....	1	.....	0	.....	.....	0.126	3.2	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	.....	.....	29.79	756.7	75.4	24.1	62	NE	.....	.....	3	.....	10	.....	.....	0.618	15.7	Raining	Prof. Ivan Stosir.
Cracow, I. R. Observatory	.....	.....	29.81	758.0	65.8	18.8	52	E	.....	.....	1	.....	8	.....	.....	0.142	3.6	.....	Dr. Wiersbiski.
Eperies	.....	.....	29.82	757.4	65.8	18.8	60	Calm	.....	.....	0	.....	9	.....	.....	0.159	4.04	.....	Julius Mikolik.
Gratz	28.61	726.6	29.80	756.8	60.6	15.9	89	SW	.....	.....	2	.....	10	.....	.....	0.138	3.5	.....	Andreas Rospini.
Hermannstadt	28.41	721.5	29.76	755.8	73.0	22.8	42	N	.....	.....	3	.....	4	.....	.....	0.020	0.5	.....	Prof. Reissenberger.
Kremsmünster	28.50	723.9	29.80	756.8	66.2	19.0	59	SE	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	.....	.....	29.82	757.3	55.0	12.8	90	NW	.....	.....	3	.....	10	.....	.....	0.138	3.5	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habsuda Daniel.
Pola	.....	.....	29.81	757.1	70.9	21.6	80	ESE	.....	.....	2	.....	9cks	.....	.....	0.161	4.10	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	29.78	756.5	73.4	24.1	51	W	.....	.....	1	.....	5	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	29.80	756.9	70.7	26.5	64	WSW	.....	.....	1	.....	8	.....	.....	0.957	24.3	.....	Prof. V. Farolfi.
Vienna	.....	.....	29.82	757.4	67.3	19.6	52	SSE	.....	.....	1	.....	10	.....	.....	0	0	.....	I. R. Central Met. Obs'y.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

Brussels	.....	.....	29.79	756.6	72.0	22.2	45	ENE	.....	.....	3	.....	8	.....	ENE	0.047	1.20	Cloudy	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	59.7	15.4	.....	ENE	12	5.4	.....	.....	2	.....	.....	0	0	Blue sky.....	William Boswell.
Ardrossan	.....	.....	30.04	763.0	73	22.8	.....	ESE	.....	.....	4	.....	4	.....	.....	.....	.....	*D. clouds....	William McNeil.
Armagh, Observatory	.....	.....	30.01	762.2	55.3	12.9	.....	ENE	4	1.8	.....	.....	10	.....	.....	.....	.....	Raining.....	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	29.95	760.7	69.8	21.0	.....	Calm	... ...	.....	0	.....	8	.....	.....	.....	.....	*D. clouds....	J. Dreyer.
Bradford	.....	.....	30.02	762.5	66.2	19.0	.....	E	.....	.....	1	.....	2	.....	.....	0.95	24.1	*D. clouds....	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.00	762.0	82.0	27.8	.....	NE	.....	.....	1	.....	10	.....	.....	.....	.....	Drizzling.....	Sergt. J. F. Halanen, A.
Cambridge, Observatory	.....	.....	29.93	760.2	68.0	20.0	.....	E	.....	.....	2	.....	3	.....	.....	.....	.....	*D. clouds....	H. Todd. [H. C.
Cardington	.....	.....	29.93	760.2	71.0	21.7	.....	E	.....	.....	2	.....	1	.....	.....	.....	.....	Blue sky.....	John McLaren.
Carlisle	.....	.....	30.04	763.0	70.5	21.4	.....	E	.....	.....	6	.....	1	.....	.....	0.11	2.8	Blue sky	T. Bel, for J. Carmell.
Chatham, School M. E	.....	.....	29.89	759.2	61.5	16.4	.....	NE	.....	.....	2	.....	6	.....	.....	Blank	Blank	*D. clouds....	Capt. J. Fellowes, R.E.
Dartmoor	28.29	718.6	29.76	755.9	60.2	15.7	.....	NE	.....	.....	0	.. ..	10	.....	.....	.....	.....	Raining.....	R. E. Power.
Donaghadee	.....	.....	30.00	762.0	64	17.8	.....	ENE	.....	.....	2	.....	5	.....	.....	.....	.....	*D. clouds....	J. Mac Gowan.
Dover	.....	.....	29.86	758.4	63	17.2	.....	NE	.....	.....	4	.....	2 ?	.....	.....	.....	.....	¾ clouded ?.	J. Costello.
Eccles, (near Manchester.)	.....	.....	29.95	760.7	69.8	21.0	.....	E	8.0	3.6	.....	.....	6	.....	.....	.....	.....	*D. clouds....	Thomas Mackereth.
Falmouth, Observatory	.....	.....	29.89	759.2	66.3	19.1	.....	NNW	14	6.3	.....	.....	3	.....	.....	.....	.....	*D. clouds....	The Staff.
Fort Napier, (Natal)	27.73	704.3	29.97	761.2	64.3	17.9	.....	SE	.....	.....	1	.....	8	.....	.....	.....	.....	Overcast.....	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	30.04	763.0	83	28.3	.....	N	.....	.....	2	.....	5	.....	.....	Blank	Blank	*D. clouds....	
Galway, Queen's College	.....	.....	29.99	761.7	65	18.3	.....	SE	.....	.....	1	.....	3	.....	.....	.....	.....	*D. clouds....	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	29.96	761.0	69.8	21.0	.....	W	.....	.....	5	.....	8	.....	.....	.....	.....	Overcast.....	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	30.06	763.5	67.2	19.6	.....	NE	.....	.....	4	.....	1	.....	.....	.....	.....	Fine.....	Lewis Stuart.
Great Yarmouth	.....	.....	29.97	761.2	60	15.6	.....	ENE	.....	.....	5	.....	2	.....	.....	.....	.....	Blue sky.....	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	29.90	759.4	65.8	18.8	.....	ENE	.....	.....	2	.....	8	.....	.....	Blank	Blank	*D. clouds....	The Staff, for G. B. Airy.
Guernsey	.....	.....	29.87	758.7	63	17.2	.....	NW	.....	.....	1	.....	7	.....	.....	.....	.....	*D. clouds....	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	30.01	762.2	66.2	19.0	.....	E	.....	.....	4	.....	4	.....	.....	Blank	Blank	*D. clouds....	L. J. Crossley.
Helston	.....	.....	29.85	758.2	68	20.0	.....	N	.....	.....	4	.....	2c	.....	.....	0	0	Veryfine....	M. P. Moyle.
Holyhead	.....	.....	29.95	760.7	60	15.6	.....	E	.....	.....	1	.....	10	.....	.....	.....	.....	Raining.....	John Tilston.
Kew, Observatory	.....	.....	29.89	759.2	65.0	18.3	.....	E	17	7.6	.....	.....	9	.....	.....	.....	.....	Threatenin g	The Staff.
Kingstown	.....	.....	29.99	761.7	59	15.0	.....	NNE	.....	.....	1	.....	10	.....	.....	.....	.....	Foggy	George Mitchell.
Leicester Museum	.....	.....	29.95	760.7	68.9	20.5	.....	E	.....	.....	3	.....	2	.....	.....	.....	.....	*D. clouds....	Wm. J. Harrison, F.G.S.
Malta, Mediterranean	.....	.....	29.91	759.7	82	27.8	.....	NW	.....	.....	1	.....	2k	.....	.....	.....	.....	*D. clouds....	Corp'l F. Fraser, A.M.C.
Nairn	.....	.....	30.17	766.3	62	16.7	.....	ESE	.....	.....	4	.....	0	.....	.....	.....	.....	Clea	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.12	765.0	82.6	28.1	.....	NE	.....	.....	5	.....	8	.....	.....	.....	.....	*D. clouds....	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	29.97	761.2	70.2	21.2	.....	ENE	.....	.....	5	.....	10k	.....	E	0.45	11.46	Blue sky.....	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	29.93	760.2	68.9	20.5	.....	ENE	.....	.....	4-5	.....	4	.....	.....	.....	.....	*D clouds....	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	29.89	759.2	66	18.9	.....	NE	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast.....	J. Lucas.
Plymouth	.....	.....	29.88	758.9	68.2	20.1	.....	SW	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast.....	John Merrifield.
Roche's Point	.....	.....	29.96	761.0	66	18.9	.....	SE	.....	.....	2	.....	5	.....	.....	.....	.....	Fine.....	W. Kennedy.
Saint Ann's Head	.....	.....	29.91	759.4	64	17.8	.....	N	.....	.....	4	.....	5	.....	.....	.....	.....	Hazy.....	John C. Walker.
Saint Helier, Jersey	.....	.....	29.84	757.9	70.8	21.6	.....	E	.....	.....	2	.....	8	.....	.....	.....	.....	¾ clouded....	A. P. Amy.
Sandwick Manse, Orkneys	.....	.....	29.73	755.1	72.1	22.3	.....	E	7	3.1	.....	.....	2	.....	.....	.....	.....	*D. clouds....	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	30.08	764.0	58.7	14.8	.....	E	.....	.....	1	.....	1	.....	.....	.....	.....	Blue sky.....	F. Shaw.
Scutari Cemetery, Turkey	.....	.....	29.81	757.2	81.2	27.3	.....	SW	.....	.....	1	.....	5	.....	.....	.....	.....	*D. clouds....	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.01	762.2	67.8	19.9	.....	E	.....	.....	3	.....	2	.....	.....	1.518	38.55	Blue sky.....	W. F. Cooper.
Silloth Rectory	.....	.....	30.02	762.5	70.2	21.2	47	SW	.....	.....	6	.....	3	.....	.....	0	0	*D. clouds....	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	29.98	761.5	65.8	18.8	.....	E	.....	.....	4	.....	6	.....	.....	Trace	Blank	*D. clouds....	Rev. S. J. Perry.
Stornoway, Lews C., Hebr.	.....	.....	30.14	765.5	67	19.4	.....	ENE	.....	.....	3	.....	0	.....	.....	.....	.....	Blue sky.....	John Smith.
Stratfield Turgiss	.....	.....	29.90	759.4	64.0	17.8	.....	NE	.....	.....	0-1	.....	10	.....	.....	.....	.....	Over a-t.....	Rev. Charles H. Griffith.
Thurso	.....	.....	30.18	766.6	69	20.6	.....	NE	.....	.....	2	.....	1	.....	.....	.....	.....	Blue sky.....	John Trotter.
Truro, Royal Institution	.....	.....	29.93	760.2	70	21.1	.....	N	.....	.....	6	.....	6	.....	.....	.....	.....	*D. clouds....	W. Newcombe.
Valencia, Observatory	.....	.....	29.96	761.0	59.9	15.5	.....	W	13	5.8	.....	...	4	... ...	.....	.....	.....	*D. clouds....	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	54	12.2	.....	E	.....	.....	4	.....	2	.....	.....	0.15	3.8	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.45	773.4	48.0	8.9	91	SSW	16	7.2	.....	4	5	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	30.12	772.7	60.0	15.6	82	N	.....	.....	2	.. ..	3k	.....	.....	0	0	Aurora.....	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	30.12	765.0	59.0	15.0	.....	E	.....	.....	4	.....	.....	.....	.....	0.03	0.8	Fine.....	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.22	767.6	71.9	22.2	74	E	16.1	7.2	.....	.....	4	W	.....	0.01	0.3	Squally.....	C. Meldrum
Melbourne, Observatory	.....	.....	30.49	774.4	44.0	6.7	98	SSW	3	1.3	.....	.....	10	.....	.....	0.02	0.5	Dense fog....	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	30.12	765.0	62	16.7	.....	E	.....	.....	3	5	3	E	.....	0.3	7.0	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	30.26	768.6	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 Ibs. 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	.....	.....	30.07	763.7	65.7	18.7	52	S	.....	.....	2	.....	7	.....	.....	.....	.....	.....	.....
Faröe	.....	.....	30.07	763.7	60.4	20.8	50	E	.....	.....	6	.....	5	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	30.08	763.9	.....	.....	.....	Calm	... ...	.....	0	... ..	8	.....	.....	.....	.....	.....	.....
Stykkisholm, (Iceland)	.....	.....	30.19	766.7	52.7	11.5	86	W	.....	.....	2	... ...	8	.....	.....	.....	.....	.....	.....
Thorshavn, (Faröe)	.....	.....	30.33	770.3	60.8	16.0	71	Calm	.....	.....	0	.. ..	0	.....	.....	.....	.....	.....	.....
Vestervig	.....	.....	30.10	764.5	70.9	21.6	50	N	.....	.....	4	.....	0	.....	.....	.....	.....	.....	.....

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

FRENCH SERIES.

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

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	29.61	752.0	68.0	20	64	NE	.....	.....	1	..c	..n	.....	NE	0	0	Very cloudy	Normal School.
Amiens	.....	.....	29.81	757.1	68.7	20.4	78	SW	.....	.....	3	.....	10	.....	.....	0	0	Covered	Normal School.
Avignon	.....	.....	29.76	756.0	81.7	27.6	35	NW	.....	.....	2	.....	.....	.....	.....	0	0	Light clouds	Normal School.
Bar-sur-Seine	.....	.....	29.79	756.6	71.4	21.9	50	N	.....	.....	1	.....	5	.....	NE	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.82	757.3	70.7	21.5	51	E	5.8	2.6	.....	.....	10	.....	S	0	0	Covered	Beaumette Observatory.
Beauvais	.....	.....	29.84	757.9	68.2	20.1	68	ENE	.....	.....	2	.....	8	.....	NE	0	0	Very cloudy	Normal School.
Besançon	.....	.....	29.78	756.5	71.6	22	69	E	.....	.....	2	.....	5	.....	SW	0.059	1.5	Cloudy	Normal School.
Bourg en Bresse	.....	.....	29.83	757.7	77.0	25	100	NNE	.....	.....	2	.....	..k	.....	W	.....	.....	.....	Normal School.
Bourges	.....	.....	29.80	756.9	69.8	21	65	NE	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	29.81	757.2	66.0	18.9	67	NNE	.....	.....	3	.....	10	.....	NE	0	0	Stormy	Naval Observatory.
Carcassonne	.....	.....	29.70	754.3	70.0	21.1	60	W	.....	.....	4	.....	5	.....	E	0.008	0.2	Cloudy	Normal School
Caen	.....	.....	30.002	777.27	68.9	20.5	70	N	.....	.....	2	.....	10	.....	E	0	0	Covered	Normal School.
Chartres	.....	.....	29.80	756.8	74.8	23.8	.....	NE	.....	.....	2	.....	7	.....	.....	0	0	.....	Normal School.
Clermont	.....	.....	29.77	756.2	60.4	15.8	57	NE	.....	.....	2	.....	10	.....	S	0	0	Covered	Puy de Dome Obs'y.
Commercy	.....	.....	29.82	757.5	66.7	19.3	73	ENE	.....	.....	4	.....	8k0	.....	E	0.14	3.6	Very cloudy	Normal School.
Commune de Greasque*	.....	.....	29.83	757.6	80.6	27.0	38	SE	.....	.....	2	...	2	.....	SE	0	0	.....	M. Klna.
Grenoble	.....	.....	29.80	756.9	75.9	24.4	72	NW	.....	.....	2	.....	5	.....	NW	0.012	0.3	Cloudy	Normal School.
La Roche-sur-Yon	.....	.....	29.87	758 8	70.5	21.4	70	N	.....	...	2	.....	10	.....	.....	...	.....	Covered	Normal School.
Le Mans	.....	.....	29.82	757.4	68.7	20.4	75	NW	.....	.....	3	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier	.....	.....	29.82	757.5	74.3	23.5	59	NE	.....	.....	.....	.....	5	.....	N	0	0	Cloudy	Normal School.
Mâcon	.....	.....	29.77	756.2	73.8	23.2	69	NW	.....	.....	2	.....	5	.....	NE	0	0	Cloudy	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	29.74	755.3	70.2	21.2	63	N	.....	.....	4	.....	2	.....	S	0	0	Slightly cl'dy	Normal School.
Nismes	.....	.....	29.74	755.3	88.5	31.4	34	NE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	29.76	755.8	70.5	21.4	55	ENE	.....	.....	1	.....	5	.....	N	0	0	Cloudy	Normal School.
Paris, Observatory	.....	.....	29.82	757.3	66.4	19.1	68	N	.....	.....	1	.....	10k	.....	N	0	0	Covered	National Observatory.
Parthenay	.....	.....	29.72	754.8	77.0	25	54	NE	.....	.....	2	.....	8	.....	NW	0	0	Very cloudy	Normal School.
Privas	.....	.....	29.74	755.5	79.2	26.2	.....	NE	.....	.....	2	.....	2	.....	NE	...	.....	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.16	766.1	74.3	23.5	66	ENE	.....	.....	4	.....	10	.....	SW	0.276	7.0	Covered	Naval Observatory.
Rouen	.....	.....	29.82	757.4	74.3	23.5	47	NW	.....	.....	1	.....	2	.....	W	0	0	Slightly cl'dy	Normal School.
Saint Lo	.....	.....	29.67	753.5	68.2	20.1	74	NE	.....	.....	1	.....	7	.....	SW	0	0	.....	Normal School.
Tarbes	28.87	733.2	29.92	759.9	66.2	19	.....	W	.....	.....	1	.....	8	.....	E	0	0	Very cloudy	Normal School
Villefranche	.....	.....	29.71	754.5	77.2	25.1	57	NE	.....	.....	2	.....	5	.....	.....	0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.89	759.1	80.6	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	Blank	Blank	.....	L'Abbé Marchésl.
Marseilles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Marseilles Observatory.
Mont-Louis	.....	.....	30.00	761.9	55.9	13.3	95	S	3.7	1.67	.....	.....	10	.....	S	0.004	0.1	.....	—. Faiguère.
Montsouris, Paris	.....	.....	29.82	757.3	65.7	18.7	73	N	.....	.....	2	.....	10	.....	N	0	0	.....	Montsouris Observatory.
Perpignan	.....	.....	29.72	754.8	73.0	22.8	57	SE	13.0	5.8	.....	.....	6	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.82	757.4	65.5	18.6	78	NNE	.....	.....	1	.....	10	.....	.....	0	0	Very cloudy	E. Renou.
Toulouse	.....	.....	29.74	755.5	72.0	22.2	50	SE	.....	.....	3	.....	10	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	29.79	756.6	72.7	22.6	44	N	.....	.....	2	.....	5	.....	NNE	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.82	757.5	69.1	20.6	67	NE	.....	.....	2	.....	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.

Bamberg	.....	.....	29.84	757.9	70.7	21.5	41	E	.....	.....	6	.....	4	E	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.97	761.1	66.7	19.3	39	NE	.....	.....	2	.....	8	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	29.97	761.1	64.6	18.1	39	NNE	.....	.....	4	.....	7	.....	.....	0	0	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	29.78	756.4	71.6	22.0	53	NE	.....	.....	3	.....	9	.....	.....	0.248	6.3	.....	A. Senz.
Cassel	.....	.....	29.89	759.3	70.9	21.6	41	E	.....	.....	7	.....	5	E	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	29.98	761.4	68.0	20.0	40	NE	.....	.....	4	.....	4	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.85	758.1	74.3	23.5	35	NE	.....	.....	4	.....	3	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	29.77	756.2	70.5	21.4	75	W	.....	.....	1	.....	6	.....	.....	0.012	0.3	Light rain	M. Wilhelm.
Hamburg	.....	.....	30.03	762.8	62.6	17.0	55	ENE	.....	.....	6	.....	10k,k	.....	.....	0	0	Very cloudy	Captain F. Hegemann.
Kiel	.....	.....	30.05	763.3	64.2	17.9	45	ENE	.....	.....	4	.....	1	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.91	759.6	59.0	15.0	75	N	.....	.....	2	.....	4	.....	.....	0.03	0.8	Thunder, lightn'g	Prof. E. Luther.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	29.93	760.2	66.9	19.4	40	NNE	.....	.....	3	.....	5	NE	.....	0	0	.....	Prof. Bruhns.
Meinel	.....	.....	29.95	760.8	63.7	17.6	52	NE	.....	.....	3	.....	9ck,8	E	.....	0.008	0.2	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.95	760.7	71.6	22.0	41	.....	.....	.....	3	.....	0	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.98	761.5	61.3	16.3	72	NE	.....	.....	4	.....	8	.....	.....	Inap.	Inap.	.....	A. Lothes.
Posen	.....	.....	29.98	761.6	65.7	18.7	40	NW	.....	.....	7	.....	9	.....	.....	0.035	0.9	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.80	756.8	70.9	21.6	62	NE	.....	.....	1	.....	10	NW	.....	0.028	0.7	.....	Dr. Schur.
Stuttgart	.....	.....	29.78	756.3	71.2	21 8	57	W	.....	.....	1	.....	6	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	29.89	759.1	60 4	15.1	44	NE	.....	.....	3	.....	6	.....	.....	0.031	0.8	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	30.03	762.8	63.7	17.6	53	NE	.....	.....	3	.....	3	.....	.....	0	0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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			29.86	758.4	85.1	29.5		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.

Udine			29.77	756.1	76.6	24.8	50	SW	0.7	0.3			9			0.047	1.2		
Padua			29.75	755.7	73.6	23.1	66	SE	7.4	3.3			10	W		0.382	9.7		
Vicenza			29.76	755.8	74.5	23.6	58	E	3.1	1.4			7	E		0.169	4.3		
Verona			29.72	755.0	78.1	25.6	68	E			1		10			0.803	20.4		
Bergamo	28.45	722.6	29.72	754.8	66.2	19.0	72	NW			2		9			2.244	57.0		
Domodossola																0.087	2.2		
Milan			29.75	755.6	79.5	26.4	66	NNE			2		8	NNE		0.807	20.5		
Pavia			29.85	755.6	76.3	24.6	57	E			1		9	NE		0.157	4.0		
Moncalieri			29.76	755.8	71.2	21.8	71	SSE	3.8	1.7			9	SE		0.028	0.7		
Mondovi	27.89	708.4	29.74	755.3	74.7	23.7	53	NE			4		4			0.315	8.0		
Porto Maurizio			29.84	757.9	76.1	24.5	70	SW			4		6	NE		0	0		
Genoa			29.79	756.7	72.3	22.4	70	SW	1.8	0.8			10	SE		0.009	0.2		
Piacenza			29.76	756.0	72.5	22.5	70	SE	6.9	3.1			10	E		0.038	1.0		
Parma			29.76	756.9	77.4	25.2	61	SE			2		9			0	0		
Bologna			29.82	757.3	74.5	23.6	49	NNW			1		5	S		0.197	5.0		
Florence			29.84	757.9	77.0	25.0	66	NW			2		10	SW		0.087	2.2		
Leghorn			29.84	758.0	72.3	22.4	73	W	8.7	3.9			7			0	0		
Siena	28.62	727.0	29.79	756.6	70.3	21.3	79	SSW	1.3	0.6			9	SW		0.051	1.3	Showery	
Urbino	28.32	719.3	29.82	757.4	73.6	23.1	62	SW			2		10			0.079	2.0		
Pesaro																			
Ancona			29.82	757.3	77.7	25.4	60	SE			4		5			0.250	6.5	Showery	
Grosseto			29.84	757.8	78.1	25.6	57	SSE			4		3	SE		0	0		
Rome			29.84	758.0	79.0	26.1	52	SW	5.6	2.5			8			0	0		
Naples, O. U			29.91	759.6	80.1	26.7	60	SW			4		9	NW		0	0		
Lecce			29.85	758.1	83.7	28.7	40	SSE	9.8	4.4			8	S		0	0		
Cosenza			29.86	758.4	87.8	31.0	68	NW	4.3	1.9			3			0	0		
Riposto, (Sicily)			29.89	759.1	74.5	23.6	72	NE			2		5	SW		0	0		
Palermo			29.85	758.3	73.0	22.8	68	NE	6.3	2.8			9			0	0		
Caltanissetta	27.02	709.2	29.78	756.3	79.2	26.2	24	WNW			1		1	N		0	0		
Sub-Series.																			
Naples, S. R			29.92	759.9	77.0	25.0	65	SSW	1.8	0.8			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.

Tokio																			

NETHERLANDS' SERIES.

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

Flushing			29.90	759.4	69.4	20.8		ENE			4								
Groningen			29.95	760.8	66.4	19.1		NE			5								
Helder			29.98	761.4	65.5	18.6		ENE			4								
Utrecht			29.89	759.1	69.8	21.0	42	ENE			4		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.

Bergen			30.17	766.2	79.5	26.4	43	NNW	13.9	6.2			0			0	0		
Bröno			30.21	767.2	64.8	18.2	76	N	7	3			0			0	0		
Christiania			30.11	764.8	83.5	28.6	27	E	4.3	1.9			2			0	0		
Tromsö			30.30	769.6	56.3	13.5	69	N	2	1			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,)	.....	.....	30.43	772.8	70.5	21.4	78	NNW	2.4	1.08	.....	.....	4	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.84	758.0	67.3	19.6	65	WNW	17.3	7.75	.....	.....	9	WNW	.....	0.311	7.9	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.18	766.5	69.8	21.0	68	SW	8.6	1.61	.....	.....	6	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	29.96	760.9	64.2	17.9	65	NNW	21.0	9.4	.....	.....	8	.....	.....	0.311	7.9	.....	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	.....	.....	29.85	758.1	56.3	13.5	69	SW	7	3	.....	.....	3	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.88	758.9	63.0	17.2	46	NE	7	3	.....	.....	6	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.97	761.1	68.2	20.1	48	NE	7	3	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.99	761.7	68.0	20.0	40	ENE	11	5	.....	.....	8	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	30.04	762.8	77.2	25.1	58	NE	7	3	.....	.....	5	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.84	757.9	63.7	17.6	68	SSE	11	5	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.93	760.1	70.3	24.6	37	SE	4	2	.....	.....	3	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.90	759.5	75.6	24.2	62	ENE	4	2	.....	.....	2	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.90	759.4	68.0	20.0	47	S	4	2	.....	.....	6	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.85	758.2	73.6	23.1	44	NE	18	8	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.11	764.9	58.1	14.5	53	WNW	22	10	.....	.....	0	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.44	722.4	29.76	756.0	85.6	29.8	30	N	25	11	.....	.....	1	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.87	758.7	70.7	20.5	54	N	9	4	.....	.....	9	.....	.....	Blank	Blank	.....	Sebastianof.
Kasan	.....	.....	29.70	754.4	64.2	17.9	77	W	9	4	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.69	728.7	29.03	752.7	69.8	21.0	74	NE	4	2	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.56	750.8	96.4	35.8	35	NNW	9	4	.....	.....	2	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.06	712.7	29.04	752.9	83.5	28.6	48	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.85	758.1	66.6	19.2	33	NE	2	1	.....	.....	1	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.65	753.0	68.0	20.0	53	NW	4	2	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	28.19	715.9	29.52	749.7	59.9	15.5	84	Calm	0	0	.....	.....	7	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.95	760.6	80.2	26.8	56	NNE	13	6	.....	.....	2	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.09	764.2	52.0	11.1	90	SE	9	4	.....	.....	10	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	40.8	4.9	96	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, m. 494.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid	.....	.....	29.81	757.1	60.1	15.6	99	SW	6.0	2.67	.....	.....	10	.....	.....	0.248	6.3	Rainy	Royal Observatory.
San Fernando	.....	.....	29.98	761.6	71.1	21.7	70	SW	16.8	7.5	.....	4	6	SW	SW	.....	.....	.....	The Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

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

SWEDISH SERIES.

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

Haparanda	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Umea	.....	.....	30.11	764.8	77.0	25.0	43	SE	.....	.....	6	.....	4	.....	.....	0	0	.....	
Hernosand	.....	.....	30.12	765.0	85.3	29.6	25	NNE	.....	.....	2	.....	5	.....	.....	0	0	.....	
Stockholm	.....	.....	30.03	762.8	76.5	24.7	37	E	.....	.....	4	.....	1	.....	.....	0	0	.....	
Wisby	.....	.....	30.05	763.2	56.1	13.4	85	NE	.....	.....	4	.....	5	.....	.....	0	0	.....	
Upsala, Sub-Series.	.....	.....	30.04	763.0	77.0	25.0	35	NE	11.9	5.3	.....	.....	1	.....	ENE	0.007	0.18	.....	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	28.37	720.6	29.75	755.6	71.6	22.0	55	NE	.....	.....	2	.....	4	.....	.....	0	0	Clouds	The Observatory.
Zurich	28.19	716.1	29.78	756.3	69.8	21.0	73	NW	.....	.....	1	.....	7	.....	.....	0.248	6.3	Cloudy	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, —6.3 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.

Constantinople	.....	.....	29.86	758.5	83.7	28.7	45	S	2	1.0	.....	.....	3	.....	W	0	0	.....	
Fao, (Persian Gulf)	.....	.....	29.74	755.3	95.0	35.0	.....	NW	.....	.....	4	.....	10	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.93	760.1	82.8	28.2	.....	SE	.....	.....	1	.....	2	.....	.....	.....	.....	.....	
Valona	.....	.....	29.86	758.4	83.3	28.5	.....	S	.....	.....	3	.....	2	.....	.....	.....	.....	.....	
Varna	.....	.....	29.86	758.5	72.5	22.5	.....	SW	.....	.....	3	.....	10	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.99	761 8	80. 2	26. 8	65	NW	.....	.....	1	.....	1ks	.....	SE	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	.....	.....	29.57	751.1	66.9	19.4	52	NW	5	2.2	.....	0	0	.....	.....	0	0	Fair	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.73	755.1	71	21.7	.....	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	W. R Bigg.
*Chatham, N. B	.....	.....	29.63	752.6	63	17.2	72	SW	6	2.7	.....	10c	0	SW	.....	0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.68	753.9	59	15.0	77	SW	13	5.8	.....	5c	0	.....	.....	0.07	1.8	Fair	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.61	752.1	77.7	25.4	66	SW	.....	.....	3	1k	0	.....	.....	0	0	Fair	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.62	752.3	59.0	15.0	81	W	.....	.....	3	5cs	0	.....	.....	0	0	.....	H. A. Johnson.
Esquimault, B. C	.....	.....	29.96	761.0	49.3	9.6	93	SW	1	0.4	.....	1cs	0	.....	.....	0	0	Clear	W. H. Bevis.
Fredericton, N. B	.....	.....	29.69	754.1	54.3	12.4	77	Calm	0	0	.....	8cs	0	.....	.....	0 1.06	2.67	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.75	755.6	56	13.3	84	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	James Stewart.
Goderich, Ontario	.....	.....	29.83	757.7	71.4	21.9	82	S	.....	.....	1	1ck	0	W	.....	0	0	Fine	H. J. Strang, M. A.
Granton, Ontario	28.77	730.7	29.81	757.2	72	22.2	.....	S	.....	.....	1	0	0	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S	.....	.....	29.71	754.6	63	17.2	71	SW	3	1.3	.....	0	0	.....	.....	0.08	2.0	Clear	F. Allison, M. A.
*Kingston, Ontario	.....	.....	29.72	754.9	68	20.0	84	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S	.....	.....	29.66	753.4	69.8	21.0	57	W	7	3.1	.....	1k	0	W	.....	0	0	Fair	C. H. Rigby.
*Montreal, Quebec	.....	.....	29.60	751.8	68	20.0	81	SW	12	5.4	.....	5k	5ks	W	.....	0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.62	752.3	70	21.1	70	W	10	4.5	.....	2ck	0	W	.....	0	0	Clear	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.75	755.6	61	16.1	91	W	11	4.9	.....	.....	Fog	.....	SW	0	0	Foggy	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	29.85	758.2	69	20.6	85	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	H. Morgan.
Port Hastings, N. S	.....	.....	29.69	754.1	60.8	16.0	.....	Calm	0	0	.....	.....	.....	.....	.....	0.10	2.5	Fine	Peter Grant.
*Port Stanley, Ontario	.....	.....	30.85	758.2	69	20.6	85	W	2	0.9	.....	2ck	0	W	.....	0	0	Clear	M. Payne.
*Quebec, Quebec	.....	.....	29.62	752.3	57	13.9	87	Calm	0	0	.....	.....	10n	.....	.....	0.04	1.0	Light rain	Capt. Ashe, R. N.
St. John, N. B	.....	.....	29.74	755.4	55	12.8	84	S	7	3.1	.....	5ck	0	.....	.....	0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.77	756.1	64	17.8	88	Calm	0	0	.....	2cs	0	.....	.....	0	0	Clear	R. Stewart.
Stayner, Ontario	.....	.....	29.71	754.6	76	24.4	62	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	R. J. Cole.
Stratford, Ontario	28.58	725.9	29.81	757.2	66.0	18.9	92	W	8	3.6	.....	0	0	.....	.....	0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.69	754.1	70	21.1	67	SW	8	3.6	...	0	0	.....	.....	0.02	0.5	Clear	T. C. Hin.
*Toronto, Ontario	.....	.....	29.79	756.7	69	20.6	81	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	Magnetic Observatory
Woodstock, Ontario	.....	.....	29.80	756.9	69.8	21.0	85	W	9	4.0	.....	2c	0	W	.....	0	0	Fine	J. Montgomery.
Sub-Series.																			
St. John's, Newfoundland	.....	.....	29.81	757.2	70	21.1	48	W	.....	.....	.....	0	0	.....	.....	0	0	Clear	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 360.3 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.	.....	.....	29.73	755.1	71	21.7	71	S	2	0.9	.....	10k	0	SW	.....	0	0	Cloudy	
Alpena, Mich.	.....	.....	29.72	754.9	71	21.7	71	NW	14	6.3	.....	0	0	.....	.....	0.04	1.0	Clear	
Atlantic City, N. J.	.....	.....	29.83	757.7	73	22.8	85	SW	4	1.8	.....	1c	Haze	W	.....	0	0	Hazy	
Augusta, Ga.	.....	.....	29.99	761.7	79	26.1	76	Calm	0	0	.....	5cs	Haze	W	.....	0	0	Fair	
Baltimore, Md.	.....	.....	29.85	758.2	77	25.0	65	NW	8	3.6	.....	2c	Haze	SW	.....	0	0	Fair	
Barnegat, N. J.	.....	.....	29.83	757.7	71	21.7	80	SW	13	5.8	.....	2ck	0	NW	.....	0	0	Fair	
Benton, Montana	27.07	687.3	29.87	758.7	60	15.6	61	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Bismarck, Dakota	28.08	713.2	29.66	753.4	60	15.6	44	Calm	0	0	.....	Haze	Haze	.....	.....	0	0	Hazy	
Boston, Mass	.....	.....	29.73	755.1	78	25.6	49	SW	6	2.7	.....	1cs	Haze	.....	.....	0	0	Clear	
Breckenridge, Minn	.....	.....	29.73	755.1	66	18.9	68	E	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	29.79	756.7	64	17.8	97	SW	6	2.7	.....	.....	Fog	.....	.....	0	0	Foggy	
Burlington, Vt.	.....	.....	29.95	760.3	69	20.6	70	S	9	4.0	.....	2k	5s	.....	.....	0	0	Cloudy	
Cairo, Ill.	.....	.....	30.01	762.0	77	25.0	72	S	5	2.2	.....	5c	0	.....	.....	0	0	Fair	
Cape Hatteras, N. C.	.....	.....	29.86	758.4	80	26.7	86	SW	16	7.2	.....	8ck	Haze	N	.....	0	0	Cloudy	
Cape Henry, Va.	.....	.....	29.85	758.2	80	26.7	66	SW	10	4.5	.....	5k	5s	SW	SW	0	0	Cloudy	
Cape Lookout, N. C.	.....	.....	29.93	760.2	80	26.7	82	SW	16	7.2	.....	5ck	0	W	.....	0	0	Fair	
Cape May, N. J.	.....	.....	29.84	757.9	70	21.1	90	S	14	6.3	.....	2c	2s	NW	W	0	0	Fair	
Charleston, S. C.	.....	.....	30.00	762.0	81	27.2	74	W	6	2.7	.....	8c	0	.....	.....	0	0	Fair	
Cheyenne, Wyoming	24.08	611.6	30.02	762.5	60	15.6	66	SW	4	1.8	.....	8c	0	W	.....	0	0	Fair	
Chicago, Ill.	.....	.....	29.88	758.9	74	23.3	81	SW	4	1.8	.....	Haze	Haze	NW	.....	0.08	2.0	Hazy	
Cincinnati, Ohio	.....	.....	29.91	759.7	73	22.8	81	W	3	1.3	.....	5ck	Sm'e	NW	W	0.66	16.8	Fair	
Cleveland, Ohio	.....	.....	29.89	759.2	67.8	19.6	90	W	8	3.6	.....	0	8ks	.....	W	0.03	0.8	Fair	
Colorado Springs, Col.	24.16	613.9	30.03	762.7	57	13.9	81	N	1	0.4	.....	5c	2s	.....	.....	0.17	4.3	Fair	
Corsicana, Tex.	.....	.....	30.05	763.3	75	23.9	88	SE	6	2.7	.....	5ck	0	SW	.....	Inap	Inap.	Fair	
Davenport, Iowa	.....	.....	29.92	760.0	71	21.7	85	W	4	1.8	.....	7cs	0	SW	.....	0.09	2.3	Fair	
Denison, Tex.	.....	.....	30.03	762.7	81	27.2	78	SW	8	3.6	.....	1c	0	S	.....	0	0	Clear	
Denver, Col.	24.84	630.9	30.00	762.0	61	16.1	55	Calm	0	0	.....	5c	0	.....	.....	Inap.	Inap.	Fair	
Detroit, Mich.	.....	.....	30.00	763.5	61	16.1	55	W	4	1.8	.....	.....	10s	.....	.....	0.25	6.3	Cloudy	
Dodge City, Kan.	27.34	694.4	29.85	758.2	69	20.6	90	S	14	6.3	.....	2c	0	W	.....	Inap.	Inap.	Fair	
Dubuque, Iowa	.....	.....	29.50	749.3	74	23.3	81	SW	4	1.8	.....	5ck	0	.....	.....	0	0	Fair	
Duluth, Minn.	.....	.....	29.89	759.2	74	23.3	76	Calm	0	0	.....	8k	0	SW	.....	0	0	Fair	
Eastport, Me.	.....	.....	29.79	756.7	64	17.8	72	S	2	0.9	.....	5c	8s	.....	.....	0	0	Cloudy	
Erie, Pa.	.....	.....	29.71	754.6	60	15.6	76	W	12	5.4	.....	8k	0	W	.....	0	0	Fair	
Escanaba, Mich.	.....	.....	29.82	757.4	69	20.6	95	W	4	1.8	.....	0	0	.....	.....	0.06	1.5	Clear	
Fort Gibson, Indian Ter.	.....	.....	29.80	756.9	71	21.7	62	SW	2	0.9	.....	0	8s	.....	.....	0	0	Fair	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian T.	28.79	731.3	29.84	757.9	79	26.1	74	S	8	3.6	.....	2cs	0	S	.....	0	0	Clear	
Fort Sully, Dakota	28.12	714.2	29.69	754.1	68	20.0	51	N	4	1.8	.....	2c	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.10	764.5	82	27.8	78	S	1	0.4	.....	2c	2k	W	S	0	0	Fair	
Grand Haven, Mich.	.....	.....	29.89	759.2	64	17.8	94	SW	2	0.9	.....	.....	Fog	.....	.....	0.70	17.8	Foggy	
Indianapolis, Ind.	.....	.....	29.93	760.2	72	22.2	85	SW	1	0.4	.....	8cs	0	.....	.....	0.43	10.9	Fair	
Indianola, Tex.	.....	.....	30.10	764.5	83	28.3	70	S	4	1.8	.....	5c	0	.....	.....	0	0	Fair	
Jacksonville, Fla.	.....	.....	30.05	763.3	80	26.7	74	S	10	4.5	.....	0	0	.....	.....	0.10	4.8	Clear	
Keokuk, Iowa	.....	.....	29.87	758.7	69	20.6	90	NE	4	1.8	.....	.....	10s	.....	NE	1.24	31.5	Cloudy	
Key West, Fla.	.....	.....	30.09	764.3	82.8	28.2	74	Calm	0	0	.....	2cs	10s	.....	.....	0.35	8.9	Hazy	
Kittyhawk, N. C.	.....	.....	29.88	758.9	79	26.1	78	SW	10	4.5	.....	2k	5s	W	.....	0	0	Fair	
Knoxville, Tenn.	.....	.....	30.01	762.2	72	22.2	95	Calm	0	0	.....	1c,k	0	NW	.....	0.16	4.1	Clear	
La Crosse, Wis.	.....	.....	29.88	758.9	67	19.4	90	S	9	4.0	.....	.....	Fog	.....	.....	0	0	Foggy	
Leavenworth, Kan.	.....	.....	29.90	759.4	73	22.8	76	SE	10	4.5	.....	.....	10s	.....	.....	0	0	Threatening	
Lexington, Ky.	28.89	733.8	29.94	760.5	71	21.7	80	S	4	1.8	.....	8c	0	.....	.....	1.09	27.7	Cloudy	
Long Branch, N. J.	.....	.....	29.81	757.2	76	24.4	69	SW	11	4.9	.....	2ck	Haze	SW	.....	0	0	Fair	
Louisville, Ky.	.....	.....	29.94	760.5	76	24.4	73	SW	4	1.8	.....	2ck	0	.....	.....	0.03	0.8	Clear	
Lynchburg, Va.	.....	.....	29.87	758.7	77	25.0	63	NW	4	1.8	.....	2c	0	W	.....	Inap.	Inap.	Clear	
Malone, N. Y.	.....	.....	29.58	751.3	70	21.1	75	SW	12	5.4	.....	2k	0	SW	.....	0	0	Fair	
Manhattan, Kan.	28.73	729.7	29.81	757.2	75	23.9	81	S	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Marquette, Mich.	.....	.....	29.77	756.1	73	22.8	80	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn.	.....	.....	30.03	762.7	81	27.2	70	SW	3	1.3	.....	2cs	0	.....	.....	0	0	Fair	
Milwaukee, Wis.	.....	.....	29.89	759.2	73	22.8	76	W	6	2.7	.....	5c	Sm'e	W	.....	0.54	13.7	Fair	
Mobile, Ala.	.....	.....	30.08	764.0	81	27.2	66	W	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Montgomery, Ala.	.....	.....	30.08	764.0	81	27.2	66	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Morgantown, W. Va.	.....	.....	30.05	763.5	81	27.2	74	S	5	2.2	.....	.....	10s	.....	S	0.62	15.7	Threatening	
Mt. Washington, N. H.	23.65	600.7	29.92	760.0	69	20.6	90	NW	36	16.1	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	30.01	762.2	47	8.3	100	W	1	0.4	.....	2c	0	.....	.....	0	0	Clear	
New Haven, Conn.	.....	.....	29.97	761.2	82	27.8	67	SW	5	2.2	.....	10ck	Haze	W	.....	0	0	Cloudy	
New London, Conn.	.....	.....	29.78	756.4	75	23.9	64	SW	8	3.6	.....	2k	Haze	W	.....	0	0	Clear	
New Orleans, La.	.....	.....	29.80	756.9	74	23.3	63	W	5	2.2	.....	0	Haze	.....	.....	0	0	Clear	
Newport, R. I.	.....	.....	30.09	764.3	80.5	26.9	81	SW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
New York, N. Y.	.....	.....	29.78	756.4	69	20.6	70	SW	8	3.6	.....	5k	Sm'e	SW	.....	0	0	Fair	
Norfolk, Va.	.....	.....	29.82	757.4	68	20.0	70	SW	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy	
North Platte, Neb.	.....	.....	29.87	758.7	80	26.7	66	Calm	0	0	.....	8c	0	W	.....	Inap.	Inap.	Fair	
Omaha, Neb.	27.02	686.3	30.42	772.3	69	20.6	65	S	12	5.4	.....	2ck	5cs	SW	.....	0	0	Fair	
Oswego, N. Y.	28.70	731.3	29.79	756.7	76	24.4	76	SW	14	6.3	.....	0	Haze	.....	.....	0	0	Hazy	
Pembina, Dakota	.....	.....	29.74	755.4	71	21.7	77	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Penn.	.....	.....	29.72	754.9	63	17.2	67	W	7	3.1	.....	1c	Haze	W	.....	0	0	Clear	
Pike's Peak, Colorado	18.01	457.4	29.82	757.4	73	22.8	76	N	8	3.6	.....	1c	5s	.....	.....	0.32	8.1	Fair	
Pittsburgh, Penn.	.....	.....	30.22	767.6	36	2.2	83	W	6	2.7	.....	.....	10s	.....	W	0	0	Cloudy	
Port Huron, Mich.	.....	.....	29.89	759.2	69	20.6	87	W	7	3.1	.....	0	1s	.....	.....	0.15	3.8	Clear	
Portland, Me.	.....	.....	29.80	756.9	72	22.2	85	SW	5	2.2	.....	8k	Haze	W	.....	0	0	Cloudy	
Portland, Oregon	.....	.....	29.71	754.6	69	20.6	65	N	6	2.7	.....	.....	10n	.....	NW	1.31	33.3	Light rain	
Punta Rassa, Fla.	.....	.....	30.01	762.2	52	11.1	100	E	4	1.8	.....	Haze	Haze	.....	.....	0	0	Hazy	
Rochester, N. Y.	.....	.....	30.09	764.3	80.5	26.9	74	W	14	6.3	.....	0	Haze	.....	.....	Inap.	Inap.	Clear	
Salt Lake City, Utah	25.59	650.0	29.74	755.4	72	22.2	75	W	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	29.92	760.0	65	18.3	35	W	12	5.4	.....	5c	Haze	W	.....	0	0	Fair	
San Diego, Cal.	.....	.....	29.80	756.9	74	23.3	72	N	4	1.8	.....	.....	10s	.....	N	0	0	Cloudy	
San Francisco, Cal.	.....	.....	30.02	762.5	63	17.2	88	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23.32	592.3	30.04	763.0	55	12.8	87	SE	8	3.6	.....	5k	5s	.....	.....	0.21	5.3	Cloudy	
Savannah, Ga.	.....	.....	29.86	758.4	55	12.8	80	SW	4	1.8	.....	2ck	Sm'e	NW	.....	0	0	Fair	
Shreveport, La.	.....	.....	30.01	762.2	87	30.6	61	S	6	2.7	.....	5ck	0	SW	.....	0	0	Fair	
Smithville, N. C.	.....	.....	30.10	764.5	77	25.0	84	S	10	4.5	.....	5cs	0	.....	.....	0	0	Fair	
Springfield, Mass.	.....	.....	29.95	760.7	80	26.7	74	SW	4	1.8	.....	0	8s	.....	W	0	0	Cloudy	
St. Louis, Mo.	.....	.....	29.75	755.6	70	21.1	75	S	4	1.8	.....	.....	1 8	.....	.....	0.12	3.0	Cloudy	
St. Marks, Fla.	.....	.....	29.95	760.7	73	22.8	80	SW	4	1.8	.....	2cs	0	.....	.....	0	0	Fair	
St. Paul, Minn.	.....	.....	30.06	763.3	79	26.1	88	W	3	1.3	.....	8c cs	0	SW	.....	0	0	Fair	
St. Paul's Island, Alaska	.....	.....	29.77	756.1	73	22.8	63	SE	2	0.9	.....	.....	10k	.....	.....	0	0	Cloudy	
Thatcher's Island, Mass.	.....	.....	30.17	766.3	40	4.4	82	NW	2	0.9	.....	0	0	.....	.....	0	0	Hazy	
Toledo, Ohio	.....	.....	29.75	755.6	64	17.8	78	SW	6	2.7	.....	0	.....	.....	.....	.....	.....	.....	
Tucson, Arizona	.....	.....	29.86	758.4	71	21.7	90	SW	4	1.8	.....	5c	Sm'e	.....	.....	1.07	27.2	Fair	
Tybee Island, Ga.	27.57	700.3	30.16	766.1	71	21.7	.....	NE	.....	.....	.....	2	8s	.....	.....	0.26	6.6	Light rain	
Vicksburg, Miss.	.....	.....	30.00	762.0	76	24.4	95	Calm	0	0	.....	5c	Fog	S W	S	0	0	Fair	
	.....	.....	30.09	764.3	83	28.3	74	S	2	0.9	.....	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.	24.16	613.6	29.64	752.8	60	15.6	39	SW	4	1.8	.....	6c	0	SW	.....	0	0	Cloudy	
Washington, D. C.	.....	.....	29.85	758.2	77	25.0	65	NW	14	6.3	.....	2c	0	W	.....	0	0	Fair	
Wilmington, N. C	.....	.....	29.94	760.5	81	27.2	70	SW	7	3.1	.....	5c	0	NW	.....	0	0	Fair	
Wood's Holl, Mass.	.....	.....	29.80	756.9	68	20.0	84	SW	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Wytheville, Va.	27.69	703.3	29.76	755.9	67	19.4	90	W	8	3.6	.....	4c,ck	2ks	W	W	0.15	3.8	Fair	
Yankton, Dakota	28.57	725.7	29.79	756.7	69	20.6	85	Calm	0	0	.....	8cs	5s	W	W	0	0	Cloudy	
Yuma, Arizona	.....	.....	29.82	757.4	77	25.0	.....	NE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub-Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.07	763.8	84	28.9	75	NE	7	3.1	.....	2ck	5s	E	N	0	0	Fair	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	30.02	762.5	80	26.7	90	E	.....	.....	.....	10fk	5n	.....	.....	0.33	8.4	Rainy	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.12	765.0	80	26.7	74	Calm	0	0	.....	8c	0	.....	.....	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	29.83	757.7	83	28.3	74	NW	1.2	0.5	.....	8c	0	.....	.....	0	0	Fair	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.06	763.5	80	26.7	79	NE	1.2	0.5	.....	8k,c	0	SE	.....	0.44	11.2	Cloudy	Charles Hasselbrink
St. Georges, Bermudas	.....	.....	30.08	764.0	78.0	25.6	74	WSW	10.0	4.5	.....	10c	2k	N	.....	0	0	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	72	22.2	71	SE	3.0	1.3	.....	2c	0	SE	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.06	763.5	82	27.8	83	E	.....	.....	2	5k	5k	E	.....	0.620	15.49	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.7	.....	.....	83.8	28.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.079	2.00	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.25	641.3	.....	.....	65.8	18.8	82	Calm	0	0	.....	3c	5s	.....	.....	0.15	3.8	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	29.28	743.7	60	15.6	97	S	6	2.7	.....	4k	0	E	.....	1.10	27.9	.....	J. Fortescue, W. Woods
Honolulu, Oahu, H. I.	.....	.....	30.14	765.5	76	24.4	90	NE	.....	.....	2	.....	.....	.....	.....	0	0	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	30.00	762.0	69	15.0	86	NE	2.4	1.1	.....	2cs	0	SW	.....	0	0	Threatening	F. L. Clarke.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
Steamer Nova Scotian, N. 45° 0′, W. 58° 15′.	W by N ½ N	11¼	29.76	755.9	51	10.6	.....	SW	.....	.....	3	.....	0	.....	.....	Smooth	.....	Blue sky	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, 6,057.8 ft., or 1,846.2 m.; Clifton about 2.892 ft., or 881.5 m.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,264.8 ft., or 1,301.1 m.; Santa Fé, 6,802.2 (?) 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, 0.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. 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, 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 JUNE 25, 1876.

7:35 A. M. WASHINGTON mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:48 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours	....	.....	29.96	761.0	75.6	24.2	62	NNW	.....	.....	2	.....	3	.....	.....	0.035	1.4	Fair	Charnot.
Algiers	... .	.....	29.84	758.0	77.0	25.0	48	WNW	.....	.....	2	.....	2	.....	.....	0	0	Clear	Peter.
La Calle	.....	.....	....	.....	73.4	23.0	.....	NW	.....	.....	2	.....	7	.....	.....	0.406	10.3	Cloudy	Kunts.
Tunis	.....	.....	29.90	759.4	80.7	30.4	30	N	.....	.....	4	.....	3	.....	.....	0.045	0.9	Fair	Jacques.
Sfax	.....	.....	29.93	760.1	81.7	27.6	57	E	.....	.....	3	.....	1	.....	.....	0	0	Clear	Chauvey.
Saida	.....	.....	29.98	761.4	75.2	24.0	69	NW	.....	.....	2	.....	2	.....	.....	0.126	3.2	Clear	Millot.
Tebessa	.....	.....	29.92	759.9	81.7	27.6	.....	E	.....	.....	3	.....	2	.....	.....	0	0	Clear	Colin.
Geriville	.....	.....	29.98	761.5	70.5	21.4	41	NNW	.....	.....	3	.....	2	.....	.....	0.157	4.0	Clear	Buard.
Laghouat	.....	.....	29.95	760.6	86.0	30.0	41	SW	.....	.....	2	.....	0	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	29.89	759.1	86.7	30.4	31	NW	.....	.....	5	.....	0	.....	.....	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	.....	.....	29.81	757.8	66.1	15.6	96	Calm	.....	.....	0	.....	10	.....	.....	0.740	18.8	Raining	Prof. Ivan Stosir.
Cracow, I. R. Observatory	.....	.....	29.87	758.6	66.2	19.0	49	NE	.....	.....	1	.....	5	.....	.....	0.075	1.9	.....	Dr. Wiersbiski.
Eperies	.....	.....	29.83	757.6	67.1	19.5	52	Calm	.....	.....	0	.....	9	.....	S	0	0	.....	Julius Mikolik.
Gratz	28.02	727.0	29.82	757.3	58.6	14.8	87	SW	.....	.....	2	.....	10	.....	.....	0.295	7.5	.....	Andreas Rospini.
Hermannstadt	28.34	719.7	29.09	754.0	72.5	22.5	62	SE	.....	.....	3	.....	8	.....	.....	0.144	3.65	.....	Prof. Reissenberger.
Kremsmünster	28.52	724.3	29.82	757.4	64.4	18.0	55	ENE	.....	.....	3	.....	8	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	.....	.....	29.80	756.9	64.4	18.0	83	S	.....	.....	3	.....	7	.....	.....	0.012	0.3	.....	Dr. T. Staneoki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habsuda Daniel.
Pola	.....	.....	29.81	757.1	75.9	24.4	72	NW	.....	.....	1	.....	8ks	.....	.....	0.033	0.84	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	29.82	757.3	63.3	17.4	76	SE	.....	.....	1	.....	10	.....	.....	0.138	3.50	.....	Karl Stancel.
Trieste	.....	.....	29.82	757.3	73.2	22.9	74	W	.....	.....	1	.....	4	.....	.....	1.371	34.8	.....	Prof. V. Farolfi.
Vienna	.....	.....	29.84	758.0	61.5	16.4	76	SW	.....	.....	1	.....	10	.....	.....	Blank	Blank	.....	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	.....	.....	29.80	756.4	70.5	21.4	42	ENE	.....	.....	5	.....	2	.....	E	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	.....	.....	30.21	767.3	75.0	23.9	.....	NNW	13	5.8	.....	.....	0	.....	.....	0	0	Blue sky.....	William Boswell.
Ardrossan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	William McNeil.
Armagh, Observatory	.....	.....	30.20	767.1	66.4	19.1	.....	ENE	12	5.4	.....	.....	.....	.....	.....	.....	.....	.....	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	30.12	765.0	69.2	20.7	.....	ENE	.....	.....	1–3	.....	0	.....	.....	.....	.....	Hazy.....	J. Dreyer.
† Bradford	.....	.....	30.10	764.5	61.7	16.5	.....	N	.....	.....	2	.....	3	.....	.....	0	0	*D. clouds....	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.01	762.2	80.0	26.7	.....	NE	.....	.....	2	.....	6	.....	.....	.....	.....	Overcast.....	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory	.....	.....	30.03	762.7	70.9	21.6	.....	NE	.....	.....	3	.....	2	.....	.....	.....	.....	*D. clouds....	H. Todd. [H. C.
Cardington	.....	.....	30.03	762.7	71.0	21.7	.....	E	.....	.....	4	.....	1	.....	.....	.....	.....	Blue sky.....	John McLaren.
Carlisle	.....	.....	30.16	766.1	73.8	23.2	.....	E	.....	.....	1	.....	1	.....	.....	0	0	Blue sky.....	T. Bell, for J. Carmell.
Chatham, School M. E	.....	.....	29.97	761.2	64.0	17.8	.....	NE	.....	.....	4	.....	.....	.....	.....	.....	.....	*D. clouds....	Capt. J. Fellowes, R.E.
Dartmoor	28.54	724.9	30.11	764.8	60.2	15.7	.....	NE	.....	.....	0	.....	4	.....	.....	.....	.....	*D. clouds....	R. E. Power.
Donaghadee	.....	.....	30.20	767.1	62	16.7	.....	NNE	.....	.....	3	.....	0	.....	.....	.....	.....	Blue sky...	J. Mac Gowan.
Dover	.....	.....	29.92	760.0	62	16.7	.....	NE	.....	.....	5	.....	1?	.....	.....	.....	.....	¾ clouded?	J. Costello.
Eccles, (near Manchester.)	.....	.....	30.09	764.3	72.0	22.2	.....	NE	5.9	2.5	.....	.....	.....	.....	.....	.....	.....	Blue sky.....	Thomas Mackereth.
Falmouth, Observatory	.....	.....	29.93	760.2	66.8	19.3	.....	ENE	22	9.8	.....	.....	1	.....	.....	.....	.....	*D. clouds....	The Staff.
Fort Napier, (Natal)	27.85	707.4	30.09	764.3	60.1	15.6	.....	E	.....	.....	1	.....	4	.....	.....	.....	.....	*D. clouds....	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	30.04	763.0	84	28.9	.....	N	.....	.....	3	.....	7	.....	.....	.....	.....	*D. clouds....	
Galway, Queen's College	.....	.....	30.10	764.5	69	20.6	.....	SE	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	29.95	760.7	70.0	21.1	.....	N	.....	.....	4	.....	3	.....	.....	.....	.....	*D clouds....	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	30.19	766.8	73.8	23.2	.....	NE	.....	.....	1	.....	1	.....	.....	.....	.....	Fine.....	Lewis Stuart.
Great Yarmouth	.....	.....	30.05	763.3	64	17.8	.....	NE	.....	.....	4	.....	0	.....	.....	.....	.....	Blue sky.....	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	29.98	761.5	71.5	21.9	.....	ENE	.....	.....	4	.....	0	.....	.....	.....	.....	Blue sky ...	The Staff, for G. B. Airy.
Guernsey	.....	.....	29.83	757.7	62	16.7	.....	NE	.....	.....	4	.....	3	.....	.....	.....	.....	*D. clouds....	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	30.12	765.0	69.6	20.9	.....	E	.....	.....	3	.....	1	.....	.....	.....	.....	*D. clouds....	L. J. Crossley.
Helston	.....	.....	29.87	758.7	71	21.7	.....	E	.....	.....	6	.....	0	.....	.....	0.5	12.7	Very fine ..	M. P. Moyle.
Holyhead	.....	.....	30.11	764.8	60	15.6	.....	N	.....	.....	1	.....	1	.....	.....	.....	.....	Blue sky.....	John Tilston.
Kew, Observatory	.....	.....	29.97	761.2	67.9	19.9	.....	ENE	32	14.3	.....	.....	4	.....	.....	.....	.....	Blue sky.....	The Staff.
Kingstown	.....	.....	30.17	766.3	58	14.4	.....	ENE	.....	.....	5	.....	1	.....	.....	.....	.....	Blue sky.....	George Mitchell.
Leicester Museum	.....	.....	30.08	764.0	67.6	19.8	.....	E	.....	.....	2	.....	1	.....	.....	.....	.....	*D. clouds....	Wm. J. Harrison, F.G.S.
Malta, Mediterranean	.....	.....	29.86	758.4	81.6	27.6	.....	SW	.....	.....	1	.....	2k	.....	.....	.....	.....	*D. clouds....	Corp'l F. Fraser, A. M. C.
Nairn	.....	.....	30.23	767.8	77	25.0	.....	Calm	.....	.....	0	.....	0	.....	.....	.....	.....	Clear.....	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.11	764.8	80.6	27.0	.....	S	.....	.....	0	.....	8	.....	.....	.....	.....	*D. clouds....	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	30.09	764.3	70.4	21.3	.....	ENE	.....	.....	6	.....	1ck,c	.....	E	0	0	Blue sky.....	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.04	763.0	68.7	20.4	.....	ENE	.....	.....	5	.....	0	.....	.....	.....	.....	Blue sky.....	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	29.98	761.5	69	20.6	.....	ENE	.....	.....	2	.....	4	.....	.....	.....	.....	*D. clouds....	J. Lucas.
Plymouth	.....	.....	29.92	760.0	71.2	21.8	.....	ENE	.....	.....	5	.....	3	.....	.....	.....	.....	*D. clouds....	John Merrifield.
Roche's Point	.....	.....	30.05	763.3	67	19.4	.....	SE	.....	.....	4	.....	5	.....	.....	.....	.....	Fine.....	W. Kennedy.
Saint Ann's Head	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John C. Walker.
Saint Helier, Jersey	.....	.....	29.79	756.7	69.2	20.7	.....	ENE	.....	.....	6	.....	5	.....	.....	.....	.....	½ clouded..	A. P Amy.
Sandwick Manse (Orkneys)	.....	.....	30.26	768.6	66.0	18.9	.....	NE	16	7.2	.....	.....	0	.....	.....	.....	.....	Blue sky.....	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. Shaw.
Scutari Cemetery, Turkey	.....	.....	29.85	758.2	83.4	28.6	.....	W	.....	.....	1	.....	1	.....	.....	.....	.....	Blue sky.....	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.11	764.8	61.0	16.1	.....	ENE	.....	.....	3	.....	6	.....	.....	0	0	*D. clouds....	W. F. Cooper.
Silloth Rectory	.....	.....	30.15	765.8	72.5	22.5	52	SE	.....	.....	3	.....	0	.....	.....	0	0	Blue sky.....	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	30.13	764.8	69.9	21.1	.....	E	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	Rev. S. J. Perry.
Stornoway, Lews C., Hebr.	.....	.....	30.25	768.3	68	20 0	.....	ENE	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	John Smith.
Stratfield Turgiss	.....	.....	29.96	761.0	69.6	20.9	.....	NE	.....	.....	3	.....	3	.....	.....	.....	.....	Squally.....	Rev. Charles H. Griffith.
Thurso	.....	.....	30.24	768.1	65	18.3	.....	NW	.....	.....	2	.....	0	.....	.....	.....	.....	Blue sky.....	John Trotter.
Truro, Royal Institution	.....	.....	29.97	761.2	77	25.0	.....	E	.....	.....	2	.....	2	.....	.....	.....	.....	*D clouds....	W. Newcombe.
Valencia, Observatory	.....	.....	30.07	763.8	68.5	20.3	.....	N	16	7.2	.....	.....	4	.....	.....	.....	.....	Hazy.....	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	54	12.2	.....	E	.....	.....	4	.....	2	.....	.....	0	0	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.26	768.6	60.6	15.9	63	SSE	15	6.7	.....	2	2	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	30.50	774.7	57.0	13.9	87	W	.....	.....	1	.....	0	.....	.....	0.01	0.3	.....	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	30.23	767.8	69.0	20.6	.....	E	.....	.....	2	.....	.....	.....	.....	0	0	Fine.....	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.23	767.8	.....	.....	.....	ESE	13.1	5.9	.....	.....	.....	.....	.....	0.15	3.8	.....	C. Meldrum
Melbourne, Observatory	.....	.....	30.49	774.4	45.0	7.2	95	SE	2	0.9	.....	.....	10	.....	.....	0.01	0.3	Dense fog....	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	30.21	767.2	62	16.7	.....	NE	.....	.....	3	0	0	.....	.....	0	0	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	30.25	768.3	55	12.8	.....	NE	.....	.....	3	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 670.6 m. *Detached clouds. †This observation probably belongs to *Monday, the 26th.*

DANISH SERIES.

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

Copenhagen	.....	.....	29.99	761.8	66.2	19.0	72	NNE	.....	.....	2	.....	5	.....	.....	.....	.....	.....	.....
Faröe	.....	.....	30.02	762.5	65.8	18.8	86	W	.....	.....	2	.....	5	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	29.91	759.7	.....	.....	.....	Calm	.....	.....	0	.....	0	.....	.....	.....	.....	.....	.....
Stykkisholm, Iceland)	.....	.....	30.38	771.7	52.2	11.2	88	Calm	.....	.....	0	.....	8	.....	.....	.....	.....	.....	.....
Thorshavn, (Faröe)	.....	.....	30.39	771.9	52.7	11.5	86	Calm	.....	.....	0	.....	10	.....	.....	.....	.....	Foggy	.....
Vestervig	.....	.....	30.00	762.1	67.5	19.7	82	NNE	.....	.....	2	.....	10	.....	.....	.....	.....	Raining.....	.....

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

FRENCH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alengon	.....	.....	29.71	754.6	71.6	22	50	NE	.....	.....	2	.....	6&8,ku	.....	NE	0	0	Cloudy	Normal School.
Amiens	.....	.....	29.94	760.5	73.4	23.0	53	SW	.....	.....	3	.....	0	.....	.....	0.087	2.2	Clear...	Normal School.
Avignon	.....	.....	29.69	754.1	73.4	23	74	SE	.....	.....	2	.....	8	.....	SE	0	0	Very cloudy	Normal School.
Bar-sur-Seine	.....	.....	29.69	754.2	75.2	24.0	43	E	.....	.....	2	.....	5	.....	E	0	0	Cloudy.....	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.59	751.6	76.5	24.7	51	E	17.4	7.8	.....	.....	10	.....	E	0.083	2.1	Covered	Beaumette Observatory.
Beauvais	.....	.....	29.81	757.1	72.9	22.7	47	E	.....	.....	3	.....	2	.....	E	0.043	1.10	Slightly cl'dy	Normal School.
Besançon	.....	.....	29.70	754.3	74.5	23.6	64	E	.....	.....	3	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	29.08	753.9	80.6	27	90	N	.....	.....	1	..c	.....	SW	.....	.....	.....	Clear.....	Normal School.
Bourges	.....	.....	29.63	752.6	75.2	24	55	NNE	.....	.....	0	.....	5	.....	W	0	0	Cloudy.....	Normal School.
Brest	.....	.....	29.74	755.4	64.6	18.1	65	NE	.....	.....	5	.....	4	.....	NE	0.030	0.76	Stormy.....	Naval Observatory.
Carcassonne	.....	.....	29.68	753.8	64.8	18.2	79	W	.....	.....	2	.....	10	.....	E	0.096	25.3	Covered	Normal School
Caen	.....	.....	30.59?	777.0?	69.8	21	76	N	.....	.....	3	..c	.....	W	.....	0	0	.....	Normal School.
Chartres	.....	.....	29.71	754.7	75.0	24.4	.....	ENE	.....	.....	4	.....	8	.....	N	0	0	.....	Normal School.
Clermont	.....	.....	29.03	752.6	73.2	22.9	64	SE	.....	.....	2	.....	10n	.....	S	0.315	8.0	Covered	Puy de Dome Obs'y.
Commercy	.....	.....	29.77	756.2	70.5	21.4	72	ENE	.....	.....	0	.....	5k	.....	E	0	0	Cloudy.....	Normal School.
Commune de Greasque*	.....	.....	29.74	755.4	71.6	22.0	56	SE	.....	.....	4	.....	10	.....	SE	.....	.....	.....	M. Kina.
Grenoble	.....	.....	29.65	753.2	73.8	23.2	91	ENE	.....	.....	2	.....	5k	.....	W	0.433	11.25	Partly cloudy	Normal School.
La Roche-sur-Yon	.....	.....	29.62	752.3	72.3	22.4	74	NE	.....	.....	0	.....	10	.....	.....	0.480	12.2	Cloudy.....	Normal School.
Le Mans	.....	.....	29.74	755.3	75.0	23.9	75	NE	.....	.....	0	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier	.....	.....	29.63	754.6	76.8	24.9	50	SE	.....	.....	.....	.....	10	.....	N	0	0	Covered	Normal School.
Macon	.....	.....	29.67	753.5	74.3	23.5	73	NW	.....	.....	2	.....	5	.....	NE	0	0	Cloudy.....	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	29.43	747.5	72.0	22.2	50	NE	.....	.....	0	.....	2	.....	SE	0	0	Slightly cl'dy	Normal School.
Nismes	.....	.....	29.66	753.4	67.0	19.8	90	SE	.....	.....	1	.....	10	.....	SW	1.38	35.	Covered.....	Normal School.
Orleans	.....	.....	29.64	752.9	74.8	23.8	49	ENE	.....	.....	4	.....	5	.....	E	0	0	Cloudy.....	Normal School.
Paris, Observatory	.....	.....	29.75	755.6	74.1	23.4	48	NE	.....	.....	4	5c	.....	.....	.....	0	0	Cloudy.....	National Observatory.
Parthenay	.....	.....	29.58	751.2	77.0	25	40	SW	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Privas	.....	.....	29.73	755.1	69.4	20.8	.....	SSE	.....	.....	2	.....	5	.....	SE	.....	.....	Cloudy	Normal School.
Rochefort, Observatory	.....	.....	29.09	754.2	67.1	19.5	90	W	.....	.....	3	.....	10	.....	E	0.501	15.0	Covered	Naval Observatory.
Rouen	.....	.....	29.79	756.7	78.6	25.9	36	NNE	.....	.....	4	.....	0	.....	.....	0	0	Clear.....	Normal School.
Saint Lo	.....	.....	29.59	751.5	73.2	22.9	53	NE	.....	.....	2	.....	2	.....	E	0	0	.....	Normal School.
Tarbes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Villefranche	28.67	728.3	30.14	765.5	62.6	17	.....	W	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School
	.....	.....	29.71	754.6	74.8	23.8	66	NE	.....	.....	1	.....	5	.....	S	0	0	Cloudy.....	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.89	759.3	78.8	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	Blank	Blank	.....	L'Abbé Marchési.
Marseilles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Marseilles Observatory.
Mont-Louis	.....	.....	29.88	759.0	52.5	11.4	81	SSW	22.4	10.00	.....	.....	8	.....	SSW	0.165	4.2	....	—. Falguère.
Montsouris, Paris	.....	.....	29.75	755.7	74.8	23.8	48	NE	.....	.....	4	.....	6	.....	.....	0	0	....	Montsouris Observ'tory.
Perpignan	.....	.....	29.67	753.5	64.2	17.9	79	NE	11.2	5.00	.....	.....	10	.....	.....	0.87	22.1	....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.76	755.6	75.0	23.9	50	NE	.....	.....	3	.....	3	.....	.....	0	0	Slightly cl'dy	E. Renou.
Toulouse	.....	.....	29.73	755.1	57.9	14.4	95	W	.....	.....	4	.....	10	.....	.....	0.488	12.4	Rainy.....	Toulouse Observatory.
Tours	.....	.....	29.64	752.9	77.4	25.2	51	NE	.....	.....	3	.....	7	.....	E	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.76	755.9	74.8	23.8	48	E	.....	.....	6	.....	0	.....	.....	0	0	Clear.....	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Le Lec, S. J.
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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.

Bamberg	.....	.....	29.88	758.9	70.7	21.5	38	E	.....	.....	3	.....	3	E	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.96	761.0	66.6	19.2	47	N	.....	.....	2	.....	6	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	29.97	761.2	61.7	16.5	58	WNW	.....	.....	6	.....	6	.....	.....	0.256	6.5	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	29.78	756.4	72.7	22.6	49	NE	.....	.....	5	.....	1	.....	.....	0	0	.....	A. Sena.
Cassel	.....	.....	29.93	760.1	74.8	23.8	34	NE	.....	.....	6	.....	2	ENE	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	29.95	760.8	72.5	22.5	61	NNE	.....	.....	4	.....	2	E	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.89	759.2	73.9	23.3	30	ENE	.....	.....	4	.....	3	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	29.75	755.6	70.7	21.5	57	NE	.....	.....	4	.....	5	.....	.....	0.402	10.2	.....	M. Wilhelm.
Hamburg	.....	.....	29.98	761.6	70.7	21.5	46	ESE	.....	.....	1	.....	2k	.....	.....	0	0	Very sultry.	Captain F. Hegemann.
Kiel	.....	.....	29.99	761.8	68.9	20.5	43	NE	.....	.....	2	.....	6	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.91	759.8	66.6	19.2	51	NE	.....	.....	5	.....	5	.....	.....	0.114	2.9	Thunder, lightn'g	Prof. E. Luther
Koslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	29.96	760.9	69.4	20.8	41	ENE	.....	.....	1	.....	4	E	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	29.96	761.0	63.0	17.2	59	NW	.....	.....	3	.....	4ck,s	.....	NE	0.047	1.2	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.98	761.4	73.4	23.0	41	.....	.....	.....	5	.....	0	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.97	761.2	63.0	17.2	80	NE	.....	.....	6	.....	6	NNE	.....	0	0	.....	A. Lothes.
Posen	.....	.....	29.97	761.2	69.6	20.9	39	NNW	.....	.....	7	.....	4	.....	.....	0.008	0.2	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.76	755.9	73.9	23.3	49	NE	.....	.....	2	.....	3	SE	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.80	756.9	71.6	22.0	43	E	.....	.....	2	.....	4	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	29.90	759.4	68.9	20.5	40	E	.....	.....	2	.....	5	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.80	757.0	74.5	23.6	34	NE	.....	.....	7	.....	2	.....	.....	0	0	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	30.00	762.0	61.9	16.6	69	N	.....	.....	3	.....	0	.....	.....	0	0	.....	E. F. Schütz.
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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			29.89	759.2	85.3	29.6		SW										Very clear	

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

ITALIAN SERIES.

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

Udine			29.79	756.7	68.2	20.1	70	NE	0.7	0.3			9			0.110	2.8		
Padua			29.76	755.9	72.0	22.2	66	NNE	5.6	2.5			9	S		0.307	7.8		
Vicenza			29.78	756.3	71.1	21.7	74	N	3.1	1.4			5	E		0.524	13.3		
Verona			29.74	755.4	76.8	24.9	59	E			1		5			0.914	23.2		
Bergamo	28.44	722.4	29.71	754.6	71.6	22.0	71	S			2		9			0.669	17.0		
Domodossola																0.287	7.3		
Milan			29.79	756.6	76.6	24.8	63	W			2		8	W		1.142	29.0		
Pavia			29.76	756.9	72.9	22.7	68	NE			1		9	E		0.315	8.0		
Moncalieri			29.74	755.3	68.0	20.0	79	ENE	3.1	1.4			9	SW		2.709	68.8	Showery	
Mondovi	27.88	708.1	29.72	755.0	61.5	16.4	90	W			2		10			0.728	18.5	Showery	
Porto Maurizio			29.81	757.2	76.3	24.6	73	SW			2		10	NE		0.024	0.6		
Genoa			29.77	756.2	73.4	23.0	65	SW	2.5	1.1			10	SW		0	0		
Piacenza			29.77	756.1	72.1	22.3	71	E	8.1	3.6			10	E		0.130	3.3		
Parma			29.77	756.1	70.7	21.5	68	NNW			4		9			0.094	2.4		
Bologna			29.78	756.4	76.1	24.5	45	NE			6		5	S		0.236	6.0		
Florence			29.79	756.6	84.2	29.0	46	SSE			2		10	SW		0	0		
Leghorn			29.80	756.8	75.9	24.4	71	S	15.4	6.9			10			0	0		
Siena	28.62	726.9	29.78	756.5	75.0	23.9	61	SSW	3.8	1.7			10	SW		0.165	4.2		
Urbino	28.30	718.8	29.80	756.9	73.6	23.1	50	SW			2		6			0	0		
Pesaro																			
Ancona			29.80	756.9	74.8	23.8	70	Calm			0		10			0.264	6.7		
Grosseto			29.85	758.2	74.8	23.8	70	SE			6		8	S		0	0		
Rome			29.84	758.0	79.7	26.5	51	S	19.2	8.6			8	SSW		0.020	0.5		
Naples, O. U.			29.87	758.8	80.6	27.0	52	SW			1		10	NW		0	0		
Lecce			29.92	759.9	82.4	28.0	57	SE	13.7	6.1			4			0	0		
Cosenza			29.87	758.7	89.2	31.8	66	NW	0	0			1			0	0		
Riposto, (Sicily)			29.90	759.5	77.9	25.5	61	SE			2		0			0	0		
Palermo			29.82	757.3	78.3	25.7	57	NE	4.3	1.9			0			0	0		
Caltanissetta	27.90	708.6	29.75	755.7	80.8	27.1	25	SE			2		0			.0	0		
Sub-Series.																			
Naples, S. R.			29.92	760.0	78.4	25.8	49	SW	4.3	1.9			4	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, 806 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.

Flushing			29.97	761.1	70.0	21.1		ENE			5								
Groningen					69.4	20.8		N			2								
Helder			30.02	762.5	65.5	18.6		N			3								
Utrecht			29.94	760.4	70.3	21.3	49	NE			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.

Bergen			30.02	762.6	78.4	25.8	52	WNW	4.5	2.0			0			0	0		
Brönö			30.21	767.2	60.8	16.0	69	NNE	25	11			0			0	0		
Christiania			30.02	762.5	83.3	28.5	32	ENE	2.2	1.0			4			0	0		
Tromsö			30.19	766.8	50.9	10.5	76	NW	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,)	.....	.....	30.59	774.8	70.9	21.6	74	E	5.7	2.56	.....	.....	3	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.90	759.4	66.9	19.4	31	WNW	18.8	8.39	.....	.....	3	.....	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.19	766.7	71.6	22.0	62	SW	4.2	1.88	.....	.....	8	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.04	763.0	63.3	17.4	47	NW	18.6	8.3	.....	.....	9	NW	.....	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 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	.....	.....	29.89	759.1	58.3	14.6	68	ENE	7	3	.....	.....	10	.....	.....	.....	.....	Light rain...	Astronomical Obs.
Wilna	.....	.....	29.93	760.1	61.3	16.3	68	W	2	1	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.98	761.4	70.3	21.3	48	NE	9	4	.....	.....	3	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.98	761.4	70.2	21.2	44	ENE	7	3	.....	.....	1	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	30.00	762.0	72.9	22.7	52	NW	7	3	.....	.....	0	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.82	757.4	74.1	23.4	53	S	9	4	.....	.....	10	.....	.....	.....	.....	.....	Physical Cab net.
Nikolaiev	.....	.....	29.94	760.4	77.4	25.2	69	SW	13	6	.....	.....	7	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.91	759.8	81.0	27.2	63	S	7	3	.....	.....	2	.....	.....	.....	.....	.....	Lugorio.
Moscow	.....	.....	29.95	760.8	70.7	21.5	47	SW	4	2	.....	.....	5	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.87	758.7	79.3	26.3	42	ESE	13	6	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.85	758.3	61.3	16.3	61	NW	22	10	.....	.....	9	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.19	723.6	29.81	757.1	88.2	31.2	37	S	4	2	.....	.....	7	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.96	761.0	73.2	22.9	53	N	18	8	.....	.....	4	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.78	756.3	67.1	19.5	73	N	9	4	.....	.....	9	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.82	732.0	29.80	756.9	59.7	15.4	82	NE	2	1	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Nukúss	.....	.....	29.66	753.4	90.1	35.6	25	NNE	7	3	.....	.....	1	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.11	713.9	29.69	754.1	85.6	29.8	49	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.66	753.3	72.9	22.7	42	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.67	753.6	68.5	20.3	63	SW	4	2	.....	.....	1	.....	.....	.....	.....	.....	Marks.
Irkutsk	28.42	721.9	29.78	756.3	54.9	12.7	79	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	30.02	762.4	81.0	27.2	48	SSW	13	6	.....	.....	4	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.17	766.4	50.7	10.4	91	SE	2	1	.....	.....	1	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	54.0	12.2	98	E	11	5	.....	.....	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.

Madrid	.....	.....	29.73	755.2	66.6	19.2	50	NW	15.7	7.0?	.....	0	9	.....	.....	0.221	5.7	Almost cov'd	Royal Observatory.
San Fernando	.....	.....	30.02	762.5	67.6	19.8	49	WNW	18.3	8.2	.....	0	4	.....	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.

Haparanda	.....	.....	30.14	765.6	77.0	25.0	64	NE	.....	.....	4	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	30.07	763.7	77.4	25.2	37	S	.....	.....	4	.....	1	.....	.....	0	0	.....	
Hernosand	.....	.....	30.09	764.3	73.4	23.0	46	ENE	.....	.....	2	.....	1	.....	.....	0.003	1.6	.....	
Stockholm	.....	.....	30.01	762.2	73.2	22.9	70	ENE	.....	.....	4	.....	1	.....	.....	0.114	2.9	.....	
Wisby	.....	.....	30.04	762.9	59.4	15.2	70	NE	.....	.....	6	.....	5	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.01	762.3	76.8	24.9	38	NE	9.8	4.4	.....	.....	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 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	28.29	718.6	29.67	753.6	70.7	21.5	66	N	.....	.....	2	.....	3	.....	.....	0.067	1.7	Clouds	The Observatory.
Zurich	28.17	715.6	29.76	755.8	70.3	21.3	67	NE	.....	.....	1	.....	2	.....	.....	0	0	Clear	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note—For Geneva the corresponding departures from the normal values are: Barometer, —8.4 mm; Thermometer, —0.1 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.

Constantinople	.....	.....	29.90	759 5	86.2	30.1	47	SE	4	2.0	.....	.....	3	.....	NW	0	0	.....	
Fa o, (Persian Gulf)	.....	.....	29.74	755.4	94.3	34.6	.....	NW	.....	.....	4	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.95	760.8	89.6	32.0	.....	S	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	29.92	760.0	89.2	31.8	.....	S	.....	.....	2	.....	5	.....	.....	.....	.....	.....	
Varna	.....	.....	29.84	758.0	86.0	30.0	.....	E	.....	.....	3	.....	8	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.89	759.3	83.1	28.4	66	WNW	.....	.....	1	.....	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.

Bathurst, N. B	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.68	753.9	66	18.9	.....	SW	11	4.9	.....	.....	10n	.....	SW	Inap.	Inap.	Light rain	W. R Bigg.
*Chatham, N. B	.....	.....	29.48	748.8	63	17.2	97	NW	5	2.2	.....	.....	10ks	.....	NW	0.29	7.4	Cloudy	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.51	749.5	60	15.6	82	S	18	8.0	.....	.....	10n	.....	.....	0	0	Threatening	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.58	751.3	79.0	26.1	77	W	.....	.....	1	3c	0	.....	.....	0	0	Bright	James Smith, M. A.
Dalhousie, N. B	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. A. Johnson.
Esquimault, B. C	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Bevis.
Fredericton, N. B	.....	.....	29.54	750.3	61.0	16.1	73	NW	5	2.2	.....	0	5ks	.....	.....	0.376	9.53	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.58	751.3	66	18.9	76	SE	5	2.2	.....	..k	.ks	SE	SE	0	0	Fair	James Stewart.
Goderich, Ontario	.....	.....	29.69	754.1	74.9	23.8	77	SW	.....	.....	2	0	0	.....	.....	0 0t4	1.63	Fine	H. J. Strang, M. A.
Granton, Ontario	28.65	727.7	29.69	754.1	70	21.1	.....	SW	.....	.....	1	0	0	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S	.....	.....	29.51	749.5	56	13.3	94	S	13	5.8	.....	.....	8n	.....	.....	0.14	3.6	Cloudy	F. Allison, M. A.
*Kingston, Ontario	.....	.....	29.68	753.9	66	18.9	90	NW	3	1.3	.....	.....	10s	.....	NW	0.04	1.0	Cloudy	S. Woods, M. A.
Little Glace Bay, N. S	.....	.....	29.55	750.6	59.5	15.3	97	SW	5	2.2	.....	10k	0	SW	.....	0	0	Thunder, lightn'g	C. H. Rigby.
*Montreal, Quebec	.....	.....	29.57	751.1	71	21.7	62	W	7	3 1	.....	2c	0	W	.....	Inap.	Inap.	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.59	751.6	71	21.7	78	W	6	2.7	.....	2cs	0	.....	.....	0	0	Clear	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.64	752.8	65	18.3	73	SW	4	1.8	.....	2cs	2ks	W	W	Inap.	Inap	Fair	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	29.77	756.1	61	16.1	94	SW	5	2.2	.....	.....	Fog	.....	SW	0	0	Foggy	H. Morgan.
Port Hastings, N. S	.....	.....	29.56	750 8	58.8	14.9	.....	SE	4	1.8	.....	.....	.....	.....	.....	0.40	10.2	Raining	Peter Grant.
*Port Stanley, Ontario	.....	.....	29.76	755.9	64	17.8	92	W	8	3.6	.....	.....	10ks	.....	W	0	0	Fair	M. Payne.
*Quebec, Quebec	.....	.....	29.55	750.6	70	21.1	78	SW	3	1.3	.....	0	0	.....	.....	0.17	4.3	Clear	Capt. Ashe, R. N.
St. John, N. B	.....	.....	29.53	750.0	55	12.8	93	NE	5	2.2	.....	.....	10n	.....	.....	0.120	3.05	Overcast	G. Murdoch, C. E.
*Sarnia, Ontario	.....	.....	29.64	752.8	69	20.6	74	W	7	3.1	.....	0	0	.....	.....	0	0	Clear	K. Stewart.
Stayner, Ontario	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. J. Cole.
Stratford, Ontario	28.44	722.4	29.65	753.1	69.7	20.9	91	SW	5	2.2	.....	2cs	3s	SW	.....	0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.59	751.6	60	15.6	95	SW	10	4.5	.....	.....	10n	.....	.....	0.02	0.5	Heavy rain	T. C. Hill.
*Toronto, Ontario	.....	.....	29.68	753.9	70	21.1	81	S	2	0.9	.....	2ck	8ks	W	W	0.01	0.3	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.68	753.9	71.5	21.9	87	S	8	3.6	.....	.....	10s	.....	.....	0	0	Fine	J. Montgomery
Sub-Series.																			
St. John's, Newfoundland	.....	.....	29.96	761.0	61	16.1	77	S	.....	.....	.....	.....	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 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.	.....	.....	29.66	753.4	77	25.0	60	Calm	0	0	.....	5c	Haze	W	.....	0	0	Fair	
Alpena, Mich.	.....	.....	29.58	751.3	76	24.4	64	NW	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Atlantic City, N. J.	.....	.....	29.81	757.2	76	24.4	72	NW	4	1.8	.....	5cs	0	SW	.....	0	0	Fair	
Augusta, Ga.	.....	.....	29.93	760.2	80	26.7	72	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Baltimore, Md.	.....	.....	29.85	758.2	79	26.1	61	W	4	1.8	.....	2ck	2s	.....	.....	0	0	Fair	
Barnegat, N. J.	.....	.....	29.79	756.7	70	20.1	61	NW	9	4.0	.....	5ck	0	NW	.....	0	0	Fair	
Benton, Montana	27.10	688.3	29.90	759.4	60	15.6	48	W	4	1.8	.....	0	5s	.....	W	0	0	Fair	
Bismarck, Dakota	27.91	708.9	29.44	747.8	68	20.0	60	NE	2	0.9	.....	.....	10ks	.....	NE	0	0	Cloudy	
Boston, Mass.	.....	.....	29.92	752.3	79	26.1	43	W	14	6.3	.....	1cs	Haze	W	.....	Inap.	Inap.	Hazy	
Breckenridge, Minn.	.....	.....	29.59	751.6	70	21.1	79	SE	14	6.3	.....	.....	8ks	.....	SW	0.01	0.3	Cloudy	
Buffalo, N. Y.	.....	.....	29.71	754.6	68.5	20.3	87	SW	10	4.5	.....	8c	2k	W	W	0	0	Cloudy	
Burlington, Vt.	.....	.....	29.61	752.1	74	23.3	68	N	1	0.4	.....	2k	0	.....	.....	0	0	Fa r	
Cairo, Ill.	.....	.....	29.80	756.9	73	22.8	85	Calm	0	0	.....	8ck	0	SW	.....	0.25	6.3	Fair	
Cape Hatteras, N. C.	.....	.....	29.80	756.9	81	27.2	82	SW	12	5.4	.....	8c	Haze	W	.....	0	0	Cloudy	
Cape Henry, Va.	.....	.....	29.83	757.7	84	28.9	64	Calm	0	0	.....	2c	Haze	.....	.....	0	0	Fair	
Cape Lookout, N. C.	.....	.....	29.88	758.9	80	26.7	86	SW	9	4.0	.....	2c	0	.....	.....	Inap.	Inap.	Clear	
Cape May, N. J.	.....	.....	29.82	757.4	73	22.8	90	W	5	2.2	.....	8cs	Haze	NW	.....	0	0	Fair	
Charleston, S. C.	.....	.....	29.94	760.5	82	27.8	78	W	6	2.7	.....	2c	2cs	.....	.....	0	0	Fair	
Cheyenne, Wyoming	23.98	609.1	29.92	760.0	64	17.8	23	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	29.75	755.6	75	23.9	76	W	4	1.8	.....	5k	0	W	.....	0	0	Fair	
Cincinnati, Ohio	.....	.....	29.77	756.1	76	24.4	72	SW	1	0.4	.....	.....	10ks	.....	SW	0.02	0.5	Cloudy	
Cleveland, Ohio	.....	.....	29.78	756.4	72.8	22.7	80	S	10	4.5	.....	8k	0	W	.....	0	0	Fair	
Colorado Springs, Col.	24.05	610.9	29.92	760.0	59	15.0	54	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Corsicana, Tex.	.....	.....	29.91	759.7	72	22.2	82	S	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Davenport, Iowa	.....	.....	29.74	755.4	73	22.8	90	SW	8	3.6	.....	7ck	2s	W	.....	0	0	Cloudy	
Denison, Tex.	.....	.....	29.91	759.7	77	25.0	81	S	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Denver, Col.	24.74	628.4	29.96	761.0	62	16.7	41	S	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	29.71	754.6	68	20.0	69	SW	6	2.7	.....	2ck	Haze	SW	.....	0	0	Fair	
Dodge City, Kan.	27.21	691.1	29.35	745.5	74	23.3	51	S	10	4.5	.....	5c,ck	0	.....	.....	Inap.	Inap.	Fair	
Dubuque, Iowa	.....	.....	29.72	754.9	74	23.3	81	W	2	0.9	.....	0	5s	.....	.....	0	0	Fair	
Duluth, Minn.	.....	.....	29.66	753.4	61	16.1	77	NE	4	1.8	.....	5ck	0	NW	.....	0	0	Fair	
Eastport, Me.	.....	.....	29.94	760.5	54	12.2	93	W	4	1.8	.....	.....	10s	.....	.....	0.09	2.3	Cloudy	
Erie, Pa.	.....	.....	29.74	755.4	75	23.9	72	S	12	5.4	.....	5c	Haze	.....	.....	0	0	Fair	
Escanaba, Mich.	.....	.....	29.65	753.1	67	19.4	74	NE	3	1.3	.....	5k	0	NE	.....	0.05	1.3	Fair	
Fort Gibson, Indian Ter.	.....	.....	29.80	756.9	80	26.7	74	S	8	3.6	.....	2ck	5cs	E	.....	0	0	Fair	
Ft. St. Michael, Alaska	.....	.....	29.97	761.2	46	7.8	77	SW	.....	.....	1	0	0	.....	.....	0	0	Clear	
Fort Sill, Indian T.	28.66	728.0	29.70	754.4	77	25.0	76	S	4	1.8	.....	.....	10s	.....	S	0	0	Cloudy	
Fort Sully, Dakota	27.91	708.9	29.44	747.8	72	22.2	70	NW	3	1.3	.....	1c	0	.....	.....	0.30	7.6	Clear	
Galveston, Tex.	.....	.....	29.99	761.7	82	27.8	74	S	8	3.6	.....	2c	2k	W	S	0	0	Fair	
Grand Haven, Mich.	.....	.....	29.71	754.6	68	20.0	94	SW	6	2.7	.....	.....	Fog	.....	.....	0	0	Foggy	
Indianapolis, Ind.	.....	.....	29.78	756.4	76	24.4	81	SW	3	1.3	.....	2k,hz.	0	.....	.....	0	0	Fair	
Indianola, Tex.	.....	.....	29.98	761.5	83	28.3	83	S	12	5.4	.....	10ck	0	.....	.....	0	0	Cloudy	
Jacksonville, Fla.	.....	.....	29.99	761.7	85	29.4	70	S	8	3.6	.....	5k	0	S	.....	0	0	Fair	
Keokuk, Iowa	.....	.....	29.74	755.4	72	22.2	90	W	5	2.2	.....	.....	10s	.....	W	0.02	0.5	Cloudy	
Key West, Fla.	.....	.....	30.05	763.3	82.2	27.9	70	Calm	0	0	.....	8ck	1ks	SE	.....	0	0	Cloudy	
Kittyhawk, N. C.	.....	.....	29.84	757.9	80	26.7	78	W	6	2.7	.....	5k	Haze	W	.....	0	0	Fair	
Knoxville, Tenn.	.....	.....	29.96	761.0	66	18.9	91	NW	2	0.9	.....	.....	Fog	.....	.....	0.37	9.4	Dense fog	
La Crosse, Wis.	.....	.....	29.70	754.4	75	23.9	68	S	4	1.8	.....	0	0	.....	.....	0.05	1.3	Clear	
Leavenworth, Kan.	.....	.....	29.70	754.4	75	23.9	85	S	8	3.6	.....	.....	10s	.....	NE	0.12	3.0	Cloudy	
Lexington, Ky.	28.80	731.5	29.84	757.9	73	22.8	85	S	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Long Branch, N. J.	.....	.....	29.79	756.7	81	27.2	58	W	10	4.5	.....	2c	0	W	SW	0	0	Clear	
Louisville, Ky.	.....	.....	29.83	757.7	79	26.1	74	SW	6	2.7	.....	.....	10ks	.....	.....	0	0	Cloudy	
Lynchburg, Va.	.....	.....	29.84	757.9	80	26.7	68	W	1	0.4	.....	5ck	0	SW	.....	0	0	Fair	
Malone, N. Y.	.....	.....	29.86	758.8	70	21.1	82	SW	8	3.6	.....	2c	0	NW	.....	0	0	Fair	
Manhattan, Kan.	28.61	726.7	29.68	753.9	76	24.4	81	S	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Marquette, Mich.	.....	.....	29.67	753.6	73	22.8	46	NW	8	3.6	.....	5cs	0	W	.....	0	0	Fair	
Memphis, Tenn.	.....	.....	29.91	759.7	82	27.8	74	SW	5	2.2	.....	2cs	0	.....	.....	Inap.	Inap.	Clear	
Milwaukee, Wis.	.....	.....	29.73	755.1	73	22.8	63	W	10	4.5	.....	2c	2ck	W	W	0	0	Fair	
Mobile, Ala.	.....	.....	30.00	762.0	82	27.8	67	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Montgomery, Ala.	.....	.....	29.98	761.5	82	27.8	70	SW	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Morgantown, W. Va.	.....	.....	29.84	757.9	69	20.6	90	Calm	0	0	.....	.....	10s	.....	W	Inap.	Inap.	Foggy	
Mt. Washington, N. H.	23.57	598.7	29.93	760.2	43	6.1	100	NW	40	17.9	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	29.86	758.9	77	25.0	82	Calm	0	0	.....	10k	0	SW	.....	0.03	0.8	Cloudy	
New Haven, Conn.	.....	.....	29.72	754.9	82	27.8	52	SW	10	4.5	.....	5c	Haze	NW	.....	0.06	1.5	Fair	
New London, Conn.	.....	.....	29.72	754.9	78	25.6	53	W	6	2.7	.....	5c	0	W	.....	0	0	Fair	
New Orleans, La.	.....	.....	30.01	762.2	81	27.2	76	W	6	2.7	.....	5c	0	W	.....	0	0	Fair	
Newport, R. I.	.....	.....	29.99	761.1	75	23.9	59	W	15	6.7	.....	2ck	0	W	.....	Inap.	Inap.	Fair	
New York, N. Y.	.....	.....	29.77	756.1	72	22.2	67	SW	10	4.5	.....	5ck	Haze	W	.....	0	0	Fair	
Norfolk, Va.	.....	.....	29.84	757.9	81	28.9	64	NE	4	1.8	.....	5c	0	.....	.....	0	0	Fair	
North Platte, Neb.	26.84	681.7	29.19	741.4	73	22.8	81	Calm	0	0	.....	0	Fog	.....	.....	0	0	Foggy	
Omaha, Neb.	28.66	728.0	29.65	753.1	73	22.8	85	SE	11	4.9	.....	2c	2k	.....	.....	0.16	4.1	Fair	
Oswego, N. Y.	.....	.....	29.97	761.6	75	23.9	70	SW	11	4.9	.....	.....	10s	.....	NW	0.02	0.5	Cloudy	
Pembina, Dakota	.....	.....	29.81	749.5	69	20.6	74	S	8	3.6	.....	5ck	0	NW	.....	0	0	Fair	
Philadelphia, Penn.	.....	.....	29.80	756.9	79	26.1	61	SW	1	0.4	.....	2ck	Sm'e	W	.....	0	0	Fair	
Pike's Peak, Colorado	17.98	456.7	30.19	766.8	39	3.9	81	NE	6	2.7	.....	0	1s	.....	.....	0	0	Clear	
Pittsburgh, Penn.	.....	.....	29.80	756.9	72	22.2	85	SW	6	2.7	.....	5c	0	.....	.....	0	0	Fair	
Port Huron, Mich.	.....	.....	29.63	752.6	69	20.6	84	S	12	5.4	.....	.....	10s	.....	W	Inap.	Inap.	Cloudy	
Portland, Me.	.....	.....	29.58	751.3	75	23.9	52	W	12	5.4	.....	1c	Haze	NW	.....	0	0	Fair	
Portland, Oregon	.....	.....	30.22	767.6	53	11.7	86	SW	1	0.4	.....	.....	10s	.....	SW	0.22	5.6	Cloudy	
Punta Rassa, Fla.	.....	.....	30.06	763.5	80.5	26.9	74	Calm	0	0	.....	.....	8ks	.....	NE	0	0	Cloudy	
Rochester, N. Y.	.....	.....	29.65	753.1	75	23.9	72	W	17	7.6	.....	5k	2s	W	W	0	0	Fair	
Salt Lake City, Utah	25.60	650.2	29.93	760.2	63	17.2	46	Calm	0	0	.....	2c	0	NW	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	29.77	756.1	78	25.6	65	W	10	4.5	.....	5c	Haze	.....	.....	0	0	Fair	
San Diego, Cal.	.....	.....	29.93	760.2	63	17.2	88	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
San Francisco, Cal.	.....	.....	30.09	762.0	56	13.3	80	SW	1	0.4	.....	2c	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23.24	590.3	29.78	756.4	54	12.2	73	NE	4	1.8	.....	5c	0	NE	.....	0.11	2.8	Fair	
Savannah, Ga.	.....	.....	29.95	760.7	90	32.2	60	W	4	1.8	.....	2cs	Sm'e	.....	.....	0	0	Fair	
Shreveport, La.	.....	.....	29.99	761.7	80	26.7	78	SW	4	1.8	.....	5c	0	.....	.....	0	0	Fair	
Smithville, N. C.	.....	.....	29.91	759.7	81	27.2	78	SW	12	5.4	.....	20k	0	W	.....	0	0	Fair	
Springfield, Mass.	.....	.....	29.66	753.4	81	27.2	54	W	8	3.6	.....	8ck,cs	0	S	.....	Inap.	Inap.	Fair	
St. Louis, Mo.	.....	.....	29.86	758.4	72	22.2	90	SW	4	1.8	.....	.....	10n	.....	.....	0.55	14.0	Light rain	
St. Marks, Fla.	.....	.....	30.00	762.0	80	26.7	82	SW	4	1.8	.....	2cs	5ks	.....	SW	0	0	Fair	
St. Paul, Minn.	.....	.....	29.64	752.8	70	21.1	82	E	1	0.4	.....	1cs	0	N	.....	0.28	7.1	Cloudy	
St. Paul's Island, Alaska	.....	.....	30.16	766.1	36	2.2	90	N	17	7.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Thatcher's Island, Mass.	.....	.....	29.62	752.3	73	22.8	50	W	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Toledo, Ohio	.....	.....	29.72	754.9	75	23.9	81	SW	3	1.3	.....	2c	Haze	SW	.....	0	0	Fair	
Tucson, Arizona	27.50	698.5	30.08	764.0	76	24.4	.....	S	.....	.....	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Tybee Island, Ga.	.....	.....	29.94	760.5	82	27.8	78	W	4	1.8	.....	2c	m'e	W	.....	0	0	Fair	
Vicksburg, Miss.	.....	.....	29.98	761.5	84	28.9	74	SW	4	1.8	.....	5c	0	W	.....	0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer
Virginia City, M. T.	24.23	615.4	29.71	754.6	52	11.1	62	SE	1	0.4	.....	8k	0	W	.....	0	0	Cloudy	
Washington, D. C.	.....	.....	29.84	757.9	74	23.3	72	Calm	0	0	.....	5ck	2s	W	.....	0	0	Cloudy	
Wilmington, N. C	.....	.....	29.89	759.2	79	26.1	82	SW	3	1 3	.....	5c	0	SW	.....	Inap.	Inap.	Fair	
Wood's Holl, Mass.	.....	.....	29.67	753.6	75	23.9	64	W	9	4.0	.....	2c	0	NW	.....	0	0	Clear	
Wytheville, Va.	27.63	701.8	29.68	753.9	70	21.1	84	W	4	1.8	.....	1ck	8ks	W	W	0	0	Cloudy	
Yankton, Dakota	28.45	722.6	29.66	753.4	69	20.6	90	SE	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Yuma, Arizona	.....	.....	29.81	757.2	77	25.0	.....	SW	.....	.....	.....	1k	0	SW	.....	0	0	Clear	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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Sub Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.06	763.5	82	27.8	83	NE	5	2.2	.....	0	5ks	.....	NE	1.00	25.4	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.98	761.5	80	26.7	90	E	.....	.....	.....	10k	5ks	.....	.....	0.51	13.0	Cloudy	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.20	767.1	80	26.7	78	SE	3	1.3	.....	8c	2s	.....	E	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.03	762.7	79	26.1	78	Calm	0	0	.....	10c	0	.....	.....	0	0	Fair	Charles Hasselbrink
St. Georges, Bermudas	.....	.....	30.10	764.5	78.5	25.8	76	SW	13.0	5.8	.....	8pc	5fk	SW	.....	0.01	1.0	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	30.03	762.7	71	21.7	75	SE	1.0	0.4	.....	5c	0	SE	.....	0	0	Fine, clear	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.06	763.5	76.5	24.7	88	SE	.....	.....	2	.....	10n	.....	SE	1.070	27.18	Raining	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.11	764.7	.....	.....	74 8	23.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.575	40.00	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.25	641.3	.....	.....	65.0	18.3	85	Calm	0	0	.....	7k	3s	.....	.....	0.14	3.6	Cloudy	Thomas Herran
York Factory, B. A.	.....	.....	29.78	756.4	38	3.3	96	W	4	1.8	.....	4ck	0	E	.....	0	0	.....	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.14	765.5	76	24.4	90	SSE	.....	.....	2	.....	.....	.....	.....	0	0	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	30.00	762.0	60	15.6	85	NE	1.2	0.8	.....	0	4n	.....	NE	0.7	17.8	Rainy	F. L. Clarke.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	
}	.....	.....	.....	.....	.....
}	.....	.....	.....	.....	.....
}	.....	.....	.....	.....	.....
Steamer Nova Scotian off Halifax, N. S. }	Stationary.	.....	Smooth	.....	Dense fog. Capt. Ritchie.
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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.; 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, 4,253.8 ft., or 1,301.1 m.; Santa Fé, 6,892.2 (?) 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, 0.54 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, 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 JUNE 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.
1:18 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			30.00	761.9	73.4	23.0	48	NNW			2		2			0	0	Clear	Charnot.
Algiers			29.98	761.5	73.4	23.0	48	W			2		1			0	0	Clear	Peter.
La Calle					75.6	24.2	67	E			2		1			0	0	Clear	Kunts.
Tunis			29.99	761.7	85.6	29.8	50	E			4		0			0	0	Clear	Jacques.
Sfax			29.97	761.2	81.7	27.6	57	NE			4		2			0	0	Clear	Chauvey.
Gafsa			30.00	762.1	72.5	22.5	23	N			2		1			0	0	Clear	Millot.
Tebessa			29.97	761.1	97.2	36.2		SW			3		0			0	0	Clear	Colin.
Geriville			29.98	761.6	79.5	26.4	36	S			3		2			0	0	Clear	Buard.
Laghouat			29.94	760.5	93.2	34.0		NE			3		0			0	0	Clear	Guyot.
Biskra			29.93	760.1	90.5	32.5	37	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			29.81	757.2	71.8	22.1	69	Calm			0		7			1.248	31.7	Raining	Prof. Ivan Stosir.
Cracow, I. R. Observatory			29.84	758.0	69.8	21.0	47	NE			1		3			0	0		Dr. Wiersbiski.
Sperles			29.80	757.0	68.7	20.4	50	Calm			0		5		S	0.437	11.10		Julius Mikolik.
Gratz	28.61	726.8	29.82	757.3	66.5	13.6	86	W			2		10			0.059	3.8		Andreas Rospini.
Hermannstadt	28.36	720.2	29.71	754.5	73.0	22.8	65	SE			1		4			0.156	3.96	Showery	Prof. Reissenberger.
Kremsmünster	28.47	723.1	29.79	756.6	58.3	14.6	83	E			2		10			0	0		Prof. C. Wagner.
Lemberg			29.76	755.8	67.3	19.6	80	NW			2		4			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.81	757.2	75.7	24.3	73	S			1		8ks			0.418	10.60		I.R.Hydrographic Office.
Szegedin			29.83	757.6	63.1	17.3	81	E			2		10			0.393	8.45		Karl Stancel.
Trieste			29.81	757.1	72.7	22.6	81	Calm			0		7			0.972	24.7		Prof. V. Farolfi.
Vienna			29.88	759.0	61.7	16.5	71	SW			2		10			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			29.87	758.7	72.0	22.2	39	E			4		6		ENE	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	67.0	19.4		NNW	15	6.7			0			0	0	Blue sky	William Boswell.
Ardrossan			30.12	765.0	70	21.1		NW			2		0					Blue sky	William McNeil.
Armagh, Observatory			30.14	765.5	73.9	23.3		NNE	5	2.2			0					Blue sky	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown).			30.11	764.8	79.0	26.1		NNE			1–2		2					*D. clouds	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	82.2	27.9		NE			1		9					Drizzling.	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			30.04	763.0	70.5	21.4		N			3		1					Blue sky	H. Todd.
Cardington			30.05	763.3	67.0	19.4		N			2		3					Blue sky	John McLaren.
Carlisle			30.07	763.8	72.3	22.4		E			2		0			0	0	Blue sky	T. Bell, for J. Carmell.
Chatham, School M. E.			29.97	761.2	71.0	21.7		NE			3		3					*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	24.64	727.4	30.08	764.0	71.4	21.9		NE			1		3					Blue sky	R. E. Power.
Donaghadee			30.12	765.0	65	18.3		N			4		0					Blue sky	J. Mac Gowan.
Dover			29.95	760.7	67	19.4		NE			4		2					¼ clouded	J. Costello.
Eccles (near Manchester.)			30.05	763.3	72.6	22.6		E	4.0	1.8								Hazy	Thomas Mackereth.
Falmouth, Observatory			30.02	762.5	74.0	23.3		E	10	4.5			1					*D. clouds	The Staff.
Fort Napier, (Natal)	27.61	702.0	29.88	758.9	58.0	14.4		NW			6		8					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			30.03	762.7	85	29.4		N			4		6					*D. clouds	
Galway, Queen's College			30.13	765.3	70	21.1		E			1		2					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean).			30.00	762.0	68.5	20.3		W			6		0					Blue sky	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory			30.10	764.5	75.0	23.9		NE			1		1					Fine	Lewis Stuart.
Great Yarmouth			30.03	762.7	62	16.7		N			4		3					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			29.99	761.7	73.2	22.9		NNE			3		5					*D. clouds	The Staff, for G. B. Airy.
Guernsey			29.93	750.2	66	18.9		ENE			3		0					Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y			30.10	764.5	65.6	18.7		NE			2		3					*D. clouds	L. J. Crossley.
Helston			29.96	761.0	74	23.3		E			4		0			0	0	Fine	M. P. Moyle.
Holyhead			30.09	764.3	61	16.1		N			4		0					Blue sky	John Tilston.
Kew, Observatory			29.99	761.7	69.6	20.9		N	15	6.7			5					*D. clouds	The Staff.
Kingstown			30.14	765.5	64	17.8		NW			3		1					Blue sky	George Mitchell.
Leicester Museum			30.09	764.3	60.8	16.0		NE			1		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.86	758.4	73.8	23.2		NE			1		0						Corp'l F. Fraser, A. M. C.
Nairn			30.17	766.3	76	24.4		Calm			0		0					Clear	W. D. Penny.
Nassau, (Bahamas)			30.13	765.3	78.4	25.8		SE			2		10					Raining	Surg. Maj. Henry.
Nottingham, Observatory			30.09	764.3	63.3	17.4		NNE			5		7k		NE	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.07	763.8	57.7	14.3		NNE			3–4		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.01	762.2	68	20.0		NNE			2		0					Blue sky	J. Lucas.
Plymouth			29.99	761.7	77.5	25.3		ENE			4		0					Blue sky	John Merrifield.
Roche's Point			30.10	764.5	71	21.7		SSE			3		2					Fine	W. Kennedy.
Saint Ann's Head			30.05	763.3	62	16.7		NW			1		1					Blue sky	John C. Walker.
Saint Helier, (Jersey)			29.90	759.4	74.6	23.7		ENE			5		0					Clear	A. P. Amy.
Sandwick Manse (Orkneys)			30.19	766.8	59.2	15.1		NW	19	8.5			0					Blue sky	Rev. C. Clouston, LL.D.
Scarborough			30.10	764.5	56.1	13.4		NNW			3		10					Overcast	F. Shaw.
Scutari Cemetery (Turkey)			29.87	758.7	81.6	27.6		S			1		0					Blue sky	Sergt. W. H. Lyne.
Sheffield			30.03	762.7	67.0	19.4		NE			2		9			0	0	Overcast	W. F. Cooper.
Silloth Rectory			30.11	764.8	73.3	22.9	50	SE			4		0			0	0	Blue sky	Rev. Francis Redford.
Stonyhurst, Observatory.			30.06	763.5	72.9	22.7		E			1								Rev. S. J. Perry.
Stornoway, Lews C. (Hebr.			30.21	767.3	65	18.3		NE			1		0					Blue sky	John Smith.
Stratfield Turgiss			30.01	762.0	71.4	21.9		E			2		0					Blue sky	Rev. Charles H. Griffith.
Thurso			30.18	766.6	58	14.4		WNW			3		10					Overcast	John Trotter.
Truro, Royal Institution			30.04	763.0	77	25.0		N			2		4					*D. clouds	W. Newcombe.
Valencia, Observatory			30.16	766.1	69.6	20.9		NNW	16	7.2			4					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					60	15.6		NE			4		0			0	0		Thomas Dawson.
Cape Good Hope, Obs'y			30.17	766.3	57.7	14.3	94	SSW	4	1.8		5	5						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.31	769.9	55.0	12.8	86	W			2		6kn			0	0	Hazy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			30.16	766.1	68.0	20.0		E			1					0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.20	767.1				E	19.1	8.5						0.01	0.3		C. Meldrum
Melbourne, Observatory			30.22	767.6	48.2	9.0	98	SE	3	1.3			10			0.02	0.5	Hazy	R. L. J. Ellery.
Monach Lt-house, Hebrides			30.21	767.3	62	16.7		N			3	3	3	N		0	0		J. Youngclause.
North Unst, (Shetland Is.)			30.20	767.1	54	12.2		NE			2							Foggy	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, 0 p. m., local time; Mauritius, unknown. The altitude of Dartmoor is 1,400 feet, or 426.7 meters; Fort Napier, 2,210 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.	Corr. Inches	Corr. Millimeters	Red. Inches	Red. Millimeters	Fahrenheit	Centigrade	Per cent.	Wind From—	Miles per hour	Meters per second	Force 0–10	Clouds Up'er	Clouds Low'r	Dir. Upper	Dir. Lower	Rain Inches	Rain Millimeters	Weather	Observer
Copenhagen			29.99	761.8	69.3	20.7	46	N			2		0						
Fanöe			29.99	761.7	76.6	24.8	40	NE			4		1						
Godthaab, (Greenland)			30.13	765.4				S			1		5						
Stykkisholm, (Iceland)			30.00	762.0	52.7	11.5	93	Calm			0		8						
Thorshavn, (Faröe)			30.28	769.1	57.9	14.4	74	Calm			0		0						
Vestervig			30.01	762.2	78.1	25.6	53	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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	29.60	751.9	69.8	21	43	NE	.....	.....	2	..c	..n	.....	NE	0	0	Cloudy	Normal School.
Amiens	.....	.....	29.92	759.9	78.1	25.6	69	ENE	.....	.....	0	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	29.80	757.0	69.8	21	92	WSW	.....	.....	1	.....	10	.....	SE	1.10	28.	Heavy rain	Normal School.
Bar-sur-Seine	.....	.....	29.73	755.1	73.2	22.9	40	E	.....	.....	3	.....	8	.....	E	0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.76	756.0	74.8	23.8	34	E	8.9	4.0	.....	.....	5	.....	E	0.563	14.3	Cloudy	Beaumette Observatory.
Beauvais	.....	.....	29.80	758.4	72.9	22.7	33	ENE	.....	.....	4	.....	5	.....	NE	0	0	Cloudy	Normal School.
Besançon	.....	.....	29.78	756.4	60.1	15.6	83	E	.....	.....	2	.....	10	.....	E	0.024	0.6	Covered	Normal School.
Bourg en Bresse	.....	.....	29.75	755.7	65.5	18.6	83	N	.....	.....	1	.....	10n	.....	NW	.....	.....	Covered	Normal School.
Bourges	.....	.....	29.72	754.9	69.3	20.7	84	E	.....	.....	2	.....	2	.....	SW	0.16	4.	Slightly cl'dy	Normal School.
Brest	.....	.....	29.88	758.8	60.0	20.9	59	NE	.....	.....	5	.....	1	.....	.....	0	0	Clear	Naval Observatory.
Carcassonne	.....	.....	29.71	754.5	64.6	18.1	82	NW	.....	.....	2	.....	10	.....	SE	0.244	6.2	Covered	Normal School.
Caen	.....	.....	30.60?	777.1?	69.8	21	83	E	.....	.....	8	..c	.....	W	.....	0	0	.....	Normal School.
Chartres	.....	.....	29.79	756.6	76.8	24.9	.....	ENE	.....	.....	6	.....	0	.....	SW	0	0	.....	Normal School.
Clermont	.....	.....	29.76	755.9	67.0	19.8	77	NE	.....	.....	2	.....	10	.....	W	0.286	6.0	Raining	Puy de Dome Obs'y.
Commercy	.....	.....	29.79	756.6	69.3	20.7	39	E	.....	.....	6	.....	2k	.....	E	0	0	Slightly cl'dy	Normal School.
Commune de Greasque*	.....	.....	29.82	757.4	60.6	15.9	71	SE	.....	.....	6	.....	10	.....	SE	0.94	24.	.....	M. Kina.
Grenoble	.....	.....	29.70	754.4	70.9	21.6	71	NW	.....	.....	4	.....	10n	.....	SW	0.240	6.10	Covered	Normal School.
La Roche-sur-Yon	.....	.....	29.73	755.2	74.5	23.6	60	N	.....	.....	2	.....	5	.....	S	0.772	19.6	Partly cl'dy	Normal School.
Le Mans	.....	.....	29.79	756.7	73.6	23.1	72	ENE	.....	.....	6	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier	.....	.....	29.75	755.7	63.5	17.5	90	NE	.....	.....	.....	.....	10	.....	.....	1.268	32.20	Raining	Normal School.
Mâcon	.....	.....	29.86	758.7	64.8	18.2	90	SE	.....	.....	2	.....	10	.....	.....	0.39	10.	Covered	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	29.74	755.3	69.4	20.8	44	NE	.....	.....	2	.....	2	.....	SE	0	0	Slightly cl'dy	Normal School.
Nismes	.....	.....	29.77	756.1	62.2	16.8	81	NW	.....	.....	4	.....	10	.....	SE	0.98	25.	Covered	Normal School.
Orleans	.....	.....	29.74	755.4	76.6	24.8	29	E	.....	.....	6	.....	5	.....	E	0	0	Cloudy	Normal School.
Paris, Observatory	.....	.....	29.81	757.1	73.2	22.9	33	NE	.....	.....	3	.....	5	.....	.....	0	0	Cloudy	National Observatory.
Parthenay	.....	.....	29.70	754.4	73.4	23	67	NE	.....	.....	4	.....	5	.....	SW	0.75	19.	Cloudy	Normal School.
Privas	.....	.....	29.75	755.7	68.7	20.4	.....	S	.....	.....	2	.....	5	.....	SSE	.....	.....	Cloudy	Normal School.
Rochefort, Observatory	.....	.....	29.80	757.0	65.7	18.7	85	WSW	.....	.....	3	.....	10	.....	NE	0	0	Covered	Naval Observatory.
Rouen	.....	.....	30.06	763.5	75.6	24.2	36	NNW	.....	.....	2	.....	2	.....	W	0	0	Slightly cl'dy	Normal School.
Saint Lo	.....	.....	29.52	749.9	74.3	23.5	48	E	.....	.....	2	.....	1	.....	NE	0	0	.....	Normal School.
Tarbes	28.71	729.2	30.17	766.3	64.4	18	.....	WSW	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School
Villefranche	.....	.....	29.76	756.0	66.2	19	87	SE	.....	.....	1	.....	8	.....	SE	1.284	32.6	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.92	760.1	81.3	27.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	Blank	Blank	.....	L'Abbé Marchési.
Marseilles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Marseilles Observatory.
Mont-Louis	.....	.....	29.99	761.7	48.7	9.3	82	SW	3.7	1.67	.....	.....	8	.....	SW	0.520	13.2	.....	—. Falguère.
Montsouris, Paris	.....	.....	29.80	757.0	72.0	22.2	40	NE	.....	.....	4	.....	8	.....	NE	0	0	.....	Montsouris Observatory.
Perpignan	.....	.....	29.77	756.2	62.2	16.8	74	N	9.3	4.17	.....	.....	8	.....	.....	0.307	7.8	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.81	757.1	71.8	22.1	36	NE	.....	.....	3	.....	4	.....	.....	0	0	Fair	E. Renou.
Toulouse	.....	.....	29.83	757.7	65.3	18.5	67	W	.....	.....	1	.....	0	.....	.....	0.05	1.4	.....	Toulouse Observatory.
Tours	.....	.....	29.76	755.8	74.1	23.4	42	ENE	.....	.....	4	.....	5	.....	ENE.	0.551	14.0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.82	757.5	75.2	24.0	33	E	.....	.....	6	.....	8	.....	.....	0	0	Partly 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 1,580.40 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,) 2,360 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.

Bamberg	.....	.....	29.82	757.4	72.5	22.5	41	E	.....	.....	5	.....	4	E	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.95	760.6	70.3	21.3	59	SE	.....	.....	1	.....	3	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	29.95	760.6	68.7	20.4	36	N	.....	.....	4	.....	6	.....	.....	0	0	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	29.74	755.4	74.1	23.4	39	NE	.....	.....	5	.....	3	.....	.....	0	0	.....	A. Sena.
Cassel	.....	.....	29.89	759.3	75.2	24.0	37	ENE	.....	.....	4	.....	3	NE	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	29.95	760.7	73 2	22.9	36	NE	.....	.....	6	.....	0	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.8.	758.2	73.6	23.1	40	NE	.....	.....	5	.....	3	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	29.73	755.2	61.9	16.6	71	N	.....	.....	1	.....	10	.....	.....	0.295	7.5	Raining	M. Wilhelm.
Hamburg	.....	.....	30.00	762.0	68.7	20.4	48	NE	.....	.....	4	.....	1k	.....	.....	0	0	Clear	Captain F. Hegemann.
Kiel	.....	.....	30.00	762.1	68.4	20.2	54	NE	.....	.....	2	.....	0	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.87	758.7	62.2	16.8	75	N	.....	.....	2	.....	4	.....	.....	0.209	7.6	.....	Prof. E. Luther.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	29.90	759.5	72.0	22.2	36	ENE	.....	.....	3	.....	7	E	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	29.90	759.5	62.2	16.8	76	ENE	.....	.....	2	.....	10n	.....	.....	0.035	0.9	Raining	Reinbrecht & Skalweit.
Münster	.....	.....	29.98	761.5	73.4	23.0	41	.....	.....	.....	1	.....	0	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.94	760.5	63.9	17.7	69	N	.....	.....	3	.....	6	.....	.....	0.039	1.0	.....	A. Lothes.
Posen	.....	.....	29.97	761.1	72.5	22.5	44	NW	.....	.....	4	.....	10	.....	.....	0.059	1.5	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.74	755.5	72.7	22.6	30	NE	.....	.....	4	.....	6	E	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.74	755.4	74.3	23.5	32	E	.....	.....	2	.....	5	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	29.89	759.2	68 2	20.1	61	W	.....	.....	3	.....	3	NE	.....	0.161	4.1	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.79	756.6	73.2	22.9	37	E	.....	.....	5	.....	2	.....	.....	0	0	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	30.01	762.2	62.8	17.1	70	N	.....	.....	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	.....	.....	29.93	760.3	86.9	30.5	.....	SW	.....	.....	.....	.....	.....	.....	.....	.....	.....	Very clear...	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

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

ITALIAN SERIES.

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

Udine	.....	.....	29.76	755.9	72.9	22.7	69	SW	2.5	1.1	.....	.....	7	.....	.....	2.028	51.5	.....	
Padua	.....	.....	29.72	755.0	72.7	22.6	69	ESE	7.4	3.3	.....	.....	7	SW	.....	0.709	18.0	.....	
Vicenza	.....	.....	29.73	755.1	73.8	23.2	64	S	3.1	1.4	.....	.....	9	.....	.....	1.138	28.9	Showery	
Verona	.....	.....	29.73	755.2	67.3	19.6	76	E	.....	.....	2	.....	10	.....	.....	0.276	7.0	.....	
Bergamo	28.41	721.5	29.67	753.7	68.0	20.0	64	N	.....	.....	1	.....	7	.....	.....	2.697	68.5	.....	
Domodossola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.465	11.8	.....	
Milan	.....	.....	29.74	755.3	72.7	22.6	73	E	.....	.....	1	.....	8	SW	.....	0.409	10.4	.....	
Pavia	.....	.....	29.72	754.9	74.8	23.8	56	S	.....	.....	4	.....	9	SW	.....	0.142	3.6	.....	
Moncalieri	.....	.....	29.71	754.6	73.9	23.3	70	SW	3.1	1.4	.....	.....	7	SE	.....	0.280	7.1	.....	
Mondovi	27.86	707.6	29.71	754.5	66.7	19.3	63	NW	.....	.....	2	.....	7	SW	.....	0.307	7.8	.....	
Porto Maurizio	.....	.....	29.83	757.6	72.3	22.4	84	SSW	.....	.....	2	.....	10	NE	.....	0.504	12.8	.....	
Genoa	.....	.....	29.79	756.6	72.3	22.4	67	S	7.4	3.3	.....	.....	6	S	.....	2.244	57.0	.....	
Piacenza	.....	.....	29.73	755.2	73.9	23.3	53	S	16.8	7.5	.....	.....	5	WSW	.....	0.173	4.4	.....	
Parma	.....	.....	29.74	755.3	77.0	25.0	61	SW	.....	.....	4	.....	4	W	.....	0.366	9.3	.....	
Bologna	.....	.....	29.77	756.2	76.1	24.5	43	N	.....	.....	1	.....	5	N	.....	0.827	21.0	.....	
Florence	.....	.....	29.82	757.3	76.1	24.5	62	SW	.....	.....	2	.....	8	SW	.....	0	0	.....	
Leghorn	.....	.....	29.83	757.6	73.4	23.0	69	SSW	11.9	5.3	.....	.....	9	.....	.....	0	0	.....	
Siena	28.66	727.9	29.82	757.5	73.4	23.0	55	SW	3.8	1.7	.....	.....	6	SW	.....	0.020	0.5	.....	
Urbino	28.32	719.3	29.82	757.4	74.8	23.8	53	SW	.....	.....	2	.....	4	.....	.....	0	0	.....	
Pesaro	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ancona	.....	.....	29.81	757.3	77.4	25.2	67	SE	.....	.....	4	.....	4	E	.....	0.291	7.4	.....	
Grosseto	.....	.....	29.88	758.9	78.1	25.6	55	ESE	.....	.....	4	.....	6	S	.....	0.016	0.4	.....	
Rome	.....	.....	29.91	759.7	77.7	25.4	56	SW	9.8	4.4	.....	.....	4	WSW	.....	0	0	.....	
Naples, O. U	.....	.....	29.94	760.4	80.2	26.8	56	SSW	.....	.....	2	.....	0	.....	.....	0	0	.....	
Lecce	.....	.....	29.94	760.5	82.4	28.0	41	SSE	18.6	8.3	.....	.....	0	.....	.....	0	0	.....	
Cosenza	.....	.....	29.89	759.2	89.1	31.7	61	SW	0.7	0.3	.....	.....	0	.....	.....	0	0	.....	
Riposto, (Sicily)	.....	.....	29.92	760.0	78.3	25.7	74	E	.....	.....	2	.....	0	.....	.....	0	0	.....	
Palermo	.....	.....	29.93	760.1	76.6	24.8	70	NE	5.6	2.5	.....	.....	1	.....	.....	0	0	.....	
Caltanissetta	27.93	709.5	29.79	756.6	83.8	28.8	21	ENE	.....	.....	1	.....	0	.....	.....	0	0	.....	
Sub-Series.																			
Naples, S. R	.....	.....	29.96	760.9	78.3	26.0	54	SW	1.3	0.6	.....	.....	8	SSW	.....	0.071	1.8	.....	Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known; Domodossola, 306 m., or 1,003.9 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet; Caltanissetta, 570.3 m., or 1,871.0 feet.

JAPANESE SERIES.

Tokio	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NETHERLANDS' SERIES.

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

Flushing	.....	.....	29.95	760.8	72.7	22.6	.....	ENE	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	
Groningen	.....	.....	29.95	760.6	71.2	21.8	.....	N	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	
Helder	.....	.....	29.99	761.7	66.9	19.4	.....	NE	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	
Utrecht	.....	.....	29.90	759.5	73.9	23.3	40	ENE	.....	.....	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.

Bergen	.....	.....	30.06	763.4	74.1	23.4	52	W	9.8	4.4	.....	.....	0	.....	.....	0	0	.....	
Brönö	.....	.....	30.15	765.8	55.4	13.0	87	NNE	18	8	.....	.....	0	.....	.....	0	0	.....	
Christiania	.....	.....	29.97	761.3	86.0	30.0	26	S	4.5	2.0	.....	.....	3	.....	.....	0.004	0.1	.....	
Tromsö	.....	.....	30.13	765.4	56.3	13.5	59	W	2	1	.....	.....	0	.....	.....	0.008	0.2	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

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,)	.....	.....	30.43	773.0	69.4	20.8	78	NE	9.0	4.03	.....	.....	5	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.96	761.0	63.1	17.3	61	WNW	15.5	6.92	.....	.....	8	WNW	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.17	766.3	68.2	20.1	79	ESE	3.6	1.61	.....	.....	10	.....	.....	0.134	3.4	.....	Capt D. A. da Cunha.
Lisbon	.....	.....	30.08	763.9	61.3	16.3	71	WNW	15.0	6.7	.....	.....	10	.....	.....	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	.....	.....	29.84	757.9	62.6	17.0	64	N	11	5	.....	.....	9	.....	.....	.....	.....	Light rain...	Astronomical Obs.
Wilna	.....	.....	29.76	756.0	68.9	20.5	46	NNW	4	2	.....	.....	9	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.80	757.0	75.0	23.9	32	N	7	3	.....	.....	1	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.87	758.8	70.7	21.5	44	NE	13	6	.....	.....	3	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	30.01	762.3	62.6	17.0	75	NE	18	8	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.74	755.5	64.2	17.9	64	NW	9	4	.....	.....	7	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.87	758.7	78.4	25.8	60	NW	13	6	.....	.....	7	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.80	759.1	86.4	30.2	54	S	13	6	.....	.....	1	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.82	757.4	64.6	18.1	76	S	4	2	.....	.....	10	.....	.....	.....	.....	Light rain...	Meteorological Obs.
Lugan	.....	.....	29.69	754.2	66.9	19.4	89	E	40	18	.....	.....	10	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	30.11	764.8	46.6	8.1	67	NNE	22	10	.....	.....	5	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.48	723.3	29.80	757.0	84.6	29.2	37	SE	4	2	.....	.....	7	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.96	761.0	83.3	28.5	33	SSW	4	2	.....	.....	9	.....	.....	.....	.....	Solar corona	Sebastianof.
Kasan	.....	.....	29.78	756.4	73.2	22.9	43	W	13	6	.....	.....	3	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.71	729.3	29.67	753.5	68.4	20.2	58	S	2	1	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.70	754.3	97.2	36.2	27	NE	4	2	.....	.....	6	.....	.....	.....	.....	.....	.....
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.18	715.8	29.75	755.7	90.0	32.2	45	.....	0	0	.....	.....	2	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.58	751.2	78.8	26.0	47	Calm	0	0	.....	.....	3	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniselsk	.....	.....	29.59	751.5	68.2	20.1	68	SW	2	1	.....	.....	1	.....	.....	.....	.....	.....	Marks.
Irkutsk	28.30	718.7	29.61	752.0	64.6	18.1	57	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Moasin.
Peking, (China)	.....	.....	29.96	760.9	81.7	27.6	42	SSW	11	5	.....	.....	2	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.00	762.0	54.1	12.3	91	E	9	4	.....	.....	0	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	57.6	14.2	95	E	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 400. 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	.....	.....	29.88	759.0	66.0	18.9	51	W	11.2	5.0	.....	0	7	.....	.....	0.043	1.1	Cloudy.....	Royal Observatory.
San Fernando	.....	.....	30.05	763.2	64.9	18.3	59	W	17.9	8.0	.....	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.

Haparanda	.....	.....	30.13	765.2	63.7	17.6	42	NW	.....	.....	4	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	30.13	765.4	64.4	18.0	44	NE	.....	.....	4	.....	0	.....	.....	0	0	.....	
Hernosand	.....	.....	30.11	764.9	59.9	15.5	55	NE	.....	.....	6	.....	0	.....	.....	0	0	.....	
Stockholm	.....	.....	29.93	760.2	81.8	27.4	31	ENE	.....	.....	2	.....	4	.....	.....	0	0	.....	
Wisby	.....	.....	29.98	761.5	60.8	16.0	79	NNE	.....	.....	4	.....	0	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.97	761.2	74.8	23.8	41	N	14.5	6.5	.....	.....	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.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Mill meters.	Weather.	Observer.
Geneva	28.35	720.2	29.76	755.8	62.2	16.8	80	NNW	.....	.....	2	.....	9	.....	.....	1.083	27.5	Covered	The Observatory.
Zurich	28.20	716.3	29.84	757.8	55.8	13.2	96	NW	.....	.....	1	.....	10	.....	.....	0	0	Covered	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, —6.8 mm; Thermometer, —4.9 cent.; Relative Humidity, + 26 per cent.

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

Constantinople	.....	.....	29.93	760.2	87.1	30.6	46	E	3	1.5	.....	.....	1	.....	N	0	0	.....	
Fao, (Persian Gulf)	.....	.....	29.70	754.4	98.1	36.7	.....	NW	.....	.....	4	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.97	761.3	83.3	28.5	.....	E	.....	.....	2	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	29.93	760.2	83.5	28.6	.....	S	.....	.....	3	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	29.84	758.0	78.8	26.0	.....	W	.....	.....	3	.....	10	.....	.....	.....	.....	Stormy	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.89	759 2	82.9	28.3	71	NW	.....	.....	1	.....	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.

Bathurst, N. B	.....	.....	29.51	749.5	59.9	15.5	93	NE	5	2.2	.....	.....	10n	.....	.....	.....	.....	Raining	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.83	757.7	71	21.7	.....	N	1	0.4	.....	0	0	.....	.....	0.18	4.6	Clear	W. R Bigg.
*Chatham, N. B	.....	.....	29.52	749.8	64	17.8	83	NW	15	6.7	.....	8k	2ks	NW	NW	0.56	14.2	Fair	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.54	750.3	63	17.2	84	S	8	3.6	.....	.....	10ks	.....	S	0.70	17.8	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.74	755.4	78.0	25.6	77	SE	.....	.....	1	0	0	.....	.....	0	0	Bright	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.55	750.6	67.5	14.2	98	W	.....	.....	1	.....	.....	.....	.....	0.94	23.9	Rainy	H. A. Johnson.
Esquimault, B. C	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Bevis.
Fredericton, N. B	.....	.....	29.63	752.6	66.0	18.9	68	NW	12	5.4	.....	2k	0	.....	.....	0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.67	753.6	58	14.4	70	W	13	5.8	.....	..k	..ks	W	W	0	0	Cloudy	James Stewart.
Goderich, Ontario	.....	.....	29.79	756.7	69.4	20.8	78	Calm	.....	.....	0	4ck	0	W	.....	0	0	Fine	H. J. Strang, M. A.
Granton, Ontario	28.73	729.7	29.78	756.4	72	22.2	.....	Calm	.....	.....	0	1c	0	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S.	.....	.....	29.57	751.1	68	20.0	70	W	11	4.9	.....	2c	0	SW	.....	0.02	0.5	Fair	F. Allison, M. A.
*Kingston, Ontario	.....	.....	29.83	757.7	72	22.2	72	NE	2	0.9	.....	2c	0	.....	.....	0.04	1.0	Clear	S. Woods, M. A.
Little Glace Bay, N. S	.....	.....	29.57	751.1	65.4	18.6	85	SW	6	2.7	.....	2k	0	SW	.....	0.96	24.4	Fair	C. H. Rigby.
*Montreal, Quebec	.....	.....	29.76	755.9	70	21.1	59	N	4	1.8	.....	2c	0	.....	.....	0.04	1.0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.79	756.7	67	19.4	65	N	7	3.1	.....	0	0	.....	.....	0	0	Clear	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.79	756.7	72	22.2	62	SE	10	4.5	.....	0	0	.....	.....	0	0	Clear	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	29.79	756.7	70	21.1	75	N	7	3.1	.....	10c	0	NW	.....	0.20	5.1	Fair	H. Morgan.
Port Hastings, N. S	.....	.....	29.56	750.8	59.8	15.4	.....	Calm	0	0	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
*Port Stanley, Ontario	.....	.....	29.79	756.7	71	21.7	87	E	1	0.4	.....	2ck	0	W	.....	0.02	0.5	Clear	M. Payne.
*Quebec, Quebec	.....	.....	29.70	754.4	65	18.3	68	NW	5	2.2	.....	0	0	.....	.....	0.33	8.4	Clear	Capt. Ashe, R. N.
St. John, N. B	.....	.....	29.64	752.8	64	17.8	78	W	11	4.9	.....	1k	0	.....	.....	0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.75	755.6	70	21.1	65	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	K. Stewart.
Stayner, Ontario	.....	.....	29.76	755.9	69	20.6	65	Calm	0	0	.....	0	0	.....	.....	Inap.	Inap.	Clear	R. J. Cole.
Stratford, Ontario	28.54	724.9	29.76	755.9	67.0	19.4	75	Calm	0	0	.....	2cs	0	NW	.....	0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.58	751.3	65	18.3	85	SW	8	3.6	.....	5k	5ks	W	SW	1.12	28.4	Fair	T. C. Hill.
*Toronto, Ontario	.....	.....	29.79	756.7	70	21.1	66	E	5	2.2	.....	8c	0	.....	.....	0	0	Fair	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.78	756.4	70.5	21.4	68	E	1	0.4	.....	3c	0	.....	.....	0	0	Fine	J. Montgomery
Sub-Series.																			
St. John's, Newfoundland	.....	.....	29.90	759.4	61	16.1	77	S	.....	.....	.....	5c	5ks	.....	.....	0	0	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 360.3 m.

UNITED STATES SERIES.

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

STATIONS.	BAROMETER. Corrected for instrumental errors. Inches.	BAROMETER. Corrected for instrumental errors. Millimeters.	BAROMETER. Reduced to sea-level. Inches	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10	CLOUDS. Amount. Up'er 0—10	CLOUDS. Amount. Low'r 0—10	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Albany, N. Y.	.....	.....	29.74	755.4	75	23.9	72	Calm	0	0	.....	0	Haze	.....	.....	0.60	15.2	Clear	
Alpena, Mich	.....	.....	29.70	754.4	71	21.7	57	Calm	0	0	.....	5c	0	N	.....	0	0	Fair	
Atlantic City, N. J	.....	.....	29.76	755.9	80	26.7	70	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Augusta, Ga.	.....	.....	29.96	761.0	80	26.7	70	NW	2	0.9	.....	2cs	0	NW	.....	0	0	Fair	
Baltimore, Md	.....	.....	29.81	757.2	81	27.2	62	NW	8	3.6	.....	2cs	2s	.....	.....	0	0	Fair	
Barnegat, N. J	.....	.....	29.75	755.6	81	27.2	66	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Benton, Montana	27.20	690.9	30.00	762.0	51	10.6	59	SW	1	0.4	.....	.....	10s	.....	SW	0	0	Cloudy	
Bismarck, Dakota	28.11	714.0	29.70	754.4	59	15.0	64	SW	3	1.3	.....	5ck	Haze	.....	.....	0.22	5.6	Fair	
Boston, Mass	.....	.....	29.72	754.9	77	25.0	65	W	4	1.8	.....	Haze	Haze	.....	.....	0.69	17.5	Hazy	
Breckenridge, Minn	.....	.....	29.63	752.6	62	16.7	71	NW	14	6.3	.....	2k	5s	N	NW	0.01	0.3	Cloudy	
Buffalo, N. Y.	.....	.....	29.76	755.9	68.5	20.3	84	W	3	1.3	.....	6c	1k	W	W	0	0	Fair	
Burlington, Vt.	.....	.....	29.77	756.1	66	18.9	68	N	4	1.8	.....	2k	0	N	.....	0.13	3.3	Fair	
Cairo, Ill.	.....	.....	29.91	759.7	75	23.9	81	S	4	1.8	.....	10ck	0	W	.....	0	0	Cloudy	
Cape Hatteras, N. C.	.....	.....	29.79	756.7	82	27.8	78	NW	8	3.6	.....	10c	Haze	.....	.....	0.02	0.5	Cloudy	
Cape Henry, Va.	.....	.....	29.78	756.4	83	28.3	67	W	8	3.6	.....	8c	0	W	.....	0	0	Fair	
Cape Lookout, N. C.	.....	.....	29.88	758.9	81	27.2	78	W	14	6.3	.....	Haze	Haze	.....	.....	Inap.	Inap.	Fair	
Cape May, N. J.	.....	.....	29.77	756.1	75	23.9	95	W	4	1.8	.....	5ck	Haze	NW	.....	0	0	Fair	
Charleston, S. C.	.....	.....	29.96	761.0	84	28.9	71	SW	6	2.7	.....	2ck	5ks	W	W	0	0	Fair	
Cheyenne, Wyoming	24.01	610.0	30.00	762.0	51	10.6	71	N	24	10.7	.....	5c	0	.....	.....	0	0	Fair	
Chicago, Ill.	.....	.....	29.72	754.9	75	23.9	76	SW	10	4.5	.....	8k	0	SW	.....	0	0	Fair	
Cincinnati, Ohio	.....	.....	29.82	757.4	75	23.9	76	W	4	1.8	.....	.....	10ks	.....	W	0	0	Cloudy	
Cleveland, Ohio	.....	.....	29.78	756.4	74.8	23.8	75	SW	9	4.0	.....	2c	0	SW	.....	0	0	Clear	
Colorado Springs, Col.	24.07	611.4	29.94	760.5	64	17.8	43	N	8	3.6	.....	1c	0	NE	.....	0	0	Clear	
Corsicana, Tex	.....	.....	29.86	758.4	73	22.8	90	SE	6	2.7	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Davenport, Iowa	.....	.....	29.69	754.1	74	23.3	90	S	3	1.3	.....	5cs	5s	W	W	0.07	1.8	Fair	
Denison, Tex	.....	.....	29.86	758.4	78	25.6	77	SE	12	5.4	.....	.....	10s	.....	S	0	0	Cloudy	
Denver, Col.	24.78	629.4	30.00	762.0	61	16.1	45	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich	.....	.....	29.75	755.6	73	22.8	71	W	3	1.3	.....	1cs	Sm'e	.....	.....	0	0	Clear	
Dodge City, Kan	27.22	691.4	29.37	746.0	72	22.2	71	SE	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	29.64	752.8	75	23.9	81	S	1	0.4	.....	5k	0	S	.....	0	0	Fair	
Duluth, Minn	.....	.....	29.60	751.8	63	17.2	83	NW	8	3.6	.....	.....	10s	.....	W	0.95	24.1	Cloudy	
Eastport, Me	.....	.....	29.65	753.1	69	20.6	62	W	7	3.1	.....	0	0	.....	.....	0.01	0.3	Clear	
Erie, Pa	.....	.....	29.76	755.9	75	23.9	76	SW	4	1.8	.....	3c	Haze	.....	.....	0	0	Fair	
Escanaba, Mich	.....	.....	29.68	753.9	63	17.2	89	S	8	3.6	.....	.....	Fog	.....	.....	0	0	Dense fog	
Fort Gibson, Indian Ter.	.....	.....	29.79	756.7	80	26.7	74	S	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	30.03	762.7	47	8.3	77	SW	.....	.....	6	0	0	.....	.....	0	0	Clear	
Fort Sill, Indian T.	28.62	726.9	29.67	753.6	73	22.8	90	SE	8	3.6	.....	.....	10s	.....	SE	0.49	12.4	Threatening	
Fort Sully, Dakota	28.22	716.8	29.82	757.4	61	16.1	77	NW	24	10.7	.....	2ck	5s	NW	NW	0	0	Fair	
Galveston, Tex	.....	.....	29.93	760.2	82	27.8	74	S	6	2.7	.....	8cs	2ks	SW	S	0	0	Cloudy	
Grand Haven, Mich	.....	.....	29.75	755.6	68	20.0	90	SW	6	2.7	.....	0	Fog	.....	SW	0	0	Fair	
Indianapolis, Ind	.....	.....	29.80	756.9	73	22.8	90	SW	3	1.3	.....	.....	10n	.....	SW	Inap.	Inap.	Light rain	
Indianola, Tex	.....	.....	29.89	759.2	82	27.8	78	S	17	7.6	.....	.....	10s	.....	S	0	0	Cloudy	
Jacksonville, Fla	.....	.....	30.02	762.5	87	30.6	69	S	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Keokuk, Iowa	.....	.....	29.69	754.1	78	25.6	77	SW	10	4.5	.....	2k	0	SW	.....	0.11	2.8	Clear	
Key West, Fla	.....	.....	30.07	763.8	82.7	28.2	70	S	4	1.8	.....	5k	Haze	S	S	Inap	Inap.	Fair	
Kittyhawk, N. C.	.....	.....	29.84	757.9	78	25.6	85	W	12	5.4	.....	8cs	0	W	.....	0.36	9.1	Fair	
Knoxville, Tenn	.....	.....	29.95	760.7	70	21.1	90	SW	2	0.9	.....	2cs	1ks	SW	SW	0.05	16.5	Fair	
La Crosse, Wis	.....	.....	29.61	752.1	76	24.4	80	S	6	2.7	.....	.....	Fog	.....	.....	0	0	Foggy	
Leavenworth, Kan	.....	.....	29.68	753.9	76	24.4	76	S	4	1.8	.....	5c	0	SW	.....	0	0	Fair	
Lexington, Ky.	28.82	732.0	29.88	758.9	70	21.1	95	S	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Long Branch, N. J.	.....	.....	29.76	755.9	84	28.9	57	NW	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Louisville, Ky.	.....	.....	29.84	758.9	75	23.9	81	S	2	0.9	.....	.....	8ks	.....	SW	0.32	8.1	Cloudy	
Lynchburg, Va.	.....	.....	29.82	757.4	78	25.6	72	W	2	0.9	.....	5ck	0	W	.....	0.91	23.1	Fair	
Malone, N. Y.	.....	.....	29.74	755.4	67	19.4	64	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Manhattan, Kan.	28.56	725.4	29.63	752.6	74	23.3	85	S	16	7.2	.....	2cs	0	S	.....	0	0	Clear	
Marquette, Mich.	.....	.....	29.71	754.6	52	11.1	86	W	16	7.2	.....	.....	10n	.....	NW	0.22	5.6	Heavy rain	
Memphis, Tenn	.....	.....	29.93	760.2	82	27.8	74	SW	3	1.3	.....	5cs	0	.....	.....	0	0	Fair	
Milwaukee, Wis.	.....	.....	29.72	754.9	72	22.2	80	SE	4	1.8	.....	8c	Haze	W	.....	0	0	Fair	
Mobile, Ala.	.....	.....	30.02	762.5	82	27.8	74	SW	2	0.9	.....	5c	0	.....	.....	0	0	Fair	
Montgomery, Ala.	.....	.....	30.01	762.2	78	25.6	86	S	2	0.9	.....	0	5s	.....	S	Inap.	Inap.	Fair	
Morgantown, W. Va.	.....	.....	29.82	757.4	73	22.8	90	S	5	2.2	.....	.....	10s	.....	W	0.57	14.5	Cloudy	
Mt. Washington, N. H.	23.64	600.4	30.00	762.0	42	5.6	91	NW	60	26.8	.....	0	2s	.....	NW	0.14	3.6	Fair	
Nashville, Tenn.	.....	.....	29.92	760.0	79	26.1	73	Calm	0	0	.....	8k	0	W	.....	0.37	9.4	Fair	
New Haven, Conn	.....	.....	29.74	755.4	82	27.8	52	N	5	2.2	.....	Haze	Haze	.....	.....	0	0	Fair	
New London, Conn	.....	.....	29.74	755.4	82	27.8	59	N	2	0.9	.....	0	Haze	.....	.....	0	0	Clear	
New Orleans, La	.....	.....	30.01	762.2	81	27.2	70	S	1	0.4	.....	5c	0	W	.....	0	0	Fair	
Newport, R. I.	.....	.....	29.74	755.4	78	25.6	65	Calm	0	0	.....	0	0	.....	.....	Inap.	Inap.	Clear	
New York, N. Y.	.....	.....	29.76	755.9	79	26.1	73	W	3	1.3	.....	0	Haze	.....	.....	0	0	Clear	
Norfolk, Va.	.....	.....	29.82	757.4	83	28.3	67	W	6	2.7	.....	8ck	0	SW	.....	0	0	Fair	
North Platte, Neb.	.....	.....	29.26	743.2	70	21.1	56	N	20	8.9	.....	2c	2k	NW	NW	0	0	Fair	
Omaha, Neb.	26.89	683.0	29.54	750.3	76	24.4	76	SW	11	4.9	.....	5c	0	SW	.....	0	0	Fair	
Oswego, N. Y.	28.55	725.2	29.78	756.4	63.2	17.3	78	NW	1	0.4	.....	0	Haze	.....	.....	Inap.	Inap.	Clear	
Pembina, Dakota	.....	.....	29.66	753.4	57	13.9	75	NW	8	3.6	.....	5c	2s	.....	.....	0	0	Cloudy	
Philadelphia, Penn	.....	.....	29.77	756.1	80	26.7	62	N	11	4.9	.....	0	Sm'e	.....	.....	0	0	Clear	
Pike's Peak, Colorado	17.98	456.7	30.19	766.8	38	3.3	54	Calm	0	0	.....	1cs	0	.....	.....	0.01	0.3	Clear	
Pittsburgh, Penn.	.....	.....	29.79	756.7	73	22.8	90	SW	2	0.9	.....	5c	Sm'e	NW	SW	0	0	Fair	
Port Huron, Mich.	.....	.....	29.74	755.4	64	17.8	84	Calm	0	0	.....	2c	0	.....	.....	Inap.	Inap.	Fair	
Portland, Me.	.....	.....	29.72	754.9	72	22.2	67	W	1	0.4	.....	0	Haze	.....	.....	0	0	Clear	
Portland, Oregon	.....	.....	30.06	764.3	60	15.6	88	S	5	2.2	.....	.....	8s	.....	SW	0.02	0.5	Cloudy	
Punta Rassa, Fla.	.....	.....	30.08	764.0	81.0	27.2	82	E	5	2.2	.....	.....	8ks	.....	SW	0.21	5.3	Threatening	
Rochester, N. Y.	.....	.....	29.76	755.9	71	21.7	71	W	4	1.8	.....	0	Haze	.....	.....	0.41	10.4	Clear	
Salt Lake City, Utah	25.66	652.5	29.99	761.7	58	14.4	53	Calm	0	0	.....	5c	0	NW	.....	0	0	Fair	
Sandy Hook, N. J.	.....	.....	29.74	755.4	74	23.3	81	NW	7	3.1	.....	0	Haze	.....	.....	0	0	Hazy	
San Diego, Cal.	.....	.....	29.88	758.9	63	17.2	88	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
San Francisco, Cal.	.....	.....	29.81	757.2	62	16.7	71	Calm	0	0	.....	Haze	Haze	.....	.....	0	0	Hazy	
Santa Fé, N. M.	23.19	589.0	29.73	755.1	60	15.6	59	E	6	2.7	.....	0	0	.....	.....	0.06	1.5	Clear	
Savannah, Ga.	.....	.....	29.99	761.7	87	30.6	61	W	5	2.2	.....	2c	Sm'e	E	.....	0.01	0.3	Fair	
Shreveport, La.	.....	.....	29.97	761.2	76	24.4	86	S	2	0.9	.....	10ck	0	SW	.....	0	0	Cloudy	
Smithville, N. C.	.....	.....	29.93	760.2	82	27.8	70	W	7	3.1	.....	1c	0	W	.....	0	0	Clear	
Springfield, Mass.	.....	.....	29.74	755.4	78	25.6	72	SE	2	0.9	.....	Haze	Haze	.....	.....	0.23	5.8	Hazy	
St. Louis, Mo.	.....	.....	29.83	757.7	74	23.3	85	SW	4	1.8	.....	.....	10s	.....	.....	1.09	27.7	Cloudy	
St. Marks, Fla	.....	.....	30.03	762.7	80	26.7	86	SW	5	2.2	.....	8cs	0	SW	.....	0	0	Fair	
St. Paul, Minn.	.....	.....	29.56	750.8	68.5	20.3	84	Calm	0	0	.....	.....	10ks	.....	W	0.21	5.3	Cloudy	
St. Paul's Island, Alaska	.....	.....	30.09	764.3	34	1.1	90	NE	10	4.5	.....	.....	Fog	.....	.....	0	0	Foggy	
Thatcher's Island, Mass.	.....	.....	29.72	754.9	71	21.7	80	SW	2	0.9	.....	0	0	.....	.....	0.93	23.6	Hazy	
Toledo, Ohio	.....	.....	29.75	755.6	75	23.9	90	SW	2	0.9	.....	.....	Fog	.....	SW	0	0	Foggy	
Tucson, Arizona	27.33	694.2	29.92	760.0	79	26.1	.....	NE	.....	.....	.....	2ck	2ks	E	E	0	0	Fair	
Tybee Island, Ga.	.....	.....	29.98	761.5	81	27.2	78	W	6	2.7	.....	5cs	0	NW	.....	0.07	1.8	Fair	
Vicksburg, Miss.	.....	.....	30.00	762.0	81.5	27.5	74	SW	3	1.3	.....	8c	2ck	W	.....	0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10	Clouds. Amount. Up'er 0–10	Clouds. Amount. Low'r 0–10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer
Virginia City, M. T.	24.24	641.1	29.72	754.9	52	11.1	66	W	4	1.8	..	2k	5ks	W	W	0	0	Cloudy	
Washington, D. C.	.....	.....	29.81	757.2	77	25.0	72	N	8	3.6	.....	2cs	2s	W	.....	0	0	Fair	
Wilmington, N. C	.....	.....	29.91	759.7	82	27.8	74	W	4	1.8	.....	2c	0	W	.....	0	0	Fair	
Wood's Holl, Mass.	.....	.....	29.74	755.4	70	21.1	84	SW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Wytheville, Va.	27.64	702.0	29.69	754.1	70	21.1	84	W	4	1.8	.....	0	8ks	.....	W	0.19	4.8	Cloudy	
Yankton, Dakota	28.37	720.6	29.57	751.1	73	22.8	81	NE	5	2.2	.....	5k	5s	W	W	0.03	0.8	Fair	
Yuma, Arizona	.....	.....	29.74	755.4	77	25.0	.....	SW	.....	.....	.....	1c	0	SW	.....	0	0	Clear	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.08	764.0	83	28.3	74	E	6	2.7	.....	5c	5ks	.....	E	0.19	4.8	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	30.02	762.5	83	28.3	83	E	.....	.....	.....	5c	5k	.....	.....	0.27	6.9	Fair	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.18	766.6	80	26.7	78	Calm	0	0	.....	5c	0	.....	.....	0	0	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.04	763.0	82	27.8	74	NE	3.6	1.6	.....	10ck	s, hz	S	S	0.04	1.0	Fair	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.12	765.0	78.5	25.8	76	SW	8.0	3.6	.....	8pc	5k	sW	.....	0	0	Fair	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica, W. I.	27.24	691.9	30.06	763.5	70	21.1	71	SE	1.5	0.7	.....	2c	0	SE	.....	0	0	Fine, clear	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.04	763.0	81	27.2	78	E	.....	.....	2	5k	5k	E	.....	0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.7	.....	.....	85.6	29.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1	.....	.....	63.0	17.2	85	SE	1	0.4	.....	2c	4s	.....	.....	0.26	6.6	Fair	Thomas Herran
York Factory, B. A.	.....	.....	29.69	754.1	44	6.7	92	E	16	7.2	.....	4c	0	E	.....	0	0	.....	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.11	764 8	76	24.4	90	NE	.....	.....	2	.....	.....	.....	.....	0	0	Overcast	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	30.01	762.2	61	16.1	86	NE	2.4	1.1	.....	0	0	.....	.....	0	0	Clear	F. L. Clarke.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	Weather.	Observer
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....
Steamer Nova Scotian	At Halifax, N. S.	.....	.....	.....	Fine & 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.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Manhattan, 1,125 ft., or 342.9 m.; Medellin, 4,912 ft., or 1,497.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,263.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?. 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.; 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, 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 JUNE 27, 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.
1:18 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			30.07	763.7	74.8	23.8	44	NW			2		0			0	0	Clear	Charnot.
Algiers			30.26	768.6	74.8	23.8	69	NNE			1		3			0	0	Fair	Peter.
La Calle					71.8	22.1	72	NE			4		1			0	0	Clear	Kunts.
Tunis			30.04	763.0	85.3	29 6	39	NE			3		0			0	0	Clear	Jacques.
Sfax			30.02	762.6	81.0	27.2	55	NE			4		4			0	0	Fair	Chauvey.
Salda			30.08	763.9	77.0	25.0	28	NNE			2		1			0	0	Clear	Millot.
Tebessa			30.01	762.2	97.7	36.5		SW			2		0			0	0	Clear	Colin.
Geriville			30.04	763.1	84.9	29.4	23	S			3		1			0	0	Clear	Buard.
Laghouat			29.61?	752.0?	98.6	37.0		SW			3		1			0	0	Clear	Guyot.
Biskra			29.90	760.9	99.0	37.2		NE			4		0			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.

Agram			29.87	758.6	66.6	19.2	68	Calm			0		8			0.012	0.3		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.82	757.4	61.9	16.6	75	W			1		10			0.177	4.5		Dr. Wierzbiski.
Eperies			29.76	755.8	64.4	18.0	63	N			1		10			0.234	5.95		Julius Mikolik.
Gratz	28.67	728.3	29.85	758.2	65.1	18.4	68	W			4		6			0.433	11.0		Andreas Rospini.
Hermannstadt	28.37	720.6	29.75	755.6	64.8	18.2	73	NW			3		10			0.370	9.40		Prof. Reissenberger.
Kremsmünster	28.65	727.8	29.99	761.8	53.2	11.8	81	W			3		10			0.315	8.0		Prof. C. Wagner.
Lemberg			29.70	754.4	65.3	18.5	85	NE			1		8			0	0		Dr. T. Stanecki.
Nylregyhaza																			Habsuda Daniel.
Pola			29.91	759.6	73.6	23.1	59	W			3		2ks			0.016	0.41		I.R. Hydrographic Office.
Szegedin			29.75	755.6	72.3	22.4	63	W			2		6			0.335	8.50		Karl Stancel.
Trieste			29.90	759.5	74.5	23.6	73	WSW			1		5			0.035	0.9	Stormy	Prof. V. Farolfi.
Vienna			29.85	758.1	64.6	18.1	60	WNW			3		9			0.583	14.8		I. R. Central Met. Obs'y.

Note.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 843.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 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.

Brussels			30.07	763.7	73.4	23.0	42	NNE			1		2		E	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	67.5	19.7	.....	SE	9	4.0	.... ..	.....	0	.....	.....	0	0	Blue sky.....	William Boswell.
Ardrossan	.....	.....	30.19	766.8	65	18.3	.....	SSW	.....	....	2	.....	0	.....	.....	.....	.....	Blue sky.....	William McNeil.
Armagh, Observatory	.....	.....	30.25	768.3	69.3	20.7	.....	NNE	6	2.7	.....	.....	0	.....	.....	.....	.....	Blue sky.....	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	30.23	767.8	75.4	24.1	.....	NNW	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	J. Dreyer.
Bradford	.....	.....	30.16	766.1	68.5	20.3	.....	Calm	.....	.....	0	.....	0	.....	.....	0	0	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.01	762.2	80.0	26.7	.....	E	.....	.....	3	.....	5	.....	.....	.....	.....	*D. clouds.....	Sergt. J. F. Halanen, A. C.
Cambridge, Observatory	.....	.....	30.18	766.6	73.5	23.1	.....	N	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	H. Todd. [C.
Cardington	.....	.....	30.19	766.8	74.0	23.3	.....	N	.....	.....	1	.....	1	.....	.....	.....	.....	Blue sky.....	John McLaren.
Carlisle	.....	.....	30.16	766.1	75	23.9	.....	Calm	.....	.....	0	.....	0	.....	.....	0	0	Blue sky.....	T. Bell, for J. Cartmell.
Chatham, School M. E	.....	.....	30.16	766.1	72.0	22.2	.....	NW	.....	.....	1	.....	.....	.....	.....	.....	.....	Blue sky.....	Capt. J. Fellowes, R.E.
Dartmoor	28.80	731.5	30.25	768.3	71.4	21.9	.....	ENE	.....	.....	0	.....	1	.....	.....	.....	.....	Blue sky ...	R. E. Power.
Donaghadee	.....	.....	30.22	767.6	62	16.7	.....	N	.....	.....	4	.....	0	.....	.....	.....	.....	Blue sky.....	J. Mac Gowan.
Dover	.....	.....	30.16	766.1	62	16.7	.....	NE	.....	.....	4	.....	2	.....	.....	.....	.....	¼ cl uded...	J. Costello.
Eccles, (near Manchester.)	.....	.....	30.15	765.8	75.5	24.2	.....	SW	5.2	2.3	.....	.....	.....	.....	.....	.....	.....	Blue sky.....	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.20	767.1	67.6	19.8	.....	SE	8	3.6	.....	.....	1	.....	.....	.....	.....	*D. clouds....	The Staff.
Fort Napier, (Natal)	27.50	698.5	29.74	755.4	67.9	19.9	.....	S	.....	.....	3	.....	3	.....	.....	.....	.....	*D. clouds....	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	30.04	763.0	83	28.3	.....	N	.....	.....	2	.....	6	.....	.....	.....	.....	*D. clouds....	
Galway, Queen's College	.....	.....	30.22	767.6	72	22.2	.....	NE	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.05	763.3	68.0	20.0	.....	W	.....	.....	3	.....	10	.....	.....	.....	.....	Raining.....	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	30.14	765.5	74.2	23.4	.....	WSW	.....	.....	1	.....	.....	.....	.....	.....	.....	Fine.....	Lewis Stuart.
Great Yarmouth	.....	.....	30.18	766.6	60	15.6	.....	NNW	.....	.....	3	.....	6	.....	.....	.....	.....	Hazy.....	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	30.17	766.3	77.6	25.3	.....	N	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	The Staff, for G. B. Airy.
Guernsey	.....	.....	30.14	765.5	68	17.2	.....	NNE	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	30.17	766.3	71.3	21.8	.....	ESE	.....	.....	1	.....	0	.....	.....	.....	.....	Hazy.....	L. J. Crossley.
Helston	.....	.....	29.14	765.5	75	23.9	.....	E	.....	.....	2	.....	0	.....	.....	0	0	Very fine ...	M. P. Moyle.
Holyhead	.....	.....	30.21	767.3	59	15.0	.....	NNW	.....	.....	3	.....	0	.....	.....	.....	.....	Blue sky.....	John Tilston.
Kew, Observatory	.....	.....	30.17	766.3	72.0	22.2	.....	NNE	9	4.0	.....	.....	1	.....	.....	.....	.....	Blue sky.....	The Staff.
Kingstown	.....	.....	30.25	768.3	63	17.2	.....	E	.....	.....	3	.....	0	.....	.....	.....	.....	Blue sky.....	George Mitchell.
Leicester Museum	.....	.....	30.20	767.1	70.3	21.3	.....	Calm	.....	.....	0	.....	0	.....	.....	.....	.....	Hazy.....	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)	.....	.....	29.89	759.2	74.8	23.8	.....	NE	.....	.....	1	.....	0	.....	.....	.....	.....	.....	Corp'l F. Fraser, A. M. C.
Nairn	.....	.....	30.12	765.0	79	26.1	.....	Calm	.....	.....	0	.....	0	.....	.....	.....	.....	Clear.....	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.12	765.0	84.3	29.1	.....	E	.....	.....	6	.....	7	.....	.....	.....	.....	*D. clouds....	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	30.18	766.6	78.3	25.7	.....	S	.....	.....	2	.....	0	.....	.....	0	0	Blue sky.....	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.17	766.3	68.8	20.4	.....	E	.....	.....	0–1	.....	0	.....	.....	.....	.....	Hazy.....	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	30.18	766.6	71	21.7	.....	N	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	J. Lucas.
Plymouth	.....	.....	30.17	766.3	71.7	22.1	.....	S	.....	.....	2	.....	3	.....	.....	.....	.....	*D. clouds....	John Merrifield.
Roche's Point	.....	.....	30.21	767.3	71	21.7	.....	SSE	.....	.....	2	.....	2	.....	.....	.....	.....	Fine.....	W. Kennedy.
Saint Ann's Head	.....	.....	30.22	767.6	63	17.2	.....	NW	.....	.....	1	.....	0	.....	.....	.....	.....	Hazy.....	John C. Walker.
Saint Helier, (Jersey)	.....	.....	30.13	765.3	77.0	25.0	.....	E	.....	.....	4	.....	0	.....	.....	.....	.....	Clear.....	A. P. Amy.
Sandwick Manse (Orkneys)	.....	.....	30.16	766.1	55.2	12.9	.....	NNW	17	7.6	.....	.....	10	.....	.....	.....	.....	Misty.....	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	30.20	767.1	56.9	13.8	.....	NNE	.....	.....	2	.....	7	.....	.....	.....	.....	*D. clouds....	F. Shaw.
Scutari Cemetery, Turkey	.....	.....	29.80	756.9	80.4	30 2	.....	SW	.....	.....	1	.....	1	.....	.....	.....	.....	Blue sky.....	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.18	766.6	68.0	20.0	.....	E	.....	.....	1	.....	6	.....	.....	0	0	Hazy.....	W. F. Cooper.
Silloth Rectory	.....	.....	30.18	766.6	79.0	26.1	44	Calm	.....	.....	0	.....	0	.....	.....	0.	0	Blue sky.....	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	30.17	766.3	72.9	22.7	.....	S	.....	.....	1	.....	.....	.....	.....	.....	.....	Hazy.....	Rev. S. J. Perry.
Stornoway, Lews C., Hebr.	.....	.....	30.19	766.8	60	15.6	.....	NW	.....	.....	1	.....	8	.....	.....	.....	.....	*D. clouds....	John Smith.
Stratfield Turgiss	.....	.....	30.28	769.1	74.2	23.4	.....	NE	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	Rev. Charles H. Griffith.
Thurso	.....	.....	30.16	766.1	56	13.3	.....	NW	.....	.....	2	.....	7	.....	.....	.....	.....	*D. clouds....	John Trotter.
Truro, Royal Institution	.....	.....	30.19	766.8	80	26.7	.....	E	.....	.....	4	.....	3	.....	.....	.....	.....	*D. clouds....	W. Newcombe.
Valencia, Observatory	.....	.....	30.27	768.8	61.7	16.5	.....	NNW	22	9.8	.....	.....	3	.....	.....	.....	.....	*D. clouds....	The Staff.
Sub-Series.																			
Calf of Man, Isle of Man	.....	.....	.....	.....	60	15.6	.....	NE	.....	.....	4	.....	0	.....	.....	0	0	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.00	762.0	65.8	18.2	89	NW	15	6.7	.....	4	4	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	29.84	757.9	57.0	13.9	93	NW	.....	.....	1	.....	10kn	.....	.....	0	0	Overcast.....	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	30.18	766.6	65.9	18.8	.....	E	.....	.....	2	.....	.....	.....	.....	0	0	Fine.....	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.24	768.1	.....	.....	.....	ESE	16.6	7.4	.....	.....	.....	.....	.....	0.15	3.8	.....	C. Meldrum
Melbourne, Observatory	.....	.....	29.96	761.0	46.2	7.9	79	W	7	3.1	.....	.....	10	.....	.....	0.09	2.3	Dull.....	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	30.20	767.1	63	17.2	.....	NW	.....	.....	3	5	0	NW	.....	0	0	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	30.05	763.3	54	12.2	.....	W	.....	.....	6	.....	.....	.....	.....	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, 2,260 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	.....	.....	29.93	760.3	75.4	24.1	50	NNE	.....	.....	2	.....	0	.....	.....	.....	.....	.....	.....
Fanöe	.....	.....	30.02	762.5	74.7	23.7	72	W	.....	.....	4	.....	1	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	29.82	757.4	.....	.....	.....	S	.....	.....	1	.....	8	.....	.....	.....	.....	.....	.....
Stykkisholm, Iceland	.....	.....	30.06	763.5	51.6	10.9	94	Calm	.....	.....	0	.....	10	.....	.....	.....	.....	.....	.....
Thorshavn, (Farõe)	.....	.....	30.07	763.7	56.5	13.6	78	SW	.....	.....	5	.....	5	.....	.....	.....	.....	.....	.....
Vestervig	.....	.....	30.00	762.1	70.5	21.4	70	NW	.....	.....	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	.....	.....	30.11	764.8	69.8	21	37	NE	.....	.....	1	.....	5n,k	.....	NE	0	0	Cloudy.....	Normal School.
Amiens	.....	.....	30.13	765.4	80.6	27	63	ENE	.....	.....	3	.....	0	.....	.....	0	0	Clear.....	Normal School.
Avignon	.....	.....	30.01	762.3	75.0	23.9	58	N	.....	.....	2	.....	2	.....	NNW	1.071	27.2	Slightly cl'dy	Normal School.
Bar-sur-Seine	.....	.....	30.01	762.9	75.9	24.4	36	N	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.05	763.2	74.5	23.6	36	E	3.8	1.7	.....	.....	5	.....	E	0	0	Cloudy.....	Beaumette Observatory.
Beauvais	.....	.....	30.10	764.6	75.2	24	33	ENE	.....	.....	3	.....	5	.....	ENE	0	0	Cloudy.....	Normal School.
Besançon	.....	.....	30.04	762.9	75.6	24.2	52	SSW	.....	.....	2	.....	2	.....	SW	0.055	1.4	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	30.04	762.9	73.9	23.3	61	N	.....	.....	1	.....	..k	.....	SW	.....	.....	Clear.....	Normal School.
Bourges	.....	.....	30.04	763.0	73.0	22.8	52	NNE	.....	.....	2	.....	2	.....	SW	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	30.07	763.8	71.8	22.1	55	ENE	.....	.....	4	.....	1	.....	.....	0	0	Clear.....	Naval Observatory.
Carcassonne	.....	.....	30.05	763.3	67.8	19.9	64	W	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Caen	.....	.....	30.632	777.97	70.7	21.5	92	N	.....	.....	6	..c	.....	W	.....	0	0	.....	Normal School.
Chartres	.....	.....	29.67	753.5	78.1	25.6	.....	NE	.....	.....	2	.....	7	.....	NW	0	0	.....	Normal School.
Clermont	.....	.....	30.03	762.7	64.6	18.1	73	N	.....	.....	2	.....	8	.....	N	0.677	17.2	Very cloudy	Puy de Dome Obs'y.
Commercy	.....	.....	30.05	763.2	72.9	22.7	41	N	.....	.....	4	.....	2k	.....	N	0	0	Slightly cl'dy	Normal School.
Commune de Greasque*	.....	.....	30.01	762.9	73.2	22.9	54	NW	.....	.....	4	.....	5	.....	NW	0.18	2.	.....	M. Kina.
Grenoble	.....	.....	30.01	762.3	69.1	20.6	70	NNW	.....	.....	2	.....	2ck	.....	NW	0.718	18.10	Slightly cl'dy	Normal School.
La Roche-sur-Yon	.....	.....	30.05	763.2	74.5	23.6	46	N	.....	.....	4	.....	5	.....	SE	0	0	Cloudy.....	Normal School.
Le Mans	.....	.....	30.09	764.2	75.4	24.1	71	NE	.....	.....	3	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier	.....	.....	30.00	762.1	71.4	21.9	58	NE	.....	.....	.....	.....	5	.....	W	0.024	0.60	Raining.....	Normal School.
Mâcon	.....	.....	30.01	762.2	68.7	20.4	78	NE	.....	.....	4	.....	0	.....	.....	0	0	Clear.....	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	30.06	763.5	72.0	22.2	41	N	.....	.....	2	.....	5	.....	S	0	0	Cloudy.....	Normal School.
Nismes	.....	.....	29.97	761.3	73.4	23	58	N	.....	.....	4	.....	5	.....	W	0	0	Cloudy.....	Normal School.
Orleans	.....	.....	30.03	762.7	76.6	24.8	31	NE	.....	.....	1	.....	5	.....	NE	0	0	Cloudy.....	Normal School.
Paris, Observatory	.....	.....	30.08	764.0	73.9	23.3	33	NE	.....	.....	2	.....	5k	.....	.....	0	0	Cloudy.....	National Observatory.
Parthenay	.....	.....	30.03	762.7	88.2	31.2	81	NE	.....	.....	2	.....	1	.....	NE	0	0	Slightly cl'dy	Normal School.
Privas	.....	.....	30.01	762.3	71.8	22.1	.....	N	.....	.....	1	.....	2	.....	N	.....	.....	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.09	764.2	70.2	26.2	64	NE	.....	.....	1	.....	5	.....	NE	0	0	½ covered...	Naval Observatory.
Rouen	.....	.....	30.10	764.6	79.0	26.1	37	NNW	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
Saint Lo	.....	.....	29.92	752.4	76.1	24.5	53	NE	.....	.....	2	.....	1	.....	NE	0	0	.....	Normal School.
Tarbes	28.96	735.6	30.01	762.3	68.0	20	.....	WNW	.....	.....	2	.....	5	.....	E	0	0	Cloudy.....	Normal School.
Villefranche	.....	.....	30.03	762.7	71.8	22.1	67	NW	.....	.....	1	.....	5	.....	W	0.638	16.2	Cloudy.....	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.90	759.5	82.4	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	.....	L'Abbé Marchési.
Marseilles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Marseilles Observatory.
Mont-Louis	.....	.....	30.26	768.6	56.1	13.4	89	SSE	13.0	5.83	.....	.....	8	.....	NW	0.283	7.2	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.08	763.9	69.1	20.6	54	ENE	.....	.....	2	.....	7	.....	E N E	0	0	.....	Montsouris Observ'tory.
Perpignan	.....	.....	30.01	762.2	74.5	23.6	52	N	9.3	4 17	.....	.....	2	.....	W	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	764.0	76.1	24.5	37	N	.....	.....	1	.....	2	.....	.....	0	0	Clear.....	E. Renou.
Toulouse	.....	.....	30.11	764.9	70.0	21.1	64	NW	.....	.....	3	.....	3	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.07	763.6	75.7	24.3	37	ENE	.....	.....	2	.....	5	.....	NNE	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.10	764.4	75.9	24.4	36	NE	.....	.....	3	.....	7	.....	.....	0	0	Partly 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.

Bamberg	.....	.....	29.88	758.9	70.5	21.4	41	NE	.....	.....	4	.....	6	N	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.97	761.2	69.8	21.0	44	NE	.....	.....	2	.....	9	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	29.96	761.0	68.7	20.4	40	N	.....	.....	6	.....	8	.....	.....	0	0	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	29.99	761.7	74.1	23.4	42	N	.....	.....	5	.....	3	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.02	762.6	78.8	26.0	41	NNW	.....	.....	4	.....	6	N	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	30.02	762.5	72.7	22.6	48	NNW	.....	.....	4	.....	0	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.04	763.0	76.3	24.6	33	NE	.....	.....	4	.....	3	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	30.05	763.2	64.8	18.2	68	NE	.....	.....	4	.....	6	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.00	762.1	76.5	24.7	48	NE	.....	.....	4	.....	2k	.....	.....	0	0	Fine.....	Captain F. Hegemann.
Kiel	.....	.....	30.04	762.9	67.5	19.7	73	NE	.....	.....	3	.....	10	.....	.....	0	0	.....	Prof. G. Karston.
Königsberg, (Prussia.)	.....	.....	29.83	757.6	72.0	22.2	57	N	.....	.....	2	.....	2	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	29.99	761.7	71.1	21.7	42	N	.....	.....	3	.....	9	NE	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	29.87	758.7	64.9	17.8	66	NW	.....	.....	3	.....	4s	.....	NNE	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.07	763.8	75.7	24.3	43	.....	.....	.....	1	.....	5	.....	.....	0	0	Thunder, lightn'g	Prof. E. Heis.
Neufahrwasser	.....	.....	29.93	760.1	66.2	19.0	77	N ?	.....	.....	5	.....	0	.....	.....	0	0	Smoke-haze.	A. Lothes.
Posen	.....	.....	29.98	761.5	69.3	20.7	55	NW	.....	.....	5	.....	10	.....	.....	0.051	1.3	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.02	762.5	73.4	23.0	37	NE	.....	.....	2	.....	7	NE	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.98	761.6	72.5	22.5	37	N	.....	.....	2	.....	0	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	29.86	758.5	77.0	25.0	32	NE	.....	.....	3	.....	6	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.00	762.1	75.7	24.3	36	N	.....	.....	6	.....	6	.....	.....	0	0	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	30.04	763.0	69.1	20.6	67	NNW	.....	.....	2	.....	0	.....	.....	0	0	.....	E. F. Schütz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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	90.9	32.7		SW										Very clear...	

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

ITALIAN SERIES.

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

Udine			29.85	758.2	61.5	16.4	78	NE	4.9	2.2			10			0.146	3.7		
Padua			29.85	758.2	72.3	22.4	55	SW	11.2	5.0			3			0.024	0.6		
Vicenza			29.86	758.5	74.5	23.6	52	SW	6.3	2.8			1			0.197	5.0		
Verona			29.85	758.2	76.3	24.6	55	E			2		0			0	0		
Bergamo	28.55	725.1	29.82	757.3	73.4	23.0	61	SSW			1		4			0.315	8.0		
Domodossola	28.83	732.3	29.82	757.5	72.5	22.5	49	N			1		0			0	0		
Milan			29.89	759.2	75.0	23.9	66	SW			2		4	NW		0	0		
Pavia			29.89	759.1	74.3	23.5	52	SW			6		0			0	0		
Moncalieri			29.91	759.6	67.8	19.9	56	WSW	1.8	0.8			1			0	0		
Mondovi	28.04	712.1	29.88	759.0	70.2	21.2	65	NW			4		2			0	0		
Porto Maurizio			29.98	761.6	71.4	21.9	73	ESE			2		1			0	0		
Genoa			29.95	760.7	72.7	22.6	58	SE	6.3	2.8			0			0	0		
Piacenza			29.90	759.5	72.1	22.3	57	NW	11.2	5.0			1			0	0		
Parma			29.90	759.5	73.6	23.1	52	NW			6		3			0	0		
Bologna			29.87	758.8	75.2	24.0	41	W			1		4	S		0	0		
Florence			29.98	761.6	71.6	22.0	63	WSW			6		10	SW		0	0		
Leghorn			29.97	761.2	72.0	22.2	64	SW	15.4	6.9			4			0	0		
Siena	28.78	731.0	29.95	760.6	71.4	21.9	53	WSW	7.4	3.3			7	W		0	0		
Urbino	28.42	721.9	29.92	760.0	72.1	22.3	48	SW			4		2			0	0		
Pesaro																			
Ancona			29.92	760.0	78.4	25.8	39	SW			6		5			0	0		
Grosseto			30.02	762.4	76.3	24.6	47	NW			4		5	NW		0	0		
Rome			30.00	762.1	75.9	24.4	57	SSW	6.3	2.8			1			0	0		
Naples, O. U			30.00	762.1	78.8	26.0	37	WNW			2		0			0	0		
Lecce			29.91	759.7	84.9	29.4	31	NNE	11.9	5.3			0			0	0		
Cosenza			29.94	760.4	91.0	32.8	62	SW	2.5	1.1			0			0	0		
Riposto, (Sicily)			29.90	759.5	78.4	25.8	64	E			2		3	S		0	0		
Palermo			29.93	760.1	78.3	25.7	64	NE	4.9	2.2			1			0	0		
Caltanissetta	27.98	710.7	29.84	757.8	93.4	34.1	23	W			2		1	E		0	0		
Sub-Series.																			
Naples, S. R			30.02	762.4	78.8	26.0	42	SW	2.5	1.1			0			0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather 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.

Flushing			30.16	766.1	64.4	18.0		N			2								
Groningen			30.03	762.7	72.7	22.6		NW			2								
Helder			30.11	764.9	68.0	20.0		NNW			2								
Utrecht			30.07	763.7	75.6	24.2	43	N			3		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.

Bergen			30.03	762.8	63.0	17.2	76	WNW	10.3	4.6			3			0	0		
Brönö			30.01	762.3	53.1	12.0	83	NNW	2	1			6			0	0	Light fog	
Christiania			29.93	760.3	81.1	27.3	38	WSW	3.6	1.6			1			0	0		
Tromsö			29.83	757.7	51.1	10.6	80	W	9	4			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 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	774.4	69.1	20.6	73	NE	10.6	4.75	.....	.....	6	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	29.98	761.6	74.3	23.5	37	SSE	6.2	2.75	.....	.....	9	ESE	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.26	768.5	68.5	20.3	59	SE	2.8	1.25	.....	.....	7	.....	.....	0.098	2.5	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.06	763.4	68.0	20.0	64	NNW	3.8	1.7	.....	.....	6	NE	.....	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.

Warsaw	.....	.....	29.82	757.3	68.4	20.2	62	N	13	6	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.72	755.0	73.0	22.8	33	N	22	10	.....	.....	4	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.87	758.7	67.6	19.8	37	NE	9	4	.....	.....	0	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.89	759.2	60.1	15.6	41	NE	13	6	.....	.....	0	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.92	759.9	65.5	18.6	60	E	7	3	.....	.....	0	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.62	752.3	67.8	19.9	44	WNW	13	6	.....	.....	7	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.78	756.5	76.6	24.8	51	NE	4	2	.....	.....	7	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.87	758.8	74.3	23.5	79	SSW	7	3	.....	.....	10	.....	.....	.....	.....	Raining.....	Lagorio.
Moscow	.....	.....	29.58	751.4	57.0	13.9	97	S	4	2	.....	.....	10	.....	.....	.....	.....	Raining.....	Meteorological Obs.
Lugan	.....	.....	29.61	752.1	76.3	24.6	51	WSW	29	13	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.82	757.4	60.3	15.7	75	W	18	8	.....	.....	6	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.16	722.9	29.79	756.6	87.8	31.0	33	NW	13	6	.....	.....	6	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.85	758.2	86.5	30.3	31	S	2	1	.....	.....	3	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.69	754.1	58.5	14.7	88	E	29	13	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.80	733.0	29.84	757.8	60.1	15.6	37	W	16	7	.....	.....	7	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.79	756.7	86.5	30.3	29	N	13	6	.....	.....	7	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.19	716.0	29.77	756.1	88.2	31.2	45	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.57	751.0	75.2	24.0	77	NW	2	1	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.32	744 8	73.9	23.3	72	SW	2	1	.....	.....	10	.....	.....	Blank	Blank	.....	Marks.
Irkutsk	28.31	719.1	29.63	752.7	63.1	17.3	57	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.82	757.4	85.6	29.8	36	SW	9	4	.....	.....	1	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	29.89	759.1	57.2	14.0	90	E	13	6	.....	.....	1	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	61.7	16.5	95	ESE	16	7	.....	.....	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, 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.

Madrid	.....	.....	29.97	761.1	74.5	23.6	47	S	3.0	1.33	.....	0	10	.....	.....	0	0	Covered	Royal Observatory.
San Fernando	.....	.....	30.00	764.2	67.6	19.7	73	SW	9.6	4.3	.....	0	10	.....	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.

Haparanda	.....	.....	29.82	757.5	61.5	16.4	58	SW	.....	.....	4	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	29.93	760.1	67.3	19.6	36	S	.....	.....	4	.....	0	.....	.....	0	0	.....	
Hernosand	.....	.....	29.92	759.9	71.8	22.1	25	SSW	.....	.....	2	.....	0	.....	.....	0	0	.....	
Stockholm	.....	.....	29.93	760.2	72.7	22.6	49	NNE	.....	.....	4	.....	0	.....	.....	0	0	.....	
Wisby	.....	.....	29.98	761.4	58.3	14.6	91	N	.....	.....	6	.....	10	.....	.....	0	0	Foggy	
Sub-Series.																			
Upsala	.....	.....	29.93	760.2	73.8	23.2	50	E	4.0	1.8	.....	.....	6	.....	NNE	0	0	.....	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; 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	28.62	726.9	30.00	762.1	67.6	19.8	57	NNE	.....	.....	3	.....	1	.....	.....	0.189	4.8	Clear	The Observatory.
Zurich	28.44	722.3	30.03	762.8	66.9	19.4	66	NW	.....	.....	1	.....	4	.....	.....	0.768	19.5	Clear	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE—For Geneva the corresponding departures from the normal values are: Barometer, —0.2 mm; Thermometer, —2.0 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 Prof. C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	29.84	758.0	93.2	34.0	50	SSW	11	5.0	.....	.....	4	.....	NW	0	0	.....	
Fao, (Persian Gulf)	.....	.....	29.70	754.3	100.4	38.0	.....	NW	.....	.....	3	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.91	759 6	77.0	25.0	.....	S	.....	.....	2	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	29.94	760.4	85.1	29.5	.....	SW	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	29.76	756.0	89.6	32.0	.....	NE	.....	.....	2	.....	8	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.90	759.4	88.5	31.4	64	WSW	.....	.....	1	.....	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.

Bathurst, N. B	.....	.....	29.84	757.9	63.9	17.7	72	SW	7	3.1	.....	0	6	.....	.....	0	0	Fine	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.76	755.9	71	21.7	.....	N	1	0.4	.....	2c	2s	W	SW	0	0	Fair	W. R Bigg.
*Chatham, N. B	.....	.....	29.91	759.7	64	17.8	83	W	1	0.4	.....	10ck	0	W	.....	Inap.	Inap.	Fair	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.92	760.0	63	17.2	84	Calm	0	0	.....	.....	10ks	.....	.....	0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.71	754.6	76.7	24.8	69	SE	.....	.....	1	8k	0	.....	.....	0	0	Fair	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.87	758.7	58.0	14.4	79	E	.....	.....	1	.....	.....	.....	.....	0.04	1.0	.....	H. A. Johnson.
Esquimault, B. C	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Bevis.
Fredericton, N. B	.....	.....	29.90	759.4	64.2	17.9	77	SE	4	1.8	.....	7cs	0	.....	.....	0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.74	755.4	55	12.8	80	W	6	2.7	.....	..k	..ks	W	W	0	0	Cloudy	James Stewart.
Goderich, Ontario	.....	.....	29.74	755.4	74.5	23.6	83	SW	.....	.....	2	5c	0	W	.....	0.051	1.30	Fine	H. J. Strang, M. A.
Granton, Ontario	28.69	728.7	29.73	755.1	73.5	23.1	.....	W	.....	.....	1	0	0	.....	.....	0.58	14.7	Clear	James Grant.
*Halifax, N. S	.....	.....	29.89	759.2	65	18.3	78	S	4	1.8	.....	2cs	2ks	.....	.....	0	0	Fair	F. Allison, M. A.
*Kingston, Ontario	.....	.....	29.74	755.4	70	21.1	77	SW	5	2.2	.....	2k	5ks	NW	SW	0	0	Cloudy	S. Woods, M. A.
Little Glace Bay, N. S	.....	.....	29.98	761.5	64.5	18.1	74	SW	6	2.7	.....	8k	0	SW	.....	0	0	Cloudy	C. H. Rigby
*Montreal, Quebec	.....	.....	29.74	755.4	70	21.1	74	S	12	5.4	.....	8c	0	W	.....	0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.65	753.1	71	21.7	64	Calm	0	0	.....	10cs	0	.....	.....	0.70	17.8	Cloudy	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.67	753.6	67	19.4	97	N	3	1.3	.....	.....	10n	.....	S	0.37	9.4	Cloudy	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	29.75	755.6	67	19.4	95	W	6	2.7	.....	.....	10n	.....	W	0.18	4.6	Light rain	H. Morgan.
Port Hastings, N. S	.....	.....	29.92	760.0	60.6	15.9	.....	Calm	0	0	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
*Port Stanley, Ontario	.....	.....	29.76	755.9	69	20.6	95	W	3	1.3	.....	.....	10n	.....	NW	0	0	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	29.80	756.9	70	21.1	75	Calm	0	0	.....	.....	10n	.....	.....	0	0	Cloudy	Capt. Ashe, R. N.
St. John, N. B	.....	.....	29.94	760 5	59	15.0	76	S	6	2.7	.....	1c	0	.....	.....	0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.67	753.6	66	18.9	89	SE	10	4.5	.....	10cs	0	.....	.....	0.31	7.9	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	29.64	752.8	75	23.9	83	SW	1	0.4	.....	8ck	0	W	.....	0.30	7.6	Clearing	R. J. Cole.
Stratford, Ontario	28.48	723.4	29.70	754.4	69.9	21.1	99	SW	7	3 1	.....	.....	10s	.....	.....	0.484	12.29	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.92	760.0	64	17.8	77	W	8	3.6	.....	8ck	2ks	W	NW	0	0	Cloudy	T. C. Hill.
*Toronto, Ontario	.....	.....	29.70	754.4	69	20.6	83	Calm	0	0	.....	.....	10n	.....	W	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.70	754.4	70.8	21.6	94	N	3	1.3	.....	.....	10s	.....	.....	1.10	27.9	Gloomy	J. Montgomery
Sub-Series.																			
St. John's, Newfoundland	.....	.....	29.91	759.7	74	23.3	55	SW	.....	.....	.....	0	5k	.....	.....	0	0	Sultry	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 360.3 m.

UNITED STATES SERIES.

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

STATIONS.	BAROMETER. Corrected for instrumental errors. Inches.	BAROMETER. Corrected for instrumental errors. Millimeters.	BAROMETER. Reduced to sea-level. Inches	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10	CLOUDS. Amount. Up'er 0—10	CLOUDS. Amount. Low'r 0—10	CLOUDS. Direction. Upper. From	CLOUDS. Direction. Lower. From	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Albany, N. Y.	.....	.....	29.79	756.7	74	23.3	68	Calm	0	0	.....	10k	0	S	.....	0	0	Cloudy.....	
Alpena, Mich.	.....	.....	29.61	752.1	69	20.6	90	W	4	1.8	.....	.....	10s	.....	W	0.73	18.5	Cloudy..	
Atlantic City, N. J.	.....	.....	29.86	758.4	76	23.9	81	SW	4	1.8	.....	8cs	Haze	W	.....	0	0	Cloudy.....	
Augusta, Ga.	.....	.....	30.04	763.0	80	26.7	74	W	2	0.9	.....	5ck	2s	W	SW	0	0	Cloudy.....	
Baltimore, Md.	.....	.....	29.91	759.7	83	28.3	60	W	6	2.7	.....	2ck	2s	W	W	Inap.	Inap.	Fair.....	
Barnegat, N. J.	.....	.....	29.85	758.2	82	27.8	67	SW	8	3.6	.....	2c	Haze	.....	.....	0	0	Fair.....	
Benton, Montana	27.31	693.7	30.11	764.8	51	10.6	53	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear.....	
Bismarck, Dakota	28.19	716.0	29.80	756.9	55	12.8	44	NW	4	1.8	.....	Haze	Haze	.....	.....	0.08	2.0	Hazy.....	
Boston, Mass.	.....	.....	29.84	757.9	76	24.4	72	S	7	3.1	.....	5cs	Fog	W	.....	0	0	Foggy.....	
Breckenridge, Minn.	.....	.....	29.84	757.9	58	14.4	69	NW	8	3.6	.....	0	5ks	.....	.....	0.01	0.3	Fair.....	
Buffalo, N. Y.	.....	.....	29.69	754.1	69	20.6	90	W	5	2.2	.....	.....	10s	.....	SW	0.03	0.8	Cloudy.....	
Burlington, Vt.	.....	.....	29.78	756.4	73	22.8	67	S	6	2.7	.....	2k	0	.....	.....	0	0	Fair.....	
Cairo, Ill.	.....	.....	30.00	762.0	77	25.0	77	S	1	0.4	.....	5c	0	.....	.....	0	0	Fair.....	
Cape Hatteras, N. C.	.....	.....	29.89	759.2	84	28.9	79	W	12	5.4	.....	Haze	0	.....	.....	0	0	Clear.....	
Cape Henry, Va.	.....	.....	29.91	759.7	86	30.0	73	W	12	5.4	.....	2k	0	W	.....	0	0	Fair.....	
Cape Lookout, N. C.	.....	.....	29.98	761.5	82	27.8	87	W	16	7.2	.....	Haze	0	.....	.....	0	0	Clear.....	
Cape May, N. J.	.....	.....	29.88	758.9	77	25.0	86	SW	4	1.8	.....	2ck	5ks	W	W	0	0	Fair.....	
Charleston, S. C.	.....	.....	30.04	763.0	83	28.3	67	W	7	3.1	.....	2cs	0	.....	.....	0	0	Fair.....	
Cheyenne, Wyoming	24.10	612.1	30.04	763.0	49	9.4	59	N	20	8.9	.....	0	0	.....	.....	0	0	Clear.....	
Chicago, Ill.	.....	.....	29.78	756.4	72	22.2	80	SW	11	4.9	.....	.....	10s	.....	SW	0.66	16.8	Cloudy.....	
Cincinnati, Ohio	.....	.....	29.88	758.9	78	25.6	77	W	10	4.5	.....	2ck	8ks	.....	NW	0.10	2.5	Cloudy.....	
Cleveland, Ohio	.....	.....	29.79	756.7	69.1	20.6	90	W	8	3.6	.....	.....	10ks	.....	W	0.85	21.6	Cloudy.....	
Colorado Springs, Col.	24.10	612.1	29.97	761.2	60	15.6	65	NE	12	5.4	.....	0	0	.....	.....	0	0	Clear.....	
Corsicana, Tex.	.....	.....	29.87	758.7	77	25.0	86	SE	12	5.4	.....	.....	10s	.....	S	0.20	5.1	Cloudy.....	
Davenport, Iowa	.....	.....	29.94	757.9	71	21.7	95	NW	8	3.6	.....	2ck	7s	.....	NW	0.53	13.5	Cloudy.....	
Denison, Tex.	.....	.....	29.90	759.4	76	24.4	81	SE	12	5.4	.....	.....	10s	.....	S	0.17	4.3	Cloudy.....	
Denver, Col.	24.83	630.7	30.05	763.3	59	15.0	64	N	12	5.4	.....	0	0	.....	.....	0	0	Clear.....	
Detroit, Mich.	.....	.....	29.77	756.1	69	20.6	84	SW	6	2.7	.....	5cs	Fog	SW	W	0.10	2.5	Fair.....	
Dodge City, Kan.	27.32	693.9	29.51	749.5	67	19.4	94	ESE	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Dubuque, Iowa	.....	.....	29.83	757.7	70	21.1	79	NW	4	1.8	.....	2c	0	.....	.....	2.43	61.7	Fair	
Duluth, Minn.	.....	.....	29.78	756.4	61	16.1	60	W	15	6.7	.....	.....	10s	.....	N	0	0	Cloudy.....	
Eastport, Me.	.....	.....	29.87	758.7	63	17.2	72	S	2	0.9	.....	2c	Haze	.....	.....	0	0	Hazy.....	
Erie, Pa.	.....	.....	29.71	754.6	72	22.2	95	W	8	3.6	.....	.....	10n	.....	.....	1.60	40.6	Heavy rain..	
Escanaba, Mich.	.....	.....	29.71	754.6	63	17.2	78	NW	12	5.4	.....	5ck	0	NW	.....	0.85	21.6	Fair.....	
Fort Gibson, Indian Ter.	.....	.....	29.88	758.9	78	25.6	73	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Ft. St. Michael, Alaska	.....	.....	29.95	760.7	55	12.8	80	SW	.....	.....	6	0	0	.....	.....	0	0	Clear.....	
Fort Sill, Indian T.	28.60	726.4	29.06	753.4	71	21.7	95	SE	20	8.9	.....	.....	10n	.....	SE	3.56	90.4	Heavy rain..	
Fort Sully, Dakota	28.30	718.8	29.91	759.7	60	15.6	94	S	4	1.8	.....	.....	10s	.....	NW	0.05	1.3	Cloudy.....	
Galveston, Tex.	.....	.....	29.97	761.2	83	28.3	74	S	12	5.4	.....	5k	0	S	.....	0.11	2.8	Fair.....	
Grand Haven, Mich.	.....	.....	29.74	755.4	61	16.1	97	W	13	5.8	.....	.....	Fog	.....	W	0.72	18.3	Foggy	
Indianapolis, Ind.	.....	.....	29.89	759.2	70	21.1	95	SE	3	1.3	.....	.....	10s	.....	.....	0.90	22.9	Cloudy.....	
Indianola, Tex.	.....	.....	29.92	76 0	82	27.8	74	S	14	6.3	.....	5ck	0	S	.....	0	0	Fair.....	
Jacksonville, Fla.	.....	.....	30.11	764.8	86	30 0	69	S W	4	1.8	.....	0	0	.....	.....	0	0	Clear.....	
Keokuk, Iowa	.....	.....	29.78	756.4	77	25.0	86	W	6	2.7	.....	.....	10s	.....	W	0	0	Cloudy.....	
Key West, Fla.	.....	.....	30.07	763.0	82.6	28.1	74	E	9	4.0	.....	2k	Haze	E	E	0	0	Cloudy.....	
Kittyhawk, N. C.	.....	.....	29.92	760.0	83	28.3	74	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear.....	
Knoxville, Tenn.	.....	.....	30.04	763.0	73	22.8	95	Calm	0	0	.....	1c	0	W	.....	0.01	0.3	Clear.....	
La Crosse, Wis.	.....	.....	29.85	758.2	64	17.8	72	N	2	0.9	.....	5k	2ks	.....	.....	0.36	9 1	Cloudy.....	
Leavenworth, Kan.	.....	.....	29.86	758.4	78	25.6	69	S	4	1.8	.....	2c	0	.....	.....	0	0	Clear.....	
Lexington, Ky.	28.90	734.0	29.94	760.5	77	25.0	81	SW	8	3.6	.....	5c	0	.....	.....	0	0	Fair.....	
Long Branch, N. J.	.....	.....	29.85	758.2	75	23.9	76	Calm	0	0	.....	5c	Haze	W	.....	0	0	Fair.....	
Louisville, Ky.	.....	.....	29.94	760.5	80	26.7	74	SW	8	3.6	.....	2ck	0	.....	.....	0	0	Clear.....	
Lynchburg, Va.	.....	.....	29.92	760.0	85	29.4	58	Calm	0	0	.....	5c	0	W	.....	Inap.	Inap.	Fair.....	
Malone, N. Y.	.....	.....	29.68	753.9	75	23.9	56	S	11	4.9	.....	5ck	0	W	.....	0	0	Fair.....	
Manhattan, Kan.	28.66	728.0	29.73	755.1	76	24.4	81	S	2	0.9	.....	0	0	.....	.....	0	0	Clear.....	
Marquette, Mich.	.....	.....	29.70	754.4	64	17.8	62	W	8	3.6	.....	2cs	0	W	.....	0.15	3.8	Fair.....	
Memphis, Tenn.	.....	.....	30.02	762.5	81	27.2	70	S	6	2.7	.....	5ck	0	SW	.....	0	0	Fair.....	
Milwaukee, Wis.	.....	.....	29.77	756.1	70	21.1	90	W	14	6.3	.....	.....	10ks	.....	W	1.04	26.4	Threatening	
Mobile, Ala.	.....	.....	30.10	764.5	82	27.8	78	S	3	1.3	.....	5k	0	SW	.....	0	0	Fair.....	
Montgomery, Ala.	.....	.....	30.11	764.8	75	23.9	85	S	2	0.9	.....	.....	10s	.....	.....	0.29	7.5	Cloudy.....	
Morgantown, W. Va.	.....	.....	29.82	757.4	78	25.6	73	NW	14	6.3	.....	0	2s	.....	SW	0	0	Fair.....	
Mt. Washington, N. H.	23.85	605.8	30.21	767.3	52	11.1	72	NW	24	10.7	.....	2c	0	NW	.....	0	0	Fair.....	
Nashville, Tenn.	.....	.....	29.99	761.7	79	26.1	78	W	2	0.9	.....	8k	0	SW	.....	0	0	Cloudy.....	
New Haven, Conn.	.....	.....	29.85	758.2	80	26.7	70	SE	5	2.2	.....	8ck	Haze	SW	.....	0	0	Cloudy.....	
New London, Conn.	.....	.....	29.88	758.9	76	24.4	76	SE	1	0.4	.....	2c	Haze	W	.....	0	0	Fair.....	
New Orleans, La.	.....	.....	30.04	763.5	81	27.2	78	S	3	1.3	.....	0	0	.....	.....	0	0	Clear.....	
Newport, R. I.	.....	.....	29.88	758.9	70	21.1	95	SE	2	0.9	.....	.....	Fog	.....	.....	0	0	Foggy	
New York, N. Y.	.....	.....	29.85	758.2	77	25.0	77	Calm	0	0	.....	10k	0	W	.....	0	0	Hazy.....	
Norfolk, Va.	.....	.....	29.93	760.2	84	28.9	61	NW	9	4 0	.....	0	0	.....	.....	0	0	Clear.....	
North Platte, Neb.	.....	.....	29.53	750.0	61	16.1	60	NE	20	8.9	.....	.....	10n	.....	NE	0.04	1.0	Light rain...	
Omaha, Neb.	27.08	687.8	29.80	756.9	64	17.8	62	N	5	2.2	.....	10c	0	W	.....	0.01	0.3	Cloudy.....	
Oswego, N. Y.	28.87	733.3	29.89	759.4	64	17.8	82	SE	4	1.8	.....	.....	10s	.....	S	0.05	1.3	Threatening	
Pembina, Dakota	.....	.....	29.73	755.1	73	22.8	82	SE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Philadelphia, Penn.	.....	.....	29.75	755.6	55	12.8	68	SW	4	1.8	.....	8k	0	SW	.....	0	0	Cloudy.....	
Pike's Peak, Colorado	.....	.....	29.84	757.9	79	26.1	89	W	3	1.3	.....	5ck	Sm'e	W	.....	0	0	Fair.....	
Pittsburgh, Penn.	17.99	456.9	30.20	767.1	40	4.4	18	N	14	6.3	.....	0	0	.....	.....	0	0	Clear.....	
Port Huron, Mich.	.....	.....	29.76	755.9	79	26.1	73	SW	16	7.2	.....	5k	0	SW	.....	0	0	Fair.....	
Portland, Me.	.....	.....	29.72	754.9	72	22.2	75	SW	6	2.7	.....	10c	0	NW	.....	Inap.	Inap.	Cloudy.....	
Portland, Oregon	.....	.....	29.87	758.7	68	20.0	74	Calm	0	0	.....	5ck	Haze	W	.....	0	0	Fair.....	
Punta Rassa, Fla.	.....	.....	30.23	767.8	87	13.9	93	Calm	0	0	.....	.....	8s	.....	.....	0	0	Cloudy.....	
Rochester, N. Y.	.....	.....	30.10	764.5	79.5	26.4	82	E	4	1.8	.....	.....	10s	.....	S	0	0	Cloudy.....	
Salt Lake City, Utah	.....	.....	29.69	754.1	74	23.3	81	SW	6	2.7	.....	.....	10s	.....	SW	0	0	Cloudy.....	
Sandy Hook, N. J.	25.67	652.5	30.00	762.0	63	17.2	46	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
San Diego, Cal.	.....	.....	29.83	757.7	76	24.4	81	W	3	0.9	.....	5ck	Haze	W	.....	0	0	Hazy	
San Francisco, Cal.	.....	.....	29.86	758.4	61	16.1	94	Calm	0	0	.....	0	2s	.....	.....	0	0	Fair.....	
Santa Fé, N. M.	.....	.....	29.73	755.1	63	17.2	72	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Savannah, Ga.	23.25	590.5	29.79	756.7	62	16.7	56	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Shreveport, La.	.....	.....	30.07	763.8	86	30.0	64	W	4	1.8	.....	5c	Sm'e	SW	.....	Inap.	Inap.	Fair.....	
Smithville, N. C.	.....	.....	30.03	762.7	78	25.6	82	SE	2	0.9	.....	Haze	0	.....	.....	0	0	Fair..	
Springfield, Mass.	.....	.....	30.01	762.2	83	28.3	79	W	5	2.2	.....	1k	0	W	.....	0	0	Clear	
St. Louis, Mo.	.....	.....	29.84	757.9	76.5	24.7	69	S	4	1.8	.....	8k	Haze	SW	.....	0	0	Cloudy.....	
St. Marks, Fla.	.....	.....	29.93	760.2	79	26.1	65	SW	12	5.4	.....	0	0	.....	.....	0	0	Clear.....	
St. Paul, Minn.	.....	.....	30.13	765.3	78	25.6	86	W	3	1.3	.....	2c	2ks	E	.....	0	0	Fair.....	
St. Paul's Island, Alaska	.....	.....	29.85	758.2	60	15.6	82	S	5	2.2	.....	.....	10n	.....	.....	Inap.	Inap.	Light rain...	
Thatcher's Island, Mass.	.....	.....	29.95	760.7	37	2.8	81	E	13	5.8	.....	.....	10s	.....	.....	0.01	0.3	Cloudy.....	
Toledo, Ohio	.....	.....	29.87	758.7	66	18.9	84	S	2	0 9	.....	2c	0	W	.....	0	0	Foggy	
Tucson, Arizona	27.40	696.0	29.77	756.1	71	21.7	85	SW	6	2.7	.....	5ck	2ks	SW	SW	0.45	11.4	Fair.....	
Tybee Island, Ga.	.....	.....	29.99	761.7	78	25.6	.....	NE	.....	.....	.....	5c	5s	E	.....	0	0	Cloudy.....	
Vicksburg, Miss.	.....	.....	30.06	763.5	79	26.1	78	W	4	1.8	.....	5c	0	.....	.....	0	0	Fair.....	
	.....	.....	30.07	763.8	78	25.6	82	SE	4	1.8	.....	5cs	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.	24.38	619.2	29.86	758.4	50	10.0	58	W	1	0.4	.....	1c	0	W	.....	Inap.	Inap.	Clear.	
Washington, D. C.	.....	.....	29.90	759.4	79	26.1	74	W	2	0 9	.....	1ck	1s	W	W	0.02	0.5	Fair.	
Wilmington, N. C.	.....	.....	30.00	762.0	83	28.3	74	W	6	2.7	.....	0	0	.....	.....	0	0	Clear.	
Wood's Holl, Mass.	.....	.....	29.87	758.7	73	22 8	81	S	3	1.3	.....	2k	0	.....	.....	0	0	Clear.	
Wytheville, Va.	27.73	704.3	29.79	756.7	72	22.2	80	W	4	1.8	.....	2ck	2ks	W	W	0	0	Fair.	
Yankton, Dakota	28.74	730.0	30.00	762.0	60	15.6	65	NW	3	1.3	.....	.....	10s	.....	NW	0	0	Cloudy..	
Yuma, Arizona	.....	.....	29.73	755.1	84	28.9	.....	SE	.....	.....	.....	8ck	0	SW	.....	Inap.	Inap.	Fair.	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub Series.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Bridgetown, B'b'dos. W. I.	.....	.....	30.08	764.0	83	28.3	74	NE	6	2.7	.....	5ck	5ks	E	NE	0.18	4.6	Cloudy..	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	30.03	762.7	83	28.3	79	E	.....	....	.....	5c	5ks	.....	.....	0	0	Fair.	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.16	766.1	83	28.3	79	SE	5	2 2	.....	8c	5n	SE	.....	0.18	4.6	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.02	762.5	80	26.7	78	E	4.8	2.1	.....	10c, ck	0	S	.....	0.03	0.8	Fair..	Charles Hasselbrink
St. Georges, Bermudas	.....	.....	30.10	764.5	72.5	22.5	93	SW	25.0	11.2	.....	.....	10n	.....	.....	0.47	11.9	Raining.	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	.....	C. Partridge.
Clifton, Jamaica, W. I.	27.21	691.1	29.98	761.5	69	20.6	75	.....	.....	.....	.....	.....	.....	.....	.....	0.125	3.18	Fair.	C. J. Hering.
Paramaribo, D. Guiana, S. A.	.....	.....	30.00	762.0	83	28.3	83	E	.....	.....	2	6k	6k	E	.....	0	0	.....	Dr. H. Groot.
Batavia, Dutch Guiana, S. A.	30.07	763.7	.....	.....	85.1	29.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.68	17.3	Cloudy.	Thomas Herran
Medellin, Colombia, S. A.	25.22	640.6	.....	.....	64.2	17.9	81	Calm	0	0	.....	10k	0	.....	.....	*3.10	*78.7	.....	J. Fortescue, W. Wood
York Factory, B. A.	.....	.....	29.69	754.1	42.5	5.8	100	E	6	2.7	.....	.....	10n	.....	.....	0	0	Clear.	Daniel Smith.
Honolulu, Oahu, H. I.	.....	.....	30.06	763.5	76	24.4	90	E	.....	.....	1	.....	.....	.....	.....	0	0	Clear.	F. L. Clarke.
Makawao, Maui, H. I.	.....	.....	30.04	763.0	60	15.6	80	Calm	0	0	.....	0	0	.....	.....	.....	.....	.....	
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Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	
	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....
Steamer Nova Scotian, N. 41° 47′, W. 65° 36′	SW ½W	9	Fog	.....	Foggy. 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.; 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.; 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, 4,293.8 ft., or 1,301.1 m.; Santa Fè, 6,892.2 (?) 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, 0.36 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 4 p. m. of the 26th until 9 a. m. of the 27th.

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, 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 JUNE 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.	Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	76.5	24.7	51	NW	.....	.....	2	.....	0	.....	.....	0	0	Clear	Charnot.
Algiers	.....	.....	30.10	764.5	69.8	21.0	83	NW	.....	.....	1	.....	10	.....	.....	Inap.	Inap.	Hidden..	Peter.
La Calle	.....	.....	.....	.....	78.6	25.9	64	NW	.....	.....	2	.....	3	.....	.....	0	0	Fair	Kuntz.
Tunis	.....	.....	30.07	763.6	82.4	28.0	57	NE	.....	.....	3	.....	5	.....	.....	0	0	Fair	Jacques.
Sfax	.....	.....	30.06	763.5	81.0	27.2	73	E	.....	.....	2	.....	4	.....	.....	0	0	Fair	Chauvey.
Saida	.....	.....	30.14	765.5	77.0	25.0	22	NNE	.....	.....	1	.....	1	.....	.....	0	0	Clear	Millot.
Tebessa	.....	.....	30.04	763.1	91.6	33.1	.....	SW	.....	.....	3	.....	4	.....	.....	0	0	Fair	Colin.
Geriville	.....	.....	30.09	764.2	78.6	25.9	21	N	.....	.....	1	.....	1	.....	.....	0	0	Clear	Buard.
Laghouat	.....	.....	30.10	764.6	96.8	36.0	.....	SW	.....	.....	2	.....	0	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	29.98	761.6	93.4	34.1	37	NE	.....	.....	2	.....	8	.....	.....	0	0	Cloudy	Laromer.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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Note.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram	.....	.....	30.03	762.8	73.8	23.2	54	SW	.....	.....	2	.....	5	.....	.....	0	0	.....	Prof. Ivan Stosir.
Cracow, I. R. Observatory	.....	.....	29.92	759.9	74.8	23.8	49	W	.....	.....	3	.....	7	.....	.....	0.012	0.3	.....	Dr. Wierzbiski.
Eperies	.....	.....	29.86	758.4	72.7	22.6	54	NW	.....	.....	1	.....	5	.....	.....	0.048	1.18	.....	Julius Mikolik.
Gratz	28.92	734.5	30.09	764.2	68.2	20.1	54	SSE	.....	.....	3	.....	2	.....	.....	0.791	20.1	.....	Andreas Rospini.
Hermannstadt	28.48	723.3	29.88	758.9	59.2	15.1	79	NW	.....	.....	3	.....	10	.....	.....	0.173	4.40	.....	Prof. Reissenberger.
Kremsmünster	28.73	729.8	30.04	762.9	68.4	20.2	54	N	.....	.....	1	.....	2	.....	.....	0.177	4.5	.....	Prof. C. Wagner.
Lemberg	.....	.....	29.71	754.6	71.8	22.1	73	NE	.....	.....	4	.....	5	.....	.....	0	0	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habsuda Daniel.
Pola	.....	.....	30.07	763.8	75.0	23.9	57	W	.....	.....	2	.....	Sck	.....	.....	0	0	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	29.93	760.1	72.3	22.4	52	NE	.....	.....	2	.....	6	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	30.08	763.9	76.3	24.6	55	W	.....	.....	1	.....	2	.....	.....	0	0	Clear	Prof. V. Farolfi.
Vienna	.....	.....	30.02	762.5	66.9	19.4	60	NW	.....	.....	2	.....	7	.....	.....	0	0	.....	I. R. Central Met. Obs'y.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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Note.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 497.8 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.	Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	764.2	67.3	19.6	54	N	.....	.....	1	.....	.....	.....	.....	0	0	.....	Royal Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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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	62.7	17.1	.....	WNW	15	6.7	.....	.....	4	.....	.....	0	0	Blue sky	William Boswell.
Ardrossan	.....	.....	30.17	766.3	59	15.0	.....	WNW	.....	.....	4	.....	6	.....	.....	.....	.....	*D. clouds	William McNeil.
Armagh, Observatory	.....	.....	30.23	767.8	59.8	15.4	.....	WNW	6	2.7	.....	.....	10	.....	.....	.....	.....	Overcast	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	30.26	768.6	59.0	15.0	.....	NW	...	....	1	.....	10	.....	.....	.....	.....	Overcast	J. Dreyer.
Bradford	.....	.....	30.10	764.5	68.2	20.1	.....	SW	.....	.....	0	.....	3	.....	.....	0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.01	762.2	82.0	27.8	.....	NE	.....	.....	1	.....	8	.....	.....	.....	.....	Overcast	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory	.....	.....	30.07	763.8	79.0	26.1	.....	WSW	.....	.....	1	.....	0	.....	.....	.....	.....	Hazy	H. Todd. [H. C.
Cardington	.....	.....	30.08	764.0	80.0	26.7	.....	NW	.....	.....	1	.....	2	.....	.....	.....	.....	Blue sky	John McLaren.
Carlisle	.....	.....	30.10	764.5	66.6	19.2	.....	W	.....	.....	4	.....	7	.....	.....	0	0	*D. clouds	T. Bell, for J. Carmell.
Chatham, School M. E	.....	.....	30.08	764.0	75.7	24.3	.....	Calm	.....	.....	0	.....	.....	.....	.....	Blank	Blank	Blue sky	Capt. J. Fellowes, R.E.
Dartmoor	28.75	730.2	30.20	767.1	73.2	22.9	.....	NW	.....	.....	1	.....	7	.....	.....	.....	.....	*D. clouds	R. E. Power.
Donaghadee	.....	.....	30.19	766.8	59	15.0	.....	N	.....	.....	5	.....	8	.....	.....	.....	.....	*D. clouds	J. Mac Gowan.
Dover	.....	.....	30.12	765.0	58	14.4	.....	SW	.....	.....	1	.....	10,fog	.....	.....	.....	.....	Overcast	J. Costello.
Eccles, (near Manchester.)	.....	.....	30.15	765.8	59.7	15.4	.....	NW	7.8	3.5	.....	.....	10	.....	.....	.....	.....	Gloomy	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.16	766.1	71.9	22.2	.....	NW	14	6.3	.....	.....	0	.....	.....	.....	.....	Hazy	The Staff.
Fort Napier, (Natal)	27.64	702.0	29.88	758.9	64.5	18.1	.....	E	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	30.04	763.0	82	27.8	.....	N	.....	.....	2	.....	7	.....	.....	.....	.....	*D. clouds	
Galway, Queen's College	.....	.....	30.24	768.1	60	20.6	.....	NE	.....	.....	1	.....	1	.....	.....	.....	.....	*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.12	765.0	72.0	22.2	.....	NW	.....	.....	4	.....	3	.....	.....	.....	.....	*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	30.11	764.8	61.0	16.1	.....	W	.....	.....	1	.....	7	.....	.....	.....	.....	Fine	Lewis Stuart.
Great Yarmouth	.....	.....	30.09	764.3	61	16.1	.....	S	.....	.....	2	.....	6	.....	.....	.....	.....	Foggy	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	30.11	764.8	80.7	27.1	.....	SSW	.....	.....	1	.....	7	.....	.....	.....	.....	Hazy	The Staff, for G. B. Airy.
Guernsey	.....	.....	30.11	764.8	72	22.2	.....	NW	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	30.11	764.8	66.7	19.3	.....	WNW	.....	.....	2	.....	7	.....	.....	.....	.....	*D. clouds	L. J. Crossley.
Helston	.....	.....	30.14	765.5	72	22.2	.....	NW	.....	.....	2	.....	0	.....	.....	0	0	Very fine	M. P. Moyle.
Holyhead	.....	.....	30.21	767.3	58	14.4	.....	N	.....	.....	2	.....	10	.....	.....	.....	.....	Hazy	John Tilston.
Kew, Observatory	.....	.....	30.10	764.5	75.5	24.2	.....	WNW	5	2.2	.....	.....	1	.....	.....	.....	.....	Hazy	The Staff.
Kingstown	.....	.....	30.24	768.1	59	15.0	.....	NW	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast	George Mitchell.
Leicester Museum	.....	.....	30.10	764.5	73.8	23.2	.....	W	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky	Wm. J. Harrison, F.G.S.
Malta, Mediterranean	.....	.....	29.96	761.0	77.4	25.2	.....	NE	.....	.....	1	.....	2	.....	.....	.....	.....	*D. clouds	Corp'l F. Fraser, A. M. C.
Nairn	.....	.....	30.10	764.5	62	16.7	.....	W	.....	.....	4	.....	8	.....	.....	.....	.....	¾ clouded	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.20	767.1	86.4	30.2	.....	SE	.....	.....	6	.....	8	.....	.....	.....	.....	*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	30.11	764.8	81.5	27.5	.....	WNW	.....	.....	3	.....	2c	.....	WNW	0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.10	764.5	70.0	21.1	.....	NW	.....	.....	3-4	.....	0	.....	.....	.....	.....	Blue sky	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	30.09	764.3	76	24.4	.....	WNW	.....	.....	1	.....	4	.....	.....	.....	.....	*D. clouds	J. Lucas.
Plymouth	.....	.....	30.14	765.5	71.5	21.9	.....	S	.....	.....	2	.....	1	.....	.....	.....	.....	*D. clouds	John Merrifield.
Roche's Point	.....	.....	30.22	767.6	65	18.3	.....	NNE	.....	.....	3	.....	2	.....	.....	.....	.....	Fine	W. Kennedy.
Saint Ann's Head	.....	.....	30.19	766.8	63	17.2	.....	N	.....	.....	4	.....	3	.....	.....	.....	.....	*D. clouds	John C. Walker.
Saint Helier, (Jersey)	.....	.....	30.14	765.5	77.4	25.2	.....	NNE	.....	.....	2	.....	0	.....	.....	.....	.....	Clear	A. P. Amy.
Sandwick Manse (Orkneys)	.....	.....	30.01	762.2	54.2	12.3	.....	W	23	10.3	.....	.....	8	.....	.....	.....	.....	Showery	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	30.09	764.3	58.4	14.7	.....	NNE	.....	.....	2	.....	6	.....	.....	.....	.....	*D. clouds	F. Shaw.
Scutari Cemetery, (Turkey)	.....	.....	29.80	756.9	85.2	29.6	.....	NE	.....	.....	1	.....	4	.....	.....	.....	.....	*D. clouds	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.09	764.3	72.0	22.2	.....	WNW	.....	.....	3	.....	5	.....	.....	0	0	Blue sky	W. F. Cooper.
Silloth Rectory	.....	.....	30.10	764.5	76.1	24.5	47	E	.....	.....	1	.....	3	.....	.....	0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	30.14	765.5	59.4	15.2	.....	W	.....	.....	2	.....	10	.....	.....	.....	.....	Threatening	Rev. S. J. Perry.
Stornoway, Lews C., Hebr.	.....	.....	30.12	765.0	60	15.6	.....	WNW	.....	.....	5	.....	8	.....	.....	.....	.....	*D. clouds	John Smith.
Stratfield Turgiss	.....	.....	30.12	765.0	76.7	24.8	.....	NW	.....	.....	1	.....	1	.....	.....	.....	.....	Blue sky	Rev. Charles H. Griffith.
Thurso	.....	.....	30.05	763.3	57	13.9	.....	WNW	.....	.....	5	.....	7	.....	.....	.....	.....	Gloomy	John Trotter.
Truro, Royal Institution	.....	.....	30.19	766.8	75	23.9	.....	N	.....	.....	4	.....	0	.....	.....	.....	.....	Blue sky	W. Newcombe.
Valencia, Observatory	.....	.....	30.26	768.6	63.0	17.6	.....	NNW	19	8.5	.....	.....	3	.....	.....	.....	.....	*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	54	12.2	.....	N	.....	.....	4	.....	5	.....	.....	0	0	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.35	770.9	60.0	15.6	73	WNW	3	1.3	.....	3	3	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	29.92	76 1.0	55.0	12.8	86	NW	.....	.....	2	.....	5k	.....	.....	0.03	0.8	.....	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	30.10	764.5	66.8	19.3	.....	W	.....	.....	3	.....	2k	.....	.....	0	0	Fine	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.21	767.3	.....	.....	.....	E	12.6	5.6	.....	.....	.....	.....	.....	0.01	0.3	.....	C. Meldrum
Melbourne, Observatory	.....	.....	30.15	765.8	41.0	5.0	84	WSW	4	1.8	.....	.....	2	.....	.....	0	0	Fine, hazy	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	30.17	766.3	60	15.6	.....	NW	.....	.....	3	.....	10	.....	.....	0	0	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	29.88	758.9	53	11.7	.....	W	.....	.....	4	.....	.....	.....	.....	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	.....	.....	29.91	759.6	70.9	21.6	60	NNW	.....	.....	2	.....	0	.....	.....	.....	.....	..	
Faroe	.....	.....	30.01	762.3	62.2	16.8	76	W	.....	.....	6	.....	1	.....	.....	.....	.....	.....	
Godthaab, (Greenland)	.....	.....	29.71	754.5	.....	.....	.....	S	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	
Stykkisholm, (Iceland)	.....	.....	30.05	763.3	50.9	10.5	82	NW	.....	.....	4	.....	8	.....	.....	.....	.....	.....	
Thorshavn, (Faröe)	.....	.....	30.02	762.5	53.2	11.8	71	NW	.....	.....	4	.....	7	.....	.....	.....	.....	.....	
Vestervig	.....	.....	29.96	760.9	61.9	16.6	64	NW	.....	.....	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	.....	.....	30.08	763.9	71.6	22	61	NE	.....	.....	2	.....	8n, k	.....	NE	0	0	Very cloudy	Normal School.
Amiens	.....	.....	30.07	763.7	82.0	27.8	67	ENE	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	30.05	763.2	72.5	22.5	64	S	.....	.....	3	.....	8	.....	S	0	0	Very cloudy	Normal School.
Bar-sur-Seine	.....	.....	30.09	764.2	77.4	25.2	34	NE	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.00	762.0	80.4	26.9	39	NE	2.7	1.2	.....	.....	5	.....	NW	0	0	Cloudy	Beaumette Observatory.
Beauvais	.....	.....	30.11	764.8	75.0	23.9	39	ENE	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Besançon	.....	.....	30.04	762.9	76.3	24.6	52	ESE	.....	.....	4	.....	6	.....	.....	0	0	Clear	Normal School.
Bourg en Bresse	.....	.....	30.01	763.1	77.0	25	52	N	.....	.....	1	..0	.....	.....	.....	.....	.....	Clear	Normal School.
Bourges	.....	.....	30.04	763.1	75.2	24	49	NNE	.....	.....	2	.....	5	.....	W	0	0	Partly cl'dy	Normal School.
Brest	.....	..	30.08	764.1	74 3	23.5	56	NE	.....	.....	3	.....	1	.....	.....	0	0	Clear	Naval Observatory.
Carcassonne	.....	..	30.02	762.6	68.4	20.2	70	W	.....	.....	1	.....	10	.....	E	0.024	0.6	Covered	Normal School.
Caen	.....	...	30.63?	778.0?	70.3	21.3	77	N	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Chartres	.....	.....	30.04	763.0	76.6	24.8	.....	N	.....	.....	2	.....	6	.....	W	0	0	.....	Normal School.
Clermont	.....	.....	30.02	762.6	71.6	22.0	48	N	.....	.....	2	.....	5	.....	N	0	0	Cloudy	Puy de Dome Obs'y.
Commercy	.....	.....	30.07	763.7	73.2	22.9	40	NE	.....	.....	2	...	2k	.....	NE	0	0	Slightly cl'dy	Normal School.
Commune de Greasque*	.....	.....	30.11	764.8	74.7	23 7	48	SW	.....	.....	4	.....	5	.....	SW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.04	763.1	73.2	22.9	75	NNE	.....	.....	2	.....	8s,	.....	SE	0	0	Cloudy	Normal School.
La Roche-sur-Yon	.....	.....	30.07	763.7	77.7	25.4	46	N	.....	...	2	.....	2	.....	S	0	0	Slightly cl'dy	Normal School.
Le Mans	.....	.....	30.08	764.1	77.9	25.5	71	NE	.....	.....	2	.....	5	.....	NE	0	0	Cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	29.96	761.0	73.6	23.1	49	NE	.....	.....	4	.....	10	.....	.....	1.42	36.	H'vy shower	Normal School.
Mâcon	.....	.....	30.05	763.3	72.0	22.2	69	NE	.....	.....	4	.....	6	.....	SW	0	0	Cloudy	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	30.04	763.0	72.3	22.4	41	N	.....	.....	2	.....	5	.....	S	0	0	Cloudy	Normal School.
Nismes	.....	.....	30.02	762.6	74.8	23.8	75	SW	.....	.....	4	.....	5	.....	S	0	0	Cloudy	Normal School.
Orleans	.....	.....	30.00	762.1	77.0	25	29	NE	.....	.....	1	.....	8	.....	SE	0	0	Very cloudy	Normal School.
Paris, Observatory	.....	..	30.08	764.0	76.8	24.9	35	NE	.....	.....	2	.....	5k	.....	NE	0	0	Cloudy	National Observatory.
Parthenay	.....	.....	29.98	761.5	80.6	27	39	N	.....	.....	2	.....	2	.....	N	0	0	Slightly cl'dy	Normal School.
Privas	.....	.....	29.98	761.4	76.6	24.8	.....	N	.....	.....	2	.....	5	.....	N	.....	.....	Cloudy	Normal School.
Rochefort, Observatory	.....	.....	30.08	764.0	78.8	26.0	39	NE	.....	.....	3	.....	8	.....	SW	0	0	¾ Covered	Naval Observatory.
Rouen	.....	.....	30.10	764.6	76.8	24.9	50	NW	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Saint Lo	.....	.....	29.85	758.2	80.4	26.9	45	E	.....	.....	1	.....	1	.....	NE	0	0	.....	Normal School.
Tarbes	28.99	736.3	30.04	763.0	67.3	19.6	.....	WNW	.....	.....	1	.....	10	.....	.....	.....	.....	Raining	Normal School
Villefranche	.....	.....	30.02	762.6	75.6	24.2	74	NE	.....	.....	1	.....	5	.....	.....	0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.92	760.0	82.4	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	.....	L'Abbé Marchési.
Marseilles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Marseilles Observatory.
Mont-Louis	.....	.....	30.26	768.5	67.0	18.9	79	SSW	7.4	3.3?	.....	.....	8	.....	SSW	0.161	4.1	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.06	763.5	77.5	25 3	40	NE	.....	.....	3	.....	3	.....	S	0	0	.....	Montsouris Observ'tory.
Perpignan	.....	.....	30.03	762.8	73.2	22.9	63	SE	11.2	5.00	.....	.....	6	.....	SW	0.187	2.2	.....	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	77.0	25.0	47	NE	.....	.....	1	.....	2	.....	.....	0	0	Clear	L. Renou.
Toulouse	.....	.....	30.08	764.0	63.5	17.5	100	NW	.....	.....	1	.....	10	.....	.....	0.520	13.2	Rainy	Toulouse Observatory.
Tours	.....	.....	30.06	763.4	80.6	27.0	37	ENE	.....	.....	1	.....	5	.....	E	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.10	764.4	79.5	26.4	38	ENE	.....	.....	2	.....	5	.....	.....	0	0	Fair	Dr. A. Bérigny.
Zi Ka-Wei, (near Shanghai)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Le Lec, S. J.
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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 1,886.40 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,) 2,360 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.

Bamberg	.....	.....	30.04	763.1	73.9	23.3	41	N	.....	.....	3	.....	3	.....	.....	0.472	12.0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.90	759 4	74.3	23.5	59	NW	.....	.....	2	.....	1	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.01	762.3	77.2	25.1	32	NW	.....	.....	7	.....	7	.....	.....	Inap	Inap.	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	30.02	762.4	75.9	24.4	48	NE	.....	.....	3	.....	1	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.04	762.9	80.6	27.0	40	NNW	.....	.....	4	.....	1	NW	.....	0	0	.....	Dr. H. Möhl.
Emden	.....	.....	30.04	763.0	66.0	18.9	73	NW	.....	.....	3	.....	0	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.07	763.7	70.9	20.6	35	NE	.....	.....	1	.....	3	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	.....	.....	30.04	762 9	71.2	21.8	49	N	.....	.....	1	.....	9	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.03	762.8	69.8	20.7	64	NW	.....	.....	4	.....	0	.....	.....	0	0	Clear	Captain F. Hegemann.
Kiel	.....	.....	30.00	761.9	69.4	20.8	60	W	.....	.....	4	.....	0	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.85	758.2	69.4	20.8	49	NW	.....	.....	2	.....	0	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	30.03	762.7	77.2	25.1	49	NW	.....	.....	3	.....	3	WNW	.....	0.016	0.4	.....	Prof. Bruhns.
Memel	.....	.....	29.88	758.9	60.1	15.6	71	NW	.....	.....	3	.....	0	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.11	764.9	78.4	25.8	45	.....	.....	.....	1	.....	0	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.92	759 9	65.5	18.6	68	ENE	.....	.....	1	.....	1	.....	.....	0	0	Smoke-haze	A. Lothes.
Posen	.....	.....	29.97	761.2	70.0	26.1	41	W	.....	.....	2	.....	2	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (In Alsace)	.....	.....	30.05	763.2	76.5	24.7	40	NE	.....	.....	2	.....	2	E	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	30.06	763.4	74.8	23.8	37	N	.....	.....	1	.....	2	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	29.86	758.5	81.7	27.6	34	NW	.....	.....	3	.....	5	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.01	762.2	78.6	25.9	84	NW	.....	.....	4	.....	2	.....	.....	0	0	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	30.02	762.6	63.7	17.6	77	W	.....	.....	5	.....	3	.....	.....	0	0	.....	E. F. Schütz.
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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	94.1	34.5		W										Very clear	

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

ITALIAN SERIES.

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

Udine			30.04	763.0	74.8	23.8	46	SW	0.7	0.3			2			0	0		
Padua			30.04	763.0	73.8	23.2	50	SE	6.1	3.1			4	W		0	0		
Vicenza			30.04	762.9	75.9	24.4	50	S	3.1	1.4			2			0	0		
Verona			29.85	758.2	70.5	21.4	51	E			1		0			0	0		
Bergamo	28.56	725.3	29.82	757.5	74.3	23.5	59	S			1		7			0	0		
Domodossola	29.00	736.5	30.01	762.2	73.4	23.0	56	S			4		7			0.461	11.7		
Milan			30.03	762.8	80.2	26.8	57	E			2		8	E		0.043	1.1		
Pavia			30.03	762.7	77.0	25.0	53	NE			4		7	SW		0	0		
Moncalieri			30.04	762.9	71.1	21.7	68	N	1.3	0.6			9	W		0.488	12.4		
Mondovi	28.17	715.4	30.01	762.3	72.3	22.4	56	N			2		8	W		0.075	1.9		
Porto Maurizio			30.10	764.6	72.0	22.2	76	SW			2		7	N		0	0		
Genoa			30.05	763.3	73.9	23.3	61	SW	1.8	0.8			4	NW		0	0		
Piacenza			30.04	763.0	74.7	23.7	55	E	7.4	3.3			10	S		0	0		
Parma			30.02	762.6	79.2	26.2	56	E			2		9			0	0		
Bologna			30.01	762.3	77.9	25.5	57	NE			6		5	N		0	0		
Florence			30.03	762.8	83.3	28.5	39	NW			2		6	W		0	0		
Leghorn			30.03	762.7	73.8	23.2	67	W	6.5	2.8			4			0	0		
Siena	28.83	732.2	29.99	761.8	77.9	25.5	39	SE	1.5	0.6			6	W		0	0		
Urbino	28.56	725.4	30.06	763.5	71.6	22.0	45	NE			4		6			0	0		
Pesaro																			
Ancona			30.08	764.0	76.3	24.6	56	E			4		2			0	0		
Grosseto			30.06	763.4	81.0	27.2	42	NNW			4		3	NW		0	0		
Rome			30.03	762.7	81.1	27.3	44	SW	4.9	2.2			3	W		0	0		
Naples, O. U			30.01	762.3	84.0	28.9	42	SW			2		0			0	0		
Lecce			30.08	763.9	78.1	25.6	43	NNE	18.5	8.3			1	N		0	0		
Cosenza			30.00	761.9	87.3	30.7	63	NE	1.8	0.8			0			0	0		
Riposto, (Sicily)			30.00	762.0	81.0	27.2	53	SE			2		0			0	0		
Palermo			29.94	760.4	77.4	25.2	70	NE	6.3	2.8			0			0	0		
Caltanissetta	28.05	712.4	29.90	759.5	83.5	28.6	30	SE			2		0			0	0		
Sub-Series.																			
Naples, S. R			30.03	762.8	83.5	28.6	55	SSW	1.8	0.8			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, 806 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.

Flushing			30.15	765.9	64.2	17.9		NW			2								
Groningen			30.04	763.0	69.8	21.0		NW			2								
Helder			30.10	764.6	63.1	17.3		WSW			1								
Utrecht			30.07	763.8	76.1	24.5	56	N			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.

Bergen			29.92	759.9	59.4	15.2	70	SW	7.2	3.2			10			0.079	2.0		
Brönö			29.84	758.0	56.1	13.4	75	NNW	9	4			8			0	0		
Christiania			29.67	753.5	81.7	27.6	27	SW	4.9	2.2			1			0	0		
Tromsö			29.85	758.3	49.6	9.8	62	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,)	.....	.....	30.51	775.0	69.1	20.6	85	NE	10.6	4.75	.....	.....	5	.....	.....	Inap.	Inap.	Raining.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.08	763.9	70.3	21.3	52	SW	6.2	2.75	.....	.....	10	SW	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.29	769.3	69.6	20.9	63	SW	4.6	2.05	.....	.....	9	.....	.....	0	0	.....	Capt D. A. da Cunha.
Lisbon	.....	.....	30.13	765.4	63.1	17.3	75	SW	16.1	7.2	.....	.....	9	.....	.....	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	.....	.....	29.84	757.9	72.7	22.6	50	NW	22	10	.....	.....	3	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.75	755.6	71.1	21.7	26	N	22	10	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.77	756.1	72.1	22.3	34	WSW	4	2	.....	.....	0	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.74	755.3	67.3	19.6	50	NW	18	8	.....	.....	1	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.61	752.1	76.8	24.9	49	NW	13	6	.....	.....	0	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.56	750.8	54.3	12.4	100	NNW	9	4	.....	.....	10	.....	.....	.....	.....	Raining.....	Physical Cabinet.
Nikolaiev	.....	.....	29.67	753.5	75.9	24.4	50	N	18	8	.....	.....	5	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.58	751.2	73.6	23.1	73	S	4	2	.....	.....	6	.....	.....	.....	.....	Raining.....	Lagorio.
Moscow	.....	.....	29.57	751.1	57.2	14.0	87	NW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.35	745.6	72.1	22.3	56	NW	40	22	.....	.....	9	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	29.64	752.8	57.0	13.9	78	NW	29	13	.....	.....	0	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.30	718.7	29.60	751.7	89.6	32.0	39	NW	4	2	.....	.....	7	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.61	752.1	86.2	30.1	41	S	4	2	.....	.....	7	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.46	748.3	70.7	21.5	83	WNW	9	4	.....	.....	9	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.82	731.9	29.82	757.4	47.8	8.8	96	NE	2	1	.....	.....	10	.....	.....	.....	.....	Misty.....	Meteorological Obs.
Nukuss	.....	.....	29.61	752.1	92.7	33.7	35	NNE	4	2	.....	.....	9	.....	.....	.....	.....	.....	.....
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.17	715.5	29.74	755.4	91.0	32.8	44	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.00	762.0	64.2	17.9	87	WNW	18	8	.....	.....	1	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.53	750.0	55.4	13.0	70	SW	11	5	.....	.....	7	.....	.....	.....	.....	Thunder-storm...	Marks.
Irkutsk	28.19	716.1	29.50	749.2	68.5	20.3	56	SE	11	5	.....	.....	10	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.78	756.4	89.1	31.7	35	Calm	0	0	.....	.....	4	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	29.97	761.3	62.2	16.8	75	SE	2	1	.....	.....	1	.....	.....	.....	.....	.....	.....
Nikolaievsk, on the Amoor	.....	.....	.....	.....	58.5	14.7	98	E	7	3	.....	.....	5	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, or 1,621.3? ft.; Irkutsk, 392 m., or 1,286. ft.; Nertchinsk, 502.0? m., or 1,642.2? 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	762.9	64.8	18.2	68	SW	7.4	3.33	.....	.....	10	.....	.....	0.291	7.4	Rainy.....	Royal Observatory.
San Fernando	.....	.....	30.17	766.4	67.8	19.9	69	WSW	8.7	3.9	.....	4	6	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. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.78	756.3	60.4	19.1	41	N	.....	.....	4	.....	1	.....	.....	0	0	.....	
Umea	.....	.....	30.11	764.9	65.7	18.7	50	SE	.....	.....	2	.....	0	.....	.....	0	0	.....	
Hernosand	.....	.....	29.72	754.8	73.0	22.8	45	E	.....	.....	2	.....	1	.....	.....	0	0	.....	
Stockholm	.....	.....	29.67	753.5	80.5	30.3	37	SSW	.....	.....	2	.....	5	.....	.....	0	0	.....	
Wisby	.....	.....	29.85	758.3	74.5	23.6	54	WSW	.....	.....	6	.....	0	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.69	754.0	60.4	15.8	97	N	19.0	8.5	.....	.....	10	.....	.....	1.129	28.68	Rain, hail...	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	727.4	30.02	762.5	69.3	20.7	47	N	.....	.....	1	.....	7	.....	.....	0	0	Vapory	The Observatory.
Zurich	28.46	722.9	30.04	762.9	72.9	22.7	49	NE	.....	.....	1	.....	1	.....	.....	0.098	2.5	Clear	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note—For Geneva the corresponding departures from the normal values are: Barometer, +0.3 mm; Thermometer, —1.1 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.

Constantinople	.....	.....	29.86	758.4	80.6	27.0	43	NNE	12	5.5	.....	.....	5	.....	W	0	0	.....	
Fao, (Persian Gulf)	.....	.....	29.74	755.3	102.2	39.0	.....	S	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.92	760.0	74.8	23.8	.....	NW	.....	.....	8	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	29.99	761.8	79.0	26.1	.....	NW	.....	.....	3	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	29.82	757.5	74.3	23.5	.....	NW	.....	.....	8	.....	10	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.35	758.1	90.5	32.5	65	SW	.....	.....	1	.....	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.

Bathurst, N. B.	.....	.....	29.62	752.3	68.9	20.5	80	SW	16	7.2	.....	.....	8	.....	.....	0	0	Squally	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.98	761.5	74	23.8	.....	SW	5	2.2	.....	2c	0	SW	.....	0	0	Fair	W. R Bigg.
*Chatham, N. B.	.....	.....	29.72	754.9	66	18.9	96	SW	13	5.8	.....	.....	10ks	.....	SW	0.02	0.5	Cloudy	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.84	757.9	63	17.2	91	S	10	4.5	.....	.....	10ks	.....	.....	0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.89	759.2	77.4	25.2	71	W	.....	.....	1	4c	0	.....	.....	0	0	Bright	James Smith, M. A.
Dalhousie, N. B.	.....	.....	29.63	752.6	67.2	19.6	81	E	.....	.....	1	.....	.....	.....	.....	0.07	1.8	Foggy	H. A. Johnson.
Esquimault, B. C.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Bevis.
Fredericton, N. B.	.....	.....	29.80	756.9	63.0	17.2	89	S	4	1.8	.....	.....	10s	.....	.....	0.03	0.8	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.85	758.2	53	11.7	91	W	11	4.9	.....	..ck	..ks	W	W	0.17	4.3	Fair	James Stewart.
Goderich, Ontario	.....	.....	30.03	762.7	67.2	19.6	79	Calm	.....	.....	0	8k	2s	.....	W	0	0	Cloudy	H. J. Strang, M. A.
Granton, Ontario	28.96	735.6	30.03	762.7	63	17.2	.....	Calm	.....	.....	0	2cs	0	.....	.....	0.19	4.8	Clear	James Grant.
*Halifax, N. S.	.....	.....	29.90	759.4	64	17.8	100	S	7	3.1	.....	.....	Fog	.....	.....	0.01	0.3	Foggy	F. Allison, M. A.
*Kingston, Ontario	.....	.....	29.99	761.7	68	20.0	72	W	2	0.9	.....	5c	0	W	.....	Inap.	Inap.	Cle r	S. Woods, M. A.
Little Glace Bay, N. S.	.....	.....	29.95	760.7	62.2	16.8	95	SW	5	2.2	.....	.....	Fog	.....	.....	0	0	Foggy	C. H. Rigby.
*Montreal, Quebec	.....	.....	29.84	757.9	68	20.0	70	SW	15	6.7	.....	8c	0	W	.....	0.29	7.4	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.90	759.4	68	20.0	65	W	14	6.3	.....	8c	0	W	.....	0	0	Fair	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.98	761.5	62	16.7	83	W	9	4.0	.....	2cs	0	W	.....	0	0	Fair	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	30.02	762.5	68	20.0	65	N	4	1.8	.....	5k	0	SW	.....	0.01	0.3	Fair	H. Morgan.
Port Hastings, N. S.	.....	.....	29.94	760.5	61.5	16.4	.....	SE	10	4.5	.....	.....	.....	.....	.....	0	0	Dull	Peter Grant.
*Port Stanley, Ontario	.....	.....	30.01	762.2	68	20.0	68	NE	2	0.9	.....	10k	0	W	.....	0	0	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	29.70	754.4	73	22.8	81	SW	20	8.9	.....	8k	0	SW	.....	0.05	1.3	Fair	Capt. Ashe, R. N.
St. John, N. B.	.....	.....	29.88	758.9	58	14.4	97	S	2	0.9	.....	.....	Fog	.....	.....	0.080	2.03	Light rain	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.97	761.2	65	18.3	62	W	4	1.8	.....	10cs	0	.....	.....	Inap.	Inap.	Fair	K. Stewart.
Stayner, Ontario	.....	.....	29.96	761.0	66	18.9	59	Calm	0	0	.....	8k	0	W	.....	0	0	Cloudy	R. J. Cole.
Stratford, Ontario	28.75	730.2	29.99	761.7	61.9	16.6	87	Calm	0	0	.....	10cs	0	W	.....	0	0	Cloudy	C. J. Macgregor, M. A.
*Sydney, C. B.	.....	.....	29.97	761.2	62	16.7	95	S	8	3.6	....	.....	10n	.....	....	0	0	Cloudy	T. C. Hill.
*Toronto, Ontario	.....	.....	30.02	762.5	66	18.9	64	W	3	1.3	.....	.....	10ks	.....	W	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.02	762.5	64.8	18.2	78	Calm	0	0	.....	...	10s	.....	.....	Inap.	Inap.	Fine	J. Montgomery
Sub-Series.																			
St. John's, Newfoundland	.....	.....	30.26	768.6	56	13.3	69	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 360.3 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	76	24.4	72	W	5	2.2		0	0			0.06	1.5	Clear	
Alpena, Mich			29.94	760.5	64	17.8	67	NW	10	4.5		0	0			0	0	Clear	
Atlantic City, N. J			29.93	761.5	83	28.3	63	NW	10	4.5		0	0			0	0	Clear	
Augusta, Ga			30.12	765.0	81	27.2	74	Calm	0	0		0	0			0	0	Clear	
Baltimore, Md			30.01	763.0	82	27.8	67	W	4	1.8		5ck	2s	W	W	0	0	Fair	
Barnegat, N. J			29.97	761.2	83	28.3	63	NW	10	4.5		0	0			0	0	Clear	
Benton, Montana	27.50	698.5	30.30	769.6	63	17.2	73	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.32	719.3	29.96	761.0	52	11.1	42	NW	4	1.8		0	0			0	0	Clear	
Boston, Mass			29.84	757.9	79	26.1	69	W	8	3.6		1cs	Haze	W		0.12	3.0	Hazy	
Breckenridge, Minn			29.95	760.7	58	14.4	69	NW	8	3.6		8k	0	N		0	0	Cloudy	
Buffalo, N. Y			29.97	761.2	68.5	20.3	53	NE	2	0.9		2c	2k	W	W	Inap	Inap.	Fair	
Burlington, Vt			29.88	758.9	74	23.3	68	NW	7	3.1		5c	0			0	0	Fair	
Cairo, Ill			30.09	764.3	79	26.1	78	S	4	1.8		2cs	0			0	0	Clear	
Cape Hatteras, N. C			29.98	761.5	84	28.9	75	W	5	2.2		0	0			0	0	Clear	
Cape Henry, Va			30.03	762.7	87	30.6	62	NW	9	4.0		2c	0	W		0	0	Clear	
Cape Lookout, N. C			30.08	764.0	82	27.8	78	W	16	7.2		Haze	2s			0	0	Fair	
Cape May, N. J			29.99	761.7	77	25.0	86	NW	10	4.5		5k	0	W		0	0	Clear	
Charleston, S. C			30.12	765.0	86	30.0	75	W	7	3.1		0	Haze			0	0	Clear	
Cheyenne, Wyoming	24.24	615.7	30.18	766.6	56	13.3	81	SE	4	1.8			10s			0	0	Cloudy	
Chicago, Ill			30.05	763.3	67	19.4	79	W	1	0.4			10s			0	0	Cloudy	
Cincinnati, Ohio			29.99	761.7	79	26.1	73	NW	4	1.8		5ck	Sm'e	W	NW	0	0	Fair	
Cleveland, Ohio			30.00	762.0	68.4	20.2	88	W	6	2.7			10ks		W	Inap.	Inap.	Cloudy	
Colorado Springs, Col	24.25	615.9	30.12	765.0	59	15.0	100	Calm	0	0		1k	5s	SW		0.07	1.8	Fair	
Corsicana, Tex			30.00	762.0	76	24.4	88	S	12	5.4		10k	0	S		0.02	0.5	Cloudy	
Davenport, Iowa			30.10	764.5	67	19.4	84	E	1	0.4		2cs	8s			0.03	0.8	Cloudy	
Denison, Tex			30.01	762.2	75	23.9	81	SE	16	7.2			10s			0.24	6.1	Cloudy	
Denver, Col	24.93	634.5	30.20	767.1	58	14.4	75	NE	5	2.2			10s			0.01	0.3	Cloudy	
Detroit, Mich			30.02	762.5	67	19.4	60	NW	3	1.3			10s		NW	0	0	Cloudy	
Dodge City, Kan	27.48	698.0	29.72	754.9	59	15.0	100	N	18	8.0			10n			Inap	Inap.	Light rain	
Dubuque, Iowa			30.07	763.8	65	18.3	73	Calm	0	0			10s			0	0	Cloudy	
Duluth, Minn			29.92	760.0	64	17.8	58	SW	14	6.3		5k	0	SW		0.07	1.8	Fair	
Eastport, Me			29.80	756.9	56	13.3	100	S	6	2.7			Fog			0.04	1.0	Foggy	
Erie, Pa			29.97	761.2	70	21.1	84	W	3	1.3			10s			Inap.	Inap.	Cloudy	
Escanaba, Mich			29.95	760.7	64	17.8	62	W	8	3.6		0	0			0	0	Clear	
Fort Gibson, Indian Ter			29.97	761.2	79	26.1	78	SE	7	3.1			10s		SE	0	0	Cloudy	
Ft. St. Michael, Alaska			29.79	756.7	53	11.7	73	NE			5	0	5k,ks			0	0	Fair	
Fort Sill, Indian T	28.07	728.2	29.73	755.1	69	20.6	100	SE	20	8.9			10n		SE	5.09	129.3	Heavy rain	
Fort Sully, Dakota	28.43	722.1	30.06	763.5	58	14.4	47	NW	8	3.6		0	0			Inap.	Inap.	Clear	
Galveston, Tex			30.08	764.0	83	28.3	74	SE	8	3.6		2k	0	S		0	0	Fair	
Grand Haven, Mich			30.04	763.0	65	18.3	76	W	5	2.2		0	8s		W	0	0	Cloudy	
Indianapolis, Ind			30.04	763.0	72	22.2	90	NW	3	1.3			10n		N	0.66	16.8	Light rain	
Indianola, Tex			30.05	763.3	83	28.3	79	S	12	5.4		5k	0	S		0.01	0.3	Fair	
Jacksonville, Fla			30.16	766.1	85	29.4	67	S	8	3.6		7k	0		E	0.49	12 4	Light rain	
Keokuk, Iowa			30.05	763.3	63	17.2	88	E	9	4.0			10n			Inap.	Inap.	Cloudy	
Key West, Fla			30.13	765.3	82.2	27.9	83	SE	4	1.8			10s			0	0	Clear	
Kittyhawk, N. C			30.04	763.0	84	28.9	70	NW	6	2.7		0	0			0.48	10.9	Cloudy	
Knoxville, Tenn			30.13	765.3	72	22.2	95	SW	2	0.9		10k	0	SW		0	0	Clear	
La Crosse, Wis			30.08	764.7	68	20.0	69	S	6	2.7		0	0		NE	1.44	36.6	Cloudy	
Leavenworth, Kan			30.03	762.7	66	18.9	94	NE	4	1.8			10s			0	0	Fair	
Lexington, Ky	28.99	736.3	30.03	762.7	79	26.1	77	SW	12	5.4		5c	0		NW	0.08	2.0	Clear	
Long Branch, N. J			29.95	760.7	85	29.4	61	NW	10	4.5		0	1s			0	0	Clear	
Louisville, Ky			30.03	762.7	80	26.7	78	S	8	3.6		2k	0	SW		0	0	Clear	
Lynchburg, Va			30.05	763.3	84	28.9	52	W	1	0.4		0	0			0	0	Clear	
Malone, N. Y			29.85	758.2	67	19.4	84	SW	9	4.0		8c	0	W		0.05	1.3	Cloudy	
Manhattan, Kan	28.92	734.6	30.04	763.0	64	17.8	100	NW	2	0.9			10n			1.00	25 4	Light rain	
Marquette, Mich			29.94	760.2	64	17.8	62	SW	8	3.6		0	0			0	0	Clear	
Memphis, Tenn			30.12	765.0	81	27.2	74	S	2	0.9		8cs	0			0	0	Fair	
Milwaukee, Wis			30.08	764.0	63	17.2	78	W	5	2.2			10ks		W	0	0	Cloudy	
Mobile, Ala			30.18	766.6	81	27.2	78	S	3	1.3		0	0			Inap.	Inap.	Clear	
Montgomery, Ala			30.18	766.6	82	27.8	74	SW	2	0.9		0	0			0	0	Clear	
Morgantown, W. Va	29.00	736.6	30.00	762.0	76	24.4	72	S	4	1.8		0	0			Inap.	Inap.	Clear	
Mt. Washington, N. H	23.79	604.3	30.15	765.8	53	11.7	100	NW	54	24.1			Fog			0.41	10.4	Foggy	
Nashville, Tenn			30.08	764.0	82	27.8	70	Calm	0	0		2c	0			0	0	Clear	
New Haven, Conn			29.93	760.2	81	27.2	67	N	10	4.5		5k	Haze	NW		0.05	1.3	Fair	
New London, Conn			29.91	759.7	83	28.3	60	NW	7	3.1		5c	0	W		0.02	0.5	Clear	
New Orleans, La			30.15	765.8	81	27.2	78	SE	2	0.9		0	0			2.11	53.6	Clear	
Newport, R. I			29.89	759.2	79	26.1	69	NW	6	2.7		0	0			0.06	1.5	Clear	
New York, N. Y			29.97	761.2	79	26.1	65	NW	8	3.6		2ck	0			0.03	0.8	Clear	
Norfolk, Va			30.05	763.3	85	29.4	61	N	5	2.2		0	Haze			0	0	Clear	
North Platte, Neb			29.77	756.1	67	13.9	75	N	2	0.9		10k	0	NW		0.12	3.0	Cloudy	
Omaha, Neb	27.26	692.4	29.77	756.1	67	17.2	88	Calm	0	0		8c	0	W		0.04	1.0	Fair	
Oswego, N. Y	29.04	737.6	30.08	764.0	64.5	18.1	70	SW	8	3.6			10ks		NW	0	0	Cloudy	
Pembina, Dakota			29.98	761.5	54	12.2	73	NW	8	3.6		5k	0	NW		0	0	Fair	
Philadelphia, Penn			29.85	758.2	81	27.2	59	NW	9	4.0		5ck	0	W		0.47	11.9	Fair	
Pike's Peak, Colorado			29.99	761.7	38	3.3	71	W	5	2.2		0	5k			0.17	4.3	Clear	
Pittsburgh, Penn	18.06	458.7	30.27	768.8	38	3.3	71	W	5	2.2		5k	0	NW		0	0	Fair	
Port Huron, Mich			29.97	761.2	75	23.9	81	NW	4	1.8			10s		W	0	0	Cloudy	
Portland, Me			30.01	762.2	65	18.3	78	NW	4	1.8			10s			0	0	Cloudy	
Portland, Oregon			29.82	757.4	66	18.9	89	Calm	0	0			Fog			0.60	15.2	Foggy	
Punta Rassa, Fla			30.09	764.3	60	15.6	82	N	2	0.9		0	0			0	0	Clear	
Rochester, N. Y			30.14	765.5	80.5	26.9	82	E	8	3.6			10s		NE	0	0	Threatening	
Salt Lake City, Utah			29.97	761.2	69	20.6	56	W	6	2.7		10k	0	W		Inap.	Inap.	Cloudy	
Sandy Hook, N. J	25.70	652.8	30.03	762.7	65	18.3	41	N	8	3.6		0	0			0	0	Clear	
San Diego, Cal			29.94	760.5	77	25.0	76	W	12	5.4		2ck	Haze			0	0	Clear	
San Francisco, Cal			29.90	759.4	63	17.2	94	NW	4	1.8			10s		NW	0	0	Cloudy	
Santa Fé, N. M			29.84	757.9	57	13.9	87	SW	12	5.4		0	0			0	0	Clear	
Savannah, Ga	28.93	592.0	29.87	758.7	62	16.7	66	E	4	1.8		0	0			0	0	Clear	
Shreveport, La			30.15	765.8	84	28.9	75	W	3	1.3		2c	Haze	SE		0	0	Fair	
Smithville, N. C			30.14	765.5	78	25.6	86	SE	4	1.8		2c	Haze		SE	0.03	0.8	Fair	
Springfield, Mass			30.10	764.5	82	27.8	83	SW	10	4.5		5k,ck	0	W		0	0	Fair	
St. Louis, Mo			29.91	759.7	82	27.8	66	W	10	4.5		2k	Haze	W		0.27	6.9	Fair	
St. Marks, Fla			30.05	763.3	76	24.4	70	NE	8	3.6			10s			0.10	2.5	Cloudy	
St. Paul, Minn			30.18	766.6	80	26.7	82	NW	2	0.9		2c	0			0	0	Fair	
St. Paul's Island, Alaska			29.98	761.5	63	17.2	72	SW	8	3.6		0	0			0.01	0.3	Clear	
Thatcher's Island, Mass			29.76	755.9	38	3.3	100	NE	26	11.6			10n			0.18	4.6	Raining	
Toledo, Ohio			29.85	758.2	65	18.3	89	SW	5	2.2						0.16	4.1	Dense fog	
Tucson, Arizona	27.49	698.2	30.02	762.5	68	20.0	74	SW	1	0.4			10ks		SW	Inap.	Inap.	Cloudy	
Tybee Island, Ga			30.08	764.0	80	26.7		S				5k	5ks	S	S	0	0	Cloudy	
Vicksburg, Miss			30.13	765.3	83	28.3	79	NW	4	1.8		5	m'e			0	0	Fair	
			30.17	766.3	79.5	26.4	78	S	1	0.4		1c,hz	0	N		Inap.	Inap.	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.	24.48	621.8	29.96	761.0	50	10.0	58	SE	8	3 6	.....	0	0	.....	.....	0	0	Clear.	
Washington, D. C.	.....	.....	30.03	762.7	83	28.3	64	SW	2	0.9	.....	0	2s	.....	W	Inap.	Inap.	Fair.	
Wilmington, N. C	.....	.....	30.09	764.3	84	28.9	71	W	6	2.7	.....	2c	0	w	.....	Inap.	Inap.	Fair.	
Wood's Holl, Mass.	.....	.....	29.89	759.2	73	22.8	81	Calm	0	0	.....	2c	0	SW	.....	0	0	Clear.	
Wytheville, Va.	27.83	706.9	29.90	759.4	74	23.3	81	W	4	1.8	.....	1c	1ks	W	W	0	0	Clear.	
Yankton, Dakota	28.86	733.0	30.12	765.0	61	16.1	66	S	3	1.3	.....	0	0	.....	.....	0.01	0.3	Clear.	
Yuma, Arizona	.....	.....	29.82	757.4	81	27.2	.....	E	.....	.....	.....	0	0	.....	.....	0	0	Clear.	
Sub Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.06	763.5	82	27.8	70	NE	6	2.7	.....	0	5s	.....	E	0	0	Fair.	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	30.02	762.5	82	27.8	87	E	.....	.....	.....	5k	5ks	.....	.....	0	0	Fair.	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.22	767.6	82	27.8	78	SE	4	1.8	.....	8c	0	.....	.....	0.11	2.8	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.09	764.3	79	26.1	82	ENE	3.6	1.6	.....	10c	0	.....	.....	0.58	14.7	Cloudy.	Charles Hasselbrink
St. Georges, Bermudas	.....	.....	30.09	764.3	76.0	24.4	95	W	20.0	8.9	.....	.....	10n	.....	.....	0.41	10.4	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	70	21.1	75	SE	1.0	0.4	.....	5c	0	SE	.....	0.54	13.7	Fine, clear.	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.05	763.3	82	27.8	79	E	.....	.....	2	4k	5k	E	.....	1.990	50.55	Fair.	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.11	764.8	.....	.....	84.2	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.969	50.00	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640.6	.....	.....	66.0	18.9	85	Calm	0	0	.....	3c	4ks	.....	.....	0.06	1.5	Fair.	Thomas Herran
York Factory, B. A.	.....	.....	30.09	764.3	44	6.7	92	NE	13	5.8	.....	0	0	.....	.....	0	0	.....	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.04	763.0	76	24.4	90	E	.....	.....	1	.....	.....	.....	.....	0	0	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	30.04	763.0	61	16.1	78	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Steamer Nova Scotian, N. 39° 02′, W. 69° 34′.	WSW	10½	29.97	761.2	73	22.8	.....	SE to S	.....	.....	2	.....	6	.....	.....	Tranq'l	.....	Very 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.; 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, 1,078 (?) 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, 4,268.8 ft., or 1,301.1 m.; Santa Fè, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are 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 JUNE 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.
1:18 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	....	.....	30.07	763.8	71.6	22.0	59	N	.....	.....	1	.....	9	.....	.....	0	0	Hidden	Charnot.
Algiers	....	.....	30.08	763.9	75.2	24.0	67	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	Peter.
La Calle	.....	.....	.....	.....	77.9	25.5	58	NW	.....	.....	2	.....	3	.....	.....	0	0	Fair	Kunts.
Tunis	.....	.....	30.06	763.5	82.2	27.9	59	NE	.....	.....	4	.....	5	.....	.....	0	0	Fair	Jacques.
Sfax	.....	.....	30.04	762.9	81.7	27.6	66	NE	.....	.....	4	.....	3	.....	.....	0	0	Fair	Chauvey.
Saida	.....	.....	30.11	764.7	78.8	26.0	24	NNW	.....	.....	2	.....	1	.....	.....	0	0	Clear	Millot.
Tebessa	.....	.....	30.06	763.4	82.4	28.0	.....	SW	.....	.....	1	.....	7	.....	.....	0	0	Cloudy	Colin.
Geriville	.....	.....	30.05	763.2	82.0	27.8	24	W	.....	.....	2	.....	1	.....	.....	0	0	Clear	Buard.
Laghouat	.....	.....	30.06	763.5	96.8	36.0	.....	NW	.....	.....	2	.....	0	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	29.98	761.5	95.9	35.5	.....	N	.....	.....	1	.....	0	.....	.....	0	0	Clear	Laromer.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

AUSTRIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram	.....	.....	29.89	759.3	77.5	25.3	53	Calm	.....	.....	0	.....	4	.....	.....	0	0	.....	Prof. Ivan Stosir.
Cracow, I. R. Observatory	.....	.....	29.84	758.0	77.7	25.4	48	W	.....	.....	2	.....	7	.....	.....	0.004	0.1	.....	Dr. Wierzbiski.
Eperies	.....	.....	29.85	758.1	71.6	22.0	74	Calm	.....	.....	0	.....	9	.....	.....	0.028	0.70	.....	Julius Mikolik.
Gratz	28.77	730.8	29.93	760.3	73.0	22.8	47	NE	.....	.....	4	.....	5	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	28.48	723.3	29.83	757.6	76.3	24.6	41	NW	.....	.....	3	.....	5	.....	.....	0	0	.....	Prof. Reissenberger.
Kremsmünster	28.52	724.3	29.79	756.7	74.5	23.6	42	ENE	.....	.....	2	.....	3	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	.....	.....	29.73	755.2	73 4	23.0	84	E	.....	.....	1	.....	2	.....	.....	0	0	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habsuda Daniel.
Pola	.....	.....	29.93	760.1	76.6	24.7	58	NW	.....	.....	1	.....	7cs	.....	.....	0	0	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	29.87	758.6	77.7	25.4	47	SW	.....	.....	2	.....	4	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	29.94	760.5	76.3	24.6	57	Calm	.....	.....	0	.....	6	.....	.....	0	0	Covered	Prof. V. Farolfi.
Vienna	.....	.....	29.84	758.0	75.7	24 3	50	SE	.....	.....	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.; 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	.....	.....	29.85	758.1	68.5	20.3	51	WNW	.....	.....	2	7	2	W	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	.....	.....	29.95	760.7	59.0	15.0	.....	WNW	20	8.9	.....	.....	7	.....	.....	0	0	*D. clouds	William Boswell.
Ardrossan	.....	.....	30.02	762.5	60	15.6	.....	NW	.....	.....	3	.....	7	.....	.....	.....	.....	*D. clouds	William McNeil.
Armagh, Observatory	.....	.....	30.08	764.0	60.9	16.1	.....	W	5	2.2	.....	.....	9	.....	.....	.....	.....	Overcast	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	30.10	764.5	62.9	17.2	.....	NW	.....	.....	1	.....	7	.....	.....	.....	.....	*D. clouds	J. Dreyer.
Bradford	.....	.....	29.96	761.0	66.2	19.0	.....	W	.....	.....	0	.....	2	.....	.....	0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.05	763.3	80.0	26.7	.....	SE	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory	.....	.....	29.97	761.2	70.0	21.1	.....	N	.....	.....	1	.....	7	.....	.....	.....	.....	*D. clouds	H. Todd.
Cardington	.....	.....	29.98	761.5	64.0	17.8	.....	N	.....	.....	1	.....	9	.....	.....	.....	.....	Overcast	John McLaren.
Carlisle	.....	.....	29.96	761.0	63.8	17.7	.....	W	.....	.....	1	.....	8	.....	.....	0	0	*D. clouds	T. Bell, for J. Carmell.
Chatham, School M. E	.....	.....	29.95	760.7	64.5	18.1	.....	NE	.....	.....	1	.....	3	.....	.....	.....	.....	*D. clouds	Capt. J. Fellowes, R.E.
Dartmoor	28.77	730.7	30.26	768.6	58.4	14.7	.....	N	.....	.....	3	.....	6	.....	.....	.....	.....	*D. clouds	R. E. Power.
Donaghadee	.....	.....	30.05	763 3	58	14.4	.....	N	.....	.....	5	.....	8	.....	.....	.....	.....	*D. clouds	J. Mac Gowan.
Dover	.....	.....	29.95	760.7	63	17.2	.....	NE	.....	.....	2	.....	7	.....	.....	.....	.....	½ clouded	J. Costello.
Eccles, (near Manchester.)	.....	.....	29.98	761.5	62.9	17.2	.....	WSW	9.6	4.3	.....	.....	10	.....	.....	.....	.....	Gloomy	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.00	762.3	63.5	17.5	.....	NW	14	6.3	.....	.....	9	.....	.....	.....	.....	Overcast	The Staff.
Fort Napier, (Natal)	27.90	708.6	30.14	765.5	60.1	15.6	.....	E	.....	.....	2	.....	1	.....	.....	.....	.....	*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	30.04	763.0	84	28.9	.....	NE	.....	.....	4	.....	5	.....	.....	.....	.....	*D. clouds	
Galway, Queen's College	.....	.....	30.05	763.3	67	19.4	.....	NW	.....	.....	1	.....	10	.....	.....	.....	.....	Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.03	762.7	74.0	23.3	.....	W	.....	.....	4	.....	0	.....	.....	.....	.....	Blue sky	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	29.98	761.5	60.0	15.6	.....	W	.....	.....	1	.....	9	.....	.....	.....	.....	*D. clouds	Lewis Stuart.
Great Yarmouth	.....	.....	29.98	761.5	63	17.2	.....	NNE	.....	.....	3	.....	3	.....	.....	.....	.....	Blue sky	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	29.96	761.0	69.7	20.9	.....	N	.....	.....	1	.....	9	.....	.....	.....	.....	Cloudy	The Staff, for G. B. Airy.
Guernsey	.....	.....	30.03	762.7	64.5	18.1	.....	NW	.....	.....	3	.....	3	.....	.....	.....	.....	*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	29.98	761.5	66.0	18.9	.....	WNW	.....	.....	1	.....	5	.....	.....	.....	.....	*D. clouds	L. J. Crossley.
Helston	.....	.....	30.06	763.5	67	19.4	.....	NW	.....	.....	2	.....	4c	.....	.....	0	0	Fine	M. P. Moyle.
Holyhead	.....	.....	30.07	763.8	57	13.9	.....	WNW	.....	.....	3	.....	10	.....	.....	.....	.....	Overcast	John Tilston.
Kew, Observatory	.....	.....	29.96	761.0	67.5	19.7	.....	NNW	8	3.6	.....	.....	8	.....	.....	.....	.....	Threatening	The Staff.
Kingstown	.....	.....	30.05	763.3	58	14.4	.....	NW	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast	George Mitchell.
Leicester Museum	.....	.....	30.00	762.0	62.2	16.8	.....	N	.....	.....	1	.....	8	.....	.....	.....	.....	Hazy	Wm. J. Harrison, F.G.S.
Malta, Mediterranean	.....	.....	29.94	760.5	77.6	25.3	.....	NE	.....	.....	1	.....	0	.....	.....	.....	.....	.....	Corp'l F. Fraser, A. M. C.
Nairn	.....	.....	29.98	761.5	58	14.4	.....	W	.....	.....	3	.....	8	.....	.....	.....	.....	¾ clouded	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.18	766.6	85.2	29.6	.....	NE	.....	.....	5	.....	7	.....	.....	.....	.....	*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	29.98	761.5	69.3	20.7	.....	WSW	.....	.....	3	.....	10k	.....	SW	0	0	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.01	762.2	59.9	15.5	.....	NW	.....	.....	3	.....	9	.....	.....	.....	.....	Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	29.97	761.2	64	17.8	.....	N	.....	.....	2	.....	10	.....	.....	.....	.....	Overcast	J. Lucas.
Plymouth	.....	.....	30.05	763.5	69	20.6	.....	N	.....	.....	3	.....	6	.....	.....	.....	.....	*D. clouds	John Merrifield.
Roche's Point	.....	.....	30.13	765.3	65	18.3	.....	NNW	.....	.....	3	.....	5	.....	.....	.....	.....	Fine	W. Kennedy.
Saint Ann's Head	.....	.....	30.10	764.5	58	14.4	.....	NW	.....	.....	2	.....	5	.....	.....	.....	.....	*D. clouds	John C. Walker.
Saint Helier, (Jersey)	.....	.....	30.03	762.7	68.0	20.0	.....	NNE	.....	.....	3	.....	2	.....	.....	.....	.....	¼ clouded	A. P. Amy.
Sandwick Manse (Orkneys)	.....	.....	29.94	760.5	52.0	11.1	.....	NW	23	10.3	.....	.....	10	.....	.....	.....	.....	Misty	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	29.99	761.7	53.7	12.1	.....	SE	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast	F. Shaw.
Scutari Cemetery (Turkey	.....	.....	29.89	759.2	71.4	21.9	.....	SW	.....	.....	2	.....	6	.....	.....	Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield	.....	.....	29.97	761.2	67.6	19.8	.....	WSW	.....	.....	2	.....	8	.....	.....	0	0	Overcast	W. F. Cooper.
Silloth Rectory	.....	.....	29.98	761.5	75.9	24.4	43	Calm	.....	.....	0	.....	3	.....	.....	0	0 *	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	29.98	761.5	63.2	17.3	.....	W	.....	.....	1	.....	6	.....	.....	.....	.....	.....	Rev. S. J. Perry.
Stornoway, Lews C., Hebr.	.....	.....	30.02	762.5	57	13.9	.....	NW	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast	John Smith.
Stratfield Turgiss	.....	.....	29.99	761.7	64.6	18.1	.....	N	.....	.....	1	.....	2	.....	.....	.....	.....	Blue sky	Rev. Charles H. Griffith.
Thurso	.....	.....	29.95	760.7	54	12 2	.....	NW	.....	.....	4	.....	9	.....	.....	.....	.....	Overcast	John Trotter.
Truro, Royal Institution	.....	.....	30.10	764.5	66	18.9	.....	NW	.....	.....	6	.....	8	.....	.....	.....	.....	Gloomy	W. Newcombe.
Valencia, Observatory	.....	.....	30.17	766.3	59.4	15.2	.....	W	11	4.9	.....	.....	10	.....	.....	.....	.....	*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, Isle of Man	.....	.....	.....	.....	55	12.8	.....	N	.....	.....	4	.....	10	.....	.....	0	0	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	30.20	767.1	61.8	16.6	55	S	5	2.2	.....	0	2	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	29.94	760.5	58.0	14.4	87	W	.....	.....	1	.....	2k	.....	.....	0.05	1.3	.....	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	29.98	761.5	55.0	12.8	.....	W	.....	.....	2	.....	8k	.....	.....	0	0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.16	766.1	.....	.....	.....	ESE	8.2	3.7	.....	.....	.....	.....	.....	0.01	0.3	.....	C. Meldrum
Melbourne, Observatory	.....	.....	30.19	766.8	44.9	7.2	83	N	9	4.0	.....	.....	4	.....	.....	0	0	Fine	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	30.03	762.7	53	11.7	.....	NW	.....	.....	3	5	5	N	.....	0	0	.....	J. Youngerhouse.
North Unst, (Shetland Is.)	.....	.....	29.86	758.4	53	11.7	.....	N	.....	.....	4	2	4	N	.....	.....	.....	.....	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	.....	.....	29.86	758.4	64.2	17.9	63	SSW	.....	.....	2	.....	10	.....	.....	.....	.....	.....	.....
Faröe	.....	.....	29.88	758.9	62.8	17.1	69	NW	.....	.....	4	.....	5	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	29.58	751.3	.....	.....	.....	Calm	.....	.....	0	.....	5	.....	.....	.....	.....	.....	.....
Stykkisholm, (Iceland)	.....	.....	29.61	752.2	52.3	11.3	83	S	.....	.....	8	.....	10	.....	.....	.....	.....	Raining	.....
Thorshavn, (Faröe)	.....	.....	29.97	761.3	54.7	12.6	72	WSW	.....	.....	2	.....	10	.....	.....	.....	.....	.....	.....
Vestervig	.....	.....	29.83	757.7	61.5	16.4	66	WNW	.....	.....	4	.....	0	.....	.....	.....	.....	.....	.....

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

FRENCH SERIES.

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

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	29.94	760.4	71.6	22	72	SW	.....	.....	1	.....	8ku	.....	SW	0	0	Very cloudy	Normal School.
Amiens	.....	.....	30.02	762.6	80.6	27.0	55	N	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	29.97	761.3	75.6	24.2	59	E	.....	.....	2	.....	0	.....	.....	0.535	13.6	Clear	Normal School.
Bar-sur-Seine	.....	.....	29.88	758.9	79.0	26.1	37	N	.....	.....	2	.....	5	.....	.....	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.97	761.2	78.3	25.7	30	W	8.9	4.0	.....	.....	5	.....	W	0	0	Cloudy	Beaumette Observatory.
Beauvais	.....	.....	29.92	759.9	76.1	24.5	45	NW	.....	.....	3	.....	8	.....	NW	0	0	Very cloudy	Normal School.
Besançon	.....	.....	29.94	760.4	75.2	24	53	SSW	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Bourg en Bresse	.....	.....	30.02	762.5	71.6	22	67	S	.....	.....	1	.....	..k	.....	.....	.....	.....	Clear	Normal School.
Bourges	.....	.....	29.92	759.9	78.4	23	69	NNW	.....	.....	4	.....	5	.....	SSW	0	0	Partly cloudy	Normal School.
Brest	.....	.....	30.04	763.0	63.9	17.7	69	NNE	.....	.....	4	.....	6k	.....	NNE	0	0	.....	Naval Observatory.
Carcassonne	.....	.....	30.00	762.1	70.0	21.1	60	NW	.....	.....	3	.....	2	.....	SE	0	0	Slightly cl'dy	Normal School
Caen	.....	.....	30.01?	777.0?	70.7	21.5	74	NW	.....	.....	2	.....	1	.....	W	0	0	Clear	Normal School.
Chartres	.....	.....	29.80	756.8	80.8	27.1	.....	N	.....	.....	2	.....	5	.....	NW	0	0	.....	Normal School.
Clermont	.....	.....	29.95	760.7	72.7	22.6	51	N	.....	.....	2	.....	10	.....	N	.....	.....	Rain & hail	Puy de Dome Obs'y.
Commercy	.....	.....	29.89	759.2	73.0	22.8	45	NW	.....	.....	4	.....	5k	.....	NW	0	0	Cloudy	Normal School.
Commune de Greasque*	.....	.....	30.05	763.2	73.9	23.3	48	SW	.....	.....	2	.....	8	.....	SW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.04	763.0	75.0	23.9	70	ENE	.....	.....	2	.....	5k	.....	SW	1.028	26.1	Cloudy	Normal School.
La Roche-sur-Yon	.....	.....	29.99	761.8	81.3	27.4	43	W	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Le Mans	.....	.....	29.96	761.0	76.5	24.7	55	W	.....	.....	2	.....	2	.....	W	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier	.....	.....	29.91	759.6	70.7	21.5	67	SW	.....	.....	2	.....	0	.....	.....	1.047	26.60	Clear	Normal School.
Mâcon	.....	.....	29.96	760.9	72.7	22.6	70	SE	.....	.....	4	.....	5	.....	NW	0	0	Cloudy	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	30.20	767.0	64.4	18	82	W	.....	.....	2	.....	8	.....	E	0	0	Very cloudy	Normal School.
Nismes	.....	.....	29.95	760.6	75.2	24	57	SW	.....	.....	4	.....	5	.....	SW	0	0	Cloudy	Normal School.
Orleans	.....	.....	29.91	759.6	78 8	26	31	WNW	.....	.....	2	.....	2	.....	S	0	0	Slightly cl'dy	Normal School.
Paris, Observatory	.....	.....	29.91	759.7	77.9	25.5	38	WNW	.....	.....	2	.....	4k	.....	W	0	0	Cloudy	National Observatory.
Parthenay	.....	.....	29.91	759.8	87.8	31	40	NW	.....	.....	2	.....	1	.....	NW	0	0	Slightly cl'dy	Normal School.
Privas	.....	.....	29.98	761.5	73.0	22.8	.....	SE	.....	.....	1	.....	2	.....	SE	.....	.....	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.02	762.6	83.7	28.7	50	W	.....	.....	3	.....	0	.....	.....	0	0	Blue sky	Naval Observatory.
Rouen	.....	.....	29.95	760.6	73.2	22.9	53	W	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Saint Lo	.....	.....	29.80	758.4	72.0	22.7	74	NW	.....	.....	1	.....	8	.....	W	0	0	.....	Normal School.
Tarbes	29.92	737.0	30.08	763.9	66.2	19	.....	W	.....	.....	1	.....	5	.....	E	0	0	Cloudy	Normal School
Villefranche	.....	.....	29.96	761.0	72.5	22.5	81	SE	.....	.....	3	.....	5	.....	SW	0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.88	759.0	82.4	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	lank	Blank	.....	L'Abbé Marchéal.
Marseilles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Marseilles Observatory.
Mont-Louis	.....	.....	30.25	768.3	55.8	13.2	79	NE	1.9	0.83	.....	.....	4	.....	SW	0.012	0.3	.....	—. Falguère.
Montsouris, Paris	.....	.....	29.92	760.0	76.6	24.8	40	W	.....	.....	2	.....	7	.....	W	0	0	.....	Montsouris Observ'tory.
Perpignan	.....	.....	29.98	761.6	75.2	24.0	52	NE	7.4	3.33	.....	.....	4	.....	W	0.030	1.0	.....	Dr. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.91	759.7	79.3	26.3	45	WNW	.....	.....	1	.....	3	.....	.....	0	0	Slightly cl'dy	F. Penou.
Toulouse	.....	.....	30.09	764.2	69.1	20.6	73	NW	.....	.....	2	.....	5	.....	.....	0.012	0.3	.....	Toulouse Observatory.
Tours	.....	.....	29.95	760.7	79.9	26.6	31	NW	.....	.....	2	.....	1	.....	W	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.93	760.2	78.1	25.6	31	NW	.....	.....	2	.....	3	.....	.....	0	0	Fair	Dr. A. Berigny.
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 1,272.0 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.

Bamberg	.....	.....	29.88	759.0	74.7	23.7	51	N	.....	.....	2	.....	3	N	.....	Inap.	Inap.	Thunder, lightn'g	Prof. T. Hoh.
Berlin	.....	.....	29.84	758.0	77.0	25.0	37	N	.....	.....	2	.....	2	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	29.95	760.7	77.4	25.2	38	NE	.....	.....	3	.....	2	.....	.....	0	0	.....	Dr. P. Neugebauer.
Carlsruhe	.....	.....	29.83	757.7	77.4	25.2	55	SW	.....	.....	1	.....	10	.....	.....	0	0	.....	A. Senn.
Cassel	.....	.....	29.90	759.5	70.9	21.6	67	N	.....	.....	2	.....	10	S	.....	0.118	3.0	Thunder, lightn'g	Dr. H. Möhl.
Emden	.....	.....	29.91	759.8	64.2	17.9	64	N	.....	.....	4	.....	8	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.81	758.8	81.1	27.3	33	NW	.....	.....	1	.....	4	.....	.....	Inap.	Inap.	.....	Physical Society.
Friedrichshafen	.....	.....	29.03	760.2	67.6	19.8	78	SW	.....	.....	4	.....	8	.....	.....	0.035	0.9	Raining	M. Wilhelm.
Hamburg	.....	.....	29.89	759.3	68.2	20.1	60	NNW	.....	.....	1	.....	1k	.....	.....	0	0	.....	Captain F. Hegemann.
Kiel	.....	.....	29.88	758.9	64.4	18.0	66	W	.....	.....	2	.....	6	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	29.83	757.6	73.6	23.1	56	W	.....	.....	2	.....	2	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	29.87	758.8	70.9	26.6	36	SE	.....	.....	2	.....	6	.....	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	29.85	758.1	64.8	18.2	76	WNW	.....	.....	2	.....	0	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.91	759.8	77.5	25.3	57	.....	.....	.....	1	.....	5	.....	.....	0.268	6.8	Thunder, lightn'g	Prof. E. Heis.
Neufahrwasser	.....	.....	29.88	759.0	68.5	20.3	78	NE	.....	.....	2	.....	3	.....	.....	0	0	.....	A. Lothes.
Posen	.....	.....	29.91	759.8	78.6	25.9	35	W	.....	.....	5	.....	0	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.88	758.9	78.1	25.6	45	Calm	.....	.....	0	.....	9	SW	.....	0	0	Thunder, lightn'g	Dr. Schur.
Stuttgart	.....	.....	29.85	758.1	75.2	24.0	40	NE	.....	.....	1	.....	4	.....	.....	0.413	10.5	Thunder-storm	Prof. Schoder.
Thorn	.....	.....	29.86	758.4	81.9	27.7	33	NW	.....	.....	4	.....	1	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.82	757.4	79.7	26.5	35	SE	.....	.....	6	.....	9	.....	.....	0.543	13.8	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	29.96	760.9	64.0	17.8	68	W	.....	.....	3	.....	3	.....	.....	0	0	.....	E. F. Schütt.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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	759.8	88.9	31.6		SW										Very clear	

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

ITALIAN SERIES.

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

Udine			29.90	759.4	77.4	25.2	42	SW	0.7	0.3			6			0	0		
Padua			29.90	759.4	75.2	24.0	50	SE	4.3	1.9			10	S		0.024	0.6		
Vicenza			29.89	759.3	77.9	25.5	40	SE	4.9	2.2			6	SW		0.201	5.1		
Verona			29.85	758.3	72.7	22.6	51	E			2		6			0.551	14.0		
Bergamo	28.58	725.8	29.84	758.0	75.2	24.0	53	SSW			2		6			0.689	17.5		
Domodossola	28.93	734.7	29.94	760.5	64.4	18.0	84	Calm			0		9			0.102	2.6		
Milan			29.93	760.2	73.8	23.2	67	NNW			2		8	NNW		0.650	16.5		
Pavia			29.93	760.1	75.7	24.3	51	N			1		7	SW		0.051	1.3		
Moncalieri			29.93	760.2	61.7	16.5	85	SE	1.8	0.8			1	E		0.280	7.1		
Mondovi	28.06	712.7	29.91	759.6	64.9	18.3	77	N			2		10			0	0		
Porto Maurizio			30.01	762.2	73.0	22.8	77	SW			2		8	NE		0	0		
Genoa			29.96	761.0	72.7	22.6	65	W	1.8	0.8			10	W		0.020	0.5		
Piacenza			29.96	761.0	66.2	19.0	83	W	10.5	4.7			10			0.071	1.8	Showery	
Parma			29.94	760.5	69.8	21.0	57	S			4		9			0.217	5.5		
Bologna			29.96	760.9	71.6	22.0	41	SE			6		5	W		0.157	4.0		
Florence			29.96	761.0	79.3	26.3	51	SW			4		6	SW		0	0		
Leghorn			29.98	761.5	74.7	23.7	62	W	6.9	3.1			9			0	0		
Siena	28.74	730.1	29.91	759.7	76.6	24.8	46	WSW	3.1	1.4			4	SW		0	0		
Urbino	28.44	722.5	29.95	760.6	76.3	24.6	54	W			4		10			0	0		
Pesaro																			
Ancona			29.92	760.0	72.3	22.4	68	SSE			4		10			0.205	5.2	Showery	
Grosseto			29.98	761.5	81.0	27.2	42	SSW			4		3	NW		0	0		
Rome			30.00	762.1	77.5	25.3	62	WSW	4.9	2.2			10	S W		0.004	0.1		
Naples, O. U			29.96	761.0	81.0	27.2	61	SW			4		1	WSW		0	0		
Lecce			30.00	762.0	78.8	26.0	42	ENE	15.0	6.7			0			0	0		
Cosenza			29.99	761.7	87.8	31.0	63	SW	0	0			0			0	0		
Riposto, (Sicily)			30.03	762.7	79.9	26.6	53	E			2		4	NE		0	0		
Palermo			29.96	761.0	77.7	25.4	68	ENE	4.9	2.2			3			0	0		
Caltanissetta	28.04	712.3	29.90	759.4	84.7	29.3	75	WSW			1		4			0	0		
Sub-Series.																			
Naples, S. R			30.02	762.5	77.7	25.5	64	WSW	0	0			0			0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known; Domodossola, 806 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.

Flushing			29.95	760.7	67.3	19.6		NNE			2								
Groningen					61.9	16.6		N			2								
Helder			29.94	760.5	62.6	17.0		NNE			4								
Utrecht			29.87	758.8	69.1	20.6	72	NNW			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.

Bergen			29.72	754.8	59.0	15.0	89	S	3.1	1.4			10			0.583	13.6		
Brönö			29.71	754.5	57.9	14.4	74	N	9	4			5			0.008	0.2		
Christiania			29.90	751.8	73.8	23.2	32	S	7.8	3.5			1			0	0		
Tromsö			29.83	757.7	51.4	10.8	54	NE	9	4			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 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,)	.....	.....	30.48	774.3	71.1	21.7	71	NW	7.3	3.28	.....	.....	5	.....	.....	0	0	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.00	763.5	70.3	21.3	60	SW	5.8	2.58	.....	.....	9	SSW	.....	0.260	6.6	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.27	768.8	70.7	21.5	59	SW	2.6	1.17	.....	.....	3	.....	.....	0	0	.....	Capt D. A. da Cunha.
Lisbon	.....	.....	30.15	765.7	66.7	19.3	61	NW	8.7	3.9	.....	.....	5	.....	.....	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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	76.8	24.9	49	W	9	4	.....	.....	0	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.80	756.9	75.4	24.1	28	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.74	754.4	76.1	24.5	37	SW	4	2	.....	.....	0	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.72	754.9	68.4	20.2	61	ENE	9	4	.....	.....	1	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.78	756.3	66.9	19.4	61	N	22	10	.....	.....	0	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.67	753.7	68.7	20.4	45	N	9	4	.....	.....	7	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.73	755.1	71.2	21.8	56	NW	11	5	.....	.....	5	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.64	752.9	72.1	22.3	54	NNW	13	6	.....	.....	4	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.58	751.2	67.6	19.8	44	NNW	4	2	.....	.....	7	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.37	746.1	61.2	16.2	85	SW	13	6	.....	.....	9	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	29.85	758.3	53.1	11.7	81	NW	22	10	.....	.....	2	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.29	718.6	29.63	752.5	75.2	24.0	38	NE	18	8	.....	.....	1	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.60	751.9	70.0	21.1	76	SW	2	1	.....	.....	10	.....	.....	Blank	Blank	.....	Sebastianof.
Kasan	.....	.....	29.44	747.8	71.4	21.9	63	W	18	8	.....	.....	8	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.04	727.4	29.57	751.2	77.5	25.3	59	SE	20	9	.....	10	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.41	747.0	99.0	37.2	24	SSW	13	6	.....	0	.....	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bohrof.
Tashkend	27.99	711.0	29.54	750.2	95.0	35.0	45	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.98	761.4	67.5	19.7	44	N	13	6	.....	.....	1	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.97	761.1	59.7	15.4	48	SW	2	1	.....	.....	1	.....	.....	.....	.....	.....	Marks.
Irkutsk	28.62	726.8	29.94	760.4	65.7	18.7	71	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Usoltzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.80	756.8	78.8	26.0	61	Calm	0	0	.....	.....	5	.....	.....	Blank	Blank	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.02	762.5	59.7	15.4	90	E	7	3	.....	0	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	45.9	7.7	98	NE	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.

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	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	69.4	20.8	59	W	3.0	1.33	.....	0	0	.....	.....	0.024	0.6	Almost cov'd	Royal Observatory.
San Fernando	.....	.....	30.14	765.6	67.8	19.9	67	WNW	9.2	4.1	.....	0	0	.....	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. 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	.....	.....	29.86	758.4	65.5	18.6	41	SE	.....	.....	2	.....	5	.....	.....	0	0	.....	
Umea	.....	.....	29.72	754.8	68.4	20.2	52	E	.....	.....	2	.....	8	.....	.....	0	0	.....	
Hernosand	.....	.....	29.66	753.4	64.4	18.0	67	E	.....	.....	4	.....	7	.....	.....	0	0	.....	
Stockholm	.....	.....	29.65	753.1	75.7	24.3	83	WSW	.....	.....	4	.....	3	.....	.....	0.094	2.4	.....	
Wisby	.....	.....	29.81	757.1	70.2	21.2	55	WNW	.....	.....	4	.....	0	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.76	755.9	72.0	22.2	47	WSW	13.9	6.2	.....	.....	1	SSW	.....	0	0	.....	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; 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	28.57	725.7	29.96	761.0	66.6	19.2	72	ESE	.....	.....	1	.....	8	.....	.....	0.291	7.4	Cloudy.....	The Observatory.
Zurich	28.36	720.2	29.95	760.7	66.9	19.4	76	SW	.....	.....	1	.....	8	.....	.....	0	0	Cloudy	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE—For Geneva the corresponding departures from the normal values are: Barometer, —1.4 mm; Thermometer, —2.7 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 Prof. C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	29.94	760.5	76.3	24.6	54	SSW	5	1.5	.....	.....	5	.....	NW	0	0	.....	
Fao, (Persian Gulf)	.....	.....	29.69	754.0	95.0	35.0	.....	SW	.....	.....	3	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.99	761.8	85.3	29.6	.....	S	.....	.....	4	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	29.96	761.0	80.8	27.1	.....	W	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	29.88	759 0	82.4	28.0	.....	W	.....	.....	3	.....	5	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.75	755.6	91.2	32.9	60	SW	.....	.....	2	.....	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.

Bathurst, N. B	.....	.....	29.84	757.9	72.0	22.2	72	NW	8	3.6	.....	0	4	.....	.....	0	0	Fine.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.07	763.8	71	21.7	.....	SW	3	1.3	.....	5c	0	SW	.....	0	0	Fair.....	W. R Bigg.
*Chatham, N. B	.....	.....	29.91	759.7	72	22.2	62	W	5	2.2	.....	0	0	.....	.....	0	0	Clear.....	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.88	758.9	73	22.8	74	N	8	3.6	.....	5k	0	N	.....	Inap.	Inap.	Fair.....	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.97	761.2	75.0	23.9	60	SE	.....	.....	1	0	0	.....	.....	0	0	Bright.....	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.89	759.2	66.6	19.2	69	W	.....	.....	3	.....	.....	.....	.....	0.03	0.8	.....	H. A. Johnson.
Esquimault, B. C	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Bevis.
Fredericton, N. B	.....	.....	29.95	760.7	72.1	22.3	55	W	1	0.4	.....	0	0	.....	.....	0	0	Fair.....	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.12	765.0	52	11.1	93	N	7	3.1	.....	8c	8	NE	.....	0.07	1.8	Fair.....	James Stewart.
Goderich, Ontario	.....	.....	30.01	762.2	67.5	19.7	79	SW	.....	.....	2	2c	0	.....	.....	0	0	Fine.....	H. J. Strang, M. A.
Granton, Ontario	28.94	735.1	30.01	762 2	62.8	17.1	.....	NW	.....	.....	1	2cs	0	.....	.....	0	0	Clear.....	James Grant.
*Halifax, N. S	.....	.....	29.86	758.4	72	22.2	81	W	4	1.8	.....	.....	5ks	.....	W	Inap.	Inap.	Clearing.....	F. Allison, M. A.
*Kingston, Ontario	.....	.....	30.05	763.3	66	18.9	79	W	1	0.4	.....	8c	0	W	.....	0	0	Fair.....	S. Woods, M. A.
Little Glace Bay, N. S	.....	.....	29.84	757.9	71.3	21.8	92	SW	2	0.9	.....	3k	0	SW	.....	0.29	7.4	Fair.....	C. H. Rigby.
*Montreal, Quebec	.....	.....	29.98	761.5	68	20.0	72	SW	8	3.6	.....	0	2ks	.....	.....	0	0	Clear.....	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.99	761.7	69	20.6	69	W	10	4.5	.....	5c	0	.....	.....	0	0	Fair.....	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.99	761.7	68	20.0	72	E	3	1.3	.....	5ck	0	SW	.....	0	0	Fair.....	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	30.05	763.3	61	16.1	94	SE	3	1.3	.....	10ck	0	W	.....	0	0	Fair.....	H. Morgan.
Port Hastings, N. S	.....	.....	29.87	758.7	63.6	17.6	.....	Calm	0	0	.....	.....	.....	.....	.....	0	0	Fine.....	Peter Grant.
*Port Stanley, Ontario	.....	.....	30.03	762.7	66	18.9	84	Calm	0	0	.....	10k	0	.....	.....	0	0	Fair.....	M. Payne.
*Quebec, Quebec	.....	.....	29.90	759.4	70	21.1	90	SW	3	1.3	.....	0	0	.....	.....	0	0	Clear.....	Capt. Ashe, R. N.
St. John, N. B	.....	.....	29.94	760.5	67	19.4	69	N	1	0.4	.....	0	0	.....	.....	0	0	Fair.....	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.95	760.7	67	19.4	73	Calm	0	0	.....	5cs	0	.....	.....	0	0	Fair.....	K. Stewart.
Stayner, Ontario	.....	.....	29.96	761.0	71	21.7	75	Calm	0	0	.....	2ck	0	W	.....	0	0	Fair.....	R. J. Cole.
Stratford, Ontario	28.76	730.5	30.01	762.2	58.9	14.9	90	W	6	2.7	.....	0	0	.....	.....	0	0	Fine.....	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.86	758.4	72	22.2	93	SW	4	1.8	.....	8k	5s	W	W	0.32	8.1	Clearing.....	T. C. Hill.
*Toronto, Ontario	.....	.....	30.04	763.0	67	19.4	70	Calm	0	0	.....	8cs	0	W	.....	0	0	Cloudy.....	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.98	761.5	65.3	18.5	89	S	1	0.4	.....	8cs	0	.....	.....	0	0	Fine.....	J. Montgomery
Sub-Series.																			
St. John's, Newfoundland	.....	.....	30.01	763.0	71	21.7	85	SW	.....	.....	.....	.....	10n	.....	.....	Inap.	Inap.	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 360.3 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	67	19.4	68	Calm	0	0	.....	10k	0	S	.....	0	0	Cloudy.....	
Alpena, Mich.	.....	.....	29.95	760.7	60	15.6	88	N	4	1.8	.....	.....	10n	.....	SW	0.02	0.5	Light rain...	
Atlantic City, N. J.	.....	.....	30.07	762.0	76	24.4	90	Calm	0	0	.....	5cs	2s	NW	N	0.09	2.3	Cloudy.....	
Augusta, Ga.	.....	.....	30.08	764.0	82	27.8	75	NW	3	1.3	.....	0	0	.....	.....	0	0	Clear.....	
Baltimore, Md.	.....	.....	30.04	763.0	79	26.1	73	W	4	1.8	.....	2cs	0	NW	.....	0.59	15.0	Fair.....	
Barnegat, N. J.	.....	.....	29.94	761.5	76	24.4	76	N	8	3.6	.....	8k	Haze	NW	.....	0.26	6.6	Fair.....	
Benton, Montana	27.28	692.9	30.08	764.0	57	13.9	57	SE	1	0.4	.....	0	8s	.....	.....	0	0	Fair.....	
Bismarck, Dakota	28.34	719.8	29.99	761.7	51	10.6	46	S	1	0.4	.....	5ck	Haze	S	.....	0	0	Fair.....	
Boston, Mass.	.....	.....	29.99	761.7	69	20.6	70	SE	1	0.4	.....	10s	Fog	W	.....	0.01	0.3	Cloudy.....	
Breckenridge, Minn.	.....	.....	30.12	765.0	49	9.4	75	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear.....	
Buffalo, N. Y.	.....	.....	30.02	762.3	65.5	18.6	83	SW	3	1.3	.....	2c	5ks	.....	SW	0	0	Fair.....	
Burlington, Vt.	.....	.....	30.00	762.0	69	20.6	70	S	3	1.3	.....	0	2s	.....	.....	0	0	Fair.....	
Cairo, Ill.	.....	.....	30.12	765.0	72	22.2	95	N	2	0.9	.....	.....	10n	.....	N	1.12	28.4	Heavy rain..	
Cape Hatteras, N. C.	.....	.....	29.97	761.2	82	27.8	87	W	9	4.0	.....	5ak	5ks,hs	W	.....	0	0	Cloudy.....	
Cape Henry, Va.	.....	.....	29.99	761.7	82	27.8	75	W	6	2.7	.....	8c	Haze	SW	.....	0	0	Fair.....	
Cape Lookout, N. C.	.....	.....	30.04	763.5	82	27.8	91	W	12	5.4	.....	8k	0	W	.....	0	0	Fair.....	
Cape May, N. J.	.....	.....	30.01	762.2	74	23.3	90	NW	10	4.5	.....	8ck	0	NW	.....	0.84	21.3	Fair.....	
Charleston, S. C.	.....	.....	30.07	763.8	86	30.0	68	SW	8	3.6	.....	0	Haze	.....	.....	0	0	Clear.....	
Cheyenne, Wyoming	24.23	616.7	30.17	766.3	59	15.0	57	S	8	3.6	.....	.....	10s	.....	S	0	0	Cloudy.....	
Chicago, Ill.	.....	.....	30.00	762.0	69	20.6	75	W	8	3.6	.....	2c	Haze	SW	.....	0	0	Fair.....	
Cincinnati, Ohio.	.....	.....	30.00	762.0	71	21.7	80	NE	7	3.1	.....	.....	10s	.....	.....	0.28	7.1	Cloudy.....	
Cleveland, Ohio.	.....	.....	30.04	763.0	65.5	18.6	78	S	1	0.4	.....	8c	Sm'c	W	S	0.18	3.8	Fair.....	
Colorado Springs, Col.	24.31	617.5	30.18	766.6	57	13.9	100	SE	12	5.4	.....	.....	10n	.....	.....	0.66	16.8	Light rain...	
Corsicana, Tex.	.....	.....	30.05	763.3	77	25.0	90	S	9	4.0	.....	.....	10s	.....	S	0	0	Cloudy.....	
Davenport, Iowa.	.....	.....	30.07	763.8	68	20.0	79	W	4	1.8	.....	5cs	0	W	.....	0	0	Fair.....	
Denison, Tex.	.....	.....	30.01	762.0	74	23.3	90	SW	20	8.9	.....	.....	10s	.....	SW	2.05	52.1	Cloudy.....	
Denver, Col.	25.01	635.2	30.23	767.8	63	17.2	78	Calm	0	0	.....	.....	10s	.....	.....	0.02	0.5	Cloudy.....	
Detroit, Mich.	.....	.....	30.02	762.5	63	17.2	72	W	3	1.3	.....	5cs	0	W	.....	Inap.	Inap.	Fair.....	
Dodge City, Kan.	27.52	699.0	29.76	755.9	63	17.2	94	NW	16	7.2	.....	5k	5s	NW	.....	0.13	3.3	Cloudy.....	
Dubuque, Iowa.	.....	.....	30.05	763.3	65	18.3	63	W	4	1.8	.....	2c	0	.....	.....	0	0	Clear.....	
Duluth, Minn.	.....	.....	29.98	761.5	57	13.9	74	W	8	3.6	.....	5k	0	NW	.....	0	0	Fair.....	
Eastport, Me.	.....	.....	29.92	760.0	71	21.7	71	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear.....	
Erie, Pa.	.....	.....	30.02	762.5	68	20.0	79	Calm	0	0	.....	5c	Haze	.....	.....	0	0	Fair.....	
Escanaba, Mich.	.....	.....	29.91	759.7	59	15.0	76	NW	6	2.7	.....	0	0	.....	.....	0.36	9.1	Cloudy.....	
Fort Gibson, Indian Ter.	.....	.....	29.88	758.9	74	23.3	85	E	16	7.2	.....	.....	10n	.....	E	0.80	20.3	Light rain...	
Ft. St. Michael, Alaska.	.....	.....	29.61	752.1	56	13.3	87	NE	.....	.....	6	0	8ks	.....	.....	0.59	15.0	Cloudy.....	
Fort Sill, Indian T.	28.69	728.7	29.75	755.6	71	21.7	85	NW	30	13.4	.....	.....	10s	.....	NW	0.96	24.4	Cloudy.....	
Fort Sully, Dakota.	28.52	724.4	30.18	766.6	54	12.2	61	N	4	1.8	.....	1c	0	NW	.....	0	0	Clear.....	
Galveston, Tex.	.....	.....	30.10	764.5	83	28.3	74	S	8	3.6	.....	2c	2k	.....	S	0	0	Fair.....	
Grand Haven, Mich.	.....	.....	29.98	761.5	67	19.4	74	SW	15	6.7	.....	1cs	0	.....	.....	0	0	Clear.....	
Indianapolis, Ind.	.....	.....	30.05	763.3	69	20.6	79	N	4	1.8	.....	5ck	5s	W	NE	0.08	2.0	Fair.....	
Indianola, Tex.	.....	.....	30.03	764.3	84	28.9	83	SE	8	3.6	.....	2k	0	.....	.....	0	0	Fair.....	
Jacksonville, Fla.	.....	.....	30.13	765.3	84	28.9	75	S	4	1.8	.....	10k	0	SE	.....	0	0	Cloudy.....	
Keokuk, Iowa.	.....	.....	30.06	763.5	66	18.9	90	W	5	2.2	.....	8k	Haze	W	.....	0.08	2.0	Cloudy.....	
Key West, Fla.	.....	.....	30.12	765.0	84.2	29.0	79	E	9	4.	.....	5cs	Haze	.....	E	0	0	Hazy.....	
Kittyhawk, N. C.	.....	.....	30.00	762.0	82	27.8	74	W	8	3.6	.....	5ck	2s	.....	.....	0	0	Fair.....	
Knoxville, Tenn.	.....	.....	30.09	764.3	73	22.8	90	SW	3	1.3	.....	8k	0	SW	.....	0	0	Cloudy.....	
La Crosse, Wis.	.....	.....	30.05	763.3	61	16.1	71	W	6	2.7	.....	0	0	.....	.....	0.13	3.3	Clear.....	
Leavenworth, Kan.	.....	.....	30.09	764.3	67	19.4	90	N	2	0.9	.....	.....	10s	.....	.....	0.07	1.8	Cloudy.....	
Lexington, Ky.	28.98	736.1	30.03	763.3	71	21.7	95	SW	4	1.8	.....	.....	10s	.....	.....	0.75	19.1	Cloudy.....	
Long Branch, N. J.	.....	.....	30.00	762.0	74	23.3	47	N	14	6.3	.....	8c	0	SW	.....	0	0	Fair.....	
Louisville, Ky.	.....	.....	30.04	763.0	74	23.3	86	W	4	1.8	.....	.....	10s	.....	W	0.67	17.0	Cloudy.....	
Lynchburg, Va.	.....	.....	30.01	762.2	84	28.9	62	N	2	0.9	.....	5c	0	.....	.....	Inap.	Inap.	Fair.....	
Malone, N. Y.	.....	.....	29.96	761.0	69	20.6	56	SW	4	1.8	.....	2c	0	NW	.....	0	0	Fair.....	
Manhattan, Kan.	28.94	735.1	30.05	763.3	68	20.0	84	NE	1	0.4	.....	0	5ks	.....	.....	0.10	2.5	Fair.....	
Marquette, Mich.	.....	.....	29.92	760.0	56	13.3	87	Calm	0	0	.....	5ck	0	W	.....	0.31	7.9	Fair.....	
Memphis, Tenn.	.....	.....	30.09	764.3	82	27.8	70	SE	1	0.4	.....	8cs	Haze	.....	.....	0	0	Fair.....	
Milwaukee, Wis.	.....	.....	30.00	762.0	66	18.9	64	W	12	5.4	.....	2c	0	W	.....	0	0	Clear.....	
Mobile, Ala.	.....	.....	30.14	765.5	80	26.7	82	S	4	1.8	.....	5c	0	.....	.....	0	0	Fair.....	
Montgomery, Ala.	.....	.....	30.12	765.0	82	27.8	70	Calm	0	0	.....	5c	0	.....	.....	0	0	Fair.....	
Morgantown, W. Va.	29.00	736.6	30.01	762.2	71	21.7	85	S	2	0.9	.....	.....	10s	.....	S	0.29	7.4	Threatening	
Mt. Washington, N. H.	23.93	607.8	30.29	769.4	47	8.3	79	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear.....	
Nashville, Tenn.	.....	.....	30.06	763.5	80	26.7	74	Calm	0	0	.....	8c	0	.....	.....	0.01	0.3	Fair.....	
New Haven, Conn.	.....	.....	29.99	761.7	72	22.2	59	NE	10	4.5	.....	.....	10s	.....	.....	0	0	Cloudy.....	
New London, Conn.	.....	.....	30.00	762.0	70	24.4	56	N	3	1.3	.....	5ck	2s	SW	SW	Inap.	Inap.	Cloudy.....	
New Orleans, La.	.....	.....	30.12	765.0	82	27.8	81	SE	1	0.4	.....	9k	0	.....	.....	0	0	Cloudy.....	
Newport, R. I.	.....	.....	29.98	761.5	74	23.3	59	N	8	3.6	.....	.....	10ks	.....	N	0	0	Cloudy.....	
New York, N. Y.	.....	.....	30.00	762.0	76	24.4	72	NE	11	4.9	.....	8k	Haze	W	.....	0	0	Fair.....	
Norfolk, Va.	.....	.....	30.01	762.2	83	28.3	70	W	4	1.8	.....	5c	0	W	.....	0	0	Fair.....	
North Platte, Neb.	.....	.....	29.74	755.4	66	18.9	73	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear.....	
Omaha, Neb.	27.28	692.9	30.10	764.5	64	17.8	73	N	8	3.6	.....	0	0	.....	.....	0	0	Clear.....	
Oswego, N. Y.	29.00	736.1	30.04	763.0	65	18.3	78	W	4	1.8	.....	10cs	0	NW	.....	0	0	Cloudy.....	
Pembina, Dakota.	.....	.....	30.08	764.0	52	11.1	86	NW	8	3.6	.....	2k	0	NW	.....	0.03	0.8	Clear.....	
Philadelphia, Penn.	.....	.....	30.00	762.0	75	23.9	64	b	10	4.5	.....	2ck	Sm'c	W	.....	0.16	4.1	Fair.....	
Pike's Peak, Colorado.	.....	.....	30.29	769.4	34.5	1.4	75	NW	11	4.9	.....	1c	8k	.....	.....	0.82	20.8	Clear.....	
Pittsburgh, Penn.	18.08	459.2	30.02	762.5	69	20.6	75	N	3	1.3	.....	.....	10s	.....	.....	0.56	14.2	Cloudy.....	
Port Huron, Mich.	.....	.....	30.00	762.0	62	16.7	77	SW	3	1.3	.....	2c	2s	W	.....	Inap.	Inap.	Fair.....	
Portland, Me.	.....	.....	30.00	762.0	72	22.2	62	Calm	0	0	.....	8k	Haze	SW	.....	0	0	Cloudy.....	
Portland, Oregon.	.....	.....	30.12	765.0	60	15.6	88	Calm	0	0	.....	1c	0	.....	.....	0	0	Clear.....	
Punta Rassa, Fla.	.....	.....	30.13	765.3	82.5	28.1	82	E	8	3.6	.....	.....	10s	.....	E	0.35	8.9	Cloudy.....	
Rochester, N. Y.	.....	.....	30.02	762.5	65	18.3	78	W	4	1.8	.....	8c	Sm'c	W	.....	Inap.	Inap.	Fair.....	
Salt Lake City, Utah.	25.70	652.8	30.03	762.7	61	16.1	49	NE	3	1.3	.....	2c	0	.....	.....	0	0	Clear.....	
Sandy Hook, N. J.	.....	.....	29.99	761.7	76	24.4	49	NE	4	1.8	.....	8ck	Haze	NW	.....	0	0	Fair.....	
San Diego, Cal.	.....	.....	29.94	760.5	65	18.3	90	N	8	3.6	.....	.....	10s	.....	N	0	0	Cloudy.....	
San Francisco, Cal.	.....	.....	29.93	760.2	58	14.4	87	W	10	4.5	.....	0	Fog	.....	W	0	0	Fair.....	
Santa Fé, N. M.	.....	.....	29.99	761.7	55	12.8	93	SE	5	2.2	.....	5c	2cs	SW	.....	0.06	1.5	Fair.....	
Savannah, Ga.	23.45	595.6	30.09	764.3	90	32.2	60	W	5	2.2	.....	2k	Haz	SW	.....	0	0	Fair.....	
Shreveport, La.	.....	.....	30.12	765.0	77	25.0	86	S	5	2.2	.....	8cs	Haze	.....	SW	0	0	Cloudy.....	
Smithville, N. C.	.....	.....	30.07	763.8	83	28.3	79	SW	13	5.8	.....	1k	0	SW	.....	0	0	Clear.....	
Springfield, Mass.	.....	.....	29.99	761.7	73	22.8	67	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy.....	
St. Louis, Mo.	.....	.....	30.11	764.8	70	21.1	84	NE	4	1.8	.....	.....	10s	.....	.....	0.04	1.0	Cloudy.....	
St. Marks, Fla.	.....	.....	30.14	765.5	80	26.7	82	Calm	0	0	.....	5c	0	.....	.....	0	0	Fair.....	
St. Paul, Minn.	.....	.....	30.09	764.7	58.5	14.7	76	NW	7	3.1	.....	0	0	.....	.....	0	0	Clear.....	
St. Paul's Island, Alaska.	.....	.....	29.67	753.6	40	4.4	91	NE	20	8.9	.....	10cs	0	NE	.....	0.07	1.8	Cloudy.....	
Thatcher's Island, Mass.	.....	.....	30.09	764.0	69	20.6	70	W	5	2.2	.....	2ck	8s	W	W	0	0	Cloudy.....	
Toledo, Ohio.	.....	.....	30.01	762.2	67	19.4	79	Calm	0	0	.....	5c	0	SW	.....	0.03	0.8	Fair.....	
Tucson, Arizona.	27.53	699.2	30.12	765.0	81	27.2	.....	SE	.....	.....	.....	2k	5ks	W	W	0	0	Fair.....	
Tybee Island, Ga.	.....	.....	30.07	763.8	85	29.4	72	Calm	0	0	.....	5c	Sm'c	.....	.....	0	0	Fair.....	
Vicksburg, Miss.	.....	.....	30.13	765.3	85	29.4	71	SW	2	0.9	.....	5c	0	N	.....	0	0	Fair.....	

UNITED STATES SERIES.—CONTINUED.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per Cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer
Virginia City, M. T.	24.37	619.0	29.85	758.2	56	13.3	56	SE	4	1.8	...	8c	2ks	W	W	0	0	Cloudy..	
Washington, D. C.	.....	.....	30.03	762.7	75	23.9	85	NW	1	0.4	.....	2cs	2ks	.....	W	0.84	21.3	Fair.	
Wilmington, N. C	.....	.....	30.06	763.5	85	29.4	71	W	10	4 5	.....	Haze	0	.....	.....	Inap.	Inap.	Clear.	
Wood's Holl, Mass.	.....	.....	30.09	762.0	72	22.2	67	NE	6	2.7	.....	.....	10s	.....	SW	0	0	Cloudy..	
Wytheville, Va.	27.80	706.1	29.87	758.7	71	21.7	84	SW	4	1.8	.....	5c,ck	2s	W	W	0.09	2.3	Cloudy.	
Yankton, Dakota	28.03	734.8	30.22	767.6	57	13.9	63	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	
Yuma, Arizona	.....	.....	29.83	757.7	81	27.2	.....	SE	.....	.....	.....	8ck	0	.....	.....	0	0	Fair.	
Sub Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.03	762.7	81	27.2	87	E	9	4.0	.....	0	5ks	.....	E	1.00	25.4	Cloudy.	E. Racker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	29.98	761.5	82	27.8	78	E	.....	.....	.....	8k	0	.....	.....	0	0	Fair.	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.21	767.3	81	27.2	74	Calm	0	0	.....	2c	0	.....	.....	0	0		James Gall.
Santiago de Cuba, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.07	763.8	83	28.3	78	SE	2.4	1.1	.....	10c	0	.....	.....	0.69	17.5	Cloudy.	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.19	766.8	78.0	25.6	93	SW	18.0	8.0	.....	.....	10n	.....	.....	0.02	0.5	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	29.98	761.5	71	21.7	79	SE	2.0	0.9	.....	5c	0	SE	.....	0	0	Fine, clear.	C. Partridge.
Paramaribo, D. Guiana, S. A	.....	.....	30.05	763.3	83	28.3	79	SE	.....	.....	3	5k	6k	SE	.....	0.290	7.37	Fair.	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.11	764.9	.....	.....	84.2	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.305	7.76	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	26.24	641.1	.....	.....	63 5	17.5	85	Calm	0	0	.....	10k	0	.....	.....	0.07	1.8	Cloudy..	Thomas Herran.
York Factory, B. A.	.....	.....	30.20	767.1	41	5.0	82	S	6	2.7	.....	0	0	.....	.....	0	0	.....	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.04	763.0	75	23.9	95	Calm	.....	.....	0	.....	.....	.....	.....	0	0	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	30.03	762.7	60	15.6	75	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.	F. L. Clarke.
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Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—		
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.....	.....	.....	.....	.....	.....	.....
Steamer Nova Scotian To Cape Henry, Va. W by S ½ S 75 miles.	.....	.....	Tranq'l	.....	Very 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.; 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 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, 2,204.8 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, 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 JUNE 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	.....	.....	30.05	763.3	75.4	24.1	58	N	.....	.....	1	.....	0	.....	.....	0.04	1.	Clear	Charnot.
Algiers	.....	.....	30.07	763.8	75.6	24.2	74	NNW	.....	.....	1	.....	6	.....	.....	0	0	Fair	Peter.
La Calle	.....	.....	.....	.....	78.8	26.0	62	NE	.....	.....	2	.....	1	.....	.....	0	0	Clear	Kunts.
Tunis	.....	.....	30.05	763.3	86.0	30.0	36	N	.....	.....	3	.....	0	.....	.....	0	0	Clear	Jacques.
Sfax	.....	.....	30.04	763.0	82.0	27.8	58	NE	.....	.....	3	.....	3	.....	.....	0	0	Fair	Chauvey.
Saida	.....	.....	30.09	764.2	78.8	26.0	24	NW	.....	.....	3	.....	1	.....	.....	0	0	Clear	Millot.
Tebessa	.....	.....	30.06	763.4	90.5	32.5	.....	E	.....	.....	2	.....	0	.....	.....	0	0	Clear	Colin.
Geriville	.....	.....	30.04	763.0	89.8	32.1	24	SSE	.....	.....	4	.....	1	.....	.....	0	0	Clear	Buard.
Laghouat	.....	.....	30.03	762.8	100.4	38.0	.....	NW	.....	.....	3	.....	1	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	30.01	762.3	90.9	32.7	52	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.

Agram	.....	.....	29.79	756.6	77.7	25.4	40	SW	.....	.....	1	.....	4	.....	.....	0	0	.....	Prof. Ivan Stosir.
Cracow, I. R. Observatory	.....	.....	29.77	756.2	80.6	27.0	46	NE	.....	.....	1	.....	4	.....	.....	0	0	.....	Dr. Wierabiski.
Eperies	.....	.....	29.76	755.9	78.8	26.0	61	NW	.....	.....	3	.....	0	.....	.....	Blank	Blank	.....	Julius Mikolik.
Gratz	28.73	729.7	29.90	759.4	68.7	20 4	74	W	.....	.....	3	.....	6	.....	.....	0.197	5.0	.....	Andreas Rospini.
Hermannstadt	28.37	720.5	29.70	754.4	79.5	26.4	43	ESE	.....	.....	3	.....	5	.....	.....	1.051	26.70	.....	Prof. Reissenberger.
Kremsmünster	28.52	724.5	29.82	757.3	68.7	20.4	57	W	.....	.....	3	.....	5	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	.....	.....	29.73	755.1	75.0	24.0	64	E	.....	.....	1	.....	2	.....	.....	0	0	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habasuda Daniel.
Pola	.....	.....	29.80	756.4	73.8	23.2	70	WSW	.....	.....	1	.....	4k	.....	.....	0.368	9.09	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	29.77	756.2	76.1	24.5	55	W	.....	.....	1	.....	5	.....	.....	0.201	5 10	.....	Karl Stancel.
Trieste	.....	.....	29.80	756.5	76.8	24.9	67	WSW	.....	.....	1	.....	4	.....	.....	0	0	Lightning	Prof. V. Farolfi.
Vienna	.....	.....	29.76	755.9	76.6	24.8	52	W	.....	.....	3	.....	3	.....	.....	0	0	.....	I. R. Central Met. Obs'y.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

Brussels	.....	.....	29.90	759.4	67.6	19.8	51	NNW	.....	.....	1	.....	2	.....	WNW	0.110	2.80	.....	Royal Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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	.....	.....	29.90	759.4	57.0	13.9	.....	NNW	7	3.1	.....	.....	7	.....	.....	0	0	*D. clouds	William Boswell.
Ardrossan	.....	.....	29.92	760.0	60	15.6	.....	SSW	.....	.....	3	.....	4	.....	.....	.....	.....	*D. clouds	William McNeil.
Armagh, Observatory	.....	.....	29.94	760.5	61.8	16.6	.....	WSW	3	1.3	.....	.....	10	.....	.....	.....	.....	Overcast	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	29.97	761.2	65.1	18.4	.....	WSW	... ...	.....	1	.....	10	.....	.....	.....	.....	Gloomy	J. Dreyer.
Bradford	.....	.....	29.90	759.4	63.2	17.3	.....	W	.....	.....	1	.....	5	.....	.....	0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.06	763.5	82.0	27.8	.....	SE	.....	.....	1	.....	9	.....	.....	.....	.....	Overcast	Sergt. J. F. Halanen, A. [H. C.
Cambridge, Observatory	.....	.....	29.94	760.5	64.0	17.8	.....	WNW	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast	H. Todd.
Cardington	.....	.....	29.95	760.7	70.0	21.1	.....	NW	.....	.....	1	.....	7	.....	.....	.....	.....	Overcast	John McLaren.
Carlisle	.....	.....	29.90	759.4	63.4	17.4	.....	W	.....	.....	2	.....	9	.....	.....	0	0	*D. clouds	T. Bell, for J. Car mell.
Chatham, School M. E	.....	.....	29.94	760.5	64.2	17.9	.....	NW	.....	.....	1	.....	8	.....	.....	.....	.....	Gloomy	Capt. J. Fellowes, R.E.
Dartmoor	24.62	726.9	30.11	764.8	57.0	13.9	.....	NW	.....	.....	2	.....	10	.....	.....	.....	.....	Drizzling	R. E. Power.
Donaghadee	.....	.....	29.93	760.2	57	13.9	.....	SSW	.....	.....	1	.....	10	.....	.....	.....	.....	Raining	J. Mac Gowan.
Dover	.....	.....	29.94	760.5	63	17.2	.....	SW	.....	.....	2	.....	5	.....	.....	.....	.....	½ clouded	J. Costelo.
Eccles (near Manchester.)	.....	.....	29.93	760.2	63.0	17.2	.....	WSW	5.2	2.3	.....	.....	6	.....	.....	.....	.....	*D. clouds	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.06	763.5	62.9	17.2	.....	WNW	19	8.5	.....	.....	10	.....	.....	.....	.....	Overcast	The Staff.
Fort Napier, (Natal)	27.74	704.6	29.98	761.5	62.1	16.7	.....	E	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	30.06	763.5	85	29.4	.....	N	.....	.....	1	.....	4	.....	.....	.....	.....	*D. clouds	
Galway, Queen's College	.....	.....	29.94	760.5	68	20.0	.....	W	.....	.....	1	.....	8	.....	.....	.....	.....	*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.00	762.0	74.0	23.3	.....	SW	.....	.....	4	.....	1	.....	.....	.....	.....	*D. clouds	Pvt. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	29.88	758.9	62.1	16.7	.....	W	.....	.....	2	.....	6	.....	.....	.....	.....	Fine	Lewis Stuart.
Great Yarmouth	.....	.....	29.92	760.0	63	17.2	.....	E	.....	.....	2	.....	8	.....	.....	.....	.....	Raining	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	29.96	761.0	67.5	19.7	.....	NW	.....	.....	1	.....	7	.....	.....	.....	.....	*D. clouds	The Staff, for G. B. Airy.
Guernsey	.....	.....	30.05	763.3	65	18.3	.....	WSW	.....	.....	1	.....	7	.....	.....	.....	.....	*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs'y	.....	.....	29.93	760.2	62.7	17.1	.....	WNW	.....	.....	2	.....	5	.....	.....	.....	.....	*D. clouds	L. J. Crossley.
Helston	.....	.....	30.02	762.5	66	18.9	.....	W	.....	.....	2	.....	10	.....	.....	0.2	5.1	Overcast	M. P. Moyle.
Holyhead	.....	.....	29.96	761.0	60	15.6	.....	SW	.....	.....	2	.....	10	.....	.....	.....	.....	Hazy	John Tilston.
Kew, Observatory	.....	.....	29.97	761.2	64.4	18.0	.....	WNW	8	3.6	.....	.....	7	.....	.....	.....	.....	*D. clouds	The Staff.
Kingstown	.....	.....	29.97	761.2	63	17.2	.....	W	.....	.....	1	.....	5	.....	.....	.....	.....	*D. clouds	George Mitchell.
Leicester Museum	.....	.....	29.95	760.7	64.6	18.1	.....	W	.....	.....	2	.....	5	.....	.....	.....	.....	*D. clouds	Wm. J. Harrison, F.G.S.
Malta, Mediterranean	.....	.....	29.90	759.4	78.4	25.8	.....	NE	.....	.....	1	.....	0	.....	.....	.....	.....	.....	Corp'l F. Fraser, A. M. C.
Nairn	.....	.....	29.88	758.9	65	18.3	.....	Calm	.....	.....	0	.....	0	.....	.....	.....	.....	Clear	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.17	766.3	84.0	28.9	.....	NE	.....	.....	5	.....	6	.....	.....	.....	.....	*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	29.94	760.5	73.2	22.9	.....	WSW	.....	.....	3	.....	7k, ck	.....	NW	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	29.95	760.7	63.0	17.2	.....	WSW	.....	.....	3	.....	10	.....	.....	.....	.....	Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	29.95	760.7	67	19.4	.....	WNW	.....	.....	2	.....	9	.....	.....	.....	.....	Overcast	J. Lucas.
Plymouth	.....	.....	30.03	762.7	66.8	19.3	.....	W	.....	.....	2	.....	10	.....	.....	.....	.....	Gloomy	John Merrifield.
Roche's Point	.....	.....	30.01	762.2	65	18.3	.....	WSW	.....	.....	3	.....	10	.....	.....	.....	.....	Dull	W. Kennedy.
Saint Ann's Head	.....	.....	30.01	762.2	61	16.1	.....	W	.....	.....	2	.....	10	.....	.....	.....	.....	Foggy	John C. Walker.
Saint Helier, (Jersey)	.....	.....	30.06	763.5	67.2	19.6	.....	W	.....	.....	3	.....	0	.....	.....	.....	.....	Clear	A. P. Amy.
Sandwick Manse, (Orkneys)	.....	.....	29.82	757.4	55.1	12.8	.....	NW	13	5.8	.....	.....	3	.....	.....	.....	.....	*D. clouds	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	29.92	760.0	57.7	14.3	.....	E	.....	.....	1	.....	7	.....	.....	.....	.....	*D. clouds	F. Shaw.
Scutari Cemetery (Turkey	.....	.....	29.80	756.9	68.0	20.0	.....	NE	.....	.....	2	.....	9	.....	.....	.....	.....	Showery	Sergt. W. H. Lyne.
Sheffield	.....	.....	29.91	759.7	66.3	19.1	.....	NW	.....	.....	2	.....	6	.....	.....	0	0	*D. clouds	W. F. Cooper.
Silloth Rectory	.....	.....	29.91	759.7	71.0	21.7	52	W	.....	.....	2	.....	4	.....	.....	0.216	5.48	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	29.92	760.0	63.0	17.2	.....	W	.....	.....	1	.....	8	.....	.....	.....	.....	.....	Rev. S. J. Perry.
Stornoway, Lews C. Hebr.	.....	.....	29.88	758.9	57	13.9	.....	SW	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast	John Smith.
Stratfield Turgiss	.....	.....	29.98	761.5	67	19.8	.....	NW	.....	.....	2	.....	8	.....	.....	.....	.....	*D. clouds	Rev. Charles H. Griffith.
Thurso	.....	.....	29.86	758.4	59	15.0	.....	NNE	.....	.....	2	.....	4	.....	.....	.....	.....	*D. clouds	John Trotter.
Truro, Royal Institution	.....	.....	30.08	764.0	64	17.8	.....	W	.....	.....	2	.....	10	.....	.....	.....	.....	Raining	W. Newcombe.
Valencia, Observatory	.....	.....	30.02	762.5	59.9	15.5	.....	SW	18	8.0	.....	...	10	.....	.....	.....	.....	Overcast	The Staff.
Sub-Series.																			
Calf of Man, Isle of Man	.....	.....	.....	.....	55	12.8	.....	N	.....	.....	1	.....	0	.....	.....	0	0	.....	Thomas Dawson.
Cape Good Hope, Obs'y	.....	.....	29.91	759.7	56.4	13.6	86	NW	16	7.2	.....	5	5	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	29.72	754.9	57.5	14.2	75	N	.....	.....	3	.....	9k	.....	.....	0	0	.....	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	29.91	759.7	61.7	16.5	.....	E	.....	.....	2	.....	9k	.....	.....	0	0	Fine, cloudy	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.14	765.5	.....	.....	.....	ESE	9.7	4.3	.....	.....	.....	.....	.....	0.07	1.8	.....	C. Meldrum
Melbourne, Observatory	.....	.....	30.08	764.0	49.0	9.4	58	N	24	10.7	.....	.....	4	.....	.....	0	0	Fine	R. L. J. Ellery.
Monach Lt-house, Hebrides	.....	.....	29.84	757.9	53	11.7	.....	S	.....	.....	3	5	5	SW	.....	0	0	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	29.82	757.4	54	12.2	.....	N	.....	.....	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, 2,210 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	757.3	56.5	13.6	87	NE	.....	.....	2	.....	10	.....	.....	.....	.....	Raining	
Fanöe	.....	.....	29.83	757.7	61.5	16.4	76	WSW	.....	.....	2	.....	7	.....	.....	.....	.....	.....	
Godthaab, Greenland	.....	.....	29.56	750.8	37.0	2.8	80	NW	.....	.....	1	.....	10	.....	.....	.....	.....	Raining	
Stykkisholm, (Iceland)	.....	.....	29.16	740.7	50.9	10.5	90	S	.....	.....	4	.....	10	.....	.....	.....	.....	Raining	
Thorshavn, (Faröe)	.....	.....	29.80	756.8	54.3	12.4	87	SSW	.....	.....	2	.....	7	.....	.....	.....	.....	.....	
Vestervig	.....	.....	29.78	756.4	61.2	16.2	71	WSW	.....	.....	4	.....	4	.....	.....	.....	.....	.....	

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

FRENCH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observers.
Alençon	.....	.....	30.02	762.4	69.8	21	74	NE	.....	.....	2	.....	88,n	.....	NE	0	0	Very cloudy	Normal School.
Amiens	.....	.....	29.97	761.1	75.9	24.4	54	N	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	29.96	760.9	80.4	26.9	49	N	.....	.....	1	.....	0	.....	.....	0.205	5.2	Clear	Normal School.
Bar-sur-Seine	.....	.....	29.96	760.9	68.7	20.4	60	N	.....	.....	2	.....	5	.....	W	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.02	762.6	66.7	19.3	50	NW	5.8	2.6	.....	.....	5	.....	SW	0	0	Cloudy	Beaumette Observatory.
Beauvais	.....	.....	30.00	761.9	68.5	20.3	51	WNW	.....	.....	2	.....	8	.....	NW	0	0	Very cloudy	Normal School.
Besançon	.....	.....	29.96	760.9	71.6	22	66	SSW	.....	.....	3	.....	2	.....	SW	0.024	0.6	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	30.14	765.6	70.7	21.5	83	S	.....	.....	1	.....	10p	.....	SE	.....	.....	Covered	Normal School.
Bourges	.....	.....	30.00	762.1	68.7	20.4	67	SW	.....	.....	4	.....	5	.....	.....	0	0	Cloudy	Normal School.
Brest	.....	.....	30.05	763.3	67.1	19.5	70	WNW	.....	.....	3	.....	10	.....	WNW	.....	.....	Light rain	Naval Observatory.
Carcassonne	.....	.....	30.09	764.2	69.1	20.6	49	NW	.....	.....	4	.....	2	.....	SE	0	0	Slightly cl'dy	Normal School.
Caen	.....	.....	30.627	777 77	68.9	20.5	85	NW	.....	.....	1	.....	5	.....	S	0	0	Cloudy	Normal School.
Chartres	.....	.....	29.83	757.7	67.6	19.8	.....	NNW	.....	.....	3	.....	7	.....	SE	0	0	.....	Normal School.
Clermont	.....	.....	29.96	761.0	72.7	22.6	51	W	.....	.....	2	.....	5	.....	W	0.921	23.4	Cloudy	Puy de Dome Obs'y.
Commercy	.....	.....	29.94	760.4	66.4	19.1	64	WNW	.....	.....	6	.....	8kn	.....	NW	0.520	13.2	Very cloudy	Normal School.
Commune de Greasque*	.....	.....	30.00	762.1	74.7	23.7	38	NW	.....	.....	6	.....	2	.....	NW	0.650	16.5	.....	M. Kina.
Grenoble	.....	.....	30.00	762.1	70.0	21.1	77	NE	.....	.....	2	.....	5cs	.....	SW	0	0	Cloudy	Normal School.
La Roche-sur-Yon	.....	.....	30.08	764.1	87.6	19.8	58	W	.....	.....	2	.....	5	.....	SE	0	0	Cloudy	Normal School.
Le Mans	.....	.....	30.04	763.1	66.9	19.4	58	N	.....	.....	2	.....	5	.....	N	0	0	Cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	29.94	760.5	70.0	21.1	77	SW	.....	.....	4	.....	5	.....	E	0.228	5.8	Cloudy	Normal School.
Mâcon	.....	.....	29.98	761.4	68.5	20.3	75	NW	.....	.....	4	.....	5	.....	E	0	0	Cloudy	Normal School.
Metz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Schuster.
Mirecourt	.....	.....	29.91	759.6	64.8	18.2	67	SSW	.....	.....	2	.....	5	.....	NE	1.06	27.	Cloudy	Normal School.
Nismes	.....	.....	29.94	760.4	80.6	27	30	NW	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	29.96	761.0	69.8	21	44	NW	.....	.....	1	.....	8	.....	NW	0	0	Very cloudy	Normal School.
Paris, Observatory	.....	.....	29.99	761.8	64.4	18.0	62	NW	.....	.....	2-3	.....	8ck	.....	NW	0	0	Very cloudy	National Observatory.
Parthenay	.....	.....	29.98	761.4	77.5	25.3	54	W	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Privas	.....	.....	29.91	759.6	76.3	24.6	.....	SSE	.....	.....	1	.....	5	.....	SE	.....	.....	Cloudy	Normal School.
Rochefort, Observatory	.....	.....	30.15	765.7	73.0	22.8	53	W	.....	.....	3	.....	8	.....	E	0	0	¾ Covered	Naval Observatory.
Rouen	.....	.....	30.01	762.2	68.0	20.0	53	W	.....	.....	2	.....	5	.....	W	0	0	Cloudy	Normal School.
Saint Lo	.....	.....	29.72	754.8	72.3	22.4	54	NW	.....	.....	1	.....	5	.....	W	0	0	.....	Normal School.
Tarbes	29.01	736.9	30.07	763.6	66.9	19.4	.....	W	.....	.....	4	.....	10	.....	.....	0	0	Covered	Normal School
Villefranche	.....	.....	29.98	761.6	72.3	22.4	90	NW	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.89	759.1	80.6	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	Blank	Blank	.....	L'Abbé Marchési.
Marseilles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Marseilles Observatory.
Mont-Louis	.....	.....	30.25	768.3	58.8	14.9	74	NNW	13 0	5.83	.....	.....	4	.....	SW	0.067	1.7	.....	—. Falguère.
Montsouris, Paris	.....	.....	29.99	761.7	64.4	18.0	64	WNW	.....	.....	2	.....	10	.....	NW	0	0	.....	Montsouris Observatory.
Perpignan	.....	.....	30.02	762.4	76.5	24.7	42	N	16.8	7.50	.....	.....	1	.....	NW	0	0	.....	Ir. Fines.
Pic du Midi, (Summit) H.P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.99	761.7	67.3	19.6	60	WNW	.....	.....	2	.....	4?	.....	.....	0	0	Very cloudy	E. Renou.
Toulouse	.....	.....	30.14	765.6	70.2	21.2	51	NW	.....	.....	2	.....	6	.....	.....	0.008	0.2	.....	Toulouse Observatory.
Tours	.....	.....	30.04	762.9	71.4	21.9	44	W	.....	.....	2	.....	7	.....	NW	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.00	762.1	66.2	19.0	64	NW	.....	.....	2	.....	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 1,580.40 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 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.

Bamberg	.....	.....	29.80	756 9	74.8	23.8	66	N	.....	.....	3	.....	8	N	.....	0.230	6.0	Thunder-storm	Prof. T. Hoh.
Berlin	.....	.....	29.77	756.2	72.1	22.3	58	W	.....	.....	4	.....	9	.....	.....	0.085	2.1	Thunder-storm	Prof. Arndt.
Breslau	.....	.....	29.88	759.0	63.3	17.4	73	W	.....	.....	4	.....	10	.....	.....	0.815	20.7	Thunder-storm	Dr. P. Neugebauer.
Carlsruhe	.....	.....	29.87	758.7	65.8	18.8	71	NE	.....	.....	4	.....	10	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	29.87	758.6	68.9	20.5	66	NNW	.....	.....	4	.....	8	WNW	.....	0.25	6.4	.....	Dr. H. Möhl.
Emden	.....	.....	29.88	759.0	58.8	14.9	79	W	.....	.....	1	.....	10	.....	.....	0.098	2.5	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.89	759 2	67.6	19.8	70	SW	.....	.....	4	.....	6	.....	.....	0.063	1.6	.....	Physical Society.
Friedrichshafen	.....	.....	29.93	760.3	67.3	19.6	75	SW	.....	.....	2	.....	10	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	29.86	758.5	63.9	17.7	72	NW	.....	.....	3	.....	8k	NW	.....	0.327	8.3	Cloudy	Captain F. Hegemann.
Kiel	.....	.....	29.85	758.1	57.4	14.1	64	NW	.....	.....	2	.....	7	.....	.....	0.208	6.8	.....	Prof. G. Karsten.
Königsberg, (Prussia.)	.....	.....	29.81	757.1	70.1	24.5	42	NE	.....	.....	2	.....	2	.....	.....	0.004	0.1	.....	Prof. E. Luther.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. Müller.
Leipsic	.....	.....	29.82	757.4	70.7	21.5	53	NW	.....	.....	4	.....	10	W	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	29.87	758.8	65.8	18.8	78	NW	.....	.....	3	.....	1k	.....	.....	0.008	0.2	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.91	759 7	68.0	20.0	57	.....	.....	.....	2	.....	6	.....	.....	0.043	1.1	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.85	758.3	66.4	19.2	73	NE	.....	.....	2	.....	8	.....	.....	0.004	0.1	.....	A. Lothes.
Posen	.....	.....	29.82	757.5	77.5	25.3	57	SW	.....	.....	1	.....	9	.....	.....	0.547	13.9	Thunder, lightn'g	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.90	759.4	70.5	21.4	60	SW	.....	.....	2	.....	10	W	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.88	758.9	64.9	18.3	73	S	.....	.....	1	.....	8	.....	.....	0.748	19.0	Thunder-storm.	Prof. Schoder.
Thorn	.....	.....	29.80	756.9	80.2	26.8	41	N	.....	.....	4	.....	5	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.85	758.2	70.9	21.1	66	NW	.....	.....	5	.....	10	.....	.....	0.272	6 9	.....	Prof. Flesch.
Wustrow, Naval School	.....	.....	29.87	758.6	60.1	15.6	88	NW	.....	.....	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			29.79	756.6	86.5	30.3		SW										Very clear...	

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

ITALIAN SERIES.

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

Udine			29.83	757.6	74.8	23.8	52	W	1.3	0.6			10			0	0		
Padua			29.81	757.2	76.6	24.2	54	S	3.1	1.4			3	W		0	0		
Vicenza			29.82	757.5	75.9	24.4	52	NW	2.5	1.1			3			0	0		
Verona			29.83	757.6	78.3	25.7	59	W			1		6			0.394	10.0		
Bergamo	28.50	724.0	29.77	756.2	75.9	24.4	54	SW			2		4			0	0		
Domodossola	28.80	731.5	29.79	756.7	72.5	22.5	76	Calm			0		5			0	0		
Milan			29.84	757.9	77.7	25.4	51	NNW			2		8	NNW		0	0		
Pavia			29.84	757.9	77.7	25.4	48	S			1		1	SW		0	0		
Moncalieri			29.84	758.0	70.2	21.2	65	SW	1.3	0.6			1			0	0		
Mondovi	28.00	711.1	29.84	758.0	72.9	22.7	44	SSE			2		0			0	0		
Porto Maurizio			29.93	760.3	77.5	25.3	81	E			2		5	SSW		0	0		
Genoa			29.90	759.5	74.1	23.4	64	SE	3.8	1.7			2	SE		0	0		
Piacenza			29.84	757.9	75.2	24.0	53	N	6.9	3.1			3			0	0		
Parma			29.84	757.9	75.2	24.0	61	W			4		6			0	0		
Bologna			29.84	757.8	75.0	24.4	42	NE			1		4	N		0	0		
Florence			29.94	760.4	76.1	24.5	55	NW			2		10	SW		0	0		
Leghorn			29.92	759.9	74.1	23.4	62	W	9.8	4.4			4			0	0		
Siena	28.72	729.5	29.89	759.1	70.9	21.6	61	W	3.8	1.7			6	W		0.382	9.7	Showery...	
Urbino	28.39	721.1	29.89	759.2	73.0	22.8	54	NE			2		10			0	0		
Pesaro																			
Ancona			29.90	759.5	75.6	24.2	58	NE			4		6			0	0		
Grosseto			29.96	761.0	78.1	25.6	56	SSW			4		3	NW		0	0		
Rome			29.93	760.2	78.8	26.0	56	W	8.1	3.6			1			0	0		
Naples, O. U.			29.94	760.5	79.9	26.6	55	SW			4		2	NW		0	0		
Lecce			29.89	759.1	79.7	26.5	46	NNW	12.5	5.6			2			0	0		
Cosenza			29.91	759.6	85.1	29.5	65	SE	3.8	1.7			0			0	0		
Riposto, (Sicily)			29.92	759.9	77.7	25.4	73	NE			4		1	SW		0	0		
Palermo			29.92	759.9	76.1	24.5	66	NE	6.9	3.1			0			0	0		
Caltanissetta	27.96	710.3	29.82	757.4	84.7	29.3	25	WSW			4		0			0	0		
Sub-Series.																			
Naples, S. R.			30.00	762.0	76.5	24.7	58	SW	0	0			0			0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The altitude of Bergamo is not known; Domodossola, 308 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.

Flushing			29.96	761.0	63.0	17.2		WNW			3								
Groningen			29.85	758.3	61.9	16.6		W			2								
Helder			29.92	759.9	62.2	16.8		WSW			2								
Utrecht			29.88	758.9	67.6	19.8	54	WNW			3		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.

Bergen			29.70	754.3	60.4	15.8	71	W	8.1	3.6			5			0.008	0.2		
Brönö			29.74	755.5	61.7	16.5	65	W	2	1			2			0	0		
Christiania			29.76	755.8	68.4	20.0	43	S	13.4	6.0			4			0	0		
Tromsö			29.74	755.3	53.8	12.1	66	NE	2	1			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,)	.....	.....	30.35	770.9	72.7	22.6	76	N	6.5	2.92	.....	.....	4	.....	.....	0.055	1.4	.....	Dr. J. A. N. Sampaio.
Campo Major	.....	.....	30.01	762.2	70.7	20.5	84	SSW	3.5	1.58	.....	.....	3	.....	.....	0	0	.....	Dr. A. M. R. dos Santos
Funchal, (Madeira,)	.....	.....	30.19	766.9	69.8	21.0	54	SW	6.0	2.68	.....	.....	7	.....	.....	0	0	.....	Capt D. A. da Cunha.
Lisbon	.....	.....	30.10	764.6	68.9	20.5	66	S	6.3	2.8	.....	.....	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.

Warsaw	.....	.....	29.77	756.2	79.9	26.6	39	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.80	756.8	79.5	26.4	37	N	13	6	.....	.....	5	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.82	757.4	75.4	24.1	38	E	7	3	.....	.....	0	.....	.....	.....	.....	.....	Physical Cabinet
St. Petersburg	.....	.....	29.87	758.6	64.4	18.0	42	ENE	9	4	.....	.....	1	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.88	758.9	65.7	18.7	58	E	18	8	.....	.....	0	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.66	753.3	75.9	24.4	31	N	9	4	.....	.....	8	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.79	756.7	78.1	25.6	48	NW	4	2	.....	.....	4	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.68	753.9	67.6	19.8	61	NNW	13	6	.....	.....	3	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.69	754.0	64.9	18.3	46	NW	4	2	.....	.....	4	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.39	746.4	65.5	18.6	79	NW	18	8	.....	.....	8	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	29.96	761.0	57.4	14.1	55	NW	29	13	.....	.....	0	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.31	719.0	29.66	753.3	73.6	23.1	33	NW	20	9	.....	.....	3	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.58	751.3	81.1	27.3	33	SW	18	8	.....	.....	4	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.39	746 4	62.4	16.9	96	NNE	4	2	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.56	725.4	29.49	749.0	78.4	25.8	69	ENE	11	5	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.49	749.1	95.9	35.5	35	N	4	2	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	27.98	710.8	29.51	750.3	91.2	32.9	47	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.66	753.4	78.6	25.9	37	NE	9	4	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.77	756.1	74.8	23.8	45	S	4	2	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	28.01	726.7	29.93	760.3	66.4	19.1	77	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Usolzef.
Oorga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mossin.
Peking, (China)	.....	.....	29.87	758.8	79.9	26.6	51	NW	9	4	.....	.....	8	.....	.....	Blank	Blank	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	29.97	761.3	60.8	16.0	82	E	2	1	.....	.....	3	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	55.8	13.2	98	SE	18	8	.....	.....	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 4,202.6? 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	.....	.....	29.99	761.8	73.4	23.0	50	NW	4.5	2.00	.....	0	7	.....	.....	0.260	6.6	Cloudy.	Royal Observatory.
San Fernando	.....	.....	30.05	764.2	73.2	22.9	65	W	8.1	3.6	.....	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 Dr. H. H. Hildebransson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.80	759.2	63.0	17.2	45	S	.....	.....	6	.....	10	.....	.....	0	0	.....	
Umea	.....	.....	29.79	756.7	61.9	16.6	69	S	.....	.....	2	.....	1	.....	.....	0	0	.....	
Hernosand	.....	.....	29.72	754.8	65.8	18.8	66	S	.....	.....	2	.....	1	.....	.....	0	0	.....	
Stockholm	.....	.....	30.18?	766.6?	73.6	23.1	75	WSW	.....	.....	2	.....	3	.....	.....	0	0	.....	
Wisby	.....	.....	29.88	759.0	63.7	17.6	76	NE	.....	.....	4	.....	0	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.79	756.7	70.2	21.2	48	SSW	10.1	4.5	.....	.....	1	.....	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	28.55	726.0	29.98	761.5	64.6	18.1	66	N	.....	.....	1	.....	10	.....	.....	0.051	1.3	Covered	The Observatory.
Zurich	28.38	720.8	30.00	762.0	59.0	15.0	89	SW	.....	.....	1	.....	10	.....	.....	0.118	3.0	Thunder-storm	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note—For Geneva the corresponding departures from the normal values are: Barometer, —1.2 mm; Thermometer, —3.9 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.

Constantinople	.....	.....	29.86	758.5	66.9	19.4	72	N	7	3.0	.....	.....	10	.....	NW	0.236	6.0	Thunder-storm	
Fao, (Persian Gulf)	.....	.....	29.69	754.0	102.2	39.0	.....	NW	.....	.....	3	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.89	759.2	78.8	26.0	.....	S	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	29.89	759.2	78.8	26.0	.....	NW	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	29.84	758.0	75.2	24.0	.....	SW	.....	.....	2	.....	10	.....	.....	.....	.....	Stormy	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.76	756.0	88.3	31.3	62	SW	.....	.....	3	.....	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.

Bathurst, N. B	.....	.....	30.02	762.5	58.9	14.9	87	NE	10	4.5	.....	.....	8	.....	.....	0	0	Dull	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.01	762.2	71	21.7	.....	SW	4	1.8	.....	0	2s	.....	SW	0	0	Fair	W. R Bigg.
*Chatham, N. B	.....	.....	30.16	766.1	64	17.8	80	N	8	3.6	.....	10ck	0	N	.....	0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.14	765.5	65	18.3	63	E	6	2.7	.....	.....	8ks	.....	.....	0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.94	760.5	74.2	23.4	62	W	.....	.....	1	2c	0	.....	.....	0	0	Bright	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.15	765.8	55.0	12.8	83	E	.....	.....	3	.....	.....	.....	.....	0	0	.....	H. A. Johnson.
Esquimault, B. C	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Beeks.
Fredericton, N. B	.....	.....	30.09	764.3	66.0	18.9	55	NE	5	2.2	.....	4ck	0	.....	.....	0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.03	762.7	57	13.9	90	E	2	0.9	.....	..c	Haz	.....	.....	0	0	Fair	James Stewart.
Goderich, Ontario	.....	.....	30.06	763.5	65.7	18.7	81	SW	.....	.....	2	6ck	0	W	.....	0.051	1.30	Fair	B. J. Strang, M. A.
Granton, Ontario	28.96	735.6	30.04	763.0	63	17.2	.....	Calm ?	.....	.....	1 ?	0	0	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S	.....	.....	30.06	763.5	59	15.0	90	E	6	2.7	.....	.....	10n	.....	.....	0.08	2.0	Cloudy	F. Allison, M. A.
*Kingston, Ontario	.....	.....	29.98	761.5	67	19.4	84	SW	5	2.2	.....	2k	0	sW	.....	0	0	Clear	S. Woods, M. A.
Little Glace Bay, N. S	.....	.....	30.16	766.1	56.2	13.4	79	E	4	1.8	.....	8cs	0	E	.....	0	0	Cloudy	C. H. Rigby.
*Montreal, Quebec	.....	.....	29.94	760.5	68	20.0	72	S	2	0.9	.....	5ck	0	W	.....	0	0	Fair	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.97	761.2	69	20.6	73	NW	6	2.7	.....	5k	5n	SW	NW	0	0	Threatening	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.01	762.2	61	16.1	77	W	12	5.4	.....	0	0	.....	.....	0	0	Clear	Rev. R. Mosley.
*Port Dover, Ontario	.....	.....	30.03	762.7	65	18.3	68	NW	6	2.7	.....	5cs	0	SW	.....	0	0	Fair	H. Morgan.
Port Hastings, N. S	.....	.....	30.15	765.8	57.8	14.3	.....	SE	10	4.5	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
*Port Stanley, Ontario	.....	.....	30.03	762.7	64	17.8	72	W	4	1.8	.....	2k	0	W	.....	0	0	Clear	M. Payne.
*Quebec, Quebec	.....	.....	29.98	761.5	63	17.2	94	NE	15	6.7	.....	8k	2ks	W	W	0	0	Cloudy	Capt. Ashe, R. N.
St. John, N. B	.....	.....	30.09	764.3	63	17.2	60	Calm	0	0	.....	0	0ks	.....	.....	0.060	1.52	Sultry	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.03	762.7	57	13.9	87	Calm	0	0	.....	0	0	.....	.....	Inap.	Inap.	Clear	K. Stewart.
Stayner, Ontario	.....	.....	29.98	761.5	63	17.2	83	NW	10	4.5	.....	0	0	.....	.....	0	0.	Clear	R. J. Cole.
Stratford, Ontario	28.77	730.7	30.02	762.5	60.9	16.1	70	NW	4	1.8	.....	3cs	0	W	.....	0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.18	766.6	56	13.3	79	NE	4	1.8	.....	10cs	0	sW	.....	0	0	Cloudy	T. C. Hill.
*Toronto, Ontario	.....	.....	30.01	762.2	65	18.3	65	NW	7	3.1	.....	5ck	0	W	.....	0	0	Fair	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.01	762.2	65.2	18.4	70	W	4	1.8	.....	2c	0	.....	.....	0	0	Fine	J. Montgomery.
Sub-Series.																			
St. John's, Newfoundland	.....	.....	30.22	767.6	58	14.4	94	NE	.....	.....	.....	.....	10n	.....	.....	0.18	4.6	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 360.3 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	69	20.6	75	Calm	0	0	.....	5k	Haze	.....	.....	0	0	Fair	
Alpena, Mich	.....	.....	30.01	762.2	56	13.3	80	NW	12	5.4	.....	.....	10s	.....	NW	0.14	3.6	Cloudy	
Atlantic City, N. J	.....	.....	30.01	762.0	73	22.8	90	SW	4	1.8	.....	2cs	5s	SW	SW	0.12	3.0	Cloudy	
Augusta, Ga.	.....	.....	30.04	763.0	82	27.8	69	NW	1	0.4	.....	5cs	0	W	.....	0	0	Fair	
Baltimore, Md.	.....	.....	30.04	763.5	77	25.0	60	NW	4	1.8	.....	5cs	2s	NW	NW	0.35	8.9	Fair	
Barnegat, N. J.	.....	.....	30.01	762.0	77	25.0	82	S	5	2.2	.....	8k	Haze	W	.....	0.09	2.3	Fair	
Benton, Montana	27.47	698.0	30.20	767.1	56	13.3	68	NW	5	2.2	.....	.....	10s	.....	NW	0.19	4.8	Cloudy	
Bismarck, Dakota	28.21	716.5	29.82	757.4	57	13.9	63	E	5	2.2	.....	8k	1s	E	.....	0	0	Cloudy	
Boston, Mass	.....	.....	29.93	761.5	76	24.4	56	W	4	1.8	.....	8ck	Fog	W	.....	Inap.	Inap.	Foggy	
Breckenridge, Minn	.....	.....	29.90	761.7	53	11.7	79	S	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Buffalo, N. Y.	.....	.....	29.97	761.2	66	18.9	73	W	8	3.6	.....	5c	1k	W	W	0	0	Fair	
Burlington, Vt.	.....	.....	29.97	761.2	71	21.7	66	S	4	1.8	.....	0	2s	.....	.....	0	0	Fair	
Cairo, Ill.	.....	.....	29.94	760.5	72	22.2	95	E	16	7.2	.....	.....	10n	.....	E	2.15	54.6	Light rain	
Cape Hatteras, N. C.	.....	.....	30.00	762.0	77	25.0	90	S	24	10.7	.....	.....	10ks	.....	S	0.62	15.7	Cloudy	
Cape Henry, Va.	.....	.....	30.01	762.2	83	28.3	71	Calm	0	0	.....	5c	Haze	SW	.....	0	0	Fair	
Cape Lookout, N. C.	.....	.....	30.07	763.8	77	25.0	82	S	16	7.2	.....	.....	10s	.....	S	0.15	3.8	Cloudy	
Cape May, N. J.	.....	.....	30.01	762.2	75	23.9	90	NW	5	2.2	.....	5c	5ks	W	W	0.02	0.5	Fair	
Charleston, S. C.	.....	.....	30.06	763.5	80	30.0	72	SW	4	1.8	.....	2cs	Haze	.....	.....	Inap.	Inap.	Fair	
Cheyenne, Wyoming	24.03	610.4	29.97	761.2	51	10.6	93	NW	24	10.7	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Chicago, Ill	.....	.....	30.02	762.5	65	18.3	73	N	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Cincinnati, Ohio	.....	.....	30.01	762.2	73	22.8	81	NW	1	0.4	.....	.....	10ks	.....	W	0	0	Cloudy	
Cleveland, Ohio	.....	.....	30.00	762.5	66.4	19.1	64	W	4	1.8	.....	8cs	0	W	.....	0	0	Fair	
Colorado Springs, Col.	24.07	611.4	29.94	760.5	56	13.3	93	SE	4	1.8	.....	5ck	5k	SE	.....	0.13	3.3	Cloudy	
Corsicana, Tex	.....	.....	29.93	760.2	76	24.4	90	S	6	2.7	.....	5cs	5ks	.....	S	0.40	10.2	Cloudy	
Davenport, Iowa	.....	.....	30.02	762.5	65	18.3	83	NE	4	1.8	.....	5cs	0	SW	.....	0	0	Fair	
Denison, Tex.	.....	.....	29.95	760.7	74	23.3	81	W	4	1.8	.....	0	0	.....	.....	0.04	1.0	Clear	
Denver, Col.	24.76	628.9	29.93	761.5	58	14.4	64	N	5	2.2	.....	0	5c	.....	SW	0.08	2.0	Fair	
Detroit, Mich	.....	.....	30.04	763.0	61	16.1	77	W	5	2.2	.....	8cs	0	W	.....	0	0	Fair	
Dodge City, Kan.	27.35	694.7	29.57	751.1	63	17.2	88	E	4	1.8	.....	5k	5s	SE	.....	0	0	Cloudy	
Dubuque, Iowa	.....	.....	30.02	762.5	61	16.1	82	Calm	0	0	.....	0	Fog	.....	.....	0	0	Foggy	
Duluth, Minn	.....	.....	30.07	763.8	50	10.0	78	NE	1	0.4	.....	5k	2s	NW	.....	0	0	Fair	
Eastport, Me.	.....	.....	30.05	763.3	50	13.3	80	NE	7	3.1	.....	.....	10s	.....	W	0	0	Cloudy	
Erie, Pa.	.....	.....	30.01	762.2	67	19.4	74	W	8	3.6	.....	5c	Haze	.....	.....	0	0	Fair	
Escanaba, Mich	.....	.....	30.06	763.5	57	13.9	81	N	3	1.3	.....	5c	0	N	.....	0.29	7.4	Fair	
Fort Gibson, Indian Ter.	.....	.....	29.79	756.7	69	20.6	90	W	12	5.4	.....	.....	10n	.....	.....	1.37	34.8	Light rain	
Ft. St. Michael, Alaska	.....	.....	29.52	749.8	54	12.2	100	S	.....	.....	7	.....	10n	.....	.....	Inap.	Inap.	Light rain	
Fort Sill, Indian T.	28.73	729.7	29.79	756.7	72	22.2	85	NW	4	1.8	.....	0	0	.....	.....	0.03	0.8	Clear	
Fort Sully, Dakota	28.21	716.5	29.82	757.4	57	13.9	94	SE	20	8.9	.....	.....	10n	.....	.....	0.70	17.8	Light rain	
Galveston, Tex.	.....	.....	30.01	762.2	77	25.0	80	S	14	6.3	.....	.....	10s,n	.....	.....	0.09	2.3	Light rain	
Grand Haven, Mich	.....	.....	30.03	762.7	69	20.6	65	E	5	1.8	.....	5cs	0	W	.....	0	0	Fair	
Indianapolis, Ind.	.....	.....	30.02	762.5	70	21.1	79	E	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Indianola, Tex.	.....	.....	29.98	761.5	78	25.6	86	SE	2	0.9	.....	0	5ks	.....	.....	0.06	1.5	Fair	
Jacksonville, Fla.	.....	.....	30.11	764.8	84	28.9	70	S	3	1.3	.....	0	5s	.....	SW	0.04	1.0	Fair	
Keokuk, Iowa	.....	.....	29.93	760.2	65	18.3	83	E	10	4.5	.....	8c	0	.....	.....	0	0	Fair	
Key West, Fla.	.....	.....	30.11	764.8	82.5	28.1	74	SE	12	5.4	.....	0	5ks	.....	SE	0	0	Fair	
Kittyhawk, N. C.	.....	.....	30.04	763.0	80	26.7	82	SW	10	4.5	.....	2k	5s	.....	.....	0.01	0.3	Fair	
Knoxville, Tenn	.....	.....	30.04	763.0	71	21.7	95	SW	3	1.3	.....	.....	Fog	.....	.....	0.47	11.9	Dense fog	
La Crosse, Wis.	.....	.....	30.02	762.5	59	15.0	100	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Leavenworth, Kan	.....	.....	29.86	758.4	69	20.6	70	NE	4	1.8	.....	2c	0	.....	.....	0	0	Clear	
Lexington, Ky.	28.97	735.8	30.02	762.5	74	23.3	76	Calm	0	0	.....	5c	0	.....	.....	0.23	5.8	Fair	
Long Branch, N. J.	.....	.....	30.00	762.0	72	22.2	90	W	2	0.9	.....	.....	10s	.....	.....	Inap	Inap.	Cloudy	
Louisville, Ky.	.....	.....	30.02	762.5	70	21.1	80	N	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Lynchburg, Va.	.....	.....	30.02	762.5	82	27.8	67	W	1	0.4	.....	10c	0	W	.....	0.02	0.5	Cloudy	
Malone, N. Y.	.....	.....	29.91	759.7	69	20.6	50	S	7	3.1	.....	Haze	0	.....	.....	0	0	Hazy	
Manhattan, Kan.	28.79	731.3	29.90	759.4	63	17.2	83	SE	1	0.4	.....	5cs	0	S	.....	0	0	Fair	
Marquette, Mich	.....	.....	30.05	763.3	57	13.9	81	NW	4	1.8	.....	5c	0	W	.....	0.08	2.0	Fair	
Memphis, Tenn	.....	.....	29.95	760.7	80	26.7	70	S	11	4.9	.....	5cs	5s	SW	.....	0	0	Fair	
Milwaukee, Wis.	.....	.....	30.06	763.5	62	16.7	66	NE	9	4.0	.....	5c	0	W	.....	0	0	Fair	
Mobile, Ala.	.....	.....	30.09	764.3	83	28.3	74	E	3	1.3	.....	2ck	2s	.....	.....	0	0	Fair	
Montgomery, Ala.	.....	.....	30.00	763.5	77	25.0	82	SW	5	2.2	.....	.....	8s	.....	SW	0.85	21.6	Clearing	
Morgantown, W. Va.	29.93	737.3	30.05	763.3	67	19.4	90	Calm	0	0	.....	.....	Fog	.....	.....	0.62	15.7	Foggy	
Mt. Washington, N. H.	23.92	607.6	30.28	769.1	50	10.0	86	Calm	0	0	.....	8k	0	S	.....	0	0	Fair	
Nashville, Tenn.	.....	.....	29.97	761.2	80	26.7	74	E	3	1.3	.....	5ck	0	S	.....	0	0	Fair	
New Haven, Conn	.....	.....	29.98	761.5	78	25.6	65	Calm	0	0	.....	5ck	Haze	W	.....	0	0	Cloudy	
New London, Conn.	.....	.....	30.02	762.5	71	21.7	90	Calm	0	0	.....	.....	10ks	.....	SW	Inap.	Inap.	Cloudy	
New Orleans, La	.....	.....	30.07	763.8	79.5	26.4	80	SW	1	0.4	.....	9k	0	.....	.....	0.03	0.8	Cloudy	
Newport, R. I.	.....	.....	30.00	762.0	71	21.7	90	Calm	0	0	.....	10cs	0	W	.....	0	0	Cloudy	
New York, N. Y.	.....	.....	29.99	761.7	77	25.0	69	NE	3	1.3	.....	.....	Fog	.....	.....	0	0	Cloudy	
Norfolk, Va.	.....	.....	30.03	762.7	82	27.8	70	SW	3	1.3	.....	2ck	0	SW	.....	0	0	Fair	
North Platte, Neb.	26.93	681.8	29.85	758.5	69	20.6	60	SE	24	10.7	.....	5k	2s	SE	SE	0	0	Fair	
Omaha, Neb.	28.80	733.0	29.88	758.9	66	18.9	73	SE	8	3.6	.....	5ck	0	W	.....	0	0	Fair	
Oswego, N. Y.	.....	.....	29.98	761.5	70	21.1	66	SW	4	1.8	.....	1cs	Haze	SW	.....	0	0	Fair	
Pembina, Dakota	.....	.....	29.98	761.5	54	12.2	86	Calm	0	0	.....	0	2ks	.....	.....	0	0	Fair	
Philadelphia, Penn	.....	.....	30.01	762.0	76	24.4	70	N	12	5.4	.....	8ck	Haze	W	.....	Inap.	Inap.	Fair	
Pike's Peak, Colorado	17.95	455.9	30.16	766.1	35.5	1.9	56	N	16	7.2	.....	8ck	2cs	.....	.....	0.27	6.9	Cloudy	
Pittsburgh, Penn.	.....	.....	30.04	763.0	65	18.3	82	NW	1	0.4	.....	0	Sm'e	.....	.....	0.02	0.5	Clear	
Port Huron, Mich.	.....	.....	30.03	762.7	63	17.2	72	W	4	1.8	.....	8c	0	W	.....	Inap.	Inap.	Cloudy	
Portland, Me.	.....	.....	30.01	762.2	71	21.7	75	S	6	2.7	.....	5k	Haze	S	.....	0	0	Fair	
Portland, Oregon	.....	.....	30.12	765.0	60	15.6	88	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Punta Rassa, Fla.	.....	.....	30.14	765.5	80.5	26.9	78	E	4	1.8	.....	.....	10s	.....	SE	1.02	25.9	Cloudy	
Rochester, N. Y.	.....	.....	29.95	760.7	69	20.6	70	W	9	4.0	.....	0	Haze	.....	.....	0	0	Clear	
Salt Lake City, Utah	25.58	649.7	29.91	759.7	68	20.0	38	NE	6	2.7	.....	5c	2s	.....	NW	0	0	Fair	
Sandy Hook, N. J.	.....	.....	29.98	761.5	73	22.8	90	NW	2	0.9	.....	.....	Fog	.....	.....	Inap.	Inap.	Foggy	
San Diego, Cal.	.....	.....	29.88	758.9	63	17.2	94	N	4	1.8	.....	.....	10s	.....	N	0	0	Cloudy	
San Francisco, Cal.	.....	.....	29.89	759.2	56	13.3	93	SW	10	4.5	.....	.....	Fog	.....	SW	0	0	Foggy	
Santa Fé, N. M.	23.32	592.6	29.86	758.4	57	13.9	80	NE	1	0.4	.....	5s	2ks	.....	.....	0.83	21.1	Threatening	
Savannah, Ga.	.....	.....	30.00	762.0	68	31.1	66	SW	4	1.8	.....	5cs	Sm'e	.....	.....	1.12	28.4	Fair	
Shreveport, La.	.....	.....	30.03	762.7	70	26.1	80	SW	6	2.7	.....	2k	0	SW	.....	0.05	1.3	Fair	
Smithville, N. C.	.....	.....	30.07	763.8	81	27.2	82	SW	6	2.7	.....	8ck,k	0	SW	.....	0.21	5.3	Cloudy	
Springfield, Mass.	.....	.....	29.99	761.7	72.5	22.5	75	Calm	0	0	.....	8ck,cs	0	.....	.....	0	0	Fair	
St. Louis, Mo.	.....	.....	29.94	760.5	64	17.8	100	E	12	5.4	.....	.....	10n	.....	.....	0.10	2.5	Light rain	
St. Marks, Fla	.....	.....	30.10	764.5	77	25.0	86	Calm	0	0	.....	2cs	2ks	.....	.....	0.01	0.3	Fair	
St. Paul, Minn.	.....	.....	29.97	761.2	60	15.6	80	NW	3	1.3	.....	8c	0	NW	.....	0	0	Fair	
St. Paul's Island, Alaska	.....	.....	29.84	762.8	49	4.4	91	N	15	6.7	.....	.....	10n	.....	.....	0.09	2.3	Light rain	
Thatcher's Island, Mass.	.....	.....	30.00	762.0	69	20.6	90	SE	2	0.9	.....	8c	0	W	.....	0	0	Foggy	
Toledo, Ohio	.....	.....	30.02	762.5	66	18.9	73	Calm	0	0	.....	8cs	Sm'e	SW	.....	0	0	Fair	
Tucson, Arizona	27.44	697.0	30.03	762.7	84	28.9	.....	SE	.....	.....	.....	5k	2ks	W	.....	0	0	Fair	
Tybee Island, Ga.	.....	.....	30.05	763.3	85	29.4	75	S	6	2.7	.....	2c	Haze	.....	.....	0	0	Fair	
Vicksburg, Miss.	.....	.....	30.05	763.3	81	26.7	74	SW	4	1.8	.....	2ck	0	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	50	10.0	71	NE	4	1.8	.....	.....	10ks	.....	NE	0.03	0.8	Cloudy.....	
Washington, D. C.	.....	.....	30.05	763.3	75	23.9	72	N	5	2.2	.....	2c	8s	.....	W	0.03	0.8	Cloudy.....	
Wilmington, N. C	.....	.....	30.08	764.0	79	26.1	90	SW	6	2.7	.....	.....	10s	.....	SW	1.40	35.6	Cloudy.....	
Wood's Holl, Mass.	.....	.....	30.00	762.0	69	20.6	90	S	4	1.8	.....	.....	10s	.....	SW	0	0	Cloudy.....	
Wytheville, Va.	27.78	705.6	29.87	758.7	69	20.6	90	Calm	0	0	.....	.....	10s	.....	W	0.22	5.6	Cloudy.....	
Yankton, Dakota	28.68	728.5	29.93	760.2	61	16.1	77	Calm	0	0	.....	.....	10s	.....	S	0	0	Cloudy.....	
Yuma, Arizona	.....	.....	29.75	755.6	89	31.7	.....	E	.....	.....	.....	0	0	.....	.....	0	0	Clear.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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Sub-Series.																			
Bridgetown, B'b'dos, W. I.	.....	.....	30.07	763.8	82	27.8	78	NE	2	0.9	.....	5ck	5ks	E	E	0.70	17.8	Cloudy.....	E. Barker.
Pointe-a-Pitre, G'd'loupe, do	.....	.....	30.01	762.2	80	26.7	86	SE	.....	.....	.....	8pc	5n	.....	.....	0.06	16.8	Hazy.....	L. V. Bigard.
Kingston, Jamaica, W. I.	.....	.....	30.21	767.3	78	25.6	90	Calm	0	0	.....	5c	8n	.....	SE	0.85	21.6	.....	James Gall.
Santiago de Cuba, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Robert Mason.
Havana, Cuba, W. I.	.....	.....	30.07	763.8	81	27.2	78	NE	6.0	2.7	.....	2c	0	.....	.....	0.65	16.5	Fair.....	Charles Hasselbrink.
St. Georges, Bermudas	.....	.....	30.19	766.8	75.5	24.2	91	S	8.0	3.6	.....	0	8, k	.....	.....	0	0	Fair.....	C. F. Allen.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Navassa, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Clifton, Jamaica, W. I.	27.21	691.1	30.02	762.5	67	19.4	84	SE	1.0	0.4	.....	0	5k	.....	.....	0.25	6.3	Dull.....	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.06	763.5	82	27.8	83	E	.....	.....	2	7ks	6ks	E	.....	0.380	9.65	Cloudy.....	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.11	764.9	.....	.....	83.3	28.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.886	22.50	.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.25	641.3	.....	.....	64.5	18.1	85	Calm	0	0	.....	10k	0	.....	.....	0.82	20.8	Cloudy.....	Thomas Herran
York Factory, B. A.	.....	.....	29.90	759.4	57	13.9	75	S	4	1.8	.....	0	6s	.....	N	0	0	.....	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.09	764.3	75	23.9	95	NE	.....	.....	6	.....	.....	.....	.....	0	0	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	30.03	762.7	60	15.6	78	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	F. L. Clarke.
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Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	
.....	.....	.....	.....	.....	.....
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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, 6,012.4 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, 1,674 (?) 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, 2,294.8 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.; 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.

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Note.—Reports commenced by order of the Secretary of the Navy, General Order No. 220, dated Navy Department, December 25, 1870.

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.